In general, the increased exports went to Great Britain, France, and Italy, and to the neutrals, Holland, Denmark, and Scandinavia. Those to France and Italy more than doubled, and those to Great Britain grew by more than a half in 1914-15. The extraordinary increase to the neutral European countries is significant, being due, no doubt, to the inability to obtain the usual imports from the Central Powers, as well as to obtain our goods for sale to the same Powers. While we were not in the war, Germany obtained cotton, the supplies from us through the neutrals in large quantities. After March 1915, our exports directly to Germany practically closed.

After this came some adjustment to war conditions, it was believed that this country would gain largely in its business of supplying the demands of belligerents. The great increase in our exports of food, cotton and copper.

---

1. France and Great Britain jointly account for 83.4% of the increased exports of automobiles, 88.9% of meat, 46.7% of wheat. Italy alone (not yet in the war) accounts for 26.2% of the increase of wheat. The cotton and manufactures of copper, for 76.9% of increased imports to Italy, and for 68.8% of the decrease to Germany. Breast stuffs from 60.8% of the increase to Holland. Horses, wheat, automobiles, and meat account for 60.6% of the increase to France, and 38.7 to Great Britain. Sorell, ibid., pp. 56-60.

2. cf. charts by Sorell, ibid., pp. 35-36.
and war goods. Of course, justified that belief. But our ability to export depends very much, in certain lines of production, upon obtaining necessary materials from Europe. We needed their dyes for textiles, manganese for steel, platinum from Russia and carbons and filaments from Germany for the electrical industries. We had depended on Germany for such drugs as eucalyptus; tartaric acid; camphor; caustic acid in photography; cyanide of potassium in the manufacture of glass; and potash for making glass, soap, matches, gunpowder and fertilizers. Eventually, the making of dyes from coal tar has become an established success in the United States. Manganese has been supplied from England, Russia and South America. Potash and cyanide, although obtained more cheaply from deposits, can be manufactured.

It might have been supposed that our merchants, when our trade with Europe was interrupted, would succeed in taking over the trade of the bellwethers, especially of Germany, in South America and elsewhere which had been lost to them. On the outbreak of war, the building up of trade with South

1. The chemical and dye question is involved with that of explosives, since coal tar yields also benzol, toluid, naphtal, anthracene, carbazole, and other ingredients.
America has been slow and difficult. These countries, being young, are yet mainly engaged in developing their natural resources, for which they lack capital. Previously, they had obtained English and German capital. It is estimated that the English who came first have invested some $5,000,000,000 in South America. The Europeans ran out of these supplies and the business of those borrowers was paralyzed. Not able to maintain production on the old scale, their purchasing power was reduced. If the United States were to acquire their trade it must not only provide the requisite capital, but it must also be willing to lend it on the customary terms. Since the funds were needed to sustain operations in agriculture and in turning out raw materials, in which the period between the inception and the completion of production is long, credits were demanded on long terms. Such loans, therefore, were not of the sort to be taken by strictly commercial banks. This was patent, especially for banks in the Federal Reserve system, whose first aim was to encourage and accept only short-term commercial paper. German banks, organized for foreign business and to finance new enterprises, were not confined to commercial banking. They accepted long-term credits, took risks, and expanded their operations in a way not customary in this country. Not only were mortgages common, but real estate security was regarded as a satisfactory bank asset in South America.

When the war came, South American money markets were hard hit. Of the springs of credit one shriveled up. The main current of trade was dried up. Could we make a connection between their needs, strength, and our resources?
The answer was not an easy one. We had been in the past, buying more from South America than she took from us. In August, 1914, our exports to her fell to one-third of the same month in 1913. In October, our exports to Argentina and Brazil had fallen in the same proportion. The latter country had been over-expanded before the war, brought to a halt in 1913, and plunged into a banking crisis in the early part of 1914; a bad situation was so aggravated by the war that she was led to pass a general moratorium and to issue such large amounts of government paper money that it depreciated twenty-five per cent. Obviously, countries in such a condition could not be expected to respond to our advances for a larger trade with them. There was an increase in the risk of lending to South America, not only because the local monetary conditions made the quality of the means of payment uncertain, but the resort to moratoria rendered obligations un-liquid for a considerable period. And much as they had depended on income from customs duties to sub-

The war caused difficulties in our trade with South America and Brazil. In August, 1914, our exports to her fell to one-third of the same month in 1913. In October, our exports to Argentina and Brazil had fallen in the same proportion. The latter country had been over-expanded before the war, brought to a halt in 1913, and plunged into a banking crisis in the early part of 1914; a bad situation was so aggravated by the war that she was led to pass a general moratorium and to issue such large amounts of government paper money that it depreciated twenty-five per cent. Obviously, countries in such a condition could not be expected to respond to our advances for a larger trade with them. There was an increase in the risk of lending to South America, not only because the local monetary conditions made the quality of the means of payment uncertain, but the resort to moratoria rendered obligations un-liquid for a considerable period. And much as they had depended on income from customs duties, the cessation of trade reduced their income, made it difficult to pay interest on national debts, and led to unfortunate issues of paper money. It was no wonder, then, that expectations of an increased trade with South America early in the war were disappointed.

The continuance of the war, however, and the extraordinary growth of capital in the United States practically forced us into closer relations of trade and credit. There was no other resort for South America but to draw supplies of capital. We needed her
wool, hides, nitrate of soda, and her copper; and she began to take from us in increasing quantities automobiles, coal, cotton goods, implements, and tin plate, gradually and inevitably. Our trade developed, on the following fiscal years:

<table>
<thead>
<tr>
<th></th>
<th>Imports into U.S.</th>
<th>Exports from U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td>222,5</td>
<td>124,5</td>
</tr>
<tr>
<td>1915</td>
<td>261,5</td>
<td>99,3</td>
</tr>
<tr>
<td>1916</td>
<td>391,5</td>
<td>180,1</td>
</tr>
<tr>
<td>1917</td>
<td>542,2</td>
<td>259,6</td>
</tr>
</tbody>
</table>

The trade still remains somewhat one-sided. We are not able to pay for our imports by exports of goods. On the merchandise account, she sent South America $754,000,000. By selling her raw products to us, she is able to meet obligations falling due in Europe, since we raise our large balance in Europe to pay European creditors of South America. The adjustments of this trade, however, have given rise to interesting problems in foreign exchange, and to an ambition hope for "dollar exchange". The total trade of South America is large, and the business in bills drawn on the movement of wool and staple goods to the various - even though changed - markets of the world is important and eagerly competed for. Discounting of such bills is a part of legitimate commercial banking on short-term paper.

The importance of the increase in this trade resides in the fact that the goods exchanged are not munitions of war, and should, therefore, be more likely to be traded in after peace comes.
The effects of the prewar decline in our foreign trade have upset the calculations regarding credit, the foreign exchanges and the balance of trade. It will be noticed that, at the outbreak of war, imports continued to fall even after exports had begun to climb (see Chart VII). Europe had been taking from us chiefly foodstuffs and raw materials and had been sending us mainly manufactured articles; our exports were of a sort which were necessary to the belligerents, while most of our imports could be dispensed with in an emergency. For this reason our imports declined while our exports rose. But later, our imports rose to an unprecedented level, essentially related in some distant way to the exceptionally large exports. The increase in the imports in 1916 was due to the buying for the most part of raw materials entering into the production of exports, such as guns, ammunitioo, copper ore, cotton, jute, manila, silk and other fibres, hides and skins, rubber, raw silk and wool. Potters for a time also had to use less raw materials, but more of finished goods, and in the finished articles, the cost of the material of her labor force. The increase in the demand for finished manufactured goods (which includes munitions) was nearly a billion dollars greater in 1917 than in 1916, and manufacturers for further use half a billion greater. These calculations show a greater increase than food stuffs, although the latter rose earlier than the former. The demand for munitions continued in force and outstripped foodstuffs. In 1914, cotton exports had; in 1915, hene-stuffs; in 1916, 1917, manufactures of iron and steel.

