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Chapter Author: William Adams Brown, Jr.

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PART III

What Was Restored

A Decentralized International Financial System

CHAPTER 17

The Technical Instability Inherent in the Partial Transfer of International Money Market Functions from London to New York

The treatment that has now been given of the return to gold of countries outside the central nucleus and of France, and of the efforts to consolidate the gold standard in Germany, completes our separate examination of two of the three lines of development taking place simultaneously from 1925 to 1929 (cf. p. 393). The third, the attempt to operate a widespread international gold standard system with New York and London as major centers was profundly modified by the addition of France to the nucleus of center countries in 1927. This, however, served only to clarify and define the main features of the experimentation of 1925–31, and in the end proved to be in some respects a passing episode. For from 1925 to 1927 and again after 1934 Great Britain and the United States alone were center countries.[1] Both before and after the French stabilization the transfer of certain international money market functions from London to New York is basic in our analysis.[2]

Two questions of importance for the interpretation of gold standard history after 1925 arise from this transfer. One is whether the assumption by New York of international money market functions on a large scale, *under a particular set of circumstances,* caused a loss of stability in international fi-

[1] Cf. Ch. 29, The Major Characteristics of the Central Foreign Exchange Triangle, 1931–1934, and Ch. 33, The Great American Gold Magnet.

[2] Cf. Ch. 7, 'The Release of Forces leading to the Rise of an International Money Market in New York' and 'Sharing with London during the War,' and Ch. 11, Who is Leader?

nancial relations. The other is whether such a loss of stability was *inherent* in the replacement of the pre-war London-centered system by a decentralized world credit system. The examination of the first question requires an estimate of the capacity of the New York market to shoulder its new responsibilities after the return to gold, and carries our historical narrative forward. In contrast, the answer to the second question is best obtained by an accounting analysis of the effect of such a transfer of functions upon the distribution of bank deposits, the character of bank assets, and the conduct of the world's foreign exchange markets. Such an analysis interrupts the historical narrative, but supports conclusions drawn or suggested in other parts of the discussion, and contributes to the general interpretation in Chapter 21. In particular the concluding paragraph on the Conflict between Technique and Capacity is essential to our argument. It is not, however, necessary for all readers to follow through the details of the accounting treatment here given to support the conclusions stated in this paragraph, and those who are not especially interested in this type of exposition are advised to pass at once to Chapter 18.

A Divided Market Place for International Transactions in General

The rise of New York as an international money market, when looked upon from a world point of view, meant a reversal of that process of concentration of transactions, of loans and of deposits which before the war was characteristic of the growth of an international hierarchy of money markets (cf. Ch. 7). As a development in banking technique this was a backward step.

Ten Typical Transactions

To bring out this point we examine first the clearance of certain purchases and sales of goods and services in a given international financial center (e.g., London) and then con-

sider the effects of the transfer of these transactions in whole or in part to another center (e.g., New York). In order to include situations in which each center is assumed to be rendering all the typical services of an international market place, we use examples that represent purchases and sales between Englishmen and other foreigners including Americans, purchases and sales between Americans and other foreigners including Englishmen, purchases and sales between citizens of countries other than England and America, and purchases and sales between Englishmen and Americans and their own nationals.

Specifically we analyze what happens when goods are sold by

1) Americans to Englishmen
2) Englishmen to Americans
3) Argentinians to Englishmen
4) Englishmen to Argentinians
5) Argentinians to Americans
6) Americans to Argentinians
7) Argentinians to Swedes
8) Swedes to Argentinians
9) Englishmen to other Englishmen
10) Americans to other Americans

Concerning these ten transactions we assume that (1) Argentina and Sweden represent all countries other than the United States and England; (2) the transactions are carried out by banks for customers; (3) each transaction is carried out by a different bank; (4) the goods are purchased not with bank credit but with current income or savings accumulated in the country of the purchasers.

