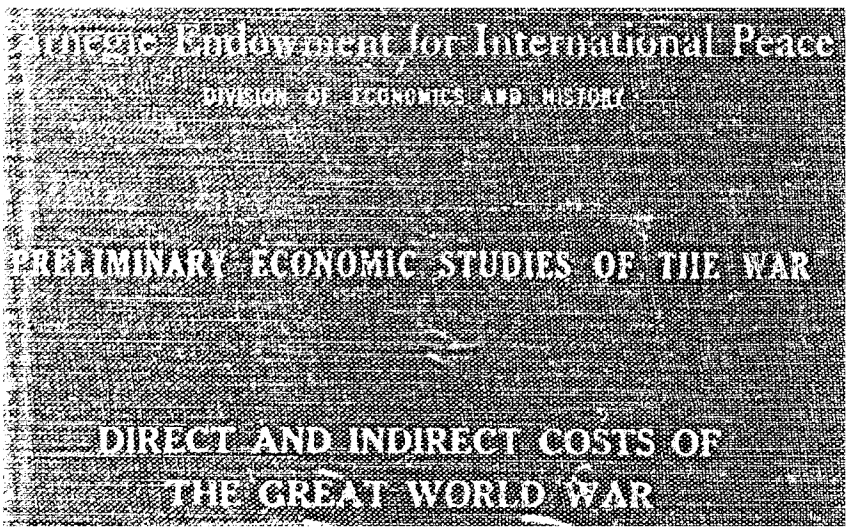
Carnegie Endowment for International Peace
DIVISION OF ECONOMICS AND HISTORY
PRELIMINARY ECONOMIC STUDIES OF THE WAR
DIRECT AND INDIRECT COSTS OF
THE GREAT WORLD WAR

Carnegie Endowment for International Peace

DIVISION OF ECONOMICS AND HISTORY

JOHN BATES CLARK, DIRECTOR

PRELIMINARY ECONOMIC STUDIES OF THE WAR

EDITED BY

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No. 24

DIRECT AND INDIRECT COSTS OF THE GREAT WORLD WAR

BY

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EDITOR'S PREFACE

A few years ago pamphleteers and men in public life were declaring that there could not be another great war because of the tremendous costs that would be involved. Saner students of history pointed out that cost was relative and that no nation had ever been prevented from going into war from fear of the expense. The judgment of the latter has been vindicated by recent history. The war that has just come to an end shows that anticipated costs, however great, are not a preventive. A recital of the tremendous costs of the great war can not therefore be regarded as worth while if the purpose of the recital is to warn against further wars. Nevertheless, it is well that the world should know as fully as possible the monetary and other costs of its bloody debauch. The recital will serve as a cautionary signal, if not as a preventive, for the future. For this reason it seemed well to the officers of the Endowment that an attempt should be made to gather together in one volume at least the more obvious costs of the great war. Professor E. L. Bogart was entrusted with the task. His first study, in accordance with the wishes of the Endowment was a short presentation. The demand for his work was so great that a new edition was called for and Professor Bogart took the opportunity to go into the matter more exhaustively. The present presentation is therefore virtually a new work much enlarged and improved not only in a physical but in a scholarly sense. Professor Bogart's book shows the handiwork of a scholar and yet presents the subject in a way that will interest the general reader.

It would be platitudinous for the editor to comment upon the facts presented or to summarize the gruesome story. The figures of direct expenditures have no significance to the human mind. They are too great to grasp. Still more is this true when we consider the total costs, direct and indirect, even when we attempt to reduce them to an estimate of dollars. But no one can estimate

accurately the value of the human life lost or the industrial contribution to the world's prosperity which their continuance would have meant. No one can put into figures the great economic loss that the world has suffered and is suffering from the impairment of our moral, economic and social standards. No one can put into arithmetical values the agonies of heart and mind that millions of human beings have felt in the last five years to the impairment of their own welfare and of their efficiency as members of society. Professor Bogart's consideration of these topics and his resulting conclusions are, in the editor's opinion, fair and reasonable. I feel very sure that the work will serve a very useful purpose both to the general public and to the students of the war.

DAVID KINLEY,
Editor.

URBANA, ILLINOIS, *October 3, 1919.*

FOREWORD

The cost of a war is measured in loss of life, destruction of property, loss of economic efficiency and prestige, and lowering of normal standards of consumption along many lines. It is impossible to appraise such varied values by any unit of measurement, and some of them are clearly not reducible to monetary valuation. In the following pages the direct outlays of the governments, which are matters of usual financial procedure, may be said to be fairly accurate; the attempt to estimate the indirect costs of the war, however, is attended with a considerable amount of conjecture and must be regarded merely as the best guess which is possible at the present time. These events are still so recent, the necessity for haste has been so urgent, that in most cases the governments themselves have not as yet absolutely correct statements of their expenditures, revenues, loans, and debts. But in addition to this, serious difficulties have been encountered in the attempt to make an accurate presentation of the finances of the war. In the first place, owing to the necessity for military secrecy the governments have very generally suppressed certain information, or have stated it in misleading fashion. There has also been a very general breakdown of the budgetary system, so that a regular presentation of expenditures and revenues has been completely lacking in some countries, and has been presented only for civil expenditures in others. Essential differences in the fiscal systems of the different countries open the door to the possibility of error in the interpretation of figures, even were these published fully and frankly. War expenditures are not distinguished from social and civil expenditures; deficits are juggled and concealed; revenues from taxation and receipts from government enterprises are not distinguished; loans are given in gross, with no allowance for conversion or for the funding of short term obligations; bonds have in some instances been made receivable for taxes, but no statements have been issued as to the

proportion of revenues received in this form or the amount of the debt thus retired; the debts themselves have in some instances been reported at figures below the actuality in order not to alarm the taxpayers; while on the other hand, an effort has been more recently discernible to swell the debt statements to unduly large figures in order that the country so doing might profit more largely from the possible distribution of an indemnity. But every effort has been made in this study to secure official and accurate information.

For convenience in checking up the figures in the tables of this study with the original sources, the foreign currencies have been converted into dollars at prewar rates of exchange. The pound sterling ($4.8665) has been converted at $5; the Turkish pound ($4.40) at $4.50; the ruble ($.5146) and yen ($.4985) at 50 cents; the krona ($.268) and mark ($.2385) at 25 cents; the florin ($.402) at 40 cents; the leu and leva ($.1946), the drachma, lira and franc ($.193) at 20 cents. The slight divergence between the par of exchange and the rate of conversion will account for some apparent discrepancies between the figures in this book and those found in other publications. As a result of this method, moreover, there has been a slight overstatement in the case of some of the countries, and a slight understatement in the case of others. But in dealing with figures which are still open to correction, it was thought that the convenience of the reader in reconverting the figures to the original currencies more than offset the slight variations involved.

In conclusion the writer records his indebtedness to the untiring and able assistance of Miss Constance Agnes McHugh, to whose cooperation at every stage of preparation is due much of whatever value this study may possess.

ERNEST L. BOGART.

WASHINGTON, D. C.
June 1, 1919.

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DIRECT AND INDIRECT COSTS OF THE GREAT WORLD WAR

GREAT BRITAIN

The economic and financial position of Great Britain was a strong one when the war broke out. The bad effects of the Boer War and of the Balkan Wars had by this time been overcome. Credit was sound, business was good, and a continued peace seemed assured. The government finances were in a sound condition, showing small surpluses each year. Taxes had shown a fairly steady increase, but this was for the purpose of carrying out a program of social reform and improving labor conditions. The position of Great Britain in the international markets of the world was such, however, that the first effects of the war were to break down the delicate mechanism of exchange which had been built up with so much care during the preceding century. The London banking institutions occupied the position of international bankers for the world, and when it became evident, after the Austrian ultimatum to Serbia, that war was inevitable, there occurred a sudden stoppage of normal exchange operations. With the interruption of ordinary remittances, London took measures to protect itself. The rate of the Bank of England was raised from 3 to 4 per cent on July 30, then to 8, and finally to 10 per cent on August 1. The London Stock Exchange was closed on July 31 in order to prevent a mass of securities from being thrown on the market at panic prices. On Tuesday, August 4, war between Great Britain and Germany was declared, and the further measures that were taken become a part of the history of British war finance.

Banking and Currency, 1914

The first thing to be done was to gain time for reflection and the preparation of further measures of relief. Accordingly, the bank holiday which fell on Monday, August 3, was extended for three days longer. On August 2, for the first time in Eng-

lish history, a limited moratorium applying to bills of exchange was proclaimed for one month, and the day following was legalized by the Postponement of Payments Act, which included all negotiable instruments. This was later broadened in scope and extended to December 3, 1914.[1] A breathing spell was thus provided during which the necessary adjustments between debtor and creditor could be made. It has, however, been vigorously asserted by numerous competent English writers that no such legislation was necessary.

The internal panic was accompanied by a breakdown of international exchange which made it impossible for Great Britain, the creditor nation of half the world, to realize on her holdings or to realize on the debts due her from capitalists in other countries. In this emergency the government first suspended the Bank Act, thus authorizing the Bank of England to issue notes in excess of the limit fixed by law, which required a 100 per cent gold reserve for all issues in excess of $92,250,000. The Bank did not avail itself of the privilege, which indeed the government made unnecessary by issuing notes itself. The Currency and Bank Note Act of August 6 authorized an emission of $1,125,000,000 emergency currency in $5 and $2.50 (£1 and 10s.) notes. These were to be issued to the banks in sums up to 20 per cent

[1] By the proclamation of August 6, payments which became due before September 4 in respect to any bill of exchange, negotiable instrument, or contract dated before August 4, were postponed to September 4 or their due date. By proclamation of September 3, similar provision postponed due dates from September 4 to October 3, and by proclamation of September 30 one month's postponement was granted in respect to payments falling due (whether under the previous proclamations or otherwise) from October 4 to November 3. These three proclamations therefore postponed to November 3 payments which otherwise would have been due up to September 3. The operation of the general moratorium therefore came to an end on December 3, and the moratorium in regard to reaccepted bills of exchange ceased to operate on November 17.

The moratorium did not apply to wages, salaries, liabilities under $25, maritime freights, debts from abroad, dividends and interest on trustee investments, bank notes, debts due from government old age pensions, payments under national insurance acts or workmen's compensation acts, or deposits in trustee savings banks.

The Courts (Emergency Powers) Act of August 31, 1914, however, put it within the power of courts to stay executions of judgments on contracts antedating August 4 when the facts warranted it, this discretion to continue until six months after war.

of their deposit liabilities, but up to November 27, the banks had taken only $65,000,000. Owing to difficulties in printing, the emergency notes were not available in sufficient quantities on the reopening of the banks on August 7, and for the time being, $2.50 postal money orders were constituted legal tender,[1] and remained so until February 3, 1915. The currency notes were also given the legal tender quality.

More important than the provision of additional currency was the problem of assisting the banks to meet the foreign exchange situation. The moratorium had postponed the period of settlement, but had not guaranteed the goodness of the bills coming due. The failure of the houses which had accepted them seemed certain unless this could be done, and no new business would be undertaken under these circumstances. To meet this situation the Bank of England on August 13 agreed to discount all approved bills of exchange accepted before August 4 without recourse to the holder. If unpaid at maturity, it could be renewed by the acceptor at a rate of 2 per cent above the bank rate. At the same time the government guaranteed the Bank of England against any loss it might incur by discounting such bills.[2] Any losses involved, which it was estimated might amount to $150,000,000, were to be charged up to the public debt.

One of the immediate effects of the war was to drive the insurance rates on shipping to prohibitive heights. Upon the outbreak of war, rates had jumped from one-fourth of 1 per cent to 21 per cent, and the following week had gone as high as 80 per cent, rendering it almost impossible for merchants to ship under these conditions. The government accordingly organized a shipping insurance office and during the week of August 8 perfected its procedure for accepting rates on shipping. Its object was to stabilize the insurance and in this it was successful. When it opened for business it proclaimed itself ready to take risks at 5 per cent; on August 7 it reduced the rate to 4 per cent, and the

[1] E. Crammond, "Economic Aspects of the War," *The Quarterly Review*, (October, 1914), 221: 528.
[2] *The Economist* (London), August, 1914, p. 306.

following week the open market rates in competition with the government fell to 2 per cent. The purpose of the act was thus attained.

Loans, 1914

The next problem, after meeting the banking and monetary shipping situation which confronted the Treasury, was that of borrowing for its own needs. The first vote of credit to provide means for meeting the war expenditures was that of August 5, 1914, for $500,000,000. Grants of funds by Parliament have always been made on the basis of carefully prepared estimates, and after extended debate. While the purposes for which they were to be spent had been stated in detail, with the advent of war the customary procedure was wholly abandoned. Votes of credit without estimates, or with dummy or "token" estimates merely, in order to preserve the form of control, have been passed blindly whenever they have been asked. The Chancellor of the Exchequer became the supreme financial dictator.

Compared with the expenditures of the continental belligerents, those of Great Britain during the first few months of the war were small. But they kept growing steadily. For the first five months of the war they were as follows:

WAR EXPENDITURES BY QUARTERS, 1914–15

Period	Number of Days	Per Quarter	Per Day
Aug. 4–Sept. 30, 1914.....	58	$351,155,000	$5,975,000
Oct. 1–Dec. 31, 1914.....	92	930,490,000	10,115,000
Jan. 1–Mar. 31, 1915.....	90	1,202,890,000	13,365,000
Total and average.....	240	$2,484,535,000	$10,352,300

To provide the sums thus authorized, the Chancellor proceeded to issue Treasury bills. These were discounted by the Bank of England and the joint stock banks. Due to the interruption of normal trade, large amounts of idle funds had accumulated in the banks which they willingly invested in Treasury bills at 3⅝ per cent. Owing to the cheap rate at which the government was thus enabled to procure funds, there was a strong temptation to rely on this form of short term debt. As the amounts involved

by the Treasury operations became greater, however, the huge mass of Treasury bills which matured at short intervals tended to become unmanageable, and it was necessary to fund them by the issue of long time bonds. The use of Treasury bills running for not more than six months was a customary financial practice on the part of the British Treasury, and at the time of the declaration of war there were already outstanding some $50,500,000 which would mature in the following December and January. During the remainder of the year 1914, six additional emissions were made of $75,000,000 each. They provided the necessary sums until a permanent loan was made in November. The following table shows the operations of the Treasury in this regard between August 1 and December 31, 1914:

TREASURY BILLS, AUGUST TO DECEMBER, 1914

(In dollars, 000s omitted.)

Date of Issue	Maturity	Amount Issued	Amount Subscribed	Issue Price
August 19	February 22, 1915..	$75,000	$210,575	96.35
August 26	February 28, 1915..	75,000	200,965	96.22
September 16	March 19, 1915.....	3,750	122,805	97.07
September 16	September 19, 1915..	3,750	122,435	96.59
October 7	April 10, 1915.....	75,000	152,465	96.95
October 21	April 24, 1915.....	75,000	215,810	96.26
November 4	May 7, 1915.....	75,000	133,165	96.32

A second vote of credit was granted by Parliament on November 12, 1914, amounting to $1,125,000,000 and a third for $185,000,000 on February 25, 1915, making a total to the end of the fiscal year of $1,810,000,000. These sums represented an amount larger than could be handled satisfactorily by means of Treasury bills, and accordingly the first war loan was offered on November 16, 1914.

This loan for $1,750,000,000 consisted of 3½ per cent bonds maturing between 1925 and 1928, issued at 95. Their real yield was thus 4 per cent. Payments were spread over three months, and finally, a special privilege was granted subscribers in that the Bank of England pledged itself ready to lend upon these bonds up to their issue price during the next three years; that is, up to March 1, 1918. Subscriptions to the end of the fiscal year

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(March 31, 1915) brought into the Treasury the sum of $1,480,000,000. It had taken Great Britain eleven years (1903 to 1914) to pay off $450,000,000 of the debt incurred during the Boer War. The savings of these years were now being spent in a couple of months.

In addition to this popular loan, the Treasury also sold 3 per cent five year Exchequer bonds to the amount of $238,500,000. This was a financial device first employed by Gladstone during the Crimean War in 1854, and used to a considerable extent again during the Boer War in 1900 and 1901. Recourse to this method of short term financing was as yet modest; it was to become much greater in 1915 and 1916. In addition to these various loans, advances from the Bank of England for a total amount of about $800,000,000 were also secured.

Expenditures, 1914

The total of expenditures for the fiscal year ending March 31, 1915, comprising four months of peace and eight months of war, was estimated by Mr. Lloyd George in his budget proposals of November 17, 1914, at $2,848,085,000, which proved to be more than the actual expenditures. To meet this the estimated receipts from all sources were put at $1,056,480,000, leaving $1,791,605,000 to be raised by borrowing. Of this latter sum, almost $1,500,000,000 was secured from the 3½ per cent loan, and the remainder was obtained by the issue of Treasury bills and from other sources described. Of the Treasury bills, there was outstanding on March 31, 1915, the sum of $438,750,000. The end of the first eight months of war saw Great Britain's debt increased by $2,157,250,000. The receipts and expenditures for the year 1914–15, including eight months of war, and also for the last complete peace year, are shown in the following table:

RECEIPTS AND EXPENDITURES, 1913–1915[1]

Fiscal Year	Expenditures	Revenue Receipts	Loans
1913–14	$987,464,840	$991,214,485	.....
1914–15	2,802,367,665	1,133,470,400	$2,157,250,000
Aug. 1, 1914, to March 31, 1915	2,491,799,900	858,793,720	2,157,250,000

[1] *Finance Accounts.* See also *The Economist* (London), April 7, 1917, p. 618.

TAXATION, 1914

In line with a time honored policy, England early resorted to taxation to meet at least a portion of the war expenditures. As a result of old age pensions and other social legislation on behalf of the working classes the public expenses of England had been growing rapidly during the last few years, and with them her tax revenues. The gross sums for the preceding few years may be set down in a brief table:

Fiscal Year	Revenue	Expenditure
1910–11	$1,514,255,000	$859,980,000
1911–12	925,450,000	892,725,000
1912–13	944,010,000	943,110,000
1913–14	991,215,000	987,465,000

For the fiscal year 1914–15 the budget of May 4, 1914, had proposed new taxes amounting to about $67,595,000 for the purpose of relieving local taxation and of carrying out the program of social reform. On July 31, on the very eve of war, the Finance Act providing for this program of peace was passed. This fixed the rate of the income tax at 1s. 2d. in the pound, or 6¼ per cent, at which point it had stood for some five years past. It imposed a tax of 5d. a pound on tea, and revised and increased the death duties or inheritance tax. It was estimated that these changes would bring the total revenue for the fiscal year ending March 31, 1915, up to about $1,035,000,000. In spite of the date which this act bore, it was in no way a war measure.

This peace budget was left undisturbed when war broke out, but it soon became evident that additional revenue would have to be provided to meet the war expenditures. Accordingly, on November 17, 1914, the first war budget was introduced by Mr. Lloyd George, then Chancellor of the Exchequer. This simply grafted onto the existing budget increases in the case of three taxes. These consisted of a doubling of the rates of the income tax, the imposition of an additional duty on tea of 3d. per pound, bringing the total duty on tea up to 8d., and an additional duty of 17s. 3d. per barrel on beer, making a total of 25s. in all on this beverage. The taxes on beer and tea now amounted to about 80

per cent of their original cost. The double income tax was levied for only one-third of the year, namely, from December 1, 1914, to March 31, 1915. These new taxes were to run only for the remainder of the fiscal year to March 31, 1915, when a new budget would make permanent provision for the burdens of war.

It was estimated that the additional tea duty would yield $4,750,000. The additional beer duties were expected to bring in $12,500,000, and the increase in the income and supertax $62,500,000. But from these increases should be subtracted a reduction of license duties which was made to compensate for the tax on beer, and which lessened the revenues from this source by $2,250,000. Moreover, a revised statement of the Treasury on December 21, 1914, modifying the above estimates, reduced the revenue expected from the income tax by $8,200,000 and that from the beer duty by another $2,250,000. It is evident that as yet the problem of war taxation had not been seriously attacked, and that these taxes could be considered only as a makeshift.

Expenditures, 1915–16

The second war budget was that of May 4, 1915. It was by this time clear that the war was not to end as speedily as had been at first optimistically anticipated. War costs were mounting rapidly, and Great Britain's share of the burden was growing appreciably. The deficit for the fiscal year just ended, which had to be met by borrowing, was $1,668,900,000 or somewhat less than had been anticipated. This was due to the fact that the increases in taxation introduced by Lloyd George were yielding rather more than had been estimated, and the losses in the customs and excise duties had not been so great as was anticipated, owing to the greatly increased imports of war material and other commodities and the increased consumption of spirits.

The total expenditures for the year in the budget presented by Lloyd George were estimated at $5,663,270,000. A saving of $18,900,000 was estimated as a result of the proposed suspension of the new sinking fund, but against this must be set an addition of $74,880,000 for interest and expenses of additional war debts.

The revenue receipts, on the other hand, were calculated at $1,351,660,000, leaving the balance of $4,311,610,000 to be met by loans—an amount almost equal to the total British debt at the end of the Napoleonic War ($4,380,000,000). The only changes in taxation proposed in the budget were slight increases of the wine and beer duties which it was estimated would bring in $15,500,000. The additions made in November, 1914, to the tea duties and the income tax were continued. Receipts from taxes and nontax revenues together, according to this program, made up about one quarter of the total expenditures, the other three quarters being obtained from loans. In lieu of a vigorous tax policy, Mr. Lloyd George was content to let the slight additions of the previous November remain and to exhort the people as to the importance of thrift. The financial results of the operations of the past year and the estimates for the coming one as given in the Chancellor's financial statement may be briefly stated as follows:

Fiscal Year	Receipts	Expenditures	Deficit to be Met by Loans
1913–14	$991,215,000	$987,465,000	† $3,750,000
1914–15	1,133,470,000	2,802,368,000	1,668,900,000
1915–16*	1,351,660,000	5,663,020,000	4,311,610,000

* Estimate on basis of 12 months of war.
† Surplus.

Before the year was over, these estimates had to be revised in an upward direction and still larger sums asked for even than the enormous amounts here set down. The votes of credit asked by the government during the fiscal year 1915–16 were as follows:

VOTES OF CREDIT, 1915–16

Date	Amount
1915 February 28	$1,250,000,000
July 10	1,250,000,000
July 19	750,000,000
September 14	1,250,000,000
November 9	2,000,000,000
1916 February 17	600,000,000
	* $7,100,000,000

* Excluding $800,000,000 repaid to Bank of England expended in previous year.

Loans, 1915–16

In order to raise these sums the British Government first made use of short term securities; then, in the second week of April, 1915, it began with a large issue of Treasury bills which it decided to sell, not at stated intervals in fixed amounts as during the previous year, but in the open market by issue at any time at fixed rates of discount.[1] This policy was successful in procuring considerable sums for the Treasury at a comparatively low rate of interest. During April and June the rate of interest was 2¾ per cent for three months bills, 3⅝ per cent for six months, and 3¾ per cent for nine months and one year bills. By June 21, the amount of Treasury bills issued was $1,175,000,000.

In spite of its success, however, the increase of the floating debt carried with it certain dangers, as the bills might mature just as the Treasury was in need of additional funds. Moreover, with their enlarged emission, the rate of interest began to go up, until there was little to gain from a further use of these bills instead of a permanent loan. Accordingly, on June 21, 1915, Mr. Reginald McKenna, the new Chancellor of the Exchequer, announced the issue of a second permanent loan. This differed in several important respects from the 3½ per cent loan of the previous November. The rate of interest was raised to 4½ per cent, but it was to be issued at par and the income from this source was subject to the income tax and supertax. As the 3½ per cent ten year bonds had been issued at 95 and were tax exempt, there was practically no increase in the real rate of interest, especially if the depreciation in the value of money be taken into account. Current criticism directed against this loan was to the effect that the rate was unduly high. But this was excused on the ground that the high rate was expected to attract investors from neutral countries and that it was desired to make the loan a success.[2] The bonds were redeemable in ten years and payable in thirty years. This was the principle adopted by Secre-

[1] Speech of Mr. McKenna, Chancellor of the Exchequer, before House of Commons, June 21, 1915.

[2] *Spectator*, 114:882; *Bankers Magazine* (London), 100:119.

tary Chase in the issue of the so-called "five-twenties" and "ten-forties" during the American Civil War. It brought the issue under the control of the Treasury in a short time if it wished to avail itself of that privilege; but, on the other hand, this very possibility undoubtedly had the effect of raising the rate of interest and of increasing the cost to the Treasury if the debt were not paid off. The element of flexibility was, however, an advantage which the Treasury presumably thought worth the higher price.

The loan was for an unlimited amount. It could be paid for in instalments spread over four months, and, finally, it was made available to small subscribers by the issue of small denominations as low as $25. At the same time there was placed on sale at all the post offices and trade union headquarters war loan vouchers for sums as low as $1.25, which could be applied on the purchase of the $25 and $125 denomination bonds. Payment could be made for these bonds in 3½ per cent consols, 2½ and 2¾ per cent annuities at a value fixed by the government. In the case of consols this exchange rate was placed at 66⅔, which was slightly more than the existing market rate but considerably less than the prewar price. Provision was also made that in case future loans were issued at a higher rate of interest, holders of the 4½s could convert them into the new loan. On July 13, 1915, Mr. McKenna announced the first result of the new war loan:

	Subscribers	Amount of Subscriptions
At Bank of England	550,000	$2,850,000,000
At post offices	47,000	75,000,000
	597,000	$2,925,000,000

The final amount received by the Treasury for this loan was $2,961,725,000, but about half of it was made up of existing debt which was now converted into this higher priced stock. The amounts offered for conversion were as follows:[1]

[1] *Economist* (London), November 20, 1915, p. 853.

Consols	$1,020,000,000
2½ per cent annuities	37,500,000
2¾ per cent annuities	5,000,000
3½ per cent war loan	675,000,000
	$1,737,500,000

The proceeds of this loan sufficed to meet the expenditures of the next three or four months, but by the autumn it was clear that a more vigorous use of taxation would have to be made. The war costs were mounting up beyond all expectations, and there was no prospect of a speedy termination of the struggle. The progressive increase in war expenditures is shown in the following table:

WAR EXPENDITURES BY QUARTERS, 1915-16

Period	Days	Per Quarter	Per Day
April 1–June 30, 1915	91	$1,292,365,000	$14,200,000
July 1–September 30, 1915	92	2,080,120,000	22,610,000
October 1–December 31, 1915	92	2,127,100,000	23,120,000
January 1–March 31, 1916	91	2,297,205,000	25,230,000
Total and average	366	$7,796,790,000	$21,302,705

To meet these growing expenditures, the Chancellor of the Exchequer was compelled to grasp at every credit device open to him which gave promise of yielding returns. In a speech at Guildhall on June 29, 1915, Mr. Asquith[1] mentioned four possibilities for financing the war, namely, (1) the sale of investments, (2) borrowing abroad, (3) payment out of gold reserve, (4) diminish expenditures and increase savings. The first method was held to be unwise because it would impoverish the country and impracticable because of the inability of foreigners to buy the British investments. The second method, while feasible, should not be indulged in too freely for fear of making Great Britain a debtor nation. The third method was dismissed as impracticable, but in the fourth his strongest hope was placed. These views are mentioned here not for any merit which they possess as financial expedients, but as evidence of the views entertained in high quarters both as to the cost and duration of war,

[1] *Bankers Magazine* (London), July, 1915.

and the best means of financing it. Within six months both of the first two methods then rejected as impracticable were being pursued. Great as was the financial strength shown by Great Britain, it was quite beyond her power to pay for the war out of current income, and she was shortly compelled to mortgage her capital in order to meet the expenditures To the credit of Great Britain it should be said, however, that neither then nor subsequently was any suggestion made that resort should be had to paper money.

In addition to the ten-thirty year loan of June just described, recourse was had also to short term Exchequer bonds. Some $238,500,000 of these had been issued the previous year at 3 per cent to run five years, but now they were used more freely. The new Exchequer bonds, which like the previous issue fell due in 1920, bore a 5 per cent interest rate. By the end of the fiscal year (March 31, 1916), there were $768,445,000 of these outstanding. War savings certificates payable in five years were also sold to the total amount of $6,250,000. In addition to these domestic supplies of capital, Great Britain looked abroad for the first time for assistance. A joint French and English mission was sent to the United States to negotiate a loan for these governments. An effort was made to float a loan of $1,000,000,000, but the American bankers were unwilling to underwrite so large a proposition, and half this amount was finally agreed upon. Even this amount caused considerable misgivings in the New York money market as this was the largest single loan to be floated in the United States since the days of the Civil War. Some little trouble, too, was caused by the opposition of pro-German bankers and sympathizers who wished to insert a provision that no portion of the loan should be spent for munitions, or go to Russia. As finally arranged, the Anglo-French loan was for $500,000,000 and consisted of 5 per cent bonds due in five years, when they were either payable in cash or convertible into long term bonds of the two governments. The issue price was 98, making the real yield nearly 5.5 per cent. The distribution of these bonds was effected in part by their allocation to

various munition firms and other businesses furnishing supplies to the French and English governments. Some of the bonds were later distributed by these corporations in the form of dividends.

From all these sources a total of some $6,779,297,280 was secured, from which must be subtracted the repayment of the advances of the Bank of England. The net borrowings are shown in the following table:

BORROWINGS DURING 1915–16

Treasury bills, net	$2,464,090,000
3½ per cent loan, 1925–1928	178,992,040
3 per cent Exchequer bonds, 1920	1,211,725
4½ per cent war loan	2,961,725,900
5 per cent Exchequer bonds, 1920	768,445,000
United States loan	254,100,115
Other debt	51,250,000
Other advances	99,482,500
	$6,779,297,280
Less: Repayment to Bank of England	802,138,115
Net debt created by borrowing	$5,977,159,165

Taxation, 1915–16

The proportion of the total government expenditure defrayed by loans during the second year (April 1, 1915, to March 31, 1916) was 84 per cent. Such an extreme loan policy was not in accord with British tradition, and in the next budget proposal of Mr. McKenna on September 21, 1915, a vigorous effort was made to open up new sources of tax revenue. This was the first real application of war taxation which the country had experienced. The war costs were still mounting and the estimate of the year's needs, which in April had been put at $5,665,000,000, was now raised to $7,950,000,000. Of this amount some $395,000,000 were needed for the consolidated fund service, which included the national debt charges; $455,000,000 were to go to the ordinary supply service; which left a balance of $7,100,000,000 for war expenditure. These were staggering sums and represented an increase of nearly $2,400,000,000 over the original estimates.

Daily expenditures were now running at about $25,000,000. How to raise this sum was the problem which was presented to Mr. McKenna, a problem which he met boldly and vigorously. The budget which he presented aroused even the conservative London *Economist,* not ordinarily given to superlative, to draw heavily upon its stock of adjectives: "It was a *plain, unvarnished* statement of *unparalleled* revenues, an *inconceivable* expenditure, and an *unimaginable* deficit, followed by a list of fresh taxation which imposed an *unprecedented* burden on the country."

The most important sources of revenue under this new scheme were the income tax and supertax. The normal income tax rate was raised to 3s. 6d. in the pound, or 17.5 per cent. But more important than the increase in the rate was the reduction in the minimum exemption from $900 to $650, so that a great mass of taxpayers who had previously escaped direct taxation were now drawn into the tax net. At the same time a distinction was made between earned and unearned incomes, the latter being taxed somewhat more heavily. The supertax ranged from 10d. to 3s. 6d., being graduated on incomes from $12,500 to $50,000. From these two additional taxes a revenue of $67,120,000 was estimated, which, together with the sums already collected, would give total taxes from this source of $582,120,000 for the year 1915–16. The real war tax of the program was the excess war profits tax which was introduced for the first time. This tax amounted to 50 per cent on incomes for the period from August 1, 1914, to July 1, 1915, on any excess over the defined prewar standard of profits with a further abatement of $1,000. As a basis for prewar profits, the taxpayer was permitted to take the average of any two of the three prewar years, but if these years could be shown to have been years of depression, he was permitted to take any four of the last six years. The estimated receipts were placed at $150,000,000 for a full year, and at $30,000,000 to March 31, 1916, but defects in the tax and its administration made the yield for the latter period but $700,000.

Although the income tax now reached down to the man with an income of $655, it was felt that still smaller incomes must be

made to shoulder their share of the war burden, but as it was manifestly impossible to reach them directly on account of the excessive cost of collecting an income tax from persons of very small means, it was proposed to get at them by raising the customs and excise duties on a number of articles which were of general consumption among the masses of the people. These were tea, cocoa, coffee, chicory, dried fruits, tobacco, on all of which the duties were raised 50 per cent; sugar, the duty on which was jumped from 1s. 10d. to 9s. 4d., or 2½ cents a pound. On motor spirits and patent medicines the duties were doubled; and upon cinema films, watches, musical instruments, imported motor cars and motor bicycles, hitherto untaxed, an import duty of 33⅓ per cent was imposed. Finally, the postal, telegraph and telephone rates were raised. From all these sources it was hoped to secure additional revenues of $57,500,000 for the balance of the year, and $164,520,000 for a full year.

The proportion of direct income and property taxes as contrasted with indirect consumption taxes remained about in the ratio of 60 to 40 under these new impositions, which was about the relation established in the prewar budget of Mr. Lloyd George.

The receipts from taxation for the fiscal year 1915–16 proved to be $155,000,000 more than Mr. McKenna had estimated in September, while the total expenditures were not quite so large. The year's operations were as follows:

Expenditures	$7,795,791,885
Revenue	1,683,834,120
Loans	5,977,159,165

At the end of the fiscal year 1915–16 the debt had been increased $5,158,187,715 over that of a twelvemonth before, and now amounted to $10,987,196,225. The official statement for this date was as follows:

DEBT, MARCH 31, 1916

Form	Amount
Prewar	$3,538,270,000
Treasury bills	$2,756,630,000
3 per cent Exchequer bonds, 1920	250,000,000
5 per cent Exchequer bonds, 1920	768,445,000
3½ per cent war loan	1,750,000,000
4½ per cent war loan, 1925–1945	2,961,725,900
Anglo-French loan in United States	257,800,000
Miscellaneous borrowings	99,480,000
	$8,844,080,900
Less debt redeemed	130,555,950
War debt	$8,713,524,950
Total, war and prewar	* $12,251,794,950

* Less consols converted into 4½ per cent war loan on basis of £66 13s. 4d. per 100 pounds.

Expenditures, 1916–17

While this was a satisfactory showing from one standpoint, the percentage which loans made of the total receipts, 78.5 per cent, was still very high. Taxes alone contributed only 18.6 per cent of the expenditures. On the other hand, war expenses were still mounting. For three months, from January to March 31, 1916, the war expenditures had been at the rate of $25,230,000 daily, and during the spring and summer they would undoubtedly be higher. Moreover, the interest and sinking fund charges for the debt alone now amounted to $335,000,000 for the year. The steady growth of expenditure is indicated in the following table:

WAR EXPENDITURES BY QUARTERS, 1916–17

Period	Days	Per Quarter	Per Day
April 1–June 30, 1916	91	$2,222,800,000	$24,425,000
July 1–September 30, 1916	92	2,301,210,000	25,015,000
October 1–December 31, 1916	92	3,305,585,000	35,930,000
January 1–March 31, 1917	90	3,160,970,000	35,620,000
Total and average	365	$10,990,565,000	$30,111,137

When Mr. McKenna brought in his budget of April 4, 1916, making provision for the fiscal year 1916–17, he therefore raised his estimates all around. Expenditures were estimated at $9,125,-

000,000, and revenues to bring in $2,867,000,000, leaving $6,258,000,000 to be raised by loans.

Taxation, 1916–17

The revenues from taxation which were to be raised by this budget amounted to $2,511,375,000, which was an increase of $830,000,000 over the previous year. To secure this truly staggering sum, the rates on the income tax were first of all raised. The lowest rate on earned incomes was 2s. 3d. for those between $655 and $1,500, and 3s. for unearned incomes of the same amount. For both classes of income these rates progressed until they reached 5s. for incomes over $12,500. The supertax, which applied to incomes over $12,500, was left unchanged. From these two taxes it was estimated that $725,000,000 might be obtained. As a matter of fact, the end of the fiscal year showed the yield to be some $50,000,000 higher than the estimates.

The rate of the excess profits tax, whose administration had been approved and which had met with popular approval, was now raised to 60 per cent. The principle of the English excess profits tax was designed to secure for the state a part—under the new law the larger part—of those profits which were specifically due to the war. The returns from this tax were estimated at $430,000,000, which estimate, because of the newness of the tax, was merely a guess. So great was the war prosperity, however, that the actual yield from this tax was $699,600,000. The various additions to these taxes which had been made since the beginning of the war are shown in the following table:[1]

[1] George Paish, "War Finance," in *Journal of the Royal Statistical Society*, May, 1916, p. 282.

WAR TAXES—INCOME TAX, SUPERTAX AND EXCESS PROFITS TAX

	Prior to War	November, 1914	September, 1915	April, 1916
Income tax*	1s. 3d. per £.	2s. 6d.	3s. 6d.	†5s.
Supertax	6d. per £ over £5,000.	10d. to 2s. 8d. graduated from £2,500 to £8,000.	10d. to 3s. 6d. graduated from £2,500 to £10,000.	
Excess profits tax	Nil.	Nil.	50 per cent.	60 per cent.

*The basis of taxation under Schedule B (charged in respect of the occupation of lands) from one-third to the full amount of the annual value.

†Graduations also changed. Rate 2s. 3d. in the pound on *earned* incomes not exceeding £500, 2s. 6d. from £500 to £1,000, 3s. from £1,000 to £1,500, 3s. 8d. from £1,500 to £2,000, 4s. 4d. from £2,000 to £2,500, 5s. over £2,500. Rate 3s. in the pound on *unearned* incomes not exceeding £300, 3s. 6d. from £300 to £500, 4s. from £500 to £1,000, 4s. 6d. from £1,000 to £2,000, 5s. over £2,000.

Attention was then turned to the customs and excise duties. The duty on cocoa was quadrupled, that on tea, coffee, and chicory was doubled; that on sugar was raised 50 per cent. New taxes were imposed on table waters, cider, and similar beverages, and on matches, while license fees for automobiles and motor cycles were doubled. Amusements of all sorts were also to be taxed, including theaters, moving pictures, horseraces, and football matches.[1] From all these sources it was hoped to raise $308,900,000.

Huge as had been the estimates, the actual receipts for the fiscal year ending March 31, 1917, exceeded them by over $350,000,000, almost every source yielding beyond the original estimate. Considerably over half of the $2,867,000,000 was obtained from the income and excess profits taxes. Next to these in lucrativeness ranked the customs, excise, and estate duties. English industry had now adjusted itself to war conditions and was experiencing an era of expansion which swelled the tax receipts beyond all expectation. The customs and excise duties were also increased largely as a result of the increased demand

[1] A proposed tax on railway travel estimated to bring in some $15,000,000 was abandoned because of popular dissatisfaction. *Annalist*, May 8, 1916.

for semi-luxuries by the wage earners whose unprecedentedly high wages were spent, rather than saved.

Even with this stupendous increase in the burden of taxation which the English people accepted without murmuring, it was necessary to rely mainly upon loans to raise the $30,000,000 which the war was now daily costing. The actual receipts and expenditures for the year were as follows:

Expenditures, 1916–17	$10,990,563,550
Revenue receipts, 1916–17	2,867,137,910
Loans	8,149,508,125

Loans, 1916–17

The floating debt was assuming unmanageable proportions, Treasury bills outstanding having increased from $1,977,825,000 on December 31, 1915, to $2,756,630,000 on March 31, 1916, and to $3,243,300,000 on May 16, 1916, and to $5,000,000,000 in September of 1916.

Exchequer bonds running for three and five years were used to fill in the gap between Treasury bills and long term bonds. Originally these were issued for five years at 5 per cent, but after January 1, 1916, the three and five year bonds were issued in their stead, while the interest rate was raised to 6 per cent in November, 1916, as a result of the large issues of Treasury bills which glutted the market. Ways and Means advances were practically loans from Bank of England. Altogether, about one-half of the total borrowings of this period took the form of temporary or short term obligations. As the war progressed, however, there was a tendency to make larger use of long term bonds. The stages in the working out of the British financial policy are clearly discernible; from short term Treasury bills to Exchequer bonds running only a few years was a short step, to be followed inevitably as the war dragged on and the debt piled up, by resort to long term funded debt.

An important part of the loan program of this period was the problem of securing American credits. British purchases of munitions, foodstuffs and other war materials in the United

States had been enormous and an adverse balance had been created which was disastrously affecting exchange rates. As early as November 24, 1915, Mr. McKenna, Chancellor of the Exchequer, stated to the House of Commons that the government had begun negotiations with large holders of American securities for the purpose of obtaining control of these holdings, in order to use them as collateral for additional credits. As originally proposed, the plan contemplated the purchase or the borrowing of American securities. The government might buy such securities outright at the New York market quotation and pay for them in 5 per cent Exchequer bonds, or it might borrow the securities paying to the owner the interest or dividends received and a bonus of one-half of one per cent on the par value. In case the government found it necessary to do so, it was to have the option of selling the borrowed securities, in which case it agreed to add 2½ per cent to the average of the high and low New York quotation on the day of sale. This plan was modified from time to time but the essential features were not materially altered.

On January 7, 1916, the British Government made public the initial list of securities which the Treasury was prepared to borrow or buy, and the prices it would pay therefor. This list contained fifty-four securities. Subsequent lists increased the number of securities which the government agreed to purchase, the fourth one published May 6, 1917, bringing the number up to nine hundred. As the plan did not at first bring in as many securities as were hoped for, a penal tax of 10 per cent was placed on the income from listed securities not turned in. This tax, together with modifications in the original plan which made compliance financially more attractive to holders, had the desired effect. It was estimated in January, 1917, that not less than $2,000,000,000 out of a total of $4,500,000,000 American securities owned in Great Britain had been deposited by owners with the government. The entrance of the United States into the war in April, 1917, so altered the situation with regard to the raising of loans in the United States and the control of ex-

change that the British Treasury was able practically to discontinue the scheme by the following September.

With the aid of the securities thus mobilized, the government was able to float two large loans in United States. The first was for $250,000,000 and was secured in August, 1916, from a syndicate headed by J. P. Morgan & Company. Two year 5 per cent collateral gold notes of the British Government secured by collateral aggregating in value some $300,000,000 were taken over by the syndicate at 98 and sold to the public at 99, at which price they yielded about 5.5 per cent. The loan was quickly subscribed and proved a decided success. In October another loan of the same sort was brought out by the same syndicate. This was for $300,000,000, half consisting of three year gold notes, and half of five year gold notes, bearing 5 per cent interest. These were direct obligations of the British Government and were further secured by collateral of stocks, bonds, and securities of various kinds amounting to a face value of $360,000,000. The three year issue was offered at 99.25, yielding 5.75 per cent, and the five year issue at 98.5, yielding 5.85 per cent. This loan too was a complete success. It is doubtful whether in the existing state of the market and of the public mind these loans could have been floated, at least upon as reasonable terms, unless they had been secured by collateral.

Large as were the sums borrowed during the year 1916, they were insufficient to carry the government through to the end of the fiscal year and meet the war costs, which by the end of March were $36,000,000 per day. Accordingly, the third great long term war loan was offered in January, 1917. This consisted of two different kinds of bonds: (1) a 5 per cent loan redeemable in 1929–1947 issued at 95, and (2) a 4 per cent loan redeemable in 1929–1942 issued at par. The 5 per cent bonds were subject to the income tax, while the 4s were tax free. By offering a choice, the government could test the demand for tax-free bonds. The result showed a striking preference for the taxable bond at the higher interest rate, for out of over $5,000,000,000 subscribed for the loan, only $110,000,000 was for the

tax-free 4s. The amount of the loan was not specified. Provision was made for a new sort of sinking fund designed to maintain the market price of the bonds. This was a fund of one-eighth of 1 per cent per month of the amount of each loan, and was to be used to purchase stocks or bonds of either loan for cancelation when the market price fell below the price of issue. Whenever the unexpended balance of this fund fell below $50,000,000 further purchase was to cease for the time being. Of the round $5,000,000,000 secured from this loan, over $4,000,000,000 was "new money." Up to this time, therefore, this constituted the greatest loan in the financial history of the world. Details of the character of the subscriptions are given in the following statement:[1]

Applications through Bank of England	$4,097,930,000
Applications through post offices	153,575,000
Treasury bills converted	653,559,750
War savings certificates purchased	96,500,000
	$5,001,564,750

The total number of subscribers was 5,289,000 and the actual amount received from the loan was $4,734,635,000, of which only $3,901,885,000 was received before March 31.

Still another loan was effected before the end of the fiscal year. This was a collateral loan for $250,000,000, the third of its kind placed in the United States, and consisted of one and two year notes dated February 1, 1917, bearing 5.5 per cent interest. The notes were convertible at the option of the holder at any time before maturity into 5½ per cent twenty year bonds redeemable in 1937. They were payable in United States gold coin or in English sterling at the fixed rate of $4.865 to the pound.

In addition to the loans already described, there was one of $50,000,000 from Japan, and another for $50,000,000 from Canada, but this latter was probably included under the head "Other debt" in the Treasury statement. The net borrowings of the year are shown in the following table:

[1] *Economist* (London), March 3, 1917, p. 424.

BORROWINGS DURING 1916–17

Source		Amount
Treasury bills		$8,949,775,000
4½ per cent war loan, 1925–1945		2,120
5 per cent Exchequer bonds (United States loans)		904,493,000
6 per cent Exchequer bonds		804,758,500
War expenditure certificates		149,392,500
War savings certificates		363,750,000
Other debt		1,659,479,405
4 and 5 per cent war loans		3,901,883,550
Other advances		988,150,000
		$17,721,684,075
Less: Treasury bills redeemed	$9,441,130,000	
War loans and Exchequer bonds redeemed.	6,428,525	
War expenditure certificates	31,587,500	
Other debt	93,029,925	
		9,572,175,950
Net debt created by borrowing		$8,149,508,125

The British debt on March 31, 1917, stood at $19,272,000,000, which represented an increase over the prewar debt of three years previous of $15,735,000,000.

Fiscal Year, 1917–18

The budget for the fiscal year 1917–18 was not presented until May 2, by Mr. Bonar Law, the new Chancellor of the Exchequer. Expenditure for the year was estimated at $11,451,905,000, or an average of $31,500,000 a day. The total revenue was estimated at $3,193,000,000—an increase over the previous year of $325,860,000. Few changes were made in the existing taxes, the net increase from this source being calculated at only $130,500,000. Indeed, the small addition to taxation was the most striking feature of the budget, and one which called forth adverse criticism. An extra 1s. 10d. in the pound on tobacco was expected to bring in $30,000,000; an increase in the entertainments tax (on tickets costing more than 2d.), $5,000,000, and $100,000,000 additional was expected from the excess profits tax which was raised to 80 per cent,[1] the munitions levy being consolidated with it. On the other hand, further rebates on

[1] By the budget of April 30, 1919, the rate of this tax was reduced to 40 per cent.

liquor license duties reduced the yield from this source by $4,500,000. This left a deficit of $8,258,905,000 to be met by borrowing.

As the budget made such slight additions to tax revenue, it was evident that still larger use would have to be made of borrowing to meet the steadily growing war expenditures. These were now estimated for the coming year at over $31,500,000 a day, as against $25,000,000 the previous year. But even this enlarged estimate speedily proved inadequate.[1] The following table shows the expenditures by quarters:

WAR EXPENDITURES BY QUARTERS, 1917–18

Period	Number of Days	Per Quarter	Per Day
April 1–June 30, 1917.....	91	$3,356,435,000	$36,885,000
July 1–September 30, 1917...	92	3,283,830,000	35,695,000
October 1–December 31, 1917	92	3,505,905,000	38,105,000
January 1–March 31, 1918...	90	3,333,931,715	37,043,686
Total and average.....	365	$13,448,101,715	$36,931,786

These figures proved to be practically the highwater mark, as the entrance of the United States into the war on April 6, 1917, afforded welcome relief by transferring to the new belligerent a part of the enormous financial burden which Great Britain had until now been forced to carry on behalf of the Allies. Not only this but the British Government was able to secure from the United States much needed assistance to her own finances. The advances by the United States Government to European Allies began in April, 1917, almost contemporaneously with its entrance into the war, and those to Great Britain averaged about $400,000,000 a month for the fiscal year. The following table shows Great Britain's actual transactions for the fiscal year:

Expenditures	$13,481,107,025
Revenue receipts	3,536,172,825
Loans	10,196,769,005

[1] In a speech in the House of Commons, July 24, 1917, Mr. McKenna stated that the average daily expense would probably be $40,000,000. *Chronicle*, July 28, 1917, p. 329.

This year was marked by a greater dependence upon Treasury bills and short term Exchequer bonds than any previous period. The outstanding issues of the former grew by $2,544,500,000 during the fiscal year, while the latter increased $471,500,000. Chancellor Bonar Law was much in favor of this method of short term borrowing, supplemented by the plan of continuous sale of war bonds which was brought out later in the year. In December, 1917, announcement was made that no further issues of Exchequer bonds would be made.

The plan of continuous borrowing just alluded to was known as the "Drummond Fraser Day-to-Day Borrowing." This was a change from the previous policy of a fixed subscription period and constituted an innovation in British finance. National war bonds were placed on continuous sale at the Treasury, the Bank of England, the post offices, and other places. According to a statement by the Chancellor of the Exchequer, the minimum amount needed to be subscribed by this method was $100,000,000 per week. This rate was just about maintained during the remainder of the fiscal year, the total subscriptions from October 1, 1917, to the end of March, 1918, amounting to about $2,750,000,000. As part of this program of continuous sale, there should be mentioned also the war savings certificates which amounted during the fiscal year to $311,000,000.

The bonds issued under the plan of continuous sale, which constituted Great Britain's fourth war loan, consisted of two kinds of national war bonds. The first of these was a 4 per cent tax-free bond similar to that of the previous January issue, and was payable at 105 in 1927. The other was a 5 per cent bond with three maturities, five, seven and ten years, payable at 102, 103 and 105 respectively. The bonds were issued at par. The holders of these national war bonds were given the privilege of converting them into the 4 and 5 per cent issues respectively of the third loan, at 95 and 100, as well as into any future war bonds. Holders of the 4½ per cent war loan of 1915 and the various issues of Exchequer bonds might convert these into the new national bonds maturing in 1924 or 1927 of either

description. The credit transactions for the fiscal year may be stated as follows:

BORROWINGS DURING 1917–18

Form		Amount
Treasury bills, net		$2,544,425,000
5 per cent Exchequer bonds, 1922		411,352,000
6 per cent Exchequer bonds, 1920		220,000
3 per cent Exchequer bonds, 1930		60,106,000
War savings certificates		311,000,000
Other debt		3,707,520,490
4 and 5 per cent war loan		840,413,100
National war bonds		3,071,075,000
		$10,946,111,590
Less redemptions:		
War loans, Exchequer bonds under 1917 act	$114,578,185	
War expenditure certificates, converted	3,143,500	
Other debt, retired	505,345,165	
Other advances repaid	126,275,735	
		749,342,585
Net debt created by borrowing		$10,196,769,005

Expenditures, 1918–19

The fifth war budget was introduced by Mr. Bonar Law in April, 1918. This estimated the year's expenditures at $14,860,000,000, of which $4,210,250,000 was to be raised by taxation, and the remainder secured by loans.[1] According to this program some 23.3 per cent of the year's expenditures (deducting normal expenditure and advances to Allies and Dominions) were to be raised by taxation, which may be considered a good showing for the fourth year of the war. The budget was severely criticized for the slight additions it made to taxation, as it provided for new revenue amounting, according to the

[1] The relation of revenue to expenditure and loans is shown in the following table:

Fiscal Year	Expenditure	Revenue	Loans
1913–14	$987,464,845	$991,214,485	.....
1914–15	2,802,367,665	1,133,470,000	$2,157,250,000
1915–16	7,795,791,888	1,683,830,000	5,977,159,165
1916–17	10,990,563,550	2,867,145,000	8,149,508,125
1917–18	13,481,107,025	3,536,170,000	10,196,769,005
1918–19	13,896,505,940	4,444,104,125	9,873,337,515

estimate, to only $339,000,000.[1] The leading economic journals were a unit in insisting upon a vigorous tax policy and in discountenancing the continuance of loans on a large scale. The Chancellor's term, said the *Economist,* "has been marked by highly successful borrowing. Now he has another chance to prove his mettle as a tax gatherer. We can only hope that he will not foozle his stroke as disastrously as he did a year ago, when he imposed a petty $30,000,000 of fresh taxation." In an article headed "Another Year of Bad Finance" the *Nation* had the following to say: "The debauchery of borrowing in which ever higher prices are paid for loaned money furnished for a large part out of swollen war profits and for the rest out of bank inflation, is to continue, and on a larger scale than ever." And finally, the *Statist* apologetically remarked, "In fairness to him it must be admitted he has never claimed to be a financial expert." [2]

The actual expenditures of this fiscal year were as follows:

Expenditure	$13,896,505,940
Revenue	4,444,104,125
Loans	9,873,337,515

Mr. Law stated his financial policy in this language: "My predecessor laid down a rule which I adopted last year, that in presenting the budget the Chancellor of the Exchequer should aim to produce such a result that on the assumption that the war came to an end at the close of the year which his financial statement covers, there will be sufficient revenue, without new borrowing or taxation, to make sure that both normal expenditure and debt charge would be met in that way." Such a state-

[1] The new taxation added by each budget during the war is shown in the following table:

Budget of	Amount
April, 1914	$67,995,000
November, 1914	360,500,000
September, 1915	559,560,000
April, 1916	364,750,000
May, 1917	325,860,000
April, 1918	339,000,000

[2] Quoted in *Living Age,* vol. 297, pp. 509, 636, 635.

ment might quiet a man of affairs interested only in the problem of meeting maturing bills, but it could hardly satisfy the student of finance.

Even before the conclusion of the previous fiscal year it had been found necessary to grant another vote of credit, but as its proceeds were spent during the fiscal year 1918–19, it may properly be included in the account of this year. The following votes of credit were granted during this year:

March 7	$2,500,000,000
June 18	2,500,000,000
August 1	3,500,000,000
November 12	3,500,000,000

The August vote was expected to provide funds to carry on the war until the end of October so that with its passage the war credits may be said to have ended as the armistice came so soon thereafter. The total credits through August amounted to $40,210,000,000.

The end of the fourth year of war led to various calculations as to the cost of the war. According to a statement published by the Treasury on July 30, 1918, the war was then costing the people of Great Britain $34,920,000 a day, or nearly $25,000 a minute. The total government expenditure during the war period was placed at $39,650,000,000, of which $10,105,000,000 had been provided by revenue and the balance—$29,545,000,000—was borrowed. However, if normal prewar expenditures, loans to Allies, and other similar items be deducted, the net cost of the war would be $35,650,000,000. On this basis 23.4 per cent was raised by taxation.[1]

If the date of the armistice be selected as marking the end of the war, and consequently a convenient period for estimating its costs, the following statement gives the facts from the beginning of the war to its practical cessation. The total expenditure by Great Britain from August 1, 1914, to November 16, 1918, amounted to $43,311,696,385. Of this amount $11,101,-

[1] *New York Tribune*, July 31, 1918; *Economist* (London), August 3, 1918, p. 135.

178.595 was raised by taxation, and $32,210,517,790 by means of loans. In round numbers, about one quarter of the expenditure was defrayed out of revenue, but this includes the normal peace time expenditure as well as that for war. Since the costs of the war did not cease with the signing of the armistice, however, the final estimate of expenditure must be deferred until a later date.

Loans, 1918–19

The loans which were obtained this year came principally from two sources: (1) continued sale of national war bonds at home, and (2) advances from the United States Government. The sale of Exchequer bonds had been stopped in December, 1917, so that no further use was made of this form of obligation during the year. Only slight resort was made to Treasury bills, the increase of these at the end of the year amounting only to $750,000,000 net. From the sale of war bonds about $5,000,000,000 was secured down to their withdrawal on January 18, 1919.

The plan of continuous borrowing had on the whole been successful. It had avoided the frantic drives and the periodic disturbance to the money market which attended large loans with fixed periods of subscription. Mr. Drummond Fraser, the deviser of this plan, in a letter to the *Economist*[1] claimed for that plan the following advantages: (a) it has saved the government in interest alone a sufficient sum to start a sinking fund for the repayment of the bonds; (b) it has provided a substantial depreciation fund for the 1917 war loan; (c) it aided the rise in the market price of the 1917 war loan to the issue price, making it unnecessary for the government to find money for the depreciation fund promised in the prospectus, and (d) by furnishing a steady and continuous stream of subscriptions it undoubtedly stimulated savings out of current earnings, rather than the purchase of bonds out of loans at banks with the attendant inflation. But even the day to day borrowing system

[1] October 5, 1918, p. 424.

was not without its occasional outbreaks of feverish appeals in the way of "special weeks," of competition between cities, and other methods of arousing flagging interest in the loan. One of the methods adopted to stimulate popular subscription was introduced by certain department stores in London. Some $25,000,000 of bonds were sold, each bearing a distinctive number. At the end of the "campaign" these numbers were drawn and prizes ranging from $2,500 down to $25 were given. The drawing was conducted by no less distinguished persons than the Mayor of London and Lady Asquith. This was, however, a purely private venture carried through at the expense of its promoters who undoubtedly found its reward in the advertising they secured. A similar plan was agitated by the press for adoption by the government, but was rejected by the government as both unnecessary and undesirable; in fact, with the exception of Germany, whose premium loans contained a lottery feature, no belligerent made use of the lottery plan during the war.

Another resource which Great Britain used during the year was the war savings certificates. With the establishment in 1916 of the National War Savings Committee much had been done to encourage the savings of small investors. By the beginning of 1918 there were fifteen hundred local war savings committees established to promote war savings by publicity and other methods, and to organize cooperative associations for savings by instalments. Forty thousand such associations were reported at work at the beginning of the year 1918.[1] School associations were also formed, and much was done to further the savings and investment habits permanently as well as for the war. The sale of war savings certificates during the fiscal year 1918–19 amounted to $450,000,000.

A sixth war loan was issued on February 1, 1919. This consisted of two issues of 5 per cent bonds subject to the income tax for five and ten years respectively, and a four per cent tax

[1] B. E. Blackett, "England's Effort to Pay for the War," in *Proceedings of Academy of Political Science*, vol. 7, pp. 59-70.

compounded bond for ten years. The issue and redemption prices remained the same as the previous loan. The new issue differed from the old in that the seven year bond was dropped and the new bonds carried no right of conversion into past or future war loans.

A valuable supplement to the internal war loans was the advance of funds by the United States Government to Great Britain in common with the other Allies. Those to Great Britain amounted at the end of the fiscal year 1919 to $4,116,323,825.

While Great Britain was by no means financially exhausted, it may safely be asserted that the assistance of the United States afforded a welcome, if not indispensable, relief to the British Treasury. The mere loan of this amount was the smallest part of the financial relief afforded, for the United States at the same time assumed the burden of financing the other Allies and thus gave to Great Britain a free hand in the ordering of her own finances. The credit transactions of the fiscal year 1918–19 are shown in the following table:

BORROWINGS DURING 1918–19

Form		Amount
5 per cent Exchequer bonds, 1922		$20,175
6 per cent Exchequer bonds, 1920		4,185
3 per cent Exchequer bonds, 1930		4,018,000
War savings certificates		447,500,000
Other debt (U. S. advances, etc.)		2,776,123,020
National war bonds		5,332,068,900
Ways and Means advances		1,313,603,235
		$9,873,337,515
Less: Redeemed Treasury bills	$82,320,000	
War loans, Exchequer bonds, etc.	329,795,360	
War expenditure certificates	114,661,500	
Other debt	772,123,795	
		1,298,900,655
Net debt created by borrowing		$8,574,436,860

The loan transactions of the four and a half years of war are clearly shown in the following table, which indicates the amounts of the various loans, the extent of their conversions into subsequent loans, and the dependence which was placed at different periods upon the different methods of borrowing. In

the last column are shown the growth of the debt and its distribution among the various forms of obligation:

GROWTH AND CHANGES IN THE NATIONAL DEBT

1914 to 1919 (in millions of dollars)

Form	Aug. 1, 1914	Mar. 31, 1915	Mar. 31, 1916	Mar. 31, 1917	Mar. 31, 1918	Mar. 31, 1919	Increase Decrease
Funded debt	2,933.5	2,916.5	1,592.5	1,589.0	1,588.5	1,588.5	— 1,345.0
Term annuities	148.0	140.0	130.5	120.0	109.5	109.5	— 38.5
3½% war stock	....	1,745.5	314.0	313.5	313.5	313.5	+ 313.5
4½% war stock	....	....	4,500.0	100.0	80.5	80.5	+ 80.5
4 & 5% war stock	....	....	....	9,812.0	10,452.5	9,969.0	+ 9,969.0
National war bonds	....	....	....	....	3,129.0	8,461.0	+ 8,461.0
Treasury bills	77.5	386.0	2,834.0	2,318.5	4,867.0	4,785.0	+ 4,707.5
Exchequer bonds.	102.5	337.0	885.0	1,601.5	1,958.5	1,963.0	+ 1,860.5
War savings certificates	....	....	7.0	372.5	688.5	1,136.5	+ 1,136.5
War expenditure certificates	....	....	....	118.0	114.5	....	....
Other debt	....	....	46.0	1,582.5	4,684.5	6,679.0	+ 6,679.0
American loan	....	....	257.0	257.0	257.0	257.0	+ 257.0
Temporary advances	5.0	....	99.5	1,087.5	961.5	2,282.5	+ 2,277.5
	3,266.5	5,525.0	10,665.5	19,272.0	29,205.0	37,625.0	+34,358.5
Other capital liabilities	286.	285.	283.5	261.	246.	236.	— 50.
Total liabilities	3,552.5	5,810.0	10,949.0.	19,533.	29,451.	37,861.	+34,308.5

The account of British borrowing would not be complete without a statement of the bank inflation which took place during this period. On this point the following quotation may be made from the London *Economist,*[1] which never tired of criticizing the government for lack of a sufficiently vigorous policy of taxation and arraigning it for its loan policy which, it insisted, was inevitably followed by inflation: "Apart from this question of taxation, on which our present rulers have shown such serious faults, they have simply followed the old fashioned system of borrowing as much as they could at home and abroad, and filling the gaps that still remained between the receipts and the outgo by watering the currency and raising the wind by means of bank credits."