1. The graphs showing a great increase of exports in the first three years of the war are as follows (in millions of dollars):

<table>
<thead>
<tr>
<th></th>
<th>1915</th>
<th>1916</th>
<th>1917</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bread stuffs</td>
<td>573</td>
<td>435</td>
<td>589</td>
</tr>
<tr>
<td>Cotton (vas)</td>
<td>376</td>
<td>374</td>
<td>543</td>
</tr>
<tr>
<td>Iron and Steel + imports</td>
<td>226</td>
<td>621</td>
<td>1129</td>
</tr>
<tr>
<td>Copper + imports</td>
<td>99</td>
<td>172</td>
<td>372</td>
</tr>
<tr>
<td>Leather + imports</td>
<td>120</td>
<td>146</td>
<td>153</td>
</tr>
<tr>
<td>Meat</td>
<td>220</td>
<td>290</td>
<td>404</td>
</tr>
<tr>
<td>Explosives</td>
<td>41</td>
<td>467</td>
<td>802</td>
</tr>
</tbody>
</table>

In these groups there would be the greatest readjustments when peace comes.
When studying the bearing of the modifications in our foreign trade upon the foreign exchanges and credit we may sum up the general results of the balance of trade in fiscal years as follows (in millions of dollars):

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports</th>
<th>Imports</th>
<th>Excess of Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1913</td>
<td>2,465</td>
<td>1,813</td>
<td>652</td>
</tr>
<tr>
<td>1914</td>
<td>2,364</td>
<td>1,893</td>
<td>470</td>
</tr>
<tr>
<td>1915</td>
<td>2,769</td>
<td>1,674</td>
<td>1,094</td>
</tr>
<tr>
<td>1916</td>
<td>4,333</td>
<td>2,198</td>
<td>2,136</td>
</tr>
<tr>
<td>1917</td>
<td>6,298</td>
<td>2,659</td>
<td>3,634</td>
</tr>
<tr>
<td>Totals for 1915-17</td>
<td>13,398</td>
<td>6,531</td>
<td>6,867</td>
</tr>
</tbody>
</table>

In these last three years the excess of our exports was itself larger than all our imports; and the balance in our favor was ten times as great as in a normal year like 1913; more than all our securities held abroad; or, more than twice as large as the debt incurred in our Civil War. It is a remarkable display of economic power in contrast to the alarm and depression of 1914; and a basis for estimating our capacity for service in entering the war against Germany.

1. cf. infra, p. 376.
§ 5. The studies already made were unable to take into account the remarkable and unexpected oscillations in our foreign exchange transactions. Never in our history have they shown the operations of credit on such a scale, or in such surprising contracts. These amazing jumps from high to low in the international medium of credit cannot be explained without a full understanding of the movements of goods, of securities, and of gold to and from the United States. We have found goods to be the basis and explanation of credit, and we have given attention to the extraordinary upheaval in the movement of goods. Next to goods, however, securities have the most importance among the items making up the international accounts.

We have already referred to the large amount of our securities which were held in Europe before the war. After subtracting those returned to us since the Balkan war, it seems that European holdings must have been less than $6,000,000,000, in 1914. In July there was heavy selling here; but this was held up by the closing of the Stock Exchange (July 31) to prevent rumors of liquidation when other means of international payment were in abeyance. Obviously, the exchange had to wait on the movement of goods, and the movement of the market for foreign bills. In the period of suspension, market prices were established by the banks so that loans on collateral could be carried by the banks at lower rates. Loans on collateral could be carried by the banks at lower rates as no quotations were established, but outside dealings could not be entirely prevented. Loans on collateral could be carried by the banks so long as no quotations were received as those of an efficient market were published. Outstanding contracts, July 31, to about $100,000,000 in New York were settled by mutual consent in the term until September 22, and
This lead taken from the market. Pressure for some means of selling and buying was strong. On August 12, members were permitted to buy for cash at prices not below the closing prices of July 30. Through a Committee of the Exchange, and could also sell on the same restrictions of price if shown to be necessary to relieve themselves or their customers. On September 9, listed bonds could be disposed of under supervision at minimum prices.

By the end of September means had been devised for restricted dealings in listed stocks, and listed and unlisted bonds. Finally, the intention of the Curb to open the Stock Exchange to arrange for dealings in unlisted stocks through a mixed Committee. In November, as we have seen, the pressure for loans had passed, and efforts were gaining, and recovery was at hand.

On November 12, unrestricted trading in listed municipal and state bonds for domestic account was established; November 16, the Curb Market opened. November 28, in a period of rising prices, dealings on the floor in listed bonds for cash at prices not below those authorized by

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1. The Curb market in New St. began operations by August 12, and some stocks like U.S. Steel fell from 105 to 13 points below the minimum of July 30.
the Committee from time to time were allowed. The generally improved situation and a feeling of confidence brought higher prices; and this reopening itself was a success. On December 12, a further step was taken by authorizing dealings in a designated list of stocks at fixed minimum prices, which were two or three points below the quotations of July 30. A rising market and great activity. Through the Committee, which finally led to the reopening of the Exchange for all securities on December 15, 1914, it was not until April 1, 1915, however, that the lists of minimum prices were finally abolished. Thus the market for securities was freed from all the fundamental movement of gains which underlies all credit operations.

There seems to be no more fear of an avalanche of selling by foreign holders of our securities. The total amount of securities already sold to serve as an offset to our enormous excess of exports is probably about $2,200,000,000, and no larger sums seem likely to be offered. After the opening of the Stock Exchange, very large amounts were absorbed by us, as regards railway securities alone (which in past years formed the main attraction to foreign investors) and being offered. On January 31, 1915, 2,704, 440, 364 (upon a value) were held abroad, of which about $1,578,590,878 had been returned to this country by January 31, 1917. This figure, of course, does not include sales before January 31.

(with a market value of probably $2,000,000,000)

1. cf. Report made by President E. P. Loos of the Delaware & Hudson Co. based on information furnished by 144 railroads over 100 miles in length.
1915, nor those since January 31, 1917, nor

Then, if we add the return of securities other than those of railways, such as industrials, state and municipal bonds, it is fairly within the mark to estimate the total volume of our securities returned to us in the first three years of war at $2,200,000,000. The remainder of foreign holdings are largely impounded in the hands of governments as a basis for loans placed in our markets.

(approximate)

Having arrived at the amount of securities entering into the international account, and having also definite figures for the loans made to Europe both by our government and private institutions of credit, now are now in a position to take into account, finally, the story of the foreign exchanges and the movement of gold. By this process, we can obtain the various items which offset our $6,800,000,000 of surplus reports of the merchandise account and thus balance the international account between us and other nations. Credit among the nations, as well as credit operations within each nation, are written large in the records of this unprecedented war.

An international medium of credit which saves the passage of gold is of importance in so far as it acts in an inexpensive and effective exchange of goods, in our domestic trade. This end is served by checks drawn on deposit accounts, that is, the deposit-currency. In international trade, this service is rendered by bills of exchange. A bill of exchange is an order on a foreign debtor to pay a certain sum (usually the proceeds of exports) to another person as designated in the bill. Thus A, having sold wheat, or cotton, to B in London, may wish the cash at once, and sells his claim on B to C, in New York, or elsewhere. Then C, in turn, claims on D, in London, using the bill he has bought on B, and pays D. In this simple way, two shipments A to B, B to D, are paid for by bills. Only at a last resort is gold actually shipped to cover a balance arising from offsetting all the various items in the international account. At any one time the open account may not balance, but as an excess of debts may be followed soon by an excess of credits, the account is kept going by offsetting claims through bills of exchange up to a certain point, until the price of bills goes up, or down, enough to warrant the exchange of shipping gold. If our exports are large, many bills on Europe are offered and they go down in price; but normally they would not be sold below the rate which would cover the cost of sending gold. Between us and London, for a pound sterling is $4.86 1/2, and the shipping point about 3 1/4 cents above or below (which includes commissions, insurance, and interest for the time the goods is on the water). The shipping point, therefore, may vary, especially because of danger on the sea, or...
of changes in the rates of interest. When bills rise or fall, because of fluctuations in the movement of 
merchandise, securities, etc., they are hummed in above and 
below by definite shipping points for gold. If gold 
actually moves, quotations for bills cannot go be-
yond these points. In other words, the sending of 
gold acts as does redemption for a domestic circula-
tion: it prevents depreciation. If shipping point's 
disappear, bills may go to any figure of depreciation, 
like in convertible currency.