In order to complete these ten transactions, ten debits and ten credits to bank accounts of the actual buyers and sellers are necessary:

Three English sellers are credited in sterling
Three English buyers are debited in sterling
Three American sellers are credited in dollars
Three American buyers are debited in dollars
Three Argentine sellers are credited in pesos
Three Argentine buyers are debited in pesos
One Swedish seller is credited in kronor
One Swedish buyer is debited in kronor

These debits and credits are the essential ones in the transaction, but to bring them about, a certain number of interbank debits and credits are required. Both their number and distribution and the number of exchange transactions involved and their character depend upon the location of the market where the goods are bought and sold.

Clearing the Ten Transactions through London

MINIMUM NUMBER OF BANK DEPOSITS INVOLVED

If all these transactions are completed in London, then at least seventeen bank deposits must be created and seventeen canceled in order to accomplish the ten credits and the ten debits to the principals. They are distributed as follows:

In	BANK DEPOSITS CREATED	BANK DEPOSITS CANCELED
London	10	10
New York	3	3
Argentina	3	3
Sweden	1	1
	17	17

That is to say, ten credits and ten debits to the original buyers and sellers, and seven debits and seven credits to interbank accounts.

Of the ten credits and ten debits to the original buyers and sellers three are in London in sterling in the accounts of the three English buyers and the three English sellers, three in Argentina in pesos in the accounts of the three Argentine buyers and the three Argentine sellers, three in America in dollars in the accounts of the three American buyers and the three American sellers, and one in Sweden in kronor in the accounts of the one Swedish buyer and the one Swedish seller. All seven credits and seven debits to interbank accounts are made in sterling:

CREDITS

Three to American banks in payment for American goods sold to Englishmen, Argentinians, and Americans

Three to Argentine banks in payment for Argentine goods sold to Englishmen, Americans, and Swedes
One to a Swedish bank in payment for Swedish goods sold to Argentinians

DEBITS

Three to American banks in payment for English, Argentine, and American goods bought by Americans
Three to Argentine banks in payment for English, American, and Swedish goods bought by Argentinians
One to a Swedish bank in payment for Argentine goods bought by Swedes

The seven credits and the seven debits to interbank accounts represent changes in the assets of the American, Argentine, and Swedish banks which are the contra-entries for the changes in the deposits on their books of the buyers and sellers in their respective countries. These banks are acting as channels and merely record the effects of transactions taking place in London. Their assets and liabilities rise and fall as the transactions are concluded in London. Clearance takes place in London and if complete for the transactions in which each country as a whole is concerned, there is no net change in the assets and liabilities of their banks. These relations are shown in the left column of Chart 28, which lists the 34 entries made on the books of banks to clear the original ten transactions and the changes in bank assets accompanying them in the four banking systems.

MINIMUM NUMBER OF EXCHANGE RATES INVOLVED

In nine out of the ten cases exchange rates have to be fixed, the sale of goods by Englishmen to other Englishmen being the one exception. There is one in each of the four other cases in which an Englishman is a party, and there are two in each of the five cases in which Englishmen are not parties. These exchange rates have to be fixed as follows:

In the sterling-dollar exchange six rates:
Three to determine the amount of dollars to be credited to the

CHART 28

Effect of the Transfer of International Dealings in Goods from London to New York upon the Deposits and Assets of Banks in Various Centers