[1] November 23, 1918, p. 703.

The extent of the growth of fiduciary money in Great Britain is shown for the first four years of the war in the following table:

Form	July 10, 1914	July 10, 1918
Fiduciary issue of Bank of England	$92,250,000	$92,250,000
Currency notes not covered by gold	.....	1,152,060,000
	$92,250,000	$1,244,310,000
Bank of England notes issued against coin and bullion	192,380,000	326,840,000
Currency notes covered by gold	.....	142,500,000
Estimated amount of gold coin held by bank exclusive of gold coin held by issue department Bank of England and in public circulation	615,000,000	200,000,000

In a country like Great Britain where such a small proportion of the total volume of business is transacted by means of actual cash, such a table as that just given by no means indicates the real inflation of the total currency (notes plus deposits) which had taken place during this period. This is better indicated by the growth in the item of deposits. As the banking system is centralized to such a marked degree in the Bank of England, a record of the changes in the chief items of its statement will show the expansion along this line:

BANK OF ENGLAND'S COMPARATIVE STATEMENTS[1]

(in millions of dollars)

	1914 July 29	1915 July 28	1916 July 26	1917 July 25	1918 July 24
Circulation	148,530	167,655	180,225	193,680	278,715
Public deposits	63,565	888,180	264,945	233,070	173,285
Other deposits	272,090	477,700	426,205	634,195	683,490
Government securities	55,025	265,775	210,940	240,635	280,310
Other securities	236,535	960,975	376,095	556,825	516,595
Reserve notes and coin	134,375	229,125	193,905	159,210	149,220
Coin and bullion	190,655	304,530	281,880	265,645	355,690
Ratio reserves to liabilities	40.03	16.77	28.05	18.36	17.41
Bank rate	4	5	6	5	5

Taxation, 1918–19

In the budget for 1918–19 Chancellor Law estimated the revenues at $4,210,250,000, of which $339,000,000 was to be gained

[1] *Chronicle*, July 27, 1918, p. 320.

from new taxation, a third of which was due to an increase in the income tax from 5s. to 6s. in the pound. No change was proposed in the tax on incomes less than $2,500. The supertax was raised from 1s. to 4s. 6d. in the pound. From these two taxes together, a yield of $114,750,000 was anticipated. Customs were estimated to bring in an additional $114,250,000, the chief items being an increase in the tobacco tax from 1s. to 8s. 2d. per pound, and of sugar from 11s. 8d. to 25s. 8d. per hundredweight. A doubling of the tax on spirits, beer, and matches was expected to yield $89,250,000 additional, while the balance was to be obtained from an increase in the stamp duty on checks and an increase in postal rates. Almost two-thirds of the increase in existing taxation was thus to be obtained from indirect taxes.

A luxury tax was also voted to be put into effect when the committee to which it was referred should agree on the details. This was to be at the rate of 2d. in the shilling or 6 per cent, collected by means of a stamp duty. The so-called luxury tax committee made its report to the Chancellor in August,[1] dividing articles into two groups: (a) those in Schedule A on which the tax was to be paid whatever the price and which included the following articles: jewelry, fans, perfumes, liveries, pictures, sculptures, liquors, clothing made of silk or furs or trimmed with fur, rents for fishing and shooting rights, riding and hunting clothes, pianos and musical instruments, billiard tables, yachts, and motor cars; (b) Schedule B included a list of articles on which the tax was to be paid when the price was above certain specified minimums—such as meals and accommodations at clubs, hotels and lodgings; shoes, hats, furniture, thoroughbred horses, dogs, bicycles, and all articles for personal use. The tax was a well meant effort to take toll of those who spent money on superfluities or unnecessarily costly articles, but the committee was criticized by the *Economist* [2] on the ground that it never really made up its mind whether its object was "to get revenue or check

[1] *Chronicle*, August 17, 1918, p. 630.
[2] August 17, 1918, p. 205.

expenditure." Owing to the newness of the tax, the committee did not venture to estimate the expected yield.

In the following table is given a summary statement of the receipts from taxation during the six years ending March 31, 1919:

REVENUE, 1914 TO 1919

(In thousands of dollars)

Source	Fiscal year ending March 31 1914	1915	1916	1917	1918	1919
I *Taxation*						
Customs	172,250	193,310	298,030	352,805	356,305	513,900
Excise	197,950	211,565	306,050	281,900	193,860	297,200
Estate duties....	136,795	141,910	155,175	156,160	158,370	151,310
Stamps	49,830	37,885	33,820	39,390	41,500	61,190
Land tax	3,500	3,150	3,300	3,200	3,325	3,150
House duty	10,000	9,650	9,950	9,700	9,800	9,250
Property, income, supertax	236,245	346,995	641,600	1,025,165	1,197,545	1,455,930
Excess profits...	.....	.....	700	699,600	1,101,070	1,425,140
Land value duties	3,575	2,060	1,815	2,620	3,425	3,320
	810,145	946,525	1,450,440	2,570,540	3,065,200	3,920,390
II *Nontax Revenues*						
Postal service...	105,950	102,000	120,500	121,750	126,000	147,000
Telegraph service	15,400	15,000	16,750	16,750	17,500	19,000
Telephone service	32,650	31,250	32,250	32,000	33,000	34,000
Crown lands....	2,650	2,725	2,750	3,250	3,450	3,800
Suez Canal and sundry loans..	7,895	6,380	12,155	40,275	30,280	58,397
Miscellaneous ..	11,515	29,585	48,980	82,580	260,640	261,516
	176,060	186,940	233,385	296,605	470,870	523,713
Grand total	986,205	1,133,465	1,683,825	2,867,145	3,536,070	4,444,103

Total 1915	$1,133,470,000
Total 1916	1,683,830,000
Total 1917	2,867,145,000
Total 1918	3,536,170,000
Total 1919	4,444,103,000
	$13,664,718,000
Excess above normal	$8,734,593,000

The British chancellors have been criticized, and by none more severely than by their own people and journals, for not imposing

heavier taxation, especially at the beginning of the war. To such critics an impressive answer is given in the table above. An increase of revenue from less than $1,000,000,000 to over $4,000,000,000 during the course of a ruinous war shows a remarkable application of the tax policy. It must be said, however, that the government was slow in initiating a vigorous tax system. The increase of revenue for 1915 over the previous year was only 14.35 per cent and for the small increase Mr. Lloyd George has been severely criticized He seems to have held the view that war in itself constituted a crushing burden upon the people, and that they would not be able to stand additional taxation. It was soon discovered, however, that this war was bringing to Great Britain, or at least to certain sections of it, considerable war prosperity, and the next two years saw a more vigorous resort to taxation, the increase of the fiscal year 1916 over 1915 being 48.56 per cent, while 1917 registered a still greater relative increase, or 70.27 per cent over 1916. This measured the apex, for while each of the next two years showed an absolute growth in revenue, the relative increase declined.

The question whether as much was raised from taxation as should have been, or whether Great Britain relied too much upon loans to finance the war, is a problem into which it is not possible to enter here. In general, it may be said that Great Britain met about one-fourth of the cost of the war out of revenue. While this fell below the standard of 47 per cent which had been realized during the Napoleonic Wars and which was continuously held up as a goal by those who urged heavier taxation, the magnitude of the expenditures during the present struggle may be urged as an excuse, if not a reason, for falling short of this ideal. The following table shows the ratio of taxes to expenditures:

RATIO OF TAXES TO EXPENDITURES[1]

(In thousands of dollars)

Year	Expenditures	Revenues	Ratio	Taxes	Ratio Taxes to Expenditures
1914	$987,465	$991,214	100	$810,145	82.5
1915	2,802,367	1,133,465	40.7	946,525	33.6
1916	7,795,791	1,683,425	21.6	1,450,440	18.6
1917	10,990,563	2,867,145	26.1	2,570,540	23.4
1918	13,481,107	3,536,070	27.8	3,065,200	24.8
1919	13,896,506	4,444,103	31.9	3,920,390	28.1

One of the striking features of the British tax program was the small number of sources from which the increased revenue was drawn. More than half of all came from the income and excess profits taxes. Moreover, the government was content on the whole to increase the rates of existing taxes—with the very notable exception of the excess war profits tax—rather than experiment with new and untried sources of revenue. In this respect the English differed from the French and Italians.

The proportion of tax revenue to be derived from direct and indirect taxes was the subject of frequent discussion and a greater resort to direct taxation was very generally urged. Reference to the table given above, however, will show that considerably over half of the tax revenues—at least after the excess war profits tax got into working order—was derived from direct taxes. Moreover, the indirect taxes were of considerable value in checking certain forms of undesirable expenditure. This was particularly true of the last budget. More significant in this respect was the slowness in introducing taxation to check extravagance and undesirable expenditure. There was decided timidity in imposing drastic taxes on beer and liquor for fear of offending the working classes, and not until the war was practically over was a luxury tax introduced. Taking it all in all, the English tax

[1] If the advances to the Allies and Dominions be subtracted from the expenditures, the proportion of the total expenditures defrayed out of revenue would be much higher. For the years 1915 to 1918 the expenditure-revenue ratio would be 32.2, 32.2, 35.7, 33.7 respectively, and the expenditure-tax ratio would be 27.4, 27.4, 32.0 and 30.1 respectively. While this is far below the proportion contributed during the Napoleonic Wars, which according to Mr. Bernard Mallett (*British Budgets*, 1887–1913) was 47 per cent, it yet constitutes by far the best showing of any of the European belligerents.

policy showed no bold originality, but proceeded along well known lines with cautious steps. Under Chancellor McKenna only was a really vigorous use made of the taxing power.

A careful survey of the finances of the war was made by Sir Edward Holden, President of London Joint City and Midland Bank, Ltd., at the general meeting of the shareholders on January 29, 1919.[1] According to his statement, the total war expenditure from August 1, 1914, to December 31, 1918, amounted to $40,640,000,000. This war debt was met by receipts from revenue of $7,120,000,000 and borrowings to the amount of $33,520,000,000, but of this latter amount $6,917,500,000 was loaned to the Allies and Dominions. If these credits be deducted, there has been a net addition to the British national debt during the war of $33,750,000,000, raising it from $3,250,000,000 to $37,000,000,000. If 50 per cent of the loans made to the Allies be regarded as recoverable—an estimate made by the Chancellor—and some other adjustments be made, the net amount of the debt may be finally set down at about $32,090,000,000. "This is approximately the figure," concluded Sir Edward, "on which we shall have to pay interest and sinking fund charges, unless means are found to relieve us of part of the burden."

The cost of the war to Great Britain may be computed by regarding the expenditures ($987,465,000) and the revenues ($991,214,000) of 1913–14 as normal, and deducting that amount from the expenditures and revenues during the war period. The excess expenditures over normal would thus represent the war costs, as follows:

Expenditures:		
1914–15	$2,802,367,665	
1915–16	7,795,791,888	
1916–17	10,990,563,550	
1917–18	13,481,107,025	
1918–19	13,896,505,940	
	$48,966,336,068	
Less five years normal	4,937,324,200	
Excess, or war cost		$44,029,011,868

[1] Reported in the *Economist* (London), February 1, 1919, p. 142.

This expenditure was met by:

Revenue:		
1914–15	$1,133,465,000	
1915–16	1,683,425,000	
1916–17	2,867,145,000	
1917–18	3,536,070,000	
1918–19	4,444,103,000	
	$13,664,208,000	
Less five years normal	4,956,072,425	
		$8,708,135,575
Creation of debt:		
Borrowings—		
1914–15	$2,157,250,000	
1915–16	5,977,159,165	
1916–17	8,149,508,125	
1917–18	10,196,769,005	
1918–19	8,574,436,860	
		35,055,123,155
		$43,763,258,730

CANADA

The war came at an inopportune time for Canada, for the country was just recovering from the consequences of an exploded boom which brought in its train a collapse of land values, a decline in imports, a falling off in immigration, tight money, and general stagnation of trade. The debt of the Dominion, while not nearly so great as that of European nations, imposed a per capita charge four times that in the United States. On March 31, 1914, the net debt was $336,000,000. In addition to this, however, there was an indirect debt in the form of a guarantee of railway bonds to the amount of $240,000,000.

Like its wealthier allies, the Canadian Government resorted to bank advances at the outbreak of war to supply it with the needed funds. The organization of the banks in Canada, with a well developed system of branch banking, is much more centralized than in the United States, and consequently prompt and effective action in a crisis is comparatively easy. Such a crisis arose when it became evident that war in Europe was inevitable and that Great Britain might be drawn into it. The stock exchange was closed on July 29, and on August 3 specie payments were suspended in order to conserve the gold supply. No general moratorium was declared, although several Canadian provinces, including Ontario, Manitoba, Saskatchewan, Alberta and British Columbia adopted more or less modified moratoria. The notes in circulation, both those issued by the Dominion and by the chartered banks, showed a steady but by no means alarming increase The changes in the volume of notes issued and in circulation during the next four years are shown in the following table:

NOTE CIRCULATION, 1914–1919

Kind	March 31, 1914	March 31, 1919
Dominion notes	$114,295,719	$298,058,697
Chartered bank notes	96,848,384	214,576,870
Total	$211,144,103	$512,635,567

Expenditures, 1914–15

Canada's initial war expenditure was met by advances from the mother country. An arrangement was made by which the Bank of England was to advance all the money needed until the end of the fiscal year (March 31, 1915) for Canada's military and naval expenditures. These were limited under the arrangement to the expense of mobilizing, equipping, and training the troops. When they were turned over to the British military authorities the further costs were assumed by the British Government.

Parliament appropriated $150,000,000 for war purposes during the fiscal year, $50,000,000 being voted in August, 1914, and $100,000,000 in February, 1915. Canada's actual expenditure to March 31, 1915, amounted to $65,939,492.

Taxation, 1914–15

Canada immediately inaugurated a taxation program, what may be called the first war budget being introduced on February 11, 1915. This proposed an addition to taxation which included a general increase of 7½ per cent in import duties; one-fourth of 1 per cent on average bank notes in circulation; a 1 per cent tax on the gross income of loan and trust companies; 1 per cent on premiums of life and marine insurance policies; 1 per cent on cable and telegraphic messages; graded taxes on railway and other travel and accessory facilities; a stamp duty on checks, money orders and postcards, and a stamp duty on proprietary medicines, perfumes, wines, champagne. The measure became law on April 8, 1915. The increase in customs duties was estimated to yield $17,000,000 and the new special taxes about $8,000,000 annually. This $25,000,000 was described by the Finance Minister as a "considerable burden." Canada's revenues had shown a steady growth from 1910, when they had reached $100,000,000, to their highest pinnacle in 1913 of $168,000,000. A loss of $30,000,000 in customs alone as a result of the war reduced her revenue to $133,000,000 in 1914–15. The new levies resulted in a total

revenue return of $172,000,000 for the first year during which they were operative (1915–16), although customs duties were still $6,000,000 below their prewar level.

Expenditures, 1915–16

In his budget speech of February, 1916, Minister of Finance White stated that the expenditures for the first nine months of the fiscal year down to January 1, 1916, amounted to $85,748,898, bringing the total costs of the war to that date up to $146,499,374. The main factor in raising the cost of war was the increase in the military establishment from 100,000 to 500,000 men. By the end of the fiscal year war expenditure reached $169,384,654, or a total of $237,961,308. It was manifest that the sums raised during the preceding year, large as they seemed at the time, would be insufficient to meet the growing expenditures. Accordingly the new budget proposed to borrow $215,000,000 and also to impose new taxes.

Loans, 1915–16

Canada's first external loan was for $25,000,000, placed in London in March, 1915, and was a 4.5 per cent loan payable in 1920 and due in 1925. In August, 1915, she placed a loan of $45,000,000 in New York to meet the cost of supplies and materials purchased there. The loan consisted of: (a) $25,000,000 one year notes, and (b) $20,000,000 two year notes, both bearing 5 per cent.

In November, 1915, the first internal war loan was brought out. It was dated December 1, 1915, and was a 5 per cent ten year bond issued at 97.5, the amount being fixed at $50,000,000. The total subscriptions amounted to $113,000,000, of which $100,000,000 was accepted. As the subscribers to this loan numbered only 24,862, it is evident that most of the loan was taken by the banks and corporations or by wealthy subscribers. The bonds of this and subsequent issues were tax exempt.

Taxation, 1915–16

The most important item in the tax program was the proposed excess profits tax. From munition making firms, irrespective of the amount of their capital, and from other companies with a paid up capital of over $50,000, one quarter of all net profits over 7 per cent made in each accounting period since the beginning of the war was to be collected. It was estimated that this tax would produce from $20,000,000 to $25,000,000 annually.

Expenditures, 1916–17

The expenditures for this fiscal year totaled $498,342,388, of which war expenditures alone amounted to $321,864,160, bringing war expenditures to that date up to $559,825,198. This year's expenditure exceeded the combined expenditures of the two previous years by over $84,000,000.

Loans, 1916–17

Taxes were wholly insufficient to meet the growing burden of war, and the main dependence in Canada, as in every other country, was of necessity on loans. During this year Canada again turned to the United States and in March, 1916, placed there a $75,000,000 5 per cent five-fifteen year loan, $25,000,000 of which took up the then maturing portion of the 1915 loan.

In September, 1916, the second internal war loan was issued, consisting of $100,000,000 5 per cent fifteen year bonds dated October 1, 1916, issued at 97.5. The subscriptions amounted to $201,000,000, but the Dominion accepted only the amount originally asked for, allotting the subscriptions among the 36,526 subscribers. In both amount and number of subscribers, the second loan showed an encouraging growth over the first.

So rapidly had expenditures grown, however, that a third loan was necessary within five months after the second, and therefore in March, 1917, the third internal loan of $150,000,000 was offered, in 5 per cent twenty year bonds issued at 96. The

total subscriptions aggregated $260,000,000, there being 40,800 subscribers, but only the original amount asked was accepted, allocation being made.

Taxation, 1916–17

Finance Minister White delivered a very brief budget speech on April 24, in which he stated that the total outlay to that date, so far as capable of ascertainment, was about $600,000,000; that as a result of this war expenditure, the Dominion debt had grown from $336,000,000 prewar to over $900,000,000, and estimated that by March 31, 1918, it would total $1,200,000,000. He announced the policy of the government to be "to fund the war indebtedness so as to postpone its maturities to periods well beyond the end of the war, and by increased taxation on the one hand and the reduction of current expenditure on the other, to meet from the annual income all annual outlays, including increased interest and pension charges, and in addition a substantial amount of the war expenditure itself."

The actual receipts of revenue for the year ending March 31, 1917, were $232,601,294, which was an increase of $61,000,000 over the year 1916, and $100,000,000 over the year 1915. The total current and capital expenditure, including war interest and charges in line with the announced policy, had amounted to $172,000,000, leaving a surplus of $60,000,000 for war purposes from revenue. Interest on the public debt rose from $15,700,000 in 1915, to $21,400,000 in 1916, and to $35,800,000 in 1917. New taxation was therefore imperative.

The business profits war tax of 1916 was increased to 50 per cent of profits in excess of 15 and not exceeding 20 per cent. and 75 per cent of all profits in excess of 20 per cent. The receipts from this tax under the first rate of levy amounted to only $12,500,000, which was considerably below the estimate. The receipts from the increased rate were conservatively estimated at $20,000,000.

Expenditures, 1917–18

The total expenditures for this fiscal year amounted to $543,547,283, of which $345,547,283 were war expenditure, bringing the total war cost to that date up to $905,372,481. Ordinary expenditure had amounted to $203,000,000, which, in accord with the financial policy announced in 1916, included the carrying charges of the war debt and all ordinary expenditure apart from current war costs. As the revenues of the year amounted to $258,000,000, a surplus of $55,000,000 was available to meet these war expenditures. Minister of Finance McLean estimated that this, together with the money secured by the fourth war loan, would finance the war until July, 1918.

The budget for the new year, ending March 31, 1919, he estimated as follows:

Expenditures:	
Civil budget	$230,000,000
War expenditures	425,000,000
Advances to Imperial Government	325,000,000
Total	$980,000,000
Receipts:	
Revenue	$270,000,000
Advances by Great Britain	300,000,000
Unexpended balance of fourth loan	130,000,000
Total	$700,000,000

This would leave a deficit of $280,000,000 to be met by loans.

Loans, 1917–18

During this year Canada placed in the United States a loan of $100,000,000 consisting of 5 per cent two year notes dated July, 1917, which were issued to meet adverse trade balances occasioned by large purchases of war materials here.

In November, 1917, the fourth internal war loan was brought out. It differed from the three previous ones in several respects. First, the rate of interest was increased from 5 to 5.5 per cent; the bonds were issued at par instead of a discount; the investor was given a choice of three maturities, namely, five, ten and

twenty years; and finally, whether as a result of better organization or other causes, the number of subscribers was greatly increased, reaching the record total of 820,035, or one in every ten of the total population. The amount asked for had been placed at $150,000,000. The amount subscribed was $419,289,400, of which approximately $398,000,000 was allotted.

During this year war savings certificates were offered. Three experiments were made in the denominations in which these were put out. The first, in January, 1917, placed the denominations at $25, $50, and $100, but as this was found beyond the reach of the average small saver, they were reduced in August to a $10 par which was sold at $8.60, due in three years at par. Although the receipts from this denomination (including the earlier and higher priced certificates) reached about $12,000,000 by the end of the fiscal year, they were brought down in September, 1917, to the English and American denomination of $5 par, with supplementary 25 cent thrift stamps.

The Dominion also offered a 5 per cent three year Dominion debenture stock to be used exclusively for the purchase of war supplies, in multiples of $500. By December 31, 1917, $10,000,000 of this stock had been placed. This was withdrawn from the market December 10, 1918, the total outstanding then being $28,000,000.

Taxation, 1917–18

A substantial decline in customs revenue was anticipated, but it was proposed to meet this by extra taxation, including an increased business tax, a new income tax, taxes on light beers, tobacco, cigars, cigarettes, and coffee, as well as a new tax of 10 cents a pound on tea, and 10 per cent on motor cars, jewelry, moving picture films and phonographs. The business profits tax was enlarged by bringing within its scope industries capitalized from $25,000 to $50,000. A national income tax was introduced for the first time in Canada in July, 1917. Exemptions were placed at $1,500 for unmarried and $3,000 for married persons. All income above these exemptions bore a normal tax of 4 per

cent. Supertaxes were then imposed ranging from 2 per cent on $6,000 to 25 per cent on $100,000 and over. Corporations and joint stock companies were not subject to the tax. Later in the year, these exemptions were lowered to $1,000 for unmarried and $1,500 for married persons, and the supertax rates on incomes over $50,000 were increased, the maximum levy being 50 per cent on incomes over $1,000,000. This tax being new, no estimate as to its yield was made.

Expenditures, 1918–19

The total expenditures for this year amounted to $684,476,306, of which $450,000,000 were war expenditures, bringing total war costs on March 31, 1919, up to $1,355,000,000. Ordinary expenditure amounted to $234,476,306 and revenues to $310,968,124, which, in accord with the policy announced, left a surplus of $76,492,000 to apply against war expenditure.

Loans, 1918–19

As the war dragged on through the summer, a fifth loan became necessary. Accordingly, in October, 1918, the fifth internal war loan was offered. This was $300,000,000 in amount, and in form was a 5½ per cent five-fifteen year bond issued at par. The subscriptions to this loan reached a total of $690,000,000, and were applied for by 1,080,000 subscribers. The Dominion accepted the whole amount.

The results of the five internal Canadian war loans were as follows:[1]

Record of Loan	1st, Nov. 22, 1915	2d, Sept. 12, 1916	3d, Mar. 12, 1917	4th, Nov. 12, 1917	5th, Oct., 1918
Amount	$50,000,000	$100,000,000	$150,000,000	$150,000,000	$300,000,000
Public subscriptions	78,729,500	151,444,800	200,768,000	419,289,000	690,000,000
Bank subscriptions	25,000,000	50,000,000	60,000,000	.....	.....
Total	$103,729,500	$201,444,800	$260,768,000	$419,289,000	$690,000,000
No. subscribers	24,862	34,526	40,800	820,035	1,080,000
Interest, per cent	5	5	5	5.5	5.5
Maturity	Dec. 1, 1925	Oct. 1, 1931	Mar. 1, 1937	5-10-20 yrs.	Oct., 1934
Price	97.5	97.5	96	Par	100
Amount accepted	$100,000,000	$100,000,000	$150,000,000	$398,000,000	$690,000,000

[1] Compiled from *Canadian Annual Review*, 1917, and later data.

The costs of the war to Canada as submitted to the Reparations Commission at Paris were reported to have been estimated at $1,500,000,000.[1] This sum would seem to include merely the direct money outlay and interest charges on the war debt, as shown in the war expenditure and increased civil budget which carried the interest charges.

The actual war cost to Canada is shown in the following table of expenditure and revenue during the war period:

Fiscal Year	Civil Expenditure	War Expenditure	Revenues
1914–15	$182,162,034	$65,936,492	$133,073,482
1915–16	170,317,848	169,384,654	172,149,393
1916–17	176,478,288	321,864,160	232,601,294
1917–13	203,000,000	345,574,000	258,000,000
1918–19	234,476,306	450,000,000	310,968,124

Expenditures:	
Total direct war expenditure	$1,352,759,306
Increase in civil budget for five years over normal in 1914	312,816,726
Total	$1,665,576,032

This was met by:

Revenue:			
Excess revenue over 1914 normal during five years			$265,792,193
Loans:			
Internal,			
1st, November, 1915		$100,000,000	
2d, September, 1916		100,000,000	
3d, March, 1917		150,000,000	
4th, November, 1917		398,000,000	
5th, October, 1918		*690,000,000	
		$1,438,000,000	
External, in United States:			
March, 1915	$25,000,000		
August, 1915	45,000,000		
March, 1916	75,000,000		
July, 1917	100,000,000		
	$245,000,000		
Redeemed	50,000,000		
		195,000,000	
		$1,633,000,000	1,633,000,000
Total sum raised for war purposes by taxes and loans			$1,898,792,193

*The unexpected aggregate of the last loan, coming after the armistice was signed, makes Canada's loan account much greater than her war expenditure, thus leaving a balance, a large part of which has since been loaned to the European countries for reconstruction purposes.

[1] Reuter despatch from Paris to *The Washington Post*, March 21, 1919.

AUSTRALIA

The agricultural and mercantile classes in Australia were in a prosperous condition when the war broke out, but the industrial situation was less sound. The financial situation of the government was weak, for it had been expending about $100,000,000 annually on public works, most of which had been borrowed in London. Work on these public utilities could not be suspended without disaster to the investment, and the prospect of new financial burdens due to war caused a conference to be held by the state premiers and members of the Federal Ministry and of the Opposition, with a view to devising policies to be pursued. Three distinct bulwarks were planned against financial contingencies: first, there was to be an expansion of the currency; second, the Australian notes were made inconvertible until after the war, and third, the eventual declaration of a moratorium. The expansion of the currency was to proceed in either of two ways: (a) the Commonwealth should supply the states with paper money against a deposit of 25 per cent of the amount borrowed in gold with the Commonwealth Treasury with interest at 4 per cent, or (b) the Commonwealth should advance to the private banks such paper money as they might require in case their gold reserve fell too low, such notes to be a first charge upon the assets of the bank and to be secured by a deposit of 33 per cent at the Treasury, the current rate of interest being charged for such issue.

Expenditures, 1914–15

The Commonwealth budget was presented on December 3, 1914—about six months after the fiscal year had run—estimating expenditure at $188,000,000, revenues at $108,000,000, and a deficit of $80,000,000. Of this, $65,000,000 was to be met by loans, and $14,500,000 by increased taxation. The new probate and succession duties on estates over $5,000 were expected to

yield $5,000,000; the increase in the unimproved land tax rate, $5,500,000, and revisions in the tariff on stimulants and narcotics, $4,000,000. These taxes were to go into effect July 1, 1915. The loans were to be received from the British Government, which allocated to Australia $90,000,000 in advances to meet war expenditure. The actual operations of the year ending June 30, 1915, were as follows:

Ordinary expenditure	$83,456,140
War expenditure	73,964,800
	$157,420,940
Revenue	80,239,680
Deficit met by loans	$77,181,260

Loans, 1914–15

During this year the total war expenditure was met out of loans from the British Government, these war advances on June 30, 1915, amounting to $74,210,525.

Expenditures, 1915–16

The financial operations for this year were as follows:

Expenditures, ordinary	$96,197,780
War expenditures	230,537,195
	$326,734,975
Revenue	153,139,715
Deficit met by loans	$173,595,260

Loans, 1915–16

The Commonwealth now decided to probe the possibilities of home resources, and in August, 1915, the first internal loan was offered, the amount of which had been fixed at $100,000,000 and a first instalment at $25,000,000. It bore 4½ per cent, was exempt from the income tax, and was issued at par. Subscriptions totaled $66,947,200. In February, 1916, the second internal loan was floated. This was a 4½ per cent bond, of which $50,000,000 was offered, but the subscriptions amounted to double that sum,

being $108,298,400, all of which was accepted. Both loans were redeemable in 1925, and both were free of the income tax. In view of the heavily graded state income taxes current in Australia, this exemption constituted a substantial bonus to the purchaser—indeed, it was estimated that a 4½ per cent tax-free bond was the equivalent of a 6½ per cent bond subject to taxation. The total credit operations of this year therefore amounted to $175,225,600.

Taxation, 1915–16

The income tax imposed in 1915 became operative during this year. The tax was levied at rates of 3d. to 5s. in the pound, with exemption on incomes under $780. This was supplementary to the income tax imposed by the several states, so that an aggregate burden as high as 5s. in the pound was laid on the taxpayer. Its actual yield during this year was $19,667,355.

In October, 1916, the Commonwealth Treasurer announced additional taxation, estimated to yield $41,665,000, made up of a tax on entertainments expected to bring in $5,000,000 from January 1 when it went into effect; a wartime profits tax, estimated to produce $15,000,000, of which $5,000,000 was expected in the year 1915–16 and $10,000,000 for the year 1916–17; an increase of 25 per cent in the income tax, calculated to produce an additional $1,000,000; and finally a levy on wealth for the capital repatriation fund, to yield $16,665,000 on the first instalment. The total capital levy was to be $50,000,000 payable in three instalments, and was a tax of 1½ per cent on all estates, real and personal, of the value of $2,500 and over. The fund was to be used for the assistance of Australian soldiers and their dependents.

The actual revenue receipts for the fiscal year 1915–16 were $153,811,080, or $41,000,000 in excess of 1914–15, of which $19,667,355 was the return under the new income tax.

EXPENDITURES, 1916–17

The financial operations for this year were as follows:

Expenditure, ordinary	$76,388,190
War expenditure	331,395,455
	$407,783,645
Revenue	170,175,865
Deficit to be met	$237,607,780

The Commonwealth debt, which reflected the growing costs of war, stood on June 30, 1917, at $845,888,835. In December, 1916, the second interim financial statement of the Commonwealth Treasurer summarized war finance to that date. The budgets of the separate states showed a slight but steady increase owing to their continued expenditure on public works; indeed, the continuance of these activities, which for the most part were carried on with borrowed money secured in the English market at rates of interest somewhat higher than the war loans, introduced a certain element of competition for capital which in other countries was checked by the restrictions placed upon private enterprise. Since these were government expenditures, however, and not those of private corporations, they could not so easily be suspended, nor indeed was it desirable to halt enterprises which were in the midst of construction. The conclusion to be drawn from this situation is not that industrial borrowing on the part of the state is unwise but that it necessarily conflicts with borrowing for war purposes—in other words, an industrial state devotes its means and energies to ends different from those sought by a militaristic state.

For the first three years of war Australia, like most of the belligerents, had followed the loan policy in meeting war expenditures. In his budget speech of June, 1917, Sir John Forest, Commonwealth Treasurer, stated "It is clear that a very large additional revenue will be required, limited, I hope, by a considerable decrease in departmental expenditures." Even in far off Australia the burden of the war was now being keenly felt, and

the expenditures on the new federal capital, on railway construction, and other public works were curtailed owing to inability to obtain funds for carrying on the work by borrowing.

Loans, 1916–17

The third Australian loan was issued in July, 1916. It was a 4 per cent bond free of income tax, maturing in 1925, and, like the previous loans, it was issued at par. While the result was satisfactory, it fell short of the high expectations entertained. It was hoped that the subscriptions might amount to $125,000,000, but the actual result was $117,938,250. At the same time that the internal loan was being floated, the Commonwealth was issuing a 4¼ per cent $20,000,000 loan in London at par.

Large as were these sums, they were insufficient to meet the estimated expenditures of the Commonwealth for the fiscal year 1916–17, and accordingly a fourth internal loan was issued in December, 1916. This was a 4½ per cent loan for $90,000,000 issued at par, redeemable in 1925. Subscriptions were made payable in ten monthly instalments beginning in February. This was done to avoid a repetition of the accumulation of large amounts of cash in the government account with the Commonwealth Bank which had proved excessive in the case of the third loan. The loan was free of the income tax as had been the prior issues, and in addition the bonds were made free of the stamp duty while bonds and inscribed stock were made acceptable at par in payment of Commonwealth death duties. It was also announced that the new loan would be exempt from the application of the wealth levy. The loan was oversubscribed with the help of the banks and the insurance companies, amounting to $107,920,000.

Taxation, 1916–17

Australia's record in the matter of taxation was not up to this time a happy one. The taxation proposed the previous year had largely failed of enactment or collection. The proposed wealth levy, the first instalment of which would have brought in $16,665,000, had been completely dropped, while the wartime profits tax, modeled after the similar English tax, had not yet become

law owing to modifications required to adapt it to Australian conditions. The entertainments tax, which was expected to bring in about $5,000,000, was now estimated to produce only $500,000. It is true that the interest on the war debt and pensions were being met out of increased revenue, but up to this time the actual costs of military and naval operations had been defrayed entirely by borrowing.

The Commonwealth revenues for the fiscal year ending June 30, 1917, were as follows:

Income tax	$28,178,355
Land tax	10,535,700
Probate and succession	5,309,655
Customs revenue	61,814,780
Excise	16,217,425
Post office	27,443,825
Other revenue	20,676,125
	$170,175,865
Less allocation to states	31,352,095
Net to Commonwealth	$138,823,770

The need of economy and of more energetic financial measures was now thoroughly appreciated. The Commonwealth announced that expenditure upon all matters not directly relating to war should be reduced to the lowest possible level; that a war profits tax was to be levied, and the federal income tax to be increased. At the same time the issues of new domestic loans and of war savings certificates were to be pushed.

This program seems to have been a pious wish rather than a policy to be energetically pursued, for nothing further seems to have been done in the way of imposing taxes. On March 27, 1918, the Commonwealth Prime Minister, Mr. Hughes, made an announcement in regard to federal taxation which would seem to indicate a complete change in the policy of financing the war. He said: "It is not the present intention of the Ministry to impose additional taxation, but, of course, the Ministry must deal with the position as it arises from time to time. When the new financial statement is made for the coming year, the Treasurer will face the facts as they then present themselves and the proposals of the Ministry will then be placed before Parliament."

EXPENDITURES, 1917–18

The estimates for this year were as follows:

Expenditures	$620,388,935
Of which, war expenditure was	438,500,000
Ordinary expenditure	$181,888,935
Estimated revenues	$171,781,500
New loans	450,000,000

By May, 1918, the total war expenditure of the Commonwealth had reached $840,000,000, of which $740,831,700 had been charged against loans, and only $98,187,320 against revenues, the latter being principally the interest charges on war debts, pensions, etc., as carried in the ordinary budget.

LOANS, 1917–18

In pursuance of this policy, recourse was had to loans to meet the expenditures of the year. The fifth war loan was issued in September, 1917. This was for $100,000,000 and consisted of a 4½ per cent bond, free of the income tax, issued at par, repayable in ten years. The loan was slightly oversubscribed, subscriptions amounting to $106,068,900. While it was successful, it was less so than the three previous loans, and compared with the amount offered, it was not nearly so great a success.

In addition, war savings certificates had brought in $13,597,370, so that altogether over $515,000,000 had thus far been raised by internal loans. There was considerable discussion at the time of the fifth loan as to the expediency of continuing the exemption from income tax feature. The possibility of further increases in the income tax or the imposition of supertaxes placed the bondholders in a privileged position. On the other hand it was urged that if further loans were made subject to the income tax, the rate of interest would have to be raised, and that the extra burden involved would be greater than the amount of revenue secured from the tax on the holders of the bonds. On the whole, the general disposition was to adhere to the existing system, especially as the loans already issued were redeemable in such a comparatively short time, *i.e.*, 1925 and 1927.

In February, 1918, the prospectus for the sixth war loan was issued, subscriptions to which closed on April 10. All previous war loans had been issued at 4½ per cent free of the income tax. This time the Commonwealth decided to offer two forms—(a) a 4½ per cent tax-free bond the principal of which was also exempt from a wealth levy if imposed, and (b) a 5 per cent bond subject to federal taxation. Both issues were to be free of state income taxes. As the Australian federal income tax was steeply graded, it was expected that the 4½ per cent issue would appeal to the wealthier investors, while the less affluent who would not be subject to the income tax would prefer the 5 per cent issue. Holders of the earlier issues were offered the privilege of conversion into the new 5s on condition that they subscribe to an equal amount of the new loan. The total amount asked by the Commonwealth was $200,000,000, but when the subscription period closed on April 10 the subscriptions amounted only to $190,000,000. so an extension period was announced for two weeks. The final subscriptions amounted to $214,260,650, of which $32,635,000 represented the 5s and $181,625,650 the 4½s.

Large as was this loan—practically double any prior one—it was sufficient to meet growing war expenditures for only six months. These were increasing at a progressive rate, and were made worse by the inflation which was taking place in Australia, as well as in Europe.

The seventh war loan, subscriptions for which closed October 15, 1918, was again for $200,000,000. This differed from the other ones in several respects. The rate of interest was fixed at 5 per cent and the bonds were made subject to Commonwealth taxation. The loan was repayable in five years, which was a shorter currency than any previous loan As in the case of the sixth issue, banks arranged to make advances to subscribers at 4 per cent up to eighteen months. When the subscriptions closed about $185,000,000 only had been applied for, so an extension of two weeks was made, and this time there was a threat of compulsion. When the loan was finally closed, subscriptions amounted to $217,116,375.

The threat of compulsion alluded to consisted of a so-called compulsion bill which was introduced into Parliament in October, 1918. According to it the Commissioner of Taxation was empowered to require subscriptions up to an amount not exceeding six times the yearly income tax. In case of refusal to subscribe, a penalty of twice the yearly income tax was prescribed. The proposition failed of enactment into law

If to the loans there be added war savings certificates issued to June 30, 1918, amounting to $22,676,795, the total loans raised in Australia for war purposes amounted to $961,205,820. In addition to the internal debt there was also owing to the British Government $247,000,000 incurred for war purposes.

In introducing the 1919–20 budget, the Commonwealth Treasurer summarized Australia's war finance as follows:

COST OF THE WAR TO AUSTRALIA, AND HOW MET, 1914-1919.

Period	Revenue	Loans	Total
1914–15	$3,201,085	$72,355,590	$75,556,675
1915–16	18,891,890	187,117,830	206,009,720
1916–17	42,136,645	265,571,185	307,707,830
1917–18	59,281,175	274,430,575	333,711,750
1918–19 (estimate)	105,648,010	394,574,045	500,222,055
	$229,158,805	$1,194,049,225	$1,423,208,030

The following table itemizes the Australian loans:

Form	Amount
INTERNAL:	
1st—August, 1915	$66,947,200
2d—February, 1916	108,298,400
3d—July, 1916	117,938,250
4th—December, 1916	107,920,100
5th—September, 1917	106,068,900
6th—February, 1918:	
4½ per cent	181,625,650
5 per cent	32,635,000
7th—October, 1918	217,116,375
	$938,549,875
War savings certificates	22,700,000
	$961,249,875
EXTERNAL: Great Britain	247,000,000
	$1,208,249,875
War expenditures raised by revenue	229,168,805
	$1,437,418,680

NEW ZEALAND

New Zealand was in a favorable condition at the declaration of war, as she had just finished marketing her produce at very high prices, and had a good proportion of the surplus still in hand. Measures were taken to protect the banks and the government. The export of gold was prohibited and a limited moratorium applying to mortgages was provided for. Bank notes were made legal tender, and depositors in the post office savings banks were required to give seven days' notice of all withdrawals exceeding $10.

The war at first brought to New Zealand prosperity rather than financial burdens. Wool and frozen meat, New Zealand's two most important exports, brought record prices, so that large profits were gained by producers of these commodities. The gains thus retained far outweighed the war expenditures of the government. For the fiscal year ending March 31, 1915, New Zealand spent $13,750,000 on the war. For the following fiscal year 1916–17, it was estimated that additional revenues of $10,000,000 would be required to meet extraordinary war expenditures, and to provide this it was proposed to increase the land and income taxes, the post and telegraph rates, railway rates, customs duties, beer duties, and probate and succession dues and stamp tax. An alteration was also made in the scale of the graduated income tax.

The budget for the next fiscal year, 1916–17, proposed an increase in the income tax of 5 per cent on incomes earned during the previous year from all sources, exclusive of war profits. By this horizontal increase a relatively heavier burden was placed on small incomes. At the same time the minimum exemption was lowered from $2,500 to $1,500. The excess profits tax was fixed at 45 per cent of the excess profits made during the previous year, either from business or directly from primary products. These profits were ascertained in the same way as the British tax by

taking the average profit for the three years prior to the war as the basis. Taxation was now imposed on a heavy scale, the total direct and indirect taxes collected during the year 1916–17 amounting to $53,599,535 as compared with $30,000,000 for the fiscal year 1914–15, or an increase of 67 per cent. The main source of this additional revenue in New Zealand, as in all other countries which made a vigorous resort to taxation, was the income tax and the special war tax on incomes. This was an addition of 50 per cent to the schedule rates of the regular income tax. The tax on excess profits was found very difficult to adjust in a young and rapidly developing country, and it was therefore dropped, the reason given being that it was not sufficiently lucrative. The opponents of the tax claimed that an 80 per cent war profits tax would have been less onerous than a 45 per cent excess profits tax.[1] The total receipts from taxation of the Dominion Government during the four years of war were as follows:

Fiscal Year	Tax Receipts
1915	$29,404,055
1916	37,174,225
1917	53,559,535
1918	62,284,800

The first war loan was issued on September 1, 1916. This was a 4½ per cent bond issued at par, redeemable in 15 and payable in 25 years, free of the income tax. The total amount allotted against cash subscriptions was $38,932,000. A second loan, floated in September, 1917, issued at par, was a 4½ per cent twenty-one year bond free of the income tax. The total subscriptions were $58,398,000.

An unique feature of the New Zealand loans was that of compulsory subscription. Although this was discussed elsewhere, it was not put into practice in any other belligerent country. The law providing for it is so interesting that it is quoted in full:

Taxpayers whose taxable income for the year ending March 31, 1916, was not less than £700 are required to subscribe to the loan authorized to be

[1] *Round Table*, December, 1917.

raised by the War Purposes Loan Act of 1917 to an amount equal to three times the total amount of land tax and income tax (exclusive of excess profits duty) for which he was liable under the Finance Act, 1916.

If, however, any taxpayer to whom this section relates has subscribed to the loan authorized to be raised by Section 35 of the Finance Act, 1916, an amount exceeding one and a half times the amount of tax for which he was liable, the amount so contributed by him in excess will be deducted from the amount which he is obliged under this section to subscribe to the War Purposes Loan, and his obligation to subscribe to that loan will be modified accordingly.

The third war loan, which was issued in April, 1918, differed from the two previous ones in that it was put out in two forms: (a) a 4 per cent twenty year bond free of income tax issued at par, and (b) a 5 per cent ten year post office war loan stock subject to the income tax. As the latter was designed for the small investor who would not pay an income tax, the amount which could be subscribed by any one person was limited to $2,500. A novel feature of the prospectus of this loan was the plain reference to compulsory subscriptions, machinery for which had been provided during the previous year. The prospectus stated, "It is confidently anticipated that the full amount of $47,500,000 will be voluntarily subscribed, but should there be any deficiency it will be necessary to raise the amount of such deficiency by compulsory levy." The total subscriptions amounted to $42,500,000 against the required $47,500,000, and consequently the compulsory subscriptions were enforced where necessary The law was further strengthened by authorizing the Commissioner of Taxes to call upon a person to subscribe to a maximum of six times the yearly average of his land and income tax (inclusive of the special war tax, but exclusive of excess profits tax) for the three years ending March 31, 1918.

In addition to the internal loans, war savings certificates were issued, and over $50,000,000 sold during 1917. Five per cent bonds were also sold in Great Britain. Altogether during the four years of war, loans were raised for war purposes to an amount of $318,119,350, of which about two-thirds were raised at home and the other third obtained in Great Britain. The pub-

lic debt which on March 31, 1914, had stood at $459,449,175 rose to $776,568,525 at the end of 1918.

The growth of civil expenditures, revenues and loans during the five fiscal years ending March 31, 1918, is shown in the following table:[1]

Year	Expenditures	Revenues	Loans
1914.....	$59,129,320	$61,148,305	.....
1915.....	61,899,015	62,259,725	$24,773,100
1916.....	62,465,535	72,550,685	46,564,890
1917.....	70,293,850	91,837,735	98,075,410
1918.....	80,413,510	86,314,000	123,750,000

The actual war expenditure of New Zealand down to December 31, 1918, amounted to $378,750,000.[2]

At the same time that loans were being resorted to, taxes were being increased at a rapid rate, having practically doubled during the four years of the war. Indeed, the receipts from taxation were so large in 1918 that Sir Joseph Ward, the Minister of Finance, announced that there was no need to impose any further taxation, and expressed his opinion that after the war New Zealand would be the lightest taxed country on account of war expenditure in the British Empire.

[1] *Round Table*, December, 1917.

[2] *Economist* (London), May 17, 1919, p. 801, statement of Under Secretary of State for the Colonies on the floor of the House of Commons in reply to Sir J. Norton Griffiths.

INDIA

At the outbreak of the war India was in a relatively strong financial position. Crops were on the whole satisfactory, and the export trade was good. When, however, it became apparent that Great Britain would be involved in hostilities, this fact was reflected in Indian exchange. Steps were therefore taken by the Indian Government to support the exchange and to prevent the dissipation of the gold stock held by the government. Indian trade was profoundly affected, as a large proportion of it had formerly been with the Central Powers, especially for cotton, jute, rice, and cocoanut products.

When the financial statement of the government for the year ending March 31, 1915, was published, it showed a great falling off in Indian revenues. This was sufficient, in spite of economies in expenditure, to turn an estimated surplus of $6,280,000 into a deficit of $13,979,000. In the budget for 1915–16 the expenditures upon civil works, especially railways, were cut down by over $5,000,000 and military services by over $2,500,000. This was effected by transferring a part of the expenditures of this character to the imperial account, but in spite of this, a deficit of $14,785,500 was estimated in the imperial budget, to which should be added a further deficit of $5,305,000 in the provincial budget.

Like most of the countries which produce raw materials, India reaped a good deal of prosperity from the war through high prices for an increased output of its products, thus enabling it to reduce its external indebtedness by buying back securities from its creditors. As a result of these improved conditions, the deficit at the end of the year turned out to be but $8,971,000.

The budget for the year 1916–17 estimated a surplus of $4,128,500, due to additional taxation of $18,250,000, almost two-thirds of which was expected to come from increases in customs duties. Extra revenue from the salt tax was expected to bring

in $3,000,000, while increases in the income tax were estimated to yield $4,500,000.

The prosperity of India was now so great and the prospects of revenue so bright that the government was able to offer a truly munificent gift to the British Government. India proposed to contribute $500,000,000 to the cost of the war by (a) raising a domestic loan of as large an amount as possible, and transferring the proceeds to the British Government, and (b) assuming responsibility for the debt charges on the amount of the latest British loan equivalent to the difference between the proceeds of the Indian loan and $500,000,000. This was the answer made by India to the German allegation of disloyalty and insurrection.

In accordance with this promise, an Indian war loan was issued in March, 1917, the whole of the cash subscriptions from which were to be given to the British Government for the prosecution of the war. The loan was issued in four different forms: (1) a 5 per cent loan, 1929–1947; (2) a 5½ per cent war bond due in 1920; (3) a 5½ per cent war bond due in 1922, and (4) post office five year cash certificates similar to the British war savings certificates. The 5 per cent loan was issued at 95, and the 5½s at par. Subscriptions to the loan amounted to $175,000,000. A year later, in June, 1918, India announced a second loan consisting of 5½ per cent bonds at par, free of the income tax but not of the supertax. These bonds were issued for periods of three, five, seven, and ten years. The subscriptions from this loan were also to be given to the Imperial Government as a part of the Indian contribution of $500,000,000 toward the cost of the war. The estimated receipts from this second loan were placed at $100,000,000.

The budget for 1917–18 estimated expenditures considerably higher than any which had yet obtained, but the revenues were correspondingly increased, so that a small surplus of $190,000 was estimated. This proved to be a very conservative, not to say pessimistic, estimation of the year's financial operations, for the year closed with an actual surplus of $40,405,000—nearly half of the extra surplus being due to an excess of net profits on

the railways, which was brought about in part by the impossibility of making the usual provision for renewals and upkeep.

In addition to the gift of $500,000,000, of which $275,000,000 had been paid over to the Imperial Government, and the assumption of the debt charge on the remaining $225,000,000 by the Indian Government, there was paid out of revenue the ordinary cost of the troops from India on active service in the prosecution of the war, which it was estimated would amount to about $77,500,000 by the end of the fiscal year 1917–18, and therefore about $100,000,000 by the close of the war. The following sums of money were raised and given to the British Government for the designated war purposes:

Maharaja of Nabha, for war purposes	$100,000
Nepal Government, for war purposes	100,000
Darbhanga, for aeroplanes	66,000
Gaikwar of Baroda, for war expenditure	33,000
Rajputana, aeroplanes and machine guns	150,000
Maharajah of Mysore	330,000
Nizam of Hyderabad, to fight submarine peril	500,000
	$1,279,000
Cost of troops, estimated	100,000,000
Gift of Government of India	500,000,000
Total cost of war to India	$601,279,000

UNION OF SOUTH AFRICA

The Union Parliament, like that of other British Colonies, undertook certain military responsibilities in connection with the war. In September, 1914, $10,000,000 was voted by Parliament for war expenditure, which proved wholly inadequate as expenditure to March, 1915, amounted to $43,750,000. The gold mining industry was not disturbed by war, but the diamond mines closed down in August, and the dislocation due to this and to the war and rebellion greatly reduced revenue from customs, so that the year 1914–15 saw a deficit of $10,960,000 between ordinary revenue and expenditure, which was charged to the loan account, involving an increased annual interest charge of about $460,000.

It was proposed to meet the 1915–16 estimated deficit of $14,000,000 by increases in the customs of 5 per cent ad valorem on coffee, paraffin, tea, boots and shoes, and playing cards, and in the excise on sugar and beer; an increase in the income tax after a reduction of exemption from $5,000 to $1,500, grading up to 2s. in the pound on incomes in excess of $100,000 and a general increase from 6d. to 1s. in the pound; a special levy of 5 per cent additional on gold mines; and other appropriations of funds from sale of mining rights, etc. The new loan estimate for war expenditure for 1915–16 was $36,250,000, or a total of $90,000,000 for the two years, to cover the deficit in the first year appropriation. During the year 1915, however, the sudden prosperity of munition making nations, and their indulgence in such luxuries as diamonds, gold ornaments, and ostrich feathers, South Africa's specialties, led to an era of great prosperity, and increased customs and tax revenues so that the actual result of the finances showed, instead of the estimated deficit of $2,920,000, a surplus of $1,355,000. This was brought about by the government taking over, as part of its receipts, the so-called *"bewaarplaatsen"*—a method often resorted to to balance South African

budgets. This term applies to the moneys obtained by the government from the sale or leasing of certain mineral rights underlying areas the surface of which is used for dumping and storage, under the gold law of 1908, which permitted the government so to do, requiring it to hold such rentals or sale moneys as a separate fund until ownership thereto could be determined—a matter which for political reasons seems to be delayed.

In the 1916–17 budget, revenue (exclusive of the *bewaarplaatsen,* which was estimated at $940,000) was estimated at $81,660,000 and expenditure at $89,355,000, which left a deficit of $7,665,000, which was to be made good by borrowing from the *bewaarplaatsen* and increased taxation in the form of a graduated supertax ranging from 1s. to 3s. in the pound on personal incomes in excess of $12,500; increased excise and customs duties on spirits, and an export duty on diamonds, both of which showed heavy increases in the actual returns of the year. Instead of a deficit, an actual surplus of $2,000,000 was realized.

The whole of the war expenditure in South Africa was charged to the loan account, the ordinary budget carrying only the interest charges on the newly created debt, and making a "contribution" to the loan account from revenue equal to the normal expenditure on defense purposes, which was put down for 1916–17 as $6,500,000.

The 1917–18 estimates placed revenue at $90,870,000 and expenditure at $92,545,000, the deficit to be met by an excess profits tax of 25 per cent on all excess profits earned after July 1, 1916, modeled on the British plan of determining them. An extension of the diamond export tax was proposed, and the income tax was reorganized, from which slight additions were expected. The increase in expenditure was due, of course, to the growing interest charges on the loan account from which war expenditure was being financed. On March 31, 1917, war expenditure totaled $115,000,000 as found in the loan, and $16,000,000 as shown in the revenue accounts.

The total money cost of the war to the South African Union has been estimated at $300,000,000.

FRANCE

The financial situation in France was unsatisfactory at the outbreak of the war. The finances had been in process of reconstruction owing to new expenditures brought on by the settlement of the expenses in Morocco, the introduction of the three year service law, and the increase in the navy.[1] The budget voted by the Chamber in 1914 of $1,054,600,000 did not suffice to cover these new appropriations, and a new loan was accordingly authorized by act of June 30, 1914, to be issued on July 7, for $180,000,000 nominal (net $161,000,000) of 3½ per cent twenty-five year bonds issued at 91. By the issue of a bond redeemable in twenty-five years, France seemed to have abandoned the policy which she had followed since 1878 of creating only perpetual debts. But while this was an improvement over her former practice, it was a mistake to issue such a long term bond to meet expenditures the benefits of which would endure for a much shorter period. According to French custom, arrangements were made by which the bonds could be paid for in four instalments, the third of which fell due on September 16 and the fourth on November 16. At the beginning of August only $76,000,000 had been paid in.[2] Although the loan had been thirty-seven times oversubscribed, it was all but impossible for the subscribers to meet the third and fourth payments after the declaration of war on August 1, and the consequent disorganization of the markets. The loan was for the most part in the hands of the great credit establishments or of persons who could not secure the necessary funds under the circumstances. To meet this difficulty the two remaining instalments were divided into four periods: September 16–30, October 16–31, November 16–30, and December 16–31. Furthermore, the state promised subscribers that any money which they held in the 3½ per cent loan

[1] *Economist* (London), August 4, 1917, p. 155.

[2] Gaston Jéze, "L'Emprunt Français de 900 Millions de Francs," *Revue de Science et de Législation financière,* July–December, 1914, XII, 455.

would be accepted in future loans at 91, the price of issue. Arrangements were also made with the Bank of France to lend to subscribers the money necessary for the payment of instalments as they fell due.[1] Further payments on this loan were made as follows:[2]

August, 1914	$8,444,600
September	12,038,200
October	9,206,200
November	4,485,600
December	9,772,600
	$43,947,200

France, like England, suffered a total collapse in credit in the days preceding the war. As early as July 23 there was the beginning of a panic. This was followed by a rush to sell securities, and on July 30 the Paris *coulisse* or "curb" market was closed. The stock market in a country like France which deals so largely in foreign securities is unusually sensitive. There was a great deal of liquidation on the bourse. To avoid complete demoralization of the stock market, only the Parquet on which selected securities are dealt in remained open, and that under strict government supervision. When the government removed from Paris to Bordeaux on September 2, the Parquet also closed. The bourse was not again opened until December 7, 1914, and then for cash transactions only. A limited moratorium was proclaimed on August 6, applying only to securities subscribed before August 4, which postponed payment until September 1. On August 11 a more general moratorium prescribed practically complete suspension during the period of hostilities of all "civil, commercial and administrative prescriptions and preemptions."[3] A decree of the government was also issued limiting to $50 the amount which depositors could withdraw from banks; in addition, they could demand only 5 per cent of any sum above this $50, an exception being made in the case of employers needing

[1] *Journal des Economistes*, November, 1914, p. 182. This loan was referred to as *ce Malheureux emprunt*.

[2] *Revue de Science et de Législation financière*, XIII, 4, 682.

[3] *Economist* (London), August 4, 1914, p. 352.

money for payment of wages to industrial and commercial employes. The French merchant makes at best but small use of checks, and his distrust of this means of payment was probably increased now by his inability to use his bank deposit. Another result of the panic and disorganized situation was the disappearance of metallic money which the people began to hoard. All of these factors made it practically impossible for subscribers to the prewar loan to meet their subscriptions.

In order to meet the deficit in the budget of 1914, which was estimated at $480,000,000, the Chamber had also voted an income tax but it was not to become operative until January 1, 1915. Any further immediate resort to taxation as a method of war finance was rendered difficult, if not impossible, as a result of the invasion of France by Germany and the seizure of the richest industrial section of the northern part of that country. As the existence of the unpaid loan of July made a new loan difficult, and the loss of territory and falling off of revenue made new taxes impossible, resort was had at the beginning to the financial assistance of the Bank of France.

Banking and Currency, 1914

The Bank of France stands in close relation to the government, and has, since the time of Napoleon I, by whom it was given a monopoly of issue in 1803. Its issues are limited only by its ability to redeem its notes in gold and by a maximum which is fixed by law. It has always been necessary therefore for the bank to maintain a large specie reserve for redemption purposes. This gold reserve may be regarded as a sort of war chest, which is available for the immediate needs of the government, and in the case of a short war might satisfy all demands. The situation of the bank before the war, and just after its outbreak, is shown in the following table:

BANK OF FRANCE, 1914
(In millions of dollars)

Date	Gold Reserve	Silver Reserve	Bills Disc'd	Loans on Security	Note Circulation	Treasury Deposits	Private Deposits	Treasury Bills Disc.
July 31, 1913	672.4	125.4	368	147.8	1,135.4	77.6	131.4	..
July 23, 1914	820.8	128.	308.2	148.8	1,182.4	80.2	188.6	..
July 30, 1914	828.2	125.	488.8	152.8	1,336.6	76.6	189.6	..
Aug. 26, 1914	853.2	73.4	467.	117.4	2,590	1,300.	492.4	92

For a decade the bank had been strengthening its gold reserve, and especially during the previous year it had added to it materially,[1] so that when hostilities began to threaten it held the largest stock of gold in its history, amounting on July 23, 1914, to 69 per cent of the note circulation and 46 per cent of all liabilities. It was thus in a position to render the necessary financial assistance to the government. The total stock of gold in France was estimated at $1,400,000,000 of which the bank held over half, the remainder being in circulation or in the hands of private possessors.

