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## GERMAN FINANCE IN WORLD WAR II

By RICHARD W. LINDHOLM\*

### *Comparative Analysis of German Fiscal Policy*

The procedures used by Germany to finance World War II cannot be considered unusual with the exception, perhaps, of taxes levied on conquered people. In fact, the methods employed by Germany are sufficiently similar in many respects to those used by Great Britain and the United States that comparison of the results obtained amounts to an examination of the relative efficiency with which each nation employed the same fiscal tools. This study except for a very cursory examination of the broadest aspects of the financing of the war in Great Britain and the United States will concern itself with an examination of the manner in which Germany tapped the conventional sources of governmental revenue and the flow of funds which she obtained. Also, attention will be paid to: (1) the indications of wartime economic conditions inside Germany which are shown by revenue receipts, and (2) the relative importance of occupation charges assessed by the Nazis.

Table I below summarizes the World War II expenditures and taxes of Germany, Great Britain and the United States. The years selected as comparable were determined upon the basis of wholesale prices and tax receipts. The earlier year is the fiscal year which witnessed the jump in wholesale prices prior to the inauguration of rigid price controls and the later year is when each of the three nations had completed the transfer to a total war economy.<sup>1</sup>

It is worthy of mention that the United States entered the total war period paying a smaller portion of her expenditures from tax receipts than did Germany. With the complete establishment of the war economy, however, the portion of total United States expenses paid with taxes became comparable with that paid in Germany in 1939 and re-

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<sup>1</sup> The data regarding German finances not supported by further source reference were obtained by the writer from the files of the Statistisches Reichsamt in August and July of 1945. The Statistisches Reichsamt is in the Russian section of Berlin and is not available to Americans for economic research. It is believed vital portions of the data have now been removed from Berlin. The writer was given invaluable aid by the following economists of Berlin: Professor Merwarth, Dr. Ferdinand Hotte, and Dr. Hans Schultz. Dr. Karl Heinrich Knappstein of Frankfurt am Main gave valuable interpretive assistance.

mained comparable with Great Britain.<sup>2</sup> Also, when completely mobilized, the United States war effort was about twenty-five per cent greater than the combined achievements of Germany and Great Britain.

Total war meant different things to the populations in the three nations. In all three countries however, it was the extent to which the government could, or did, induce the population to support the war

TABLE I.—COMPARATIVE FINANCE DATA OF GERMANY, GREAT BRITAIN, AND UNITED STATES FOR THE FISCAL YEARS INDICATED IN THE BODY OF THE TABLE (in millions of dollars)<sup>a</sup>

Item	Germany	Great Britain	United States
Expenditures of central government	1939—21,200 1942—51,200	1940—15,883 1944—24,252	1942— 32,491 1945—100,397
Per cent of increase	141	53	209
Receipts of central government	1939— 9,440 1942—16,160	1940— 5,981 1944—12,952	1942— 12,799 1945— 47,740
Per cent of increase	71	119	273
Per cent receipts of total expenditure	1939—45.4 1942—31.6	1940—38 1944—53	1942—39 1945—46
National income	1939—36,000 1942—40,000	1940—23,780 1944—33,336	1942—107.7 1945—156.9
Per cent of increase	11	40	46
Per cent receipts of national income	1939—26 1942—40	1940—24 1944—39	1942—12 1945—29

<sup>a</sup> Throughout this study pounds have been valued at \$4.00 and marks at 40 cents.

Source: German: *Statistische Jahrbuch 1941-1942*, p. 605, national income 1939. Other German data, Statistisches Reichsamt, August, 1945. Great Britain: *Statesman Year Book 1945*, p. 37, expenditure and tax data; *Statistical Year Book of the League of Nations 1942/44*, pp. 282, 287, national income data. United States: *Treasury Bulletin*, Sept. 1946, p. 6 receipt and expenditure data; *Survey of Current Business*, March 1943, p. 21 and February 1946, p. 7, national income data. U. S. national income data adjusted on basis of average monthly expenditures.

effort. The varying completeness with which the efforts of the populations were included can be visualized rather accurately by comparing central government expenditures with estimates of national income. Such a comparison is included in Table I.<sup>3</sup>

The necessity of using similar data for the three nations has required

<sup>2</sup> Tax collections by local governmental units are much greater in the United States than in either Great Britain or Germany. For example, in 1941 tax collections of local governmental units amounted to 7.9 billion dollars in the United States, in Great Britain .9 billion dollars. Thus, tax collections of the various national governments are not entirely comparable.

