The Sterling Rate of Exchange Since the End of the War

by

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THE STEELING RATE OF EXCHANGE

SINCE

THE END OF THE WAR.

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A Thesis submitted for the Degree of

MASTER OF ARTS

in the Department

of

ECONOMICS.

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The University of British Columbia

April, 1922.
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THE STEELING RATE OF EXCHANGE

SINCE THE END OF THE WAR.

CHAPTER I.

FOREIGN EXCHANGE UNDER THE GOLD STANDARD

AND

UNDER INCONVERTIBLE PAPER.

The purpose of this thesis is to discuss the reasons for the fall in the price of sterling exchange since the close of the war, and the measures necessary to restore the sterling rate to its pre-war condition.

The theory of foreign exchange has been well covered by economic writers and it is not in the hope of adding anything to that theory that I have devoted this chapter to a statement of it. A brief statement of the theory is desirable in entering on the consideration of the present subject, as attention should be directed to some points which are especially important in connection with the present conditions.

Foreign exchange is the mechanism which has grown up for the settlement of international indebtedness. The simple term exchange means the barter of commodities for commodities, or for a particular kind of commodity, money.
Foreign exchange has, however, come to refer to a particular kind of exchange, the exchange of claims arising out of the transfer of commodities between countries.

Money has been defined as "that which passes from hand to hand throughout the community in final discharge of debts and full payment for commodities, being accepted equally without reference to the character or credit of the person who offers it. There are a number of things which fill these requirements in domestic trade, such as gold, silver and copper coins, and legal tender notes; but between countries there are only two, gold and silver. These are money, not on account of any stamp which they may bear but on account of the value of their bullion content. Although these metals only have the requirements of money in international trade, they are not used in the settlement of all international transactions. As the bank note and cheque are used in domestic trade on account of their convenience and economy, so has the bill-of-exchange come to be used in foreign trade.

As the stock of gold and silver money in most countries would only cover in value a portion of the goods which they import annually, no country can for long pay for its imports out of its stock of gold or silver money. Countries which produce gold and silver may export them year after year, and these metals may be an important item in the trade of such
countries. Gold and silver are then, however, exported like any other commodity, and their export does not represent a withdrawal from the money stock. Countries pay for their imports by their exports. If money had to be shipped in payment for all commercial transactions there would be a constant flow of the precious metals to and from every country,—a flow to the country to settle its credits and one from the country to settle its debts. It is this cost of a double shipment of gold or silver which is saved by the system of foreign exchange.

The principle on which the foreign exchanges operate is that the exporters in any country may, in as far as possible, receive payment for the articles they have exported from those who, having imported from foreign countries, owe money abroad, and only the balance either way need be settled in actual money, gold or silver. It is unnecessary here to enter on a complete explanation of the operations of the exchanges, but the principle may be readily understood by considering a simple hypothetical situation, in which two countries only have dealings with one another. Consider the United States as having shipped goods to and received goods from Great Britain only, and Great Britain as having shipped goods to and received goods from United States only. The American exporters draw on their British customers for the value of the goods; the form
by which they draw is called a bill of exchange. The holder of this bill is entitled to receive so much British currency from the party against whom it is drawn. The American exporters now sell their bills to American importers, thus receiving payment for their goods. The American importers send these bills to their British creditors who present them to the British importers against whom they are drawn, and so receive payment for their goods. If American exports have exceeded imports, there will be some bills against British importers for which there are no buyers, and gold will have to be shipped from Great Britain to redeem them. If American imports have exceeded exports, importers in the United States will wish to buy more bills than there are available, and those who are unable to find bills will have to ship gold to meet payments. In either case it is only the balance which need be settled in gold.

The total commercial transactions of a country do not, however, take place between that and one other country. Very often the country to which another has shipped a large volume of goods is not one from which it has received much in the way of commodities. The operation of the exchanges may be further illustrated by another example. Consider Great Britain as having imported ten million dollars worth of goods from the United States, and to have exported five million dollars worth
of goods to the United States and five million dollars worth to France. France has exported five million dollars worth of goods to the United States. Five million dollars worth of goods, imported by Great Britain, will be paid for as in the previous illustration, and the other five million by bills of exchange against France. The American exporters who receive these French bills will sell them to the American importers who received goods from France, who will send them to their French creditors. The French exporters will present them to the French importers against whom they are drawn. Thus a country may pay for its imports by bills drawn against a country to which it is a creditor, and if credits to all other countries exactly balance debts to all other countries, no gold need be shipped to or from it in payment. It is only those countries which have a total excess of debts which need ship gold, and only those which have a total excess of credits which will receive it.

I have assumed that all the exporters from one country to another will draw on their customers, and that the exporters in the second country will wait to receive bills from their customers. In practice the operations are carried out in both ways in all countries, according to the arrangement between the parties. The effect on the trade balance and gold shipments is the same whichever way the transaction is carried out.
Exchange dealings are facilitated by the work of exchange dealers and brokers. They buy bills from whoever has them to sell and sell them to those who require them. Since they are constantly in touch with the exchange market they narrow fluctuations in price, and on account of the volume of their business they are able to operate on a very small percentage of profit.

The rate of exchange expresses at any time the value of one country's currency in terms of another's in settling international debts. Thus, when sterling exchange is quoted in New York at four dollars and twenty cents, people can buy bills-of-exchange on London at the rate of four dollars and twenty cents to the pound, and anyone in United States having a debt of one pound to a party in England may settle his obligation with four dollars and twenty cents, for he may buy a bill-of-exchange and send this to his creditor.