The limit of the note issue of the Bank of France before the war stood at $1,360,000,000. Under its charter, which was renewed in 1897 for 23 years, the Bank must advance permanently to the state $40,000,000 bearing no interest and not repayable until the expiration of its charter. It must also in time of war lend to the government at the nominal interest rate of 1 per cent.[2] These compulsory advances had been fixed by agreement of November 11, 1911, at $600,000,000, but on September 21, 1914, they were increased to $1,200,000,000 and on May 4, 1915, to $1,800,000,000. As a matter of fact the Bank began at once to lend to the government, advancing on an average about $40,-

[1] The gold reserve of the Bank of France was as follows:

Date	Amount
May 2, 1912	$645,800,000
May 2, 1913	648,800,000
April 30, 1914	728,600,000

Report of M. Aimond, May 14, 1915, Senate Doc. No. 166, p. 9.

[2] The rate will be raised to 3 per cent one year after the end of the war, the additional 2 per cent to be set aside to create a fund to retire the debt. *Journal des Economistes*, October, 1914, p. 64.

000,000 a week. The actual advances for the first five months of war were as follows:[1]

ADVANCES BY BANK OF FRANCE TO STATE, 1914

Month	Amount
August	$220,000 000
September	200,000,000
October	125,000,000
November	120,000,000
December	120,000,000
	$785,000,000

These advances to the state, secured only by government obligations, constituted an increasingly large item in the bank statements.

Not only did the Bank of France advance large sums to the government, it also discounted bills freely and increased its private deposits greatly. No statements were published by the bank from August 26 until February 4, 1915, so that the extent of its services in meeting the needs of the public during this period can only be guessed. In order to meet these requirements, the limit to the note circulation was immediately raised. Before the war it had been fixed in December, 1911, at $1,360,000,000. This limit was immediately raised on August 5, 1914, to $2,400,000,000. Subsequent increases were made from time to time as the actual issues began to approach dangerously near the existing legal maximum. These successive extensions of the limit are shown in the following table:

NOTE ISSUE OF BANK OF FRANCE

Date	Limit Fixed
December, 1911	$1,360,000,000
August 5, 1914	2,400,000,000
May 11, 1915	3,000,000,000
March 15, 1916	3,600,000,000
February 15, 1917	4,200,000,000
September 10, 1917	4,800,000,000
February, 1918	5,400,000,000
May, 1918	6,000,000,000
September, 1918	6,300,000,000
March 4, 1919	7,200,000,000
May, 1919	8,000,000,000

[1] G. Jéze: "Les Finances de Guerre de la France," in *Revue de Science et de Législation financière*, October-December, 1915, XIII, 4, 649.

As in most continental countries, the French people prefer the use of actual money in making payments, rather than checks drawn against deposit accounts. The expansion of note issues reflects therefore the credit operations of the bank more accurately than it would in the United States. While this is true in normal conditions, the semi-compulsory advances to the state since the war began do not indicate a commercial demand. The recent expansion of the note issues has not been a legitimate one; that is, it has not been in response to business needs, and it has therefore resulted in an inflation of the currency, with its attendant increase in prices. The note circulation of the Bank of France increased $758,060,000 from July 30, 1914, to January 28, 1915; the increase during 1915 was $567,280,000; during 1916 it was $673,780,000; during 1917 it was $1,131,440,000; and during 1918 $1,582,600,000—or a total increase between July 30, 1914, and December 26, 1918, of $5,713,160,000.

If the bank were to expand its loans and its note issues it would endanger its gold reserves. Measures were therefore taken at once to safeguard the stock of gold. Specie payments were suspended August 5. Gold disappeared from circulation and for a time some embarrassment was felt from lack of currency. But the bank and its branches quickly issued more notes in the denominations of five and twenty francs which had been prepared for such an emergency, and which were received willingly by the people. The bank also released about half of its stock of silver coins, consisting of five-franc pieces coined under the agreement of the Latin Union. In the southwestern part of France local chambers of commerce issued one-franc and half-franc notes to meet the need for small change. The gold reserve was in this way kept practically intact. It was not only maintained, but was actually increased. As a result of an appeal from the government, the people turned over to the bank in exchange for notes considerable sums which they were hoarding in characteristic French fashion. By May, 1915, these exchanges had increased the reserves to $946,300,000 from $828,260,000 on July 30, 1914. By December 30, 1915, the reserves were increased to

$1,000,000,000. In April, 1916, $100,000,000 was sent to England to secure credits there, and the reserves fell to $898,440,000 in the latter part of June, and then steadily increased again. It had long been a tradition of the bank that it should keep a large gold reserve. In June, 1914, the gold reserve amounted to 76 per cent of the note issues, but as time went on, in spite of the encouraging growth in the absolute amount of the reserves, the relation which this bore to the note issues was made continually more unfavorable by the inflation of the note issues. This relation is shown in the following table:

Date	Notes in Circulation	Gold in Vault	Ratio
December 24, 1913.....	$1,142,710,258	$831,490,926	72.74
December 30, 1914.....	2,008,579,944	902,882,574	45.05
December 30, 1915.....	2,661,980,000	1,003,060,000	37.60
December 28, 1916.....	3,335,760,000	676,560,000	20.28
December 27, 1917.....	4,467,200,000	662,880,000	12.60
December 26, 1918.....	6,049,800,000	688,090,000	11.36

Most of the advances by the Bank of France to the state have been in the form of bank notes rather than of credit deposits to be checked against, as was the case in England and the Bank of England. This accords with the different usages of the two countries with respect to the use of credit and cash. Immediately after the outbreak of hostilities, the government relieved the bank of its obligation to pay its notes in gold, and gave the notes the legal tender quality.

Loans, 1914

During the latter half of 1914 the state depended principally upon advances from the Bank of France, the $785,000,000 received from it constituting two-thirds of the loans. The prewar 3½s brought in about $100,000,000; Treasury notes running for one year were sold in London to the amount of $60,600,000, and in New York of $41,450,000;[1] and finally, an appeal for funds was made direct to the people of France by offering the short term Treasury bills known as *bons de la défense nationale.* These bore 4 per cent when issued for three months and 5 per

[1] *Revue de Science et de Législation financière,* XIII, 4, 672.

cent when issued for one year.[1] They were sold at 96.50 in denominations as low as 100 francs ($20) and were also used to pay contractors for military supplies.[2] By the end of December, 1914, about $339,600,000 of these had been issued.

The issue of Treasury bills (*bons du tresor*) was not a new device, but their issue in this form at this time was a shrewd move. The Bank of France and the large credit establishments which had previously in times of peace been almost the sole purchasers of such bills now had their hands full and could not absorb large quantities. It was therefore necessary to attract the small savers and persuade them to make investments directly. For this purpose the new Treasury bills had several distinct advantages:[3]

(1) The nominal interest was 5 per cent, but as the interest was payable in advance this made the yield slightly more than 5 per cent. Moreover, they were exempt from taxation. These facts made them attractive to small investors.

(2) In order to adapt them to different needs, they were issued for different periods of time.

(3) In subscriptions for future loans, preference was to be given to the holders of these bills—that is, they were convertible into long term bonds.

(4) The Bank of France agreed to accept them as collateral for loans when they had less than three months to run.[4]

(5) They were placed on sale as widely as possible at all post offices, banks, tax collection offices, treasury bureaus, etc.

That this method of attracting the savings of the small capitalists was successful is shown by the fact that over 50 per cent of the bills sold were in denominations of $200 and under. To sum

[1] *L'Economiste français,* September 19, 1914.
[2] *Economist* (London), October 17, 1914, p. 643.
[3] G. Jéze: "Les Finances de Guerre de la France," in *Revue de Science et de Législation financière,* October-December, 1915, XIII, 4, 661.
[4] Whether for this reason or not, the three months' bills were the most popular. Up to January 24, 1915, the three months' bills amounted to $171,068,680; the six months' bills to $83,204,620; and the one-year to $85,226,940. The first group therefore constituted more than half. *Ibid.,* p. 671.

up the credit operations of the last five months of the year 1914, the following table shows the receipts from borrowing:[1]

FRANCE'S LOANS, 1914

Form	Amount.
Bons du Tresor	$80,700,000
Ordinary Treasury bills	23,820,000
Bons de la défense nationale	339,460,000
Prewar 3½ per cent loan	43,940,000
Advances Banks of France and Algeria	785,000,000
	$1,272,920,000

Against these were to be reckoned certain expenditures such as repayment of the first two items, advances to foreign governments of $30,401,000 and some other items amounting all told to $220,880,800. There was thus a clear balance of over $1,000,000,000 from these sources for the expenditures of the war. It was a distinct achievement to have raised these sums in the face of the financial difficulties which France confronted, although the success of the program rested upon an exclusive loan policy and excessive inflation through the issue of bank notes.

Expenditures, 1914

The actual expenditures of France during 1914 are difficult, if not impossible, to determine with accuracy, as votes of credit were made by quarters, but often the actual expenditure exceeded the credits voted, and the next vote would carry a supplemental vote to cover the unauthorized excess. As reflected in the votes of credit granted from August 1, 1914, to December 31, 1914, however, this amounted to $1,779,718,000, distributed as follows:

Military, and exceptional civil, expenditure	$1,460,187,000
Expense of debt service	120,808,000
Ordinary civil service	198,723,000
	$1,779,718,000

Expenditures, 1915

The opening of the year 1915 saw little change in the use of credit or credit devices by the government. As the yield of the

[1] *Revue de Science et de Législation financière*, XIII, 684.

existing taxes had fallen off 36.6 per cent for the year 1914, and no new taxes were possible, loans must constitute the mainstay. The situation was slightly bettered in 1915, during which year the tax deficit below normal was only 19 per cent. The enormous increase in expenditures, owing to military operations, relief to war victims, and increased expenses in connection with the public debt itself, called for a vast increase in the requirements of the government. To these must be added the deficit in the ordinary civil budget occasioned by the decline in tax revenue. Accordingly, further advances were secured during this year from the Bank of France, amounting in all to $220,000,000, although these advances had risen from $1,000,000,000 at the beginning of the year to $1,480,000,000 on November 25 which was reduced from the proceeds of the November, 1915, loan, leaving the total advances at the end of the year at $1,000,000,000.

It was manifest, however, that more energetic measures must be taken to raise the sums necessary to meet the growing costs of the war. The strictly military expenditures for the last five months of 1914 had been $1,173,000,000. The burden of the war was not yet reflected in the other forms of expenditure such as debt charges, care of dependents, etc. During the next twelve months there was an increase not merely in the strictly military expenditures, but also in the debt charges, the social expenditures such as relief of soldiers' families and those from the devastated area, and expenditures for ordinary civil purposes. The following table shows these expenditures by general groups from the beginning of the war to the end of 1915:

FRENCH EXPENDITURES, 1914–1915

(In millions of dollars)

Itemization	Aug. 1–Dec. 31, 1914	Jan. 1–Dec. 31, 1915
Strictly military	$1,173.4	$3,153.
Debt charges	120.	380.
Social expenditure	98.8	542.2
Other expenditure	387.5	485.6
	$1,779.7	$4,560.8

Borrowings, 1915

A popular loan was not deemed expedient as long as the final payments were being made on the prewar 3½ per cent loan, the last instalment of which had been postponed to January 31, 1915.[1] The payments on this loan during the month of January amounted to $41,000,000, thus at last bringing to a close the history of this transaction which for six months had embarrassed the operations of the Treasury. Resort was also had for the first three quarters of the year to further issues of Treasury bills. About $1,400,000,000 of *bons de la défense nationale* were issued during the year 1915.[2]

Before the war the Treasury had power to issue Treasury bills to the limit of $188,000,000. Only $70,000,000 had in fact been issued up to September 14, 1914, when a decree provided that these bills, formerly discounted only by banks and other credit institutions, should now be disposed of directly to the people. This met with a quick response. The *bons* were issued in denominations of 100, 500 and 1,000 francs ($20, $100 and $200) with maturities of three, six and twelve months, the first maturity bearing 5 per cent, and the other two 4 per cent. In order to dispose of large quantities of these *bons* the right of emission was raised from time to time, as follows:

LIMITATION OF ISSUE OF FRENCH TREASURY BILLS

Date	Fixed at
(Prewar)	$188,000,000
December 3, 1914	$280,000,000
January 15, 1915	700,000,000
March 27, 1915	900,000,000
May 8, 1915	1,200,000,000
June, 1915	1,400,000,000

The purchase of these bills was urged, not merely on the ground of patriotism, but also upon purely investment merits. Their sale was not confined to France, but they found a ready market in England and the United States. The amount of sales rose month by month, as follows:

[1] *Journal des Economistes*, January, 1915, p. 92.
[2] *Annalist*, May 6, 1916, p. 569.

October 5, 1914	$43,560,000
January 21, 1915	540,000,000
March 5, 1915	708,400,000
April 30, 1915	969,600,000
July 31, 1915	1,391,600,000
October 31, 1915	1,903,600,000

On February 25, 1915, a second type of short term obligation was offered to the public, namely, *obligations de la défense nationale.* They were 5 per cent ten year bonds issued at 96.5 without any limitation of amount. The Treasury bills (*bons de la défense nationale*) and the prewar 3½ per cent bonds could be funded into the new issue, the latter at 91. These *obligations* had two features which were indicative of the difficult financial situation in which the Treasury found itself, both of which were designed to make them more attractive to investors—they were made tax exempt, and interest was paid in advance. The former was a decided break with French practice, for all bonds hitherto issued had been taxable. The second circumstance, that of payment of interest in advance, was not only without precedent in France, but was probably without parallel in the financial history of modern European states. The actual interest yield was raised by these various concessions to about 5.7 per cent. Of the $442,800,000 of the new *obligations* which were disposed of in the first three months to June 15, $141,400,000 were exchanged for the 3½s and $281,000,000 for Treasury bills, so that only $20,400,000 was paid in cash.[1] The troublesome prewar loan had now finally been put away, and further sales brought relief to the Treasury. By July 31, $539,000,000 of these *obligations* had been sold, and by the end of the year (December 23, 1915) the issues amounted to $760,000,000.[2] Altogether, these represented loans of $2,520,000,000 to which must be added credits advanced by the English exchequer to the extent of $300,000,000 secured by the deposit of $100,000,000 in gold sent over by the Bank of France.

Until now the domestic resources had been drawn upon almost exclusively, but it had become necessary by reason of the large

[1] Yves Guyot: "Les Dépenses et les Ressources de la France et du Royaume Université," *Journal des Economistes,* July, 1915, p. 5.
[2] Statement of M. Ribot on December 24, 1915.

purchases in the United States of munitions and war materials, either to pay this foreign indebtedness or to place a loan there. Accordingly, in October, 1915, the French Government, in conjunction with England, placed in the United States a loan of $500,000,000, each nation taking half. This Anglo-French loan consisted of 5 per cent five year bonds maturing in 1920 and was placed at 98 and interest. This netted the French Government $240,000,000, of which $80,020,000 was paid in during 1915.

All these sums proved insufficient, however, and on November 16 the first national loan was issued. This was known as the "National Defense Loan" and consisted of 5 per cent *rentes perpetuelle* issued at 88.[1] Exemption from taxation was extended to both principal and interest. Payment could be made in four instalments ending in March, 1916. The government reserved the right of redemption after January 31, 1931. As the existing mass of Treasury bills and *obligations* which were outstanding yielded an interest rate of somewhat over 5½ per cent, it was impossible to issue a 5 per cent loan at par. The interest rate on a 5 per cent loan at 88 figures out at about 5.73, and this fact evidently determined the issue price. Such a rate of interest, joined with the prospect of a further gain from a rise in the price of the bond to par after the war, was sufficient inducement to secure large subscriptions. As a matter of fact, over four million separate subscriptions were received for this loan, 1,970,000 in Paris and 2,186,000 in the rest of France. Over $200,000,000 in subscriptions were made abroad, of which $120,400,000 were taken in England. The total amount subscribed was $2,648,500,000 payment for which was made in the following forms:[2]

Money and bank notes	$1,273,500,000	
Treasury bills (bonds)	445,600,000	
		$1,719,100,000
5 per cent *obligations*	638,400,000	
3 per cent *rentes*	286,000,000	
3½ per cent *rentes*	5,000,000	
		929,400,000
		$2,648,500,000

[1] *Statist*, February 26, 1916, p. 387.
[2] *Journal des Economistes*, January, 1916, p. 161; November, 1916, p. 311.

Not only were the Treasury bills and the 5 per cent and 3½ per cent bonds converted into this new loan, but the old 3 per cent perpetual debt was admitted to conversion in spite of considerable opposition. The holders of this debt, however, were permitted to use this for the payment of only one-third of their subscription in the new loan; the other two-thirds must be paid in cash. The rate of exchange for the 3 per cent bonds was fixed at 66. The loan was thus in part a conversion of existing bonds running for a shorter period or bearing a lower rate of interest, and in part the raising of what M. Ribot called *"argent frais."* About half the loan was net cash, which at the current rate of expenditure would cover the military expenses of about three months. The total loans of the year, however, together with revenue from taxes, sufficed to meet the expenditures.

A policy which depends upon loans for 87 per cent of the revenue, and upon taxes for only 13 per cent, is one which can be successful only if the war is a relatively short one and the sum to be borrowed comparatively small. In the case of a long struggle, the loan policy almost inevitably breaks down, first because mounting interest on the loans themselves calls for additional taxes, and second, because additional loans are to be had only at constantly higher rates. The debt charges alone for the year 1915 amounted to $380,000,000. For the year 1916 they were $663,357,402, or practically as much as was then being raised by taxation. As it was now obvious that the war would not be brought to a speedy termination, it was clear that new sources of tax revenue must be developed in spite of all the difficulties which attended such a course, and the terrible war burden which France was already carrying.

An interesting parallel might be drawn at this point between the financial policy of France during the first year and a half of the war, and that of the United States during the Civil War. As Secretary Chase believed the Civil War would be over in a few months, so it was thought by some in France that the present war would not last longer than seven months.[1] Consequently, it was

[1] *L'Economiste français*, January 30, 1915, p. 132.

not only urged that no taxes be levied, but that not even a definite loan be issued, as the war could easily be financed by advances from the Bank of France and the issue of Treasury bills.[1]

Part of the financial difficulty in which France now found herself is traceable to her financial policy of maintaining a perpetual debt. The evils certainly go back as far as 1871, at which time the Assembly did not have the courage to impose heavy taxes to meet the German indemnity.[2] But subsequent legislatures must be held equally culpable in not paying off the load of debt passed on to future generations. thus clearing the way for future needs.

From the proceeds of the November loan the Treasury was able to pay back some of the advances of the Bank of France. These stood at $1,480,000,000 on November 25, just prior to the first payment on the loan, and two weeks later, on December 30, they had sunk to $1,000,000,000.

The total receipts by borrowing during the year 1915 may be summarized as follows:

FRANCE—BORROWINGS, 1915

Source	Amount
Treasury bills	$1,294,600,000
National defense obligations	126,400,000
Anglo-French loan in U. S. A.	80,020,000
National war loan, November, 1915	2,193,400,000
Advances by Bank of France	230,000,000
Miscellaneous	46,800,000
Total	$3,971,220,000

The situation of the Treasury on December 31, 1915, as a result of the various loans contracted from the beginning of the war up to that time, was as follows:[3]

[1] *L'Economiste français,* December 26, 1914.

[2] *Cf.* G. Jéze: "Les Finances de Guerre de la France," in *Revue de Science et de Législation financière* (April-June, 1915), XIII, 295.

[3] Statement in Chamber of Deputies, *Doc. annexe No. 2115,* p. 42, cited in *Revue de Science et de Législation financière* (April-June, 1916), XIV, 2, 279.

Cash on Hand:		
In France and Algeria	$34,587,200	
In London	81,774,800	
In United States	34,820,600	
		$151,182,600
Floating Debt:		
Ordinary bills due or not due	8,685,000	
Bons de la défense nationale	1,392,583,600	
Foreign Treasury bills	232,938,400	
Special funds of Treasury General	28,047,200	
		1,662,254,200
Terminable Debt:		
Sexennial bonds	18,812,400	
Ten year 5 per cent bonds	126,469,000	
25 year 3½ bonds, loans in United States	80,020,600	
		225,302,000
Consolidated Debt:		
Five per cent loan		2,193,400,000
Advances by the Banks:		
Bank of France	1,000,000,000	
Bank of Algeria	15,000,000	
		1,015,000,000
Grand total		$5,247,138,800

Taxation, 1915

The revenues of France fell off during 1914 and 1915 from their normal yield of 1913. The decline in 1914 was $131,090,000 below the 1913 receipts, and in 1915 it was still $151,117,209 below the 1913 receipts, although contrasting the periods between August 1 and December 31 in these years, the 1915 period showed a gain of $74,400,000 over the 1914 period. This was due, of course, to the invasion of eleven of the departments, and the recovery was due to increased taxation in the uninvaded parts. The levy of the 1914 income tax which was to go into effect January 1, 1915, owing to the outbreak of war was deferred to January 1, 1916.

The receipts and expenditures for the year 1915 are as follows:

Expenditures		$4,560,900,000
Revenue receipts	$796,800,000	
Loans	3,971,220,000	
		4,768,020,000

Expenditures, 1916

The expenditures of France during the war had shown a steady increase, those for this year amounting to more than

the combined 1914 and 1915 expenditures. The heavy increase due to military operations during this year was greater than the total for 1914 and 1915, and the debt charge doubled that of 1915, while the large increase in the civil budget which carried war pensions and social relief remained about the same. However, as the supplementary votes of credit made to cover deficits showed that these figures, which are based, not upon actual expenditure but only upon votes of credit, were far below the amounts actually expended, it may be assumed that the civil budget was greater than the amount given. The votes of credit for this year were distributed as follows:

Military and exceptional civil service	$5,448,081,000
Expense of debt service	666,603,000
Ordinary civil service	474,345,000
	$6,589,029,000

These figures show a progressive increase which tended at all times to outrun the receipts. They represent credits granted, but do not include advances made by France to her allies. The daily average of $8,785,000 of 1914 was gradually increased, amounting in 1916 to $18,276,000. If advances to allies were added, it would run over $20,000,000. By the end of 1916, these advances were as follows:

Ally	Amount
Belgium	$118,400,000
Serbia	33,000,000
Greece	1,000,000
Montenegro	80,000

The credits for all public expenditure except advances to allies were approximately $4,560,000,000 for 1915 and $6,580,000,000 for 1916. The difference between expenditures and ordinary receipts was formidable, and showed a steady growth for 1916 over 1915. The increase of military expenditures for 1915 over the preceding year was 69 per cent, but in 1916 the increase over 1915 was 72 per cent. The situation may be stated as follows (in round numbers):

Year	Expenditures	Receipts	Deficit
1915.....	$4,561,000,000	$776,794,297	$3,784,206,000
1916.....	6,579,209,000	933,336,000	5,645,873,000

For 1915 the proportion of public expenditures covered by normal receipts was 16.4 per cent. By 1916 it had fallen to 13.98 per cent. The difference had to be met by loans.

The Finance Minister had asked a vote of credit on November 26, 1915, which would cover expenditures for the first quarter of the next year. But the statement made on this occasion shows no change in point of view or policy. The estimates were somewhat more accurate now, however, as a result of the experience of the past year. Receipts from taxes began to show a gradual but steady recovery. But the government hesitated to raise new taxes, or to increase the rates of existing ones, consequently the needed sums were raised by advances from the Bank of France and the issue of Treasury bills

Banking and Currency, 1916

The advances of the Bank of France to the state continued to grow steadily for the first three quarters of the year 1916 from $1,060,000,000 on January 6 to $1,760,000,000 on October 19. The government was then able with the proceeds of the second war loan to liquidate $440,000,000 of the debt, as a result of which the advances fell off sharply to $1,300,000,000 on November 30. The Bank of France performs its work of extending credit principally by means of its note issues, which are accordingly significant. The issues increased *pari passu* with the advances to the state and the extension of accommodations to private industry. From $2,703,800,000 on January 6 they swelled to over $3,400,000,000 on October 5. Then there was a temporary decline, but the upward movement soon began again. The increases necessitated raising the legal maximum which had been fixed by the decree of May 8, 1915, at $3,000,000,000. By the end of the year they stood at $3,335,760,000. The increase in the note issues can be traced in the returns of the bank (p. 76). Owing to the hoarding of notes by the people, it is

impossible to state to what extent the note circulation increased —certainly it was less than the actual issues. The gold reserve reached the highwater mark on December 30, 1915, of $1,003,000,000 around which it stood with slight fluctuations until April, 1916, when it sank to $960,000,000. Thereafter it grew again until at the end of the year it again stood at $1,000,000,000. During 1915 and 1916, Bank of France had collected from the public over $400,000,000 in gold, and in the same years had shipped abroad to correct exchange nearly $500,000,000 in gold. In June, 1916, the bank erected gold credits abroad, which thereafter appear in its statements, and mobilization of foreign securities was resorted to in order thereby to equate foreign exchange and reduce the exportation of gold.

Borrowings, 1916

In order to facilitate the placing of foreign loans, the government issued a call for the holders of securities of neutral nations to loan them to it, agreeing to add 25 per cent to the net annual return of the securities deposited.[1] These could then be used as collateral by the government in effecting a loan on its own account. In the event that they were sold by the government, it was agreed that payment would be made at the highest quoted price during the preceding quarter. Only "bearer" securities were eligible, and the period for which they were borrowed was fixed at one to three years. The securities thus obtained were used to secure a loan of $100,000,000 from a banking syndicate in the United States headed by J. P. Morgan & Company.[2] As the French Government itself did not wish to give collateral for a government loan, this flotation was arranged through the organization of a corporation known as the American Foreign Securities Company. On July 9, 1916, it was offered to the American public in the form of $94,500,000 three year 5 per cent gold notes dated August 1, 1916, at 98 and interest. At this price the notes would yield about 5.74 per cent. The loan was

[1] *Commercial and Financial Chronicle*, January 20, 1917, p. 204.
[2] *Ibid.*, p. 398.

oversubscribed in two days. Successful as was this loan, it was secured at a very high price. The terms offered the owners of the securities were much more favorable than those granted English owners by the British Government. In September, 1916, another loan of $50,000,000 was placed by France.

The second permanent internal loan was authorized by decree of September 15, 1916. This was a perpetual *rente* at 5 per cent irredeemable before January 1, 1931. It was modeled after the first loan, and was issued at 88.75. As in the case of the first loan, the bonds were exempt from taxation, and the first instalment of interest was paid in advance. This brought the actual cost to the subscriber to 87.50. The subscription period was fixed from October 5 to October 29, and the period of payment in four instalments was extended until April 16, 1917. Since the bonds were sold at a discount and other concessions were given the purchasers, the interest rate figured out as in the case of the first loan at about 5.7 per cent. Professor Leroy-Beaulieu wrote of this loan: "One would seek in vain over the whole world among the solvent states for so favorable conditions."

The question of means of payment presented itself in connection with this loan Vigorous efforts were made to induce cash subscriptions, since the mere conversion of former issues would not assist in meeting the current obligations of the government. Treasury bills were admitted as a means of payment, as there were then in circulation on September 31, 1916, about $2,633,000,000, the bulk of which would mature shortly. The 5 per cent *obligations* were admitted to conversion, about $207,400,000 being outstanding. Finally, there was a small remnant of the prewar 3½s which had not been converted into the first loan, and this was now again given the conversion privilege. The issue was favorably timed, following the military successes of the summer which roused the hopes of the French people. The Finance Minister announced the result of the loan in the Chamber of Deputies on November 9, when he stated that the total subscriptions amounted to $2,272,000,000. The total receipts by borrowing during the year 1916 may be summarized as follows:

FRANCE, BORROWINGS, 1916

Form	Amount
Balance Anglo-French loan	$170,000,000
Two United States collateral loans	150,000,000
Treasury bills sold in England	463,000,000
Bons de la défense nationale, unconverted	2,633,200,000
1916 loan, new money	1,136,000,000
Advances Bank of France	400,000,000
Obligations de la défense nationale	207,400,000
Credit in England by shipment of gold	300,000,000
Other foreign credits	80,000,000
Ordinary Treasury bills	28,400,000
Advances, Bank of Algeria	9,000,000
Total	$5,577,000,000

TAXATION, 1916

The transactions for the year 1916 were as follows:

Expenditures		$6,579,209,979
Revenue receipts	$933,300,000	
Loans	5,577,000,000	
		$6,510,300,000

This table shows clearly the inadequacy of the ordinary tax receipts to meet even nonmilitary expenditures. The interest on the debt alone now amounted to almost as much as the total tax receipts ($791,920,000). In 1916, however, the recovery of the 1914 and 1915 deficit over prewar 1913 normal had been made, and the revenues to the end of 1916 just about equaled the 1913 yield. The following table shows how the revenues recovered:

REVENUES OF FRANCE, 1913 TO 1916[1]

(In dollars)

Source	1913	1914	1915	1916
Tax Revenues:				
Direct tax	$112,563,153	$114,885,889	$109,785,903	$98,403,167
Assimilated taxes	11,903,652	12,300,397	12,975,514	9,740,680
Registration	166,733,400	123,002,200	92,718,900	104,923,400
Stamps	47,926,300	39,190,400	29,233,500	31,527,600
Bourse operations	1,968,500	1,143,700	262,400	468,400
Personalty tax	27,609,800	30,668,000	31,556,400	36,286,500
Import duties	150,876,400	115,522,600	152,828,800	279,884,200
Indirect taxes	134,785,600	112,421,600	95,413,800	94,580,400
Tax on mineral oil	396,600	291,000	45,400	92,400
Tax on salt	7,047,800	6,743,400	6,370,800	6,190,800
Tax on sugar	35,918,200	29,638,200	40,952,600	34,619,400
Total taxes	$697,729,405	$585,807,386	$572,144,017	$696,716,947
Nontax Revenues:				
Monopolies	203,155,400	186,212,280	167,514,060	188,528,680
Domain, etc.	27,026,700	24,801,720	37,136,220	48,040,820
Total revenue	$927,911,505	$796,821,386	$776,794,297	$933,286,447

The 1914 income tax was first levied in 1916, and its returns stated by M. Ribot to the Chamber of Deputies on May 18, 1916. This tax was imposed upon all persons having a net income of $1,000 or over. There were various deductions and abatements, an allowance of $400 being made to a married man, and an additional $200 for each dependent child up to five; beyond five, there was an allowance of $300 for each child. Similar allowances were made to unmarried persons with dependents. Deductions could be made also for interest on debts, arrearages in payments made by the taxpayer, other direct taxes, and losses resulting from failure of an agricultural, commercial or industrial enterprise.[2] A limited progression was introduced into the tax by a rather complicated method. The tax was calculated by counting at one-fifth the income between $1,000 and $2,000; at two-fifths that between $2,000 and $3,000; at three-fifths that between $3,000 and $4,000; and at four-fifths that between $4,000 and $5,000. All over $5,000 was to be counted at its full value. The rate of the tax was 2 per cent.[3] It was esti-

[1] *Journal Officiel de la République Française.*
[2] Law of July 15, 1914, Art. 10.
[3] *Ibid.*, Art. 154.

mated that the tax would yield a revenue of about $12,000,000 to $16,000,000, but with such liberal exemptions it was clear that the incidence of the tax would be chiefly upon the well-to-do and the very wealthy. Out of a total of some 11,000,000 income receivers, it was calculated that only 400,000 or 500,000 persons would pay the income tax. The actual returns showed that the declarations, which were virtually optional, made between March 1 and April 30 (the period of declaration for the first year) numbered 165,394, from whom the estimated revenue amounted to only $4,450,000. The facts may be briefly set forth in the following table:

RESULTS OF FRENCH INCOME TAX, 1916

Class of Income	Declarations	Amount Declared	Deductions: Married Persons	Deductions: Dependents 1 to 5	Deductions: Dependents Over 5	Estimated Amount of Tax
$1,001 to $2,000	78,206	$116,981,625	43,110	37,643	350	$54,000
$2,000 to $3,000	38,581	95,413,373	26,229	31,918	483	154,000
$3,000 to $4,000	17,163	59,827,967	11,678	15,190	413	198,000
$4,000 to $5,000	9,243	41,824,233	6,254	8,320	320	214,000
Over $5,000	22,201	282,438,583	14,599	19,251	866	3,830,000
	165,394	$596,485,781	101,870	112,322	2432	$4,450,000

Another and more characteristic tax of this period was the war excess profits tax which was imposed upon exceptional and additional profits made during the war.[1] As first proposed by M. Ribot it was to tax only those profits realized between August 1 and December 31, 1914. But as finally adopted on July 1, 1916, it was to cover profits made during the period of the war, and was to continue for twelve months after cessation of hostilities. The average net profits for the three years prior to August 1, 1914, were taken as the normal base for determining these, and upon the excess a tax of 50 per cent was laid. The excess profits realized from August 1, 1914, to December 31, 1915, must be declared by September 1, 1916. Those for the year 1916 must be declared in the first three months of 1917, and similarly for

[1] The text of the law, passed July 1, 1916, is given in *Revue de Science et de Législation financière* (July–September, 1916), XIV 3, 454–462. *Journal des Economistes,* January, 1916, p. 169.

subsequent years. The rate of taxation was increased after September 30, 1916, to 60 per cent of the taxable profits over $100,000. Amounts of $1,000 or under were exempt; abatement was allowed for borrowed capital, the cost of raw materials, rent, foreign taxes, and similar items. A reduction could also be claimed for bad or doubtful debts, for depreciation or new installations. Appeals might be lodged against presumably excessive assessments.

The proposal to impose a war profits tax met with considerable opposition.[1] The *Journal des Economistes* objected to the tax because it was retroactive.[2] The Paris Chamber of Commerce stigmatized it as "inquisitorial" and feared it would frighten away capital, while other critics insisted that it was impossible to determine the profits and losses of business before the cessation of hostilities. Against all such criticism, the sufficient answer was the growing need of the government for revenue.

Other taxes which were passed by the act of July 1, 1916, were:

(1) An exceptional war tax on all Frenchmen within the military age limit but who, for one reason or another, were not called to the colors. The tax consisted of a fixed due of 12 francs a year, and a surtax of 25 per cent added to the individual's income tax. The machinery for collection was similar to that for the income tax.

(2) Grouped taxes: Certain existing taxes were doubled, such as those on mines, carriages, horses, clubs, billiard tables, etc.

(3) Securities: The special tax of 4 per cent on the revenue from securities was raised to 5 per cent. The existing tax of 5 per cent on certain classes of foreign securities was raised to 6 per cent.

(4) Colonial products: Special taxes were imposed, in addition to the existing customs duties, on a large number of articles of foreign production such as coffee, cocoa, chocolate, tea, vanilla,

[1] The opposition to additional taxes found strong expression in *L'Economiste français*, while the policy of taxation as opposed to loans only was vigorously advocated in *Revue de Science et de Législation financière*.

[2] February, 1916, p. 338.

mineral waters, sugar, molasses, tobacco, and other colonial products.

(5) A number of other taxes were imposed which can not be particularized; thus, theaters or moving pictures and other places of entertainment were subjected to special taxes representing as much as 10 cents a seat; and as much as 25 per cent of the entrance charges in the highest rates; taxes on alcoholic drinks and mineral waters were also raised, while a new tax was imposed upon special pharmaceutical products.

(6) Rates were raised for letters, telegrams, telephone calls, and money orders, and the whole postal system was revised.

A number of the taxes imposed by the law of July 1, 1916, were not to go into effect until January 1, 1917.

The act of December 30, 1916,[1] imposed a number of additional taxes and raised in a drastic manner the rates of those already in existence, particularly the income tax, which under the act of July 15, 1915, proved disappointing as a revenue producer. Little could be expected from it because the exemptions and deductions were so liberal and the rates so low. But it was now greatly modified by the acts of December 30, 1916, and of February 25, 1917, in order to make it more lucrative. It was hoped that these changes would increase the annual yield from $4,450,000 to $30,000,000 or $32,000,000. Under the new law the minimum exemption was reduced from $1,000 to $600. This was expected to double the number of taxable incomes, although the taxable base of course would not be correspondingly increased. Changes were also made in the method of calculating the taxable income. Incomes between $600 and $1,600 were to be estimated as equivalent to one-tenth; between $1,600 and $2,400 at two-tenths; between $2,400 and $3,200 at three-tenths; between $3,200 and $4,000 at four-tenths; between $4,000 and $8,000 at five-tenths; between $8,000 and $12,000 at six-tenths; between $12,000 and $16,000 at seven-tenths; between $16,000 and $20,000 at eight-tenths; between $20,000 and

[1] The text of this law was printed in *Journal Officiel*, December 31, 1916, and reprinted in *Revue de Science et de Législation financière* (January-March, 1917), XV, 1, 123–146.

$30,000 at nine-tenths, and above $30,000 the whole income was to be counted as taxable. At the same time, the rate was raised to 10 per cent. Other changes were introduced into the tax in order to secure sharper control. Under the original act of 1914 the tax rested upon the declaration of the taxpayer, but this declaration was voluntary. The law of December 30, 1916, introduced several changes which may be summarized as follows:[1]

1—The declaration was made obligatory.

2—A penalty of 10 per cent was added for neglect to make a declaration.

3—The taxpayer must indicate in his declaration the separate items which made up his income.

4—The declarations must be verified by the inspector, but he can not require the taxpayer to produce his books. He can only ask for explanations.

5—Penalties are provided for the taxpayer who will not furnish these explanations.

6—The taxpayer whose income falls below the taxable minimum may claim exemption.

7—Finally, by an amendment of February 25, 1917, the taxpayer was granted three months from January 1 to March 31, in which to file his declaration.

Banking and Currency, 1917

During the year 1917 the same general policy was followed which had been already laid down. As the burden of the war became greater, it was increasingly difficult to institute new taxes, so that continued dependence upon loans was necessary. The expenditures were mounting steadily and every available resource had to be drawn upon. The advances by the Bank of France continued throughout the year, mounting from $1,480,000,000 at the beginning of the year to $2,500,000,000 on December 27, an increase of $1,020,000,000. As usual, these advances were

[1] Just Haristoy: "L'Impôt sur le Revenu," in *Revue de Science et de Législation financière* (January-March, 1917), XV, 1, 55.

made in the form of note issues, which increased from $3,335,000,000 at the beginning of the year to $4,467,200,000 on December 27, this progressive expansion necessitating repeated raising of the legal limit upon maximum note issues. When the year opened, this limit stood at $3,600,000,000. On September 10 it was raised to $4,800,000,000, the last named figure being just double the maximum fixed at the outbreak of war.[1] The state thus gave its legal approval to continued issues of notes by the Bank of France—indeed, the enormous expansion of bank notes was directly attributable to the advances to the state itself. During the year the bank not only placed at the disposal of the state $1,080,000,000 in advances, but it also discounted $297,000,000 in French Treasury bills to enable the state to make advances to foreign governments.

Expenditures, 1917

One of the incidental results of war finance has been the almost complete disregard of regular budgetary procedure. Owing to the system of asking for votes of credit at periodic intervals, there were now practically four budgets introduced, one for each quarter of the year. M. Ribot, in a speech before the Chamber of Deputies in 1916, urged a return to the one-budget method.[2] He returned to this point when introducing the estimates for the last quarter of 1917, when he promised this would be the last occasion on which provisional credits would be asked, at any rate for civil expenditures. Thereafter, he said, the government intended to introduce an annual budget that would include all civil expenditures and all payments in connection with the public debt, so that only military expenses due to war would be included in the quarterly credits. This pledge was carried out by the passage of the budget on June 27, 1918—the first budget passed as a whole since the beginning of the war.

Another interesting innovation was made early in the year

[1] *L'Economiste français*, September 15, 1917.
[2] *Economist* (London), December 23, 1916, p. 1177.

1917 in the presentation of the public accounts.[1] Pursuant to the promise of the Finance Minister to the Chamber of Deputies, the Chief Public Accountant for the first time published a statement showing the situation, on January 31, in regard to the credits for 1916 and for the first month of 1917:

Credits for 1916 amounted to	$6,473,400,000
Authorized expenditure amounted to	$5,122,200,000
Unauthorized expenditure amounted to	1,351,200,000

The large amount of unauthorized expenditures shows the extent to which in times of crises constitutional guaranties and legislative control are set aside and the degree to which the Executive power was using its authority with no other legal right than necessity.

Another change was made in the method of handling accounts due to the delays incident to the enormity of the transactions. Previous to the war, the accounts for the calendar year had closed on March 31 of the succeeding year, but since the outbreak of war the settlement was delayed four months with the result that now the accounts for the calendar year were not closed until the following July 31.

In the meantime, expenditures were mounting steadily. The total credits granted for the first nine months of 1917 amounted to $5,796,400,000, but the appropriations for the fourth quarter aggregated $2,430,000,000, or almost half as much again. Supplemental credits were voted, the total finally reaching $8,374,185,000, which averaged during the year a daily expenditure of $22,852,000. This amount was distributed as follows:

Military and exceptional civil service	$6,844,258,000
Expense of debt	972,677,000
Ordinary civil budget	557,250,000
	$8,374,185,000

This gave a total expenditure to the end of 1917 of $21,303,829,000, of which it was estimated that $15,200,000,000[2] were

[1] *Economist* (London), March 24, 1917, p. 553.

[2] Report of the Budget Committee of the Chamber and the Civil Service budget of 1918, Doc. No. 4133, Chamber of Deputies.

purely military. The normal military expenses of the peace budget would have been $1,540,000,000, and the credits to Allies amounting to $600,000,000 would make the actual direct cost of the war to France about $13,060,000,000. In addition to this, the indirect war expense, including such items as allowance to families of enlisted men, assistance to war victims and invaded departments, etc., was estimated at $2,238,000,000, and lastly, the service of the war debt was put at a total to that date of $2,139,000,000, giving a total of direct and indirect costs of $17,443,600,000.

The great increase in expenditures which is shown in these figures must be attributed not merely to the military operations themselves, but also to the rise in the price of raw materials and foodstuffs and other articles necessary for the troops, the increase in salaries allowed to state officials, and to families of mobilized men, owing to the increased cost of living; and lastly, to the steady increase in the interest charge on the public debt.[1] The total expenses, civil and military, as reflected in votes of credit, were now over $21,000,000,000.

Borrowings, 1917

Of the credits of $8,374,185,000 granted for the year, no less than $7,780,000,000 were raised by unfunded debt.[2] About one-seventh of this was advances by the Bank of France, which increased from $1,480,000,000 at the end of 1916 to $2,500,000,000 on December 27, 1917. The *bons de la défense nationale*, which had been suspended at the time of the second war loan, were resumed again in February, 1917. The total *bons* in circulation January 31, 1917, were $2,684,297,800 and by November, just before the third loan, they totaled some $4,000,000,000. The Treasury also resumed the issue of the 5 per cent national defense *obligations* on March 20, the terms being similar to those of the previous issues, and just before the loan in November there were some $60,000,000 of these sold. In addition to

[1] M. Thierry, in *L'Economiste Européen*, September, 1917.
[2] *Statist*, October 13, 1917, p. 606.

the Treasury bills and short term *bons*, a new kind of security was issued in March, 1917, which may be called *obligation-bons* for it united the characteristics of the two previous securities.[1] They were emitted at par, bore 5 per cent interest, and were repayable at the end of any six months' interest period. If, however, the purchaser held them until the end of the five year period, he received a bonus of half a year's interest.[2] By the end of the year, December 31, 1917, there were outstanding some $4,000,000,000 of these.

During this year France borrowed abroad to a much greater extent than during any preceding period. On March 22, 1917, books of subscription were opened abroad by J. P. Morgan & Company in New York to a second $100,000,000 collateral loan. This loan was in the form of 5½ per cent convertible two year gold notes offered to the public at 99, yielding slightly over 6 per cent. It was dated April 1, 1917, and secured by the pledge of collateral of an aggregate value of $120,000,000 in neutral government securities or American or Canadian industrials. The loan was oversubscribed in four days. During the earlier part of the year France also placed industrial credits in United States through Bonbright & Company, Inc., to the extent of $15,000,000 which was secured by French Treasury bills. Treasury bills were also sold in England in an amount estimated at about $600,000,000.

The entrance of the United States into the war opened other resources to France, as well as to other Allies of the Entente, in the form of direct loans to the French Government by the Government of the United States. Advances were made by the United States to pay for supplies purchased in this country by France. The United States furnished Treasury bills for this purpose, in return for which it received from the French Government its securities to an equal amount. France had placed in United States up to April 1, 1917, the following loans:

[1] *Journal des Economiste*, February, 1917, p. 279.
[2] *Journal Officiel*, February 11, 1917.

October, 1915, Anglo-French loan	$250,000,000
July, 1916, American Securities Co., loan	100,000,000
September, 1916, collateral loan	50,000,000
April 1, 1917, collateral loan	100,000,000
Cities of Paris, Lyons, Bordeaux, Marseilles	85,000,000
Industrial credits	65,000,000

All of these loans had been subscribed by private banks, corporations or individuals, however, but the government advances made after the entry of United States into the war on April 6, 1917, differed from the former private loans in both character and amount. During the year 1917 the advances by the United States Government amounted to $1,285,000,000.

The great bulk of short term borrowing during 1917 made inevitable the third war loan. Accordingly, this was issued in November, 1917.[1] It was a 4 per cent perpetual *rente* issued at 68.60 for fully paid up subscriptions and at 69.20 for subscriptions paid in instalments. For the former class the yield was 5.83. The loan was limited to $2,000,000,000 of real capital or $2,600,000,000 of nominal capital. If it exceeded this amount, the small subscribers for not more than $60 would receive their subscriptions in full, while higher amounts would be subject to allocation. Interest on the loan was free from income tax. Various measures were taken at the time of the issue of this loan to maintain its price. It was made acceptable at its price for payment of the extraordinary tax on war profits and a special account was opened at the Ministry of Finance for the purchase of these bonds. A fund was constituted into which $12,000,000 was to be paid monthly until there was a surplus of $72,000,000. The fund was to be used for the redemption of the new loan and the previous 5 per cent loans of 1915 and 1916, but in no case was a higher price to be paid than the rate of issue.

The result of the loan was more than satisfactory, the subscriptions amounting to $2,960,600,000 nominal, and $2,034,200,000 actual, of which half represented new money. This did not include the foreign subscriptions. As in the previous loans, *bons, obligations,* and the remnant of the prewar 3½s were ad-

[1] The text of the law is given in the *Economist* (London), November 10, 1917, p. 760.

mitted to conversion. The *obligations* outstanding just before the loan totaled some $60,000,000 and of these about two-thirds were converted into the loan. *Bons* and *obligations* together amounted in November, 1917, just before the loan, to some $4,600,000,000; by December 31, they had sunk to $4,000,000,000, showing that the difference of about $600,000,000 had been taken up by the new loan.

The borrowings of France during 1917 may be summarized as follows:

FRANCE, BORROWINGS, 1917

Form	Amount
Advances from Bank of France	$1,020,000,000
Collateral loan in United States April, 1917	100,000,000
Banking credit, Bonbright & Co., United States	15,000,000
Industrial credits in United States	50,000,000
United States Government advances	1,285,000,000
Bons de la défense nationale, net	1,350,000,000
Obligations, net	60,000,000
Obligations-bons, net	2,000,000,000
War loans November, 1917, new money	1,500,000,000
Foreign Treasury bills (England, etc.)	600,000,000
	$7,980,000,000

In respect to the foreign loans, M. Klotz emphasized this in the preamble to his budget for the last quarter of 1917, saying in the first four months of 1917 France's debtor account abroad had increased by $505,800,000, and by July the increase had risen to $622,000,000, making the foreign indebtedness on July 31, 1917, amount to $2,700,000,000. He expressed anxiety on account of the growing proportions of the foreign debt, and urged strictest economy in goods purchased abroad. By the end of the year, the foreign debt, as reflected in the following itemized statement, had grown to $4,216,083,260, of which the principal amounts were held, $2,000,000,000 in England and $1,800,000,000 in United States, governmental and private.

DEBT OF FRANCE, DECEMBER 31, 1917[1]

Form			Amount
Internal:			
3 per cent rente	$3,949,092,153		
5 per cent rente, 1915	3,040,991,810		
5 per cent rente, 1916	2,301,600,000		
Amortizable 3 per cent rentes	627,845,400		
Other debts of Finance Minister	525,208,570		
	$10,444,737,933		
Other civil debts or liabilities	845,607,200		
Total internal fixed	$11,290,345,133		
Floating	7,526,783,260		
Total internal debt	$18,817,128,393		$18,817,128,393
External:			
Fixed	$1,982,840,000		
Floating	2,233,243,260		
	4,216,083,260		4,216,083,260
			$23,033,211,653
Foreign debt is made up as follows:			
Fixed:			
U. S. A. Treasury	$1,333,800,000		
Anglo-French loan	285,300,000		
Advances U. S. banks	114,000,000		
City of Paris loan in U. S. A.	57,000,000		
Bordeaux, Lyons, Marseilles, in U. S. A.	41,000,000		
American 1917 loan	115,000,000		
Japanese	29,500,000		
	$1,975,600,000	Interest thereon	$90,240,000
Floating:			
Treasury bills in English Treasury	$1,683,780,000		
Treasury bills in Bank of England	363,160,000		
Treasury bills sold in England	50,440,000		
Industrial credits in U. S. A.	57,000,000		
Treasury bills in Japan	15,480,000		
Bank credits in Spain	20,800,000		
Sweden	15,600,000		
Norway	17,800,000		
Holland	5,860,000		
Argentina	2,640,000		
Switzerland	680,000		
	$2,233,240,000	Interest thereon	$221,196,000

The above does not include the 1917 (December) war loan.

[1] *Statesman's Yearbook*, 1918.

TAXATION, 1917

The transactions for the year 1917 were as follows:

Expenditure	$8,374,185,000
Revenue	$1,082,900,000
Loans	7,980,000,000

While it is evident from the figures just given, considered in connection with the deficits in taxation during 1914, 1915 and 1916, that France was relying wholly on loans to defray the cost of the war, she was now making a strong effort to increase revenues from taxation to sufficient proportions to cover the civil budget and service of the war debt. Her revenues during 1917 failed to do even this, being $1,082,900,000, and debt charges being $1,529,000,000. The acts of July and December (1916) had broadened the basis of taxation by the imposition of a number of new taxes and by raising the rates of the old ones, all of which went into effect on January 1, 1917, except the tax on pharmaceutical specialties which was to become effective by decree. As these revenues proved to be greater than the original estimates from month to month, the hope gained ground that the hoped for increase of $117,000,000 over the receipts of 1916 might in fact be as much as $264,000,000, distributed as follows:

Source	Amount
Increase in income tax	$40,000,000
Tax on excess war profits	100,000,000
Exceptional war tax	5,000,000
New direct taxes, 1917	12,400,000
New indirect taxes, 1917	78,400,000
Increased tobacco duty	16,000,000
Increased postal charges, etc.	12,000,000
	$263,800,000

Some of these estimates seem somewhat exaggerated, since the preamble to the budget proposals for the fourth quarter of 1917 stated that up to that time the stamp duties, yield from the tobacco monopoly, and post, telegraph and telephone service still showed a deficit from the normal prewar condition.[1] Receipts from

[1] *Economist* (London), October 6, 1917, p. 489.

sugar showed an increase over normal of about 25 per cent; estate duties of 35 per cent; and customs of 129 per cent. It must be remembered, however, that much of the expansion of French trade and of customs receipts was due to the importation of war supplies and was consequently rather artificial. In the case of indirect taxes on mineral waters, theaters, coffee, etc., the estimated yield was greatly exceeded. The gradual growth of the actual yield of taxation in France back to its prewar level, and finally its progression in the first half of 1917 to an increase above normal, as analyzed in the budget proposals, are shown in the following table:

Period	Actual Yield	Normal Yield	Increase Decrease from Normal	Actual is Per Cent of Normal
Aug. 1 to Dec. 31, 1914..	$193,732,600	$336,746,000	—42.46	57.54
Jan. 1 to July 31, 1915..	366,657,800	461,919,000	—20.62	79.38
Aug. 1 to Dec. 31, 1915..	268,849,200	338,680,800	—20.61	79.38
Jan. 1 to July 31, 1916..	420,100,400	473,151,600	—11.21	88.79
Aug. 1 to Dec. 31, 1916..	371,984,000	388,523,000	— 9.88	95.87
Jan. 1 to July 31, 1917..	563,226,000	473,151,600	+19.04	119.08

The yield from the amended income tax for the year 1917 proved to be greater than estimated. In 1916 there had been 165,394 declarations, showing a total income of $596,500,000, and yielding a tax of $4,450,000. In 1917, when the exemptions were lowered from $1,000 to $600 and the declarations made obligatory, the declarations rose by more than 50 per cent to 367,554, with a total declared income of $1,170,890,715, and a tax yield of $36,652,000 as shown in the following table:

RESULT OF INCOME RETURNS IN FRANCE IN 1917

Income	Declarations	Revenue Declared	Deductions			Total Yield
			Married	No. Dependents Under 5	Over 5	
$600— $1,600	182,673	$197,076,617	75,972	55,803	382	$430,000
1,601— 2,400	75,963	146,823,120	51,119	60,328	244	644,000
2,401— 3,200	35,437	97,394,513	23,710	32,299	727	794,000
3,201— 4,000	19,655	70,444,719	13,285	18,479	521	878,000
4,001— 8,000	32,771	178,967,975	21,791	31,035	1,033	4,060,000
8,001— 12,000	9,201	88,755,099	6,184	9,037	345	3,046,000
12,001— 16,000	3,868	53,021,594	2,562	3,780	188	2,210,000
16,001— 20,000	2,271	40,169,954	1,535	2,158	105	1,918,000
20,001— 30,000	2,665	64,615,745	1,781	2,625	133	3,658,000
Over 30,000	3,050	233,621,379	2,060	3,092	192	19,014,000
	367,554	$1,170,890,715	199,999	218,636	3,870	$36,652,000

At the beginning of the year 1917, M. Ribot proposed that three antiquated and oppressive old taxes be cancelled, namely, the tax on doors and windows, the business tax (*patentes*) and the inhabited house tax. To compensate for this loss of revenue, he proposed two fresh taxes, (1) a personal tax of five francs on each person with a private income, and (2) an increase of 20 per cent in the general income tax, raising it from 10 to 12 per cent. These proposals were acted upon and formed the subject of debate during the next session of the Assembly. The law as finally passed on July 31, 1917, marked, according to Professor Gaston Jéze, the beginning of a "new fiscal era." [1] The abolition of the three taxes mentioned was carried through, thus getting rid of most unequal and vexatious imposts. Their suppression, however, applied only to the portion of these taxes which was collected for the account of the state.

A new annual tax on business profits was imposed. The rate of the tax was 4½ per cent but it was graduated in characteristic French fashion. If the profits did not exceed $500 the tax was laid on one quarter of the amount; on profits between $500 and $1,000 the tax was imposed on one-half of the amount; profits exceeding $1,000 were taxed in full. Where the total profits did not exceed $300 no tax was levied.

A special tax was imposed on the turnover of retail business when the turnover, after certain deductions, exceeded $250,000. The contributions were fixed at the following rates:

Tax per 1,000 francs	On turnover between—
1 franc	1,000,000 and 2,000,000 francs
2	2,000,000 10,000,000
3	10,000,000 100,000,000
4	100,000,000 200,000,000
5	Over 200,000,000

Other new taxes enacted by the above law were a tax on agricultural profits and taxes on salaries and the liberal professions. The rate of these taxes was fixed at 3¾ per cent in each case. All of the above taxes were to take effect January 1, 1918.

[1] *Revue de Science et de Législation financière* (July-September, 1917), XV, 3, 448.

EXPENDITURES, 1918

The total credits voted for this year aggregated $10,671,000,000, and abundantly evidenced the growing cost of the war. The civil budget was first introduced in November, 1917, but before it had passed the Chamber in April the costs had so increased as to necessitate a revision, and before it was finally passed in June, 1918, a still further revision had to be made, increasing the estimated expenditures, and decreasing the estimated receipts, the latter due to loss occasioned by delay in imposing the taxes upon which the November estimate was based. From its introduction to its passage, these changes were:

	November Estimate	April Revision	Final Figures
Expenditure	$1,561,781,488	$1,673,283,631	$1,672,291,897
Receipts	1,561,802,786	1,674,220,672	1,642,572,428
Surplus	$21,298	$937,041	Deficit $29,719,469

Thus an estimated surplus of $21,298 was transformed by the delay into a deficit of $29,700,000. In order to avoid further loss, the Senate took the unusual step of initiating new taxes itself and referring them to the Chamber. This deficit was to be made up by $60,000,000 proposed new revenues to be derived particularly from the levy of taxes on transportation, of docking taxes, and from the suppression of fiscal frauds. At the end of the year 1918, it was estimated that the actual disbursements of the government for all purposes were 20 per cent less than the authorized expenditures, or $8,537,800,000, but in spite of this decrease in expenditure there was a real increase in costs. After the armistice the huge expenditure attendant upon demobilization and reconstruction of invaded districts became hopelessly intermingled, and purely war costs can not be precisely traced.

In bringing in the civil budget for the year 1919, however, Minister of Finance Ribot stated that it would involve $1,785,000,000 of expenditure, exclusive of interest on the 1918 loan which would amount to about $228,000,000; that interest on the advances of the bank would amount to $100,000,000 to $120,-

000,000; reconstruction expenses, which it was expected to raise by a huge loan, would carry perhaps $300,000,000 interest charges, which with added ordinary burdens, pensions, etc., would make the postwar budget total $3,400,000,000.

Banking and Currency, 1918

The charter of the Bank of France would expire on December 31, 1920, and its extension for twenty-five years was brought before the legislative body. Various proposals were made, such as (a) that it should divide its surplus profits after passing 24 per cent evenly with the state; (b) that it should be nationalized; (c) that the period of the franchise should be shortened to the end of the war, or for fifteen years, etc. The government's proposal that the present convention between the bank and itself should be extended for another twenty-five years was finally passed by the Chamber of Deputies on July 11, 1918, by a vote of 325 to 137, and became law on December 20, 1918. The convention granted the bank the sole right of issue in France. It is difficult to see how any other course could have been pursued at this time, as the government was depending so largely upon the Bank of France for assistance in financing the war.

The year 1918 saw no diminution of the responsibilities of the bank. This was evidenced by the passage on June 6, 1918, of an act increasing by $600,000,000 the amount which the bank might loan to the government. By the end of July, 1918, these advances amounted to $3,780,000,000, or a net increase of $1,640,000,000 during the past twelve months. As usual, the advances to the state which amounted to $1,080,000,000 during the year 1917, and to $930,000,000 net during the year 1918, necessitated increases in the note issues. These stood at $5,829,600,000 at the end of the fourth year of war (July 26, 1918) and at $6,049,800,000 on December 26. The successive increases made necessary the extension of the legal maximum from time to time, in February the limit being set at $5,400,000,000; in March, 1919, owing to the large advances made by the bank to

redeem the German mark in Alsace-Lorraine at its franc value, the legal limit was increased to $7,200,000,000, and finally, in May, 1919, under a pledge that it would mark the limit of these extensions, a law was passed placing the limit upon advances to the state at $5,400,000,000, and on note issues at $8,000,000,000. This act called forth much adverse criticism, and financial and economic journals expressed concern over the ability of the bank to resume specie payments for many years to come. At the time of its passage, the actual advances to the state stood at $4,500,000,000, thus permitting a further increase of $900,000,000, and note issues stood at $6,795,000,000, permitting of an increase of $1,205,000,000. Against this, France then held gold and bullion, at home and abroad, to a total of $1,505,110,000 (May 1, 1919).

In the report of the bank for the year 1918, it shows as its largest asset $3,430,000,000 advanced to the state, and French treasury bills discounted by the bank and advanced for the state to allied governments of $705,200,000, government obligations being 60 per cent of the bank's total assets; note circulation forming 90 per cent of the bank's total liabilities. The total loss of gold by the bank during the war was $604,400,000, of which $391,000,000 was shipped to England, and prior to 1917 gold was shipped to United States in large quantities to buy exchange on England. During the war, the state had repaid to the bank from the proceeds of popular loans, a total sum of $1,770,000,000.