		IF GOODS ARE BOUGHT AND SOLD IN LONDON				IF GOODS ARE BOUGHT AND SOLD IN NEW YORK			
		LONDON BANKS							
	TRANSACTION	DEPOSITS CREATED IN LONDON	ASSETS ACQUIRED BY ENGLISH BANKS	DEPOSITS CANCELED IN LONDON	REDUCTION OF ASSETS OF ENGLISH BANKS	DEPOSITS CREATED IN LONDON	ASSETS ACQUIRED BY ENGLISH BANKS	DEPOSITS CANCELED IN LONDON	REDUCTION OF ASSETS OF ENGLISH BANKS
1	Sale of goods by Americans to Englishmen	£ deposits of American banks		£ deposits of English purchaser				£ deposits of English purchaser	$ deposits of English banks
2	Sale of goods by Englishmen to Americans	£ deposits of English sellers		£ deposits of American banks		£ deposits of English sellers	$ deposits of English banks		
3	Sale of goods by Argentinians to Englishmen	£ deposits of Argentine banks		£ deposits of English purchaser				£ deposits of English purchaser	$ deposits of English banks
4	Sale of goods by Englishmen to Argentinians	£ deposits of English sellers		£ deposits of Argentine banks		£ deposits of English sellers	$ deposits of English banks		
5	Sale of goods by Argentinians to Americans	£ deposits of Argentine banks		£ deposits of American banks					
6	Sale of goods by Americans to Argentinians	£ deposits of American banks		£ deposits of Argentine banks					
7	Sale of goods by Argentinians to Swedes	£ deposits of Argentine banks		£ deposits of Swedish banks					
8	Sale of goods by Swedes to Argentinians	£ deposits of Swedish banks		£ deposits of Argentine banks					
9	Sale of goods by Englishmen to Englishmen	£ deposits of English sellers		£ deposits of English buyers		£ deposits of English sellers	$ deposits of English banks	£ deposits of English buyers	$ deposits of English banks
10	Sale of goods by Americans to Americans	£ deposits of American banks		£ deposits of American banks					

	TRANSACTION	DEPOSITS CREATED IN NEW YORK	ASSETS ACQUIRED BY AMERICAN BANKS	DEPOSITS CANCELED IN NEW YORK	REDUCTION OF ASSETS OF NEW YORK BANKS	DEPOSITS CREATED IN NEW YORK	ASSETS ACQUIRED BY AMERICAN BANKS	DEPOSITS CANCELED IN NEW YORK	REDUCTION OF ASSETS OF NEW YORK BANKS
1	Sale of goods by Americans to Englishmen	$ deposits of American sellers	£ deposits of American banks			$ deposits of American sellers		$ deposits of English banks	
2	Sale of goods by Englishmen to Americans			$ deposits of American buyers	£ deposits of American banks	$ deposits of English banks		$ deposits of American buyers	
3	Sale of goods by Argentinians to Englishmen					$ deposits of Argentine banks		$ deposits of English banks	
4	Sale of goods by Englishmen to Argentinians					$ deposits of English banks		$ deposits of Argentine banks	
5	Sale of goods by Argentinians to Americans			$ deposits of American buyers	£ deposits of American banks	$ deposits of Argentine banks		$ deposits of American buyers	
6	Sale of goods by Americans to Argentinians	$ deposits of American sellers	£ deposits of American banks			$ deposits of American sellers		$ deposits of Argentine banks	
7	Sale of goods by Argentinians to Swedes					$ deposits of Argentine banks		$ deposits of Swedish banks	
8	Sale of goods by Swedes to Argentinians					$ deposits of Swedish banks		$ deposits of Argentine banks	
9	Sale of goods by Englishmen to Englishmen					$ deposits of London banks		$ deposits of London banks	
10	Sale of goods by Americans to Americans	$ deposits of American sellers	£ deposits of American banks	$ deposits of American buyers	£ deposits of American banks	$ deposits of American sellers		$ deposits of American buyers	

CHART 28 (*concluded*)