The rate of exchange, like all other prices, is determined by the supply of, and the demand for, bills-of-exchange; therefore let us see whence comes the demand for, and the supply of, these bills. So far we have spoken of bills-of-exchange as arising only out of exports; this is only true if we consider as exports certain so-called invisible items which are not usually thought of in this regard. The supply of bills-of-exchange in any country is created by all transactions
which, but for the system of foreign exchange, would require
the shipment of money into the country. All such transactions
can usually be put under one of the following heads: commodity
exports, the buying by foreigners of the country's securities,
payment of interest on foreign securities held in the country,
payment for services done by the country's ships or financial
houses for foreigners, payment of expenses of foreigners in
the country, or services rendered to foreign ships and remitt-
ances home by the citizens of the country living abroad. These
are the transactions out of which the supply of exchange arises,
and so any increase in these transactions will tend to decrease
the price of bills-of-exchange against foreigners; that is, the
value of foreign currencies in terms of the home currency.
The demand for exchange is created by all transactions which
render the people of a country the debtors of foreigners, and
these are just the opposite kinds of transactions to those
enumerated above; these are: commodity imports, purchase of
foreign securities by people in the country, payment of interest
on the country's securities held abroad, payment for services
done by foreign ships or financial houses for the country,
expenses of the country's citizens in foreign countries or
services rendered its ships in foreign ports and remittances
by immigrants to their homes. It is out of these operations
that the demand for bills-of-exchange comes, and therefore any
increase in these transactions will tend to raise the price of bills-of-exchange, that is, the value of foreign currencies in terms of the home currency.

The effect of taking up a country's securities in a foreign country perhaps needs special consideration. This operation is usually looked upon as a credit to the country taking the securities; this it is, but, for the year in which the transaction takes place, the operation will be a debit on that country's trade balance, for it represents an amount for which the exports, visible and invisible, will have to exceed imports. Loans and the purchase of securities are therefore represented as an import item to the country making or purchasing them, an export to the country receiving or selling them.

Let us now consider the operation of the exchanges between countries which are on the gold standard. Although this is far from the case at the present time, the only way to understand many of the terms used in treatises on questions of exchange is to consider commercial transactions between countries which have a common denominator of value. That common denominator of value was, before the war, gold. A country is said

(1) A few countries were before the war on the silver standard, but I have not considered it necessary to enter fully into the effect of this on their exchange rates with gold standard countries because these exchange rates will be subject to fluctuations for the same causes which effect the rates between gold standard countries, but will also be subject to further fluctuations due to alterations of the value of silver in terms of gold.
to be on the gold standard when its currency is exchangeable for
gold at a fixed ratio. Thus British currency of all kinds was be-
fore the war exchangeable at the rate of 115.001 grains of pure
gold to the pound. American currency was and is exchangeable
at the rate of 23.22 grains of pure gold to the dollar. The
British pound, therefore, represented the same gold as 4.86-2/3
dollars. This is what is meant by the par of exchange, the propor-
tion which the gold content of one country's unit of currency
is to another's. Why, it will be asked, should the rate of ex-
change vary at all between countries both on the gold standard?
Exchange rates vary under these conditions on account of the
cost of shipping gold. As long as the supply of and the demand
for bills-of-exchange are equal as between United States and
Great Britain, there will be no variation in the rate of ex-
change, when both countries are on the gold standard; but when
the supply of bills does not equal the demand gold will have to
be shipped from one country to the other. In this case gold
itself will be more valuable by the cost of shipment in the
country to which it is to be shipped than in the other country.
So, too, those bills which represent the command over gold in
the country which is receiving gold, will be appreciated in
value in terms of the other country's currency. Bills-of-exchange
against any country fluctuate in value according to the demand
for and the supply of them; but the limit to which they may rise
or fall is determined by the cost of shipping gold between the countries. A man in United States would not pay more for a bill-of-exchanges against London than the cost of the gold plus the cost of shipment, because he could liquidate a debt in England with gold at that price. The cost of shipping gold under modern conditions has been reduced to a very small amount; before the war it cost about two cents a pound to ship gold from London to New York. Therefore when gold was leaving United States to go to England the exchange could not go above 4.88-1/2 (approximately), and when gold was leaving England to go to United States the exchange rate could not fall below 4.84-1/2 (approximately). 1.

When countries are on the gold standard, the fluctuations of exchange rates are for the above reasons not wide, and so the different currencies used offer little discouragement to international trade.

Once the gold supply has been adjusted to the monetary needs of each country, further movement of gold is discouraged, except to adjust the volume of gold to a permanent change of industrial condition. Trade is responsive to any small departure

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1. Under abnormal conditions when immediate payment is demanded and no one wishes to wait the time required to send gold, the exchange may go beyond these points. Thus, at the beginning of the war, sterling exchange in New York is said to have reached 7.00 dollars.
from equilibrium of the credits and debts of a country. For, if the balance is not struck without gold shipment, exchange on the country which the gold is leaving will be below par value in terms of the currency of that country to which the gold is going. Therefore, the people of that country will have to pay more of their money for foreign goods than previously, and to that extent will be discouraged from importing. Similarly, foreigners will be encouraged to buy in the country on account of the increased buying power of their money in that market. In the country to which the gold is going, just the opposite influences will be at work; importing will be encouraged, and exporting discouraged. If these influences are not sufficient to restore the balance of imports and exports the drain of gold from one country will continue, and due to the decreased supply of money prices will fall. On this account foreign buyers will be further encouraged. In the country or countries receiving gold the opposite influences will again be at work. In practice in ordinary times, the fluctuations are further confined through the action of the banks in raising and lowering interest rates when the exchange rate denotes a great gold movement. The effect of this is to correct the trade condition before the diminished gold supply would do so. Only when there is an increase or decrease in the trade of some countries

1. Quantity Theory of Money.
relatively to others will there be any great movement of gold. If there is an increase in the trade of one country relatively to others, prices will tend to fall, owing to the scarcity of gold relatively to the new condition of trade: exports will be stimulated and gold will come into the country until the price level is in about the same relation to that of other countries as it was before. Complete adjustment of price levels between countries is of course never effected; it is interfered with by tariffs, and one adjustment is never completed before another sets in. The responsiveness of the exchange rate to the balance of exports and imports, visible and invisible, keeps the conditions from departing far from normal. A small balance of payments to be made in gold, that is, small in comparison with total exports or imports, will be large in comparison with the total monetary supply, and will therefore start influences at work which will correct the trade balance.