While not all of the note issues were added to the circulation, as an enormous quantity of notes was hoarded by the people, while the accumulation of gold was replaced by a note increase, and even allowing for the necessary increase of the circulating media due to the vast multitude of military and civilian peoples drawn to France by the war, yet there has been as a result of the undoubted increase in note circulation an inflation of the currency with all the attendant depreciation of the franc and rise in prices. The rise in prices is shown by the result of an inquiry made by the *Statistique Générale de la France*,[1] based on the

[1] *Commercial and Financial Chronicle*, January 4, 1919, p. 8.

purchase price of some thirteen articles of general consumption consisting of foodstuffs and lighting and heating materials in the public market of all French towns of over 10,000 inhabitants. The index number thus obtained stood at 1004 for the third quarter of 1914; at 1235 for the same period in 1915; at 1420 for 1916, and at 1845 for 1917. The first quarter of 1918 showed a further rise to 2120. Of course, part of this was due to decreased production and scarcity, but there is no doubt that the inflation of the currency played an important part in the rise of prices in France. The only thing which stood between France and inconvertible paper money was the Bank of France. The gold reserves, in spite of the fact that there had been no exports during 1918, and a collection of $25,400,000 had taken place, were dangerously low, and alarm was expressed by French writers that in view of the enormous volume of bank notes outstanding, specie payments could not be resumed. The following table shows the changes which have taken place in the note issues, advances to the state, and gold holdings, at more or less significant dates during the war period:

BANK OF FRANCE

Date	Note Circulation	Advances to State	Gold In Vault	Gold Abroad
1914 July 30	$1,336,640,000	.....	$828,260,000	
1915 January 28	2,094,700,000	$780,000,000	846,760,000	
February 28	2,192,400,000	$880,000,000	847,780,000	
March 25	2,235,300,000	940,000,000	849,740,000	
April 29	2,316,880,000	1,040,000,000	833,800,000	
May 27	2,365,580,000	1,100,000,000	782,680,000	
June 24	2,420,940,000	1,200,000,000	785,440,000	
July 29	2,518,500,000	1,260,000,000	825,860,000	
August 26	2,590,060,000	1,260,000,000	853,260,000	
September 30	2,691,660,000	1,340,000,000	910,020,000	
October 28	2,773,520,000	1,380,000,000	946,000,000	
November 25	2,855,680,000	1,480,000,000	967,040,000	
December 30	2,661,980,000	1,000,000,000	1,003,060,000	
1916 January 27	2,771,600,000	1,080,000,000	1,002,320,000	
February 24	2,859,060,000	1,140,000,000	1,007,180,000	
March 30	2,990,420,000	1,340,000,000	1,001,260,000	
April 27	3,055,600,000	1,440,000,000	960,720,000	
May 25	3,087,000,000	1,500,000,000	946,300,000	
June 29	3,161,140,000	1,580,000,000	898,440,000	
July 27	3,218,180,000	1,660,000,000	903,100,000	
August 31	3,284,920,000	1,680,000,000	847,800,000	
September 28	3,542,820,000	1,700,000,000	831,640,000	
October 26	3,317,840,000	1,720,000,000	849,480,000	
November 30	3,223,900,000	1,300,000,000	752,920,000	$277,000,000
December 28	3,335,760,000	1,480,000,000	676,560,000	
1917 January 25	3,465,640,000	1,620,000,000	665,380,000	359,000,000
February 22	3,577,700,000	1,760,000,000	639,380,000	
March 29	3,691,960,000	1,900,000,000	650,480,000	
April 26	3,801,980,000	1,980,000,000	658,900,000	
May 31	3,895,880,000	2,100,000,000	647,980,000	
June 28	3,964,620,000	2,120,000,000	650,640,000	406,900,000
July 26	4,040,340,000	2,140,000,000	652,720,000	
August 30	4,113,740,000	2,240,000,000	654,940,000	
September 27	4,198,960,000	2,330,000,000	656,460,000	407,420,000
October 25	4,341,060,000	2,430,000,000	657,800,000	
December 27	4,467,200,000	2,500,000,000	662,880,000	
1918 April 4	5,169,400,000	2,960,000,000	667,590,000	407,420,000
July 25	5,829,600,000	3,780,000,000	679,080,000	
October 31	6,156,400,000	3,760,000,000	681,300,000	
December 26	6,049,800,000	3,430,000,000	688,090,000	407,420,000

Borrowings, 1918

To meet the growing expenditures the government relied for the most part, aside from the advances of the Bank of France, upon loans. The *bons de la défense nationale* were extremely popular and represented a steady and dependable reliance of the

government at all times. Their sale was made a special feature in the celebration of Bastille Day on July 14, when the country subscribed to $22,000,000. Sales of *bons* increased steadily from month to month. For the first fortnight of October subscriptions amounted to $294,400,000—the largest in any such period since the issue of that form of security. This was the highwater mark, and was $100,000,000 greater than the next highest fortnightly sales during the year 1918. For the month of November the subscriptions amounted to $439,600,000. During the first two weeks of December they exceeded $200,000,000. The total amount issued during the year was $26,614,000,000, as against $8,020,000,000 during 1917, of which there remained outstanding on December 31, 1918, some $4,483,750,000. By the end of the year the government was able to reduce the interest on these short term notes; originally the rate had been fixed at 5 per cent, but a year later it was reduced to 4 per cent on the one and three months' *bons*. The new rates now established were: 3.5 per cent for one month; 4 per cent for three month; 4.5 per cent for six month; and 5 per cent for one year *bons*.[1]

It was necessary, finally, to take up this swelling mass of short term paper, and accordingly the fourth French loan was announced for subscription from October 20. It was a 4 per cent perpetual *rente*. The coupons were free from taxation and the bonds were not convertible for at least twenty-five years. No limit was placed upon the amount of the loan which would be accepted by the government. It was issued at 70.80, at which price the yield would be 5.65, which was slightly less than the rate on the previous issues. Provision was made under conditions very favorable to the holder for the acceptance in part payment of *bons, obligations,* 3½ per cent redeemable *rente* scrip, and Treasury bills. One of the novel features in connection with the new loan was that the holders of Russian Government bonds were allowed to utilize in part payment of the French loan

[1] Quoted by *Economist* (London), November 9, 1918, p. 654.

coupons maturing during the year 1918 up to 50 per cent of their subscription.

As a result largely of conversion of other war paper, the subscriptions to the fourth loan reached a total of $6,000,000,000 nominal capital, representing a return to the Treasury of $4,250,000,000. Russian coupons were turned in to the amount of $50,000,000. There were over 7,000,000 subscribers to the loan.

Although the main dependence of the French Government in raising the enormous sums called for under her loan policy had been the French people themselves, about one quarter of the borrowings from the beginning of the war had been obtained from foreign countries. England had contributed $2,170,000,000 down to April, 1919; United States advances were $2,752,477,000 to April, 1919; Japan's $39,340,000; Switzerland, Holland, Spain, etc., $110,000,000.

During the year 1918, advances from the Bank of France increased from $2,500,000,000 to $3,430,000,000 on December 26, or $930,000,000. The total borrowings of the French Government from 1914 to 1918 may be summarized as follows:

FRANCE, WAR BORROWINGS, 1914 TO 1918

Source				Amount
War Loans: 1915	Nominal $3,041,000,000	Actual $2,661,600,000		
1916	2,302,800,000	2,016,400,000		
1917	2,960,600,000	2,034,200,000		
1918	6,000,000,000	4,300,000,000		
	$14,304,400,000	$11,012,200,000		$11,012,200,000
Advances from Bank of France				3,430,000,000
Advances from Bank of Algeria				17,000,000
Advances from Great Britain to April, 1919				2,170,000,000
Advances from United States Government				2,436,427,000
Private loans, collateral and industrial, in United States				686,000,000
Loans in neutral countries				150,000,000
Floating debt, *bons, obligations,* and *obligation-bons*				4,800,000,000
				$24,701,627,000

Taxation, 1918

France had already made energetic efforts in 1917 to increase her tax revenues in spite of adverse conditions, and during the year 1918 she continued the same policy. For 1918 the total estimated receipts from revenues were placed at $1,642,570,000, or

about $700,000,000 more than the prewar normal of 1913. The greatest increase in direct taxation was of course the income and war profits taxes. The total direct taxes from income and capital had risen from $337,449,200 in 1912, to $628,400,000 in 1918, an increase of $290,950,000. Indirect taxes, however, had increased in much greater proportion, alcohol and tobacco taxes rising from $161,000,000 to $405,600,000, and customs duties increasing from $66,600,000 to $326,000,000.

Further increases in existing taxes, and the introduction of new taxes, were proposed early in the year. These affected income, mainmorte, verification of weights, contracts, legacies, and articles of association, stamped paper, insurance policies, wine and beer, molasses and glucose, and the so-called luxury tax. The character of the taxes suggested indicates the French preference for indirect taxation, and also the difficulties which they were now experiencing in finding new sources of revenue. The heavy taxation on articles of consumption, added to the enormous rise in prices through the inflation of the currency, had made the cost of living a serious problem for all Frenchmen, and a well nigh insuperable one for the poorer classes with large families. In comparison with the year 1914 the cost of living had risen 112 per cent by the first quarter of 1918. There were not lacking critics who urged that this would have a serious effect upon the already stationary birthrate and would place France in a still more difficult position after the war in relation to other nations. The Paris correspondent of the London *Economist*,[1] commenting upon this fact, gave the following interesting comparative table of receipts for a twelvemonth to show the variation in rates of levies under the French and English method of taxation:

Type	France	England
Income tax	$54,000,000	$1,197,400,000
Tax on war profits	116,000,000	1,101,000,000
Taxes on articles of consumption	905,400,000	550,500,000

The new impositions were expected to bring in an additional $72,400,000, in addition to the expected $60,000,000 of new rev-

[1] November 9, 1918, p. 654.

enues from the taxes on transportation, docking dues, and suppression of fiscal frauds introduced to make up the deficit in the April revision of the civil budget.

The income tax was revised by the July law, exemptions and deductions remaining as before, and incomes were now divided into four categories: (1) not exceeding $1,000 net, which bore a tax rate of 1½ per cent; (2) between $1,000 and $30,000 upon which the rate progressed from 1½ per cent on the minimum to 16 per cent on the maximum; (3) between $30,000 and $110,000, on which the rate progressed from 16 per cent on the minimum to 20 per cent on the maximum; and (4) exceeding $110,000 on which the rate was 20 per cent.

The most interesting tax of this year was the tax on luxuries. When the bill dealing with this tax was introduced into the Chamber by the Minister of Finance, it proposed a threefold classification. The object of the law, according to the Minister, was "to attack manifestations of wealth, and not instruments of labor. It taxes enjoyment, but does not wish to paralyze effort." The classification proposed grouped commodities, according to their luxurious character, as follows:

(1) Obvious luxuries: in this group were enumerated photographs, jewelry, antiques, sporting games, mechanical pianos, motor cars, billiard tables, perfumes, sculptures, yachts, silk underwear, liqueurs, watches, etc.

(2) General articles such as clothing, which become a luxury when the price exceeds a certain sum. In this group taxes were imposed if the price exceeds: $2 on imitation jewelry, children's undergarments, scissors, yard lace, fans, and imitation bronze; $4 on gaiters, bookbinding, traveling clocks; $8 on pleasure dogs; $10 on boots, tablecloths, tea and coffee service; $16 on children's suits; $20 on men's suits; $50 on women's costumes; $100 on horses; $300 on safes and motorcycles.

The bill as finally passed in March was a double-barreled affair which taxed (1) every payment of a sum exceeding $30 representing the retail sale or consumption of a luxury commodity at the rate of 20 centimes per 100 francs or fraction; (2) there

was also a tax of 10 per cent upon the price paid for any object or article of merchandise which was designated by law as an article of luxury, and for expenditures made in certain establishments such as hotels and restaurants which were classed as "establishments de luxe." Both of these taxes were to go into effect on April 1, 1918.

It was not long before wholesale protests began to be forwarded to the government against the 10 per cent tax on articles of luxury. It was objected to upon the ground that prices were already high enough; that it was unfair in distribution, since it applied only to prices in excess of certain minima. Difficulties, too, in the way of practical administration developed, and trade in the articles falling under the scope of the tax fell off enormously. It was urged that in lieu of this a tax of 2 per cent on the "turnover" be substituted. By November the so-called luxury tax had become so unpopular that its radical modification, if not its entire abolition, was regarded as imperative. After a trial of over six months, it produced only about one-third of the expected revenue, and proved equally unpopular both with purchasers and merchants. In many cases the stores themselves paid the tax in order not to lose trade. It was also urged as an objection that many of the articles classified as luxuries had in reality come to be regarded as necessities, and finally, that the bookkeeping involved constituted a serious cost to the merchant. As a result of these protests, a bill was introduced into the Chamber proposing to replace the luxury tax by a 2 per cent tax on the total turnover. In order to ascertain this, every merchant was to be required to keep books showing his exact daily receipts. The general theory of the luxury tax was very unpopular in France. It was stated that the government was uncertain whether it was repressing undersirable expenditure, or seeking to increase its revenues. The two purposes being self-contradictory, both could not be secured by the same enactment; in France the former result seems to have been attained at the expense of the latter, but it was not obtained without considerable cost in irritation and dissatisfaction on the part of the people—

an intangible, though sometimes heavy, price for a government to pay. In the next session of the Assembly the luxury tax was thrown out of the Chamber, but was finally restored after the Senate had voted to retain it. Modifications were made in the tax to meet some of the more serious objections.[1]

French financial critics had lately been directing increasing attention to the dangers of the loan policy in financing the war instead of endeavoring to meet at least the civil expenditures, including interest on the loan, out of current revenues. The French method of living from hand to mouth and leaving the settlement of the war costs until after the war was over, is a policy which can safely be adopted only in the case of a short, victorious war. In view of the long continuation of the struggle the policy had well nigh broken down, and would probably have collapsed entirely had it not been for the opportune assistance secured through the entry of the United States into the war and the credits granted by that government. The day of reckoning, however, was fast approaching, and could not much longer have been postponed. There is some excuse to be made for France in view of the fact that some of her richest departments were invaded. In measuring the tax effort of France it may fairly be said that this invasion resulted in a loss of revenues of $152,000,000 for the full year of 1915, and as this total area was either occupied or rendered nonproductive from a tax viewpoint for the full four and a half years of the war, the war loss of revenues alone amounted to $684,000,000. Therefore the heavy burden of taxation due to increased levies, which yielded $1,082,900,000 in 1917 and was estimated to yield $1,642,570,000 in 1918, represents not a general increase on the full peace base of taxation, but an absolute increase on a much more restricted base, namely, the uninvaded portion. This subtraction of taxable area and population for the war period, and the imposition of the whole burden with its increasing demand on the uninvaded part of France, so modifies the mere volume of Treasury receipts that it does not permit of comparison with the fiscal efforts of non-

[1] Paris despatch in *Washington Post*, April 2, 1919.

invaded countries like Great Britain. On the other hand, if the rates of the income tax, for instance, are compared—the last enactments in these countries being 42½ per cent in England on the higher incomes, and only 20 per cent in France, and the final war profits in England being 80 per cent of the excess over $1,000, and in France 60 per cent of excess over $100,000—the inadequacy of the effort is more apparent. The unwisdom of such a policy of not raising sufficient amounts by taxation to pay the expenses of the civil budget and interest on the money borrowed has been shown by the experience of the United States in the War of 1812 and the Civil War. It was even more vividly illustrated by the experience through which Germany was now passing as a result of her almost complete dependence upon the loan policy. There was this difference, however, between France and Germany—the former country was pushed into the abyss of inflated credit and overexpansion of note circulation, while the latter deliberately chose and planned her policy as the correct method of financing a war. If further proof were needed of the unwisdom of this method, it is certainly furnished by the financial experience of these two countries during the war.

The finances of the war period, which apparently include civil expenditures, were reported to the Chamber of Deputies as follows[1]: Expenses were estimated to reach in round numbers a total of $36,400,000,000. To meet this there were raised during the war total receipts of $31,600,000,000, the difference of $4,800,000,000 remaining as a floating debt. The resources comprised $3,600,000,000 from taxation; $10,800,000,000 from the four war loans; $4,000,000,000 advances by Banks of France and Algeria, and the remainder from short term Treasury bonds and advances made by Allies.

In addition to the $4,800,000,000 deficit, certain extraordinary expenditures should be added to give a correct idea of the cost of the war. Such expenses would include compensation to civilians for war damages which is placed at $2,000,000,000; the cost of exchanging the German mark currency in Alsace-Lor-

[1] Paris despatch in *New York Times*, February 18, 1919.

raine, $500,000,000; payment of bonds issued in the liberated regions, $300,000,000 demobilization bonuses estimated at between $400,000,000 and $1,200,000,000, and other exceptional expenses sufficient to bring the total to about $5,200,000,000. If this be added to the $36,400,000,000 already given as the money outlay in course of the war, the total cost to France would be brought up to $41,600,000,000.

The direct cost of the war to France, exclusive of civil expenditures met out of loans, may be stated as follows:

Expenditures, 1914—Ordinary	$1,038,200,000	
Extraordinary	1,779,700,000	
		$2,817,900,000
1915		4,560,800,000
1916		6,589,029,000
1917		8,374,185,000
1918		8,537,800,000
		$30,879,714,000
Less 5 years normal (1913, $1,013,386,240)		5,066,931,200
Net cost of war (five full years)		$25,812,782,800

This was met by:

Source	Amount
Four war loans, actual	$11,012,200,000
Advances from Banks of France and Algeria	3,430,000,000
Advances from Great Britain	2,170,000,000
Advances from United States	2,436,427,000
Collateral and industrial in U. S. A.	686,000,000
Loans in neutral countries	150,000,000
Floating debt	4,800,000,000
Revenues, 5 years	5,232,372,130
	$29,916,999,130
Less 5 years normal (1913, $927,911,505)	4,639,557,525
Extraordinary receipts (five full years)	$25,277,441,605

There is thus shown a deficit of $535,341,195 between expenditures and receipts, which must be added to the item of floating debt reported in February to the Chamber of Deputies.

RUSSIA

The economic and financial situation in Russia was a sound one in 1914. For several years the budget had shown a surplus, and a period of economic expansion which had set in after the end of the war with Japan gave a firm foundation for the state finances. The Treasury had been able not only to reduce the government debt from $4,515,000,000 to $4,412,000,000 in the three years from 1910 to 1913,[1] but it had also accumulated an emergency reserve fund of about $250,000,000. At the outbreak of the war Russia held the largest supply of gold in her history and the largest of any European state, amounting to $850,000,000. The economic condition and the finances of Russia were, however, seriously affected by the Austro-Serbian conflict which it was clear could not long remain localized. Toward the end of July there was a considerable slump in all dividend stocks, and finally, in order to avert a panic, the Petrograd bourse was closed on July 29. At the same time, a moratorium for two months was declared as of July 25, which was later extended.

When the war began the government turned at once to the Imperial Bank of Russia for assistance, and during the first few weeks received advances from that institution averaging about $50,000,000 a week. As in the case of the other continental banks, the government relieved the Bank of the obligation of redeeming its notes in specie, and at the same time removed all checks upon note issues up to the legal limit of $1,100,000,000. In this way the gold reserve was safeguarded and the credit of the Bank was made available for the use of the state.

The financial policy adopted by Russia was similar to that followed by practically all of the belligerents except England, and was clearly stated by the Minister of Finance in his budget speech

[1] *Russian Year Book*, 1917.

of March, 1916. The civil expenditures were to be defrayed as far as possible out of taxation; the cost of the war and any deficits in the civil budget were to be met by loans and issues of paper money. The receipts and expenditures of the civil budget should therefore be studied in order to see the extent of the deficits.[1] To a certain extent they must be counted as a part of the cost of the war. As they were defrayed out of loans and issues of paper money, they at once complicated war finance. Every effort was made to avoid a deficit in the civil budget and expenditures for social purposes were cut down or eliminated wherever possible. The small deficit which showed itself the first year was met out of the free cash in the Treasury. The following year the ordinary military and naval expenditures were transferred to the war budget. Large as were these deficits, they were really greater than appears in the budget statements of the government. The following table shows the civil expenditures and receipts for the four years 1914 to 1917, inclusive:

CIVIL EXPENDITURES AND RECEIPTS, RUSSIA, 1914 TO 1917

ORDINARY—In millions of dollars

Year	Expenditures	Receipts	Deficits
1914.....	1,464	1,449	15
1915.....	1,534	1,397	137
1916.....	1,587	1,457	130
1917.....	3,061	1,870	1,191
	7,646	6,173	1,473

The war not only increased the expenditures, it also greatly reduced the revenues. The foreign trade, one-third of which had been with Germany, was profoundly affected. The closing of the Dardanelles and the suspension of the navigation of the Baltic put an end to the trade through these two routes. The result was a loss of about 80 per cent of the prewar foreign trade and a corresponding reduction of customs revenues amounting to about $250,000,000 annually. A still greater sacrifice of revenue, amounting to more than a fourth of the total,

[1] There are three budgets in Russia—the civil or ordinary, the extraordinary civil, and extraordinary military. Here only the first is considered.

was made by the abolition, immediately on the declaration of war, of the state traffic in vodka. The revenues just before and during the war from this source are shown in the following table:

RUSSIAN REVENUE FROM SPIRIT MONOPOLY

Year	Amount
1913	$449,650,000
1914	251,950,000
1915	15,360,000
1916	25,680,000
1917	24,800,000
	$767,440,000

To offset this loss new taxes were proposed which were cheerfully accepted by the commercial class. These comprised a transport tax on all goods transported within Russia by rail or water; a tax on passenger tickets; one on cotton, and an increase in the postal and telegraph rates. In this way it was expected to make up the deficit caused by the abolition of the liquor traffic and it was hoped that the increased productive capacity of the Russian nation would be so great as a result of the abolition that the new taxes would not impose in reality any additional burden and would be easily raised.

Three financial problems presented themselves for solution at the outset: first, the replacement of the revenue previously derived from the sale of vodka; second, the actual financing of the war; and third, the raising of additional revenue to meet the interest on the new war loans and other additions to the civil budget resulting from the war. The first was met in the manner above outlined. In the solution of the second the government turned for assistance to the Bank and to the loan market. In a memorandum annexed to the Russian budget, the Minister of Finance estimated the cost of the war up to October 31, 1914, at $892,500,000. This expenditure, he announced, had been covered in the following ways:

CHARACTER OF BORROWINGS

1914		Amount
Internal:		
October 3	Long dated 5 per cent 49 year loan.....	$257,000,000
August 22	Short dated 4 per cent Treasury notes.....	150,000,000
July 23, October 6, December 26	Treasury bonds	650,000,000
Foreign:		
October 6	Short dated Treasury bonds (London).....	60,000,000
December 26	Short dated Treasury bonds, 5 per cent.....	200,000,000
		$1,317,000,000

The external loans were those placed in London the proceeds of which were to be used in the purchase of supplies in England. The Russian Government also shipped $40,000,000 in gold to London in November to establish a credit to finance Anglo-Russian trade. The total amount of foreign loans placed by Russia between October 6 and December 31, 1914, was $260,000,000.

The short term internal loans of this period were (a) Treasury notes issued under the ukase of August 22 at 4 per cent, amounting to $150,000,000 and (b) Treasury bonds under the ukase of July 23, October 6 and December 26, being 5 per cent bonds in amount of $650,000,000. The long term borrowing was the first Russian war loan issued in October, being 5 per cent bonds redeemable in 1925 and payable in 1965. They were issued at 94, and yielded about $257,000,000.

Expenditures, 1915

In his budget speech to the Imperial Duma at the beginning of September, 1915, M. Bark announced that the war expenditure contracted to July 1, 1915, had amounted to $2,728,000,000 or at the rate of about $8,500,000 a day. The deficit in the civil budget of the previous year he announced as $336,800,000 of which $216,400,000 was due to the suppression of the sale of vodka. The increased taxation had barely met the civil expenditure, and consequently credit operations to the extent of about $30,400,000 had been resorted to. For the coming fiscal year

he stated that the revenue was expected to amount to $1,397,000,000, which was $118,000,000 less than had been anticipated in the estimates for the year. The deficit of 1914 had been covered by the free cash balance in the Treasury. As this had amounted on January 1, 1914, to $257,100,000 there was still some available to apply to the 1915 deficit, and M. Bark thought that $40,500,000 of this would be available. In addition it was proposed to transfer $248,000,000 of the ordinary naval and military expenditure for 1915 to the extraordinary war fund, so that the civil budget would be relieved of these charges. In this manner it was hoped to balance the budget of 1915. The total amount of the budget was $1,625,457,600. This was about $24,250,000 more than the previous year. Although the Minister suggested the introduction of an income tax which should become the cornerstone of Russian finance in the future, the chief dependence continued to be placed upon borrowing.

Banks, 1915

The government continued to draw largely upon the Imperial Bank. Treasury bills were discounted freely at this institution and the proceeds given to the government in the form of bank notes. Paper money played an important rôle in Russian war finance from the very beginning, and increasingly so as time went on. The legal limit upon the note issues of the bank just before the war (July 27–August 9) was raised by law from $150,000,000 to $600,000,000. On March 17–30, 1915, it was further raised to $1,100,000,000;[1] on August 22, 1915, to $1,750,000,000; and finally, on September 4, 1915, to $4,250,000,000.

At the same time the gold reserve of the bank fell off, so that the ratio between gold reserve and notes declined as a result of both causes. By October, 1915, the ruble had depreciated about 36 per cent. As in almost all historical instances of depreciation due to overissue any cause is attributed except the

[1] *Russian Year Book*, 1916, p. 639.

correct one, so now this depreciation of the Russian paper ruble was said to be due to the stoppage of foreign trade. There was, however, a certain justification for increased issues in the new demand which had arisen for additional currency as a result of several factors: (1) increasing employment of bank notes by millions of men in the army who, before the war, had no need of money; (2) the development of cash payments instead of sales on credit; (3) a higher standard of life after the prohibition of vodka.

That the issues were in response to an increased demand in part at least is seen from the fact that they were chiefly in small notes from one to ten rubles. On December 31, 1915, the three, five and ten ruble notes formed 47 per cent of the circulation. Gold had, of course, from the very beginning disappeared from circulation, and now there was complaint of a shortage of silver and copper coins. As always is the case in the issue of a depreciated paper currency, a vicious circle was established—overissue made prices higher, and higher prices demanded more means of payment, and so on, *ad infinitum*. During the year 1915 an appeal was made to the people to contribute gold to the bank in exchange for bank notes. A bounty of 8 per cent was given for gold and $16,000,000 was obtained. By an ukase of November 14, 1915, this bounty was raised to 30 per cent. The exportation of gold was limited in November, 1914, to $250 for each person leaving the country, but in the following July it was entirely forbidden.

The following table shows the essential facts as to the gold reserve and the note circulation:

Date	Gold Reserve	Note Circulation	Ratio
1914, July 8.....	$800,568,500	$817,055,500	50
1915, July 15.....	789,495,500	1,898,355,500	41
1915, September 14.....	794,421,287	2,105,418,048	39
1916, February 16.....	810,000,000	2,903,000,000	28

The Bank had been of great service to the government in financing the war up to this time. Indeed, the chief task of the Bank had been to furnish the state with the means of meeting war expenses. For this purpose it not only discounted short

term bonds of the Treasury, but it also helped to float the war loans. The Bank itself took two-fifths of each internal loan issued in 1915, or a total of about $650,000,000. The loan policy of the government had in the beginning been one of almost exclusive dependence upon short term bonds discounted by the Imperial Bank, or subscribed by private banks. They had not believed it possible on account of the small store of capital in Russia to secure large amounts from the people by issuing popular loans.

Borrowings, 1915

The year 1915 saw the issue of three internal war loans, two internal issues of short term Treasury notes, and five issues of Treasury bonds, in addition to Treasury bonds sold abroad and credits obtained in foreign countries. The frequency of comparatively small loans differentiated Russian war finance from that of other countries where semi-annual or annual loans were put out, as Germany and Austria in the first case, and in the second France and Italy. Russia, in the first twenty months of the war, issued five internal war loans for an aggregate of $2,500,000,000. The second war loan was issued in February, 1915, and was a 5 per cent ten-fifty year bond issued at 94, yielding to the investor 5.35 per cent. Subscriptions amounted to $257,000,000 nominal. In April, 1915, the third war loan was issued. This introduced a feature which was not duplicated again in Russian finance, nor paralleled in the bonds of any other country. The rate of interest was fixed at 5½ per cent for six years, and thereafter at 5 per cent. By this temporary increase in interest rate, the government was able to sell the bonds at 99, at which price they yielded to the investor 5.7 per cent (5.19 per cent after six years). The redemption of the bonds was as complicated as that of the interest payments. Holders might redeem their bonds at par in 1921, and the bonds not thus presented matured not later than 1926. The subscriptions to this loan amounted to $515,000,000 nominal. The fourth war loan was issued in November, 1915. This was a 5½ per cent ten year

bond issued at 95, at which price it yielded 6.17 per cent. Subscriptions amounted to $515,000,000 nominal.

All of these loans were declared free from tax on revenue from money capital. The lowest denomination for the bonds was in each case $25, indicating an effort on the part of the government to place the loan within the reach of the small subscriber who, in Russia, would with difficulty subscribe to larger sums. The long and short term borrowings of the year 1915 are grouped in the following table:

RUSSIA, BORROWINGS, 1915

Date in 1915		Character of Loan	Amount
Internal:	February 6.	49 year 5 per cent bonds	$257,000,000
	April 24.	5–10 year 5½ per cent bonds	515,000,000
	October 28.	10 year 5½ per cent bonds	515,000,000
	March 27.	4 per cent short term Treasury notes	150,000,000
	August 14.	4 per cent short term Treasury notes	125,000,000
	February 6. March 27. June 18. July 15. August 26.	5 per cent Treasury bonds	1,350,000,000
Foreign:	June 10 and Sept. 9.	Short term 5 per cent Treasury bonds	400,000,000
	March 13.	Not specified credits	312,500,000
	April 6 and Oct. 9.	Not specified credits	2,850,000,000
			$6,474,500,000

The foreign borrowings consisted in part of short term Treasury bonds discounted in Great Britain and France. The $50,000,000 one year Treasury bills placed in London in February, 1915, were renewed for another year.

The public debt, as a result of these credit operations, had practically doubled in the year and a half since the outbreak of the war. On January 1, 1914, it stood at $4,412,000,000. By January 1, 1915, after five months of war, it had risen to $5,236,500,000, and by January 1, 1916, it stood at $9,438,500,000, an increase of $4,202,000,000 during the year 1915.

Taxes, 1915

Little was done during the year 1915 in the imposition of new taxes, although the Minister of Finance brought forward pro-

posals looking to a considerable extension of taxation. The budget estimates introduced in the spring of 1915 provided for increases in a large number of existing taxes which it was estimated would bring in $17,050,000. In addition, the rate on the capital value of city realty was raised from 6 per cent to 8 per cent, while the nomad hut tax in Asiatic provinces was raised from 4 to 8 rubles a hut. Apartment house taxes and trades guild taxes were increased 50 per cent. From these four sources a net revenue of $43,350,000 was expected. A further yield of $47,400,000 was expected from the increases in a number of indirect taxes such as yeast, cigarette paper, matches, sugar, naphtha, wine, beer and tobacco. Finally, increased dues and rates on a number of government monopolies were expected to bring in $146,500,000. This sum was to come from increased port and dock dues, higher post and telegraph charges, and increased railway rates. The total from all these sources was estimated at about $250,000,000.

By the end of the year M. Bark, the Finance Minister, was compelled to announce that the actual receipts had fallen short of the estimates by some $168,000,000 and he outlined a proposed taxation program which should take up this deficit. In addition to a war income tax, he suggested the establishment of government monopolies on tea, sugar, matches, coffee and wine, which he estimated would be capable of producing about $150,000,000 annually.

Expenditures, 1916

The civil budget for the year 1916 was introduced into the Russian Duma February 29. M. Firsoff, in his budget speech, stated that the ordinary revenue was estimated at $1,511,024,655. The total expenditures were given as $1,779,078,255, showing an excess of expenditure over revenue of $188,553,595. From the new sources of revenue created since the outbreak of the war, the Minister stated that he expected more than $250,000,000.

The budget estimates were corrected in October when it was

announced that the revenues of the ordinary budget were $1,999,500,000 and those of the extraordinary $39,500,000. The expenditure, on the other hand, was $1,867,000,000 and $171,500,000, respectively. In addition to these the military expenditure, which was outside the other two budgets, reached a total of $5,820,000,000 for the year. This expenditure was met by loans and the issue of paper money. There was one bright feature in the financial situation, however, in that the loss of revenue caused by the abolition of the sale of vodka had now been made good by the increased receipts from other sources. The extraordinary expenditure, which had grown so rapidly, was devoted to railway development and to that extent may be regarded as an investment.

BANKING, 1916

Russian war finance was comparatively simple. The announced policy was to raise as much as possible by means of loans for military expenditures, and then to make up the difference by an issue of paper money. The war expenditures of the year 1915 were met to the extent of 65 per cent by bonds and short term obligations, and for the remaining 35 per cent by the direct printing of paper money. As a matter of fact, the distinction between the two was more apparent than real because the issues of bonds and Treasury notes were paid for by paper money, one government obligation being used to pay another. Nor was the issue of bonds itself a relief to the paper money circulation, because they themselves were largely backed by paper money. Issues of the Bank increased steadily from year to year. Between July 16, 1914, and November 16, 1916, the bank notes in circulation increased from $841,174,000 to $4,241,-141,000. At the same time the gold on hand fell slightly, but the gold credits abroad, which were used to support Russia's foreign exchange and to finance her purchases of munitions, showed an enormous increase. These facts are shown briefly in the following table:[1]

[1] *Commercial and Financial Chronicle*, January 27, 1917, p. 333.

RUSSIAN BANK NOTES IN CIRCULATION

	July 16–29, 1914	Nov. 16–29, 1916	Inc. or Dec.
Bank notes	$841,174,000	$4,241,141,000	+$3,399,967,000
Gold on hand	825,884,000	755,422,000	— 70,467,000
Foreign gold credit	72,471,000	1,107,104,000	+ 1,034,633,000

Of the bank notes issued, over $1,500,000,000 were paid by discounting Treasury bonds and $500,000,000 to open a credit with Great Britain. The Treasury bonds were discounted by the Bank in return for which the latter issued credit notes to the Treasury. The Treasury, in payment of its liabilities to the public, put these notes on the market. Thus as the war went on and as the liabilities of the government piled up, the number of credit notes in circulation increased in direct proportion. The addition of the notes to the circulating medium was not in response to any money demand nor the result of increased trade or other activities, but was measured solely by the needs of the government in financing the war. The result was a steady deterioration in the value of the ruble both at home and abroad.

In view of the disturbance to foreign exchange it became necessary for Russia to establish credits in foreign markets. Accordingly, the Finance Minister obtained credit in London and Paris to the amount of about $1,750,000,000 secured by bonds and Treasury bills. In addition to this, there was a loan of $100,000,000 secured from Japan in June, 1916, and one of $112,500,000 at 5½ per cent and a $50,000,000 so-called "dollar" loan bearing 6½ per cent in the United States. By the end of the year the ruble, nominally worth 51½ cents, had decreased in value to less than 25 cents. While the inflation of the currency was primarily responsible for this, there were other factors which had an important influence in the depreciation of the ruble. These were the cutting off of the larger part of Russian exports, especially of the export of grain; the tying up of the railroads owing to their use for military purposes; the disorganization of the laboring population owing to the general mobilization; the importation of war supplies from the United States and Japan; the stoppage of the export of gold, and of

the redemption of bank notes in gold. Even without any inflation of the currency, there is no doubt that prices would have risen as a result of these other factors, but the excessive issue of notes served to make a bad situation worse.

Gold of course disappeared from circulation at the very beginning of the war. A year later the subsidiary silver began to be hoarded and to disappear from circulation. To replace this small nickel coins of ten, fifteen, and twenty kopecks were used. A year later these were replaced by paper money in the size of postage stamps, even copper coins being displaced by paper. In this experience Russia simply followed the example of every country which has embarked upon the policy of unlimited paper money.

Borrowings, 1916

The first large war loan in Russia was the fifth, issued in March, 1916. This was a 5½ per cent ten year bond offered at 95, at which price it yielded 6.17 per cent to the investor. The subscriptions to this issue amounted to $1,029,000,000. The sixth internal loan was issued in October, 1916, and was in all respects like the previous one. The yield, however, was 50 per cent greater, amounting to $1,544,000,000. While it is not possible to state the proportion of these loans outside of Russia, there is no doubt that they proved a tempting speculative opportunity due to the low rate of exchange. At the time of the issue of the fifth loan the ruble was worth only about 32 cents in the United States. In addition to the internal loans, banking credits were arranged in various countries as already described. The growth of the public debt may be shown in the following table:

January 1	Amount	Increase
1914	$4,412,105,000	
1915	5,236,786,000	$824,681,000
1916	9,438,315,000	4,201,529,000
1917	12,610,468,500	3,172,153,000
1917, September	28,643,904,349	16,033,435,849
		$24,231,798,849

TAXATION, 1916

Two noteworthy taxes were introduced into Russia in the year 1916. The first of these was a war profits tax. An imperial decree published May 14, 1916, imposed a temporary tax for the years 1916 and 1917 on excess profits of companies and industrial undertakings, and on salaries for personal services. On the former, profits of less than 8 per cent of the authorized capital were exempt from the excess profits tax. Those above 8 per cent were subjected to a tax running from 8 and 9 per cent on profits between 8 and 20 per cent up to a rate of 40 per cent on profits in excess of 20 per cent. Other undertakings, personal industrial vocations, and emoluments of company directors were taxed at the rate of 20 per cent on all profits above 500 rubles ($250).

The other tax which was made law in October, 1916, to take effect January 1, 1917, was the income tax. It is safe to say that this could not have been enacted had it not been for the war. It was first projected in 1905–1907 but was blocked since that time by the landowners and the rich merchants. Not until 1915 when M. Bark, Minister of Finance, urged it upon the Duma, did the project make any advance. It passed the Duma in August, 1915, and was finally approved by the Council of the Empire in 1916. The tax was a graduated one on all incomes over $425 a year, beginning with 1 per cent on that amount and increasing to 12½ per cent on incomes of $200,000 or over. The tax was proposed on all incomes from funded capital, immovable property, trade and industrial undertakings, and on salaries and professional fees.[1]

These two taxes affected only the well-to-do and the industrial classes. If the revenue from taxation was to be increased effectively, it would be necessary to get at the incomes of those with less than $425, that is, the peasant class in general. Since he was no longer reached by the vodka monopoly plans were suggested for securing contributions from his pocketbook by a further development of indirect taxation such as an increase in

[1] *Economist* (London), October 21, 1916, p. 687.

the sugar tax, the consumption of which had increased since the abolition of vodka. Other suggestions took the form of government monopolies.

EXPENDITURES, 1917

The preliminary civil budget for 1917, which was introduced into the Duma by M. Bark in March, 1917, presented the following statement:

Estimated ordinary revenue	$1,999,315,000
" " expenditure	1,867,325,000
" " surplus	$131,990,000
Extraordinary revenue	$3,000,000
" expenditure	171,850,000
" deficit	$168,850,000

It was estimated that the revenue would be $480,000,000 more than the 1915 estimate. The larger part of this, or $285,000,000, was expected from the increased yield of existing sources. Of the new taxes which had been imposed the income tax was expected to yield $65,000,000; the increase in the tobacco excise some $45,000,000; the increase in the sugar excise about $30,000,000, and the war profits tax $27,500,000.

Before the budget could be put into effect the political situation was completely disrupted by the outbreak of the revolution (March 15, 1917).

The next report on finance was made before a Congress of Traders at Petrograd about the middle of August, supplemented by further statements to the Moscow Conference about ten days later by MM. Protopopovich and Neckrassoff, Ministers of Commerce and Finance, respectively, in the Provisional Government. In spite of the pressing needs of more revenue, M. Neckrassoff told the Conference that very little more could be gotten by direct taxation, and that further indirect taxation would simply intensify the popular discontent and the cry for higher wages. The only solution of the difficulty was the establishment of state monopolies of matches, sugar and tea. The suggestion of in-

heritance taxes and the conscription of wealth the Minister rejected, as these would increase the dissatisfaction of the upper and middle classes. It is evident that the financial program of the Provisional Government was seriously handicapped by political considerations. How difficult the situation was may be seen from the fact that the deficit announced at this time amounted to $7,500,000,000.

The summary of war finance given at this time by M. Neckrassoff, which may be regarded as an accurate picture, is an interesting one and shows the burden which had been imposed upon Russian finance. The war expenditure was stated to have been for the first year, $2,650,000,000; for the second, $5,600,000,000; for the third, $9,000,000,000; a total for the three years of $17,250,000,000.

Banks, 1917

The increase in the note circulation, and the discount of Treasury bonds by the Bank of Russia, as well as the fluctuations in the gold reserve at home and abroad, may be traced in the following table:

STATEMENT OF BANK OF RUSSIA, 1914 TO 1917

(In thousands of dollars)

Date	Gold Home	Gold Abroad	Short Loans and Treasury Bonds	Note Circulation	Advances to Treasury for Provisions
1914. July 21.	$800,750	$71,975	$196,685	$817,055	
Aug. 29.	803,745	58,425	363,995	1,215,700	
Sept. 29.	806,750	108,335	457,140	1,306,640	
Oct. 29.	811,455	107,750	522,615	1,353,140	
Nov. 29.	777,085	207,625	211,550	1,407,350	
Dec. 29.	776,820	207,105	243,270	1,431,925	
1915. Jan. 29.	778,665	76,905	429,780	1,498,940	
Feb. 21.	784,505	69,745	500,485	1,538,385	
Mar. 29.	785,635	69,910	565,735	1,549,140	
April 29.	786,605	69,745	726,645	1,638,645	
May 29.	787,100	69,410	795,975	1,708,150	
June 29.	788,595	54,295	774,550	1,791,285	
July 29.	789,300	45,040	923,605	1,915,885	
Aug. 29.	792,730	35,405	1,184,360	2,046,170	
Sept. 29.	795,395	19,245	1,197,735	2,310,875	
Oct. 29.	799,130	17,800	1,569,985	2,505,410	
Nov. 29.	804,145	114,255	1,663,430	2,532,310	
Dec. 29.	805,870	135,005	1,622,290	2,652,310	
1916. Jan. 29.	808,198	371,371	1,687,958	2,802,260	
Feb. 29.	810,433	378,269	1,890,717	2,903,243	
Mar. 29.	812,854	473,635	1,924,697	2,967,932	
April 29.	814,386	614,554	1,881,199	3,127,066	
May 29.	770,743	704,654	1,760,021	3,143,083	
June 29.	770,143	794,304	1,897,612	3,221,554	
July 29.	773,701	934,044	1,881,118	3,376,562	
Aug. 29.	775,490	1,028,550	1,947,317	3,480,472	
Sept. 29.	776,629	1,027,564	2,409,235	3,652,037	
Oct. 29.	779,385	1,027,478	2,683,872	3,922,440	
Nov. 29.	733,419	1,074,858	3,036,714	4,117,612	
Dec. 29.	736,307	1,074,923	3,267,025	4,295,642	
1917. Jan. 29.	737,673	1,075,683	3,563,256	4,602,309	
Feb. 21.	737,470	1,070,402	3,820,197	4,778,596	
Mar. 29.	739,770	1,070,574	4,169,674	5,138,904	
April 29.	739,907	1,059,395	4,686,461	5,593,279	
May 29.	739,738	1,059,402	4,526,911	5,882,666	
June 29.	740,463	1,059,806	5,096,666	6,295,996	
July 29.	645,809	1,154,008	5,581,316	6,823,026	
Aug. 29.	648,966	1,154,003	6,018,702	7,338,086	$239,524
Sept. 29.	647,611	1,154,539	6,697,397	7,943,476	414,497
Oct. 21.	647,819	1,154,310	7,239,663	8,929,451	622,037

Dates are of New Style calendar. Old Style are 13 days later.
October 21, 1917, is last published statement of the Bank.

These enormous increases must be accounted for in large measure by the nonreceipt of taxes and other forms of revenue during the revolutionary period—an evil which was increasing.

The necessities of the Provisional Government were too urgent to permit the slow development of a new system of orderly finance. Like many another provisional government without adequate powers of securing revenue, it resorted to the easiest method of raising funds, namely, that of printing paper money. The issues amounted to about $100,000,000 to $125,000,000 a week during the summer of 1917. By December the issues were as much as $500,000,000 a month. By a curious paradox which always exhibits itself on the occasion of unlimited issues of inconvertible paper money, the more that was put into circulation, the greater became the difficulty of exchange. With the enormous expansion went a concomitant depreciation of the ruble. People with goods for sale refused to give up the goods for the all but valueless paper, and trade rapidly degenerated into a primitive sort of barter. By the end of October the ruble was quoted in New York at 70.5 per cent below par. While the inflation of the currency had taken place in practically every European country, it was much the gravest in Russia, both absolutely and proportionately. The note circulation increased from $817,000,000 at the outbreak of the war to $8,929,451,000 on October 21, 1917. At the same time the gold reserve against which they were supposed to be issued had fallen from $800,750,000 at the outbreak of war to $647,819,000. The gold cover was therefore only 7.3 per cent. In addition to the note circulation the Bank also held the short term obligations of the Treasury, as shown by the foregoing table, which increased from $211,550,000 in November, 1914, when they were first shown as a separate item in the bank returns, to $7,239,663,000 on October 21, 1917, the last date on which a bank statement was issued.

Borrowings, 1917

In March, 1917, Russia issued the seventh internal war loan. This was a 5 per cent bond redeemable in ten, and payable in seventy-five years, issued at 85, at which price it yielded 5.93 per cent to the investor. This loan marks a reversal in previous policy in two or three respects. In the first place the interest

rate was reduced from 5.5 per cent, at which point it had been fixed in the last three loans, to 5 per cent; because of this it was necessary to sell the bonds at a considerable discount; and finally, the long maturity of the loan distinguished it from the bonds issued by most of the other nations. However, it was successful in yielding a larger amount in subscriptions than any previous loan, though the great depreciation in the paper money made the real purchasing power of the proceeds probably less than the smaller amounts of the earlier loans. The subscriptions were $2,058,000,000.

The Provisional Government offered a new loan of $1,500,000,000 in May, 1917, the so-called "New Russian Liberty Loan." This was a 5 per cent forty year bond issued at 85. Half was offered to the public, a syndicate of bankers taking the other half.

The Government of the United States extended to Russia a credit loan of $97,500,000 during the year 1917. The Russian Provisional Government also obtained a credit in Japan of $333,333,000 through the sale of that amount of Treasury bills to the Japanese Government. The issue bore 6 per cent interest and had a maturity of one year and was taken by Japan at par, the proceeds to be used in paying for munitions of war bought in Japan.

The debt of Russia, which at the outbreak of the war amounted to $4,412,154,000, increased during the first two and one-half years to $12,610,500,000 on January 1, 1917. Under the Provisional Government the increase was nearly as much in the next seven months as it had been for the preceding twenty-nine. On August 1, 1917, it amounted to $25,000,000,000.

Taxation, 1917

Owing to the disturbed political situation and the uncertain powers of the Provisional Government, little could be done in the way of new taxation or even in the enforcement of existing laws. In June, 1917, however, an emergency income tax was levied for the year 1917. This was levied on all persons and organizations

liable that year to the ordinary income tax if the taxable income were asssessed at over $5,000. On the other hand, it was stated that the excess profits tax was proving ruinous because of the increase in the price of raw materials and labor, and would, if enforced, in many cases destroy the industry. It was therefore proposed to defer the levy of this tax until next year, and provide for its payment in instalments. Under the circumstances little could be expected from these taxes and as conditions became more and more unsettled the revenue from all sources showed a steady decline.

Expenditures, 1918

Toward the end of the year 1917, the Provisional Government was displaced by the Bolshevik *régime*. If conditions were disorganized previously, they now became chaotic. The revenues of the government, reduced by political disorder, were still further cut down by the treaty of Brest-Litovsk with Germany of March 3, 1918. According to this, Russia lost territory containing one third of her railway mileage, 73 per cent of the total iron production, 89 per cent of the total coal production, and a great number of sugar refineries, textile factories, breweries, chemical plants, paper mills, and other establishments. The territory which now became German had brought in annual revenue amounting to $422,500,000. In addition to the loss of revenue, Russia was also burdened with a heavy cash indemnity amounting to $3,000,000,000.

Banking and Currency, 1918

With the breakdown of all orderly government under the Bolsheviki and the cessation of the orderly collection of revenue from the usual sources, the new government soon faced a desperate situation. Utterly without credit, it was of course unable to raise funds by means of loans. Indeed, the Central Executive Committee of the Soviet by decree of January 21, 1918, repudiated all debts incurred by the capitalistic bourgeois government to the end of December, 1917. Accordingly, there was

only one resource open to the new government for raising funds, and that was the issue of paper money. The monetary system of Russia which had been established by Witte had been undermined during the war and was now completely overthrown. When Lenine grasped power the note issues had reached about $10,000,000,000. The Bolsheviki, unfortunately, came into possession of the engraved plates and machinery for printing the notes which were at Petrograd. The printing presses were soon busy turning out paper at the rate of about $1,500,000,000 monthly. At the end of June it was estimated the amount of paper money in circulation aggregated $20,000,000,000. Premier Lenine announced in May that new money would be issued and the old money devalued. To anyone familiar with the history of paper money of the French Revolution, this declaration must have had a familiar ring. Although the Bolsheviki were not able to organize an orderly financial system, they were able to secure the necessary funds by seizing the banks and "nationalizing" them. They secured assets aggregating some $15,000,000,000. Seizure of other funds, both state and private, provided them with the money necessary for carrying on their propaganda and maintaining themselves in power.

It is practically impossible to secure any definite information about the subsequent financial situation in Russia as bank statements were suspended as soon as the Bolsheviki came into control.

Borrowings, 1918

Since the Bolsheviki repudiated the existing Russian debts, it was of course illogical, as well as impossible, for them to secure funds by means of loans. This action, however, caused a great deal of anxiety among holders of Russian bonds and many estimates were made as to the extent of these holdings. The French holdings, which were larger than those of any other nation, were estimated by the President du Syndicat des Agentes de Change of Paris at $2,400,000,000, although this was undoubtedly a conservative estimate, and by some writers has been placed as nigh

as $5,000,000,000. German interests amounted to probably $375,000,000; the holdings of the British were probably not over $750,000,000. But the British Government had made credit advances to the Russian Government during the war in the sum of $2,840,000,000. Similar advances by the United States Government totaled $187,729,750, while private loans in United States were nearly as large.

Taxation, 1918

In lieu of taxation the Bolsheviki instituted a system of "nationalizing" industries. If this were done universally, there would be of course no room for taxes. The experiment made in nationalizing industries was, however, a most costly one and entailed enormous deficits, that in the 1918 budget being officially estimated at $10,500,000,000. Revenues from some source were desperately needed, other than the worthless paper money, and the Soviet government accordingly imposed a capital levy on wealth, payable between October 31 and December 15, 1918. This was estimated to bring in $5,000,000,000, but yielded only one ten-thousandth of that sum. A tax in kind on foodstuffs on the richer peasants was found to be impossible of collection. The complete failure of direct taxation is due in large measure to the extreme decentralization of power and the levy by the local Soviets of "contributions" which are really forced payments in kind. With the practical cessation of foreign trade, customs duties came to an end and with the nationalization of industry there was no room for excise taxes. There was no place for a national system of taxation.

Cost of the War

Owing to the revolutions in Russia it is very difficult to estimate the cost of the war to that country. For the purposes of this study, however, they may be considered to have ended with the year 1917. The war expenditures and receipts for the period August 1, 1914, to December 31, 1917, are shown in the following table:

WAR EXPENDITURES AND RECEIPTS OF RUSSIA, 1914-1917

Period	Expenditures	Receipts	
		Loans	Paper Money
August 1–December 31, 1914.	$1,273,000,000	$1,310,000,000	$614,870,000
Calendar year 1915.....	4,687,450,000	6,474,500,000	1,220,385,000
Calendar year 1916.....	7,633,500,000	4,217,835,000	1,643,332,000
January 1 to Sept. 1, 1917..	9,000,000,000	4,828,000,000	4,633,809,000
	$22,593,950,000	$16,830,335,000	$8,112,396,000

To this war expenditure should be added the growth above prewar normal in the civil budgets, amounting to $1,790,000,000, and to the receipts should be added the increase in revenues over prewar normal, amounting to $377,000,000. This would therefore give the following result:

Actual war expenditure		$22,593,950,000
Increase in civil budgets during war period		1,790,000,000
Total		$24,383,950,000
Receipts	$24,942,731,000	
Increased revenue	377,000,000	
	$25,319,731,000	

The costs of war as reflected in the growth of the Russian debt may be seen in the following table:

Date		Amount
Prewar	$4,414,000,000	
January 1, 1915		$5,237,000,000
January 1, 1916		9,438,000,000
January 1, 1917		12,610,469,000
September, 1917		28,643,905,000
Net growth	$24,231,798,849	

As $8,929,000,000 of this is non-interest bearing unsecured paper money, the interest bearing debt due to the war is about $15,700,000,000.

In the following table an attempt is made to itemize this debt:

WAR LOANS OF RUSSIA, OCTOBER 31, 1917

Form	Amount
5 per cent loan, October, 1914 (nominal)	$257,500,000
5 per cent loan, February, 1915 (nominal)	257,500,000
5½ per cent loan, May, 1915	515,000,000
5½ per cent loan, November, 1915	515,000,000
5½ per cent loan, April, 1916	1,029,000,000
5½ per cent loan, November, 1916	1,544,000,000
5 per cent loan, April, 1917	2,058,000,000
Advances by Great Britain	2,840,000,000
Advances by U. S. Government	187,729,750
Advances by Japan	333,000,000
Private loans in United States	162,500,000
Treasury bills held by Bank of Russia	7,239,663,000
Bills discounted in France (estimated)	1,085,000,000
	$18,023,892,750

ITALY

Expenditures, 1914–1915

Although Italy delayed her entrance into the war until May 24, 1915, her war expenditures may be said to have begun at the same time as those of the other belligerents whose active participation commenced earlier, for the costs of armament and mobilization during the months of preparation entailed heavy burdens. When the war broke out, Italy was just recovering financially from the effects of her war with Turkey and the Tripoli expedition. Italy's prosperity depends largely upon tourist trade and on her exports of wine, olive oil, and other semi-luxuries. These were seriously curtailed by the outbreak of the World War, and the government receipts were adversely affected. During the period of preparation from August 1, 1914, to May 24, 1915, Italy, though not at war, put her army and navy in fighting trim and called out the reserve men, but did not effect a general mobilization. The expenditures during this preliminary period (August 1, 1914, to May 30, 1915) amounted to $607,840,000. With the beginning of actual belligerency, expenditures mounted by leaps and bounds, the monthly expenditure being:

Period	Army	Navy
June, 1915	$79,320,000	$13,440,000
July	92,040,000	10,080,000
August	81,080,000	16,060,000
September	87,800,000	10,600,000
October	100,620,000	13,300,000
November	91,680,000	10,320,000
December	130,180,000	12,420,000
	$662,720,000	$86,220,000

Banking and Currency, 1914–15

As in the case of France, the government turned first for financial assistance to the Bank of Italy, and to a lesser extent to the Banks of Naples and Sicily—these being the three banks of issue in Italy, and bound by their charters to make certain statutory

advances to the government. For the fiscal year ending June 30, 1915, the advances to the state amounted to $322,700,000. As payments in Italy are generally made in cash and deposit banking is but little developed, the state credits were almost necessarily met by increased issues of bank notes. On July 31, 1914, these had stood at $453,040,000, but by June 30, 1915, they had reached $771,200,000. The state note issues showed a still more rapid augmentation, standing at $99,820,000 on July 31, 1914, and reaching $153,160,000 by June, 1915. The total note issues to meet war expenditure, to June 30, 1915, therefore was $475,860,000. This inflation of the currency had the undesirable effect of increasing prices and raising the cost of living and of the war. During this period prices of foodstuffs rose on the average about 32 per cent. This was a poor policy at the beginning of the war, because it necessitated the raising of a still larger amount in taxation and loans later on, for which the policy of the state was in part at least responsible. A measure of the depreciation of the lira due to this overissue is to be found in the foreign exchange rates which had fallen about 25 per cent by the end of the fiscal year, June 30, 1915.

Loans, 1914–15

The year 1915 saw borrowing on the part of the state take the form both of the issue of Treasury bills and of war loans. During the fiscal year ending June 30, 1915, Treasury bills issued by the government for the purpose of meeting the cost of war amounted to $309,700,000. During the following fiscal year the amount was only half as great, or $145,000,000. The reason for lessened resort to temporary borrowing was because of the flotation of long term bonds during this period. The first of the war loans (the so-called *Mobilization* loan) was issued by the government in January, 1915. It was a 4½ per cent bond issued at 97 and was redeemable in 1925, payable in 1940. At this price the yield was about 4.71 per cent. In July of the same year the so-called first *War* loan was brought out. This was a 4½ per cent bond issued at 95, but the price was reduced to 93 for subscribers who held definitive bonds or temporary certificates of the *Mobili-*

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zation loan issued in the preceding January to an amount not greater than their subscription to this loan. At these prices the yield was 4.85 and 4.99 respectively. The date of maturity was 1925–1940, the same as the Mobilization loan. Both issues were exempt from taxes, and were convertible into future loans issued before the end of 1916. The smallest denomination of each issue was $20. As in the case of so many other belligerents, the purchase of bonds was made easy to the subscriber by authorizing the three Italian banks of issue to make advances against the pledge of the bonds. In the case of the first loan borrowers could secure their money at 4½ per cent per annum, and borrow up to 95 per cent of the face value of the bonds. In the case of the second loan the rate of interest was raised to 5 per cent and the figure at which the bonds were to be received was fixed at 90 to 95. Moreover, such loans were exempt from the special tax on advances. The government availed itself of the assistance of a syndicate of banks to assist in the flotation of these loans. This procedure was followed in all the war loans of Italy. The amount subscribed to the Mobilization loan was $200,000,000, and the nominal yield of the first war loan was $229,200,000.

Almost immediately upon Italy's entrance into the war, Great Britain lent financial assistance, and by the end of the fiscal year, June 30, 1915, the foreign loans covered by special Treasury bonds amounted to $208,040,000. The financial transactions to meet war expenditure to June 30, 1915, may therefore be summed up as follows:

BORROWINGS OF ITALY, AUGUST 1, 1914, TO JUNE 30, 1915

Form	Amount
Mobilization loan	$200,000,000
Foreign loans through special Treasury bills	208,040,000
State notes	153,160,000
Advances of bank notes from banks of issue	322,700,000
	$883,900,000

TAXATION, 1915

The financial policy of Italy showed some curious changes during the first two years of the war, which on the whole marked

a noteworthy progress from inflation by note issues and bank advances, through short term borrowings by the issue of Treasury bills, and finally to the flotation of long term bonds. This was accompanied by the development of a more vigorous tax policy as time went on. It may fairly be said that in the first period of the war it would have been impossible to meet the growing expenditures without recourse to note issues. After the country had become adjusted to a war basis the necessity of loans, of greater economy in expenditures, and of new taxes, was insisted upon. The government endeavored to introduce economy by a decree of November 18, 1915, by which it suspended all new appointments of public servants, ordained that the number of commissioned public officials be reduced by one-fifth, reduced office expenditures from 10 to 20 per cent, and took other measures looking to the same end.

New taxes, and the increase of existing ones, were provided for almost from the beginning, the character and variety of these being a striking commentary upon the strain to which the fiscal resources of the country were being put. The receipts for the last fiscal year before the war, ending June 30, 1914, amounted to $632,046,000, taxation yielding about $466,600,000 of the total revenue. Prior to the war taxes were levied on land, income, business transactions, necessary products, such as oil, bicycles, automobiles, and other articles. Customs duties also constituted an important source of revenue. The government had a monopoly on the manufacture and sale of tobacco and matches, the sale of salt and quinine, also postal facilities, telephone, telegraph and government control of railroads, as well as certain steamship lines. The decline in customs and other taxation which the disorganization of shipping and export trade would suffer as a consequence of the war, was to a great extent modified by an increase in the prices of all monopolized articles; postal, telephone, and telegraph rates were raised, new government monopolies created, and new taxes introduced. As these new measures were imposed almost at the beginning of the fiscal year, they not only made up what would otherwise have been a deficit

of about $175,000,000, but actually increased the receipts of the fiscal year 1915 to the total of $809,340,114.