1. The par in New York for foreign monies is as follows:
   - London: £ 4.865
   - Paris (francs equal to $1), 5.1826
   - Berlin (for 4 marks), 0.9525
   - Russia (for 1 ruble), 0.5144
   - Italy (lire equal to $1), 5.1826
   - Holland, 0.4089
   - Scandinavia (crown), 0.2680
   - Norway, Sweden, 5
   - Denmark
   - Austria, Hungary (crown), 2.026

2. For a part of these, see page
It was long ago concluded that London had become the recognized credit centre of the world, all over the world. Bills drawn on London were accepted means of payment. There was enough English capital engaged in banking to aid in moving all the goods traded in through London from every foreign country. If one of our banks, had loans to exporters of merchandise accompanied by bills of lading, for 90 days, it forwarded the bills of exchange drawn by the shipper, and endorsed by it, to London for acceptance and discount. The banks (or the exporter) now had a credit in his favor in London. It could at once release its capital by drawing a demand bill on this credit and selling it in this country to an importer. The exporter's (or his bank's) capital is thus freed for additional transactions here, while the task of waiting until the bill matures is assumed by the London bank. In that way, we obtained the aid of English capital on short-term bills in moving our crops or manufactured goods to foreign markets. Practically every other country engaged in international trade had the same relations with London. These operations are carried through by the use of bills of exchange. The foreign exchanges, therefore, are interesting, not so much for a knowledge of the mechanism itself as for the way it disperses the working of important forces, whose results are registered in the quotations of bills. The nature of the forces in this country, we have just been studying; and we now proceed to the consequences of the war as affecting the exchange.

1. For a list of them, see p. 124.
Owing to the market falling off in our foreign ports in the spring of 1914 (imports actually exceeding exports, see Chart VII) and to the return of our securities from Europe, there was the final resort to the shipment of goods (see Chart VI) amounting to \$89,500,000 in May and June. Bills for these goods were in demand and stood at the upper skidding point of about \$4,800 in New York. By the end of June bills began to decline, because of borrowing in Europe in anticipation of the coming harvest exports of the autumn, due to the large crops of wheat and cotton. This borrowing was carried on through the drawing on bankers' time bills (or finance bills) at not being based on the exports of goods on European lenders. Thus, obtaining credits abroad. That is, the creation of foreign credits is one of the offsets in the international account. Irrespective of the return of our securities, there was the normal large balance already due by us to Europe for imports of goods, expenditures of American travellers abroad, and the recent placing of our securities there. If conditions had remained normal, this large balance against us would have been soon met by bills sold on the coming exports of wheat, cotton, and other products. In fact, dealers in exchange, not foreseeing war, no South sold cotton short in anticipation of the great crops. Such was the situation at the outbreak of the European War.

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1. For a brief of them, see \[\text{footnote}\] (already referred to).

1. In his article on The Crisis of 1914, Professor Sprague has given an extended discussion of the foreign exchange.
International money markets were exceedingly sensitive to coming danger, and after the violent break on Vienna Bourse, July 20, foreign exchange in New York rose to 4.8880, and on July 23 exports of gold were resumed. A rise in exchange meant that our European creditors were trying to strengthen their position by calling for gold. The continual selling of our security had begun to tell in the demand for bills on Europe. If exports of our goods could be counted on, the storm might blow over. But the bottom underneath international credit was wrung out. When the war suddenly stopped the movement, not only of goods, but even of gold, there had probably never been known such a catastrophe in the history of foreign exchange. It was not so much that the mechanism failed, but that the foreign bankers were in such and unexpected confusion.

We have previously related the extraordinary event which brought the acceptance houses of London to the verge of ruin. A time-honored reliance was suddenly withdrawn from us. Our bankers had endorsed bills accepted in London, and if the acceptors failed, they would be liable. Even if they did not fail, readjustment must take time. Therefore, when London could not render account of acceptances based on shipments of goods previously made, American capital was locked up; and if no bills could be discounted in London, it meant that the exporting country must itself carry the loans.

1. Supra, Chapter III, §§3, 4.
Through to maturity, without the aid of foreign credit. This is how the shock pinched us, when the London credit system was disarranged. The buying and selling of exchange became a matter of uncertainty, or chaos. From July 27, London practically ceased discounting foreign bills. As a consequence, we heard much of the loss of English pre-eminence. The world of credit, of course, no market can remain the centre of credit, which is unable to discount and carry time bills, based on staple goods, to maturity; because the drawers get no aid if they cannot realize on bills at once. It does not follow, however, that English capital engaged in banking has been so far destroyed by this failure of debtor's in Europe and other countries to meet their obligations to London, that it will not be sufficient in the future to resume its service to foreign drawers of bills. The cataclysm may be only a prelude of the intensity of the temporary shock, and no evidence of permanent decline, likewise, New York cannot assume London's place simply because it is outside the region of actual destruction by war. Any other city can take away London's pre-eminence only if it can surpass London in the capital at its disposal for accepting and discounting bills from all parts of the world. As yet we have not the surplus capital, the experience, the information concerning local conditions and standing of merchants in foreign countries, nor the machinery to meet the emergency. Much is being done to improve our position.

1. Both spot (rates on bills already in London) and forward delivery (rates on bills to arrive by next mail) quotations were discontinued on Monday, July 27. Cf. Sprague, loc. cit., p. 506.
The storm broke in our foreign exchange market on July 27, 1914. Time bills based on shipment of goods could not be turned into cash here by the sale of demand bills on London. If our bankers had balances abroad, bills could, of course, be drawn on them; but, as before explained, we were in the normal state of insufficiency looking forward to exports to give us means of payment. Those in urgent need of making payments in Europe to save their standing bid high for exchange. Demand for exchange was quoted at $4.92, far above the customary shipping point. Such high rates offered a premium on exports of gold. On July 27 and 28, $19,000,000 were sent out; and by August 17, an additional $17,000,000 was engaged for export. There seems to be the market for exchange but slightly, since the heavy sales of our securities (as described in the preceding section) during this same week had created a new and abnormal demand for foreign exchange. Exchange rose to $6.50, and even in some instances to $7.00 for 1£. Then intervened an extraordinary situation. We turned on the gold backs of our rivals, and had the gold. Why was exchange selling at a price regardless of the shipping point? It was clear that all the offsets for an adverse balance of trade had been exhausted, except the shipment of gold. Unlike France and Germany, the United States had no reason for abandoning gold payments. Suddenly it was realized on the declaration of war, that it was physically impossible to move gold by sea. The incident of the Kronprinzessin Cecilie, which, carrying gold for London
was obliged on August 4 to turn back, actually caused our banks, although with the mailed gold embargoes, to default on their payments due in London. It was if a man with the money in his hands to prevent the foreclosing of a mortgage was forcibly restrained from reaching the door of his creditor. It was a precarious position. How could we pay our debts?

Other consequences followed. The impracticability of sending gold through usual channels to Europe, because neither ships nor insurance could be had, played havoc with the funds of Americans happening to be traveling abroad when the war came on. Bills drawn on letters of credit from American banks early in August were not cashable even at a great discount. For great numbers of travelers the only relief came from an appropriation by Congress of $2,750,000 in gold to be sent by our Government in the warships of Tennessee to the various embassies in Europe. For a time, therefore, the effect was the same as if we had suspended specie payments. For about two weeks, until England's fleet had furnished a fairly safe passage across the Atlantic, neither goods nor gold could be transmitted. Hence, exchange could not be drawn when the very basis for it had ceased to exist. The first step, however, was taken in removing the obstacles to the shipment of gold when the Bank of England established branches in Canada (Ottawa), South Africa, and Australia, in which deposits of gold counted as resources of the Bank and thus could cover English credits. Since our main intercourse in trade and credit, after the beginning of the war, was
with London and Paris. The increasing of sending gold by
hans to the Bank of England at Ottawa on August 30
removes all risks in its shipping. Means for
restoring the normal machinery of foreign exchange had
Thus began. Selling of securities has been stopped. Re-
really essential receiving could come only with the
export of goods in substantial amounts; and we have
been seen (chart VII) that the exports exceed exports until
October. Consequently, restoration of fairly normal con-
ditions in the exchange market could only be expected
earlier than that month.