IF GOODS ARE BOUGHT AND SOLD IN LONDON — IF GOODS ARE BOUGHT AND SOLD IN NEW YORK

ARGENTINE BANKS

	TRANSACTION	DEPOSITS CREATED IN BUENOS AIRES	ASSETS ACQUIRED BY ARGENTINE BANKS	DEPOSITS CANCELED IN BUENOS AIRES	REDUCTION OF ASSETS OF ARGENTINE BANKS	DEPOSITS CREATED IN BUENOS AIRES	ASSETS ACQUIRED BY ARGENTINE BANKS	DEPOSITS CANCELED IN BUENOS AIRES	REDUCTION OF ASSETS OF ARGENTINE BANKS
3	Sale of goods by Argentinians to Englishmen	Peso deposits of Argentine sellers	£ deposits of Argentine banks			Peso deposits of Argentine sellers	$ deposits of Argentine banks		
4	Sale of goods by Englishmen to Argentinians			Peso deposits of Argentine buyers	£ deposits of Argentine banks			Peso deposits of Argentine buyers	$ deposits of Argentine banks
	Sale of goods by Argentinians to Americans	Peso deposits of Argentine sellers	£ deposits of Argentine banks			Peso deposits of Argentine sellers	$ deposits of Argentine banks		
6	Sale of goods by Americans to Argentinians			Peso deposits of Argentine buyers	£ deposits of Argentine banks			Peso deposits of Argentine buyers	$ deposits of Argentine banks
7	Sale of goods by Argentinians to Swedes	Peso deposits of Argentine sellers	£ deposits of Argentine banks			Peso deposits of Argentine sellers	$ deposits of Argentine banks		
8	Sale of goods by Swedes to Argentinians			Peso deposits of Argentine buyers	£ deposits of Argentine banks			Peso deposits of Argentine buyers	$ deposits of Argentine banks

SWEDISH BANKS

	TRANSACTION	DEPOSITS CREATED IN STOCKHOLM	ASSETS ACQUIRED BY SWEDISH BANKS	DEPOSITS CANCELED IN STOCKHOLM	REDUCTION OF ASSETS OF SWEDISH BANKS	DEPOSITS CREATED IN STOCKHOLM	ASSETS ACQUIRED BY SWEDISH BANKS	DEPOSITS CANCELED IN STOCKHOLM	REDUCTION OF ASSETS OF SWEDISH BANKS
7	Sale of goods by Argentinians to Swedes			Krona deposits of Swedish buyers	£ deposits of Swedish banks			Krona deposits of Swedish buyers	$ deposits of Swedish banks
8	Sale of goods by Swedes to Argentinians	Krona deposits of Swedish sellers	£ deposits of Swedish banks			Krona deposits of Swedish sellers	$ deposits of Swedish banks		

General assumption: goods are assumed to be purchased from current income or savings accumulated in the country of the purchaser and not by bank credit.

American sellers to Englishmen, to Argentinians, and to other Americans,

and

three to determine the amount of dollars to be debited to the American purchasers from Englishmen, from Argentinians, and from other Americans.

In the sterling-peso exchange six rates:
Three to determine the amount of pesos to be credited to the Argentine sellers to Englishmen, to Americans, and to Swedes,

and

three to determine the amount of pesos to be debited to the Argentine purchasers from Englishmen, from Swedes, and from Americans.

In the sterling-krona exchange two rates:
One to determine the amount of kronor to be credited to the Swedish sellers to Argentinians,

and

one to determine the amount of kronor to be debited to the Swedish purchasers from Argentinians.

All these rates are fixed in the general market without the principals knowing from whom they are buying or selling.

These fourteen exchange rates are the minimum number that must result from these transactions if carried out in London.

ACTUAL NUMBER OF BANK DEPOSITS AND EXCHANGE RATES INVOLVED

At the moment of the completion of the transactions three American banks, three Argentine banks, and one Swedish bank have come into possession of new sterling deposits against which new domestic deposit liabilities have been created. Three American banks, three Argentine banks, and one Swedish bank have suffered a reduction in their sterling deposits and in exchange have canceled domestic deposits. But the size of the sterling deposits that these Argentine, Swedish,

and American banks individually desire to maintain or do maintain is not a function of these particular transactions. Some of them may not wish to maintain sterling deposits unimpaired. Since every transaction of commerce is an individual transaction, as Ricardo long ago observed, there will be purchases and sales of sterling among the individual banks in each country to restore the distribution of the sterling deposits previously existing among them or now desired by them. More than fourteen interbank credits and debits will therefore be required, and more than fourteen exchange rates will have to be fixed to effect the ten original transactions. Beyond the transactions arising from the equalization of the accounts of individual banks there are the transactions that take place in the trading in the exchanges that intervenes before such a distribution of the amount of sterling held by the banks of any given country among its individual banks is accomplished. Sometimes a large number of transactions in the market intervenes between the banks actually having sterling and those actually desiring it. All this secondary activity in the foreign exchange market and turnover in the sterling deposits of foreign banks *affects* the *breadth of the market for sterling* and therefore its capacity for absorbing large transactions without concessions in the rates.