This, of course, does not mean that merchandise imports and exports tend to equilibrium. A young country may for years have a balance of imports which is covered by the investment of foreign capital. In time, however, the commodity balance will have to turn in the opposite direction in order that interest payments can be made. An old, developed country will, under normal conditions, not be able to maintain a balance of imports in the same way, because they will not usually offer profitable
fields of investment.

The workings of the exchanges when some of the countries under consideration have an inconvertible paper currency is of far more direct interest at the present time, and is a much more complex study. The fluctuations in rates are, at such a time, very wide, and the causes of fluctuations difficult to locate and to arrange in order of importance.

At present the United States is the only great country of the world which maintains the gold standard of its currency. The holder of a Canadian dollar bill, or of a British paper pound, or a French franc note, cannot exchange his paper for any fixed quantity of gold. The value of the paper expressed in gold is variable, as is its value expressed in any other commodity. The holder of a bill-of-exchange against such a country has a claim for so much of its currency, but this is redeemable in no fixed quantity of gold. Therefore, there is no limit to which its value may fall in terms of gold, or of the currency of another country.

Inconvertibility of the currencies of most countries of the world has been brought about by a great increase in the volume of paper and bank deposits, relatively to the gold reserve. It is a principle of finance that a volume of negotiable credit may be maintained in circulation in a country in excess of the gold held to redeem it, without having its value depart from the
value of the gold in which it is redeemable. This volume was, in most of the belligerent countries, exceeded during the war, and in order to prevent the drain of all their gold from their countries the governments had to relieve themselves of the obligation of redeeming their notes. As soon as this was done all gold was driven from circulation, and gold was quoted at a premium in terms of paper. The greater the volume of such inconvertible paper, the less becomes the value of the unit of currency.

The value of bills-of-exchange against a country having an inconvertible paper currency in a gold standard country will correspond roughly to their value in gold, since the currency of a gold standard country is a command over gold.

At bottom the factor on which rests the price of exchange on a country under an inconvertible paper regime is the purchasing power of the inconvertible paper money within the country, relatively to the purchasing power of the currency in which the price is expressed, for the price at which people,

2. Nominal the British pound is still convertible, but the restrictions placed on the export and melting down of the gold, so obtained, render it useless for anything but circulation within the country. Thus the value of the gold coins to the individual is the same as the value of the paper unit of currency, and not the bullion value.
who hold bills-of-exchange against the country, will dispose of them, will depend on the value of the goods which they can get for the currency over which they have command. The purchasing power of the currency falls as the volume increases, but the volume is not the only element which determines purchasing power. The purchasing power is in turn affected by the rate of exchange. 1

Especially is this true in the case of a country like England, where such a large proportion of the articles of commerce are bought and sold in foreign markets. Public confidence has a great effect on purchasing power. The paper is, after all, a promise to pay as much gold bullion, and the belief which people have in the ability and good faith of their government will influence the value of the currency. If people expect a further issue of paper, they will attempt to exchange their notes wherever possible for goods, and this will itself lower purchasing power. If the people expect a reduction in the volume of the paper, they will expect an appreciation of its value, and will accumulate as much as possible in anticipation of a rise in value. This withdrawal from immediate circulation will cause a rise in purchasing power.

The price of bills-of-exchange, besides being subject to fluctuations on account of alterations in the purchasing power of the currency over which they give command, is influenced

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by other things. The confidence of foreigners in the country’s ability to meet its debts will directly affect the exchange rate in the same way as public confidence within the country affects purchasing power. In so far as external public confidence differs from internal public confidence, the price of exchange will depart from its purchasing power parity.

The balance of immediate payments causes wide divergence of the price of exchange from its purchasing power parity. A good example of this is seen in the payment by Germany of the first instalment of the indemnity. The balance of immediate payments was against Germany, and the German government was in the position of a forced buyer of exchange against her creditor countries. They had to get credits in France at any price, and this forced the value of the mark down below the value which its purchasing power warranted. Under the gold standard the balance of immediate payments has the same depressing tendency on the price of exchange against the country with the unfavorable balance, but gold is a universally desirable commodity, and the certainty that gold can be collected for the balance prevents the price of exchange from falling far. Under the convertible paper standard the country’s goods stand in the same position as gold under the gold standard, but ordinary commodities are not universally desirable. Before the balance of debts can be cancelled, goods must be manufactured for which there is a demand
in foreign markets, or wants created in foreign countries for which the debtor country has goods to supply. All this takes time, and meanwhile the exchange rate may depart a long way from purchasing power parity. While the balance is being corrected, the excess in the supply of bills-of-exchange on the country over demand will be held by speculators, and the price at which they are held will be determined by the risk which they feel they are taking.

It is sometimes thought that, when exchange on a country is very much below its par value, imports into the country are discouraged and exports encouraged. The inaccuracy of this idea lies in the fact that when a country has an inconvertible paper currency, par value has no meaning except to measure the extent of the depreciation. Trade will be only influenced either way in so far as the rate of exchange rises or falls above or below purchasing power parity. Even then, export or import will only be encouraged in so far as the purchasing power of the currency is reflected in exportable commodities. The fact that an American can get one thousand roubles worth of Russian exchange for his dollar does not encourage him to buy in Russia unless he can get more goods of a kind he desires for the one thousand roubles, so bought, than for his dollar in America or some other country. The price of exchange in relation to purchasing power parity is determined by the confidence of people outside the country relative to the
confidence of the people inside the country, and by the balance of immediate payments.

During a period of increasing inflation, the increasing volume of currency will tend to increase imports and decrease exports, because prices internally will first feel the effect of the increased supply of money, and so the decrease in purchasing power will precede the fall in the price of the country’s bills-of-exchange. Similarly, during the process of deflation, exports will be encouraged and imports discouraged.

The mere fact of an inconvertible paper currency, and consequently an apparent very unfavorable exchange rate, does not tend to produce a favorable trade balance. If such were the case, the flow of gold to the country to pay for the excess of exports would restore convertibility, and so the condition of the currency would tend to correct itself. For the effect of inconvertible paper currency and depreciated exchange rates on trade balances, particular cases must be considered separately, and all the influences being taken into consideration and the importance of each estimated, some conclusion may be drawn as to the result on trade conditions.