Meanwhile, pressures were put upon us to meet our
foreign obligations in gold. The city of New York has
used its tax warrants, to obtain funds in anticipation
of collections, as a basis for loans in London and
Paris, because it could borrow there at lower rates
than here. These loans began to fall due in September,
the last installment coming in December, 1914. To
maintain the credit of the city, the New York banks
agreed to become responsible for their payment.

As these loans matured, in gold or sterling exchange, this
agreement was regarded in the exchange markets as a reason
for a strong demand and high prices for exchange, the
rate had dropped to about 45, while the Shibboleth
point to Ottawa was 41.91. The actual outcome of
these exchange operations is instructive. To meet this
foreign debt the subscribing New York banks went in
the following ways of payment:

<table>
<thead>
<tr>
<th>Gold</th>
<th>Foreign Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>$85,264.63</td>
<td>$697.55</td>
</tr>
<tr>
<td>10,121.56</td>
<td>580.00</td>
</tr>
<tr>
<td>34,857.73</td>
<td>939.92</td>
</tr>
<tr>
<td>80,243.97</td>
<td>740.47</td>
</tr>
</tbody>
</table>

Thus was thus a considerable profit in sending gold.
The foreign exchanges were offset by the city short-term bills running 0% for 60 in heavy disbursement, but the approximate amount of the flows not taken in London and Paris was only $2,000,000.

That is, by credit operations, only 44% of the foreign inflow was actually paid in gold by shipment to Ottawa. The foreign exchange turnover was purchased in London by those banks who preferred to buy exchange at a lower price rather than face the risk of selling their own reserve. The remittances went from their own reserve. The remittances of New York funds were skillfully used in buying securities, the November Par ex. It was reminiscent of the 1920s when debits of funds began to mount up, mainly on account of purchases placed by foreign sources, and others, which also had to be remitted in large amounts. As a result, on November 12, the managers arranged that they already had sufficient in hand to cover their needs. The proposal fell below the point of 2500, and another 10% was reduced the following day. Since the arrangements of 1929, the dollar policy had been a huge success!-

This successful outcome was due not only to the importance of exports, but also to the situation in the United States. They were still providing gold for them at the lower rates. The country which had made obligations in January, January, 1925. Concentrated action in collecting gold would presumably work to lower the rate of the exchange. In the series of past years, the exchange took a new character, and again if it was known that gold was available, little would be sold for, whereas of exchange would take over. The banks for providing gold avoid the necessity of paying the price. This time of remitter confidence until before Monday again moved. Payment for our imports and for the loan, this returned before the 1925 exchange closed was wiped. In all about $400,000,000 units were used by January 1, 1925. A conference was held August 4th in Washington.
At first, exchange was high and the profits on the exchange sold were large. As fast as exchange was sold, repayments were made to subscribers, who hid thus, in effect, swapped some of their gold for New York funds.

The actual management was entrusted to a committee of five bankers in New York City where the market for exchange centers. This New York Committee had authority "to call upon the contributors for gold or gold certificates from time to time in instalments as required (provided, that the contributors shall not be called upon to pay any portion of an instalment which may make their investment in the fund at any one time exceed 25 per cent. of their original contribution), to arrange for shipments of gold to other countries, to sell exchange and cable transfers against such shipments at such prices as they may fix, to determine to whom and under what conditions foreign exchange may be sold, to distribute the proceeds of such sales among the contributing banks in New York funds, and to fix a date for the termination and final settlement of the fund".

...
of the currency in the U.S. reduce the amount of gold needed for foreign exchange transactions. The gold standard system ensured that gold was always available to meet international trade demands.

1. The total exchanges of the Gold Pool were $16,542,673, and all balances due elsewhere were repaid in February 1915.

2. A fact so obvious as this dispose of the archaic Theory That it is the shipment of gold, which works as a Central Bank force, bringing about high prices (by virtue of the Quantity Theory), and these stimulative impulses into The Country To which the gold is sent, The answer of the student is just The reverse: gold, securities, paper, all these functions, as the independent of the Circulation, deeds of exchange, kept the account open, and gold is sent only as a last resort. In such situations changes of force, if they have preceded the shipment of gold.
The collection of gold funds to send abroad was accomplished in the midst of a tendency of our bankers to hoard gold in a time of emergency. Contrary to well-established European practice, the soundness of a bank has come to be measured in this country rather by the amount of its cash reserves than by the quality of its loans. The whole function of reserves to supply cash when called for in crises was seemingly dispensed with. Our highly individualistic banking system had been so united, and without the possibility of concerted action, each for himself was the rule when a demand on gold came. Even some of our gold when there were hoarding it played into the hands of the selfish and the foolish bankers. The purpose behind the passage of the Federal Reserve Act was to remove the emphasis on reserves and transfer it to short-term paper suitable for this count; the present led which would arise in case of reserve. Since the Federal Reserve Banks were not in operation at the time, the voluntary organization of banks was needed to secure trusted leadership and unity of action. Thus the joint effort to meet our international obligations in gold provided the credit of our banking system and worked an advantage for all nations. In October, the gold holdings, in round numbers, of the Treasury were $1,000,000,000, and of the Banks and Trust Companies, $600,000,000, sufficient for all needs if properly managed.
out of the time of startling upheavals of trade
and credit came a period of comparative calm with
opportunities for great investment to new conditions. This was
followed by a dramatic reversal of all that had been so alarming
in regard to gold, trade and credit. Of the many remark-
able events in this most remarkable of all wars
nothing was so unexpected or so epoch-making as
the turn in the tide of our exports (see Chart VIII) and
the consequent revolution in the prices of exchange. The
tide began to creep in by October, 1914, when first
the exports of foodstuffs, cotton, and munitions, began to
exceed our imports. By November and December the
rising flood had floated many an enterprise off the rocks,
foreign markets flagged at the onset of our exportable
products. As an expression of the new situation, bills
began to fall to a point which warranted the importation
of gold.
The key to the whole situation, let it be repeated, lay in the unexpected and unprecedented increase of our exports (see Chart XI). In comparison, every other item in the international account is insignificant. It is this latter prodigious excess of exports of goods which has created the extraordinary problems in credit, exchange and golds.

Dynamic fixes in relation we may again state the items by which the international account must be balanced, sooner or later:

\[
\begin{array}{c|c}
\text{Dr.} & \text{Cr.} \\
\hline
\text{Imports of goods.} & \text{Exports of goods.} \\
\text{Expenses of American travellers in Europe.} & \text{Remittance to friends in Europe.} \\
\text{Freight and insurance on Exports.} & \text{Funds of returning emigrants.} \\
\text{Returns due to foreigners on their holdings of our securities.} & \\
\end{array}
\]

These are the normal items in a static condition of trade, while the dynamic forces enter in disturbances of exports and imports, the return of securities, the cessation of travel and remittances, necessitating a pre-balancing of the account by obtaining new credits in other countries having a favorable excess of exports, and even by a large movement of golds when it cannot be prevented by a change in the other items. It is the dynamic boiling in the international pot which has created the problems in exchange and golds.
In the first three years of the war, the upheaval caused by the expenses of imports was as follows [in millions]:

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports</th>
<th>Imports</th>
<th>Credit Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914-15</td>
<td>2768.6</td>
<td>16740.0</td>
<td>$6,395.9</td>
</tr>
<tr>
<td>1915-16</td>
<td>4332.5</td>
<td>2197.8</td>
<td>$6531.2</td>
</tr>
<tr>
<td>1916-17</td>
<td>6293.8</td>
<td>2659.4</td>
<td>$6,864.7</td>
</tr>
</tbody>
</table>

Next was a credit abroad in favor of the United States of $6,864,700,000. How were we paid? Certainly not in gold. The settlement was carried through by credit operations together with shipments of gold amounting to about 1% per cent. of the whole balance in our favor.

As to the changes in the other items, the remittances to friends in Europe had fallen off by 1915.

Shift-ing of Custom Any Items

They have been estimated in the first at $250,000,000 a year, the foreign postal orders alone running about $100,000,000. But the Swiss sent for aid to Belgium and other countries had much more than offset any decline. The funds carried away by returning emigrants since the war must be very small.