With the advent of belligerency, however, the demands upon revenues would be much greater, and a series of measures which had been provided for in the royal decree of October 15, 1914, enacted into law in December, 1914, were levied under legislative decrees of September 15, October 15, and November 21, 1915. These impositions fell under two heads: (1) levies that were expected to become permanent, and (2) taxes of a provisional character. Under these classifications were levied the following taxes with their estimated yields.[1]

I—Taxes of a Permanent Character:		Estimated Yield
(a) Income and business taxes:		
Income and business transactions		$20,000,000
Military tax		3,000,000
Managers of limited liability companies		600,000
War farthing tax		11,600,000
Changes in tax on transfers, etc.		8,600,000
Changes in registration tax		800,000
		$44,600,000
(b) Increase in postal rates		2,200,000
(c) Increase on superfluous commodities:		
Tobacco	$4,000,000	
Spirits	1,400,000	
Beer	800,000	
Petrol, mineral oil, etc.	1,200,000	
		7,400,000
(d) New taxes on primary necessities:		
Salt	$4,000,000	
Matches	700,000	
Sugar	2,000,000	
Bicycles	480,000	
		7,180,000
Total estimated yield of taxes under Class I		$61,380,000
II—Taxes of a Provisional Character:		
War profits tax	$10,800,000	
Abolition of privilege in registration tax	5,400,000	
Import embargoes, etc.	2,800,000	
		19,000,000
Total, both classes		$80,380,000

[1] *Economist* (London), December 25, 1915, p. 1055.

The military tax above alluded to was imposed upon men between 20 and 39 years of age exempt from military service. This was a popular tax, as it tended to equalize the lot of those who stayed at home with the men who were called to the colors. The tax was imposed for the period of liability to military service of those who, for one reason or another, were exempt from active duty. It applied to all except those wholly unfit for work or whose income was less than $400 annually. The tax progressed from $1.20 on incomes of $200, up to $601 on incomes of $40,000 and over.

Expenditures, 1916

The war expenditure for the fiscal year ending June 30, 1916, amounted to $1,670,300,000, or a total from August 1, 1914, of $2,278,140,000. This meant a mean monthly expenditure of $140,000,000, and a daily sum of $4,640,000, and caused an increase in the public debt as shown in the following table:

Date	Capital	Interest
June 30, 1914	$2,967,800,000	$104,600,000
June 30, 1915	3,185,400,000	114,400,000
June 30, 1916	3,958,000,000	154,000,000

The increase in expenditure, not fully shown in the debt increase, is found in the large floating debt which on June 30, 1916, amounted to $1,285,600,000, making the real total debt $5,243,600,000.

Banking and Currency, 1916

During this year every effort was made to mitigate the effects of inflation, and the increase in bank notes to the state during this period amounted only to $108,820,000, as against $322,700,000 the year previous. Direct issues by the state reached $227,000,000 by the end of the fiscal year. An effort was made to widen the use of checks, and thus limit the issue of bank notes.

Borrowings, 1916

Italy financed her war expenditure of this period by the issue of the first war loan already described, and by the second war

loan, issued in January, 1916, which was a 5 per cent ten-twenty-five year bond, issued at 97.5, yielding approximately 5.18 per cent. In the flotation of this issue, provision was made for the funding into the new loan of the short term obligations which the Treasury had been issuing, and also for the conversion of the previous 4½ per cent war loan. Therefore, payment for subscriptions might be made in the following:

(a) Ordinary Treasury notes at par to the full amount of the subscription;

(b) Five year Treasury bonds due in 1917 at 99, and in 1918 at 97.80, up to half the amount of the subscription;

(c) 4½s of the July, 1915, war loan, the subscriber to pay 50 cents for each $20 par value converted, to equalize the difference in the issue price.

The bonds of this issue were exempt from all present and future taxation. The subscriptions amounted to $602,800,000, of which $460,000,000 represented new money, and $142,800,000 converted securities, about $100,000,000 of the conversions being the July, 1915, 4½s. The money received from the two long term loans therefore amounted to $901,960,000 nominal, and $681,880,000 net.

During this year, the net advances from banks amounted to $108,820,000, or a total to that date of $431,520,000, and there was also a net increase in state notes of $73,840,000—or a total creation of debt to the amount of $182,660,000 by this means. The net ordinary Treasury bills yielded $45,000,000, and the special Treasury bills, which covered foreign loans, made a net increase of $480,000,000. These foreign placed bills were distributed in England and the United States, the loan here being for $25,000,000 in the form of one year 6 per cent gold notes placed through private bankers.

The creation of debt for the purpose of meeting the cost of the war during this year was therefore as follows:

BORROWINGS DURING FISCAL YEAR, 1915–16

Source			Amount
Funded:	1st war loan, July, 1915 (nominal)		$229,200,000
	2d war loan, January, 1916		602,800,000
Floating:	Ordinary Treasury bills	$147,000,000	
	Special Treasury bills	480,000,000	
	State notes, net	73,840,000	
	Advances from banks	108,820,000	
		$809,660,000	

Taxation, 1916

Due to the new levies imposed in the latter part of 1915, the total revenues of Italy for the fiscal year ending June 30, 1916, were $601,405,400—a decrease of some $8,000,000 in revenue under 1915, although it represented an increase in actual tax returns of some $75,000,000. This decrease was due, of course, to Italy's actual entrance into war, the withdrawal of men from usual occupations, and the consequent disruption of ordinary business with its attendant depletion of normal taxation. The yield of actual war taxation in 1915–16 was $100,784,488. The war profits tax did not actually become operative until 1917, and during this period the invasion of Italy did not help revenues. While Italy's effort at taxation was praiseworthy, it was as yet ineffective, as the interest on the growing war debt for 1915–16 amounted to $154,000,000, while the war taxation had yielded only $100,784,488, and the falling off in ordinary taxes had depleted the yield by about $25,000,000. The cost of war was running steadily ahead, averaging now about $200,000,000 a month.

Banking and Currency, 1917–1918

The issues of the banks continued through the fiscal years 1917 and 1918 and resulted in a progressive depreciation of the value of the lira, and a constant rise in prices. At the beginning of 1917 the total circulation had reached $1,455,120,000, and by the end of that calendar year stood at $2,034,760,000, which was distributed as follows:

Bank of Italy	$1,307,840,000
Banks of Naples and Sicily	377,160,000
Issues by the state	349,760,000
	$2,034,760,000

This was over 12 per cent of the total wealth of the country, which was estimated at $25,200,000,000. The imposition by the government of a tax of 20 centesimi on each check prevented their wide use, though the banks had tried to encourage the introduction of checks to lessen the note issues. The nominal wealth of the country, owing to the increase in prices, was apparently increasing. Deposits in savings banks, especially, showed a remarkable gain since the outbreak of the war. In 1914 these had totaled about $1,150,000,000, and by the end of March, 1918, they had increased to about $1,700,000,000, showing a gain of almost $600,000,000. Of this sum $758,800,000 were deposited in savings banks, $553,400,000 in postal savings banks, $261,000,000 in the four larger banks of Italy, and $146,200,000 in the three note issuing banks. These figures would seem to indicate that the deposits represented savings, rather than credit deposits against discounts. Owing to the inflation of the currency, however, much of this gain was mere paper profits, and did not represent an increase in real wealth.

In addition to the issues by the Italian banks, the Austrians distributed in the occupied districts of Italy paper money printed by their *cassaventa* to an amount estimated at $60,000,000. There were also considerable sums issued directly by the state so that the total paper money in circulation was swelled to an enormous amount. The issues of bank notes and of the state notes are shown in the following table, and the proportion of bank issues for ordinary commercial needs and for government needs is also given:

NOTE CIRCULATION IN ITALY, 1914 TO 1918

(In millions of dollars)

Date	Issues of the Three Banks of Issue For Needs of Commerce	For Needs of Government	Total	State Issues	Total
July 31, 1914	$453.04	.....	$453.04	$99.82	$552.86
June 30, 1915	448.5	$322.7	771.2	153.16	924.36
June 30, 1916	431.64	431.52	863.16	227.	1,090.16
June 30, 1917	504.2	658.94	1,163.14	291.98	1,455.12
June 30, 1918	717.92	1,296.28	2,014.2	422.5	2,436.7
Sept. 30, 1918	800.14	1,376.5	2,176.64	439.56	2,616.2

The continued inflation ot the currency showed itself in increased prices, and resulted in raising materially the cost of the war to the government. An estimate based on the prices in the city market of Florence showed that if the cost of living in October, 1914, were taken as 100, by the end of 1918 it had risen to 348. As some of these prices were controlled, it is probable that the general level had risen to an even greater extent. The depreciation of the currency was shown also in the fall of foreign exchange. The gold parity of the lira is 19.3 cents, but in May, 1918, it fell as low as 10.9 cents in the United States. After this it was given government support and maintained at a rate not far below the normal level. When this was withdrawn on March 19, 1919, the price of the lira suffered a disastrous fall, reaching 12.5 cents within a week.

Expenditures, 1917

The struggle to expand revenues to meet the civil expenditure and interest on growing war debt has been shown. The utter inability to cover by means of taxation any part of war expenditure is apparent. Therefore, borrowing and war expenditure had to balance. By May and June of this year the monthly expenditures reached an average of $300,000,000. It was always a problem with Italy how to meet the crushing financial burden of the war. By June 30, 1917, war expenditure alone had reached $5,104,580,000, and the actual outlay of the year itself was $2,826,440,000, or a monthly and daily mean of $235,536,000 and $7,851,300 respectively. While Italy's expenditure was

absolutely less than other belligerents, her relative burden was very heavy, if not indeed crushing. On June 30, 1917, the national debt amounted to $6,040,090,710, with an interest charge of $255,607,589, without reckoning the floating debt of some $900,000,000 in notes and Treasury bonds.

Borrowings, 1917

The year's expenditure of $2,826,440,000 was met by the following credit operations: The net issue of state notes during the year amounted to $64,980,000, and advances from banks amounted to $227,420,000, or a total of $292,400,000.

The third Italian war loan was opened for subscription in January, 1917. This was a 5 per cent unlimited perpetual loan bond issued at 90. It was tax free and inconvertible before 1931. The yield from this loan was reported to be $722,000,000, of which $498,000,000 was new money, while the rest represented conversions of former issues, short term obligations, or exchanges of foreign securities. As these conversions are of interest, they warrant a detailed statement. They were as follows:

Treasury bills	$20,800,000
4 per cent 5 year bonds	85,400,000
5 per cent 3 and 5 year bonds	79,200,000
Foreign, state and railway securities	15,800,000
Not specified	22,800,000
	$224,000,000

Later returns of foreign and field subscriptions to the new loan made a total of $797,100,000. Treasury bonds issued during this year amounted to $282,320,000 and exchequer short time bills to $687,880,000. In addition to these forms of borrowing, British and American Government loans to a total of $1,506,320,000 were received by Italy, of which only $100,000,000 had been advanced by the latter down to June 30, 1917.

The creation of debt necessitated by the cost of war during this year was therefore as follows:

BORROWINGS OF ITALY DURING YEAR, 1916-17

Source			Amount
Funded: 3d war loan, January, 1917 (nominal)			$797,100,000
Floating: State note issues, net		$64,980,000	
Advances from banks		227,420,000	
Treasury bonds		282,320,000	
Exchequer bills		687,880,000	
Foreign advances		1,506,320,000	
		$2,768,920,000	

TAXATION, 1917

Italy could only hope to expand its revenues sufficiently to take care of the civil expenditures and the interest on the growing war debt. As was seen, equilibrium between the two had not been maintained in 1916. Accordingly, further taxes were imposed by royal decree of November 15, 1916, which were expected to bring in some $40,000,000 annually. Under this decree a large number of taxes was levied which affected almost every commodity and business transaction. The variety and detailed character of the scheme was characteristic. In Italy, as in France, the government seemed to prefer to depend on a large number of small and often somewhat trivial taxes rather than attack boldly a few conspicuous objects, as was done in Great Britain and the United States. The most important of the multifarious taxes imposed by the new measure were the following.

The tax on war profits was materially increased and continued until the middle of 1918. The rates of the new tax may be conveniently stated in the form of a table:

Profits on Invested Capital Between—Per Cent	Rate of Tax Levied Aug. 1, 1914, to Dec. 31, 1915	Jan. 1, 1916, to June 30, 1918
8 to 10	12	20
10 to 15	18	30
15 to 20	24	40
Over 20	35	60

In addition, the income tax was raised to 16 per cent on the entire profits, so that on the lowest class under the war profits tax the total taxation would amount to 24 to 26 per cent of the income derived from war profits. In like manner the higher groups of

income derived from war profits would pay total taxes equal to the combined rates of the income tax and the war profits tax.

Not only was a tax on war profits levied, but there was also a limitation under the decree of February 7, 1916, which, originally rather indefinite, was now made even more so, upon the distribution of the remaining profits to shareholders. These were limited to 8 per cent of the paid-up capital for old companies, and 10 per cent for the new ones organized since the war. The announced purpose of this restriction was to compel the companies to build up adequate reserves against the postwar disorganization. The undivided profits were also placed under control. One-third must be compulsorily invested in public funds. The other two-thirds were left to the discretion of the directors to be invested in securities, buildings, stocks, etc. All these regulations were to cease at the end of the year following the declaration of peace.

Another tax was imposed upon men who ordinarily would be on active service in the army, but had been assigned to non-combatant work in government offices or permitted provisionally to stay at home, ranging from one to three centesimi in the lira, to be deducted monthly and paid over by instalments. The tax began on earnings of $24 a month and progressed up to $48, at which point the highest rate was charged.

A stamp duty of 10 centesimi per lira or fraction thereof, of the retail price, was imposed on perfume, cosmetics, fancy soaps and similar articles, and on proprietary medicines except aseptics or antiseptics. Stamp duties were also levied on endorsements of bills of exchange after the first one of 10 centesimi for every 500 lira of the amount, and on certain other commercial paper, and also on demands for exemption from military service and on the actual exemption of one and two lira respectively. The price of various classes of stamped paper for contracts and other legal documents was also decreed. An additional war tax of one-thirteenth of the existing impost was imposed on the capital of limited liability companies, firms or partnerships, including insurance, although the latter were in a moribund condition owing to the

government monopoly of life insurance. A revision was made of taxes on government concessions, on motorcycles, motor cars, motor boats, and on land. A special war tax was also placed on house rent, which the landlord was forbidden to pass on to the tenant. A monopoly was established on playing cards, and finally, the rates were raised on telegrams and on certain postal services.

These impositions yielded very little during the fiscal year 1916–17, although their return for the next full year was considerable. The total revenue receipts for the year were $761,000,000—an increase of about $160,000,000 in the total over the preceding year, with an increase in war taxation of $169,997,000 over the same period. Strict economies in the civil expenditures of this year resulted in a saving of $34,000,000, and the interest charges on the war debt in 1917 reached $255,607,589, or an increase of $101,600,000 over 1916. This fiscal year, therefore, for the first time saw Italy maintaining equilibrium between civil expenditures and interest charges, on the one hand, and revenue receipts on the other, with a slight surplus of perhaps $30,000,000 to devote to actual direct war expenditure—even then averaging $300,000,000 a month.

Expenditures 1918 to End

Purely war expenditure increased from $2,826,440,000 in the fiscal year 1916–17 to $3,946,920,000, and the total war expenditure to the end of the fiscal year 1918 therefore amounted to $9,051,500,000. Expenditure from June 30, 1918, to October 31, 1918, together with adjustments of credits and debits, the coming in of liabilities incurred but not expended in earlier periods, and the addition of interest paid on war debts by the Treasury to that date, made war expenditure to October 31, 1918, total $12,523,800,000. Expenditures for the last three months of war had reached the staggering sum of $10,930,000 a day. The national debt, excluding the floating indebtedness, on June 30, 1918, stood at $8,682,890,300, with an interest charge of $382,022,327.

Borrowings, 1918 to End

As revenues were barely sufficient to meet civil expenditures and growing interest charges, loans continued to meet war expenditure. During this period, advances from the banks amounted to $718,500,000, and state notes to $147,580,000—the amount in circulation on September 30, 1918, being $2,176,640,000 and $439,560,000 respectively, or a total circulation of $2,616,200,000.

The fourth Italian war loan was issued in January, 1918. This was a 5 per cent bond, with no fixed maturity, but not subject to conversion before 1932, issued at 86.5. Provision was made for the conversion of a large number of former bonds or short term obligations into this issue, and as many as nine different kinds of securities were enumerated which would be accepted in payment. As a result of these conversion provisions, the subscriptions amounted to almost as much as the previous loans totaled, or $1,224,600,000 nominal net. The bonds were issued exempt from all present or future taxes. In addition to this loan, Treasury bills to the amount of $200,000,000 were issued, which were placed largely in England. The foreign loans placed by Italy up to the end of the war may be stated as follows:

From	Amount
Great Britain, to April, 1919	$2,065,000,000
United States, to April, 1919[1]	1,521,500,000
Lee Higginson & Co., Boston	25,000,000

The loans in Great Britain were placed at 5.5 per cent; the Lee Higginson & Company loan was floated by means of 6 per cent bonds payable in dollars, and the United States Government advances bore varying rates from 3 per cent on the first $100,000,000 to 5 per cent on the later advances.

The debt on October 31, 1918, after the conversions of the former loans and short time obligations into the new 1918 loan was made up as follows:

[1] The final advances to Italy by the United States were $1,587,675,945.

ITALY'S DEBT, OCTOBER 31, 1918

Form	Amount
Prewar	$2,727,200,000
War loans, mobilization, 1st, 2d, 3d and 4th	$2,947,400,000
3 and 5 year 5 per cent Treasury bonds	610,400,000
Exchequer bills, 3 to 12 months	1,848,000,000
Foreign advances British and United States	2,770,200,000
Advances from banks by issue of notes	1,307,200,000
Notes issued by state direct	408,200,000
Total war debt to October 31, 1918	$9,891,400,000
Grand total	$12,618,600,000

The difference between expenditure and creation of debt, amounting to some $2,500,000,000, is accounted for by outstanding liabilities, and the difference between the nominal and the net war loans, also the fluctuation in parity of exchange, made the net and nominal amounts vary in the case of foreign loans.

Taxation, 1918 to End

During this year the great bulk of the new impositions was effective during the whole period, and the Treasury Department reported in June that Italy's financial situation was excellent, and the returns for the year ending June 30 bore out this statement.[1] The tax revenues for the fiscal year were $878,920,000, or $225,000,000 over the estimated total receipts of 1916–17. The chief source of revenue was the income tax, which really represented a complex of taxes. Of the $292,460,000 obtained from this source, $88,400,000 represented the war profits tax which was much more productive than had been estimated; $54,620,000 came from the additional "centesimi de guerre" (war farthing tax); the tax on business transactions amounted to $113,000,000, which was an increase of $24,000,000 over the previous year, but a large part of this came from war contracts and could therefore not be expected to continue. The newly imposed taxes on moving pictures, jewelry, perfumes, etc., showed only very meagre results, quite incommensurate with the irritation they caused. Large gains were made in customs duties, owing in part to the increased importation of foodstuffs and munitions from abroad.

[1] *Revue financière et économique d'Italie,* October 31, 1918.

The greatest gain was made from state monopolies which yielded a total of $223,800,000, the largest part of which (some $164,600,000) was derived from tobacco. But as a large part of this was purchased by the army, the profits were mere bookkeeping gains. Even after making all allowances, however, the increase in revenues was impressive. The real problem, however, was that of making the increases permanent rather than temporary, in order that the postbellum burden might be met. The following table shows the receipts of Italy for the fiscal year ending June 30, 1918, under the principal rubrics:

Source	Yield
Business taxes	$112,480,000
Consumption taxes	191,020,000
State monopolies	215,180,000
Direct taxes	298,320,000
Public service enterprises	56,460,000
Rights on sales of state sugar	5,460,000
	$878,920,000

The most striking and significant feature of Italian finance is not the absolute amounts involved but the increase from year to year. Finance Minister Nitti is reported to have said: "Not a debt is made without the interest being assured by a corresponding tax." Certain it is that the four years of war saw a large addition to the already heavy burden of taxation under which the Italian people were staggering. The increases in taxation alone during the war period are as follows:

Year	Amount	Increase
1914–15	$265,000,000	
1915–16	339,800,000	$74,800,000
1916–17	481,600,000	142,600,000
1917–18	601,820,000	120,220,000

Although the next fiscal year, ending June 30, 1919, witnessed a decrease in expenditures owing to the cessation of military operations in November, these by no means fell to the prewar level. Owing to the interest on the increased debt, the expenditures for pensions, release, etc., it was necessary for the state to

raise even larger revenues than those of the previous year, if these expenditures were to be met out of revenues. Accordingly, the government proposed a number of new monopolies, and various modifications were to be made in the existing monopolies of tobacco, salt, matches, quinine, playing cards, and lotteries, in order to make them more productive. Minister of Finance Nitti also decreed that the sale and supply of the following articles should be state monopolies: coffee and paraffin, mineral oils, and the sale at home and abroad of quinine and secondary products. These were very unpopular, but on account of their productiveness have been persevered in by the government.

A supplementary income tax for the year 1919 only was imposed, in addition to the already existing tax on incomes. This was levied on incomes over $2,000 a year, and was graduated from 1 per cent on those between $2,000 and $3,000 to 8 per cent on those over $15,000. There was also a 2 per cent additional tax on the dividends of joint stock companies, communes, municipalities, etc., which had issued normal bearer shares. In spite of all these new sources which were tapped, Signor Nitti, in forecasting the budget for 1919–20, was forced to estimate a deficit of $132,000,000 which it was hoped the newly decreed monopolies would cover. The estimated budget showed receipts of $971,000,000 and expenditures of $1,103,000,000.

Italy's war costs, which are listed apart from her civil expenditures, are therefore as follows:

Expenditures:	August 1, 1914, to June 30, 1915..	$607,840,000	
	July 1, 1915, to June 30, 1916....	1,670,300,000	
	July 1, 1916, to June 30, 1917....	2,826,440,000	
	July 1, 1917, to June 30, 1918....	3,946,920,000	
	July 1, 1918, to October 31, 1918..	1,345,000,000	
	Unpaid liabilities	2,000,000,000	
	Interest on war debt to Oct. 31, 1918	724,000,000	
		$13,120,500,000	
	Increase in civil budget.....	99,362,000	
	Total	$13,021,138,000	
	Less military expense in normal years, for war period.....	707,140,000	
	Net cost of war.....	$12,313,998,000	$12,313,998,000

Raised by:	Mobilization loan	200,000,000	
	1st war loan	229,200,000	
	2d war loan	602,800,000	
	3d war loan	797,100,000	
	4th war loan	1,224,600,000	
		$3,053,700,000	
	State note issues	339,740,000	
	Bank note advances	1,376,500,000	
	Advances from England to April, 1919	2,065,000,000	
	Advances from United States to April, 1919	1,521,500,000	
	3 and 5 year Treasury bonds	650,000,000	
	3 and 12 month Exchequer bills	1,950,000,000	
	Private banking credit in U. S.	25,000,000	
		$10,981,440,000	
	Excess of revenue during war period, over 1914 normal	1,468,511,000	
			$12,449,951,000

UNITED STATES

In spite of its late entrance into the war, the expenditures of the United States, by reason of their magnitude, at once rivalled those of the leading European belligerents. The country was well prepared to take a leading part in the struggle. As a result of the production of supplies for the European belligerents during the two and a half years preceding, the industries of the country were in a measure adjusted to the herculean task now to be laid upon them. The finances of the country were in good condition. The installation of the federal reserve system had created the financial machinery necessary to handle the enormous loans which were soon to be floated. The tax machinery, too, had been organized and was in good working order, for the income tax was by now running smoothly, and together with the excise taxes, formed the foundation of an easily expanded and lucrative revenue system. Indeed, so well was the United States financially prepared for participation in the war that it will not be surprising if some future historian shall "discover" that these measures were all part of a gigantic scheme to make of the United States the foremost militaristic power in the world.

The normal peace expenditure of the United States under its principal classifications, from 1913 to 1916, are given in the following table:

Establishment	1913	1914	1915	1916
Civil	$170,829,673	$170,530,235	$207,169,824	$204,038,737
Military	160,387,452	173,522,804	172,973,091	164,635,576
Naval	133,262,861	139,682,186	141,835,653	155,029,425
Pensions, interest, etc.	218,290,719	216,519,264	208,125,023	200,799,260
Total	$682,770,705	$700,254,489	$730,103,591	$724,502,998

Expenditures, 1916–17

From the very day of its entrance into the struggle on April 6, 1917, the expenditures of the United States showed a startlingly rapid growth. From an average monthly expenditure of $65,000,000 during 1916, the ordinary expenditures rose from January to June, 1917, as shown in the following table:

1917 Month	Monthly	Daily
January	$79,910,714	$2,577,765
February	75,844,498	2,708,406
March	72,773,903	2,347,545
April	81,599,598	2,719,986
May	114,102,810	3,680,736
June	134,304,040	4,776,801

These expenditures are exclusive of advances to Allies.

It is not possible to give in detail the classification of these expenditures, but an approximate idea may be secured from a summary statement for the fiscal year ending June 30, 1917, which covered only eighty-five days of the war period, however, namely, from April 6 to June 30:

Expenditure	1916–17
Civil	$234,649,248
Military	440,276,880
Naval	257,166,437
Indian	30,598,093
Pensions	160,318,405
Interest on public debt	24,742,129
Miscellaneous	147,799
Total ordinary disbursements	$1,147,898,991
Purchase of obligations of foreign governments (advances to Allies)	885,000,000
Total	$2,032,898,991

In endeavoring to estimate the expenditures chargeable to war, no serious error will be made if the expenditures for 1915–16 be regarded as normal, and the excess between the prewar normal and the subsequent war abnormal be regarded as war expenditure. This would give war expenditure for the period from April 6 to June 30, 1917, as $423,405,993, to which must be added advances to Allies of $885,000,000, making a total of $1,308,405,993.

Loans, 1916–17

The First Liberty Loan Act, passed April 24, 1917, provided for an issue of bonds to the amount of $5,000,000,000, of which $3,000,000,000 was to be used to purchase the obligations of governments at war with Germany. A popular loan of $2,000,000,000 fifteen-thirty year gold bonds was issued by the United

States in May, 1917, dated June 15, 1917, bearing interest at the rate of 3½ per cent. The bonds were tax exempt, both as to principal and interest, from all taxation except estate and inheritance taxes, and carried conversion privilege into future issues which might be put out at higher rates of interest. Pending the flotation of the loan, the Treasury was authorized to issue one year certificates of indebtedness. The use of such certificates to anticipate the yield of war loans and taxes has characterized the financing of the war in the United States from the beginning. Provision was also made for the convertibility into this issue of the outstanding Panama Canal bonds, of which $63,945,460 were later actually converted. By this act, as by subsequent loan acts, the responsibility for the success of the bond issue was imposed very largely upon the Secretary of the Treasury. He was given great power and authority under the act and may fairly be held responsible for its success or failure.

One of the first steps taken was the organization of the machinery for the sale and distribution of the loan. For this purpose the federal reserve banks formed an admirable base. Under the federal reserve system the United States was divided into twelve districts, and in each district a federal reserve bank was established in a selected city as the head office of the banks in that district. All national banks in each of the twelve districts were required to become members, and all State banks and trust companies were permitted to do so. At the time of the issue of the First Liberty Loan there were 7,581 national banks and 40 State banks and trust companies in the system. Under section 15 of the Federal Reserve Act, it was provided that the federal reserve banks could act as fiscal agents of the United States when required by the Secretary of the Treasury, and an order providing for this had already been issued. A circular of May 14, 1917, designated the Treasury Department and the twelve federal reserve banks as agents to receive applications for the First Liberty Loan. Each of the twelve banks appointed a central committee of five representative business men to act as a central Liberty Loan committee in the respective districts, and they in turn ap-

pointed subcommittees in each of the larger towns and cities. Extensive subscription and publicity campaigns were inaugurated and carried through by these committees, which acquired the voluntary cooperation of many persons in the prosecution of the work. Special women's Liberty Loan committees were formed and the aid of the Boy Scouts was secured, both of which gave valuable assistance. The American Bankers' Association offered its services. The vigorous cooperation of the press was secured, and many valuable editorials and news items were devoted to the promotion of Liberty Loan sales. Experienced bond salesmen were enlisted in the work of selling Liberty Bonds. Arrangements were made by banks and trust companies to carry on a reasonable margin large amounts of these bonds for their customers at the same rate of interest as the bonds. The same general procedure was followed in the subsequent Liberty Loan issues.

It is evident from what has been said that the part played by the federal reserve banks in financing the war was of prime importance. In their capacity as fiscal agents of the government they rendered invaluable service in securing subscriptions for and distributing the loan, but their contribution did not end with their work as brokers, for they practically underwrote the bond issues and subscribed to large amounts themselves.

The results of the loan were regarded as a sort of earnest of the intentions of the United States in the prosecution of the war, and every effort was made to insure its success. The subscriptions amounted to $3,035,226,850, but only $2,000,000,000 was accepted. Allotments were made in full to subscribers in amounts up to $10,000 and over that sum in such proportions as to net the exact amount asked for. The number of subscribers was about 4,500,000.

The credit operations of the Treasury for the fiscal year 1916–17 are given in the following table:

Receipts into Treasury from:	Amount
First Liberty Loan	$1,466,335,094
Certificates of indebtedness, net	285,632,732

Taxation, 1916–17

While no new war revenue measure was enacted in the period from April 6, 1917, to the end of the fiscal year, June 30, 1917, the yield during this fiscal year was greatly increased over pre-war normal revenue by the enactments of September 8, 1916, and March 3, 1917, and as these revenue measures, though preceding actual belligerency, were enacted to provide a "preparedness fund" and carry out an increased naval program, and were diverted to or merged in current war expenditure, they may fairly be regarded, at least in the excess over normal, as war revenue. The normal revenues[1] for the period of 1913–1917 were as follows:

Fiscal Year	Amount
1913	$723,605,259
1914	734,673,167
1915	697,910,827
1916	779,664,552
1917	1,118,174,126

In estimating the amount of revenue which went to meet war expenditure, the receipts of 1916 may be taken as normal, and therefore the difference, or $338,509,574, represents the amount of war expenditure raised in the fiscal year 1916–17 which was met out of revenue.

The financial operations of war, for the eighty-five day period between April 6 and June 30, 1917, may therefore be stated as follows:

War expenditure		$1,308,405,993
War revenue	$338,509,574	
Borrowings	1,751,967,826	
	$2,090,477,400	

Expenditures, 1917–18

The Treasury Department had estimated the expenditures for the fiscal year 1917–18 at $18,775,910,995. Congress promptly followed the estimate by an appropriation of $18,879,177,015, or slightly more than the executive estimates, with an additional

[1] Expenditures for these same years are given on page 161.

appropriation of $2,511,553,925 for contract obligations. The end of the fiscal year showed that actual ordinary disbursements amounted to only $8,966,532,266 and advances to Allies, $4,739,434,750, or a total of $13,705,967,016. The discrepancy between the estimated and the actual disbursements seems to have been due to the assumption that the total productive capacity of the United States for war materials could be used at once and to the full for government purposes. Events of the year proved this assumption to be erroneous; in fact, a full year was to elapse before the necessary adjustments were effected in American industry and trade which made it possible to direct the major resources of the country into war channels. The daily expenditures, exclusive of advances to Allies, during this year, were as follows:

1917–18	Monthly	Daily
July	$208,299,031	$6,719,323
August	277,438,000	8,949,613
September	349,013,305	11,337,768
October	465,045,360	14,904,690
November	512,952,035	17,098,401
December	611,297,425	19,719,272
January	715,302,039	23,074,260
February	675,209,068	24,114,610
March	819,955,367	26,450,173
April	910,756,758	30,358,558
May	1,068,203,026	34,458,163
June	1,263,914,905	42,130,497

The comparative growth in the war expenditure for this year may be arrived at by deducting the prewar 1915–16 normal from the expenditures of this year as given in the following table:

Expenditure	1917–18
Civil	$1,507,367,481
Military	5,684,348,623
Naval	1,368,642,793
Indian	30,888,776
Pensions	181,137,754
Interest on public debt	197,526,608
Miscellaneous adjustment (deduct)	3,379,769
Total ordinary disbursements	$8,966,532,266
Advances to Allies	4,739,434,750
Total	$13,705,967,016

A war expenditure for the year is thus secured of $8,242,039,268, or, with advances to Allies added, $12,981,474,018. This makes the total for the war period from April 6, 1917, to June 30, 1918, as follows:

Year	War Expenditure	Advances	Total
1916–17.....	$423,405,993	$885,000,000	$1,308,405,993
1917–18.....	8,242,039,268	4,739,434,750	12,981,474,018
	$8,665,445,261	$5,624,434,750	$14,289,880,011

Loans, 1917–18

As the tax legislation to provide additional revenue was not passed until October, 1917, it soon became necessary to resort again to borrowing in order to meet the increased demands occasioned by the war and also the needs of foreign countries to which the United States was extending credit. Accordingly, the Second Liberty Loan Act was passed on September 24, 1917. This authorized the Secretary of the Treasury to issue bonds, in addition to the $2,000,000,000 already issued under the first loan act, to the amount of $7,538,945,460. This sum included the unissued balances authorized under the previous act and a new authorization for $4,000,000,000. The rate of interest was fixed at 4 per cent, and the bonds were dated November 15, 1917, and made redeemable in 1927 and payable in 1942. They were convertible into the next issue of bonds bearing a higher interest rate, the conversion privilege to cease six months after the next issue (November 9, 1918) if not then exercised, and the bonds of the first issue converted into the new 4s had only coeval conversion rights. The tax exemption privilege of the first issue lapsed if converted (except for a block exemption of $5,000 principal) and the new 4s were made subject to the estate and inheritance taxes, and to the surtaxes under the income tax law, as well as to excess profits and war profits taxes. The withdrawal of the tax exemption feature was the result of the strong disapproval directed against this provision in the first issue, based on the ground that tax exemption granted a privilege which grew in value as new taxes were imposed and the burden resting upon accumulated wealth became heavier.

The amount of the second loan was $3,000,000,000 but the Secretary of the Treasury announced that he would allot additional bonds to the amount of half the oversubscription. The loan was offered on October 1 and subscriptions closed on October 27, when it was announced that they amounted to $4,617,532,300 or 54 per cent more than the amount asked. In line with the announcement of the Treasury, bonds ultimately allotted to subscribers totaled $3,808,766,150. Full subscriptions were accepted for all amounts of $50,000 and under, and percentages of larger amounts ranging from 90 per cent down to 40 per cent. The total number of subscribers was 9,420,000—more than double the number in the First Liberty Loan.

The lowest denomination of both issues had been placed at $50. But in order that subscriptions might be obtained from persons of small means who would not be able to take even a $50 bond, war savings certificates were authorized by the act of September 24, 1917, to an amount not exceeding $2,000,000,000. These were patterned after the British model and were issued in the form of a stamp costing from $4.12 to $4.23, according to the month in which purchased, and having a maturity value at the end of five years of $5. Thrift stamps costing 25 cents each and not bearing interest were also sold which were exchangeable for war savings certificates. The sale of the stamps and certificates was made the occasion for a campaign of education to instill principles of thrift and loyalty. The educational work thus done may be regarded as probably the most valuable result, though the financial return from these stamps was by no means inconsiderable. The sale was begun in December, and by the end of the fiscal year, June 30, 1918, the revenue from this source amounted to $307,092,391.

The Third Liberty Loan Act provided for the issue of $3,000,000,000 4¼ per cent ten year bonds maturing in 1928. Bonds were dated May 9, 1918, and offered on April 6, 1918, subscriptions closing May 4. The tax exemption provisions were the same as in the second loan, but the third issue differed from the previous ones in several respects. In the first place, the

optional bond was rejected in favor of a straight ten year bond, which, moreover, was inconvertible. Prior issues converted into the new 4½s also became inconvertible. The Secretary of the Treasury announced that all oversubscriptions would be accepted. Finally, the act provided for a bond purchase fund out of which the Secretary of the Treasury was authorized, until one year after the termination of the war, to purchase bonds to the amount of one-twentieth of the outstanding issues in each year, for the purpose of sustaining the market price of the bonds. By October 31, bonds to the amount of $244,036,500 had been purchased under this provision. The act also provided for the issuance of certificates of indebtedness to an amount not exceeding $8,000,000,000 of the same maturities and for the same purposes as under the previous act. The sum of $5,500,000,000 was also authorized to be used for the establishment of credits for foreign governments.

The subscriptions to this loan amounted to $4,176,516,850. This represented a slight falling off from the previous loan, but as the whole amount subscribed was accepted, the final return to the Treasury under the third loan was greater than that of the second. The number of subscribers, on the other hand, almost doubled, increasing to 18,376,815. This was about one subscriber in every six persons in the United States, or practically one to the normal family. This was the widest distribution of any government loan in any belligerent country up to this time.

The credit operations of the year may be summarized as follows:

Treasury Receipts from	Amount
First Liberty Loan, balance, net	$522,456,200
Second Liberty Loan, less conversions	3,746,813,516
Third Liberty Loan, less conversions	3,228,109,639
War Savings Stamps, less redemptions	349,797,298
Certificates of indebtedness, net	1,439,376,768
Total	$9,286,553,421
Less miscellaneous redemptions	18,513,287
	$9,268,040,134

TAXATION, 1917–18

On October 3, 1917, was passed the first war revenue act, which was estimated to raise $3,400,000,000. It included a drastic addition to the existing surtaxes on income, and added an excess profits tax. Additions were also made in the system of indirect taxes. The old excess profits tax which had been provided for under the act of March 3, 1917, and which had not yet gone into effect save for an insignificant return of $2,000 odd, was repealed. Similarly the munition manufacturers' tax was lowered to 10 per cent and was made to cease entirely on January 1, 1916.

The backbone of the new act consisted of the income and excess profits provisions. In the former the exemption minimum was lowered to $1,000 for a single person and $2,000 for married persons and a normal tax of 2 per cent was levied on all incomes in excess of these sums. This was in addition to the tax of 2 per cent on incomes in excess of $3,000 for single persons and $4,000 for married persons which had been established by the act of October 3, 1913, as amended by subsequent acts of September 8, 1916, and March 3, 1917. A scale of additional surtaxes was also prescribed in addition to those imposed by the act of September 8, 1916, on incomes of individuals, which ranged from 1 per cent on incomes from $5,000 to $7,500, up to 50 per cent on incomes over $1,000,000. The highest combined rate which was levied under this act reached 67 per cent in the case of incomes over $2,000,000. For corporations a normal tax of 4 per cent was prescribed in addition to the existing normal rate of 2 per cent on net income.

The excess profits tax was supplementary to the income tax, and provided for an excess profits tax upon the income of individuals, partnerships, and corporations. A specific exemption of $3,000 in the case of corporations, and $6,000 in the case of partnerships and individuals, was allowed and also the deduction of an amount of net income equal to 7 to 9 per cent of the invested capital used in the business during the prewar period.

The years 1911, 1912, and 1913 were defined as the "prewar" period. In case the business was not in existence during that time, the deductible income was fixed at 8 per cent. Beginning at this point a graduated tax was placed upon the profits in excess of the amounts exempted. The lowest rate was 20 per cent on excess profits up to 15 per cent; 25 per cent on the excess from 15 to 20 per cent; 35 per cent on the excess from 20 to 25 per cent; 45 per cent on the excess from 25 to 33 per cent; and 60 per cent on the excess profits over 33 per cent.

In the case of excess profits derived chiefly from personal or professional services, the rate was a flat one of 8 per cent on the net income in excess of the exemption of $3,000 for corporations and $6,000 for partnerships and individuals.

Doubt as to the meaning of the law and apprehension as to the effect upon the industry of the country which an unwise interpretation or enforcement might entail, led the Secretary of the Treasury to organize a group of business and professional men designated as "excess profits tax advisers." They were able after some months of effort to issue regulations interpreting the principal features of the excess profits tax provisions and establishing the administrative procedure with reference thereto. In spite of this effort to give a working interpretation to a clumsily drawn law, it met with serious and continued criticism.

About three-fourths of the internal revenue receipts levied under this act were secured from the sources just described, but in addition a number of other taxes were provided for. Next in importance to the income and excess profits taxes was the war tax on distilled spirits, which was raised from $2.20 to $3.20; and that on beer, which was raised from $1.50 to $3 per barrel. Other beverages were taxed at more moderate rates. The taxes on tobacco were more carefully classified and considerably raised. War stamp taxes were imposed upon certain legal or business documents, playing cards, parcel post packages, transfers of shares of stock, and sales of produce for future delivery. Additions were made to a large number of existing taxes such as the "war tax on facilities furnished by public utilities and

insurance." New taxes were imposed known as "war excise taxes" on automobiles, musical instruments, jewelry, sporting goods, cameras, cosmetics, toilet articles and patent medicines, moving picture films, motor boats and yachts. The tax on admissions and dues was also introduced for the first time. An additional war tax on estates graduated from one-half of 1 per cent on estates below $50,000 to 10 per cent on estates over $10,000,000 was added to the already existing inheritance tax. This resulted in raising the total rates on inheritance to a scale graduated from 2 per cent to 25 per cent. Finally, the postal rates were increased 50 per cent in the case of first class mail and a zone system at increased rates was introduced in the case of second class mail.

The following table shows the receipts under this law for the year ending June 30, 1918, together with those for 1917 and 1914 for purposes of comparison:

UNITED STATES TAX RECEIPTS

(In millions of dollars)

Source	1918	1917	1914
Distilled spirits	317.5	192.1	159.1
Fermented liquors	126.3	91.9	67.1
Tobacco	156.2	103.2	79.9
Oleomargarine	2.3	1.9	1.3
Special taxes	27.3	15.7	....
Miscellaneous and war excise	225.9	44.8	1.1
Total receipts from above	855.6	449.7	308.6
Income and excess profits taxes	2,838.9	359.7	71.4
Total	3,694.6	809.4	380.0

The financial operations on account of war for the fiscal year 1917–18 were therefore as follows:

War expenditure		$12,981,474,018
War revenue	$3,020,965,946	
Borrowings	9,268,010,134	
	$12,288,976,080	

Expenditures, 1918–19

The Treasury Department had estimated the expenditures for the fiscal year 1918–19 at $20,687,938,691 ordinary, and ad-

vances to Allies at $4,475,565,250, or a total of $25,000,000,000, on the assumption that the war would continue during the whole year. The expenditures for the first nine months of the year (to March 31, 1919) totaled $15,164,224,227, those for December exceeding $2,000,000,000, including advances to Allies. The monthly expenditures, exclusive of advances to Allies, are given for this year in the following table:

1918–19	Monthly	Daily
July	$1,259,782,599	$40,638,310
August	1,524,901,777	49,190,380
September	1,624,583,411	54,152,780
October	1,174,622,406	37,892,335
November	1,655,051,004	55,168,366
December	1,670,890,396	53,899,690
January	1,659,580,520	53,534,855
February	1,035,130,805	36,968,958
March	1,057,461,791	34,111,671
April	1,019,319,698	33,977,323
May	917,425,615	29,594,697
June	754,639,949	25,154,665

War expenditure for this year, arrived at by deducting the prewar 1915–16 normal, would give the sum of $14,311,131,692, and adding advances to Allies during the year amounting to $3,479,255,265, gives a total of $17,790,386,957.

The armistice was declared on November 11, 1918, but this did not at once diminish expenditure, but rather increased it as shown in the above table, due to the heavy costs involved in the cancelation of war contracts, the expenses of transporting troops from France, and other charges incident to demobilization. In January, however, a gradual decline set in which continued steadily to the end of the fiscal year.

Loans, 1918–19

The estimated expenditure of $25,000,000,000, with estimated revenues of $8,000,000,000 left a deficit of $17,000,000 to be met by loans, had the war continued. Accordingly, in July an act was passed authorizing an issuance of $8,000,000,000 additional bonds, and providing for a further advance of $1,500,000,000 to Allies. Treasury certificates in anticipation of the

fourth loan began at once to be sold. By August the amount outstanding was $2,183,835,000. The sale continued until they reached $4,659,820,000 on October 1, 1918, when the Fourth Liberty Loan was offered, which took them up.

The sale of war savings certificates had grown steadily since its inauguration in December, 1917, amounting, as before stated, to $307,092,391 during the prior fiscal year. In July, 1918, the demand became so great that for a time the Bureau of Engraving and Printing had to cease the work on postage stamps in order to supply enough war savings and thrift stamps to meet the demand. It was estimated about the middle of July that the number of persons who had invested or were "pledged" to invest in war savings stamps was 34,410,000. For the month of July the total sales amounted to $211,417,943. This was the highwater mark, however, and during the next months the sales fell off. In September, 1918, Congress extended the prior limitation of $2,000,000,000 to $4,000,000,000 and the Secretary of the Treasury prepared a new 1919 series to go on sale January 1, 1919, with a maturity in 1924. Curiously enough, in spite of subscriptions to this form of investment, and the purchase of Liberty Bonds, the savings banks of the country reported increased deposits. The same was true of the postal savings banks. In order to meet this latter growth, the maximum amount of money which a depositor might have on deposit was raised on July 22 to $2,500. This originally had been $500, and in May, 1917, had been increased to $1,000.

The Fourth Liberty Loan in the amount of $6,000,000,000 4¼ per cent fifteen-thirty year gold bonds dated October 24, 1918, was offered for subscription on September 28, 1918. The right to allot bonds up to the full amount of the oversubscriptions was reserved, as in the third loan. The tax exemption provisions were the same as in the second and third loans, but in addition there was an exemption from surtaxes and excess profits and war profits taxes allowed on the income of bonds up to $30,000 principal, and a further exemption from these taxes on the income derived from an aggregate of $45,000 principal

of the three prior loans. This latter exemption, however, was contingent upon the taxpayer who claimed it being an original subscriber to the Fourth Liberty Loan of an amount of one and one-half times the amount of the three prior loans owned by him on the date of his tax return. The two latter block tax exemptions were for a period ending two years after the war only. This exemption privilege was double barreled, having the effect almost of compulsion in securing additional subscriptions to the fourth loan from holders of prior ones who could thereby secure additional tax exemptions for their holdings, and at the same time it induced subscribers to the new loan to purchase on the market a sufficient amount of prior loans in case they did not then own them, to get the full benefit of the additional exemption. In this way there was secured the effect desired by the Treasury of maintaining the prices of the earlier issues, and of securing subscriptions to the fourth loan.

The subscriptions to the fourth loan amounted to $6,989,047,000 and, according to the announcement, the Treasury accepted the whole amount. This was an oversubscription of 16.48 per cent which, although not so large a relative oversubscription as had obtained in any of the other three loans, represented a total about 60 per cent higher than the largest previous loan. The number of subscribers grew to 21,000,000, or almost one in every five of the population.

The proceeds of this loan retired the outstanding certificates of indebtedness, and left a balance which lasted up to the end of November. At that time the sale of certificates was resumed, and by March 13, 1919, there were $4,920,256,500 outstanding. The first payment of the income tax was made on March 15, and permitted the retirement of about $1,000,000,000, but it was necessary to provide further funds to take care of the remainder, as well as to finance further activities of the government. Accordingly, on March 3, 1919, the fifth loan was authorized. As the legislation authorizing it was passed so long in advance of its issue, great latitude was granted to the Secretary of the Treasury in fixing the details, even more so than in the case of the

previous loans. The act practically determined only the limit, which was set at $7,000,000,000.

The Victory Liberty Loan, as it was called, was offered for popular subscription on April 21, 1919, and consisted of $4,500,000,000 4¾ per cent three-four year convertible gold notes. The tax-exemption provisions were similar to those of the previous acts, but the notes were made convertible at the option of the holder into wholly tax-exempt (save for estate and inheritance taxes) 3¾ per cent notes. In addition to the exemptions specified in the last three bond acts, an exemption was allowed in the interest on notes to a principal amount of $20,000, provided no noteholder should be entitled to this exemption unless he owned one-third of the amount in Victory Loan notes as an original subscriber. The Treasury announced that no oversubscription would be accepted. Other provisions of the act revived the privilege of conversion of the Liberty 4s into 4¼s, which privilege had expired November 9, 1918. A cumulative sinking fund to an amount annually of 2½ per cent of the aggregate of Liberty Bonds outstanding July 1, 1920 (less the amount of obligations of foreign governments held by the United States) was authorized, which it was calculated would expunge the net debt in twenty-five years. Authorization was also given for making further loans to foreign governments for a period of eighteen months after the termination of war, and for converting the short time obligations of foreign governments evidencing such loans into long time obligations maturing not later than 1938. Finally, the War Finance Corporation was authorized, in order to promote commerce with foreign nations, to grant credits to American exporters to a total amount of $1,000,000,000.

The subscriptions to the Victory Liberty Loan totaled $5,249,908,300—an oversubscription of nearly $750,000,000, or 16.66 per cent. The number of subscribers was about 12,000,000. Sixty per cent of the total was in amounts of less than $10,000, which, under the allotment, were paid in full, and the balance prorated among the subscribers for larger amounts.

The credit operations of the Treasury for the fiscal year 1918–19 are given in the following table:

CREDIT OPERATIONS, UNITED STATES, 1918–19

Fourth Liberty Loan	6,794,504,557
Victory Liberty Loan	3,467,840,957
Certificates of indebtedness (net)	3,273,000,000
Total	$13,535,345,514

TAXATION, 1918–19

The announced policy of the administration and of Congress had been the raising of a quarter to a third of the expenditures by taxation. At the rate expenditures were increasing, it was evident that new revenue would have to be provided, and accordingly a new revenue bill was introduced in the summer of 1918. It was designed to yield about $8,000,000,000, which would be one-third of the $24,000,000,000 that it was estimated the Treasury would need for the fiscal year 1919. A tax measure calculated to yield this amount was finally matured at the time the armistice was declared after long continued debate and the harmonizing of serious differences between the House and the Senate. Immediately upon this event the Secretary of the Treasury suggested to Congress the desirability of reducing the amount of revenue to be raised by taxation from $8,000,000,000 to $6,000,000,000 for the fiscal year 1918–19, and to $4,000,000,000 for the following year. This advice was acted upon and the existing bill was amended so as to reduce the revenue to the sums suggested. The final act was passed February 24, 1919.

As in the 1917 act, the backbone of this measure was the income and war profits taxes. The exemptions remained the same as in the 1917 act, being fixed at $1,000 for single persons and $2,000 for married persons. The normal tax on all incomes above these sums was placed at 12 per cent for the year 1918 and for subsequent years at 8 per cent—rates which represented a trebling and doubling respectively of the existing normal tax.

The surtaxes were much more finely graded and considerably increased, beginning with 1 per cent on incomes between $5,000 and $6,000, and running up to 65 per cent on incomes over $1,000,000. Incomes of the latter amount would therefore bear a total tax of 77 per cent—a figure which exceeded that of any other income tax in the world.

The 1919 act greatly changed and distinctly improved the excess profits tax. In this enactment it is styled "war profits *and* excess profits" tax, and a distinction between war profits and excess profits is established. Individuals and partnerships were relieved from the excess profits tax, and the act also permits deduction of losses in transactions not directly connected with trade or business, and removes the limitation upon the deduction of interest upon indebtedness. As in the former act, invested capital forms the basis of all computation. More careful definitions are given of such terms as "net income," "invested capital," "tangible and intangible property," "inadmissible assets," and special provision is made for exceptional cases, for reorganizations, and for difficulties in interpreting the law. After invested capital is determined, net income must be calculated according to prescribed rules.

Excess profits and war profits are differentiated and subjected to slightly different treatment. In the former a deduction of $3,000 and 8 per cent of the net income on invested capital is allowed to the taxpayer before division with the government. In the latter, a deduction of $3,000 is allowed, and in addition, an amount equal to 10 per cent of net income on invested capital, or average prewar net income on invested capital and 10 per cent on any additional invested capital used in the taxable year. Fine distinctions are drawn in the matter of differentiating between prewar net income and taxable-year net income for corporations coming into being since prewar days, but broadly speaking, the legislative intent is to declare normal profits due to the taxpayer to be $3,000 and 8 per cent of the income on his investment, and in war industry $3,000 and 10 per cent on his investment—the

excess over these deductions being subject to division with the government in the following percentages:

(a) 30 per cent between exemption and 20 per cent on invested capital;

(b) 65 per cent over 20 per cent on invested capital;

(c) 80 per cent of the excess net income above the exemption, less the sums paid as taxes under (a) and (b).

This rate applies for the calendar year 1918, but for 1919 and thereafter the above 30 per cent rate is reduced to 20 per cent, and the 65 per cent rate is reduced to 40 per cent. Profits on United States war contracts are subject to special taxation computation. The severity of these rates, however, is modified by a provision fixing the maximum ratio of the tax to net income. It is provided that the tax imposed shall in no case be more than 30 per cent of the amount of the net income between $3,000 and $20,000, plus 80 per cent of the net income in excess of $20,000.

The estate tax was considerably revised. In the first place, a somewhat finer graduation was introduced in the classes between $450,000 and $2,000,000; in the second place, the smaller estates from $50,000 up to $2,000,000 were taxed at rates beginning with 1 per cent and progressing until at $2,000,000 they reached 12 per cent. From this point the progression was similar to that of the previous act, running up as high as 25 per cent on estates over $10,000,000.

The fifth title of the act embraced a number of taxes on transportation and other facilities and on insurance. Few changes were made in this group from the taxes imposed by the act of October, 1917. The tax on Pullman tickets was reduced from 10 per cent to 8 per cent, but on the other hand, telephone, telegraph, and radio message charges were considerably increased, and a 10 per cent tax was imposed on leased wires. The greatest change took place in the two next groups of taxes—those on beverages and tobacco. In general, it may be said of these without going into detail that the tax on distilled spirits and fermented liquors, and on wines and soft drinks, was doubled.

Those on cigars, cigarettes and tobacco were subjected to an increase of about 50 per cent.

The taxes on admissions and dues were continued, but a more careful classification was made of admission prices and different classes of amusements which tended on the whole to raise the rates of this group. The tax was made to apply to all club dues over $10 per annum instead of $12 as in the previous act.

The ninth title of the act embraced a miscellaneous assortment of excise taxes. This group was now greatly enlarged by the addition of a number of nonessentials and luxuries. The following were some of the articles taxed: automobiles, motorcycles, motor accessories, pianos and other musical instruments, sporting goods, chewing gum, cameras, photo films, candy, firearms, hunting knives, swords and similar articles, electric fans, thermos bottles, cigarette holders, humidors, slot machines, liveries, riding habits and boots, articles made of fur, yachts, motor boats and canoes, toilet soaps and powders. In addition to these, sumptuary taxes were laid on a large number of luxuries or high priced articles. A tax of 10 per cent was imposed on prices in excess of specified minimums in the case of carpets, rugs, picture frames, trunks, valises, purses, lamps, umbrellas, fans, smoking jackets, waistcoats, hats, footwear, neckwear, silk stockings, men's shirts, nightgowns, kimonos. And finally, a small group of articles evidently regarded as pure luxuries was taxed a certain percentage irrespective of their price. This group included jewelry, precious stones, watches, moving picture films, perfumes, toilet compounds, and medicinal compounds.

Under the head of "special taxes" provision was made for the taxation of brokers, commission merchants, capital stock of corporations, and proprietors of amusements. The taxes on brokers were greatly increased; that on corporate capital stock was doubled in rate and the exemption minimum reduced from $99,000 to $5,000. The tax on proprietors of theaters, museums and concert halls, circuses, bowling alleys and billiard rooms was doubled, and some new classes subjected thereto, such as street fairs, shooting galleries, riding academies, and automo-

biles for hire. On the whole, these taxes were in line with those described in the previous paragraph, and were designed to place a heavy burden, even to the point of discouragement, upon activities or transactions regarded as nonessential. In similar fashion the taxes on manufacturers of tobacco were drastically raised by a finer classification according to the sales, which resulted in much heavier taxes on the larger dealers.

Stamp taxes under existing laws were evidently found satisfactory, for practically no change was made in this group.

There was written into this tax measure a new federal child labor law, which proposed by resort to taxation to prevent the employment in certain specified industries of children under fourteen years of age, and to prohibit the employment in others of children between fourteen and sixteen years for more than eight hours a day, and in the night time. This was done by imposing an excise tax equivalent to 10 per cent of the entire net profits of such employer. Heavy penalties, ranging from $1,000 to $10,000 were imposed for infraction of the law. The purpose of the act was of course not revenue, but the prohibition of child labor, and an effort was made by the weapon of taxation to frame a law which might escape the fate which overtook the Child Labor Law of 1916, which was declared unconstitutional by the United States Supreme Court in June, 1918.

The returns from the new tax measure began immediately, for within three weeks of its passage the first instalment of the income tax fell due. For the first time this tax was now made payable in four instalments. The first payment on March 15 amounted to over $1,000,000,000 and gave promise that the new act would raise the anticipated revenue. For the calendar year 1918 the total revenue receipts amounted to $4,707,532,307, and for the fiscal year ending June 30, 1919, to $5,152,257,136, or somewhat less than was anticipated.

The following table shows briefly the results of the loans contracted by the United States in the prosecution of the war:

	Date	Amount Asked Billions	Amount Subscribed	Amount Accepted	Number of Subscribers	Rate Int.	Redeemable Payable
1	6–15–'17	2	$3,035,226,850	$2,000,000,000	4,500,000	3.5	1922–1947
2	11–15–'17	3	4,617,532,300	3,808,766,150	9,420,000	4	1927–1942
3	5– 9–'18	3	4,176,516,830	4,176,576,850	18,376,815	4.25	1928
4	10–24–'18	6	6,993,073,250	6,993,073,250	21,000,000	4.25	1933–1938
5	5–21–'19	4.5	5,249,908,300	4,500,000,000	12,000,000	4.75	1923–1924

BELGIUM

It is difficult to measure the money cost of the war to Belgium, because in her case the invasion of the country by the Germans involved the destruction of her political and economic life and imposed not only financial burdens which could hardly be borne, but also horrors of cruelty, privation, loss of life, and denial of the most sacred rights of human beings. The subjective costs of the war to the Belgians can not be measured.

The impending outbreak of war in Europe affected Belgium as it did other countries, and measures similar to those taken elsewhere were found necessary here. The stock exchanges in Brussels and Antwerp closed on July 29, and on August 2 a moratorium was declared which postponed payment of bills accepted before that date, and limited cash withdrawals from banks to $200 each fortnight. The next day the bolt fell. The Germans demanded passage and were refused. The story of the martyrdom of Belgium does not belong here, and the record of Belgian finance becomes an account of German fines, impositions, and destruction on the one hand, and of loans and advances to the Belgian Government by the Entente Allies on the other.

The Belgian banking organization does not seem to have been seriously disturbed. The gold reserve of the National Bank of Belgium, amounting to practically $50,000,000, was removed to England before the German invasion. On the other hand, a large part of the liquid assets of the Bank as they existed in 1916 were removed by the Germans and reported to have been taken to Berlin for use in strengthening the resources of the Reichsbank.[1] After the signing of the armistice, the reserves and other resources of the Bank were returned, and as the other Belgian banks had maintained their organization under the

[1] *The Americas*, published by National City Bank, December, 1918.

direction of German controllers, the adoption of peace found them ready to resume operations. The monetary situation was disturbed by the emission of large quantities of paper money by the German administration. It was estimated that almost $1,000,000,000 of German marks were put into circulation; in addition to this, issues of bank notes were made, the amounts of which at the beginning and end of the war are shown in the following table:

Date	Amount
December 31, 1913	$206,000,000
December 1, 1914	312,000,000
November 11, 1918	502,000,000
February 4, 1919	772,000,000

On the last named date the ratio of the gold reserve to the notes outstanding was 7.5 per cent, a proportion which compared not unfavorably with that of other countries suffering much less than Belgium.

As practically all of Belgium except a small section was held by the Germans, there could of course be no system of taxes or domestic loans by which to raise the revenues necessary to maintain the Belgian army in the field and to meet other needs. These were financed by advances from the Allies to a total of $1,154,467,914. Of this amount England advanced $424,351,524, France $434,125,090, and the United States $295,991,300. In addition to these advances to the government, millions of dollars were spent by these and other nations for food and other relief for the civilian population of Belgium.

In his speech on the introduction of the Belgian budget on March 21, 1919, the Minister of Finance of Belgium stated that Germany owed Belgium for cash requisitions alone $1,930,000,000, of which $965,000,000 represented German marks in circulation; $386,000,000 amounts confiscated from banks, and $579,000,000 fines and monthly payments levied on the towns during military occupation.[1] In addition to these requisitions the Belgian Commission for fixing damages occasioned by the

[1] *Commercial and Financial Chronicle*, April 5, 1919, p. 1338.

war estimated the loss to property at $6,775,000,000, of which about $4,000,000,000 was for physical destruction, and the balance for theft, pillage, levies, etc. The loss of the machinery item and raw material alone was fixed at $1,200,112,000.

Assuming that the requisitions and the destruction of property will be made good by the payment of reparation by Germany to Belgium, the direct money cost of the war to the latter country may be estimated as equivalent to the advances made by the Allies or $1,154,467,914. The prewar debt as of December 31, 1913, amounted to $826,000,000. This was somewhat more than doubled by the conclusion of war, amounting then to $1,980,000,000. If, however, the fines, levies and other direct money outlays be included, as they properly should be in order to show Belgium's contribution to the war, the total cost would fall not far short of $3,000,000,000.