The detrimental effects of inconvertible paper currency, in so far as it acts through the exchanges, are due not so much to the apparent very unfavorable exchange rate against the country as to the instability of any rate. The consequent risk to all who
have commercial dealings with foreigners acts as a great barrier to trade. These risks may be partly insured against, but even then the insurance costs money, and this added expense is a discouragement to the interchange of commodities. The economic welfare of the world depends on a complex division of labor, and so on the exchange of commodities. For this reason the stabilization of exchange rates is of prime importance in the restoration of prosperity.
At the beginning of the war the price of sterling exchange soared away above par value. England had great credits in almost every country in the world, and the British credit houses, expecting that gold movements would be interfered with, demanded the instant payment of their dues. The demand for sterling exchange was so great, and the British creditors so anxious not to have to await the time required to ship gold, that cable transfers on London rose to over seven dollars to the pound. This even between gold standard countries. The exchanges were unable to supply the bills required, and had to be closed.

With the increased demand for American goods, and the falling off in the British export trade, the price of sterling exchange fell, and since there was no free movement of gold the fall was not limited to the cost of gold shipment. The British government started to support the exchange rate in 1915, but the rate did not become stabilized until early in the spring of 1916, when, through the action of the British government, the rate was held at 4.76-7/16 dollars.

The method of stabilizing the price of sterling was by

1. The War and Lombard Street - Hartley Withers.
an agreement with the J. P. Morgan Company, whereby all bills-of-exchange offered were taken at the rate agreed upon. It followed that no one would dispose of bills on London for less. The bills-of-exchange so bought were covered by a loan from the United States to the British government. This pegging of exchange, as it is called, was carried out for the purpose of ensuring the flow of munitions and food supplies from the United States, and to prevent speculators from manipulating the exchange market. While, for this reason, the action was no doubt justified, it must be recognised that the arrangement had the effect of keeping the purchasing power in United States of the British currency above the level to which it otherwise would have fallen. It acted as a subsidy on imports, and encouraged consumption which was unwarranted by the true economic condition of the country. With the government control of shipping, however, the extravagance was reduced to a minimum, since only those things considered necessary were allowed to be imported.

When the governmental control of shipping was withdrawn it was recognised that the British government could not go on increasing its debt in the United States and to that extent encouraging its people to live beyond the income of the country. Therefore on March 21st, 1919, the support of the exchanges was

1. Chapter III.
withdrawn. Sterling exchange in New York fell rapidly. There have been wide fluctuations in the price of exchange since that time. The lowest point to which it fell was 3.19 dollars on February 4th, 1920, and the highest point to which it had risen, up to the end of 1921, was 4.24-1/2 dollars on December 12th, 1921. Since the beginning of the present year sterling has shown a comparatively steady upward tendency, being usually above 4.30.

The course of sterling exchange on New York is representative of the course of exchange on gold standard countries. As was pointed out, the rate of exchange between gold standard countries is limited to a narrow margin of fluctuation, so that the rates of exchange between Great Britain and two gold standard countries will move closely together.

British exchange in the late belligerent Continental European countries — France, Italy, Germany, Austria, etc., has been usually above par. These countries have also been on inconvertible paper currencies, and as inflation of paper has been in excess of the inflation of the British paper, the depreciation of the value of the unit of circulation has been greater. The price of exchange on such countries has fallen roughly in the proportion of the increase in volume of currency. The degree of inflation is, of course, only the most general reason for the prevailing rate of exchange. Fluctuations over short periods of

1. Chapter I.
time must be looked for in the other influences given in Chapter I. The exchange rate is a ratio expressing the value of one currency in terms of another, and is therefore affected by changes in the foreign exchange value of either currency. As the British currency has been the object of less uncertainty and smaller fluctuations in domestic value that the money of the Continental European countries, the alterations in the price of sterling exchange in terms of the currency of these countries must be sought mostly in the financial, industrial, and political condition of the other country, rather than in that of Great Britain.
The word inflation in regard to currency is used with two widely different meanings. In one sense it is used to indicate any increase in the volume of the currency. In this sense inflation may occur and yet all the forms of currency be convertible into the gold which they profess to represent; inflation is due merely to the increase in the gold used for monetary purposes beyond the requirements of the country's trade relatively to the money and trade of other countries. This fact is reflected in the purchasing power of gold in the country, and the effect of the prices on foreign trade will, in a comparatively short period, correct the distribution of gold. In a second sense inflation refers to an increase in the volume of negotiable credit implements (paper money and bank deposits) to such an extent that these implements are presented for redemption in gold in greater quantity than can be redeemed. The credit implements, therefore, become inconvertible into gold, and the country is said to have an inconvertible currency. Such currency is, of course, useless for circulating purposes in foreign countries, and so the excess cannot be drawn off as excessive gold would be under the other kind of inflation.
It is in the sense of an increase in the volume of negotiable credit that inflation is applicable to the currencies of Great Britain, France, Germany, etc.

The quantity theory of money has been the object of many attacks of late. The theory may well be doubted, if it is stated in such a way as to mean that the price level will rise and fall in exact proportion to an increase or decrease in the volume of circulating medium. The theory states that the general price level will vary directly as the volume of currency if the demand for money, i.e., trade and the velocity of circulation, remains the same. Trade and the velocity of circulation may themselves be affected by an increase, or decrease, in the currency,—especially is this true when the currency consists of inconvertible paper.\(^1\) In spite of this, however, there can be no doubt that there is a tendency for prices to rise when the volume of currency increases, and fall when the volume decreases; a study of prices during the war gives ample proof to the quantity theory of money to this extent. Price levels have tended to adjust themselves to the volume of currency. The price of bills of exchange in accordance with the theory developed in Chapter I has followed the purchasing power parity more or less closely.