<sup>3</sup> German war expenditures include conquered-area receipts which do not appear to have become a part of the German national income total.

the use of national income data and has in addition dictated that the comparisons be made on a fiscal year basis. Warning is given again that national income data of different nations are only roughly comparable under normal conditions and under war conditions this degree of comparability is considerably reduced.

The taxes collected from the German people in 1942 were a smaller percentage of the national income than ever became the case in either Great Britain or the United States. The portion of national income collected in taxes in Germany at the beginning of hostilities was roughly equal to the highest point reached by the United States.<sup>4</sup>

During the periods selected for comparison British central government expenditures rose by 53 per cent and national income by 40 per cent while in the United States expenditures by central government increased by 209 per cent but national income by only about 46 per cent. Thus, the national income increases of the two nations were approximately the same but the United States was able to extract a four-fold greater increase in central government expenditures than was Great Britain. The situation in Germany was similar to that existing in the United States. Germany increased central government expenses by 146 per cent while national income increased by only 11 per cent. Reduction of local government expenditures and sharp curtailment of civilian durable consumer goods production made this achievement possible in the United States; tributes from conquered nations and also reduction in consumer goods production made it possible in Germany.

#### *German Taxes and Tax Collections*

Data regarding the methods used by the Germans to finance their tremendous military operations have been meager and, at the most, cursory in nature. It was very difficult if not impossible to obtain accurate information regarding tax receipts of the Reich during the period of her rearmament and, of course, also during the war phase.<sup>5</sup> The best available data are summarized in Table II. Some of the particular tax receipt trends are interesting in themselves.

The receipts from the personal income tax more than doubled from 1938 to 1943. This tax, which brought in only 5.4 billion marks in 1938, the peak of the rearmament period, was made to yield 13.4 billion marks in 1943. This is an increase of about 148 per cent in personal income tax receipts. During the same period Reich tax receipts rose from 17.8 bil-

<sup>4</sup> German wholesale prices 1939-1942 increased 8%, from *14th Annual Report of Bank for International Settlements*, p. 74. United Kingdom wholesale prices, 1940-44, increased 33%, *ibid.*, p. 84. The BLS wholesale price index increased 7.8% from 1942 to 1945.

<sup>5</sup> Otto Nathan has given Reich tax receipts for 1932-38 on p. 320 in *The Nazi Economic System* (1944).

TABLE II.—VARIOUS GERMAN TAXES AND RECEIPTS FOR THE FISCAL YEARS  
BEGINNING APRIL 1, 1938–1944

Types of Tax <sup>a</sup>	Total Receipts (billion marks)						
	1938	1939	1940	1941	1942	1943	1944
1. Tax upon income (a+b+c+tax upon returns upon investment)	5.4	8.2	10.7	13.1	12.7	13.4	
a) Tax upon wages (retained before paying)	2.1	2.7	3.0	4.2	4.3	5.0	
b) Assessed income tax	3.2	4.4	5.1	8.8	8.2	8.2	
c) Additional war tax upon income (only 1939–40)		1.1	2.5				
2. Corporation tax	2.4	3.2	3.5	5.1	6.9	6.7	
3. Tax upon property	0.4	0.4	0.6	0.6	0.7	0.7	
4. Turnover tax	3.4	3.7	3.9	4.2	4.2	4.2	
5. Taxes upon stock exchange	0.5	0.5	0.5	0.5	0.5	0.4	
6. Taxes on transport	0.5	0.5	0.5	0.6	0.7	0.8	
7. Total income and business taxes <sup>b</sup> (1–6)	13.1	18.7	21.1	25.0	27.6	27.8	
8. Tobacco tax	1.0	1.2	1.6	1.6	1.5	1.3	
9. Beer tax	0.4	0.5	0.5	0.7	0.7	0.3	
10. Additional war tax upon retail price of tobacco and beer		0.8	1.6	2.2	2.7	2.6	2.0
11. Sugar tax	0.4	0.5	0.5	0.6	0.5	0.6	
12. Customs duties	1.8	1.7	1.4	1.1	1.8	0.6	
13. Total excise taxes and customs <sup>c</sup> (8–12)	4.7	6.1	7.0	7.3	6.8	6.6	
14. Total tax receipts (net)	17.8	24.8	28.1	32.3	34.4	34.4	31.0 <sup>d</sup>
15. War contribution (states, provinces, communities, etc.)		0.8	1.4	1.4	1.7	1.7	2.5
16. Redemption of real estate tax (raised because of currency inflation and tax on trade 1943–1944 <sup>e</sup> )					8.0	3.7	3.3
17. Total tax receipts <sup>f</sup>	17.8	25.6	29.5	33.7	44.1	39.8	36.8