The expenditure of American travelers in Europe, which has been estimated from $50,000 to $200,000,000 a year, has ceased. For freight and insurance on the ocean we are paying not less than $25,000,000 a year. On the assumptions that foreigners held about $6,000,000,000 of our investments, and that over $2,000,000,000 have been returned to us we still owe on the dividend item probably $200,000,000, per annum.

1. cf. supra, p. 356.
The story of the means by which this prodigious credit in our favor had been obtained and furnished many lessons for the future. Since no one could see far ahead in a time of war, it is not strange that the panic of readjustment were seriously felt. By December, 1914, even before the Federal Reserve in 1915 Banks opened (November 23), the period of recovery had set in, exports were coming out, exchange was falling, and the stock exchange 

ports of gold had practically ceased. With the beginning of 1915 until autumn ensued, the period of adjustment to the new war conditions. By November, 1915, heavy gains in one trade were generally acknowledged. During this period are found the most interesting developments affecting gold and the international account.

By February, 1915, exports rose to a new height, and by September of the same year these started on a monotonous climb never before dreamed of. (See Chart VIII). Of course, exchange on London and Paris went to new low points. Import of goods began in February and continued to a record-breaking ascent in October. The shipment of gold, large as it was, had little effect on the price of exchange. Bills were in far too great a supply. Then was made clear the real issue. It was obvious that the balance in our favor could not possibly be met by gold. Moreover, England and France could not spare so much gold, and we did not need it. The war, with the vast purchases in the United States, had produced a situation quite out of the ordinary, one which could be met only by extraordinary devices.
Since no one could know all the coming changes, the fangs of readjustment to amazingly new conditions were considerable.
It is to be noted that, normally, the rate of interest in New York would affect the movement of gold to this country. If our interest rates were low, capital would not move here. To January, 1915, the rate on call loans fell to 2½ per cent, just when foreign exchange indicated coming imports of gold. It was not a normal situation. In fact, it was necessary to get munitions from us at any cost, even that incurred by the fall in exchange. Prices of exports rose before gold came. Exports had to go, and the means of payment was to be worked out somehow in the future.

Everything, therefore, pointed to the necessity of finding some other offset to our credits than the usual resort, in ordinary emergencies, of sending gold. As early as April, 1915, the nexus between the low rate of exchange and credits to foreigners became plain. The low exchange rate merely registered the extent of foreign purchases here. A first and obvious offset was the return of our securities held in Europe, of which we have previously spoken (§ 5). Beginning with January, 1915, the sales have continued into 1917, and afforded an offset against our credits, as already estimated at about £2,200,000,000.

The possibility of obtaining loans in this country to be extended for purchases here was raised early in the war by France and Russia. Through its banking agents, England had been financing purchases on a large scale. Very considerable amounts were thus

borrowed here from private credit institutions and banks. This process worked quite slowly. American investors had not been familiar with the securities of many foreign countries freely dealt in on European markets. There was hesitation in taking the direct obligations of belligerent governments on the ground that the enormous war expenditures would soon result in financial exhaustion. In August of 1915 serious attempts were made to support English exchange by sending here some $50,000,000 of gold and as much more in securities. In spite of this and other shipments of gold, exchange continued to fall. They were only palliatives. Sterling exchange dropped to 4.55½. The serious and expensive was this rate for English buyers that new efforts had to be made. The rapidly increasing efforts could not be over taken even by the exceptional imports of gold up to October. Even earlier in September, bills on London actually touched the incredibly low point of 4.49, showing a depreciation of over 67 per cent. So critical was the case that an English and French Commission arrived here to negotiate a govern-
ment loan. The Anglo-French five-year 5% and esternal loan for $500,000,000 was negotiated with some difficulty, our bankers asking for a collateral loan, while this was a direct obligation of the government. In response to this loan, exchange rose to 4.72, but soon

1. Not much importance need be given to the idea that Amer-
icans must grant credit to English purchasers of munitions, or they would buy elsewhere. Apart from Canada, there was no other source of such supplies. War demands were insatiable, and exports went on at any obtainable price. The high prices of munitions had nothing to do with the quantity of money in circulation; nor was credit easy to get.
dropped again to 4.62. For a time early in 1916 gold was not largely imported. In 1916, began a series of loans placed here by English, French, (both government and munition-purchasing), Russian, Italian, Canadian and other Governments, apart from many private loans. These offerings in our markets were taken by January, 1917, to (excluding Canadian borrowings) the sum of $141,000,000.

The case, however, needed even more drastic treatment. When this country entered the struggle (April 6, 1917) loans were soon made directly by the American Government to the Allies to cover the steadily increasing volume of purchases here. To September 25, 1917, under the Act of April 24, 1917, these loans amounted to $2,149,000,000. (while credits had been agreed upon for $2,426,400,000)

We are now able to see how, in actual practice, the international account which for the first three years of the war showed a deficit in favor of $6,864,000,000 was balanced, and how much gold was imported in this settlement. From August 1, 1914, to August 17, 1917, the excess of imports over exports of gold was $1,111,958,000, or more than the whole stock in the Treasury before the war.

1. Great Britain...$1,190,000,000
2. France.......
3. Italy
4. Russia
5. Belgium
6. Serbia

2. See p. 376
The total result for the three years may be expressed approximately in the following account (in millions):

<table>
<thead>
<tr>
<th>Cr.</th>
<th>Pr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mise Balance</td>
<td>6.864</td>
</tr>
<tr>
<td>Remittances to friends (3 years)</td>
<td>750</td>
</tr>
<tr>
<td>Relief Funds</td>
<td>90</td>
</tr>
<tr>
<td>Securities returned</td>
<td>2,200</td>
</tr>
<tr>
<td>Loans by non-Gov. financial institutions</td>
<td>1,570</td>
</tr>
<tr>
<td>Loans by the United States</td>
<td>2,149</td>
</tr>
<tr>
<td>Dividends account (3 years)</td>
<td>600</td>
</tr>
<tr>
<td>Freight and Insurance (3 years)</td>
<td>75</td>
</tr>
<tr>
<td>Withdrawal from Gold</td>
<td>1117</td>
</tr>
<tr>
<td>Total</td>
<td>$7.704</td>
</tr>
</tbody>
</table>

Thus, by requisitioning American and other securities held by English investors, to be used in steadying the rate of exchange on New York, in the Summer of 1913, by loans of exchange on New York, in our markets, and by final resort to gold shipments, it was hoped that the Sterling Exchange was stabilized at the level of $4.75 to $4.76. The high rate of incoming remittances made a lower shipping point than in normal times, so that this rate does not register a depreciation in English funds by the difference below $4.8065. This is the outcome of a difficult problem. The working of credit among the nations makes an impressive showing through the operations of foreign exchange.

1. Probably the remittances fell away from the above estimate, and the Relief Funds were much larger than given above; these are the only items in the account not based on definite authority.

2. Of Supra, p. 145.
The case of London exchange has been given first place, owing to its dominant position of our trade with Great Britain. Moreover, France had aided English exchange by sending gold through London. Another phase of the exchange, however, which furnishes valuable experience, is that with neutral countries. The dealings with European neutrals have given rise to difficulties of exchange as well as of international law. They illustrate especially the possibilities of extreme fluctuations in rates, when shipping points practically disappear because of an inability to remit gold. It makes no difference whether the failure to send gold is intentional or unintentional: the effect is the same. In spite of the colossal balance of trade in our favor, in spite of our large stock of gold, New York exchange has been at a serious discount in Spain, Switzerland, Holland, Denmark, and Sweden, (as may be seen in Chart IX). So many corresponding and adverse effects that no one bank or the specie equalization suffices. In the fiscal year of 1915, our exports to Sweden were more than six times the normal shipments, and those to Holland were highest that same year. Not until 1917 did our imports from Sweden show a marked increase, while those from Holland remained at normal.

The facts are now well known that the sudden increase in the exports of cotton, coffee, and other needed articles from this country to European neutrals indicates purchases by neutral merchants for German account. For a considerable period, indeed, settlements between Germany and the United States went on through Amsterdam. The consequent excess of our exports over imports from these
and the demand for New York funds in Europe.

The premium on New York Exchange in the early part of the war (when the time in Chapter II was above 100). At the end of 1915, for Holland and Scandinavia, and in the Spring of 1916, for Spain and Switzerland, Exchange on New York showed a heavy depreciation. In December, 1915, Sales of American Securities for German account through Holland caused a 50% in exchange which led to a shipment of $500,000 in golds from New York to Amsterdam. Soon after, German sold American obligations on the Stockholm market.