According to the quantity theory of money, the effect of

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1. It is generally admitted that the French assignats greatly reduced trade. The insecurity of the value of the paper made people unwilling to exchange anything for the assignats.
inflation on prices should be the same whether inflation be due to increase in gold or increase of inconvertible credit circulation; prices will rise in accordance with the increase in the volume of currency. This is probably not absolutely true because (1) the purchasing power at home of an inflated convertible currency is maintained by its purchasing power abroad, and (2) an inconvertible paper currency will fluctuate in purchasing power according to the prospects of its future — as the redemption appears remote or near its value will vary.

In foreign purchasing power, as indicated in the rate of exchange, the effect of the two kinds of inflation is by no means the same. No matter what the volume of a convertible currency, the exchange rate on a gold standard country is limited by the cost of gold shipment. When a currency is inconvertible, the exchange rate tends to conform to purchasing power parity, but fluctuations around that point are not limited.

There are three principal ways in which governments may obtain funds to carry on their activities. These are: taxation, borrowing, and creating credit in their favor. By taxation a portion of the funds of individuals is openly seized, by the method of loans funds of the citizens or of foreigners are borrowed, and by the method of creating credit a portion of the income of individuals is seized by reducing the buying power of their currency. Credit may be created by a government by issuing paper money, or
by having deposits in banks created in its favor. Whatever method of obtaining funds is used, if a government is to be solvent, taxation in the end must be used to pay for the funds received by the other methods.

Most of the belligerent countries were, during the war, forced to resort to the third method of securing funds to make up for the excess of their expenses over what they were able to obtain by taxation and loans. The increase in credit implemented owing to this has rendered the currencies of these countries inconvertible.

The British government was no exception; in as far as possible the war was financed by taxation and loans on the part of Great Britain, but the creation of credit had also to be resorted to. The British method was to have deposits created to the government's credit at the bank of England. As the government paid for its supplies, etc., these deposits were, of course, transferred to private accounts, and the debt was represented as an overdraft at the Bank of England. To a minor degree the government also had deposits created to its credit through supplying treasury notes to the banks.

The effect of inflation of the British currency is shown in both purchasing power and exchange rate. On account of being regarded with less uncertainty, the purchasing power and exchange rate have recorded more nearly than in any other country
the degree of inflation. People both inside and outside the United Kingdom have felt little doubt in the ability and intention of the British government to pay all its debts and restore the gold standard of the country's currency, and also as to the ability of the country to attain prosperity. Therefore, the purchasing power of the British currency and the sterling rate of exchange in New York have expressed more nearly than have the conditions of most other inconvertible currencies the financial condition of the country.

While the price of sterling exchange in New York was pegged at 4.76, the degree of inflation was, of course, not reflected in the exchange rate. Also, on account of the great extent to which articles of foreign trade enter into internal commerce of Great Britain, the purchasing power of the currency did neither conform to the degree of inflation.

The currency of a country is usually thought of as consisting of coins and government and bank notes. There is another form of currency, however,—bank deposits. The transferability of the bank deposit by means of the cheque gives it the power of acting as currency. Bank deposits subject to cheque are the currency used in a class of transactions, and as long as these deposits and the other forms of currency are exchangeable for one another the volume of deposits in relation to the volume of other forms of currency will depend on the demands made for each kind of
of currency. Owing to the restrictions placed on note issue in
England before the war, the cheque had come to be used very largely
in making payments.

In Great Britain previous to the war the currency con-
sisted of:

- Gold: £123,000,000
- Silver: £34,000,000
- Paper: £57,000,000
- Deposits at Bank of England: £71,557,000
- At other Banks: £1,070,681,000

At the end of 1919 the British currency consisted of:

- Gold: £77,000,000
- Silver: £459,000,000
- Paper: £199,000,000
- Deposits at Bank of England: £199,000,000
- At other Banks: £2,398,000,000

Gold has been entirely withdrawn from circulation.

Comparison of these statistics shows that the coin and paper
circulation has increased from £214,000,000 to £536,000,000, or
250%; bank deposits had increased from £1,142,038,000 to
£2,597,000,000, or just over 200%. The greater increase in the
coin and note circulation than in bank deposits is probably due
to the restrictions before the war on note issue, and that now
the note is sometimes used in payment where formerly the cheque

   Conference – Brussels, 1921.
The total increase in currency has been from £1,556,038,000 to £3,133,000,000, or about 210%. The price level, as indicated in the index number at the end of 1919, was 308, as compared to 100 for 1913. Thus while the volume of currency had increased to over twice its former volume, the price level had risen to more than three times its former level. The difference between the rise in prices and the inflation is probably due to a decrease in trade.

The American currency has always been convertible, but on account of the great increase in the country's gold, the purchasing power of money had by the end of 1919 fallen to less than one-half its former value. The price level was 238, as compared with 100 for 1913. The coins and notes had increased in volume from $13,760,000,000 to $28,289,000,000. The editors of the report of the Brussels Conference attribute the fall in purchasing power beyond the degree of inflation to the increasing use of the cheque.

The relation of purchasing power to the exchange rate is well illustrated in the exchange between England and New York. Thus, while the purchasing power of the British pound was 32-1/2% of its power in 1913, the purchasing power of the American dollar

was $42\%$ of its pre-war power. The depreciation of the British pound in terms of the American dollar was therefore \( \frac{9-1/2}{42} \times 100 \), or $22\%$. The exchange rate over the last part of 1919 shows American money to have been at a premium in terms of sterling of from $26.9\%$ to $21.5\%$.

A comparison of the figures of the other European belligerent currencies shows, if not as close, at least a general relation between inflation, purchasing power, and exchange rate. The greater deviation of the price level and exchange rates of their currency from the degree of inflation would appear to be due to the greater balance of immediate payments against them, and the uncertainty in which their financial policies is regarded.

The fundamental reason for the fall in the price of sterling exchange would therefore appear to be the inconvertibility and fall in purchasing power of the British currency, due to the governmental method of finance.
CHAPTER IV.

THE TRADE BALANCE OF GREAT BRITAIN.