<sup>a</sup> Totals include only the taxes collected from areas which were a part of the Reich prior to April 1, 1938; Austrian tax receipts included for the period 1939–44.

<sup>b</sup> The amount which item 7 exceeds the sum of items 1 through 6 is the sum collected from the miscellaneous business taxes.

<sup>c</sup> The amount which item 13 exceeds the sum of items 8 through 12 is the amount collected from miscellaneous excise taxes.

<sup>d</sup> Breakdown not available.

<sup>e</sup> The amount included under item 15 represents largely the return to the Reich by local governmental units of their quotas of various taxes. This, of course, results in double counting. The redemption of the tax on real estate was assessed by the states, and the tax on trade was assessed by the communities.

<sup>f</sup> Statistics on tax yields taken from Ostrow's "Preliminary Study of German Government Finance," pp. 197–199. Vol. I of *Preliminary Report on Selected Financial Laws. Decrees and Regulations* by Clifford J. Hynning of the U.S. Treasury. Data are for fiscal years 1938, 1939, 1940.

Source: See footnote 1 and Table I source.

lion marks, to 34.4 billion marks, an increase of 93 per cent. The elasticity of the German personal income tax proved to be considerable. In fact it provided the Reich tax system with the required responsiveness.

The corporation and personal income taxes totaled 7.8 billion marks in 1938, a year in which the total Reich tax receipts equalled 17.8 billion marks. Thus in 1939, 10 billion marks were raised in taxes from sources other than the corporation and personal income tax. In 1943, corporation and personal income taxes equalled 20.1 billion marks and total tax revenues 34.4 billion marks. This was a yield from other tax sources of 14.3 billion marks, and an increase of 43 per cent over that of the pre-war 1938 figure, as compared with an increase for the same period of 148 per cent in income tax receipts.

The greater stability of the Reich tax sources other than corporation and personal income taxes was to be expected. It was not expected, however, that revenue receipts arising largely from the sale of goods and services would be maintained after the strict rationing had been put into effect and after considerable damage had been inflicted on many of the Reich's principal cities.

The increase in the revenue received from these other taxes (other than income and corporation taxes) arose largely from rising revenues from the turnover tax and from the increased taxes on tobacco and beer. Customs duties, of course, showed a marked decrease. The downward trend in customs receipts continued steadily from 1938 to 1944, falling from 1.8 billion marks in 1938 to .6 billion marks in 1943.

The Nazi government during the progress of the war developed very few additional sources of revenue. One new source of revenue was the contributions made by states, provinces, associations of communities and communities to the Nazi central government from funds raised from local taxes and voluntary citizen contributions. These are extraordinary revenues and, being to a certain extent Reich obligations to repay, were not included in the above analysis. An additional source of funds to the Reich which became available in 1942 and continued to the end of the war was the redemption of the tax on real estate (capitalization of house rent tax).<sup>6</sup> After the inflation of World War I the German government levied a tax upon persons who had paid off the mortgages on their homes by the use of the highly inflated mark. In 1942 the Nazi government capitalized this annual income which again permitted the repayment of these mortgages in inflated money. This action brought in 8 billion marks in 1942 and 3.7 billion marks in 1943 and 3.3 billion marks in 1944. This revenue arose to a certain extent as the result of the sale of an asset and is not a tax revenue in the ordinary sense although the original ac-

<sup>6</sup> The 1943 and 1944 figures also included return to the Reich of the local tax on trade.

tion of the German government in fixing these new liabilities after the World War I inflation was similar in some respects to a tax which various countries have levied at times and called by different names, sometimes an "unjust enrichment tax."