The main cause, however, of the serious decline in our bills which developed in 1916 was the risk and cost of transporting golds. Moreover, the restrictions of the British blockade were drawn against the movement of gold to the neutral countries to Germany. Otherwise, gold would, by reason of trade balances, have been moving from New York to Holland and Scandinavia. The rumor of shipments made and cargoes by British patrol boats delayed letters from New York to Stockholm several weeks, it is reported. Hence Swedish trade fell off in a marked degree in 1916, and 1917. (From exports of $78.2 millions in 1915, to $51.9 in 1916, and $45.1 in 1917.)

1. Par rates of exchange on those countries now follows: 

<table>
<thead>
<tr>
<th>Country</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark, Norway, and Sweden (Crown)</td>
<td>0.2680 cents</td>
</tr>
<tr>
<td>Holland (Guilder)</td>
<td>0.4020 cents</td>
</tr>
<tr>
<td>Spain (peseta or franc)</td>
<td>0.193 cents</td>
</tr>
<tr>
<td>Switzerland (franc)</td>
<td>5.1878</td>
</tr>
</tbody>
</table>

2. For the purchase of Sumatra leaf tobacco at the Spring auction at Amsterdam, some 5,000,000 in 1915 was allowed to pass through the British blockade from New York. Exchange was about 43 cents for the 10 francs (par 40.20 cents), while, even at high costs of transportation, the gold could be delivered in Amsterdam at about 41.37 cents per franc.
The war had thrown an exceptionally large trade to Germany and Russia into the ports of Sweden and Denmark. With this large favorable balance of trade, gold accumulated. Germany was obliged to make remittances of gold to Copenhagen. With Scandinavia, as later with us, gold imports were not needed. Their central banks had been obliged by law to pay a fixed price for gold, as an encouragement to importations of gold. So full were the gold reserves of these banks, and so low were bills on New York and London (being at a discount of 6 per cent), that the banks asked for the abolition of the requirement, since they could obtain gold at much lower than the fixed price.

Such an anomaly in exchange was not the only one. It will be noticed (in Chart VI) that while exports were increasing, heavy, and while imports of goods also large, in 1917, that very considerable exports of gold began. While, for military and political reasons, England had been using every effort to stabilize exchange by sending gold to Japan and Spain, so high in other markets, to which gold could not be exported. Consequently, dealers in exchange in Spain and Japan found it profitable to send their bills on London to be sold in New York. Having credits here, gold was demanded for export to Spain and Japan. While in past years exports of gold had been negligible, in the fiscal year 1917, Spain took $70.3 millions, and Japan $110.5 millions. That is, our gold was being used to cover English trade balances.
The matter of exchange with South American neutrals has been affected by very different considerations than those touching other neutrals. The trade need of their earlier tin, niobium, coffee, and wool. The war put off the European demand for these products, as well as the wool suppliers to capital. Formerly this trade had been settled by bills on London. Could these settlements be made by bills in New York (or in Goldilocks' exchange)? Since, as always, exchange reflects the movement of goods and credits. Since we have shown an unexpectedly great power of absorbing our re-turning securities, and of lending to its allies, it may be supposed that we could provide the capital market for developing South America formerly supplied by Europe. If so, and if we are willing to accept the same conditions and terms of credit, we may expect more trade, and more re-mittances. But hitherto a fairly large trade has been settled according to established habits and currents of credit through London. The material and spiritual bene-fits of South America are toward Europe, Europe has been able to produce transport, sell and turn more credit than we; and unless these advantages are shared, than we; and unless these advantages are shared, the former unevenness will remain the demand for the new European trade and exchange. The re-establishment of American trade there will not affect and in familiarizing them with exchange on New terms. We may gain trade. But we are not likely to do this. We are able to discount in Europe. Soon after, when we are able to discount there, in Europe. Any scale set by foreign countries and acceptance on any scale set by foreign countries and acceptance at a rate lower than London and Hamburg, we may see the world's drawing dollar exchange, instead of Sterling exchange, as well.

The balance of trade is heavily against us with South America, and it pays us to its surplus credits on Europe. When our tariff allows such freedom of exchange as England offers, and when we can bring our trade nearer to an equilibrium, we shall have a stronger hold on credit and exchange among our Southern neighbors.

For many decades our flirtation with silver caused a loss of confidence among foreign countries in the stability of our standard. That we must live down.
we must be willing, and able to do without. The use of foreign capital, in my opinion, is not an advantage in economic development. Such a reliance on capital from abroad can only lead to the same troubles as before.

The English have always been the masters in the field of international trade. They have been able to accept the gold standard and retain their advantages. Perhaps, some day, the American economy will also accept a similar standard, encouraged by the British experience.
The coming of gold in large amounts to this country as a partial offset to our phenomenal exports of goods, has created some fear of inflation in our money and credit. On the other hand, it has been regarded as placing our credit system in a strong position, if the great volume of gold is placed mainly in the hands of the Federal Reserve Board, so that it can regulate the movement of gold in the common interest, which the after-war adjustment becomes necessary. Nevertheless, the large imports of gold have raised the question of possible inflation, leading to an unsafe expansion of industry, a fictitious rise of prices, and an era of speculation.

In this matter there is involved not only the question of the currency, but of credit. As regards both, there is the question of the quantity theory of money. It is assumed that the new gold increases our currency and by being offered for goods raises prices. This part of the theory is now given little attention, since money emphatically is not the banking system. But as regards the currency, mankind are entering on a war requiring unprecedented expenditures. The imports of gold are of surpassing value in enabling us to hold fast to a gold standard. On the most critical question in financing a great war—in which even England after a time receded—our government has, to its great credit, never even raised the possibility of attempting to borrow by issuing paper money in any form, for this great emergency; for the first time in our history, there has been no confusion between the fiscal and the monetary functions of the Treasury. No attention has been even called to this matter. One can hardly
place too much emphasis on this piece of good fortune or this exhibition of intelligence - whichever we may call it. From the devastating effects of a depreciated standard we are apparently to be delivered. But if gold has been going out of the country, if we had not the great good fortune of an enormous excess of exports, advantage if we had had to undergo great sacrifices to obtain the gold to preserve our standard, who does not realize from what an elevation of political democracy we have been saved? The advantage of the large stock of gold has thus been of far greater value than any one has realized. All our prices were fixed; and there has been created no price for speculation. Yet fluctuations of a changing standard. For this, let us be duly grateful.

The main contention, however, must centre on the effect of the increasing volume of gold upon an inflation of credit through an increase of bank reserves and of the lending power of the banks. There is the real issue. And in this part of the question, we shall find that the archaic and fallacious quantity theory does not explain the facts. For instance, the old Ricardoian formula has been applied to that our vast imports of goods would raise prices here, cause greater imports of goods, resulting in exports of goods. The trouble with this outgrown theory is that this order of causal events does not agree with the facts, and that prices are in-

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1. In support of this discussion, reference has been made to Sidgeman, Principles of Economics, pp. 465-6.
... by many other forces not even hinted at in speaking only of the quantity of the circulation.

The pivotal question is the effect of large imports of gold in a credit which thus becomes the cause of a rise in prices. It is urged that an increase of bank reserves encourages an expansion of credit, and that additional purchasing power, following the expansion of credit, is a familiar fact. In such a case, no consideration of enlarged reserves, a vital rule in banking, is ignored. It is assumed that, if reserves increase, more loans will be made. In short, that, if the banks can lend, they are sure to abuse their lending power, and not scrutinize the assets offered, as they should do. For in no other way can there be inflation of credit if legitimate short-time loans have been made because of increased gold reserves. Then they can be liquidated on maturity, and loans can be contracted without disaster. Liquidation is impossible only if the assets are unliquidated. Therefore, assuming legitimate banking, there can be inflation only when an increase of loans (and deficits) is not based on a corresponding increase of assets representing the movement of saleable goods or securities. Loans can be safely increased, so long as assets are sound and liquid. The question the banker must ask is: If my reserves are above the legal limit, is the loan offered

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1. Cf. National City Bank Bulletin, November, 1916, p. 3. But at the end of 1916 it is also noted that there has been no undue expansion, in fact, and that the danger is as yet only theoretical.
a safe one? To say that, because reserves are large, bankers will no longer refuse good judgment in making loans, is not a good ground for building up a theory of prices.