Examination of the exchange rates in light of purchasing power shows that after the government had ceased to control the rate it was usually depreciated more in terms of American money than in terms of its pre-war purchasing power, this allowing for the depreciation in purchasing power of the American currency. Similarly, the French franc was usually lower in terms of the British pound than in terms of its pre-war purchasing power. So was the Italian lira, German mark, etc. The reason for this is to be found in the trade balance.

Under the gold standard we saw that any balance of payments was made in gold, and that therefore the price of exchange could not fall below par by more than the cost of gold shipment. Under inconvertible paper, a balance of payments must be carried on credit against the country of the unfavorable balance, and on account of the slowness with which industries are adapted and goods supplied the exchange rate may vary quite widely from its purchasing power parity.

The United States has held up to the present time something like three and one-half billion dollars worth of matured liabilities against the countries of Europe. This means that

there is always this great sum available with which to pay for American imports. Naturally, more such credit will be only given at a very low rate.

The greater part of this three and one-half billion dollars worth of floating debt, as it is called, is held against Great Britain, for the United States has shown little readiness to accept the credit of European countries other than the United Kingdom. Great Britain has extended her credit to the nations of Europe by buying the exchange against them, and the matured liabilities, or floating debt, of Great Britain in the United States is greater than the trade balance of Great Britain would of itself have created.

Let us examine the condition of British foreign trade before the war, to see how the balance was struck. Crammond, for the year 1910, computes the British trade balance as follows:

Credit Items (in Millions of Pounds).

<table>
<thead>
<tr>
<th>Visible Exports</th>
<th>(in Millions of Pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commodities............................</td>
<td>430</td>
</tr>
<tr>
<td>Bullion and Specie.....................</td>
<td>64</td>
</tr>
<tr>
<td>Re-exports................................</td>
<td>104</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Invisible Exports</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest on Foreign Investments......</td>
<td>178</td>
</tr>
<tr>
<td>Earnings of British Merchant Marine..</td>
<td>100</td>
</tr>
<tr>
<td>Earnings of Banks and Financial houses abroad...</td>
<td>55</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>331</strong></td>
</tr>
</tbody>
</table>

Debit Items (in Millions of Pounds).

Visible Imports
Commodities............................. £ 678
Bullion and Specie.........................  71

Invisible Imports
Capital invested abroad..............  170
Earnings of foreign and Colonial
banks and interest on
British investments held
abroad...................................... 15

TOTAL  824

I have been unable to find an estimate of the trade of United Kingdom since the war, but from various sources have compiled the following for the year 1920:

Credit Items.

Visible Exports
Commodities............................. £ 1,559,976,000

Invisible Exports
Interest on Foreign Investment...  150,000,000
Earnings of British Merchant
Marine......  200,000,000
Earnings of Banks and
Financial Houses....  55,000,000

TOTAL  £ 1,974,976,000

2. Sir George Paish in The Contemporary Review, September, 1919, and Mr. McKenna in McLean's Magazine, estimate that British investments abroad have fallen by about one-quarter. At the rate at which Great Britain was investing prior to the war the total earnings of British investments in 1914 must have amounted to about 200 millions.
3. Sir George Paish in the Contemporary Review, September, 1919, says that while tonnage has been greatly reduced (probably by about one-half) freight rates have increased about seven times. I have taken this as a conservative estimate.
4. Taken from 1910 Balance.
Debit Items.

Visible Imports........................................ 1,936,740,000
Commodities..............................................

Invisible Imports
Earnings of Foreign Banks............. 15,000,000
and Financial Houses......................

1,951,740,000

The balance thus computed is, of course, only the roughest kind of estimate, but authorities seem to be agreed that the British trade balance has been maintained on a sound basis. and our figures would appear to be in agreement.

The 1931 balance as far as visible items is even more favorable to Great Britain. Both imports and exports have been reduced by about one-half in money value.

The balance of payments against Great Britain to the United States is therefore not to be accounted for by the condition of her own trade, but because she has granted credit, of a kind similar to that which she has received from the United States, to the European countries which have very unfavorable trade balances. The United States has a sufficient balance in her favor to cover the matured liabilities which she holds against the European countries, principally Great Britain; Great Britain has not, and the debt against her is thus a deprecating influence on sterling exchange.

2. Taken from 1910 Balance.
CHAPTER VII.

THE RELATION OF THE CONTINENTAL
EXCHANGES TO STERLING.

Reference has been made in Chapter IV to the depressing
influences of the exchanges of Continental European countries on
sterling. This is worthy of some additional consideration.

At the beginning of the war Great Britain accepted the
role of banker to her Allies. This, she did not only by granting
loans to the governments, but also by the purchase of bills of
exchange against them. The British government saw that trade would
be paralysed if the usual credit were not forthcoming from London
and, in order therefore to maintain her own trade and to enable her
allies to obtain the goods they needed, she encouraged the British
banks and financial houses in buying up bills of exchange.¹ This
encouragement was given by the government's action of guaranteeing
the price of bills of exchange. As the war went on the productivity
of the belligerent countries declined and their imports came to
greatly exceed exports so that there was always a greater supply of
bills-of-exchange against them than the demand for them. London
was always the best market for this surplus, and it always
accumulated there.

¹ Hartley Withers - The War and Lombard Street.
When the United States entered the war they became the chief source of finances for the Allies, and loans were granted by them to all the nations of the Entente. After the close of the war, however, the United States stopped granting of governmental loans. Private firms in the United States have shown little desire to grant credit to people of European countries other than Great Britain, and so British financiers have in the end had to take up practically all the bills-of-exchange against Europe.

This action of Great Britain in financing the late belligerent countries even at the cost of lowering the value of her own currency is not only desirable in order to enable the late belligerent countries to obtain the goods, which they are so greatly in need of, but is necessary to British prosperity. Speaking of this Sir George Paish says: "In this situation the nations which have either not suffered from the war or have suffered but little are face to face with the fact that unless they continue to supply produce and goods to the nations so severely injured by the war a very large part of the population of Europe will starve, and that the European markets for their goods will be destroyed."