The turnover tax (general sales tax) rates remained the same throughout the period 1938-44. The receipts from this tax may, therefore, be used as a basis for estimating economic activity inside Germany.<sup>7</sup> However, economic analyses based on 1944 German tax data are impossible for no attempt was made to reassess taxes and taxpayers were merely held liable for the tax which they paid in 1943.

In retrospect the most interesting economic analysis afforded by these tax data is the degree to which they indicate Germany's success in controlling the inflationary pressures of war. Briefly this is best accomplished by comparing tax collections of 1940 and 1943, which indicate wage and retail purchase data. The tax rates for these two years were practically the same but the economy of the Reich had changed from one able to provide its citizens with an abundance of the necessities of life to one that was having difficulty maintaining the requirements basic to a going economy.

The portion of the German personal income tax which is withheld (for the purpose of this discussion it can be considered a tax of uniform rate upon wages) increased from 3.0 billion marks in 1940 to 5.0 billion marks in 1943. The rate of deduction is estimated to have risen very little with the increase in gross weekly earnings—perhaps from 14 per cent to 15 per cent.<sup>8</sup> Moreover, the number of persons employed did not increase greatly from 1940 to 1943. Portions of the native German labor force taken into the army were largely replaced with foreign labor who were also subject to the wage tax. The higher wage tax rate applicable to Eastern workers (Poles and Russians) was roughly counterbalanced by the lower wages paid these laborers.<sup>9</sup> Because of these relationships the increase of 66 per cent is significant and certainly indicates that even a dictatorship finds it impossible "to follow a hold-the-line wage policy."

During the same period that the receipts of taxes on wages were showing such a substantial increase, the total of the various German excise

<sup>7</sup> Briefly the turnover tax was 2 per cent upon all sales of goods and professional services. The tax was paid at each step of production. It was not, however, paid by the wholesaler. Imports and exports were exempt as were the wholesale exchanges of raw materials such as cotton, fuel, gasoline, milk, etc. House rent, water, gas, electricity, and heat were also exempt. The rate was only 1 per cent in the case of the sale of agricultural products. The rate was increased to 2½ per cent if the sales of a single firm during the previous year were greater than 1,000,000 marks. The tax is payable quarterly. See *Business Week*, September 20, 1941, p. 80.

<sup>8</sup> *Exploitation of Foreign Labor by Germany*, Study Series C, No. 25 (Internat. Lab. Office, 1945).

<sup>9</sup> *Ibid.*, pp. 55, 61-64, 118-20.

tax receipts was decreasing from 7 billion marks to 6.6 billion marks. The receipts from these two taxes provide a fairly accurate indication of what was going on inside Germany. Money was increasing in abundance while consumable goods were decreasing but because of strict German price control this situation did not develop into a rapid price rise.<sup>10</sup> The excess funds available to German workers went into the numerous German savings institutions who in turn made the funds available to the ever-hungry German war machine.

### *German Budgetary Items*

The budget of the Reich for the years 1938 through 1944 is given in Table III. This abbreviated German budget provides the basic data needed to understand the way in which Germany financed the war.