JAPAN

Japan declared war on Germany on August 23, 1914, and about ten days later, September 3, the Diet met to vote credits for meeting the cost. It seemed to anticipate a brief and victorious struggle, for the first estimates amounted only to $26,000,000 and covered the period to the end of the war. The whole sum was to be taken out of the surplus in the Treasury. The Minister of Finance, Wakatusuki, stated that if the war continued after December the bond redemption fund, the currency fund, and the forest fund, amounting in all to $24,000,000, would have to be taken for the war. Japan's policy of financing the war seems therefore to have been to pay for it out of money already in hand, thus avoiding the problem which confronted other countries of resorting to loans or to additional taxation. The war, however, was not to be so lightly disposed of.

The government finances of Japan were in satisfactory condition at the outbreak of war. Industry and trade, however, were in a rather depressed state, as Japan had been suffering for a considerable period from the reaction which followed the boom after the close of the Russo-Japanese War. New undertakings were few, and the balance of trade was adverse. These very facts had eliminated all speculation and prepared Japan for legitimate expansion whenever circumstances permitted. The immediate situation was made worse by the outbreak of the Great World War. Banks contracted their loans, foreign trade was retarded by the disturbance of foreign exchange and the rise of insurance rates, and the market for Japan's chief staple, silk, was particularly hard hit. The underlying economic situation was good, and there were several factors which made Japan's position extraordinary. There was a large surplus in the national Treasury, sufficient indeed to enable the government to

prosecute the war during the first few months without resort to loans. The general economic world was in a cautious attitude, which was strengthened by the raising of the discount rate by the Bank of Japan on July 6. The circulation of the Bank had been considerably reduced during the preceding year, so that it had considerable resources at its command. Since the country was so far removed from the general theater of war, its military operations were on a small scale, and its industrial life was not disrupted in anything like the same fashion as that of the European belligerents. Consequently, Japan never found it necessary to prohibit gold exports or to resort to the issue of emergency paper money, to establish a moratorium, or to make use of the other devices which were necessary to bridge the period of readjustment to war conditions in European countries. The period of depression was brief, and the two years 1915 and 1916 witnessed an unprecedented economic expansion. "In the first place, the arrival of large orders for munitions from the Allies and similar orders from the far east countries and the South Seas where German imports had ceased to come, enlivened trade. In the second place, the scarcity of freight space throughout the world and the abnormal use of charterage of Japanese ships engaged in foreign trade brought in its train a phenomenal activity of shipbuilding. In the third place, the sudden decline in the imports of chemico-industrial products and of machinery and the abnormal advance in their price stimulated the launching of enterprises in these lines at home. Lastly, the marked accumulation of funds owing to the combined result of the first two factors facilitated the expansion of trade and industries."[1]

The direct expenditures on the war did not amount to much, as Japan's active participation at the beginning was limited to the capture of Kiaochau. The government also extended assistance to certain interests that were adversely affected by the war. It guaranteed war marine insurance and set aside out of the national Treasury the sum of $4,000,000 for the relief of raw silk producers and other exporters. Owing to the enforcement of

[1] The Eighteenth Financial and Economic Annual of Japan, 1918, p. 155.

strict economy, it was even possible to make the civil budget show a decrease in the first two years of the war. The following table shows the receipts and expenditures for the civil budget:

REVENUES AND EXPENDITURES OF JAPAN, 1914-1918

(In millions of dollars)

	1914–15	1915–16	1916–17	1917–18
EXPENDITURES:				
Ordinary	207.9	201.4	198.7	221.4
Extraordinary	103.9	93.7	77.9	148.9
Total	311.8	295.1	276.6	370.3
REVENUES:				
Ordinary	267.0	262.1	311.0	376.1
Extraordinary	120.1	48.3	95.6	162.6
Total	387.1	310.4	406.6	538.7

A study of these budgets reveals significant changes in Japanese finance during the first three years of the war. Expenditures showed an actual decline. The decline in the revenues for the first year was more than made good by the large increase during the following year. This was due primarily to the increase in customs duties as a result of the expansion of trade which was going on during this time. During the first four years of the war ending August, 1918, the total exports of Japan aggregated $2,498,500,000 while the imports were $1,858,000,000, leaving a favorable balance for this period of $640,500,000. This was in striking contrast with the prewar situation, for in the eighteen years ending in 1914 there were only two (1906 and 1909) which showed a favorable balance of trade. The excess of exports was due to large orders for grain, cotton, raw silk, copper, steamships and miscellaneous goods, especially from America, India, China and the South Seas. Japan took her pay for these excess exports, as did the United States, partly in gold and partly in the purchase of securities issued by foreign governments.

The increase of specie in Japan during the first two years of war was estimated at about $250,000,000 or an increase of about

50 per cent. One of the problems which confronted Japan was that of avoiding the bad effects of this plethora of gold. The other belligerent countries were under no such embarrassment, as their war expenditures absorbed all their surplus funds. In Japan the situation was met by the redemption of the public debt, of which a considerable part was paid off during these years. This is shown in the following table:

REDUCTION OF JAPAN'S NATIONAL DEBT

Year	Amount Paid Off
1914–15	$38,875,632
1915–16	8,568,407
1916–17	10,766,245
1917–18 Increase	15,521,186

Because of the application of a considerable part of the Treasury surpluses to debt payment, the new money got into circulation or into the reserves of the banks where it formed the basis of additional note issues. The banks were called upon to provide additional funds for government operations and also to furnish credit to private industry which was now showing a notable expansion, especially in manufacturing and mining. Conspicuous development took place in the chemical, mineral, textile, and shipbuilding industries. In mining silver, copper, coal, iron, and sulphur showed the greatest increase in production. The total amount of investment in the creation of new and the expansion of old undertakings for the first four years of the war reached about $1,100,000,000, the greater part of which went into manufacturing and mining industries. The monetary and banking expansion in this four year period is briefly shown in the following table:

Item	Aug. 1, 1914	Aug. 1, 1918
Coin in circulation	$89,500,000	$104,500,000
Note issues Bank of Japan	165,500,000	385,000,000
Specie reserve Bank of Japan	108,500,000	322,500,000
Tokio Associated Banks, deposits	219,500,000	831,500,000
Osaka Associated Banks, deposits	116,500,000	540,500,000

Prices for commodities showed the same increase in Japan during this period as they did in the rest of the world, the

average index number of prices of commodities in Tokio showing a rise of 103.8 per cent in the period covered by this table.

In addition to payment of gold, a second method of financing the large exports of Japan to foreign countries was by taking the government securities of those countries. To the end of 1917 Japan took the bonds of Great Britain to the amount of $265,000,000; of Russia for $127,000,000; and France for $77,500,000. Japan also redeemed in foreign markets government loans and company debentures to the amount of $110,000,000, giving a total of about $579,500,000. By August 1, 1918, the total advances to Great Britain, Russia and France had reached $593,000,000.

The war was not to pass, however, without a resort by Japan to a loan on her own account. On April 26, 1917, the government arranged a loan with the leading Japanese banks for $20,000,000 bearing 5 per cent, the issue price being fixed at 95. The redemption was to be made within fifteen years; the lowest denomination of bond was $25. Half of the loan was to be devoted to railway extension. As a result of this loan there was a net increase in the debt of about $16,000,000 during the fiscal year. The total debt at the end of the fiscal year in 1918 amounted to $1,249,372,405.

Such was the prosperity of Japan during the first four years of the war that it was not found necessary to impose new taxation. In fact, the reverse process was adopted, of reducing some of the more burdensome and obnoxious taxes. Many of these had been imposed after the Russo-Japanese War and formed a burdensome and complicated system. Beginning from about 1908, agitation had been carried on for the reduction of some of these taxes and four adjustments, so-called, were carried through. The first lowered the land tax, thus relieving the farmers' burdens. The second reduced the income tax, lowered the price of salt, and abolished the import duties on rice from Korea to Japan. The third, which was to go into effect during the year 1915–16, comprised reductions in the business tax, inheritance tax, land tax, and the commissions to civic corporations for col-

lecting national taxes. The fourth made still further changes resulting in the saving of about $4,700,000 annually. Not until the budget of 1918–19 was brought in were new taxes imposed. At this time it was proposed that the income tax and the tax on saké should be increased; that the price of tobacco, which was a state monopoly, should be raised about 17 per cent; and that a war profits tax should be introduced. This tax was to be assessed on that portion of the profits which was in excess over those of peace times at the rate of 20 per cent for corporations and 15 per cent for individuals. As the tax was to be rescinded with the return of peace, its life has been a short one.

The financial prosperity and adversity of Japan, due to war, have become so intermingled, that the latter is difficult to extract. As announced by the Finance Department in its account for the fiscal year ending March 31, 1915, the expenditure due to war amounted to $40,000,000.[1]

[1] *Economist*, London, June 19, 1915, p. 1243.

ROUMANIA

Roumania's condition was fairly sound at the outbreak of the European war. She had probably been less hurt by the Balkan wars than any of the other belligerents. Budgets for some years had shown substantial surpluses, and the state railway, forest, domain, fisheries, and salt and tobacco monopolies yielded revenue sufficient for her needs. The public debt, which was held principally in Germany, France, Holland, and Switzerland, amounted in 1914 to $343,077,200. A further sum of $25,000,000 was borrowed in Great Britain early in 1915, taking the form of an advance by the Bank of England against Roumanian Treasury bills. Another British loan of $30,000,000 was obtained in April, 1916. Roumania had also profited during the first two years of the war from the sale of her grain, petroleum, and other products which she marketed with impartiality between the Central Powers and the Entente Allies. She finally decided, however, to cast her lot with the latter, and on August 17, 1916, declared war on Austria-Hungary. As a result of misguided military operations, which were based upon political rather than strategic considerations, Roumania was forced to conclude peace with the Central Powers on May 6, 1918. The cost of twenty months of war to Roumania was defrayed practically entirely by advances from Great Britain. A loan of $6,666,000 was made to Roumania through Russia on September 5, 1917, by the United States, but was never delivered, owing to the Russian revolution.

No internal loans seem to have been raised, nor were taxes increased during the war period.

In June the Roumanian national debt was estimated to amount to about $2,000,000,000. Subtracting the prewar debt, the cost of the war may therefore be estimated at about $1,600,000,000. This figure does not include, however, the losses involved through the issues of paper money and the depreciation of the

currency. When the invasion of Roumania by the Central Powers was imminent the funds of the national Treasury of Roumania, estimated at about $173,700,000, were unfortunately removed from Bucharest to Moscow for safekeeping. The later turn of events in Russia prevented their withdrawal from that country, and has made their recovery problematical. There are at present, therefore, no coin reserves for the redemption of Roumanian paper currency. The currency situation was made worse by the issue on the part of the Germans of considerable quantities of paper money during their occupation of Roumania, so that the country was left with a greatly depreciated currency.

OTHER ENTENTE ALLIES

In the case of the remaining Entente Allies no attempt will be made to give a complete statement of the methods adopted to finance the war as the data are lacking for such a study. The most that can be done is to estimate as accurately as possible the cost of the war to the smaller countries.

SERBIA: The expenditures of Serbia were financed chiefly by advances on the part of Great Britain, France, and more recently, the United States. The advances of the last named government down to August 7, 1919, amounted to $26,780,466. The remainder was shared in practically equal amounts by Great Britain and France. The cost of the war to Serbia was estimated by the Paris *Temps* at $399,400,000, towards the end of the year 1918.

GREECE: Although Greece participated only in the last two years of the war, her war expenditures exceeded by far those of the Balkan wars. The national debt, which in 1914 was $243,000,000, rose to $486,000,000 by December 31, 1918, an increase of $243,000,000. In addition to this considerable sums were raised by the introduction of new taxes or the increase of old ones. An income tax was introduced for the first time; the rates of the inheritance tax were increased; and heavy consumption taxes were imposed upon many nonessentials. The increases in the tax revenues are shown in the following table:

Year	Amount
1914	$44,179,548
1915	47,045,698
1916	46,003,690
1917	52,581,081
1918	57,584,360

Assuming that the taxes raised during the year 1914 represent normal peace time revenues, it is evident from the table that the excess of revenues over normal during the period of the

war was about $27,000,000. If this be added to the increase in the debt, the total cost of the war to Greece may be set down at about $270,000,000.

The other Allies were Brazil, China, Cuba, Guatemala, Haiti, Honduras, Liberia, Montenegro, Nicaragua, Panama, Portugal, San Marino, and Siam. A liberal estimate of the aggregate cost of the war to these governments, so far as they made any direct outlay for this purpose, would be about $500,000,000.

GERMANY

To anyone who doubts the responsibility of Germany for bringing on the war, a study of the financial measures prior to and immediately following the declaration of war must bring conviction that it was carefully planned and provided for.[1] Within a week after the declaration of war an elaborate series of measures intended to secure the needed credit to industry and to the government and to supply a plentiful amount of cash, was put into operation.

A financial expedient which dates back to the days of Frederick the Great, and which has generally received approval from the German writers on finance, is the "war chest." This is a stock of money specifically reserved for war purposes. Thirty million dollars in gold was taken out of the French indemnity in 1871 and was stored in the Julius Tower at Spandau. By act of July 3, 1913, the amount of gold in the war chest was to be doubled, and Treasury notes were authorized for the purchase of the additional amount.[2] At the time of the outbreak of war some $21,000,000 of the additional sum had been secured, so that in July, 1914, the "war chest" amounted to about $51,000,000.

Another act passed in 1913 was the levy of the *Wehrbeitrag*, a nonrecurring tax on incomes and property, which was designed to raise some $250,000,000. This was to meet the additional expenses involved in the enlargement of the army in answer to the introduction of the three year plan of military service in France.[3] The tax on real property was a graduated

[1] *Cf.* C. F. Speare, "Europe's Preparation for War Expenses," *Review of Reviews*, 50: 322–325. There is considerable literature by German writers, both articles and books, on prewar finance.

[2] L. Katzenstein, Der Preussische Staatsschatz und der Reichskriegsschatz, in *Jahrbuch für gesammte Verwaltung und Volkswissenschaft*, XXXVI, 4 pp. 79–112.

[3] F. W. R. Zimmermann, *Die Finanzwirtschaft des Deutschen Reichs und der deutschen Bundesstaaten zu Kriegsausbruch*, 1914 (Berlin, 1916), p. 68—H. Köppe, Die Reichssteuerreform von 1913, *Finanz-Archiv* (1914) 31: 254–319.

one with rates ranging from .15 per cent on small properties of $2,500 up to 1.5 per cent on the largest properties in excess of $1,250,000. The income tax was also a progressive tax, beginning with 1 per cent on incomes over $1,250 and increasing to 8 per cent on incomes over $125,000. This tax was to be paid in three instalments in 1913, 1914, and 1915, respectively, but the first instalment was postponed until 1914 and later payments became involved in other taxes. In the budget of 1913 the *Wehrbeitrag* was estimated at $104,196,750. According to final figures published in July, 1918, the actual yield from this source during the war was $241,713,250. There is little doubt that the threat of this drastic taxation was one of the factors which led the Junkers to prefer war to a continuance of military burdens.[1] They advocated war with the expected indemnities and territorial acquisitions in the hope that these would render further taxation unnecessary.

In still other ways the government was preparing itself financially for the conflict. For some years before 1914 it had been endeavoring to increase the gold reserve in the country. The old theory that the monetary system of a country was strengthened by having a large circulation of coins within the country which could, if necessary, in time of war be displaced by issues of paper money, was abandoned in favor of a policy of having a permanent paper currency protected by a strong gold reserve. According to this newer theory, the gold stock of the country should be concentrated in the custody of the central bank of issue, and as a corollary to this principle, the notes of this bank must be made a legal tender.[2] This was done in Germany in 1909.

At the same time, in order to insure the circulation in large amount of the notes of the Reichsbank, the lowest denomination was reduced. By the law of 1875 the lowest denomination of a note of the Reichsbank had been fixed at 100 marks. On February 24, 1906, this was reduced to 50 marks and 20 marks, but

[1] J. H. Rose, *The Origins of the War* (Cambridge, 1914), p. 163.
[2] C. A. Conant, "Currency Policy and the European War," *Journal Political Economy*, 22: 717–735.

the small notes were to be limited to $75,000,000. In 1912 this limitation was removed. As the small notes were put into circulation, the gold which they displaced was collected and held by the Reichsbank. Between June 29, 1912, and December 31, 1913, the circulation of notes of 50 and 20 marks increased by $81,250,000, or from $89,250,000 to $170,500,000; at the same time the gold holdings of the Imperial Bank increased by $70,500,000, or from $222,000,000 to $292,500,000.

In furtherance of the governmental policy of financial preparedness, the control of the Reichsbank over the other banks of the Empire was extended and intensified. Joint stock banks were required to publish more frequent reports, to keep larger deposits with the Reichsbank, and to so order the granting of their credit facilities that these would assist the government in the event of war.

Preparations to avoid a disturbance to the money market had been carefully made, but in spite of all precautions the actual outbreak of war produced the customary shock to credit. The panic first showed itself on the stock exchange, resulting in a serious fall in quotations beginning even before July 23, the day of Austria's ultimatum to Serbia, and continuing until the closing of the bourse on July 29. The stock exchange panic was followed by a run on the banks for gold. The private banks for some days paid out only 20 per cent of their deposits in gold, and upon the declaration of war, stopped gold payments altogether. There was a run on the Imperial Bank by people who endeavored to exchange their notes into gold. After losing over $25,000,000 in the week ending July 31, the Imperial Bank gave notice on this last named date that it would no longer redeem its notes in gold. Much money was also drawn out of the savings banks. Most of this was hoarded, and as a result of this hoarding, the small coins almost entirely disappeared, resulting in great inconvenience to business. The silver coin from the "war chest" was used to fill the vacuum, but this, too, was soon withdrawn from circulation and hoarded. Disappearance of the fractional coin led to a still further reduction in the denomination of Treasury

notes to ten marks. Notes of the loan bureaus were immediately issued in denominations of one and two marks. Later the government was forced to supply the lack of fractional coins by an issue of $6,250,000 in iron, and still later by zinc coins to an aggregate of $4,000,000.

The declaration of war was followed by the promulgation of orders and the passage of legislation which had been carefully prepared in advance to meet just such a contingency. The gold in the war chest was transferred to the Imperial Bank where it became the basis of note issues for three times its amount. The Reichstag met in special session on August 4 and passed a series of financial measures. The first of these was a vote of credit of $1,250,000,000. Another law made the imperial Treasury notes legal tender, and suspended specie payments both for these and for the notes of the Reichsbank. The Treasury notes (*Reichskassenscheine*) were authorized by act of April 30, 1874, which permitted the issue of $30,000,000. Although they were designed to serve emergency needs, the government had always made full use of the permission granted so that it had a non-interest bearing debt of this amount. These notes had always been receivable for all public dues, but had never before been given the legal tender quality.[1]

The most far reaching act of all, however, was that which provided for the establishment of the "loan bureaus" (*Darlehnskassen*). The principle of these banks was not new, dating back to experiments first made in Prussia in 1848. They had also been used during the Franco-Prussian War. They were based essentially upon the principle of the pawnshop, and were authorized to loan upon securities, merchandise, or other collateral which would not be accepted by an ordinary commercial bank. According to the system worked out by the German financiers, the Reichsbank was to be left free to meet the needs of the government in financing its military campaigns and to protect the gold reserve. But in order to supply industrial and commer-

[1] F. W. R. Zimmermann, *Die Finanzwirtschaft des Deutschen Reichs und der deutschen Bundesstaaten zu Kriegsausbruch* 1914 (Berlin, 1916), pp. 17, 18.

cial needs for credit, especially those not usually met by an ordinary bank, temporary institutions were created. Of these the most important were the loan bureaus, which were so carefully planned before the war that even the locations were selected and the personnel of the chief institutions decided upon.[1] The loans were to be made in loan bank notes which were not given the legal tender quality but were made receivable for all public dues. The issues of the loan banks were at first limited to $375,000,000, but a month later the limit was extended to $750,000,000 in order to facilitate payments on the first war loan. Loans might be made on five classes of collateral—

(a) On nonperishable merchandise, not to exceed 40 per cent of its market value;
(b) On certain industrial stocks up to 50 per cent;
(c) On bonds up to 60 per cent of their market value;
(d) On German communal, provincial, and railway securities up to 70 per cent; and
(e) On obligations of the Empire or of a German state, up to 75 per cent.

By the end of the year the number of loan bureaus had increased to 99, with 127 agencies. The rate of interest charged was somewhat higher than the bank rate, being about 6.5 per cent. The loans ran from three to six months, but were generally renewable. As they were designed to meet the needs of small merchants and individuals of limited means, the loans were granted in amounts as small as $25.

The well worked out plan of credit organizations which had been prepared by German bankers also included two other credit institutions: the first of these was the municipal loan bureaus which furnished loans to small merchants, and to hand workers, though at a somewhat higher rate of interest than that charged by the loan bureaus. The assets accepted as collateral for these loans, however, were such as would not have been acceptable at the loan bureaus. Finally, war credit banks (*Kriegscreditbanken*) were organized for the purpose of facilitating loans for

[1] W. E. Lagerquist, "War Finances of Germany," *Moody*, 19: 561–566.

subscriptions to the war bonds. These were organized by boards of trade, by states and municipalities, and even by the larger banks themselves. Loans were made on stocks of goods or on personal notes. By means of these various credit institutions, the attempt was made to render liquid all the wealth of German citizens. It was sought to avoid resort to a moratorium and at the same time to provide the machinery for keeping business active and securing to individuals the means for subscribing to the various war loans.

It has been the boast of German financiers that their country, unlike England and the other Entente Allies, had so perfected their credit machinery that it was not necessary in Germany to resort to a moratorium. The legislation passed, however, while avoiding the name, produced practically the same result. "The conditions prevailing during the first week of the war," wrote Dr. Otto Brandt, "were the conditions of a general moratorium, although a moratorium had not been officially declared. An actual moratorium, however, is no better than a legal one."[1] The government authorized the abrogation of private contracts for payment in gold entered into prior to July 1, 1914. By edict of the Bundesrath on August 6, the payment of bills and checks was extended for thirty days, and afterwards was postponed from time to time until May 17, 1915. Mortgages were practically postponed until the end of the war. Maximum prices for many commodities were established. Every shop which would not accept the notes of the Reichsbank, or which endeavored to raise prices, was immediately closed by the authorities.[2] On the other hand, the establishment of the various credit institutions made it possible for everyone who was in need of money to raise a loan on his securities or property. In this way a legal moratorium was rendered unnecessary, but it was accomplished only by an expansion of credit and an inflation of the currency which were to have much more serious effects later than a moratorium could possibly have had. The total issue of new

[1] *Die deutsche Industrie im Kriege*, 1914-15 (Berlin, 1916).
[2] *Economist* (London), August 29, 1914, p. 383.

currency and bank money required during August and September to avoid resort to a moratorium, and to make possible the first war loan, were estimated by the London *Economist*[1] at $1,100,000,000.

The financial policy which had been outlined by German leaders, and which was adhered to practically throughout the war, was to finance the war by means of loans and paper money. Taxation was to be avoided both because of the psychological effect which would thereby be created upon the German people, and because it was unnecessary. According to the declarations of Karl Helfferich, the Minister of Finance,[2] taxation was not to be resorted to, as the costs of the war would ultimately be paid out of indemnities collected from a defeated foe. The financial, like the military, policy was predicated upon a short war ending in a decisive victory and the collection of a large indemnity. The military program was shattered at the Marne; there were also financial Marnes upon which the other program was to break.

Banking and Currency, 1914

Upon the outbreak of war the government turned at once to the Reichsbank for assistance. Specie payments were suspended August 1, and notes of the Bank made legal tender. At the same time the tax on uncovered excess note issues was abolished. The Imperial Bank was organized somewhat on the model of Bank of England, but with a modification of the latter's rigid limitation of credit issues. The notes of the Reichsbank were to be covered to one-third of their amount by lawful German money, imperial Treasury notes, and gold in bars or foreign coin; the other two-thirds were based upon discounted commercial paper of not longer than ninety days. There was no limit placed upon the issues, but if they exceeded a certain amount, which varied according to the season of the year, the excess over and above this so-called contingent was taxed at the rate of 5 per cent per annum. A certain elasticity was thus introduced into the note

[1] October 10, 1914, p. 590.
[2] Budget speeches of March, 1915, and August 20, 1915.

issues, combined with protection against inflation. As the 5 per cent tax on the excess issues was now removed, there was no legal check upon the expansion of credit by the Bank. By the end of September the Bank had discounted government Treasury notes to the amount of $587,000,000.[1] To facilitate the additional issue of notes, the Bank was authorized to place the Treasury notes of the government on the same footing as commercial paper as cover for the bank note issues which were not covered by gold. The gold in the war chest, amounting to some $51,000,000, and the silver amounting to some $30,000,000 additional, were turned over to the Reichsbank. The gold was used as the basis for further issues of notes, while the silver was paid out in the form of fractional coin. In this way the government was able to finance the war until the proceeds from the first loan began to come in. These were used to liquidate part of the indebtedness of the government to the Reichsbank.

The credit operations of the Bank and the issue of additional obligations by the government undoubtedly tended to inflate the currency. As the German people are not accustomed to the use of checks and to deposit banking, the extent of this inflation may be traced fairly accurately in the expansion of the note issues. These may be followed first of all in the returns of the Reichsbank. The following statement shows the conditions of the Bank on July 23, the last day before the outbreak of hostilities, and on August 15 when the first advances to the government were made:

Assets	July 23, 1914	Aug. 15, 1914
Gold and silver coin and bullion	$422,849,000	$397,500,000
Treasury notes	16,369,500	31,688,000
Notes of other banks	10,026,500	7,958,500
Bills discounted	187,723,000	1,106,496,000
Advances	12,550,000	45,246,000
Investments	82,704,500	50,155,000
Other securities	50,102,000	55,257,500
Liabilities		
Notes in circulation	472,723,750	970,482,500
Deposits	235,991,000	637,938,500
Other liabilities	9,991,000	22.566,000

[1] O. Schneider, Die Kriegsfinanzen der Europäischen Grossmächte, Schmoller's *Jahrbuch* (1915), 39 Jahrgang, 3 Heft, p. 266.

It will be seen that "bills discounted" show an increase from about $187,500,000 on July 23 to over $1,100,000,000 on August 15. This represents almost entirely Treasury notes discounted by the Bank. The form which these advances to the government took is shown in the increase of notes by $500,000,000 and to a lesser extent of deposits by $400,000,000. On September 26, after the first war loan had become settled in bank operations, deposits, which were largely increased by preparation for subscriptions to the first war loan, showed an expansion to $678,000,000. On the other hand, discounting operations for private firms fell off rapidly from the highwater mark of August 15, and on September 26 stood at $613,500,000, or about half of the previous figure. "The aggregate pressure on the banks on August 26—as measured by the volume of loans, discounts, and Treasury bills, less deposits—was $251,000,000." [1]

The loan bureaus also contributed to the inflation by their issue of notes, and perhaps to an even greater degree in proportion to their quantity, because they were issued in small denominations and entered into the retail trade of the country. By September 15 $63,750,000 had been issued, of which $35,185,000 were held by the Reichsbank, so that the difference of $26,900,000 was in circulation.[2] As the loan notes in the hands of the Reichsbank were placed on the same footing as the Treasury notes—*i.e.*, they could be counted equally with gold as cover for the Reichsbank's own notes—the amount held by the Reichsbank really represented a threefold addition to the currency, rather than a proportional increase. By September 30 the total issue of loan notes had increased to $119,500,000. This increase was undoubtedly due to the demand on the part of intending subscribers to the first war loan. The total operations of the loan bureaus for the first five months ending December 31, 1914, amounted to $1,175,000,000. A third form of paper money which went into circulation was the Treasury notes

[1] Speech of Herr Havenstein, president of the Reichsbank, *Münchener Zeitung*, September 30, 1914.
[2] London *Economist*, October 10, 1914, p. 608.

which were issued directly by the Imperial Government. As these were issued in denominations as low as five and ten marks, a great many of them went into circulation and helped to inflate the currency.

In all fairness, however, these additions to the currency can not be counted as pure inflation. Gold had disappeared from circulation, having been impounded by the Reichsbank. Much of the currency, including even the bank notes themselves, was being hoarded by the frightened public. This is shown by the scarcity of small change to meet which $75,000,000 in silver coin was issued during August.

The system of inconvertible paper currency thus introduced was planned, like the loan system, for a short and victorious war. But since the war proved to be neither, it led inevitably to disastrous consequences which showed themselves in ever increasing degree as the years wore on. The increasing issues of paper money led to its depreciation. When specie payment was first suspended, the bank notes were accepted by the storekeepers only at a discount. In Berlin the Military Governor declared that they must be accepted at par, since they were full legal tender, and that any shop refusing them would be punished by a confiscation of its goods. This was met by raising the prices of the goods and led to further measures on the part of the government each time in the way of price fixing. The efforts of the government to prevent the working out of the inevitable economic consequences of inflation of the currency remind one vividly of the experiences of the American Confederation with the continental paper money, and of the French Revolution with its *assignats*.

Expenditures, 1914

The expenditures of the government for war purposes are very difficult to follow, as the budgetary machinery broke down entirely during the crisis. During the war no itemized budget was presented to the Reichstag, and no statement of expenditures has been published. Parliament was asked to vote sums of money

en bloc—votes of credit—but the expenditure of these sums was entirely in the discretion of the Executive. The votes of credit afford, however, the best measure which we have for gauging the cost of the war to Germany, since no money could be expended unless it had been appropriated by the usual parliamentary procedure. Although most things financial are concealed, it has been impossible to cover the growing expenditures as they have been met by votes of credit. During the five months ending December 31, 1914, the following votes of credit were granted:

August 4, 1914	$1,250,000,000
December 2, 1914	1,250,000,000
	$2,500,000,000

Prewar expenditure had experienced a steady rise, owing to the enlargement of the army, expenditure for which had grown from $155,630,000 as the average of the ten years ending with the fiscal year 1904, to $194,135,000 as the average of the ten year period ending March 31, 1914; and to the expansion of the navy, the average expenditure for which grew from $36,655,000 to $88,065,000 annually for the same two periods.[1] Expenditures for other items of the budget had not increased in anything like the same proportion. The expenditures of the government for the last year of peace may be seen in the budget statement for the fiscal year ending March 31, 1914, as follows:

Army	$369,165,000
Navy	120,065,000
Debt service	60,890,000
Other expenditure	374,585,000
	$924,705,000

When it is remembered that this heavy expenditure on army and navy in prewar years had placed Germany in a more favorable situation from a war finance viewpoint on the outbreak of war, the appropriation of $2,500,000,000 will afford comprehension of war costs for the first five months of war.

[1] *Statist*, September 26, 1914, p. 640.

Borrowings, 1914

German loans, like everything else in the war, had been arranged beforehand in pursuance of a methodically planned program. With almost clocklike regularity, they were issued every six months, generally in September and March. The prospectus of the first war loan appeared on September 9 in some 280 newspapers. It was offered in two forms: (a) Treasury notes running for five years to an amount of $250,000,000, and (b) an unlimited issue of bonds running for ten years. Both issues bore 5 per cent, and were issued at 97.5. In order to bring them within the reach even of the humblest buyer, they were issued in denominations as low as 100 marks ($25). The loan was unquestionably a success, subscriptions amounting to $1,220,250,000. Dr. Helfferich, then a director of the Deutsche Bank, declared the amount subscribed was twice as large as had been expected, and that the proceeds would meet the needs of the government until the end of the fiscal year. The government was able with the proceeds of this loan to reduce from $1,190,000,000 to $660,000,000 the Treasury bills which had been discounted by the Reichsbank and its other short term obligations. But the war expenditures were increasing so rapidly that the remainder lasted only until December, when the government was forced to resort to new issues of Treasury bills, and to loans from the Reichsbank.

The success of the loan was attributable in part to the large subscriptions by banks, industrial companies, and state insurance organizations, but at the same time, as shown by the published returns, the number of small subscribers was considerable. There is no doubt that the loan bureaus, by making loans on unmarketable securities and other assets, greatly facilitated borrowing and made the purchase of war bonds easy for the small investor.

The amount of the first war loan had been pretty well used up in advance by loans from the Bank and other short term obligations, so that the proceeds thereof were applied to the funding of outstanding obligations. The war expenditures of the next

six months were again met by the sale of short term Treasury bills, chiefly to the Reichsbank and other large banking institutions.

In February, 1915, a second war loan was made for the purpose of funding this floating debt and to provide additional sums. This second loan consisted of 5 per cent Imperial bonds due in 1924, and Treasury bonds redeemable in 1921 and 1922, both forms being issued at 98.5. The number of subscribers was 2,694,063, and the aggregate subscriptions totaled $2,276,500,000, both the number of subscribers and the total subscriptions being about double those of the first loan. An interesting sidelight is thrown on the transactions in war loans by a provision in the law that any subscriber who would agree not to sell his war bonds before April 15, 1916, could obtain the same at 98.30. It does not appear from the published financial statements to what extent advantage was taken of this offer. Moreover, it is interesting to note that while Dr. Havenstein, President of the Reichsbank, in an address on the first war loan, boasted of a "glorious victory," Dr. Delbrück at the time of the second loan was content to refer to "an honorable peace" which would "atone for all sacrifice." In commenting upon the loans, the Amsterdam correspondent of the *Economist*[1] (London) stated that the subscriptions, so far as paid in cash, represented the conversion of foreign securities and not an investment of war profits or the employment of idle money. In April Germany made her one public attempt to borrow abroad, by offering a loan of $10,000,000 in the United States. Its success was not great enough to encourage her to repeat the performance, however.

Expenditures, 1915–16

Although the government did not publish statistics of its war expenditures during the war, illuminating sidelights may be obtained from the speeches of the Minister of Finance when he appeared before the Reichstag to request votes of credit. During

[1] March 27, 1915, p. 753.

the first six months of the war Herr Kuhn was Minister of Finance. He was succeeded on January 31, 1915, by Dr. Karl Helfferich. This appointment was a popular as well as appropriate one. The new Minister had both scholarly training and practical experience, having been university lecturer, legation councilor, railway director, and bank director. He was also the author of important texts on the subject of money and banking. In a speech before the Reichstag on March 10, 1915, Dr. Helfferich proclaimed his financial policy:

> "The means of financing a modern war are substantially the following: First, the issue of loans; second, the use of the printing press for the issue of notes and paper money; third, a reduction of expenses and war taxation."

All of these means were being employed by the government except that of taxation, and this was not to be imposed, because, as he said, "we have a firm hope that after the conclusion of peace, we shall present to our opponents a bill for the expenses of the war forced upon us." The total budget presented to the Reichstag called for an expenditure of $3,250,000,000.

Meantime war expenditures were increasing rapidly and at the same time revenues were declining. The $2,500,000,000 votes of credit of 1914 were exhausted, and in March, 1915, the Minister appeared before the Reichstag to ask for a new vote of credit for $2,500,000,000, and again in August, 1915, for a like amount. He stated that monthly expenditures were nearly $500,000,000 —"the expenditures of a single month thus exceeded by one-third the total expenditure of the war of 1870–71."

> "Let us have no illusion as to the magnitude of the effort or the burden of the sacrifice still to be made . . . . the twenty milliards voted up to date represent roughly the total value of the entire German railway system, including all stations, lines, rolling stock, etc. Although our monthly war expenditure had risen to vast proportions by March, our estimates have been exceeded by the actual development of war expenditure. . . ."

To meet these vast sums, Dr. Helfferich asked a new vote of credit and the authorization of a third loan. Taxation was rejected. The amount secured by the first two loans (some $3,475,000,000) had already been exhausted and further sums had been borrowed from the Reichsbank and the private banks by the discounting of Treasury bills, which then stood at $1,867,700,000. It was necessary to refund these, and also to secure as much new money as possible. Accordingly, a vote of credit for $2,500,000,000 was asked for and voted in August, 1915.

In his speech urging this vote, Dr. Helfferich commented upon the fact that all of the moneys used for the war had been spent within the country, and thus had created new capital. One can not help a feeling of surprise that so good an economist and practical financier should have lent himself to the promulgation of such an economic fallacy. This point, however, recurs frequently in German comment on war finance, and seems to have played its part in convincing the people of the desirability of subscribing to the war loans. Probably the Finance Minister let political expediency in this case, as in so many others, overbalance considerations of truth.

The sum thus voted, together with the proceeds of the third loan in September, was sufficient to meet the expenditures until December, when Dr. Helfferich again appeared before the Reichstag and asked for another vote of credit for $2,500,000,000. Although the cost had been increasing, he said, "we have succeeded in keeping within relatively narrow bounds increases in the monthly cost of the war." He reckoned that the money now granted would last until the end of the fiscal year. The votes of credit now aggregated $10,000,000,000.

Borrowings, 1915–16

The third war loan was issued in September, 1915. It consisted of a 5 per cent bond due in 1924, issued at 99, payment of subscriptions being spread over six months in instalments. The trend of war borrowing at the time of the third loan is gleaned

from the following excerpt from a leading German newspaper[1] which stood close to the government, explaining how it could be done, not only for the third loan, but for subsequent loans:

> "It is not necessary that one shall have actual gold or silver and anyone possessing anything can participate, whether they have ready cash or not. If you have money in the bank, simply withdraw it for the purpose of subscribing; in the case of large amounts, a certain period of notice has to be given to the bank, although when it is not a question of a big sum the banks are generally willing to repay without the requisite notice being given. You should therefore at once inquire at the bank where your money is deposited.
>
> "If you hold securities you will find it easier still to raise money. It is not necessary to sell them; you simply borrow money against them at any Reichsbank-Darlehnskasse or at any large bank, and as you will receive almost as much interest on the war loan stock, or even more interest than you pay to the lending bank, you will be nothing out of pocket. You must, however, hand over to the bank the securities against which the money is advanced to you, and the bank will return them when the loan is paid. No loss can ensue from the above mentioned procedure, or at the most, it could only be ¼ per cent per annum in the interest, if as is the case with the 'Reichs-Darlehnskassen' you pay 5¼ per cent interest on the borrowed money whilst you receive 5 per cent on the war loan stock; and even this possible loss will subsequently be made good in view of the fact that you pay only 99 marks for each 100 marks of war loan stock, which 100 marks will be repaid in full. . . .
>
> "If you have already subscribed to the first or second war loan and paid in full for the same, you can at once participate in the present issue. All you need to do is to take your stock—or, if you have not yet received the stock, the receipt for the amount paid—to a bank which will advance you 75 per cent of the nominal value, so that, if you have M 400 ($100) old war loan you can subscribe M 300 in the new issue without paying a single pfennig, you can even subscribe four times this amount, *i. e.*, M 1,600 ($400)

[1] *Kölnische Zeitung*, No. 891, September 2, 1915.

> if you will also leave with the bank the stock that you take in the new loan, in which case you will have given the bank as security M 400 of the old war loan and M 1,200 of the new war loan, together M 1,600 against a loan of M 1,200."

Subscriptions to the third loan amounted to $3,040,000,000 from 3,966,418 subscribers. This was by far the most successful of the loans thus far issued and was without doubt affected favorably by the success of the Russian campaign. Indeed, there is reason to believe that in more than one instance military operations were so directed as to secure a more or less real victory at the psychological moment during the flotation of the loans. In respects other than amount, this loan was successful, and seemed to vindicate the German policy of financing the war. The amount of each loan paid when the first instalment fell due was as follows:

First loan	$642,000,000 or 57 per cent
Second loan	1,511,250,000 or 67 per cent
Third loan	2,183,000,000 or 72 per cent

In respect also of the dependence placed upon the loan bureaus, there was to be noted a progressive improvement. In the case of the first loan 27.6 per cent of the first instalment had been paid by means of loan bureaus. In the second this proportion had fallen to 8.6 per cent, but in the third loan only 4.7 per cent of the initial payments represent borrowings at loan bureaus. It was estimated that the money which went into these loans was derived from at least five sources—(1) money previously used to finance foreign trade; (2) money formerly used in speculation on the stock exchanges; (3) profits from manufactured goods in storage sold at enhanced prices; (4) money actually saved through rigid economy; (5) money obtained from the sale of foreign securities in Amsterdam and other neutral markets.[1] It was estimated that about $300,000,000 in American securities were sold and converted into war loans. By the end of 1915 the

[1] *Economist* (London), December 25, 1915.

German debt had grown to $5,985,500,000. This was an enormous increase from the modest prewar debt of $1,250,000,000.[1]

TAXATION, 1915–16

If we now turn from loans to taxes, the showing made by the government policy is not so good. The receipts from revenue sources at the end of the fiscal year March 31, 1915, had turned out rather better than had been expected, and instead of an anticipated surplus of $9,500,000, one of $56,750,000 was announced by Dr. Helfferich. Such an increase in the surplus of revenues over expenditures might normally result either from an unexpected growth of income or a decrease in outgo. But owing to the almost complete interruption of foreign trade the receipts from customs duties, which amounted to $208,328,650 in 1913, had declined greatly, as had also most of the other sources of revenue. The surplus must have come, it would seem, from increased economies—an extraordinary achievement in war time. If the truth be told, however, the surplus was arrived at in quite another fashion. The budget spoken of by Dr. Helfferich was the civil budget which was sharply distinguished from the military budget. The latter was to be met solely by loans, the former was to be met by existing taxes and other sources of revenue, so long as it balanced. Only in event of a deficit would any new taxes be imposed. A deficit in the civil budget, however, was prevented only by transferring the whole of the military and naval outlay (amounting in 1913–1914 to $489,230,000) from the ordinary civil budget to the extraordinary war budget. In this way not only was a deficit prevented, but it was possible to

[1] This was the amount of the funded debt, but in addition to this there was a floating debt which had steadily gained in importance in the form of Treasury bills (*Schatzanweisungen*). These were designed to afford a temporary resource only and the limit of issuable bills was regularly fixed in the budget law. But the length of term, which was formerly limited, was placed at the discretion of the Chancellor and was steadily lengthened. Owing to this fact, and the regular reissue of the maturing bills, the difference between these obligations and the funded debt was more or less obliterated. According to the budget of 1913, the floating debt amounted to $55,000,000. F. W. R. Zimmermann, *loc. cit.*, p. 64.

announce a respectable surplus for the year. It need hardly be said, however, that this surplus was purely nominal.

Heavier taxation, it must be said, was already being imposed by the local governments and by the individual states. In these the main source of revenue was direct taxes, consisting generally of an income tax, together with various property taxes.[1] The preemption by the states of the field of direct taxation made it difficult for the Imperial Government, which was limited to indirect taxation for the most part, to increase its tax revenues even had it desired to do so. The attitude of the Imperial Government on this point is well stated in the speech of Dr. Helfferich before the Reichstag on August 20, 1915:

> ". . . I explained in March the reasons which determined the United Government against the imposition of war taxes during the period of the war. These reasons still stand. We do not desire to increase by taxation the heavy burden which war casts upon our people so long as it is not absolutely necessary. Heavy taxes on consumption or increased transit dues would, with prices at their present level, be neither reasonable nor desirable. Direct taxation, apart from any question of principle, is already being levied under pressure of war necessity at an increased rate by the communes and to some extent by the individual states. These reasons are the more forceful that the yield of taxation at the best could meet only a very small portion of the vast total of war expenditure.
>
> "In this connection you will doubtless expect me to say something about the much discussed taxation of war profits. . . . Such taxation should not be made until after the conclusion of the war. . . . As things are, the only method seems to be to leave the settlement of the war bill to the conclusion of peace and the time after peace has been concluded. And on this I would say: If God grants us victory, and with it the possibility of moulding peace to suit our needs, we neither can nor will forget the question of costs. We owe that to the future of our people. . . . Those

[1] Georg Schanz, Die in den deutschen Bundesstaaten direkten Steuersysteme, *Finanz-Archiv* (1914), 31: 236.

who provoked the war, and not we, deserve to drag through the centuries to come the leaden weight of these milliards. . . ."

The budget estimates for 1914–15 and 1915–16, together with the actual receipts for 1914, are given in the following table,[1] and it is safe to assume, inasmuch as the actual receipts have never been published, that the estimates are more favorable:

Source	1913–14	1914–15	1915–16
Post and telegraph	$208,328,650	$220,321,625	$220,392,375
Printing office	3,935,700	3,471,250	3,471,250
Railroads	39,645,050	40,561,500	40,561,500
Various receipts	22,891,400	20,490,250	19,955,675
Taxation: Customs	169,830,450	178,232,500	178,232,500
Tobacco	2,853,750	2,719,000	2,719,000
Cigarettes	10,674,825	9,800,500	9,800,500
Sugar	43,436,425	40,813,000	40,813,000
Salt	15,596,575	15,286,000	15,286,000
Spirits	48,443,675	48,498,750	48,498,750
Vinegar	199,775	206,250	206,250
Wine	2,377,825	2,492,500	2,492,500
Lamps and bulbs	3,768,025	3,966,500	3,966,500
Matches	5,032,675	5,258,750	5,258,750
Beer	32,500,950	32,237,500	32,237,500
Cards	501,325	508,250	508,250
Stamp tax on bills	4,903,875	4,775,000	4,775,000
Stamps (general)	58,758,625	62,521,250	66,021,250
Increment tax	3,830,725	25,000	25,000
Inheritance	11,589,200	12,500,000	12,500,000
Miscellaneous	521,175	479,750	479,750
Contributions for defense	205,150	98,455,225	81,935,225
Contributions from the state	12,985,200	12,985,200	12,985,200
Miscellaneous	95,788,825	34,688,825	26,148,400
Total	$798,599,850	$851,294,375	$829,270,125

Banking and Currency, 1916–17

The year 1916 saw no change in the financial policy of the German Government. War expenditures were still to be met by means of loans, the inflation of the currency still continued, and while new taxation was introduced, it was not sufficient even to meet the interest on the new war loans. The amount of bank notes in circulation showed a steady increase; the average for 1914 had been $729,500,000; in 1915 it was $1,352,250,000; but

[1] *Statistisches Jahrbuch für das Deutsche Reich*, 1915, pp. 347–348.

for 1916 it was $1,717,750,000. By the end of the year (December 30) the note circulation had reached the record point of $2,013,500,000. At the same time the amount of loan notes in circulation showed an equally steady expansion, though considerably less in amount. The amount of these had increased from $263,000,000 at the end of 1915 to $718,250,000 at the end of 1916. The total notes in circulation on July 23 of each year were as follows:

(In million dollars)

Notes	1914	1915	1916
Reichsbank notes	473	1328.5	1710
Treasury notes	34.5	72	343
Loan notes	...	174.5	404

The effect of this great expansion in the circulating medium was clearly seen in rising prices and in the depreciation of the mark. Exchange on every neutral market had risen against Germany, as shown in the following table:

Exchange	Par	Rate early in Dec., 1914
Swiss rate	80	90.5
Dutch	170	190.25
Scandinavian	112.5	118
Italian	80	87.28
New York	4.20	4.70

The cost of living, as shown by the report of Richard Calwer, had increased in the thirteen months of war 48.7 per cent, whereas Berlin, taken by itself, showed an increase of 56 per cent between August 1, 1914, and August 1, 1915. The *Statistische Correspondenz* for September, 1915, shows that foodstuffs had increased from a level of 100 in July, 1914, to 169.6 in August, 1915.

By the end of 1915 the mark was at a discount of about 25 per cent in neutral markets. Although foreign exchange had been left free up to this time, the government now determined to place it under the control of the Reichsbank. Notes, drafts or negotiable securities sent into Germany in payment of exported merchandise could be negotiated only through the Reichsbank

or one of the private banks authorized to handle foreign exchange. This regulation had but slight effect in improving the condition of the mark, as it was limited to payments for merchandise exported and sales of securities were still left free. Moreover, as Germany was exporting but little merchandise it became necessary to ship German gold and securities out of the country, with the result of a still further decline in the quotation of the mark.

The German banks were being placed more and more at the service of the government. With the exhaustion of supplies of raw material and the curtailment of many lines of production, the demands of private industry for accommodation at the banks fell off. This is illustrated by the decline in the note issues of the loan bureaus. On the other hand, the expenditures and loans of the Imperial Government were increasing in ever greater degree. The resources of the banks were consequently absorbed in satisfying the needs of the government and in financing war contracts. This was true of the private banks as well as of the Imperial Bank. They found their reward in expanded business and largely increased profits. Indeed, banking institutions invariably reap a harvest in a time of depreciated currency; and this was proving true of the German banks at this time. The average dividends of the five large Berlin banks other than the Reichsbank increased from 7.4 per cent in 1915 to 8.6 per cent in 1916, while their undivided profits showed an even greater growth. This prosperity was more apparent than real, however, for it really represented a waste of national wealth, although it involved an enormous money turnover.

In pursuance of the policy already adverted to, of concentrating the gold reserve of the country in the possession of the Reichsbank, a noteworthy effort was made this year to increase the gold holdings. These had averaged $429,000,000 in 1914; $601,250,000 in 1915; and $640,000,000 in 1916. Systematic efforts were now made to increase the gold fund in the Reichsbank. People were urged to exchange gold coin, ornaments and other articles of gold for bank notes as a patriotic duty. A re-

markable response was made to the appeal and by this means the gold stock of the Reichsbank was increased by $317,000,000. It has been estimated that the total gold coined in the Empire, less withdrawals, down to March 31, 1915, amounted to $1,285,-250,000. If these figures are approximately correct, it would seem that the German people, in spite of the appeals to their patriotism, were still keeping about $300,000,000 in hiding.

Expenditures, 1916–17

Thanks to the large appropriations of the previous year, only two votes of credit had to be made for 1916. These were voted on June 9 and October 30, and were each for $3,000,000,000. In his budget speech of March 16, 1916, Dr. Helfferich was compelled to admit that even the formal balance in the civil budget could no longer be maintained. A falling off of over $36,-000,000 in receipts, and an increase of over $83,750,000 in expenditures, gave a deficit of $120,000,000. In spite of drastic economy in civil expenditures, the interest charges had grown so rapidly and by such enormous amounts that this increasing burden could no longer be met from the old sources of revenue. "The service of the imperial debt for 1916," said the Finance Minister, "takes $575,750,000 against $317,000,000 in 1915, and $62,500,000 in the last peace budget." But not merely were the debt charges increasing; other expenditures, too, which grew out of the war were mounting up in alarming fashion. Owing to the rising cost of living, the government was compelled to increase the imperial allowance payable to soldiers' dependents to $5 a month for a wife and $2.50 for other dependents.[1] When the war broke out this allowance had been from $1.50 to $1.75 a month to the wife, and $1 for other dependents. In other respects, too, the government was paying more for services and supplies. The easy method of financing the war by means of inflation was beginning to react on the government fisc.

[1] *Economist* (London), December 23, 1916, p. 1179.

Borrowings, 1916–17

Two loans were effected during the year 1916 in accordance with the loan program—the fourth war loan was issued in March and consisted of (a) 5 per cent imperial loan at 98.5 payable in 1924, and (b) 4½ per cent Treasury notes redeemable from 1923 to 1932 issued at 95. The subscriptions to this loan amounted to $2,692,000,000 and the number of individual subscriptions was stated to have been 5,279,645—the largest number yet noted. The loan was made payable in four instalments, and when the first instalment was due 77.2 per cent of the amount was paid in. The proportion obtained by loans from the loan bureaus was only .6 per cent.

In September the fifth loan was brought out. It consisted of (a) imperial 5 per cent bonds redeemable in 1924 issued at 98, (b) 4½ per cent Treasury notes on the same terms as those of the last loan. The returns from this loan amounted to $2,674,750,000. The proposition was made and discussed in the press for lottery premiums of one-half to one per cent in connection with the fifth war loan, in order to make its flotation easier.[1] This was not, however, found necessary. The loan showed a slight increase over that of the preceding March, but the number of subscribers declined by over 1,400,000, indicating that the loan had been taken principally by banks and institutions and wealthy individuals.

Taxation, 1916–17

In his budget speech of March 16, 1916, Secretary Helfferich had spoken of the impossibility of balancing the budget without new revenue. He consequently asked for new taxes. These were very slight, however, and were designed to do no more than to meet the additional interest charges of the war debt. To meet the deficit which had arisen, he proposed new or additional taxes on war profits, tobacco and cigarettes, bills of lading, and receipts, and increased postal, telegraph and telephone rates. The estimated yield from these taxes was $125,000,000 but the

[1] *Berliner Tageblatt*, February 22, 1916.

actual yield has been kept a secret, as has been every vital fact connected with German war finance. The Reichstag passed the tax bill with some amendments. The provision defining the increased incomes of private persons as "war profits" was stricken from the war profits tax bill. The proposal for a universal receipts tax was rejected, and a tax on the yearly sales of goods was substituted. When the total value of sales was less than $750 no tax was to be paid; above that sum the tax was levied at the rate of 1 mark per 1,000. It went into effect on October 1, 1916. The bills providing for an increased tax on tobacco; for the increase of postal fees; and the stamp tax on freight bills were adopted with certain minor changes. The estimated yield was thereby raised from $125,000,000 to $162,500,000.

By the time these taxes were passed (June 5, 1916) Dr. Helfferich had resigned as Minister of Finance, and his place had been taken by Count von Roedern. The new Minister followed the same loan policy as his predecessor, and no change in the administration of the Treasury Department was noticeable.

Banking and Currency, 1917–18

The year 1917 saw no changes in the German policy of financing the war. It had chosen the easy path of finance by inflation, and once started on this path, it was more and more difficult to turn back. Whatever might have been said in its favor during the first year had now lost its force. The unexpected length of the war was making the question of inflation ever more serious. The note issues continued to increase at a progressively rapid rate. By July 23, 1917, the notes of the Reichsbank in circulation had grown to $2,157,500,000, and by the end of 1917 they stood at the enormous figure of $2,867,000,000. In addition to these, there were $1,288,500,000 of loan notes in circulation on the earlier date. These had increased by December 23, to $1,524,500,000. This paper money had by now so far depreciated in value that it had largely driven out of circulation the subsidiary silver coin, and its place was taken by the loan notes which were issued in denominations of one, two, five, twenty and

fifty marks. So great was the scarcity of small coin that the government was forced to issue $6,250,000 of small 5 and 10 pfennig iron pieces, and this was later increased to $11,000,000 and augmented by $4,000,000 in zinc coins and $125,000 in aluminum. There was little danger that these would be either exported or melted down.

The hoarding of coins, which was widespread, increased the demand for additional means of payment, and among the measures adopted in order to reduce the demand for currency was the creation of a closer connection between the Reichsbank and the postal check system, and the reduction of charges on postal check business. The financial institutions and papers endeavored to educate the public in the use of checks and other credit devices. As a result of this campaign the number of postal checking accounts increased from 112,000 at the end of 1915, to 148,918 in 1916, and to 180,432 at the end of 1917. Singular as it seems, the use of bank checks in Germany has been introduced on any considerable scale only within a decade, and had made but slight progress. Not until 1916 had the Imperial Bank certified checks, but these were now made receivable by all credit institutions. In view of these facts, we may conclude that the inflation of the currency was greater than the measure of the additional issues of notes. Because of the almost exclusive use of currency in ordinary commercial transactions on the part of the German people, the relation between the notes and gold reserve was regarded as particularly important. The relation between the gold reserve and total note issue of the Reichsbank in July of each year is shown in the following table:[1]

Year	Gold	Notes	Ratio Gold to Notes
1914.....	$342,750,000	$451,125,000	76.2
1915.....	596,145,000	1,306,230,000	45.6
1916.....	616,295,000	1,658,535,000	37.1
1917.....	614,220,750	2,054,935,500	29.9

There is evident here a steady reduction in the proportion which the gold bears to the notes. In view of these facts, the loss

[1] *New York Times Magazine*, July 15, 1917, p. 14.

by the Reichsbank on June 23, 1917, of $19,125,000 of gold was highly significant. This reversal of policy could only have resulted from dire necessity. The depreciation of the mark had gone so far that it was impossible for Germany to obtain from neighboring neutrals the goods which she needed. As the supply of German products which could be spared had declined, it was necessary to pay for imports with gold. This was an indication of growing economic distress, and was undoubtedly occasioned by the entry of the United States into the war.

The decline of the mark in neutral markets had already led to the placing of foreign exchange under the control of the Reichsbank, and this was carried still further by an order of the Federal Council adopted in January, 1917, which created a monopoly under the auspices of the Reichsbank for buying and selling foreign exchange.

The profits of the Reichsbank were enormous during the war, but all above about 9 per cent were diverted into the coffers of the state. This is shown in the following table:

REPORT OF PROFITS OF REICHSBANK, 1914 TO 1918

(In millions of dollars)

Item	1914	1915	1916	1917	1918
Net	$16.75	$26.62	$24.07	$24.23	$27.71
War tax	....	12.74	10.83	11.02	14.46
Reserve fund	1.52	1.23	1.17	1.17	1.17
Dividend	4.60	4.03	3.91	3.92	3.91
Dividend (per cent)	10.24	8.98	8.68	8.72	8.68
Public treasury	10.62	8.61	8.16	8.08	8.17
Balance brought forward	.0002	.0002	.004	...	...

EXPENDITURES, 1917–18

The cost of the war was steadily growing. Whereas the monthly cost had been estimated at $500,000,000 in 1916, this had grown for the period February to May, 1917, to $700,000,000, and by the end of the year it was stated by Count von Roedern, Minister of Finance, to be $750,000,000. This meant an even $25,000,000 a day for war expenditures. These growing costs were reflected in the votes of credit, of which three were

asked during this year, each for $3,750,000,000, voted in February, July, and December. The budget presented in March announced a formal deficit of $312,500,000 in the civil budget which was to be met by taxation. The service of the national debt was placed at $891,500,000. The total expenditures of the civil budget were given as $1,337,500,000. The revenues were $1,025,000,000. The figures for the civil budget were, however, quite nominal, as were also the statements of military expenditure, for there are left out of account a number of items which are included in the financial statements of other nations. Provision for separate allowances, relief and similar charges which are a direct outgrowth of the war, fall in Germany for the most part on the federal states and the municipalities. It is impossible even to estimate these, but it is known that the existing taxes in the states and local governments have been greatly increased, in some cases being more than doubled. It has been estimated that the single item of expenditures for the support of soldiers' families, which in Germany is met by the municipalities, was $37,500,000 a month, which would amount for the forty-one months of the war from August 1, 1914, to December 31, 1917, to $1,537,500,000. The finances of the year 1917 were summarized by Herr Dernberg in a speech at Carlsruhe in the following language:

> "The finances of the war have really not been effective. We have voted between $125,000,000 and $187,500,000 new taxes, but at the same time we have lost customs duties to the amount of at least $62,500,000. We are able to balance the budget only by leaving the whole of our military expenditure out of the ordinary estimates and entering it as extraordinary war expenditure. We have new debt to the amount of $25,000,000,000 and for the service of this debt we need from $1,750,000,000 to $2,000,000,000. But in this direction practically nothing has been done. The result is that the credit of the German Empire has been terribly reduced abroad."

Borrowings. 1917–18

The March and September loans consisted of issues of Treasury notes and war bonds, the former at 4½ and the latter at 5 per cent, both issued at 98. The war loan was irredeemable before 1924, as the earlier issue had been. But the Treasury notes differed from those previously sold in that they were made redeemable by drawings at 110 per cent beginning with January 1, 1918. It has always been the boast of German writers that they were able to sell successive issues of war bonds practically at par, and with no reduction in price or resort to higher rates of interest, both of which have been necessary in other belligerent countries. In the case of the Treasury notes just described, however, a high premium was offered the purchasers, which was, of course, equivalent to raising the rate of interest. The real explanation, however, of Germany's ability to maintain her credit apparently unaffected by the vast loans which she had issued, is to be found in the progressive depreciation of the currency. There is a very real decline in the value of securities which are sold even at par in a depreciated currency. A bond selling for 98 and paid for in a mark worth only 40 per cent of its par value is sold at a discount as truly as if it had been sold for $40 in gold. The deception practiced upon the mass of people as a result of inflation and consequent depreciation of the currency may have served to bolster up the military *régime* a little longer than would otherwise have been possible, but it was certainly an expensive way to secure a temporary reprieve.

The subscriptions to the sixth war loan amounted to $3,280,515,000, of which $340,344,675 were in the 4½ per cent Treasury notes. The total number of subscribers was 7,063,347, or one in every ten of the population.

The seventh war loan issued in September, 1917, was similar to that just described. It was, however, not quite as successful, as the sum realized amounted only to $3,156,415,000. The total number of subscribers, too, shows a considerable falling off from the sixth loan, the number being given as 5,213,373.