Conditions under which Complete Clearance on the Books of London Banks can take place

If each country in the illustration buys and sells on balance from all other countries, including England, an equal amount of goods through London as a market, then it is possible for all the transactions to be cleared upon the books of London banks. This is consistent with a large number of possible net creditor or debtor positions arising between any two pairs of countries using the London market for the consummation of these transactions. Though the result is simple, the process of clearing may be very complex. For the ten transactions it involves in London, as a minimum:

1) one set of offsetting debits and credits to domestic deposit accounts (Transaction 9)
2) four transfers to and from English domestic deposit accounts from and to the accounts of foreign banks in London (Transactions 1–4)
3) four transfers from the accounts of some foreign banks in London to the accounts of other foreign banks in London (Transactions 5–8)
4) one set of offsetting debits and credits in the London accounts of the banks of a single foreign country (Transaction 10).

All the transfers involved in Transactions 1–8, except those between Argentine and Swedish banks, may be of unequal amount without infringing upon the requirements of perfect clearance in London; that is, without involving any redistribution of foreign balances in London or any changes in the volume of bank deposits abroad, and without requiring any transactions in any foreign exchange on London that are not completely offsetting or any foreign exchange arbitrage operations. Since Argentina and Sweden have been taken as representative of all countries other than America and England the requirement that the transfers between them be equal in amount is consistent with many other possible net debtor and creditor positions that are excluded from the actual examples given.

The requirements for perfect clearance of the ten transactions through London are put in schematic form in Table 36.

Effects of a Transfer of the Market to New York on Bank Deposits, Bank Assets, and Exchange Rates

If the results of carrying out these ten transactions in the New York market instead of in the London market are now considered, then the distribution of debits and credits to the bank deposits of the various countries will be as follows:

Seventeen bank deposits are created and seventeen are canceled in order to accomplish the ten credits and the ten debits to the principals. That is to say, ten debits and ten

TABLE 36

Conditions of Perfect Clearance of International Transactions on the Books of London Banks

TRANSACTION	DEPOSITS CREATED IN LONDON	DEPOSITS CANCELED IN LONDON	CONDITIONS OF PERFECT CLEARANCE IN LONDON ARE MET IF
American purchases of goods from Englishmen and Argentinians (transactions 2 and 5)	£ deposits of English sellers (a) £ deposits of Argentine banks (b)	£ deposits of American banks (d)	(a)+(b) =(d)
American sales of goods to Englishmen and Argentinians (transactions 1 and 6)	£ deposits of American banks (c)	£ deposits of English buyers (e) £ deposits of Argentine banks (f)	(c) =(e)+(f) and (c) =(d)
Argentine purchases of English, American and Swedish goods (transactions 4, 6, and 8)	£ deposits of English sellers (g) £ deposits of American banks (h) £ deposits of Swedish banks (i)	£ deposits of Argentine banks (k)	(g)+(h)+(i) =(k)
Argentine sales of goods to Englishmen, Americans and Swedes (transactions 3, 5, and 7)	£ deposits of Argentine banks (j)	£ deposits of English buyers (l) £ deposits of American banks (m) £ deposits of Swedish banks (n)	(j) =(l)+(m)+(n) and (j) =(k)
Swedish purchases of Argentine goods (transaction 8)	£ deposits of Argentine banks (o)	£ deposits of Swedish banks (q)	(o) =(q)
Swedish sales of goods to Argentinians (transaction 7)	£ deposits of Swedish banks (p)	£ deposits of Argentine banks (r)	(p)=(r) and (p) =(q)

credits to the original buyers and sellers, and seven debits and seven credits to interbank accounts. The ten debits and credits to the original buyers and sellers will be the same as if