TABLE III.—GERMAN BUDGETARY ITEMS FOR THE FISCAL YEARS  
BEGINNING APRIL 1, 1938-44  
(in billions of marks)

Receipts and Expenditures	1938	1939	1940	1941	1942	1943	1944
1. Total tax receipts	17.8	25.6	29.5	33.7	44.1	39.8	36.8
2. Less quotas to states	2.0	2.0	1.9	3.0	3.7	7.9	8.3
3. Net tax receipts	15.8	23.6	27.6	30.7	40.4	31.9	28.5
4. Borrowings	3.0	11.8	21.4	41.7	56.1	60.1	79.7
5. Total internal government receipts	18.8	35.4	49.0	72.4	96.5	92.0	108.2
6. Ordinary expenditures	16.5	28.8	18.5	19.0	19.0	21.6	21.9
7. War expenditures	00.0	20.0	54.0	76.0	101.0	123.0	140.0
8. Interest on public debt	1.3	1.9	2.8	4.2	5.9	6.6	11.4
9. Amortization of debt	1.0	1.3	1.7	1.8	2.1	1.8	2.7
10. Total expenditures	18.8	52.0	77.0	101.0	128.0	153.0	176.0
11. Amounts obtained from conquered nations and secret borrowing. (Item 10 minus item 5)	00.0	16.6	28.0	28.6	31.5	61.0	67.8

Source: See footnote 1 and Table I source.

The tax receipt figure as given in Table II must be reduced by the grants made by the German central government to the states, to arrive

<sup>10</sup> Kuczynski, R. R., writing from Berlin in 1923 states that from 1914 to 1918 the German government raised 18.2 billion marks by taxation and borrowed 98.2 billion marks of funded debt. There was an additional floating debt of 48 billion marks. Therefore, of the total expenditures of the German government during the 1914-18 period (164.4 billion marks), only a little over ten per cent was obtained from taxes. *Journal of Political Economy*, Vol. 31 (1923), pp. 781-83.



at a net tax receipt figure. To this is then added fiscal year additions to the debt of the German central government to arrive at a total of central government internal receipts. The proportion of total expenditures which were financed by tax receipts is obtained by dividing item 3 by 10 of Table III, with the following result:

	1938	1939	1940	1941	1942	1943	1944
Per cent	84.0	45.4	35.8	30.4	31.6	20.9	16.2

War expenditures increased continually from the beginning of hostilities until final defeat. Over four times as many marks were spent to fight the losing battles of 1944 as were spent to equip the Reich war machine and win the great victories of 1939.<sup>11</sup> The greatest relative increase of war expenditures came in 1939 and 1940. The increase experienced between 1943 and 1944 is the smallest of the war period. Even at that late date, however, when it would be expected that Germany was completely mobilized for war, there was an increase of 17 billion marks or about 13 per cent.

The final annual total of German war expenditures of 140 billion marks (56 billion dollars) meant a *per capita* expenditure of approximately 1,750 marks (\$700, population 80,000,000) which represented an enormous effort.<sup>12</sup> However, the importation of large quantities of slave occupation labor and collections from conquered nations destroy any meaning which might be possessed by a *per capita* comparison of the German effort with that of the United States or Great Britain.<sup>13</sup>

The ordinary expenses of the German government increased greatly from 1938 to 1939 (war expenditures were undoubtedly included as ordinary expenditures) and then showed a sharp decline, though they never again reached the low of 1938.<sup>14</sup> The gradual rise of ordinary expenditures indicated in 1943 and 1944 represented the increase in the German cost of living and the additional expense arising from the use of inexperienced help. The rapid increase in the quotas granted to the states are expenditures required to aid the local governments in bombed-out areas and are therefore indirect war costs.<sup>15</sup>

<sup>11</sup> Estimated that 12.3 billion marks of the greatly increased ordinary expenditures of 1939 were actually war expenditures. Estimate based on assumption that ordinary expenditures in 1939 were the same as of 1938.

<sup>12</sup> Total German war expenditures were 514 billion marks plus about 12 billion marks for a total of 526 billion marks (210.4 billion dollars) for the period 1939-44.

<sup>13</sup> By the end of 1942 foreign workers (including prisoners of war) represented 17 per cent of those employed in industry in Germany. *13th Annual Report of Bank for International Settlements* (1943), p. 7.

<sup>14</sup> Table III, item 6.

<sup>15</sup> Table III, item 2.