England is now, as it has been for years, the international money market, and sterling exchange has been depressed below purchasing power parity on account, not so much of an adverse trade balance of Great Britain, but because exchange on London has come to reflect the trade balance of Europe. Great Britain stands in quite a sound financial position, but she owes her immediate debts

to a country which owes nothing, and has her immediate credits in
countries which have nothing at present with which to pay.

This process would not have been possible to carry on
had it not been for the credit inflation in Great Britain, for
with a balance of payments always against her in this way, if the
for payment
gold had been accessible it must have been very greatly reduced.
The credit inflation which has occurred through this accumulation
of Continental bills-of-exchange has lowered the price of sterling
exchange, and through it the purchasing power of the British
currency.

Whether the price of exchange follows the purchasing
power parity, or whether purchasing power parity follows the ex-
change rate, may be a matter of question, but the depressing
effect of inflation on both purchasing power and price of exchange
is well illustrated in the case of Great Britain.

The effect of the German indemnity and war loans has not
been of very great importance, so far, except in the case of
Germany. Up to the present no interest has been paid on war loans,
and only a small portion of the indemnity. The small indemnity
payment caused a very severe fall in the quotation of the mark.
Since all the nations which owe indemnity and most of those which
have loans to pay have already unfavorable trade balances, the pay-
ment must tend to further depreciate the value of their currencies
in exchange.
The governments of the countries which have received large loans, and which have indemnities to pay, have been unable to finance their current expenses out of taxation, and have been forced to resort to further issues of paper, since the close of the war. If they are required to make large interest or indemnity payments they must resort to further inflation. The governments may thus receive the funds with which to pay their obligations, but this is by no means a settlement by the country. It merely adds to the government’s liabilities at home in the shape of paper currency, and to the country’s floating debts abroad. The only way in which these countries may pay their debts is by developing an excess of exports over imports, and the only way in which the governments of these countries may obtain the funds with which to pay them, without further inflating their currencies, is by taxation. That the debtor countries can do this in the near future is impossible; that they can ever do it is doubtful.

It will be seen from the above that the price of sterling exchange is not dependent on the condition of the United Kingdom alone, and that any plan to stabilise the sterling exchange rate must also include the correction of conditions on the continent of Europe.
CHAPTER VI.

THE CORRECTION OF THE EXCHANGES.

The recognition of the detrimental effects of fluctuating exchange rates on trade and industry have led many people to formulate plans for their correction. We have seen that the condition of sterling exchange is not due to British trade and financial conditions alone, and that sterling cannot be stabilized by the action of Great Britain only. If the gold standard of the British currency were restored, the stability of exchange between the United Kingdom and the United States, and other gold standard countries would be restored, but sterling exchange would be subject to as violent fluctuations in Paris and Berlin as exchange on the United States is now in those places. Furthermore, we have seen that the possibility and desirability of maintaining the gold standard of the British currency is questionable, unless the stability of the Continental European currencies is also established.

The unstable condition of the exchange rates is itself an evil which requires to be remedied, but it is the result of other conditions which it tends to aggravate. The price of bills-of-exchange against most of the countries which engaged in the war is depreciated on account of the inconvertibility of their currencies into gold. This has been brought about by the methods of governmental finance necessitated by the war. The fluctuating
exchange rates are barriers in the return to prosperity. The impoverished condition of the countries renders their governments unable to finance themselves out of taxation, and consequently they must resort to more issues of paper money, in order to pay their expenses. Thus the depreciation of the currency is further increased.

Among the suggestions for correcting the exchanges made are a number for the adoption of international currencies. Such is the Vanderlip suggestion. "Mr. Vanderlip proposes to inaugurate a great financial institution with a capital of $1,000,000,000 paid in in gold, the gold to be used as reserve for the issue of $5,000,000,000 in notes for circulation in the stricken countries."¹

The plan has the following faults: (1) The gold to back such a currency would have to come from the United States, and they show no great desire to supply it; (2) Unless the governments withdraw the legal tender privileges from their present paper issues the new currency would not enter into circulation and would thus only be used for payments between countries. The traders would be faced with the same fluctuations in the price, in their currency, of the international currency, as they are now, in the variations in the price of exchange. It is very improbable that the European countries would be willing to thus repudiate the obligations.

². Gresham's Law.
represented by their circulating paper, and they could not redeem them except by a further great increase of their debt to other countries. If they could stand this additional debt, and the funds were available in other countries the outstanding paper could be reduced to the volume which could be maintained convertible, and no further action would be necessary.

Other plans for international currencies propose a currency not backed by gold, but by land values. The supporters of such suggestions point out that much of the currency of the countries of the world is unsupported by actual gold or silver, even when their currencies are convertible. They say that the value of the currency is maintained by its limited quantity, and not by its redemption in gold or silver. What such people neglect to notice is that it is the convertibility of currencies into the precious metals which assures people that the quantity issued will not be excessive. The convertibility of the currency is an automatic check on too great an expansion in volume; the scheme would substitute for this check the decisions of an administrative board. The plan would solve the difficulty of the exchanges by providing ample supplies of currency, secured by a mortgage on real property; but why such currencies backed by the property of individuals would have more value than the present currencies backed by the total assets of countries is difficult to see. No currency

has ever proven satisfactory which was not redeemable in some portable commodity of value.

Another suggestion is to restore stability through the pegging of exchanges, as was done during the war. Such a course would certainly prevent exchanges from fluctuating widely, but that it would mitigate the evils to which fluctuating exchange rates are due is very doubtful. The pegging of exchange rates depends for its support on foreign borrowing, and it is questionable if the funds would be forthcoming for the purpose. This is a difficulty in the way of putting such a plan in operation. The beneficial effect of the gold standard of currency on trade is that it automatically acts to correct trade balances, but does not act with such violence as to demoralize trade entirely. Under the inconvertible paper standard the exchange rates are subject to variations on account of the balance of immediate payments, in that a balance of payments against the country will depress the exchange rate below purchasing power parity, while a balance to the country will raise the exchange rate above purchasing power parity. But the exchanges are subject to other influences also, and respond so greatly to these influences that they are a restriction on all kinds of trade, even that which would restore the balance. Under a pegged exchange there is no tendency to keep the balance whatever. If the exchange rate is pegged above purchasing power parity imports are encouraged at the expense of an increase of the governmental debt abroad. If
the exchange rates are pegged below purchasing power parity the
people must pay very highly for their necessary imports, and com-
peting industries in other countries are at a very great disadvan-
tage in foreign markets.