Indeed, the very facts of reserve in this period of large gold imports work against such theorizing. In November, 1914, when the Federal Reserve System was just in operation, the summed requirements for reserves were a matter of wide publicity. The rise of surplus reserves (above the new legal limit) was marked and known of all men (although actual reserves did not change much), and yet loans in the turbulent Days of November and December, 1914, showed no increase. We heard much at the time about the banks having the power to increase loans by $3,000,000,000, if they wished. But they did not wish. It cannot be assumed by theorists. Therefore, that an increase of reserves must be followed by an expansion of credit, an increase of purchasing power, and a consequent rise of prices. The causes affecting the level of prices are too numerous to allow any one causality to give a quick solution by assigning an increase of money and credit as the one controlling cause.

1. Reference has been made to the very great expansion of European currencies, and the temptation has arisen to ascribe high prices there to the increased circulations, and to enlarged credit. Yet from the same quarter comes the admission that the heavy depression produced by the War has prevented expansion, especially in Europe. If so, the striking rise of prices cannot be ascribed to expansion of money or credit. Of course, if the paper money became inconvertible and depreciated, prices would rise; but that is a horse of another color.
The presence of the Federal Reserve Banks in the situation (November 16, 1914) after the crisis had passed the climate and had been dealt with by devices belonging to the old banking regime, produced no marked positive effects on credit. Their main effect has been psychological. The new system has acted as a gyroscope to stabilize the whole machinery of banking and credit. It is now well understood that there never need be again a grasping for reserves, so long as member banks hold rediscountable paper. There can never again be any paroxysms of credit in which loans are called and legitimate demands are unable to obtain credit and acceptable means of payment. The whole emphasis is placed on the quality of the loans made, and not on the amount of the circulation or the percentage of reserves. Such weapons as the Cotton Pool are, must obsolete by the new system.

This is not the place to estimate the value of the new system in various ways to our trade and credit. But in regard to the large imports of gold, and to the matter of inflation, its policy is of importance. The old tendency of individual banks to store up gold has not entirely given way to a reliance on rediscounts. An institution capable of taking the leadership in dealing with gold elasticity and aiding in the most effective management of our stocks of gold, when questions as to its import or export arise, has never before existed among us. It can play a powerful and constructive part in our international as well as in our Domestic operations of credit. It can so much judiciously to prevent the expansion of illegitimate credit at home by its use of the rediscount function in
any period when the public seems to be losing its head.

Little heed need be given to the expansion of the Federal Reserve notes, provided the present law remains unchanged, by which these notes are not allowed to be counted in the reserves of member banks. In this way the expansion of the circulation may go on under a normal demand; but it is inhibited from passing over into an uncontrolled influence in extinguishing credit. The retention of this feature is quite as important as the policy of the Federal Reserve Board in trying to draw gold into its hands by advancing the time when member banks should finish playing in their deposits. If other Than gold monies enter into reserves of banks, the control of inflation is not gained much by the control of gold. The Federal Reserve notes are so rigid about safe restrictions, and so well supported by gold, that their volume can create no concern. Their

2. Contraction may come with the cessation of war is quite another matter. Whether we are called upon for gold or not will depend upon the relation between exports and imports of goods and securities. Of course our exports of war supplies will cease. In the periods of readjustment, a hand from the brake may be desirable in studying the movement of gold and its effect upon credit.

1. Inflation of credit can best be checked at its first appearance in the member banks. The existing Act could be improved by an amendment by raising the percentage of rediscounts to the capital of the bank rises, in addition to the uniform rate of interest fixed for each district. Such a device, however, will be surmountable only when the banks make a greater use than now of the rediscounting privilege.
amount can be left to automatic adjustment.

That a rise of prices, however, has gone on contemporaneously with the imports of gold there can be no question. But it by no means follows that the imports of gold are the cause of the higher prices. It is to be noted that the question of prices transcends the limits of influence attributable to the volume of the gold circulation; for prices have risen as markedly in the countries from which the gold had come. Such facts show that other causes are more potent than the circulation.

While there is no place here for any extended study of prices, the appearance of certain general causes are so obvious that they may be briefly introduced. With us there has been no depreciation of our standard of prices; so that the influence of depreciation of money upon prices, as in Germany, may be eliminated at once. The non-monetary causes are confirmatory. We who were not even the effects of an extraordinary scarcity of labor, an intense demand especially in munition factories and in Government employments, magnified of course, as the armies are withdrawn, resulting in a very great rise of wages for the same degree of efficiency. The inevitable effect in raising expenses of production and the prices of goods follows as a matter of common observation, (2) The effect of the war in destroying shipping has obviously brought about higher rates of transportation by sea, and on a scale never before equalled. Higher freights on imports raised our prices, (3) The withdrawal of men from agriculture in Europe has lessened the supply, created an intense demand for our foodstuffs and other exports, and this fierce com-
petition has raised prices to our own consumers, irrespective of the expenses of production. (4) Moreover, the exceptional European demand for our coal, sugar, steel, copper and the like, have raised to us the price of all materials of manufacture to a scarcity level. Here, in brief mention, are listed forces working to raise prices which have no relation whatever to the volume of the circulation, or to the expansion of credit. In the face of such facts it seems like bigotry, or pride of opinion, to revert to the absolute theory that the rise of prices can be accounted for only by the quantity of money, or the increase of bank reserves. At the best, it is only a one-sided theory which omits such powerful forces from consideration, under an alibi usually termed "other things being equal." On this price question, the "other things" are, indeed, the camel, in the tent to the quantity theorists.
8 Since credit is a means of passing capital from one creating it to the one using it, we are obviously concerned with the forces behind the supply of capital. The sudden outbreak of the European war so disorganized trade, and so disarranged the ordinary machinery of credit, that although not then involved in the struggle, it was regarded as an indescribable calamity to us, like other young nations we had been borrowing capital from abroad for the development of our own resources. What would happen to us, a debtor country, if we were cut off from this foreign capital by the return of our $6,000,000,000 of securities? It was a staggering question! But, if it had been added that we must not only take back our investments, but even be called on to make enormous loans to other countries, the proposal would have been regarded with undisguised incredulity. Then, if on top of all these demands, it were prophesied that we must loan untold billions to our own government, even optimistic persons would have frankly said that it was clearly impossible. How could a debtor nation suddenly become a creditor nation on a most imposing scale? This is one of the amazing revolutions of the war. Out of what seemed inevitable calamity could come such material advantages?

The cross currents and contradictions of this contest often appear inexplicable. It is because unexpected results have been set in motion by psychological forces which could not be estimated beforehand. Not the least important of these is the psychology of capital-
making. No one has doubted the phenomenal productive capacity of the United States. The energizing influence of the new era of power and machinery has been displayed on the vast natural resources of this country in an expanding volume of products unequalled by any other nation. As a consequence, the estimated national wealth of the United States in 1912 has been placed at $187 billions (as against $88 billions in 1900). Such is the basis on which the supply of capital rests, long since it has been an economic commonplace. That saving of capital depends on two things: (1) the extent to which the margin above the necessities of life from which savings can be made; and (2) the strength of the desire to save. As regards the margin, we have never realized its extent. In recent decades we have been the scene of large fortunes and a display of extravagance which has migrated in every possible way our enormous capacity for consumption. In things not actually necessary to physical existence, no one can begin to estimate what would be the effect on the accumulation of American capital, if all this margin were saved. We have never fully realized that, as things have been going on in times of peace, the useless destruction of wealth by expenditure on unnecessary consumption—articles, which when consumed, leave nothing in their stead—has constantly been

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as great as that caused by vast armies in time of war. Then, apply to our immeasurable billions of surplus above necessity an exceptional stimulus to the will to save. The effect may seem like a miracle, but it is all within the limits of achievement, if we so wish. When the war broke out, the uncertainty caused by the shock, and the general depression induced by the world-wide disaster, led everyone to economize. Not one of our abundant resources of production, nor any of our resources, was allowed to exist. For a time the wheels of industry ran at low speed, yet the loss was not in the factors of production, but only in the temporary reduction of our usual output. In this period there was much idle capital and rates of discount were low. The floating capital sufficed to take up our returning savings. Moreover, wide-spread economy was aided by a cessation of expenditure for European travel. Under various influences working to restrict unnecessary consumption capital was slowly being accumulated. Estimating American savings, the amounts of new securitization during each year, and the rise of savings accounts, the normal annual addition to our capital before the war was far below

The crisis of 1914 had been very large, but there had been no new enterprises started, and no revival of trade. As a consequence, accumulations on a large scale were dammed up waiting for employment.