*Funds Obtained from Foreign Areas*

The comparison of the total internal receipts from taxation and borrowing with total expenditures, as shown in Table III, indicates a growing disparity throughout the war period. As a percentage of total governmental expenditures this difference, obtained by dividing item 11 by item 10 of Table III, is as follows:

	1938	1939	1940	1941	1942	1943	1944
Per cent	00.0	31.9	36.4	28.3	24.6	39.9	38.5

It can be assumed with considerable confidence that, during the early

TABLE IV.—CLEARING FUND BALANCES AND OCCUPATION COSTS AS OF DECEMBER, 1944  
(in millions of marks)

Nation	Clearing Fund Balances	Occupation Costs	Total
France	8,532	30,000	38,532
Belgium	5,411 <sup>a</sup>	5,700	11,111
Netherlands	4,900	8,000	12,900
Denmark	2,670 <sup>b</sup>	( <sup>c</sup> )	2,670
Hungary	804		804
Croatia	1,052		1,052
Bohemia and Moravia	500 <sup>c</sup>		500
Slovakia	632		632
Norway		6,000	6,000
Greece		4,000	4,000
Rumania	1,126		1,126
Switzerland	686		686
Serbia	553		553
Italy	147		147
Bulgaria	1,500 <sup>d</sup>		1,500
Spain	108		108
Others	73		73
Total	28,694	53,700 <sup>f</sup>	82,394

<sup>a</sup> Estimated balance, nearly exclusively of direct investments of the Netherlands Central Note Bank in German securities.

<sup>b</sup> Includes 1,250 million marks for occupation costs.

<sup>c</sup> Estimated balance, nearly exclusively of direct investment of Central Bank in Reich securities.

<sup>d</sup> Estimated balance, nearly 50 per cent of which consists of treasury notes (Bulgarian treasury notes in terms of German marks) purchased by the Bulgarian National Bank for its balances.

<sup>e</sup> Already included in clearing balances.

<sup>f</sup> Incomplete.

Source: See footnote 1 and Table I source.

years of the war, the above percentages were the portion of total German central government expenditures which were met from payments received from conquered areas. This assumption can not be made with

such certainty for fiscal years 1943 and 1944. In fact, it is quite probable, for example, that a large portion of the 67.8 billion marks differential indicated in 1944 consisted of secret borrowing from German internal sources.

The subtraction of the total of clearing fund balances and occupation costs for Western Europe and the Balkans, given in Table IV, (82,394,000,000 marks) from the total of the differentials reported in Table III, item 11 (233,500,000,000 marks) provides an estimate of the amounts obtained from occupation exactions from Poland and Russia. This remainder (151,106,000,000 marks) should be deflated by an estimate of the amount of German government secret borrowing. As is indicated on p. 133 the writer would decrease this amount by about 93 billion marks, giving a net contribution by Eastern Europe of about 58 billion marks.

Though German data relating to the collections made from the conquered areas of Eastern Europe are not available, data are available regarding sums obtained from the Balkans and Western Europe. The statistics gathered by the Statistisches Reichsamts show that the amount collected in this manner amounted to over 82.4 billion marks by the end of 1944. France, Belgium, and the Netherlands contributed about three-fourths of this huge total.

The distribution of the clearing claims and the garrison charges by country for the period of the war is shown in Table IV. An interesting relationship shown by these data is the comparatively large contributions made by Belgium, Holland, Norway, and Greece. The total contribution made by these countries very nearly equals that of France.

These data can be considered inaccurate to the extent that Germany looted the countries occupied. Looting of the cruder type, actually taking the physical good, was particularly important in regard to all types of rolling stock; from small family automobiles to busses and railway locomotives. The data are also inaccurate to the extent that Germany was able to force the countries with which she traded to accept payments that would have had considerably less value upon a free market than that which was assigned by the German Ministry of Economics. The extent to which Germany obtained financial aid by resort to these practices, although considerable, will always be largely a matter of personal estimate.