Some optimists think that trade conditions will be re-
stored of themselves, through the influence of the exchange rates
on imports and exports. Conditions in Europe of late tend to
support this view, but this is only because the balance of immediate
payments has depressed the price of exchange against these countries
very much below purchasing power parity. Exports will therefore
be stimulated until the price of exchange rises approximately to
purchasing power of the currency. Foreign trade will never, however,
restore the currency to its nominal gold parity, and therefore
convertibility will not be restored by this means alone. As long
as a country's currency remains inconvertible, the rate of exchange
on such a country will be subject to very great variations, except
in the case of pegged exchanges.

The wide fluctuations in the price of exchange against
the European countries are due to the inconvertibility of the
currency of these countries in gold, and this inconvertibility is
due to the increase in the bank deposits and paper money. The only
method of bringing the rates of exchange back to the stability of
pre-war days is the restoration of gold redemption, and this can only
be done by a reduction of the volume of the depreciated currencies.
The reduction may take place in either or both of two ways: by reducing the number of outstanding units of the currency, or declaring a lower gold parity of the unit of currency. For most of the European countries the reduction of the volume of currency by the calling in of the excess circulation would appear to be an almost impossible task, for their governments, seeing that so far most of the governments have been unable to defray even their current expenses by taxation. Their task would be made very much more easy if they undertook redemption at about the present gold value of the currency. We have seen that it is not so much the depreciation of the currency which is detrimental to trade as the instability of any rate of exchange. The maintenance of any gold parity would stabilize the rate of exchange and in time all prices would become adjusted to the new unit of currency.

The recent rise in the price of sterling exchange and the fact that the British government has not found it necessary to resort to the creation of new credit to any extent, show that, in the case of Great Britain, the lowering of the gold parity of redemption is not necessary. Sterling is at a discount of about 10% in New York. It would be foolish to give such a blow to the British reputation for stability as the adoption of a lower gold parity of the pound would involve, except in case of absolute necessity.

The case of most other European countries is very different; their currencies are much more greatly depreciated, they
have a great volume of foreign war debts and few external assets, and far from being able to reduce their circulation they have been forced to pay part of their current expenses by fresh issues of paper money.

The step of adopting a lower gold parity of the currency is one which most governments will hesitate to take, involving as it does a partial repudiation of the governments' and other peoples' debts. There is in this a certain amount of injustice to past creditors. People, who loaned money before the depreciation of the currency, will be forced to accept payment in currency commanding a smaller quantity of gold and having less purchasing power. The changing purchasing power of money has always been a source of injustice, however, and this would only mean a standardization of the gold value of the currency at its present level. The restoration of the old gold parity of the currency would involve a similar injustice to those who have contracted debts since the depreciation of the currency for in liquidating their debts they would be required to pay currency having a much greater purchasing power than that which they borrowed. The great bond issues of the war were taken up with a depreciated currency. There would certainly be a very great injustice to taxpayers, should they be required to pay the interest and principle of these in a currency having the pre-war gold value. These injustices might be avoided by making some discrimination in the value of loans according to the time at which they were made.
but the great transferability of debts in the shape of bonds, mortgages, etc., makes it impossible to ascertain what the purchasing power of the currency, with which they were bought by the present holder, was. Whatever the injustice the lowering of the gold parity of the currency would involve, it is necessary if taxation cannot be increased enough to retire the excess of credit in the present currencies. Such heavy taxation would be more burdensome and probably more inequitable than the resumption of specie payments at a lower parity.

In order for any gold parity of the currency to be maintained enough specie reserve must be supplied to redeem any currency which is presented for redemption. The existing gold reserves in most of the European countries are lower than could assure the convertibility of the currency in even a very moderate crisis.

The resumption of specie payments on any gold parity will mean that payment for all matured liabilities held abroad will be immediately demanded for there will be no expectation of a great rise in the price of bills-of-exchange in the future. Therefore all such matured liabilities must be replaced by long term loans.

In order that the currencies of the countries of depreciated currencies may not be again rendered inconvertible, the governments must finance themselves entirely out of taxation. If they are again forced to resort to issues of paper money to finance themselves, the currency must be further depreciated and again

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rendered inconvertible. The balancing of government budgets involves measures of an industrial, a political, and a financial nature. Industries should be organized so that there would be less expenditure necessary on the part of governments on account of unemployment. The cancellation of war debts and indemnities would relieve taxation problems materially. This would be to all nations an economic advantage, but is likely to be decided on political rather than economic issues. The reduction of government expenditure of all kinds would relieve taxation. Something might be done by the decrease of armaments, but this is also a political question. Whatever is done along lines of reducing expenditure, the governments and people must learn that public expenses must be paid out of taxation or they cannot avoid the disadvantages of the fluctuating purchasing power of their currencies and unstable exchange rates.

The rate of exchange is an index of financial and industrial conditions and even if the measures above were taken the stability of exchange could not be maintained unless some improvement were made in industry. Exports must be sufficient to pay for imports. Should these measures be taken, however, trade and industry will be relieved from the checks of widely varying exchange rates and for that reason the country will be in a much better position to maintain their trade balances.

The stabilization of sterling exchange depends on the stabilization of the exchanges of the principal European countries.

1. Bass and Moulton "America and the Balance Sheet of Europe".
On the part of Great Britain essentially the same measures are required, but the carrying out of these measures would not be so difficult, for the inflation of the British circulating credit is not so great, and therefore so great a reduction of the volume of such credit is not required. The British trade balance and balance of budgets has been nearly, if not quite, maintained, and therefore these things offer small difficulties to the restoration of the convertibility of the currency.