Debt, 1917–18

The German debt by the end of 1917 may be estimated at about $24,000,000,000. The votes of credit thus far authorized amounted to $27,250,000,000. But it was stated at the time the last credit was granted on December 1, that the Treasury had funds to carry it to the end of the calendar year, and that the additional $3,750,000,000 would be used to meet the costs of the war from that date until the end of the fiscal year, March 31, 1918. If, therefore, this last vote be subtracted from the total, there remains the enormous sum of $23,500,000,000 as war expenditures down to December 31, 1917. The indebtedness of Germany at the end of July, 1917, after three years of war, was estimated by Professor Jaffé at $30,000,000,000.[1] The ordinary civil expenditure was estimated at $750,000,000 and the annual charge for interest and amortization at $1,875,000,000, making up a total annual budget of $2,625,000,000. To these figures should be added various other charges omitted by Professor Jaffé, such as expenditure for pensions and other war charges, estimated by other writers at not less than $750,000,000, so that a more correct total annual budget at this time was $3,375,000,000. The debt had now passed the limit of $25,000,000,000 which Rudolph Havenstein, President of the Reichsbank, thought was all Germany could stand, and which he was sure would never be reached. If this figure is compared with the modest debt before the war, some measure of the financial burden imposed upon the Empire can be secured. And this figure does not take into account the debts of the several states or of the communes, which were already large and were steadily growing.

Taxation 1917-18

The increasing burdens of the war were making additional taxation vitally necessary, if further deficits were to be avoided.

[1] Quoted by Snow, *German Trade and the War.* Dept. of Com. Bureau of For. and Dom. Com. Misc. Series No. 65, p. 129. Professor Jaffé was editor of the *Europäische Staats und Wirtschaftszeitung.*

One of the first tasks of the Reichstag which met February 22, 1917, was the voting of new taxes. The proposals of the government were accepted in practically the form in which they were introduced. They consisted of new taxes on coal, on railway travel, a 20 per cent increase in the war profits tax, and a tax on the Reichsbank. Both the coal and the railway traffic tax were very unpopular, the former raising the cost of lighting and heating by about 10 per cent. The other raised the price of tickets from 10 to 16 per cent, but these increases were about doubled in Prussia by reason of similar increases in rates introduced by the Prussian Minister of Railways. The total increase in the revenue was estimated at $312,500,000 more than in 1916, of which the coal tax was estimated to furnish $125,000,000, and the traffic tax $78,500,000; the rest was to be obtained from the addition to the war profits tax and the tax on the Reichsbank. The yield of the war profits tax for the year 1916–17 was not disclosed, nor were estimates made when it was introduced; probably, however, between $100,000,000 and $125,000,000 were obtained from the 20 per cent increase.

These sums were, however, insufficient to meet the growing war costs. Heavier taxation was needed if Germany was to avoid continued deficits and the payment of interest on her debt out of new loans. That this problem was appreciated in Germany may be seen from the following quotation from a North German paper[1] in which heavier taxation is urged in order to avoid the dangers of too great a dependence upon a loan policy:

> "In order to obviate this, a thoroughgoing policy of taxation is advocated, including a property tax of 20 per cent, a yearly tax of 5 per cent on property increment, an inheritance tax on an average of 10 per cent, with reversions to the Empire in all cases of entailed estates where the testator has not at least three direct descendents; an increase in the income tax of 50 per cent; an increase in customs duties up to a yield of about $1,125,000,000; taxes on consumption, profits, traffic and monopolies."

[1] Quoted in the *Economist*, November 3, 1917, p. 732.

The taxes voted were, however, not merely belated; they were also slow in being put into effect. By the middle of August, 1917, the Empire had not yet received a single penny of the war taxes. The war profits tax was still unpaid, after three years of war. This tax had been first agreed upon at a meeting of the finance ministers of the several states on June 10, 1915. The law concerning the preliminary measures for the assessment and collection of the tax was passed on December 24, 1915, and the tax was voted on June 21, 1916. It was not until July, 1917, however, that the prospective taxpayers received their assessment papers. The coal tax which was voted April 8, 1917, did not go into effect until August 1 of that year. This experience proves conclusively the necessity of introducing tax measures early in a war if their receipts are to afford any assistance in financing it.

Banking and Currency, 1918–19

The year 1918 saw little change in the financial policy of the war. The issue of notes and loans was still the chief dependence of the Treasury. Little additional use was made of taxation. In fact, the costs were growing so rapidly that the financial situation was by this time quite out of hand, and even a vigorously enforced policy of taxation would not have mended matters.

The issue of notes continued unabated. On March 15 the note circulation of the Reichsbank was given at $2,839,000,000 and the loan notes at $1,995,000,000. By October 31 the Reichsbank issues had increased to $4,165,500,000 and loan notes to $2,357,500,000. At this date the Treasury notes in circulation amounted to $88,500,000—giving a total of $6,611,500,000.

The signing of the armistice, with its attendant disorganization as war activities ceased, led to a greater, rather than less, resort to the use of credit, and the issue of notes in circulation continued to show a steady increase. By November 15, 1918, the total was $6,906,000,000, against which only $637,500,000 of gold was held. A panic now set in, and runs took place on the banks. The banks published appeals to the people not to withdraw de-

posits, and not to hoard currency. But they were unsuccessful in preventing withdrawals. A despatch from Zurich quoted the *Neueste-Nachrichten*[1] of Munich as saying that the Reichsbank had issued notes to the amount of $500,000,000 in the last four weeks.

As a result of this continued inflation, combined with scarcity, prices had risen to unbelievable heights.

Some typical prices prevailing in Berlin between December, 1918, and March, 1919, were as follows: Lady's costume, plain, $275; chemise, $8.75; man's business suit, $125; woolen goods, per yard, $17.50; stockings, per pair, $5; leather boots, per pair, $25; white shirt with cuffs, $12.50; paper collar, 75 cents; meat, per pound, $3 to $4; butter, per pound, $7.50; potatoes, per pound, 13 to 24 cents; beans, per pound, $1.50; tea, per pound, $16.50; cocoa, per pound, $15 to $22.50.

Expenditures, 1918–19

During the year 1918 two votes of credit for $3,750,000,000 each were passed in March and July. A third was scheduled for November 22, but before this date arrived the signing of the armistice had brought military operations to an end. On the occasion of the request for the March vote, Count von Roedern, Minister of Finance, said that Germany's monthly war costs had increased from $500,000,000 in the winter of 1915–16 to $937,500,000 in the previous five months, or almost double. The independent Socialists voted against this credit on the ground that the recent peace treaty with Russia made it impossible to maintain friendly relations with that country. By July the total war costs were estimated at $40,750,000,000, as follows:[2]

Mobilization costs	$250,000,000
Purely military expenses	29,000,000,000
Feeding the nation, etc.	2,500,000,000
Compensation in invaded districts	1,250,000,000
Reconstruction of army and fleet	1,500,000,000
Pensions, etc.	6,250,000,000
	$40,750,000,000

[1] Quoted in the *Commercial and Financial Chronicle*, November 2, 1918, p. 1693.

[2] Herr Georg Bernhard, quoted in London *Economist*, July 27, 1918, p. 111.

As a result of the revolution in Germany, the expenditure, in spite of cessation of military operations, increased rather than diminished. It was estimated that during the last fourteen days of November, the Soldiers' and Workmen's Council spent over $200,000,000 of public money and that since the revolution more than $250,000,000 had been used in wage increases, war bonuses, etc., on the part of the government.

Borrowings, 1918–19

The eighth German war loan was announced in March according to schedule. It was in the usual form of a 4½ per cent note and a 5 per cent bond, issued at 98. A total of 6,510,278 subscriptions (4,693,516 being for $125 or less) yielded an aggregate of $3,691,500,000.

The ninth war loan, which was announced in September, yielded only $2,608,489,925, being a tremendous fall from the prior loan. The subscribers too shrank from 6,510,278 in March to 2,717,657 in September. This latter, like its predecessors, was a 5 per cent stock irredeemable before 1924, and a 4½ per cent Treasury bond redeemable by drawings at 110 to 120 according to the date of drawing. The price was 98. The only change was an increase in the premium granted to the 4½ per cent issues. The following is a complete table of German war loans:

GERMAN WAR LOANS

LOAN DATE	CHARACTER	AMOUNT	SUBSCRIBERS	Interest	Issue Price	MATURITY: Repayable by drawing	MATURITY: Irredeemable before
1 Sept. 10-19, 1914	Imperial loan Treasury bonds	$970,250,000 250,000,000	1,177,225	5 5	97.5 97.5	 1918-20	1924
2 Feb. 27-Mar. 19, 1915	Imperial loan Treasury bonds	2,082,750,000 193,750,000	2,604,063	5 5	98.5 98.5	 1921-22	1924
3 Sept. 4-22, 1915	Imperial loan	3,040,000,000	3,966,418	5	99	.....	1924
4 Mar. 4-22, 1916	Imperial loan Treasury bonds	2,299,000,000 393,000,000	5,279,645	5 4½	98.5 95	 1923-32	1924
5 Sept. 4-Oct. 5, 1916	Imperial loan Treasury bonds	2,206,500,000 468,250,000	3,810,600	5 4½	98 95	 1923-32	1924
6 Mar. 4-April 18, 1917	Imperial loan Treasury bonds	3,280,515,000	7,063,347	5 4½	98 98	..... From Jan. 1, '18 at 110	1924
7 Sept.-Oct. 1917	Imperial loan Treasury bonds	3,156,415,000	5,213,373	5 4½	98 98	.....	1924
8 Mar. 1918	Imperial loan Treasury bonds	3,691,500,000	6,510,278	5 4½	98 98	..	1924
9 Sept. 1918	Imperial loan Treasury bonds	2,608,489,925	2,717,657	5 4½	98 98	..	1924
		$24,640,419,925					

Taxation, 1918–19

The desperate financial situation clearly called for radical measures. Accordingly, the government introduced more far reaching proposals for taxation in 1918 than it had yet ventured to suggest. No fewer than eleven new financial measures were proposed which it was estimated would yield additional revenue of $750,000,000. Taxes were imposed upon practically all beverages; they were applied also to exchange and certain business transactions; to luxuries and war profits. Postal rates were increased. Owing to the restriction of imperial revenues to indirect taxes, it was impossible to secure many lucrative sources. The heavy inheritance and income taxes of England and the United States were wholly lacking, while the peculiar method of levying the war profits tax brought in less than was warranted from that source. This is not to say, however, that there were no increases in direct taxes, for there were. From a recently published survey of municipal taxes in 111 Prussian cities, it would

appear that during the year 1917 the direct taxes were increased 10 per cent. At the same time the states were screwing up their income and property taxes even more rapidly.

The estimated budget revenues for the fiscal years 1916–17 and 1917–18 and 1918–19 are given in the following table, and although sufficient time has elapsed in which actual receipts might have been announced had there been a disposition to do so, they still remain in the empire of silence:

Source	1916–17	1917–18	1918–19
Posts and telegraph	$220,322,125	$220,311,875	$220,311,675
Printing office	3,471,250	3,471,250	3,471,250
Railways	40,561,500	40,561,500	40,581,500
Custom and excise	178,232,500	188,482,500	188,487,500
Stamp duties	71,796,250	144,684,987	150,564,990
Whiskey tax	48,498,750	48,498,750	48,499,000
Sugar duty	40,813,000	40,813,000	40,813,000
Beer tax	32,237,500	32,237,500	32,237,500
Salt tax	15,286,000	15,286,000	15,286,000
Tobacco and cigarettes	12,519,500	34,819,500	34,819,500
Federal contributions	12,985,198	12,985,198	12,985,198
Miscellaneous taxes	133,179,161		
Various	18,950,035		
Special war taxes	120,000,000	312,500,000	718,750,000
	$948,852,769	$1,094,652,060	$1,506,807,113
Extraordinary	21,876,963	21,482,307	27,017,081
	$970,729,732	$1,116,134,367	$1,533,824,194

This silence has been broken twice: First, the admission by Herr Dernberg at Carlsruhe that there had been a loss in customs duties to the amount of at least $62,500,000, although subsequent budgets carry the prewar estimate of some $178,000,000; second, the statement of Count von Roedern in the Reichstag in April, 1918, in which he stated that more had been raised in Germany by taxation than was commonly supposed, citing in support of this the fact that the defense levy had yielded $250,000,000; the war profits tax $1,250,000,000, and that municipalities had raised $500,000,000 for the relief of soldiers' dependents, separate allowances, etc. The utterance, however, is more portentous than the silence, because it reveals that the total imperial war taxation for the four years of war was $1,500,000,000 from sources which

would cease with war itself, leaving the enormous debt and its annual charge wholly without provision from taxation to meet it. As the imperial burden carried by the municipalities in the form of separate allowances, relief to soldiers' dependents, etc., was a few months later announced by Dr. Schiffer to be $1,240,000,000, it would seem that only $500,000,000 of this amount had been raised by taxation in the states and municipalities, thereby increasing their war burden by debt $740,000,000.

But taking the estimated budget revenues, without any deduction for shrinkage in customs or other taxation such as occurred in France, Russia and Italy, and assuming that the full anticipated increases were realized, the following result is arrived at:

Year	Interest Charges	Revenues
1914–15	$317,000,000	$851,294,375
1915–16	575,000,000	829,270,125
1916–17	890,250,000	970,729,732
1917–18	1,467,750,000	1,116,134,367
1918–19	1,975,000,000	1,533,824,194
	$5,225,000,000	$5,301,252,793
Less 5 years normal civil expenditure (1914, $851,294,375)		4,256,471,875
Net surplus over normal		$1,044,780,918
Total interest charges for five years		5,225,000,000
Deficit on basis of estimated revenue		$4,180,219,082

In a speech to the German National Assembly at Weimar on February 15, 1919, Dr. Schiffer, the Minister of Finance, gave a résumé of war finance and an estimate of future needs. The expenditures of the war were given out by him as follows:[1]

Year	Amount
1914	$1,875,000,000
1915	5,750,000,000
1916	6,650,000,000
1917	9,875,000,000
1918	12,125,000,000
	$36,275,000,000
Treasury bills	1,500,000,000
Advances to allies	2,375,000,000
	$40,150,000,000

[1] *Vossische Zeitung*, February 16, 1919.

This sum exceeded by $3,500,000,000 the credits voted. The daily expenditures during the war ranged from $12,250,000 in 1914 to $33,750,000 in 1918. The total debts contracted by the government during the war aggregated $39,425,000,000 with an annual interest charge thereon of $1,975,000,000. In a later memorandum presented to the National Assembly, Dr. Schiffer stated that the total war expenditures amounted to $42,500,000,000.[1] To meet this enormous total the German revenues from 1914 to the end of 1918 had amounted to $4,250,000,000. This is $1,377,000,000 less than the total estimated receipts for the war period, and if true, means that the ordinary civil budget for the war period was not even met by revenues, but would give a deficit of $7,000,000. Dr. Schiffer stated further that the remainder was raised by loans, by the issue of Treasury bills, and by the creation of floating debt. The memorandum showed that in addition to the money outlays the war damages in Germany amounted to $1,124,000,000; the claims of ship owners to $375,000,000; while $1,240,000,000 was spent for the relief of families of dead soldiers by the states and municipalities. Dr. Schiffer estimated that the national annual expenditures for the future civil budget and debt charges would be $2,500,000,000 compared with $600,000,000 before the war. The annual expenditures of the states and communes would be about $1,250,000,000 compared with $750,000,000 before the war, the difference measuring the war burdens imposed upon the local units. The total amount of revenue to be raised by taxation in the future would therefore be $3,750,000,000. Before the war only $1,250,000,000 was raised by taxation. These figures, moreover, do not include the indemnity to be paid to the Entente Allies. If this be taken into account, the annual charges upon the German people will not be less than $5,000,000,000.

If national bankruptcy is to be avoided, it is clear that taxation of the most drastic character, both direct and indirect, will have to be resorted to. In addition to this, the plan of a capital levy

[1] Copenhagen despatch of March 26, 1919, in *Washington Post*, March 27, 1919.

on wealth as a means of scaling down the debt at 25 per cent or 30 per cent has found favor in Germany. Dr. Schiffer promised that the debt would not be repudiated, but the management of the postwar finances will call for more skill than the financing of the war itself received if this is to be avoided.

Time has rendered the final verdict on the German policy of war finance, which must be condemned as wasteful and burdensome. The loan policy which led directly to inflation and high prices was characterized by Dr. Schiffer himself as a "program of desperation." A plan which might have worked well in a short and victorious war, the cost of which would be paid by indemnities collected from a conquered foe, broke down utterly in a war which was not only protracted and expensive beyond all previous calculations, but which, contrary to expectations, resulted in defeat. Judged by the test of actual experience, the German theory of war finance must be relegated to the limbo of shattered superstition, together with that of supposed German military invincibility.

The direct money outlay in Germany may be arrived at by a summary of her votes of credit, and by her borrowings, as the secrecy of the Ministry of Finance has not permitted of other calculation. These are as follows:

Votes of Credit		Receipts	
No.	Amount	Source	Amount
1. August, 1914	$1,250,000,000	Nine war loans	$24,640,419,925
2. December, 1914	1,250,000,000	Loan in United States.	10,000,000
3. March, 1915	2,500,000,000	Discounts, Imperial Bk.	6,776,700,000
4. August, 1915	2,500,000,000	Treasury bills	[1]1,500,000,000
5. December, 1915	2,500,000,000		
6. June, 1916	3,000,000,000	Borrowing	$32,927,119,925
7. October, 1916	3,000,000,000		
8. February, 1917	3,750,000,000	War chest, gold and silver	81,000,000
9. July, 1917	3,750,000,000	Russian indemnity, gold	51,000,000
10. December, 1917	3,750,000,000	Belgian levies	500,000,000
11. March, 1918	3,750,000,000		
12. July, 1918	3,750,000,000		$33,559,119,925
	$34,750,000,000	Floating debts	Not disclosed

[1] This is the amount stated by Dr. Schiffer on February 15, 1919, but it undoubtedly is much too small, as by August 17, 1917, $610,000,000 were held in Turkey as base for the latter's note issues, and at this time there were $326,200,000 in the Reichsbank, and an unknown amount in circulation.

As the revenues for the five years according to Dr. Schiffer amounted to $4,250,000,000, and as the civil prewar budget during the same period would amount to $4,256,473,000, it is a conservative estimate that these items may be offset. The actual expenditure as announced by Dr. Schiffer was $36,275,000,000, and including advances to allies, $40,150,000,000. This would mean a floating debt of $3,590,000,000, but the actual floating debt is undoubtedly much higher than the official statements would indicate.

AUSTRIA-HUNGARY

The finances of the Dual Empire were probably in worse condition at the outbreak of the war than any of the other belligerents with the possible exception of Turkey. For ten years the government had been facing deficits, owing primarily to the cost of armament, and had met these by borrowing. Consequently, the debt was large and the credit of the country impaired.

The first effects of impending war were felt in the financial world. To prevent a panic the bourse was ordered closed for three days on July 27. Two days later both the Vienna and the Budapest stock exchanges were ordered not to open until further notice. On the 31st a moratorium was declared, postponing payment of all bills and accounts due before August 1, until the 14th, and all bills and accounts due between August 1 and 14 until the 27th. Later this was made permanent. On August 1, general mobilization began and the country was actually, as well as officially, at war.

Banking and Currency, 1914

Measures were at once taken to protect the Imperial Austro-Hungarian Bank and safeguard its gold reserve. The banks were not required to pay more than 3 per cent of the checks presented, and 3 per cent of their customers' current accounts, but in no case more than $40 a day. The bank rate rose rapidly from 4 per cent until it reached 8 per cent on August 2. On August 5 the bank act requiring a 40 per cent metallic reserve to be held by the bank against its notes was suspended (which meant a suspension of specie payments). At the same time the publication of the bank reports was prohibited by the government.[1]

As a result of this policy of secrecy, the operations of the bank during the first three years of the war are shrouded in mystery.

[1] N. Federn, Oesterreich-Ungarns Geld und Kreditwesen im Kriege, 1914. In *Archiv für Socialwissenschaften*, Bd. 40, Heft 2.

Not until December, 1917, was the silence broken. At that time figures were published for certain of the bank's operations during the war. The gold reserve of the bank on July 23, 1914, was $247,600,000, to which $12,000,000 abroad may be added. A demand for small change in place of the quickly hoarded silver was met by the bank issuing notes of two kronen (40 cents). Until then the lowest denomination was ten kronen ($2).[1]

To procure funds to meet its needs, the government entered into an arrangement with the bank by which it was to be advanced money in return for Treasury bills which the bank agreed to sell to the public on commission. The first war call made on the Imperial Austro-Hungarian Bank was indirect, the bank receiving two year Treasury bills to the amount of $190,000,000 (of which Austria furnished $120,000,000 and Hungary $70,000,000), which it then sold to a consortium of bankers, which in turn borrowed the requisite cash from the bank on the security of these same bills.

The needs of the government were too great, however, to permit it to use the bank only as a brokerage firm. It soon made direct appeals to the bank itself for funds. The first direct call was based on an agreement entered into on August 14, 1914. The two governments borrowed $400,000,000 against a deposit of Treasury bills to the amount of $533,300,000 redeemable in gold and bearing interest at 5 per cent. This represents at the very beginning of the war a discount of 25 per cent, and is a sufficient commentary upon the credit rating of the government. A second agreement, October 7, 1914, followed, allowing the government to borrow not less than $400,000,000 against promissory notes (Austria $254,400,000 and Hungary $145,600,000). A supplementary agreement of April 12, 1915, placed a further sum of $160,000,000 at the disposal of the government on the same terms.

The short term borrowings of Austria-Hungary to the end of 1914 may be summed up as follows:[2]

[1] H. Hartung, *Die finanzielle Rüstung der kriegführenden Staaten* (Berlin, 1914), p. 23.

[2] *Economist* (London), December 25, 1915, p. 1048.

1—$106,250,000 From Austro-Hungarian Bank on security of $125,000,000 5 per cent 2½ year Treasury bills;
2— 265,000,000 Same source on 5 per cent five year Treasury bonds;
3— 265,000,000 Same source on bills signed by Finance Minister;
4— 41,650,000 Advanced by group of Austrian banks on "current account" and repaid before end of year.

In addition to these sums, advances were made to Austria-Hungary by German banks against one year Treasury bills at 6 per cent. These amounted to $45,000,000 in November, 1914. Two further advances were made the following year, one in August for $125,000,000, and the other in November, 1915, for $75,000,000 on the same terms as the first loans.

It was stated on what the London *Economist*[1] said was "good authority" that Herr Engel, the Austrian Minister of Finance, refused flatly to be responsible for such a shortsighted financial policy. If the war went on for another year, he is reported to have said, the debt would reach a figure of $11,500,000,000 to $12,500,000,000, and as the total national wealth of Austria-Hungary was estimated at only from $27,500,000,000 to $30,000,000,000 national (and imperial) bankruptcy was probable.

Expenditures, 1914

It is difficult to get authentic figures for the war expenditures in Austria-Hungary due to the official censorship. The report of the State Debt Control Commission, however, which was published in November, 1915, showed the war expenditure to the end of 1914. For the last five months of 1914 the war cost Austria approximately $1,125,000,000, or about $225,000,000 per month. Hungary paid during the same period some $375,000,000, or $75,000,000 per month. After that date all is conjecture. A year later it was estimated[2] that up to November, 1915, Austria had spent $3,750,000,000 and Hungary $1,750,000,000. The average monthly expenditures for the first two years of war were estimated by the *Economist* (London) at $204,000,000.

[1] December 25, 1915, Supp., p. 5.
[2] *Der Tag*, Berlin, November 30, 1915.

Borrowings, 1914

Advances from the bank could not be counted upon alone to meet these growing war costs, and the issue of Treasury bills and promissory notes was creating a floating indebtedness which threatened soon to become unmanageable. Accordingly, in November, 1914, the first funded loan was issued. As in Germany so also in Austria-Hungary, the loans followed a prearranged plan and were issued at half yearly intervals every November and May. In contradistinction from the German policy, however, the proceeds of the loans were not used primarily to repay the advances of the bank and to fund the outstanding Treasury bills, but were applied to the payment of contractors and other future needs, while the floating debt was renewed.[1] This at least was the practice in the early part of the war. The first Austrian loan consisted of 5½ per cent five year Treasury bonds issued at 97½, of which the smallest denomination was 100 kronen ($20). The Hungarian loan, which was distinct from that issued by Austria, was in the form of stock which permitted the subscriber to demand repayment after a year's notice in 1919. The interest was fixed at 6 per cent and the subscription price at 97.5. The smallest denomination was 50 kronen ($10). The subscriptions to the first Austrian loan amounted to $440,200,000, and those of the first Hungarian loan to $235,000,000.

The loans were not limited in amount, and the subscribers were permitted to pay in all kinds of scrip. As in Germany, war loan offices were established where subscribers could borrow on securities in order to obtain money with which to subscribe to the national war loans. The Austro-Hungarian Bank and the other banks also agreed to loan subscribers up to 75 per cent of the value of the war bonds. In this fashion that part of the wealth of the people which was locked up in securities was rendered liquid and was directed into the state Treasury.

[1] O. Schneider, Die Kreigsfinanzen der europäischen Grossmächte, *loc. cit.*, p. 272.

Banking and Currency, 1915

The Austro-Hungarian policy of financing the war was clearly modeled upon that of her aggressive ally, Germany, and this was seen not merely in the loans but also in the issues of bank notes. As deposit banking was but slightly developed in the Dual Empire the extension of bank credit took the form almost exclusively of increased note issues. This is shown by noting the slight increase of deposits as compared with the enormous expansion of note issues. The issue of bank notes stood at $425,800,000 on July 23, 1914; by the end of 1914 they had risen to $1,027,200,000; and by the end of 1915 to $1,432,400,000. Excuses were found for these additions to the circulating medium, first in the increased activities of the government and the need of additional notes to take the place of hoarded gold. In 1915 it was asserted that more notes were needed for circulation in the conquered territories of Poland and Serbia. In normal times the Austro-Hungarian Bank had issued its notes on a gold cover or against a discount of commercial bills. After the outbreak of the war, however, commercial bills almost disappeared from the market and in their place Treasury bills and other securities accumulated in the portfolio of the bank. An increasing proportion of the notes was issued against such securities, while the proportion of the gold cover steadily decreased. At the end of 1913 the gold reserve was 49.7 per cent; a year later it was 22.9 per cent; and at the end of 1915 it had sunk to 9.4 per cent.

As a result of these successive note issues, the value of the crown depreciated greatly. At the end of December, 1915, Austrian paper money showed a depreciation in Zurich of 41 per cent; in Amsterdam of 52 per cent, and in New York of 44 per cent. At the same time the cost of living rose by leaps and bounds. A report of the Vienna Board of Trade showed that in July, 1915, prices were 86 per cent higher than they had been a year previous.

Borrowings, 1915

The second Austrian war loan was floated in May, 1915, and the second Hungarian loan in June, 1915. The Austrian loan was issued in the form of a 6 per cent *rente* due in 1921 issued at 95.25. Subscriptions amounted to $556,000,000. The second Hungarian loan was in two forms: (1) a 6 per cent *rente* issued at 98, and (2) a 5½ per cent a year bond issued at 91.20. Subscriptions amounted to $226,507,000. In floating these loans the Austrian state relied, as it had done in times of peace, exclusively upon the Austrian consortium or syndicate for state finance transactions. The banks, together with the postal savings banks, and the house of S. M. von Rothschild belonged to this syndicate, which represented a total capital of more than $1,400,000,000 and had an organization for placing loans and investment securities which embraced the whole Empire. Another syndicate, the equal of the above in capital and in the ability to place loans, consisting of the Rothschild group and the prominent Austrian and Hungarian banks, was utilized by the Hungarian Minister of Finance for negotiation of the loans of that kingdom. In addition to the government loans there was borrowed in June a second loan from German bankers amounting to $76,250,000. In November of the same year a third loan was made by the German banks, this time of $75,000,000. Both of these were secured by one year Treasury bills at 6 per cent.

In October, according to schedule, the third Austrian loan was issued. This was a 5½ per cent bond redeemable in 1930 and issued at 93.60. Subscriptions to this loan amounted to $840,520,000. The third Hungarian loan which was floated at the same time was the familiar 6 per cent *rente* issued at 98, redeemable in 1921, and brought in subscriptions of $396,972,000.

Banking and Currency, 1916

The increase in the note circulation continued throughout the year 1916, and by the end of that year amounted to $2,178,000,000. By this time advances to the Austrian Government

stood at $735,700,000 and to the Hungarian at $324,300,000, classified as "floating." Other advances on war stocks stood at $685,650,000, and "bills discounted," which were in fact Treasury bills, stood at $595,400,000. The same bank statement shows gold reserve to be $58,000,000. The ratio of gold to notes was now 2.8 per cent.

Expenditures, 1916

The average monthly expenditures, which had been estimated for the first two years of the war at $204,000,000, rose during the first half of 1916 to $214,000,000. Owing to the complete breakdown of ordinary budgetary procedure and the fact that no budget was presented during these years, and finally to the strict censorship upon all such information, it is impossible to secure data, other than that expenditure rose from $2,141,169,400 to $3,145,194,000 for Austria alone.

Borrowings, 1916

The fourth Austrian loan was offered for subscription in May, 1916. For the first time the subscriber was given a choice of security, the first form being a 5½ per cent 40 year bond issued at 95.5, and the second being a 5½ per cent Treasury bill repayable at par in June, 1923, issued at 93. The subscriptions to the first form aggregated $467,800,000, and to the second $425,400,000. The equality of subscriptions in the two forms of issue showed considerable skill in gauging the market. The same financial methods were followed in floating this loan as had been pursued in Germany. The Imperial Bank agreed to accept the war bonds as collateral up to 75 per cent of their nominal value on loans made for the purpose of purchasing bonds of the new issue. The rate of interest on such loans was fixed at 5 per cent for five years—that is to say, in order to subscribe for a bond of $200 which at 93 would cost $186, the subscriber could borrow $150 from the bank or from one of the war loan offices, so that he would have to lay out only $36 of his own

cash. The annual expense of his borrowings would be $7.50, while the income on his new investment would bring him $11 a year, yielding him an annual net income on the investment of $3.50, or practically 10 per cent on his actual outlay. This method of financing, while it may have swelled subscription lists to the various war loans, making them appear popular, really threw the whole burden upon the banks, which met the cost by fresh issues of notes. It was the frankest, not to say the rankest, kind of inflation. Certainly such a plan did not induce thrift on the part of the people, nor secure the payment of the costs of the war out of savings.

The Hungarian loan of this same date consisted of 6 per cent consols or *rente,* not redeemable before November 1, 1921, issued at 97.20. As in the case of the Austrian loan, an alternative was given in the form of a 5½ per cent Treasury bond irredeemable before June 1, 1926, issued at 91.90. It is not possible to give the subscriptions to each form separately, but the aggregate for both amounted to $386,000,000.

In November a fifth loan was brought out by Austria and by Hungary. Like the previous one, the Austrian loan consisted of two forms: (a) a 5½ per cent 40 year bond issued at 92.50, and (b) a 5½ per cent Treasury bill due June 1, 1923, issued at 96.50. The total subscriptions for both issues were $892,922,000.

Similarly, the fifth Hungarian loan was issued in the same form as its predecessor, there being (a) a 5½ per cent bond redeemable in 1922 and payable in 1942 (a 6–26 year bond) issued at 96.25, and (b) a 6 per cent *rente* issued at 98. Subscriptions to this loan totaled $405,000,000.

The loan transactions of the Austrian government down to the middle of the year 1916 were summarized in an official report of the National Debt Committee of the Austrian Reichsrat, published January 31, 1917. The following summary table is taken from this report:

DEBT OF AUSTRIA JUNE 30, 1916

Discounts and advances with the Imperial Bank	$1,284,920,000
Debt to Austrian Banking Syndicate	654,353,165
Debt to German Banking Syndicate	256,895,743
First War Loan 5-year Treasury bills	435,950,440
Second War Loan 10-year Treasury bills	533,664,360
Third War Loan 15-year Treasury bills	840,612,380
Fourth War Loan 40-year compulsory bond	904,058,400
Total on June 30, 1916	$4,910,452,488
Debt on December 31, 1915	2,820,000,000
Increase for first half of 1916	$2,090,452,488

A subsequent report of the Austrian National Debt Commission for the half year ending December 31, 1916, shows that by that time the total Austrian war debt had risen to $6,277,800,000. At this same date the Hungarian war debt had risen to $3,593,000,000, giving a total war debt for the Dual Monarchy, according to their official report, of $9,870,800,000, or an average of $340,400,000 per month for the first twenty-nine months.

Banking and Currency, 1917

The note issues, which had been increasing at a progressive rate, showed a still sharper upward movement for the year 1917. At the end of 1916 they had stood at $2,178,000,000, but by the end of 1917 they had mounted to $3,688,000,000. The mad dance of inflation was becoming faster and faster. At the same time the gold cover was becoming smaller and smaller, and at the end of 1917 stood at $57,020,000, the ratio of gold to notes then being 1.6 per cent. By this time the Austrian note was practically nothing more than a state issue of inconvertible paper money. The following bank statements, comprising the last one published before the outbreak of war, and the first one published subsequent to that event, show the changes which had taken place in the condition of the bank. There is shown here very clearly the extent to which the bank was being used by the government to finance its war operations:

IMPERIAL AUSTRO-HUNGARIAN BANK

Assets	1914 July 23	1917 Dec. 7
Gold coin and bullion	$247,575,800	$52,838,000
Bills and foreign notes	12,000,000	12,000,000
Silver and token coins	58,273,600	10,988,400
Total	$317,849,400	$75,826,400
Notes of war loan banks	.....	$21,206,200
Discounted bills, warrants, etc.	153,566,000	564,607,600
Loans on security	37,305,200	686,382,000
Loans to Austrian Government	.....	1,808,000,000
Loans to Hungarian Government	.....	831,600,000
Old Austrian loans	12,000,000	12,000,000
Securities	3,523,600	11,947,800
Mortgages	59,998,800	58,465,000
Other assets	23,058,400	176,380,400
Liabilities		
Share capital	42,000,000	42,000,000
Reserve funds	6,432,000	8,184,400
Notes	431,951,800	3,548,031,600
Current accounts	58,254,400	418,562,600
Mortgage deeds	58,253,600	55,258,200
Other liabilities	16,410,000	174,378,600

The metallic reserve had all but melted away. The disappearance of the gold was obviously the result of its utilization, either directly or indirectly, by the German Reichsbank, though a cleaner sweep could hardly have been made if the bank had been looted outright. The decline in the silver followed the policy in the first year of the war of putting into circulation as much as possible. On the other hand, the holdings of notes and loans to the government show an enormous expansion. The loans to the Austrian and Hungarian Governments amounted to over $2,600,000,000. To these may safely be added the "Loans on Securities," as these were doubtless loans upon war bonds to permit borrowers to make subscriptions. It is impossible to say how much of the item "Discount of bills and warrants, etc." was on private account and how much for the government, but it is safe to say that practically all were Treasury bills. The solvency of the bank was clearly dependent upon that of the Dual Empire itself, and with the collapse of the latter, that of the bank itself will be almost inevitable.

EXPENDITURES, 1917

During the first three years of the war the constitutional provisions concerning the passage of the budget were practically disregarded. But in July, 1917, the lower house of the Austrian Parliament in passing the provisional budget asked for by the government, insisted upon fixing a maximum limit of $1,200,000,000 instead of leaving the amount indefinite. Until this time they had simply passed a blind vote of credit, the money being raised and expended at the discretion of the executive branch alone. Now the House insisted that future estimates must show the war expenditures separately from the civil budget, and that a real effort must be made to cover the latter by means of taxes and other revenue. Although new taxes had been introduced since the outbreak of the war with a resulting total annual increase in revenue of $150,000,000, it was brought out during the debate that previously existing taxes showed a deficit of $300,000,000. The measures which had been introduced up to this time were characterized as "inadequate, unfair and ineffective." The period of the budget was fixed at six months, thus forcing the government to state its needs at frequent intervals and to subject them to some sort of scrutiny. The $1,200,000,000 voted at this time were estimated for the next four months, or a monthly expenditure of about $300,000,000, of which $180,000,000 were for military expenses, $35,000,000 for separation allowances, and $80,000,000 for other forms of relief and unforeseen contingencies. This amount would be raised by loans. The sums needed for the civil budget were to be secured from revenues.

The budget for 1917–18 was presented by the Austrian Finance Minister to the lower house of Parliament in October, showing estimated total expenditure of $4,433,800,000, and estimated revenues of $778,000,000. The resulting deficit would therefore amount to slightly over $3,600,000,000, and to meet this the government asked authority to raise credits of that amount. It was stated by the Finance Minister that the total war expendi-

tures of Austria for the first three years of war was $5,578,600,000. Expenses for the fourth year were estimated at $2,400,000,000, or half of the sum needed for the first three years.

In October the Budget Committee passed a provisional six months' budget, including an authorization to the government to raise war credits up to $1,800,000,000. The mounting costs of the war were evidently creating consternation in Vienna, for Baron von Plener, the Finance Minister, deplored the fact that they had not, like England, been able to raise by taxation enough to meet their civil expenditures and pay the interest on the war loan, let alone make any contribution to the expenditures of the war itself. The note circulation, he said, constituted another very disquieting element of the financial situation. It had already a total much higher than anyone had estimated, and as a result Austria would long have to suffer from a low rate of exchange and from a depreciated money. If the war lasted until the end of June, 1918, he estimated that Austria's share in the war expenditure would amount to $12,000,000,000.

A similar note of distress was noticeable in the budget speech of Premier Wekerle in introducing the budget for 1917–18 into the Hungarian lower house. The total war expenditure up to the present he estimated at $3,500,000,000, of which $2,400,000,000 had been raised by loans. The interest on the whole state debt was $206,000,000 annually. The premier said he estimated receipts at $700,000,000, which he claimed were sufficient to meet the civil budget and the interest on the debt and leave a surplus of some $5,000,000.

Borrowings, 1917

It is evident from the budget statements made in Austria and in Hungary that the whole of the war expenditure in these countries would have to be defrayed out of loans. Accordingly, in May each country issued its sixth war loan. Austria's was in alternate form: First, a 5½ per cent bond redeemable by drawings between 1923 and 1927, issued at the nominal price of 92.5. This price was reduced, however, by the granting of a "commis-

sion" and by making the interest payable as from April 1st, thus making the real price to the purchaser about 91.5 and the yield between 7.29 and 6 per cent according to date of redemption. The second form into which the loan was thrown was a 5½ per cent bond in denominations of $200 and upward, payable at par in 1927 or earlier. The price was fixed at 94 less ½ per cent commission, at which rate the yield was 6.4 per cent.

The Hungarian was issued in the form of a 6 per cent *rente* redeemable at the option of the government on or after August 1, 1922, the issue price varying from 96 to 96.8, according to the date of payment, with the usual ½ per cent deduction for "commission."

The subscriptions to the Austrian sixth loan reached $1,073,000,000, which exceeded any previous loan, even the fourth—theretofore the most successful. The increase in subscriptions was reported to have come almost entirely from Vienna, subscriptions from the provinces being on the whole distinctly lower than before. This would seem to indicate that a larger proportion was being taken up by the banks and the larger establishments. Subscriptions to the sixth Hungarian loan were $506,000,000.

The seventh Austrian loan was offered according to schedule in November. Like the previous one, it was issued in two forms: (a) a 5½ per cent tax-free bond redeemable at par by drawings between the years 1923 and 1957 with an option to the state to increase the rate of redemption from 1927 on, or to pay off from that date on three months' notice. The price was 92.5 less 1½ per cent commission, making a net price of 91, to which was added as a bonus one month's additional interest, as in the case of the prior loan. (b) A 5½ per cent bond redeemable at par in 1926 or earlier on three months' notice, the price of which was 94.5 less the 1½ per cent commission.

Similarly, the Hungarian Government offered alternative investments under its seventh war loan. This involved a departure from its procedure at the time of the sixth loan, when only 6 per cent *rente* was offered. At this time the subscriber was offered

the familiar 6 per cent *rente* convertible at the option of the government in 1922 at 96.1, at which rate it yielded about 6.3 per cent. In addition to this he was given the alternative choice of a 5½ per cent *rente* at 91.25 not convertible before May, 1925. This investment yielded 6.15 per cent. It was anticipated that the 5½ per cent security would be preferred by the large investor, and as the government was depending so largely upon this class of subscribers, a special effort was now made to meet his desires. Both kind of securities were exempt from taxation.

The subscriptions to the Austrian loan amounted to $1,117,000,000, and to the Hungarian to $738,000,000.

Additional sums were also raised by advances from the Austro-Hungarian Bank and by advances from German and other banks. On June 30, 1917, the total borrowings of the Austrian Government stood as follows:

War loans	$4,645,800,000
Advances from Austro-Hungarian Bank	2,048,200,000
Advances from other Austrian banks	1,284,800,000
German banks	472,608,400
Other foreign banks	8,451,600
Total borrowing, June 30, 1917	$8,459,860,000

As the prewar debt amounted to $4,961,432,462, this brought the total debt on June 30, 1917, up to $13,421,283,862. The progress of the war debt itself may be seen from the following comparison:

AUSTRIAN DEBT

In Millions of Dollars

Date	War Debt	Total Debt
End of 1914	1,008	5,969.4
1915	2,808	7,769.4
1916	6,277.8	11,239.2
1917, June 30	8,459.8	13,421.0

Hungary did not publish its debt with the same regularity as Austria and for that reason it is not available.

Banking and Currency, 1918

The issue of bank notes continued during the year 1918, but it seemed as though the more that were issued the greater was the

demand for more circulating medium and the more pressing the need of the government for more currency. In April they were $4,270,000,000; in October $5,625,000,000; in December $7,210,253,000, and loan office notes beginning to accumulate in the Imperial Bank to the amount of $1,502,954,000 in December, or a grand total of $8,714,900,000, the ratio of gold to notes being .0064. By November the political situation had become so desperate that people were hoarding even the depreciated bank notes and the Austrian Government announced that it would issue temporary bank notes in denominations of 25 and 100 kronen to meet the scarcity in currency that followed the general panic in that country. The frightened people had made runs on the banks in Austria to such an extent that the available supply of notes had been completely exhausted and payments were made in war loan coupons and Treasury bills. The depreciated currency was of course accompanied by a rise in prices which, by the end of the year, had attained heights reminiscent of the days of the French *assignats.* The following prices and wages were taken from the *Nepazava,* the chief organ of the Social Democratic party published at Budapest, November 12, 1918:

Commodities		Wages	
1 liter milk	$ .40	Driver, per day	$6.00
Cabbage, per head	5.67	Coal shoveler	5.00
1 kilo steak	4.00	Grave digger	8.00 to 10.00
1 kilo other meat	4.00	Day laborer	4.20

Expenditures, 1918

The budget for 1918–19 was presented to the lower Austrian house in July. The estimated expenditures aggregated $4,866,400,000 for all war needs during the fiscal year. By this time the interest on the war debt alone had increased to $403,200,000. As against these enormous expenditures, the total revenues were estimated at only $973,200,000, resulting in a deficit of $3,893,200,000 which would have to be met by borrowing. The purely military expenditures of Austria for the first four years of the war were now estimated at $7,726,600,000. The total of all

war credits to June 30 was stated to be $13,400,000,000. For the fifth year of war further credits of $2,400,000,000 were asked. A provisional budget was passed by parliament for the ensuing six months, authorizing a war credit of $1,200,000,000, or half of what was asked for by the budget for the year.

Borrowings, 1918

The result of the eighth Austrian loan was about $1,152,600,000 while the result of the eighth Hungarian loan was reported to have reached the high record total of $772,000,000. It may be doubted, however, whether in view of the subsequent political and economic crash in the Dual Empire all of the subscriptions were realized. It was reported that the Bank of Budapest had sued the former Emperor Charles for $200,000, the amount of his subscription to the eighth loan, which he refused to pay. Former Hapsburg archdukes also refused to pay their subscriptions to the loan.[1] By this time also pyramiding had made war loan subscriptions profitable to the subscribers and disastrous to financial institutions and government, and the progress of inflation made the purchasing power of the returns less and less. Details of war loans are given in the following tables:

WAR LOANS OF AUSTRIA

Loan	Date	Character	Amount Subscribed	Int.	Issue Price	Optional Redemption	Payable
1	Nov., 1914	Bonds	$440,149,400	5.5	97.5	any time	1920
2	May, 1915	Bonds	537,664,400	5.5	95.25	"	1925
3	Oct., 1915	Bonds	840,520,000	5.5	93.60	"	1930
4	June, 1916	Treasury notes	904,058,400	5.5	95.50	"	1923
		Bonds		5.5	93.	1926	1956
5	Dec., 1916	Treasury notes	892,922,000	5.5	96.50	None	1923
		Bonds		5.5	92.50	1922	1956
6	May, 1917	Treasury notes	1,073,000,000	5.5	94.	any-time	1927
	April, 1917	Bonds		5.5	92.50	1923	1957
7	Nov., 1917	Treasury notes	1,117,000,000	5.5	93.	any time	1926
		Bonds		5.5	91.	1923	1957
8	May, 1918		1,152,600,000	5.5			
			$6,957,914.200				

[1] Geneva despatch to *The Evening Star* (Washington), January 20, 1919.

WAR LOANS OF HUNGARY

Loan	Date		Character	Amount	Interest	Issue Price	Optional Redemption Date	Payable
1	Nov.,	1914	Bonds	$235,067,400	6	97.50	1919	Not fixed
2	May,	1915	Bonds	226,507,000	6	98.	any time	"
	June,	1915	Bonds		5½	91.20	1925	"
3	Nov.,	1915	Bonds	396,972,000	6	98.	1921	"
4	May,	1916	Bonds	386,000,000	6	97.20	1921	"
					5½	91.90	None	1926
5	Nov.,	1916	Bonds	405,000,000	6	98.	"	Not fixed
					5½	96.25	1922	1942
6	May,	1917	Bonds	506,000,000	6	96.	1922	Not fixed
7	Dec.,	1917	Bonds	738,000,000	5½	91.25	1925	"
					6	96.10	1922	"
8	June,	1918	Bonds	772,000,000				
				$3,665,546,400				

Taxation, War Period

The fiscal system of the Dual Empire was unique in its way. Certain joint affairs were administered by the Dual Empire, such as foreign affairs, military and naval affairs, and finances common to both. To meet these joint expenditures, which in the last peace year amounted to $117,100,000, the customs duties were assigned, amounting in the last peace year to $40,000,000, and the balance was contributed by Austria and Hungary on a basis of 63.6 and 36.4 per cent, respectively, under the agreement of extension which made this arrangement effective until 1917, at which time, under the then existing necessities, the joint parliaments continued it for one year longer. No joint loans were permitted to be contracted. The fiscal year in Austria-Hungary was the calendar year until December 31, 1913, when it was made to end on July 1 thereafter, so that the first six months of 1914 are only half of the new or old fiscal year. The separate Empires levied their own revenues, which were distinct from the Dual Empire revenues to which each contributed. On the basis of the first half of 1914, the revenues of Austria for a full year were $625,811,000, and those of Hungary $444,360,000.

The Austro-Hungarian policy of financing the war was similar to Germany's in its dependence upon loans and advances

from the banks, but it did not go quite so far as did Germany in avoiding recourse to taxation. The sentiment was never so strong in Austria-Hungary that the cost of the war would be met wholly out of indemnities levied upon a conquered country, nor was there the same hope or likelihood that even a successful war would yield them the profits upon which Germany counted. Accordingly, even at this early stage there were announced three imperial decrees of the Austrian Government raising the rates of court fees and the duties on inheritance. The new rates were not to come into force, however, until January 1, 1916, but were expected to then yield about $4,600,000.

Many increases were introduced in existing taxes in both Kingdoms during the year 1916. The main source of direct taxation in Austria had long been the personal tax law. This was passed in 1896 but did not yield any returns until 1898. In the last year under the old system (1897) the total revenue from direct taxation had amounted to only $48,902,400. In 1898 this had risen to $69,776,600, and in 1913, the last normal year before the war, it was $86,300,200. In the spring of 1914 the personal tax law was amended, increasing the scale of the income tax, introducing a surtax, and imposing a tax on directors' fees. In spite of the Russian occupation of a part of the Empire, the yield for the year was only slightly less than it had been the previous year. In 1915 it actually increased to $87,456,400. In 1916 many increases were introduced. A surtax of 100 per cent in the case of first and second classes of taxpayers, and of 60 per cent for the third and fourth classes on the general earnings tax, was imposed. On the special earnings tax there was an increase from a minimum of 20 per cent to a maximum of 100 per cent, according to profits. Other increases were even greater; on the income tax up to 120 per cent; on directors' fees 100 per cent; on land revenue 80 per cent; on interest 100 per cent. It is impossible to state the yield from these various increases, but if it was commensurate with the increase in rates, it should have resulted in a substantial augmentation of the tax revenues.

In introducing the 1917–18 budgets, the Ministers of both

Kingdoms sounded a note of distress in the matter of insufficiency of revenues to meet current civil expenditure and growing interest charges. A proposal to introduce an imperial income tax was rejected. The yield from other taxes had increased in nominal amount, it is true, but on account of the great depreciation in the value of paper money, the purchasing power was less. A much heavier tax program was outlined for this year, estimated to increase existing revenues by $420,000,000—the Austrian receipts being estimated at $838,816,400, and the Hungarians at $893,780,600. Apparently these estimates were wholly artificial. The actual yield of taxation in neither state has ever been made public since the outbreak of war, and the budget estimates of Hungary for 1916 and 1917 were never made known. Any attempt to compute the revenues, either on the estimates made public, or upon the rates of taxation actually levied, would be based so far upon conjecture as to have practically no value as statistics, but for whatever value they may have based on budget estimates, they are given as follows:

Austria		Hungary	
Year	Revenues	Year	Revenues
1915	$692,145,000	1915	$452,831,400
1916	641,847,600	1916	*401,000,000
1917	777,528,600	1917	*536,000,000
1918	838,816,400	1918	893,780,000
	$2,950,337,600		$2,283,611,400
Normal civil expenditure 4 years, 1914, $625,811,000	2,503,244,000	Normal civil expenditure 4 years (1914, $444,360,000)	1,777,444,000
	$447,093,600		$506,167,400

* There were no budgets for Hungary during 1916 or 1917, but these figures are estimated upon a proportionate increase or decrease in the Austrian budget estimates. All other figures are budget estimates.

In any consideration of these budget estimates, two things must be borne in mind: (1) that the civil budgets greatly increased during the war period, and (2) that the estimated receipts are so artificial that it is highly improbable that they were realized. But as these figures, in their most favorable light, show

that revenues were wholly insufficient during the war period to meet even the civil burden, it is fair to deduce that not only did borrowing wholly meet war costs, but that it also was resorted to in order to meet the interest charges on the growing war debt.

An illuminating sidelight on official recognition of the depreciation of the currency is given in the following episode. It had been the rule that all import duties into Austria must be paid in gold. About the middle of 1918, however, a modification was made in this provision—for every 10 kronen paid in gold, 25 might be paid in notes. This official admission of 150 per cent depreciation was commented upon with much bitterness in the Austrian press, and at the same time doubt was expressed as to whether this official estimate went far enough. By the end of the year a complete financial collapse had taken place, and there was widespread bankruptcy throughout the country. The retail trade in Vienna was ruined, and panic permeated all economic activities. Prices were fantastic and trade had become a gamble.

As the costs of the war to Austria-Hungary may therefore be measured by her borrowings and the increase in her debt, it may be summed up as follows:

Form of Borrowing	Austria		Hungary
8 war loans	$6,957,914,200		$3,665,546,400
Austro-Hungarian bank advances	3,560,000,000		2,156,000,000
Advances, other banks	2,000,000,000		512,000,000
Treasury notes discounted	280,000,000		1,134,000,000
Foreign loans	8,500,000		348,000,000
	$12,806,414,200	($20,622,960,600)	$7,815,546,400
Prewar debt	2,624,711,900		1,338,348,000
	$15,431,126,100		$9,153,894,400
War debt, end of 1914	$1,008,000,000	*Public* debt	* $1,339,114,000
1915	2,808,000,000		* 1,962,514,000
1916	6,277,800,000		3,276,042,000
1917	8,459,600,000		5,697,164,000
1918	12,806,414,200		9,153,894,400

* Funded only.

TURKEY

Regular budgets were unknown in Turkey before the reform of the Constitution in 1908, but though the form of regularity was given to the financial procedure, deficits still continued to be the rule. The public debt was in part controlled by a board of representatives of foreign countries and certain revenues for interest and amortization were pledged to this board. The Government and Parliament of Turkey could not, independently, introduce new taxes or increase old ones. For this the consent of the Great Powers was necessary. The country had no central bank of its own. The Ottoman Bank was the only Turkish bank of issue, and was under the direction of French and English administrators. In many respects, therefore, Turkey was not financially independent. Bad as had been the finances of Turkey, they were made still worse as a result of the Tripoli and Balkan wars which greatly added to the public debt. In the financial year March 1, 1913, to February 28, 1914, the receipts were $270,000,000, leaving a deficit of $85,500,000. That for the previous year had been $1,202,000,000.

The funded debt amounted in March, 1912, before the Balkan war, to $594,820,188, while the floating debt was about $36,000,000 more. New loans of considerable amount were raised to finance the struggle. By a curious stroke of irony, France supplied the needs of Turkey in the spring of 1914 with a loan of $160,000,000. This was a 5 per cent loan issued at 88. The first instalment of the amount, $99,000,000, had actually been paid over before the outbreak of war on August 1, 1914, and part of the proceeds of this were undoubtedly used against France itself. The total funded debt immediately before the beginning of the European war appears to have amounted to $682,515,000. Of this sum about 62 per cent was held by French, 29 per cent by German, and the balance by English creditors—in fact, so great was the predominance of French interest that the interest of the public debt had been made payable in Paris.

Turkey entered the war at the end of October, 1914. Payment of interest on her foreign debt was at once transferred from Paris to Constantinople, and that to citizens of enemy powers was stopped. This meant a suspension of almost three quarters of the debt payment. The Ottoman Bank was placed under Turkish control and the administration of taxes, paper money, and other financial operations were taken up independently by the Turkish Government. The war expenses have been borne chiefly by the German Government, but Turkey itself has also raised funds through requisitions, bank advances, the issue of paper money, and taxation, especially the increase of customs duties.

The war expenditures of Turkey can only be estimated, as no official statements have been published. As a guide, however, the credits voted to the Turkish war office may be taken, although it is quite certain that the actual expenditures far exceeded these sums. In the financial year ending February 28, 1915, which therefore included only five months of actual warfare, the credits for the army and navy amounted to $112,950,000. For the next year military credits amounted to $148,950,000.

To meet these expenditures, the government first of all borrowed from its own central bank, following in this respect the example of the more independent European Powers. In September, 1914, it secured from the Ottoman Bank for discounted Treasury bills $22,500,000; and in January, 1915, another $9,000,000 by granting an extension of the privilege to issue bank notes. During the year 1915, three loans were obtained from Germany and Austria. The total loan operations are shown in the following table:

BORROWINGS OF TURKEY, 1914–1915

Form	Date	Amount
Advances from Ottoman Bank	September, 1914	$22,500,000
Advances from Ottoman Bank	January, 1915	9,000,000
Loans from Germany and Austria	July, 1915	30,600,000
	November, 1915	9,000,000
	December, 1915	90,000,000
		$161,100,000

The Turkish Government also made use of its new found liberty in the matter of taxation. The customs duties were increased September 20, 1914, by 4 per cent, raising them to a rate of about 12 to 15 per cent. A year later, in July, 1915, there was a horizontal increase in all import duties, bringing the rates up to 30 per cent. In the following year the Chamber authorized the government to impose new excise taxation on sugar, cigarette paper, matches, playing cards, oil, tea, and coffee. The license tax was also extended to aliens—a thing which had been forbidden under the "Capitulations." The yield from these taxes was estimated by the Minister of Finance at $13,500,000 per annum, but it is unlikely that these amounts were realized.

In his budget speech of February 10, 1916, Talaat Bey, the Turkish Minister of Finance, stated to the Chamber that the total expenditures for the fiscal year ending February 28, 1916, amounted to $279,000,000. Against this sum he set ordinary revenues of $94,500,000, and extraordinary revenues, consisting of advances from the Central Powers, of $155,250,000, or a total of $249,750,000. This would give a deficit of $29,250,000. It will be seen from this statement that the ordinary revenues were $45,000,000 less than those of two years previous. The expenditures were only about $54,000,000 more than those of the last peace year, but it must be remembered that about $31,500,000 was being saved on interest payments. After making allowance for ordinary civil expenditures, the cost of the war to Turkey may be estimated for the first two years at about $225,000,000.

During the year 1917 the dependence of Turkey upon her stronger ally, Germany, became so great as to amount practically to financial servitude. Germany was reported on July 31, 1917, to have notified Turkey and Bulgaria that she would assume all expenses incurred by those countries in the campaign of 1917–18. Whether this report was correct or not, we have an official statement from Djavid Bey in the course of a speech requesting a supplementary war credit for $90,000,000 in December of that year, to the effect that Germany had agreed to claim no interest

on advances made to Turkey until the expiration of twelve years after peace was declared. At the same time, he estimated Turkey's "extraordinary" war expenditures from the beginning of the present war to date at $499,500,000. The Turkish debt at the end of August, 1917, was estimated at $1,542,368,000 of which the new war debt amounted to $858,818,000, which was made up as follows:

TURKISH WAR DEBT, AUGUST, 1917

Source	Amount
Requisitions still unpaid	$91,140,000
Advances from Ottoman Bank	5,524,000
Advances from Germany and Austria	414,556,000
Credits in Germany	113,926,000
Credits in Austria-Hungary	37,710,000
Miscellaneous	195,962,000
	$858,818,000

Turkey began the issue of paper money early in the war, and as in the case of every other country which utilizes this method of raising funds, resorted to it in ever increasing measure as the war dragged on. By the end of 1917 there had been seven issues of paper money, as follows:[1]

ISSUES OF PAPER MONEY IN TURKEY, 1914–1917

Number	Amount
First	$29,335,000
Second	35,109,000
Third	52,650,000
Fourth	125,000,730
Fifth	144,000,000
Sixth	144,000,000
Seventh	108,000,000
	$638,094,730

The first of these issues was nominally secured by $13,984,000 in gold deposited in Germany and $9,490,500 in gold deposited in Austria. This was made repayable in gold in Constantinople six months after peace. All other issues were secured by deposits with the Ottoman Empire Public Debt Commission

[1] The first five issues are described in *Economic Journal*, September, 1917, p. 417.

of an equivalent amount of German Treasury bills. The second and third issues were declared to be repayable in gold in Constantinople one year after peace. The fourth issue was payable in gold from three to seven years after peace. Of this issue $22,500,000 were lent to the German Government itself. The fifth issue was repayable in gold from eight to eleven years after peace.

The mass of paper money in Turkey had by this time grown to be so great that an arrangement was made in connection with the fifth issue for absorbing some of the notes already in circulation. The German Treasury bills upon the security of which they were issued were offered for sale in the Turkish market. These bills ran for three, six and twelve months and bore 4, 4½, and 5 per cent according to their maturity.

In his budget speech of March 9, 1918, Minister of Finance Bey stated that the war expenditures to the end of the fiscal year, February 28, 1918, were $1,048,500,000 and that the total indebtedness of the country now amounted to $1,746,000,000. Of this vast sum $900,000,000 had been advanced by Germany, of which $585,000,000 had been spent in Germany itself. The advances from Austria amounted to about $45,000,000. Early in 1918 Turkey announced her first internal loan. This was a 5 per cent bond issued at par and repayable at the rate of 1 per cent per annum. The interest and sinking fund payments in gold were guaranteed by Germany for the first twelve years. The subscriptions were announced as $63,000,000. This carried Turkey through the summer, but in the fall a new loan from Germany was obtained, amounting to $180,000,000. In addition to these various loans and advances, there was another heavy item in the indebtedness of the Sublime Porte of $123,750,000 for unpaid salaries and other unfunded liabilities.

At the same time that it announced the internal loan, the government also provided for a war profits tax. This consisted of two parts: (a) a progressive tax on profits of joint stock companies ranging from 10 per cent in cases where the profits did not exceed 5 per cent on the capital, up to 50 per cent in cases

where the profits were 50 per cent and over; (b) a progressive tax on increases in income of individuals beginning with 5 per cent on increases of $2,250 and mounting to 50 per cent on increases of $225,000 and over.

Before the war the Turkish debt amounted to $595,000,000. By the end of the fiscal year February 28, 1917, Djavid Bey, Minister of Finance, announced that it had grown to $1,404,000,000. A year later it was stated to be $1,746,000,000. At the present time the total debt, including the paper money issues, is probably not far from $2,025,000,000. If this figure be approximately correct, the cost of the war to Turkey has been $1,430,000,000.