An interesting feature of the clearing balances due the various countries is the seemingly small contribution which the Balkan satellites made to the Nazi war machine. Another point worth noting is that Sweden's name is not included in the list of countries having clearing claims against Germany, nor is Finland's. These appear, however, to be the only countries within the German sphere of influence which were so fortunate. In the case of Luxemburg the country was included within

the Reich, so that clearing balances did not develop as a result of their mutual trade. This was also true of Sudetenland, Austria, Alsace Lorraine and a few other smaller areas.<sup>16</sup>

The total of 82.4 billion marks is a considerable sum which was largely paid over a five-year period. This contribution represented over 6 billion dollars a year, or, if it is assumed that the total amount was secured during the period 1940 through 1944, which is approximately true, it represented about 17 per cent of the total Nazi war expenditures for those years.

The *per capita* wealth of France, Holland, and Belgium is fairly equal. The approximate *per capita* contributions of these three nations, however, varied considerably. The *per capita* assessment of France was \$367, Belgium \$536 and The Netherlands \$560.<sup>17</sup> Norway, a much poorer nation, made a *per capita* contribution of approximately \$800 for the support of German troops garrisoned there during the period of the occupation. These additional expenses were a considerable drain upon the slender resources of nations which had already been subjected to the ravages of modern war and in addition had had their international sources of wealth and income largely cut off.

#### *German Debt*

The total outstanding indebtedness of the Reich, omitting secret borrowing, rose from 30.9 billion marks on March 31, 1939, to 381.1 billion marks (152 billion dollars) on April 30, 1945. Interest costs at the end of the war amounted to 11.4 billion marks or about 40 per cent of 1944 net tax receipts of the German central government. This was a huge interest burden but represented an average interest rate of only three per cent. The methods used by the Nazis to obtain borrowed funds is summarized in Table V.

*Secret Borrowing.* In November of 1945 German fiscal experts estimated that 20 billion marks of secret borrowing was accomplished between December 31, 1944, and April 30, 1945, and this estimate is shown in Table V. They were, also, of the opinion that no secret borrowing took place prior to December 31, 1944. Recent data that have been received in Frankfurt by occupation authorities indicate a considerably higher total. Certainly Nazi military and government leaders indulged in all types of immoderate fiscal practices during the last hectic days of

<sup>16</sup> Perhaps the greatest financial loss suffered by the citizens of Luxemburg was that the savings banks were forced to invest their accumulated deposits in German bonds which are now worthless. See the *Luxemburger Wort* during the month of October, 1944.

<sup>17</sup> The figures quoted by M. Robinson vary some from the above but not greatly. To quote, "Occupation costs and balance of trade was much greater in Holland, Belgium, and Norway than in France, amounting in Holland, for example, to about \$700 as against \$320 in France" *Quarterly Journal of Economics*, November, 1945, p. 15.

the war. It is believed that most of the secret borrowing arose through confidential arrangements made between the government and large savings institutions and great German industrial firms.

TABLE V—GERMAN DEBT BY TYPES 1939-45  
(in billions of marks)

The Debt of the Reich	Mar. 1939	Mar. 1940	Mar. 1941	Mar. 1942	Mar. 1943	Mar. 1944	Mar. 1945
I. Old indebtedness before April 1, 1924	3.3	3.2	2.8	2.7	2.5	2.4	2.0
II. New indebtedness	27.4	44.7	83.1	135.0	193.0	271.0	377.3
Foreign debts	1.3	1.2	1.2	1.2	1.2	1.2	1.2
Internal debts	26.7	43.5	81.9	133.8	191.9	269.8	376.1
1. Long-term and middle-term	19.6	25.5	43.7	66.9	88.3	115.7	139.4
a. Long-term	18.7	24.1	40.5	63.9	85.4	112.8	136.6
Loans, registered claims to the government and others	7.7	13.1	20.6	30.0	39.6	51.3	63.2
Interest-bearing treasury certificates	11.0	11.0	19.9	33.9	45.9	61.5	73.4
b. Middle-term	0.9	1.4	3.2	3.0	2.9	2.8	2.8
2. Short-term	6.5	18.1	38.2	66.9	103.5	154.2	236.7
a. Number interest-bearing treasury certificates	6.1	11.3	21.3	35.1	57.5	144.5	102.7
b. Reich's treasury bills	0.4	6.5	14.9	26.0	37.3		123.8
c. Other short-term debts	0.0		2.7	5.7	8.8	9.7	10.2
Total of I and II	30.7	47.9	85.9	137.6	195.6	273.4	379.3
Loan liquidation debt lottery without drawing right, flotation purchase of savings credit cer- tificates, etc.	0.2	4.2	3.7	4.4	2.1	1.9	1.8
Reich's credit bank			1.9	5.3	7.8	8.8	9.2
Estimated amount of credits kept secret							20.0