1. It was long ago explained that countries devastated by war recover with startling rapidity, provided productive laborers are returned to the soil, and the factories. If supply is lost, the scanty capital sufficient to lower the means of subsistence and the minimum of the necessary implements of production, in a very short time a country by such enforced saving will accumulate a large capital, and will turn out the much wealth, as before the war. This situation is one which deserves enforced saving.
a billion dollars. But after the readjustment had been made in 1905 to the new war conditions, by 1916 the wheels of industry, and all the factors of production, began to run at the highest possible speed. Under these conditions enormous accumulations of capital were possible. Apply to these possibilities the magic of any new incentive to savings, such as a patriotic call to invest in a Government loan, and the results may well seem astonishing. There is no miracle. The result is the outcome of a stimulated desire to save, working upon a vast market about the necessities of life, and is an illustration of the psychology of capital making. It is the only convincing explanation of the means by which we changed from a debtor to a creditor nation.

Nevertheless, the transfer of capital to the borrower by credit is not as popularly conceived. Wealth may have its value expressed in money, but the title to wealth may be transferred without the use of money. So with capital. But, also, much capital, like mills, furnaces, factories, steamships, are in a form which cannot be passed from hand to hand. One subscribing 1000 to a government loan cannot give a part of his fixed capital, nor his cattle. It pays sufficiently in money, but money is very little used in such operations. In fact, through credit, he obtains a means of payment by which he pays for his bond. He gets the right to draw on a credit if he has bankable wealth or property (including securities, which are titles to wealth). By credit he is able to coin bankable wealth into an acceptable means of payment. In such a case he transfers to the Government a claim in the form of general purchasing power over goods. Formerly, he directed its com-
consumption; now, the government controls its consumption. He forgets all use of that wealth (or capital) and, gets in return a bond and annual interest. He may have put his wealth out of his income to the amount of $1,000, but now he has saved it by buying a bond, even though the government uses it for munitions of war. But it cannot be assumed that a large loan is wholly obtained from new savings. To the extent that people economize and are enabled to pay for bonds that is true.

To a large extent, loans come from those who already have capital. One man may pay for his bond out of his running bank balance; but, in that case, he transfers to the government a claim on the active funds of the country, since the bank has invested which was left with it. The industrial operations of the country (as appears in bank assets), the government possesses that claim to a mill for steel plates; and regions. If such claims are offset, as usual, through clearing houses, no money need pass. Other persons may sell securities in order to buy the government bonds. Securities are titled to wealth and income. When they are sold, the seller has a sum to his credit at a bank; and the process, then, is the same as that just described. The government gets present goods in return for a promise to pay in the future. The transaction is, thus, a purely credit operation involving the exchange of goods with an obligation to return an equivalent in the future. The extent to which a government can borrow depends upon the quantity of goods it can take under its control without lessening the general productive capacity of the country. The amount of money in circulation or in bank reserves, has little to do with it. That quantity of money is needed which, according to the country's monetary habits, will provide the usual...
mechanism of exchange for doing the work, whether it is concerned with a volume of peace or of war goods. Otherwise, clumsy management by the Treasury might call for loans to be taken in bank funds, and not discount them from the mortgage to have them reach their former equilibrium, before new loans were offered; only in such a case under the monetary supply seem to be insufficient.

Then, in the course of the rapid extension of our exports, it came to be evident that payment could not well be made in gold, credit operations running forward into the future, loans to were inevitable. As we have seen, the quantity of our our allies' securities returned from Europe was an inadequate offset inevitable for the sum owing up on balance. Hence, the allies were a logical sequence to the enormous purchases of our goods; and the beginning of these loans coincides with the time when our exports began to upsurge. Hence, we had looked askance at the securities of foreign governments, but loans, if we could float them, were an international necessity. Moreover, the financial position of Great Britain was shown to be very strong, while France, a weaker sister, was supported by the former. Then came the first of an important series of credit transactions between foreign countries and ourselves which may be regarded as the inaugural of a new era for us in the sphere of international credit. In order to pay for their purchases of our goods, loans were offered here with the understanding that the proceeds would be advanced here. That is our investors gave the allies general purchasing power, which was at once transferred to the sellers of our goods, who, of course, had accounts in the same group of banks through whom the loans were managed. The foreign buyer was had pledged no payment in the future,
Again, there was no reason for the use of money to any important extent, except in adjusting balances between our banks; and credit continued here also, in making efforts. Credit of the nations plays a more and more important role.

The loans to foreigners have taken different forms. The first feeder in our market was a loan of $10,000,000 to France for one year, November 5, 1914, which was paid off at maturity. Early in 1915, approval of the proposed market for acceptances here and the creation of paper which lending banks might offer for discount at the Federal Reserve Banks, $25,000,000 of Russian acceptances were offered. To allow Russia to buy of us, our bankers agreed to accept bills drawn on them for purchases from American houses. This method seems to have been discouraged, and the bills were paid off. There seems to have been a strong preference here for collateral loans. In the summer of 1915, a loan was negotiated for France by the Rothschilds amounting to $43,000,000 on the deposits of bonds of the Pennsylvania and St. Paul railroads, a well-known banking house offered in New York a one-year collateral loan guaranteed by the Bank of France for $20,000,000 on which acceptances were sold. Much later, right. London joint stock banks united to establish a credit line of $50,000,000 for six months, but was renewed at maturity at a higher rate. The selling of English Treasury bills in our market was facilitated by the Federal Reserve Board, as lending to our member banks with unliquid paper, on the assumption that the bills would not be paid off, but renewed, and thus be in effect long-term paper.
The one large loan, however, which tested our attitude to borrowing by foreign governments, and which was
forced by the condition of sterling exchange, was the
Anglo-French Five Year 5 per cent. External Loan for
$500,000,000 in October, 1915. The result of the efforts
of an English and French Commission. These bonds
were the joint obligation of the British and French Governments,
payable at the end of five years, or convertible at option
into 4½ per cent. 15-25 year bonds. A syndicate of
bankers from many cities took the whole issue at 96½,
offering the bonds to the public at 98, to yield about 5½
per cent. to the investor. This was the first foreign
loan of any magnitude to be placed in this country.

Since then, in 1916 and 1917, before we entered the
war, other loans have been placed here by Great Britain,
France (one for $94,500,000 through The American Foreign
Securities Co.), Paris, Bordeaux, Lyons, Marseilles,
Russia, Italy, Switzerland, Norway, Canada, Newfoundland,
Argentina, and China, totaling $1570,000,000.2

Immediately after we entered the war, our Government
on April 25, 1917, by virtue of the Act of April 24,
1917, made the first direct loan to the Allies, one of
$200,000,000 to Great Britain. To September 25, 1917,
the total of loans to Great Britain, France, Italy,

1. It appears that at the close of the Sixty Days' Bank for the
syndicate, $280,000,000 were withdrawn for investment at 96½;
$40,000,000 sold to the public at 98; and the remaining $180,000,000
distributed to members of the syndicate through whom the bonds
were sold in the open market. They have since sold under 90.

2. For details see Appendix IV.
Russia, Belgium, and Serbia by the Government of the United States which was $2,426,400,000. It was no longer necessary for the Allies to place loans in our open market.

In addition various other loans to foreign banks and governments through our non-governmental institutions of credit, must certainly exceed $200,000,000 and may be very much more. Thus, in the three years of war, this country, besides receiving here its own securities amounting to at least $2,200,000,000, has also loans to foreign countries not less than $4,200,000,000. So large a lending power has been unexpected; and it makes the question of the source from lending power of practical as well as of theoretical interest. Our success, in addition, in making loans of many billions to our own Governments belongs to another phase of credit.