BULGARIA

Bulgaria, in common with the other Balkan states, suffered severely from the Balkan wars, and with the outbreak of the Great World War was destined to undergo still greater losses. A general moratorium was established early in August, but the Treasury was reported at the end of 1914 to be still receiving all its prescribed revenues. Crops were good, and owing to the high prices which prevailed, Bulgaria enjoyed a certain temporary prosperity. This, however, did not long continue, and by March, 1915, this country was said to share with Switzerland the distinction of being the most acute sufferer by the war.[1] Bulgaria delayed her entrance into the war until October 14, 1915. Six months before, in April, a consortium of German and Austrian banks took up Bulgarian Treasury bills to an amount of $50,000,000. This undoubtedly was one of the conditions of Burgaria's choice of suitors, for she had long flirted with both sides. After this event the further necessary financial and material assistance needed to enable her to carry on her share of the campaigns was supplied by Germany and Austria. A loan of $100,000,000 was made in 1916, followed by a further loan the same year, and another in 1917. In addition to advances of credit war materials were furnished directly by the army authorities to an amount not made public. As security against these advances, the proceeds of the sale of tobacco in Germany and Austria were pledged. The Bulgarian Treasury bills were also discounted by German and Austrian banks which were guaranteed against loss by their governments; such discounts may therefore properly be regarded as indirect government advances. These Treasury bills were six months' bills bearing 4½ per cent interest. In November, 1917, one year 5 per cent bills were put out, free from tax and acceptable in payment of taxes or any official charges. It is not possible to say how much these various loans and advances amounted to. During the winter of 1917–18 Germany

[1] *Economist* (London), March 6, 1915, p. 484.

discontinued the practice of granting credits to Bulgaria and demanded payment for munitions and other material. It was estimated that at the end of the war Bulgaria's debt to Germany amounted to $660,000,000.[1]

Little was done in the way of raising additional revenue by taxation. The government revenues for the three years in which Bulgaria remained in the war averaged slightly over $50,000,000 per annum, but this barely sufficed to meet the ordinary civil expenditures, and consequently the debt charges were met out of new loans. Towards the end of 1917 a war profits tax was proposed, which differed from taxes of the same name in other belligerent countries by being regressive. The tax was confined to those trading profits which during the war reached a level of $1,000: on profits between $1,000 and $10,000 the taxes levied were at the rate of 55 per cent; between $10,000 and $20,000, 50 per cent, and on profits over this amount 45 per cent. These rates were for profits on government contracts. On profits derived from other sources the rates were placed at 40, 35, and 30 per cent, respectively, on the sums above enumerated. For growers of tobacco, one of Bulgaria's chief products, the rate was still further reduced. Dividends were limited to the average prewar rate. It was later reported that new taxation was adding $20,000,000 a year to the revenues. This, however, fell far short of the normal expenditures and debt charges, and to fill the gap a confiscation of wealth illegally obtained is even now being threatened.

The public debt of Bulgaria was estimated on January 1, 1915, at $175,000,000, and by the middle of 1917 it had risen to $615,000,000. By the end of 1918 it was estimated at $1,500,000,000, but this figure probably includes the paper money issued by Bulgaria to the amount of $500,000,000, leaving war loans of $815,000,000. As this was far in excess of the monetary needs of the country, the value of the money depreciated more than half. As the total wealth of Bulgaria has been estimated at only $2,200,000,000, it is clear that the war has laid upon Bulgaria

[1] *Commercial and Financial Chronicle*, March 22, 1919.

a burden far in excess of her economic strength. Unless there is a complete repudiation of the war indebtedness, the people will suffer from oppressive taxes for many years to come. As Bulgaria issued no internal loans to finance the war, and all her debt is held by citizens of other countries, it is, however, problematical whether she will be permitted to adopt the easy method of repudiation.

SUMMARY OF DIRECT COSTS

It is now possible to bring together the final figures so far as they can be ascertained for all the belligerent countries and to estimate the total direct cost of the war. It will, however, probably never be possible to state precisely how much the world has spent in prosecuting the Great World War, since the break-up of states like Austria-Hungary, Russia and even Germany, and the limited participation of countries like Brazil and Portugal and some of the smaller belligerents, have made it all but impossible to secure complete figures. Even the expenditures of the principal belligerents are far from exact, as the accounts have not been closed and expenditures are still being made which may properly be credited to the war account. But in such a gigantic total as that presented by the final aggregate cost of this war, no great difference will be made if some of the smaller items fail of exactness. The conclusions of this study are presented as an approximation to the truth which it is believed is probably as exact as can be made at this time.

The total money costs of the war for all the then belligerents have been competently estimated by the Copenhagen War Study Society at $18,785,000,000 for the first year and $33,065,000,000 for the second year.[1] For the third year the costs were estimated by another authority at $39,247,900,000,[2] giving a total for the three years of $91,097,900,000. The aggregate gross costs of the first three years were also given by the Liberty Loan Bureau of the United States Treasury Department as $89,721,500,000. As these totals so nearly agree, either may be accepted as approximately correct. According to figures compiled by the Swiss Bank of Geneva, the fourth year of the war cost as much as the

[1] Bulletin of the Copenhagen War Study Society, March, 1916, p. 2.
[2] New York *Sun*, July 29, 1917.

other three together, or about $90,000,000,000, so that by August 1, 1918, the four years of war had cost the world $180,000,000,000. The average daily expenditure on war for the first four years was $123,000,000; during the year 1918 it rose to $244,000,000. At this rate the war was costing more than $10,000,000 an hour. It must be remembered, however, that the worldwide inflation of the currency which was taking place immensely increased the money costs of the war with each succeeding year.

A number of independent estimates have been made of the total cost of the war of which two or three may be cited. A "gross total of $194,000,000,000" for the seven major belligerents was the estimate of a widely circulated pamphlet published by one of the New York City banks.[1] At a conference of governors and mayors at the White House early in March, 1919, Secretary of War Baker presented an estimate of the total money costs of the war for all the nations engaged in it, apart from all costs of damage to property and devastation. According to this estimate, the cost was $197,000,000,000.[2] The most recent estimate, by Edgar Crammond,[3] the well known English statistician, placed the final direct costs of the war at $210,175,000,000 to which sum he added another $50,000,000,000 as the indirect costs, including the destruction of property, loss of ships at sea, etc. It is impossible to say to what extent these various estimates are comparable or just what is included in the total. It would appear from their magnitude that they represent gross expenditures without any allowance for duplication as a result of advances by one belligerent to another. In the following table are summed up the results of the present study, showing the

[1] *The World's War Debt*, prepared and issued by the Mechanics and Metals National Bank, 1919, p. 16.

[2] Quoted in the *Economic World*, March 15, 1919, p. 379. A later estimate, prepared by the Statistics Branch of the General Staff, was published after the manuscript of the present study had gone to the printer. It is extremely gratifying to note that the figure therein given as the net money cost of the war coincides exactly with that arrived at in this study, namely 186 billion dollars. See L. P. Ayres, *The War with Germany* (Washington, 1919), p. 135.

[3] Address before Institute of Bankers in London, March 26, 1919, Associated Press despatch.

distribution of the gross costs among all the active belligerents whose expenditures have been described:

	Gross	Advances to Allies	Net Cost
United States	$32,080,266,968	$9,455,014,125	$22,625,252,843
Great Britain	44,029,011,868	8,695,000,000	35,334,011,868
Rest of British Empire	4,493,813,072		4,493,813,072
France[1]	25,812,782,800	1,547,200,000	24,265,582,800
Russia	22,593,950,000		22,593,950,000
Italy	12,313,998,000		12,313,998,000
Other Entente Allies	3,963,867,914		3,963,867,914
Total	$145,287,690,622	$19,697,214,125	$125,590,476,497
Germany	$40,150,000,000	$2,375,000,000	$37,775,000,000
Austria-Hungary	20,622,960,600		20,622,960,600
Turkey and Bulgaria	2,245,200,000		2,245,200,000
Total	$63,018,160,600	$2,375,000,000	$60,643,160,600
Grand total	$208,305,851,222	$22,072,214,125	$186,233,637,097

The advances made by the United States, Great Britain, France and Germany to their allies amounted to $22,072,214,125. If these be deducted from the gross outlay the net money cost of the war is found to be $186,233,637,097. In the following table are shown the advances, distributed by countries:

ADVANCES TO ALLIES

(In millions of dollars)

Made to	By United States	Great Britain	France	Germany
Great Britain	4,316	....	....	....
France	2,852	2,170	....	....
Italy	1,591	2,065	....	....
Russia	187	2,840	....	....
Belgium	341	435	....	....
Serbia	27	90	....	....
Roumania	30	....	....	....
Greece	43	....	....	....
Czecho-Slovaks	50	....	....	....
Cuba	10	....	....	....
Liberia	5	....	....	....
	9,452			
Other Allies		240	....	....
Dominions		855	....	....
		8,695	1,547	
Austria-Turkey-Bulgaria				2,375

[1] This is the calculation of the writer, based upon the declared yearly expenditures. If, however, the estimate reported to the Chamber of Deputies of $36,400,000,000 (see above, pp. 117–118) be accepted, the total net cost of the war would be raised to $197,000,000,000.

It should be noted that all the figures thus far given cover only the direct money outlays of the countries involved, and do not take into account the indirect costs, such as the destruction of property, the depreciation of capital, loss of production, interruption to trade, and similar items. It has been estimated[1] that these would amount to as much as the direct costs. If this estimate, which was made early in the war and is undoubtedly too high, be accepted, it would bring the total cost to all the belligerents to about $370,000,000,000. And in this staggering total there are not included the expenditures or losses of neutral nations, which have been very real and in some cases very serious, nor the loss of human life, nor of subsequent burdens such as pensions and allowances. An effort is made in the following pages to calculate somewhat carefully these difficult and indeterminate indirect costs, the conclusion of which shows a figure somewhat less than Mr. Crammond's earlier estimate.

On the other hand, certain deductions should be made which will reduce somewhat the real costs. In the first place, not all of the war expenditure is pure loss. Some expenditures are simply transferred from the family budget to that of the state. Soldiers are fed, clothed and housed at the expense of the government, and the bill is paid out of taxes or loans. Other expenses are positively productive, such as the building of railways or merchant vessels. And in the second place, it is quite obvious that a partial explanation of the costs of the war lies in the depreciation of the money unit. Measured in dollars the expenditures were mounting steadily and rapidly. Measured in terms of service and commodities, the increase was much less rapid. It has been estimated by the editor of the *Statist*[2] that the net cost of the war to the belligerents is about one-half of its total costs. If this generalization be accepted as correct and one-half of the direct costs be subtracted, there is left as the real economic cost of the war $244,000,000,000.

[1] E. Crammond, "The Cost of the War," *Journal of Royal Statistical Society*, May, 1915, p. 398.
[2] October 23, 1915, p. 181.

INDIRECT COSTS

Loss of Human Life

The loss of human life and the race deterioration resulting from war are the most appalling and permanent costs of the war, for they affect not merely the present, but are traceable through future generations. Reliable information as to the death toll is difficult to secure during the progress of the war for military reasons, but after the smoke of battle has cleared away, and the necessity for secrecy ceases, fairly accurate data are to be had. Owing to the large number who even yet are listed as "prisoners or missing" a certain element of conjecture will probably always be present, even in the most carefully compiled official statistics. The best information at hand gives a total death roll for all belligerent countries of approximately 10,000,000.

From a purely economic standpoint, the presence of a large number of diseased and maimed entails a greater burden than the loss of life itself. It is too early as yet to procure information sufficiently accurate and detailed to permit of classification of the "wounded" in the range from total disability to slight injury. The degree of the economic burden dependent upon this range therefore involves an even greater element of conjecture. Even more difficult to estimate and compute is the economic burden resulting from the peculiar maladies contracted by thousands and hundreds of thousands of men in the armies during the course of the war. Trench fever, gassing, tuberculosis, and other diseases have made complete human wrecks of a vast number of men, many of whom are not necessarily included in "casualty" lists. It will probably be years, possibly generations, before the full cost of the war in suffering and race deterioration can be properly measured.

The frightful toll in human life exacted by the Great World War can be better comprehended if this be compared with the

loss of life resulting from the important wars of the nineteenth century. These are given in the following table:

LOSS OF LIFE IN 19TH CENTURY WARS[1]

Wars	Duration	Dead
Napoleonic, 1790–1815	9,000 days	2,100,000
Crimean, 1854–56	730	785,000
Prussian-Danish, 1864	135	3,500
Prussian-Austrian, 1866	40	45,000
American Civil, 1861–65	1,350	700,000
Franco-Prussian, 1870–71	210	184,000
English-Boer, 1899–1902	995	9,800
Russian-Japanese, 1904–5	548	160,000
Balkan, 1912–13	238	462,000
Total loss of nineteenth century		4,449,300

It will be seen from these figures that the recent war resulted in a death toll almost exactly double that caused by all the wars of the nineteenth century put together. The first two years of the struggle resulted in the greatest sacrifice of human life relative to the number of men engaged. This was due at first to the open methods of warfare, then to the use of liquid fire, deadly gases, etc., to meet which there was in the beginning a lack of adequate protective devices, and finally a lack of facilities and experience to cope with the new problems affecting life or health, which was overcome in the later years of the war. The Copenhagen Society for the Study of War[2] made a careful investigation of the cost in human life for the first two years, basing its results on careful computations from the data it was able to secure. Subsequent casualty lists have demonstrated the conclusions to be fairly accurate, so they are given as a satisfactory estimate for the period covered:

[1] Compiled from
L. Leroy-Beaulieu, *Recherches économiques sur les guerres contemporaines;*
J. Block, *La Guerre,* Vols. IV and V;
J. Schurmann, *The Balkan Wars,* London, 1914.
Waste of Militarism. By the World Peace Foundation, New York.

[2] *Bulletin,* Human Losses in the War, August 1, 1916, p. 2.

FIRST TWO YEARS OF GREAT WORLD WAR—LOSS OF LIFE

Country	Dead	Wounded	Invalids
Austria-Hungary	718,000	1,777,000	533,000
Belgium	50,000	110,000	33,000
Bulgaria	25,000	60,000	18,000
England	205,000	512,000	154,000
France	885,000	2,115,000	634,000
Germany	885,500	2,116,300	634,900
Italy	105,000	245,000	73,500
Russia	1,498,000	3,820,000	1,146,000
Serbia	110,000	140,000	42,000
Turkey	150,000	350,000	105,000
Total	4,631,500	11,245,300	3,373,400

Accepting this estimate as correct, it appears that nearly half of the dead lost their lives in the first two years of the war. In view of the much larger numbers of men involved during the next two years, it is clear that the relative loss of life became less as greater experience was gained.

Appalling as is the loss of life already chronicled, the figure will have to be raised in order to include those first reported as "prisoners or missing" but whom later investigation shows to have been killed. So efficient were the deadly engines of destruction employed in the Great World War that in many cases men were literally blown to atoms and later recorded as missing. From official reports made by a few of the belligerent countries, it is thought that a conservative estimate of the dead who now appear in the "missing" category would be about 50 per cent. In England, Mr. Bonar Law, in answer to a parliamentary inquiry on casualties, stated that about 60 per cent of the missing were probably dead;[1] the corresponding figure for Canada is 56 per cent;[2] for France, 40 per cent.[3] The verification of the 50 per cent estimate is borne out by a careful checking of the known "prisoners" in each country against the official "prisoners or missing" of that nationality held by the enemy. If, therefore, 50 per cent of those officially listed "prisoners or missing" be presumed to be dead, a total death toll is obtained of 12,991,000.

Official returns have now been made by the more important

[1] *The Arbitrator*, April, 1919, p. 31.
[2] *Current History Magazine, New York Times*, February, 1919, p. 243.
[3] New York *Evening Post*, March 6, 1919.

belligerents as to casualties suffered during the war. Where these fail, semi-official estimates have been made which are probably not far from the truth. In the following table these official and semi-official announcements have been brought together, and while complete accuracy can not be claimed for the figures, they are probably as accurate as it is possible to make them, at least so soon after the event. The record is an appalling one, and is sufficiently impressive to stand by itself as a memorial of the Great World War without further comment. It is as follows:

CASUALTIES OF THE GREAT WORLD WAR, 1914–1918

Country	Known Dead	Seriously Wounded	Otherwise Wounded	Prisoners or Missing
United States.....	107,284[a]	43,000	148,000	4,912
Great Britain.....	807,451[b]	617,740	1,441,394	64,907
France	1,427,800[b]	700,000	2,344,000	453,500
Russia	2,762,064	1,000,000	3,950,000	2,500,000
Italy	507,160	500,000	462,196	1,359,000
*Belgium	267,000	40,000	100,000	10,000
Serbia	707,343	322,000	28,000	100,000
Roumania[c]	339,117	200,000	[e]	116,000
*Greece	15,000	10,000	30,000	45,000
*Portugal	4,000	5,000	12,000	200
*Japan	300	[e]	907	3
	6,944,519	3,437,740	8,516,497	4,653,522
Germany	1,611,104	1,600,000	2,183,143	772,522
Austria-Hungary ...	911,000	850,000	2,150,000	443,000
Turkey	436,924	107,772	300,000	103,731
Bulgaria	101,224[d]	300,000	852,399	10,825
	3,060,252	2,857,772	5,485,542	1,330,078
Grand Total.....	10,004,771	6,295,512	14,002,039	5,983,600

* Unofficial.

[a] Includes deaths at home and in Expeditionary Force.

[b] Includes colonial casualties as follows:

	Force	Dead		Wounded	Prisoners or Missing
Great Britain:	Canada	60,383		155,799	8,671
	Australia	54,890		158,199	[e]
	New Zealand.....	16,500		41,432	45
	India	59,296		46,969	[e]
French Colonials		42,569	serious	15,000	3,500
			otherwise	44,000	

[c] Exclusive of deaths at Wallachi while controlled by Germany. Of the 18,000 prisoners taken by Bulgaria, only 7,200 were returned alive, and of the 98,000 prisoners taken by Austria and Germany, 43,000 were reported dead, 15,000 were returned alive, and the remainder were reported as still held.

[d] Exclusive of influenza deaths, and those killed in Macedonian retreat.

[e] Included in preceding column.

The wounded constitute a broad group which needs further classification before it is possible to make any estimate of the economic burden which their condition imposes upon society. The total number of killed compares with the total number of wounded in the ratio of about ten to twenty-two—a proportion which shows that in this respect, too, the Great World War has resulted in a larger loss of life than any previous recorded war.[1] A general distinction has been made between those seriously wounded or invalided and those otherwise wounded, the figures for the two classes being given as approximately 6,000,000 and 13,000,000, respectively, or in about the proportion of one to two. The degree of helplessness of the wounded determines of course the amount of social loss involved, and this can not be clearly established from the official returns. The very carefully compiled returns of the United States army show that about 85 per cent of the combat wounded are fully restored, physically and functionally, and that approximately 5 per cent are partly disabled, but capable of self-support; the remaining 10 per cent being seriously injured. This, however, is not a fair average, as life saving devices had been perfected and new knowledge gained during the early part of the war by which the United States medical staff profited. A more typical estimate based upon actual Russian army hospital experience during the first two years is given by the Copenhagen War Study Society,[2] which shows the following results:

	Per Cent
Normal ability restored on hospital discharge	44.5
Ability reduced, restoration partial	52.0
Total loss of working ability	3.1
Died of wounds	.4

The largest class, amounting to over half, consists of those whose ability has been reduced but who are capable of partial

[1] "A comparative investigation of several hundred battles of modern and recent times with respect to the proportion of killed and wounded shows that the relation may be expressed by the numerical ratio of 10 to 35."—G. Bodart, *Losses of Life in Modern Wars: Austria-Hungary, France.* Carnegie Endowment for International Peace (Oxford, 1916), p. 18.

[2] *Bulletin,* p. 24.

restoration. Their disabilities were due principally to loss of hands, arms or legs. In Germany 36.4 per cent of this group were injured in their hands or arms, and 29.8 per cent in their legs. In Russia the percentages were 51 and 35.7, respectively, for these two classes of injury.[1] If the Copenhagen table of the first two years be assumed to be applicable to the whole period of the war, and if the further assumption be made that one-half of the "prisoners or missing" are actually dead, a table may be constructed which will show the loss and degree of disability for the whole course of the war, based on these assumptions:

Actually known dead			10,004,771	
Presumed dead			2,991,800	
Total			12,996,571	12,996,571
Wounded: Normality restored	44.5	per cent or	9,032,410	
Ability reduced	52.		10,554,726	
Total loss	3.1		629,244	
Death from wounds	.4		81,190	
				20,297,570
Total casualties, as far as known				33,294,141

To estimate the value of the human lives lost in war and to include the capitalized value so determined in the aggregate cost of the war, is a procedure of doubtful statistical propriety. But as the losses from this source are enormous and the most real of all the burdens of war, it seems desirable to make a comparison of the costs involved in these losses. Even such an imperfect estimate may convey to the mind some idea of the loss sustained, which could not be definitely stated in any other way.

Since the publication by Sir William Petty in the seventeenth century, of his *Political Arithmetic,* various interesting attempts have been made to compute the value of "human capital." Assuming that the mass of mankind was, like land, worth twenty years' purchase, Petty concluded that the capitalized value of a whole people, men, women and children together, was about $400 per capita. Subsequent writers have given varying esti-

[1] *Bulletin,* Copenhagen War Study Society, August 1, 1916, p. 15.

mates based upon the productive capacity of the persons involved. Sir Robert Giffen, in his study on *The Cost of the Franco-Prussian War of 1870–71*,[1] estimated the value of the human lives lost at about $3,000 per capita, but did not include this item in his final cost. Other estimates of per capita value of the population for England have been $1,000 by Professor A. Marshall;[2] $1,500 by Dr. Farr;[3] and $6,250 by Professor J. S. Nicholson.[4] But the most elaborate, as well as the latest effort to place a monetary value upon human life, was made by M. Barriol, a French actuary.[5] He estimated the average social value of an individual in the six leading countries to be as follows:

United States of America	$4,720
England	4,140
Germany	3,380
France	2,900
Austria-Hungary	2,720
Russia	2,020

This estimate was accepted by M. Yves Guyot in an article on "The Waste of War" [6] and by Mr. Edgar Crammond, in his article already cited on "The Cost of the War."[7] But as it included women and children as well as men, it is certainly a questionable procedure to use these figures as a basis for calculating the losses involved in the destruction of men of military age, in the very prime of life, and therefore of more than average earning power. However, it is evident from this very fact that these figures err on the side of underestimation rather than of exaggeration, and that no grave error will be committted in using them. Moreover, it may be pointed out that if a capital value can be assigned to human beings, this value would today be very much higher than it was before the war, owing both to a greater

[1] *Economic Studies and Enquiries*, 1, 26–29.
[2] *Principles of Economics*, p. 564.
[3] 39th Ann. Rep. of the Registrar-General.
[4] "The Living Capital of the United Kingdom," *Economic Journal*, 1, 95.
[5] "The Social Value of an Individual," *Revue Economique Internationale*, December, 1910, and May, 1911.
[6] The Nineteenth Century and After, December, 1914.
[7] *Journal of Royal Statistical Society*, May, 1915, p. 365.

scarcity of men and to the depreciation of the money in which their value is stated.

Could the exact nature of the disabilities be known, the insurable values of the great casualty companies would afford the most accurate basis of computation, for the "price" of eye, hand, arm, finger, or leg is reduced to mathematical terms by them as a result of years of experience. The statutory right of action for wrongful death in United States and England has placed a maximum life liability of $10,000, and more recently it is reported that the claims for damages on the part of the United States against Germany were based on a valuation of $25,000 for each civilian death. The last named estimate may, however, be regarded as rather in the nature of punitive damages and may be omitted from further consideration. If the other estimates are used as the basis of a computation of the value of lives lost during the war, and of disabilities suffered, assuming that one-half those reported as "missing" are dead, and that fifty per cent of the wounded are half incapacitated, the following table of monetary loss may be arrived at:

CAPITALIZED VALUE OF LOSS OF LIFE

Known dead, 10,004,771; presumed dead, 2,991,800

Estimate:

	Numerical Toll	Valuation	Total	
Barriol—United States,	109,740	$4,720	$517,972,800	
England,	938,904	4,140	3,477,102,560	
Germany,	1,997,365	3,380	6,751,093,700	
France,	1,654,550	2,900	4,818,195,000	
Austria-Hungary,	1,132,500	2,720	3,080,400,000	
Russia,	4,012,064	2,020	8,104,369,280	
[1] Belgium,	272,000	2,900	796,800,000	
Italy,	1,180,660		2,384,933,200	
Serbia,	757,343		1,530,832,860	
Roumania,	397,117		802,176,340	
Greece,	37,500	2,020	75,750,000	
Portugal,	4,100		8,282,000	
Japan,	301		608,020	
Turkey,	488,789		987,353,780	
Bulgaria,	106,637		215,406,740	
	13,089,570		$33,551,276,280	$33,551,276,280
Petty—$400				5,196,228,400
Giffen—$3,000				38,971,713,000
Marshall—$1,000				12,990,571,000
Farr—$1,500				19,485,856,500
Nicholson—$6,250				81,191,068,750
Legal—$10,000				129,905,710,000
Average				$45,898,917,700

To the losses from death or wounds inflicted by the weapons of the enemy there must be added those resulting from disease and pestilence, privation, hardship, physical exhaustion, and similar causes. During the Napoleonic War loss from disease was said to be seven times as great as that from gunfire, but during the recent war this ratio was certainly not maintained, due on the one hand to the greater efficiency of destructive weapons, and on the other to improvement in medical science and hygiene. A new horror was added to the recent war by the introduction, as a dominant weapon, of deadly gases by the Germans and their use in retaliation by other belligerents. The permanent effects of the

[1] M. Barriol's figures were confined to the six larger powers, but there seems no impropriety in applying to the other belligerents his estimates of value. In order not to exaggerate the total, the lowest valuation given by him was applied to the other nations with the exception of Belgium, in which case the French valuation was used

gases are not yet determined, although at the present time an investigation made in Canadian hospitals to which victims of the 1915 attacks were taken, warrants the discouraging conclusion that mustard gas affects the eyes of 72 per cent of its victims, and seems to terminate fatally in over 75 per cent of the cases. Trench fever, now known to be caused by vermin of the trenches, is said to injure the hearing of those afflicted, and medical experts are still finding new developments in the course of its run.[1] Statistics have been gathered covering certain group studies of trench fever as it affects the heart: these show that in some groups as many as 20 per cent of the sufferers have been discharged as permanently unfit.[2] Shell shock has been another development of the recent war, producing derangement of the nervous system of its victims, resulting in hysteria and in extreme cases in insanity.[3] The permanent effects of shell shock have not yet been fully determined, but are being carefully studied.

Another disease which did not originate in the war, but has been terribly aggravated by it, is tuberculosis. It will probably be going too far to ascribe all cases of this disease in the army or among civilians directly to war, or to the privations induced by war, but there is no question of its fearful spread in all the European countries during the past four years. It is reported that of the 2,437,450 German soldiers in hospitals at the end of June, 1916, some 750,000 were suffering from pulmonary tuberculosis, 600,000 from heart and nerve diseases, and 500,000 from intestinal diseases.[4] During the first year of the war over 86,000 men were dismissed from the French army as physically unfit through tuberculosis.[5] It should be remembered too, that this tuberculosis developed in that period in the army, among men who had stood tests for physical fitness upon entry. Allied with this, and even more directly attributable to the trench

[1] *Surgeon General's Review* (U. S.), September, 1918.
[2] *Journal of American Medical Association*, Vol. 71, p. 21.
[3] Casualties of War, published by *Review of Reviews*, p. 126.
[4] *Bulletin*, Copenhagen Society for Study of War, p. 14.
[5] *Journal of American Medical Association*, Vol. 71, p. 882.

method of warfare, was the spread of cerebro-spinal fever in the British army in 1915, the survivors of which are reported for the most part as complete physical wrecks.[1] These various types of invalidism are included among the casualties in each country only in cases where they had so far developed as to put the sufferer out of the fighting ranks. There are, however, no international medical statistics available at this time from which the percentages of permanently invalided can be determined, though the Copenhagen Society for the Study of the War gives the following percentages based on the first two years of warfare:[2] British, 40 per cent of the "wounded" are invalided; French, 30 per cent; Russians, 23.6 per cent; Germans, 16 per cent. In view of the seriousness of wounds and gas attacks, and the rapid spread of war epidemics and diseases incident to new types of warfare, especially during the first two years, these percentages do not seem too high. Invalidism of these types, especially that due to disease, involves not merely a social economic loss, but also a social danger in so far as the disease may be contagious or infectious.

Another aspect of the subject of mortality due to war and one which has been painfully evident in the recent conflict, is that of an increase in the death rate among the civil population of the belligerent states. This has been verified in past wars but it remained for the Great World War to establish a new record in this as in so many other aspects. Among soldiers the weapons of the enemy caused most of the deaths. The ravages of epidemic diseases are far greater among the civil population than in the armies, the members of which are on the whole better fed and cared for than those in civil life. No complete statement of the loss of life among the civil populations of the belligerent countries attributable directly or indirectly to war can be given at this time. Official statistical reports are lacking in many cases, and in others the social upheavals which have taken place have prevented the compilation or publication of the data pre-

[1] *Lancet*, April, 1919.
[2] *Bulletin, loc. cit.*

sumably gathered. In the following brief survey there are brought together such official and semi-official reports as are available.

Foremost in the toll which it levied on civilian life stands the Spanish influenza of 1918. While the exact underlying cause of this disease is still in doubt, the responsibility for it has generally been fastened on the war. Complete data are not yet available, but the total number of deaths from this cause is known to have exceeded six million. It is said to have had 1,250,000 victims in the United States alone,[1] of which 30,000 deaths occurred in the army at home during 1918.

Next to this in loss of life stood the massacres of Armenians, Syrians, Jews, and Greeks. Of the two million Armenians dwelling in Turkey, it has been estimated that half perished.[2] Another authority reported:[3] "For a whole month corpses were observed floating down the River Euphrates hideously mutilated. The prisons at Biredjik are filled regularly every day and emptied every night into the Euphrates." According to the Italian Consul at Trebizond, the whole Armenian population of that town, numbering from eight to ten thousand, was destroyed in one afternoon.[4] The total number of these four nationalities which perished during and as a result of the war has been estimated at four million lives by the American Committee for Armenian and Syrian Relief.[5]

In the Balkans there was a similar loss of life. War, famine, disease, and starvation exacted a toll estimated at over 800,000 in Roumania, which would give the highest percentage of mortality in any country.[6] Early in 1919, it was reported that the census taken in the new Bulgarian territory showed that the male population of Macedonia had been reduced from 175,000 to 42,500; of Thrace from 494,000 to 225,000; while in Mustapha

[1] *Review of Reviews*, January, 1919, p. 69.
[2] Sherwood Eddy, *The Right to Fight*, p. 52.
[3] *Die Allemeine Missionszeitschrift*, November, 1915.
[4] *Economist* (London), October 9, 1915, p. 530.
[5] W. W. Earnest, *A War Catechism*, p. 51. See also Walter Littlefield, in *Current History Magazine, New York Times*, February, 1919, p. 237.
[6] Paris despatch in New York *Evening Post*, August 17, 1918.

Pasha only 4,000 males were left out of 33,000. Serbian and Austrian civilians, due to famine, "spotted typhus," privation, and disease, paid a death toll of nearly 1,000,000 lives.

The last available figures for Russia give the population of Russia in January, 1914, as 175,137,800. The normal rate of growth would have added about 10,000,000 lives to this number during the next five years, so that normally the population in January, 1919, should have numbered 185,000,000. The best estimate, however, shows that the population was probably not more than 180,000,000. The deaths among the civilian population, in excess of normal—in other words, those which may fairly be attributed either directly or indirectly to the war—have been estimated at approximately 2,000,000.[1] This estimate does not include Siberia and Finland, where the effects of the war were but slightly felt, owing on the one hand to their distance from the seat of conflict, and on the other to their predominantly agricultural and pastoral character. The direct military losses of Russia have been officially stated as 2,762,064, giving total deaths in excess of normal of nearly 5,000,000, which agrees with the estimated loss in population referred to above. In view of the reports which have come out of Russia and Poland this estimate must be regarded as a distinctly conservative one.

In less than a year and a half after the beginning of the war, it was stated of Poland: "One-third of a generation, the youngest, has practically ceased to exist, due to famine, pestilence and starvation."[2] At the end of the war, an American traveling through Poland found that children under six years of age had practically all perished from starvation.[3]

A similar record obtained for the invaded districts of France. During the German occupation of Lille, the death rate in that city increased from a normal of 19.1 per thousand in 1913, to 27.7 in 1915, and 415 (41.5?) in 1918, owing largely to tuberculosis and epidemics. After the liberation of Lille, an examina-

[1] Estimate of Dr. F. E. Lee, of War Trade Board, Russian Bureau.
[2] *Appeal of the American Poles to the British Government,* January 9, 1916.
[3] Sherwood Eddy, *op. cit.,* p. 49.

tion of the children of that city showed their development to have been arrested, and about 20,000 children to be classed as "degenerate" as a result of insufficient or bad food, disease, and malnutrition.[1]

From Germany similar reports have come of great devitalization in the civilian population due to malnutrition and insufficient food, which has resulted in tuberculosis, intestinal diseases, and other ailments. The loss of life due to these various factors during the war has been placed at 812,296.[2] The same source reports that tuberculosis had increased 50 per cent in children under five years of age, and 75 per cent among children between five and fifteen years of age.

On the other hand, the loss of life among the civilian population of Belgium, in spite of horrors of invasion, was relatively slight, having been estimated at about 30,000 during the period of the war.[3] Most of these deaths were inflicted by the invading army, starvation being reduced to a minimum by the work of the Belgian Relief Commission.

The losses among neutral seamen, fishermen in mined waters, civilian population in air raids and invaded districts, and the civilian population of belligerents on the high seas, are probably in excess of 100,000 lives.[4]

In conclusion it may fairly be estimated that the loss of civilian life due directly to war or to causes induced by war equals, if indeed it does not exceed, that suffered by the armies in the field. In view of the facts cited, such an estimate must be regarded as conservative. And yet this does not take into account the appalling effects, some of them unquestionably permanent, of war, famine, pestilence, and disease on the sufferers who did not die. Years, and perhaps generations, will be required before this sacrifice of life can be made good, and the populations

[1] Prof. Calmett's Study and Report to Pasteur, reviewed in the *Lancet*, March 15, 1919, p. 430.
[2] *Muenchener Medizinische-Wochenschrift*, January 3, 1919, quoted in the *Lancet*, March 8, 1919, p. 387.
[3] *Current History Magazine, New York Times*, February, 1919, p. 237.
[4] *Ibid.*

restored to normal. It has been estimated that to replace the numbers lost by war casualties in the male population between 20 and 44 years of age, will require ten years for the United Kingdom, twelve years for Germany, thirty-eight years for Italy, and sixty-six years for France.[1] The decrease in births during the period of the war down to the end of 1917 is stated to have been 500,000 in the United Kingdom; 1,100,000 in Austria; 1,500,000 in Hungary; 2,600,000 in Germany,[2] and 833,000 in the uninvaded districts of France.[3]

But not merely is there a retardation in the growth of the population; there results also a race deterioration. The physically fit are withdrawn from civil life and exposed to special danger from death and disease, while the perpetuation of the race is left to those rejected for military service by reason of disease, infirmity, or lack of stature. This distinction was not so important in the recent war, as almost the whole male population between 22 and 44 years of age was drafted into service, but in some respects this made the repercussion of disease on the rest of the population all the more serious. The men who are drafted into the army are of especial importance to the preservation of the racial integrity of the population by reason of their age, vigor and physical fitness. This group, in the first place—

> " . . . is composed exclusively of men, its removal thus tending to disturb the sex equilibrium of the population and to prevent normal and advantageous sexual selection. Next, these men are both all of the age of greatest life expectancy, after reaching maturity, and of greatest sexual vigour and fecundity. Finally, they are men none of whom fall below, and most of whom exceed, a certain standard of physical vigor and freedom from infirmity and disease. And for each of these men so removed from the general population, at least one other man, falling below this standard, has been retained in the civil population. All

[1] La Franco Savorgnan, *Le probleme de la population apres la guerre,* summarized in *Scientia,* March, 1918.
[2] *Journal of Royal Statistical Society,* January, 1918.
[3] *Economist* (London), March 8, 1919, p. 450.

> this is, in effect, the establishment of a kind of selection, a military selection, whereby a most desirable element of the population is restrained from contributing its full and its particularly important influence in the determination, through heredity, of the racial standard of the population."[1]

In the preceding pages an effort has been made to place a money value on the army losses of the belligerents. If it be assumed that civilian losses were equal in number to those resulting from actual warfare, which were valued at $33,551,000,000, it would not be improper to add as much again for the capitalized value of civilian life lost during the war. Although many of these were children and old persons, instead of men in the prime of life, this fact is offset by the conservative character of the numerical estimate. Granting the propriety of placing a capital value on human life, the total amount of losses, both civil and military, on the basis of M. Barriol's computation, which includes women and children as well as men, may then be set down as $67,000,000,000.

Loss of Property

It is a relief to turn from the tabulation of the loss of human life to that of property, for serious as this has been, it does not involve the same elements of suffering and anguish. From a purely statistical standpoint, however, the attempt to determine property losses is the least satisfactory, as it is the most difficult. The destruction and devastation in the invaded areas of Belgium, France, Russian Poland, Roumania, Serbia, Italy, and parts of Austria are probably incapable of exact determination and it may well be doubted if the exact losses will ever be known. Estimates vary now by many millions, and some factors seem to defy any accurate computation. Agricultural experts seriously doubt whether the vast areas of Belgium and France which have been churned and riddled by trenches and shell holes, and satu-

[1] V. Kellogg, *Military Selection and Race Deterioration*, Carnegie Endowment for International Peace (Oxford, 1916), p. 178.

rated with noxious gases, chemicals, liquid fire, and other substances which destroy the productive properties of the soil, can be made fertile for many years to come. Only the most intensive culture made the great crops possible before the war, and it well may be that "grass will not grow where the foot of Attila has trod." Should time confirm this hypothesis, the loss will not be measurable.

Belgium covered 12,000 square miles, and, with its population of 7,423,784, was the most densely inhabited country in Europe. Practically the whole area save a strip along the west coast was invaded; crops were taken, factories denuded of machinery, mines worked and in retreat destroyed; cotton spindles confiscated or destroyed, and pillage or wanton destruction systematically carried out. During the German occupation heavy levies were made upon the towns and communes, and in addition to these, fines and seizures were imposed, in all amounting to about $2,000,000,000. The total property losses inflicted upon Belgium have been estimated at between $6,755,000,000 and $7,600,000,000; the bill presented by Belgium to the Peace Conference Committee on Reparations was between $7,000,000,000 and $8,000,000,000.[1] A fair estimate of the property loss to Belgium would therefore seem to be about $7,000,000,000.

Equally systematic was the destruction in the invaded districts of France which comprised eleven of the most prosperous departments. There fell into the hands of the Germans 2,554 communes with a population of nearly 4,000,000. About 8,000 square miles of the agricultural lands were laid waste, and 500,000 buildings damaged, of which 250,000 were completely destroyed. In over 500 of these communes the ruins will have to be razed to the ground to permit of reconstruction; this is true of Arras, Albert, Compeigne, Rheims, Hazebrouck, and Bethume. The devastation is only a little less complete in Amiens, Clermont, Beauvais, Senlis, Epernay, Chalons, Bar-le-Duc, Toul, and Nancy. It is reported that nearly 1,500 schools, 1,200 churches,

[1] *New York Times*, March 10, 1919.

377 public buildings, and over 1,000 industrial plants were completely destroyed. Railroads, bridges, power plants, and other public utilities were systematically put out of business.

The loss to agriculture was very great. It is impossible to determine the extent to which the productive properties of the soil have been destroyed, but the loss of agricultural implements alone is estimated at $2,000,000,000. In addition to this, cattle and stocks of material and crops were taken or destroyed. Fruit trees were cut down and the forests utilized. The destruction of France's coal mines in the Valenciennes basin during the retreat of the Germans is well known. The same procedure was followed in the iron industrial sections of Briey and Longwy and Meuthe-et-Moselle. The textile industries which lay in the path of the invader, the sugar refineries, breweries, machine shops, foundries, and other industrial plants were stripped of their machinery and supplies. Over 1,200,000 acres of valuable forests were laid waste.

The total destruction in France was placed at $13,000,000,000 by M. Dubois, of the Committee on Budget, in the Chamber of Deputies in December, 1918.[1] On the other hand, Franz Sigel, president of the Friends of German Democracy, estimated it at $6,219,088,000.[2] Perhaps the average of these two opposing estimates, in round numbers about $10,000,000,000, will give as close an approximation to the truth as is likely to be secured at the present time.

While Russia is an agricultural country and did not suffer the same losses as those to which Belgium and France were subjected, the property damage was serious and may be estimated at $1,250,000,000.

The destruction in Poland, where rich mine shafts were destroyed, crops burned, bridges ruined, railroads cut, foodstuffs taken, machinery broken or confiscated, with Kovno, Courland,

[1] *New York Times*, January 26, 1919, Sec. 3, p. 6. A detailed report is there reprinted, which was made by Mr. George B. Ford, head of the Research Department of the American Red Cross in France. The estimate of M. Dubois is described as "somewhat high."

[2] *Ibid.*, p. 8.

Vilna and Grodno looted if not destroyed, has been placed at $1,500,000,000.

In Serbia the destruction was systematic and thorough. Public buildings, libraries, schools, churches, dwellings, railroads, all went down before the approaching vandals. The property damage in Serbia, Albania and Montenegro has been estimated at $2,000,000,000.[1]

Property destruction in East Prussia, Austria and Ukraine may be placed at $1,000,000,000.

Italy was invaded in the north—her most vulunerable spot. In nothern Italy lies her best agricultural land, which in 1913 produced half of all her products, and which supports 44 per cent of her total population and 64 per cent of all her industrial workers. The 1917 invasion covered the territory up to the Piave and Brenta rivers. This damage has been estimated at $2,710,000,000.

The invasion and seizure in Roumania of the vast wheat stores and oil fields, the property destruction, and other devastation, caused losses estimated at $1,000,000,000.

The property damage throughout the British Empire may be placed at about $1,750,000,000.

The property destruction in Germany as a result mostly of air raids can scarcely have been less than in Great Britain, and may be set down at $1,750,000,000.

SUMMARY OF PROPERTY LOSS

Belgium	$7,000,000,000
France	10,000,000,000
Russia	1,250,000,000
Poland	1,500,000,000
Serbia, Albania, Montenegro	2,000,000,000
East Prussia, Austria, Ukraine	1,000,000,000
Italy	2,710,000,000
Roumania	1,000,000,000
British Empire	1,750,000,000
Germany	1,750,000,000
	$29,960,000,000

[1] *New York Times*, March 10, 1919.

Loss of Merchant Shipping

Shipping losses during the war have been carefully reported and official statements have from time to time been given out. The British Admiralty office has published accurate statistics on the losses of British and allied and neutral tonnage; but that of the Central Powers is less exact, as official announcements are either lacking or else confuse seized and interned with sunk tonnage. As seized and interned vessels do not represent a loss, but merely a transfer of possession, these should not be counted in estimating the property losses resulting from the war. The actual losses, based on official returns, are given in the following table:[1]

[1] United States Shipping Board, Division of Planning and Statistics, Report No. 572.

GROSS TONNAGE OF SEAGOING MERCHANT VESSELS LOST AUGUST 1, 1914–NOVEMBER 11, 1918

Countries	Total	Enemy Action	Marine Risk
WORLD TOTAL	15,398,392	13,007,650	2,390,742
ALLIES AND NEUTRALS	15,027,718	12,743,674[a]	2,284,044
United States	825,417	394,658	430,759[b]
Great Britain	8,899,659	7,756,659	1,143,000[c]
Other countries	5,302,642	4,592,357	710,285[d]
Norway		1,177,001	
Italy		846,333	
France		888,783	
Denmark		240,860	
Sweden		200,829	
Greece		345,516	
Russia		182,933	
Holland		203,190	
Spain		167,865	
Portugal		93,136	
Belgium		83,819	
Japan		120,176[f]	
Brazil		25,464	
Argentine		4,275	
Uruguay		6,027	
Peru		1,419	
Roumania		3,973	
Persia		758	
ENEMY COUNTRIES	370,674	263,970	106,698
Germany	273,605	187,340	86,265[e]
Austria	35,599	15,166	20,433[e]
Turkey		61,470	

[a] Recorded by British Admiralty, unconfirmed by official reports of other countries.

[b] U. S. Shipping Board, Division of Planning and Statistics Report for vessels over 500 gross tons.

[c] No figures available for further distribution of marine risk losses.

[d] Tabulated by Statistical Branch, British Ministry of Shipping for vessels 500 gross tons and over, July 1, 1914–October 31, 1918.

[e] From British Admiralty's Report of *German and Austrian Mercantile Vessels* and from reports of the Allied Maritime Transport Council as reported to February 1, 1919.

[f] According to an article in the *Japan Advertiser,* reprinted in *Commerce Reports* (June 16, 1919, p. 1384), the gross tonnage of Japanese vessels sunk during the war amounted to 128,415, of which, however, only 17,964 tons were regarded as having been sunk by enemy action.

The British, allied and neutral shipping losses, by quarters, are shown in the following official returns of the British Admiralty Office:

Period	British	Allied and Neutral	Total
1914: August and September	314,000	85,947	399,947
4th quarter	154,728	126,688	281,416
1915: 1st quarter	215,905	104,542	320,447
2nd quarter	223,676	156,743	380,419
3rd quarter	356,659	172,822	529,481
4th quarter	307,139	187,234	494,373
1916: 1st quarter	325,237	198,958	524,195
2nd quarter	270,690	251,599	522,289
3rd quarter	284,358	307,681	592,039
4th quarter	617,563	541,780	1,159,343
1917: 1st quarter	911,840	707,533	1,619,373
2nd quarter	1,361,870	875,064	2,236,934
3rd quarter	952,938	541,535	1,494,473
4th quarter	782,889	489,954	1,272,843
1918: 1st quarter	697,590	449,330	1,146,920
2nd quarter	630,506	332,864	963,370
3rd quarter	510,551	381,995	892,546
Oct. 1 to Nov. 11	113,689	109,689	223,378
Totals	9,031,828	6,021,958	15,053,786

It is difficult to reduce the tonnage losses to a monetary value owing to the wide difference in the value of the vessels sunk, varying as they did from old wooden sailing vessels to modern steamships of the latest type. The cost of construction probably varied from $75 to $200 a ton, but as much of the tonnage sunk in the early part of the war was replaced during 1917 and 1918, and further replacement will be carried on during 1919 and subsequent years at the highest level of prices, the construction cost of the tonnage loss can scarcely be estimated at less than $200 a ton. The monetary loss involved in the sinking of this 15,398,392 gross tons may therefore be placed at about $3,000,000,000.

The loss does not stop, however, with the sinking of the vessels; there is also the cargo to be considered. A semi-official estimate of the United States Shipping Board places average cargo value at about $250 a ton at normal prewar prices. In view of the fact that during the war period many of the ships sunk were carrying foodstuffs and other valuable products running as high as thousands of dollars a ton, such an estimate must be regarded as very conservative. In fact, the high freight and

insurance rates kept all but valuable cargo from being shipped, so that the average value must as a matter of fact have been much higher than $250 per ton, without taking account of the higher prices which prevailed during the latter part of the war. It has further been estimated that fully two-thirds of the tonnage carried cargo.[1] At $250 a ton, this gives a total cargo loss of $3,800,000,000.

The total tonnage and cargo loss together therefore amounted to $6,800,000,000.

Other estimates have placed this loss at $6,904,922,272, and at $7,500,000,000.[2]

Loss of Production

In addition to the direct money outlay and the losses resulting from the destruction of human life and property, there is another indirect cost which must be chronicled; this is the loss of production suffered by the belligerent nations during the war period. In the case of civil wrongs the law measures the damage as "the amount which will place the aggrieved in the same situation he would now be in had the tort not been committed." A similar standard may be applied to war costs of this character. In the days of national duels the item classified as "loss of production" was arrived at by taking the number of men withdrawn from industry and maintained under arms; the period of their withdrawal was then determined, and their usual and ordinary production in terms of money was multiplied by the number, and the result held to be the total loss of production. But in such a titanic conflict as the Great World War such a method of computation can not be applied. The war was fought not merely by the armies in the field; it was carried on by whole nations, most of whose workers were withdrawn from useful wealth production, and mobilized in the production of war materials for destructive ends. Munitions workers were as far removed

[1] The British estimate is that three-fourths of the sunk tonnage carried cargo.

[2] *Twenty-four Billions*, pamphlet published by Bankers Trust Company of New York, 1919, p. 7; and *World's Work*, Vol. 39, pp. 275-280.

from normal production as were the men called to the colors. That this was so regarded by those in military authority is seen from the changes in the deferred classifications as conscription proceeded.

In 1917 at least 38,000,000 men in the world were under arms. This aggregation was gradual, however, and perhaps half that number only was at any one time in the field. An average of 20,000,000 men may therefore be estimated to have been withdrawn from production during the whole period of the war, and this calculation may be considered a very conservative one. But in addition to these, as already stated, the labor of a multitude of others was devoted equally to destructive ends. On the other hand, as an offset to the loss in production involved in these two cases, some of the work being carried on, by both those in the field of battle and those engaged in war work behind the lines, was productive in the ordinary sense of this term. Moreover, there was a considerable addition to the labor force in most of the countries through the influx of women, young persons, and elderly persons not normally employed in production. And finally, under the stimulus of patriotism, high wages, and the bonus system, there was an undeniable speeding up in all the belligerent countries. There seems little reason to doubt, however, that the losses involved in the diversion of civilian workers to purely destructive ends far outweighed the gains just described. Since, however, any such computation is highly speculative, it will be safer to err on the side of conservatism, and to estimate that the losses and gains offset each other. In this case the loss of production would be restricted as under the old computation to the withdrawal of men actually in the field, namely, an average of 20,000,000 men for four and one-half years. An ascription of an average productive capacity of $500 a year to each of these men would mean a total loss of production amounting to $45,000,000,000.

It is evident that the diversion of labor and capital in any such amount must have shown itself, not merely in a cessation of expansion of existing enterprise and the expansion of new

ones, but also in the lack of adequate maintenance and care of existing undertakings. Railways have run down, machines have become obsolete and have not been replaced; repairs have not been made, and in practically every material aspect the belligerent nations of Europe have retrograded during the war. It is impossible to say how long a time must elapse before these nations will be able to regain their prewar economic status, but it will certainly be years, and it may be generations.

War Relief

In addition to the increase in national debts, loss of life and property, loss of production, and other war costs, there must be reckoned the vast sums of money voluntarily contributed to war relief. These can be enumerated only for the English speaking belligerents, as the amounts for the other countries are not at hand. This limitation does not therefore mean that the countries not listed did not raise and expend funds for like purposes, but simply that the data concerning them are not available. In France, Italy, Germany, and other continental European countries like Holland, Switzerland, Scandinavia, and in some of the Balkans, civilian relief and army hospital work became a matter of government finance, and to that extent is included in the national debt. Among the English speaking belligerents vast sums were voluntarily contributed to the actual hospital work for the battle wounded, and also for the relief of civilian distress caused by the absence of the breadwinners.

In the United States each philanthropic mission collected its own moneys and disbursed them under its own auspices, with little or no coordination until the year 1918, when seven of the larger associations temporarily amalgamated, each taking a particular branch of the work, thus avoiding duplications, and waste of effort. At the same time, the finances of these seven activities were collected under joint effort, apportioned among them, and spent in their various branches. The sums collected and expended on war relief by these respective organizations, up to the amalgamation, are as follows:

American Red Cross	$250,000,000
Young Men's Christian Association	55,000,000
Young Women's Christian Association	5,000,000
Knights of Columbus	11,249,529
Jewish Welfare Board	20,000,000
American Library Association	1,014,076
War Camp Community Service	15,000,000
Salvation Army	2,485,000
	$359,748,605
United Drive of 1918	203,179,038
	$562,927,643
Rockefeller Foundation[1]	3,087,385
Belgian Relief Work, private contributions	9,000,000
Other contributions, estimated	50,000,000
	$625,015,028

CANADA: Canada's private contribution to war relief totaled over $90,000,000, distributed about as follows:

Civilian distress	$44,000,000
Red Cross, cash	12,000,000
Red Cross, supplies	15,000,000
Belgium, cash	1,500,000
Belgium, supplies	1,500,000
French-Serbian-Polish relief	8,000,000
Young Men's Christian Associatio	4,500,000
Donation to British war relief	5,250,000
	$91,750,000

GREAT BRITAIN: A complete record of Great Britain's contribution to war relief is not obtainable, and the partial enumeration of known items must not be taken as a full measure. As far as known, these amounted to:

British Red Cross, for four years of war	$72,112,000	
Prince of Wales relief fund	15,000,000	
	$87,112,000	
New Zealand: to March 31, 1917	17,585,000	
Australia: to August, 1917	36,000,000	
South Africa: to end of 1917	10,000,000	
Newfoundland	3,000,000	
India, Relief Fund	3,600,000	
	$70,185,000	
Total		$874,062,028

[1] The actual sum expended by the Rockefeller Foundation was $22,444,814, but of this sum $8,000,000 was contributed to American Red Cross and appears in its figures, and $5,100,000 was contributed to the United War Work fund, besides about $4,000,000 contributed to the several philanthropies before they united.

Cost to Neutral Nations

In any complete account of the costs of the war there must be included the expense to which the neutral nations were put in maintaining their neutrality and guarding their frontiers. The cost of these "neutrality watches" was almost as great as actual belligerency, especially in the cases of Holland and Switzerland, where mobilization of armies was felt to be necessary. The cost of the war to the neutral nations may be measured by the increase in the debt and by the additional taxes levied. There were in all the neutral countries increases in the fiduciary currency, but as these were made by banks and not by the governments direct, they can not be regarded as constituting a part of the cost of the war, although by inflating the currency they doubtless helped indirectly to raise the total.

Holland: The public expenditure in Holland rose steadily during the period of the war, as shown in the following table:

PUBLIC EXPENDITURES OF HOLLAND

Year	Amount
1913	$95,200,000
1914	143,600,000
1915	124,000,000
1916	210,800,000
1917	261,600,000
1918	330,000,000

This increase in expenditure must be attributed to war, either directly or indirectly for mobilization purposes, or as a result of higher prices due to scarcity and universal inflation. The expenditures were met in part by war taxes which may be estimated at about $180,000,000, and in part from loans. The national debt, which amounted at the beginning of 1914 to $459,200,000, had risen by the end of 1918 to $832,400,000, or an increase of $373,200,000. In addition to this there was a floating debt of not less than $120,000,000 in Treasury bills and advances from the Bank of the Netherlands. The total cost of the war to Holland may therefore be set down at approximately $672,000,000.

SWITZERLAND: Switzerland's debt rose from $29,200,000 at the end of 1913 to $275,600,000 at the signing of the armistice, or an increase of $244,400,000. In addition to this, special war taxation yielded a sum which up to the end of 1917 was stated as $33,844,400, and by the end of 1918 may fairly be estimated to have reached $45,000,000. Loans and taxes together would therefore give a total cost to Switzerland of about $250,000,000. The increase in the debt is shown in the following table:

GROWTH OF SWISS DEBT, 1913 TO 1918

(In thousands of dollars)

Debt	1913	1914	1915	1916	1917	1918
Consolidated....	29,254	48,962	81,104	113,520	120,750	180,550
Floating.....	.....	11,200	21,100	44,500	73,940	95,000
Total.....	29,254	60,162	102,204	158,020	194,690	275,550

SWEDEN: In contradistinction to most of the other countries, Sweden met the additional expenditures occasioned by the war out of increased taxation, rather than loans. The total receipts of Sweden for the years 1913 to 1918 are shown in the following table:[1]

SWEDEN'S RECEIPTS, 1913 TO 1918

Year	Amount
1913.....	$46,355,000
1914.....	45,557,800
1915.....	54,114,280
1916.....	79,926,340
1917.....	122,866,140
1918.....	157,533,000

If the receipts for the year 1913 be assumed to be normal, the excess of receipts above normal during the years 1914 to 1918 amount to $228,222,560, which may be regarded as additional war taxation. The largest single source from which this was derived was the war profits tax. In addition to the increased taxation levied, loans were placed to a total amount of $93,600,000, to which must be added an increase of $107,800,000 in the float-

[1] Karl Hildebrand, De Svenska Statsmakterna och Krigstidens Folkhusallning, 1918. Stockholm, 1919, Appendix, pp. 3–4.

ing debt. Together these three items yield a total of approximately $429,800,000 which may be set down as the cost of the war to Sweden. The increase in the debt is shown in the following table:[1]

SWEDEN'S DEBT, 1913 TO 1918

Dec. 31	Funded	Floating	Total
1913	$125,646,086	$4,012,800	$129,658,886
1914	140,276,106	8,690,525	148,966,631
1915	163,610,439	7,363,700	170,974,139
1916	187,108,573	11,540,583	198,649,156
1917	201,783,017	28,062,143	229,485,160
1918	219,373,249	111,862,354	331,235,603

NORWAY: The measure of the cost of neutrality to Norway may fairly be said to be the increase in her national debt from $72,000,000 in 1913, to over $160,000,000 in 1918. Data as to increased taxation are lacking. If, however, it be assumed that half as much was raised by war taxes as was derived from loans, a total of, say $130,000,000 would be obtained, which may be taken as an estimate of the cost of neutrality to Norway.

DENMARK: Denmark kept her war and civil budgets distinct, and just before the armistice, in presenting the 1918–19 budget, the Minister of Finance announced that the war debt of Denmark then stood at $60,000,000. This, however, does not measure the total war cost, as Denmark met a fair percentage of the increased expenditures out of new tax levies. If these be estimated, as in the case of Norway, at 50 per cent of the loans, the total war cost would amount to $90,000,000.

The picture of the effect of the war on the three Scandinavian countries would not be complete without taking into account the currency changes. The inflation and the changes in the price level are shown in the following brief table of percentages of increase between 1914 and 1918:

[1] *Ibid.*

INCREASE IN NOTE CIRCULATION AND PRICES, 1914 TO 1918

Country	Percentages of Increase in Note Circulation	Prices
Sweden	182.5	103
Norway	204.9	147
Denmark	133.4	82

SUMMARY

Cost of war to	Holland	$672,000,000
	Switzerland	250,000,000
	Sweden	429,800,000
	Norway	130,000,000
	Denmark	90,000,000
	Total	$1,571,800,000

No other neutral nations were compelled to make expenditures at all comparable with those of the five countries just described, but yet none was able to escape some added burdens rendered necessary by the maintenance of neutrality. Little mistake will be made if an additional allowance of $200,000,000 is made to cover such countries as Spain, Argentine, and other Latin American states. The total cost of the war to neutrals may then be set down in round numbers as $1,750,000,000.

CONCLUSION

In conclusion, an attempt may be made to bring together the scattered data of this study into one final comprehensive picture which shall show the total cost of the war. The direct costs were estimated at $186,000,000,000. The indirect costs are now seen to have amounted to almost as much more.[1] The combined direct and indirect costs are set forth by the principal items in the following table:

DIRECT AND INDIRECT COSTS OF THE GREAT WORLD WAR

Total direct costs, net		$186,233,637,097
Indirect costs:		
Capitalized value of human life:		
Soldiers[2]	$33,551,276,280	
Civilians	33,551,276,280	
Property losses:		
On land	29,960,000,000	
Shipping and cargo	6,800,000,000	
Loss of production	45,000,000,000	
War relief	1,000,000,000	
Loss to neutrals	1,750,000,000	
	$151,612,552,560	
Total indirect costs		151,612,552,560
Grand total		$337,846,189,657

The figures presented in this summary are both incomprehensible and appalling, yet even these do not take into account the effect of the war on life, human vitality, economic well being, ethics, morality, or other phases of human relationships and activities which have been disorganized and injured. It is evident from the present disturbances in Europe that the real costs of the war can not be measured by the direct money outlays of the belligerents during the five years of its duration, but that the very breakdown of modern economic society might be the price exacted.

[1] According to press reports from Paris, the Peace Conference Committee on reparations presented a first report in which the losses to the Entente Allies were stated as $120,000,000,000, and which proposed that this amount should be exacted from the Central Powers as indemnity. Later this sum was scaled down to a much lower figure, as only non-military property damage was included. *New York Times,* March 4, 1919.

[2] No attempt has been made to place a money value on the crippled soldiers and the invalided and devitalized army and civilian population. If this were included the totals would be considerably increased.

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