Source: The amounts estimated by financial experts in Berlin. Recent evidence would favor a higher figure. See page 133 for this writer's estimate based on a larger estimate for secret borrowing. The *14th Annual Report of the Bank for International Settlements*, p. 203, summarizes substantially similar Reich debt data for the years 1938-43. Also, the *15th Report*, p. 78, estimates the German debt at war's end at 400 billion marks.

The possibility of nazi secret borrowing is borne out by the increase in amounts reported in the Reich budget as paid out for interest in 1944 over that of 1943. The increase in interest payments is reported to be 4.8 billion marks or an increase of 72 per cent. A 72 per cent increase in the Reich debt from 1943 to 1944 would bring the total debt at the end

of fiscal year 1944, up to 473 billion marks (189.2 billion dollars) instead of the 380 billion marks reported.<sup>18</sup>

It appears that the Statistisches Reichsamt data relating to Reich debt are approximately accurate up to the last year of the war, but then considerable irregular borrowing took place. By this time the Nazi leaders had apparently decided that conditions were so critical that the effects of excessive borrowing would be unimportant when compared to the military holocaust into which they had already led the nation.

If the conservative figure of 473 billion marks is taken as the total German national debt, the amount would not be unbearable if Germany at the war's end were still a going economy (similar in condition to Belgium or France), but such is not the case. The German total national income, which was estimated at over 100 billion marks in 1945, will not exceed 60 billion marks during any foreseeable future period. A debt which is eight times a nation's total national income is larger than can be serviced. Interest payments alone on a debt this size would amount to about 25 per cent of the German total national income.

*Type of Debt.* As the war progressed German government borrowing shifted in character. This was true of all the belligerents but not to the extent it was evidenced in Germany, where even secret borrowing was entered into during the last phase.

Reich long-term debt increased from 18.7 billion marks in 1939, which was 61 per cent of the total debt, to 63.9 billion marks in 1942, 46 per cent of the 1942 total, to 112.8 billion marks in 1944, which was then 41 per cent of the total debt. This trend toward the use of short-term credit was speeded up during 1944 and 1945 so that on April 30, 1945, the long-term debt was 136.6 billion marks when the total debt was not less than 400 billion marks or 34 per cent of the total debt.<sup>19</sup>

A very great increase was made in the use of treasury certificates and treasury bills as a method of financing the war. In 1938 treasury certificates outstanding amounted to 9 per cent of total debt, and treasury bills to 2 per cent; by the end of the war they amounted to 27 per cent and 32 per cent of total debt, respectively. In addition it is quite likely that most of the secret borrowing was achieved with this type of credit instrument.

### *Conclusion*

The Nazis, except for one major difference, financed their war largely by the utilization of the same conventional fiscal methods as were used

<sup>18</sup> A larger estimate of the debt at the end of the war of from 675 to 800 billion marks is reported in the *New York Times*, January 28, 1946, p. 3. The German central government's internal debt at the end of World War I was about 146 billion marks.

<sup>19</sup> Table V.

by the democracies. In addition to internal sources Germany obtained extensive funds from conquered peoples. Nevertheless, it was the German population which had to bear most of their government's war costs through tax payments and purchase of government credit instruments. Up to the last two years of the war Germany's record in meeting war expenditures from taxes was comparable to that of Great Britain and the United States. As the war progressed, however, the percentage of total war costs met by taxes showed a decrease in Germany which was not evidenced in the principal Allied countries.

The Nazis did not make extensive increased use of excise taxes. This was closely related to their greater reliance upon price control and rationing and their desire to create the impression among the masses that war could be paid with the loot and collections obtained from conquered areas.