In	BANK DEPOSITS CREATED	BANK DEPOSITS CANCELED
London	3	3
New York	10	10
Argentina	3	3
Sweden	1	1
	17	17

all transactions were cleared through London. But the seven interbank debits and credits will all be in dollars:

CREDITS

Three to English banks in payment for English goods sold to Americans, Argentinians, and Englishmen
Three to Argentine banks in payment for Argentine goods sold to Englishmen, Americans, and Swedes
One to a Swedish bank in payment for Swedish goods sold to Argentinians

DEBITS

Three to English banks in payment for American, Argentine, and British goods bought by Englishmen
Three to Argentine banks in payment for British, American, and Swedish goods bought by Argentinians
One to a Swedish bank in payment for Argentine goods bought by Swedes

In nine of the ten cases an exchange rate has to be fixed, the sale of American goods to Americans in New York now being the only exception. There is one in each of the other four cases in which an American is a party, and there are two in each of the five cases in which Americans are not parties. These exchange rates have to be fixed as follows:

In the sterling-dollar exchange, six rates:
Three to determine the amount of sterling to be credited to English sellers to Americans, Argentinians, and other Englishmen,

and

three to determine the amount of sterling to be debited to English buyers from Americans, Argentinians, and other Englishmen.

In the dollar-peso exchange, six rates:
Three to determine the amount of pesos to be credited to Argentine sellers to Americans, Englishmen, and Swedes,

and

three to determine the amount of pesos to be debited to Argentine buyers from Americans, Englishmen, and Swedes.

In the dollar-krona exchange, two rates:
One to determine the amount of kronor to be credited to Swedish sellers to Argentinians,

and

one to determine the amount of knonor to be debited to Swedish buyers from Argentinians.

These fourteen exchange rates are the minimum number that must result from these transactions if carried out in New York. As in the case when London was assumed to be the market, there would arise from these transactions intermediary transactions in the foreign exchange market and a tendency would be set up for a net increase in the New York bank deposits of foreign banks. There would be a broadening of the market for dollars in the various countries concerned, *provided, however, that the shift in the concentration of transactions was accompanied by a corresponding change in customary methods of remittance.*

As far as American trade is concerned, the New York banks that had acted merely as channels through which London rendered the essential services of providing the market place have now become principals. When the transactions were concluded in London, the debits and credits of American buyers and sellers of goods and services were offset by corresponding changes in the assets of New York banks in the form of sterling deposits. When New York is the market, the debits and credits to American buyers and sellers are offset by debits

and credits to the New York accounts of the banks of all the countries with which Americans have dealings. New York has taken the first step in the creation of an international money market, that of acting as principal for the conclusion of the international transactions of its own citizens instead of acting as a channel.

When London was the market, the transactions of Englishmen with foreigners other than Americans and of Englishmen with one another and of foreigners other than Englishmen or Americans with one another did not concern the American banking system at all. When New York becomes the market, all these transactions involve debits and credits to the accounts of the banks of these various countries. New York has, in this case, taken the second step in the creation of an international money market—the participation in the rendering of money market services in which it was previously not interested at all. The necessity for maintaining many foreign bankers' deposits in New York, which were not previously needed, has arisen and to that extent the necessity of maintaining balances in London has declined.

If the transfer of the concentration of transactions from London to New York is complete, that is, if New York succeeds in replacing London as a market for the conclusion of international transactions, there is no loss in the efficiency with which these transactions are cleared.

The new situation is shown in the right column of Chart 28. The changes involved for the banks of each country are indicated when one reads across the chart. The London banks drop out of the picture in transactions not involving English trade. In cases involving English trade they become channels instead of principals. The deposits of the Argentine and Swedish banks rise and fall with the rise or fall of their dollar rather than their sterling deposits.

Clearance of the Ten Transactions in a Divided Market

In actual practice only a relatively small proportion of the function of providing an international market place was trans-

ferred from London to New York. If the more realistic assumption is adopted that some of the ten transactions in the illustration are concluded in New York and some in London, then a net loss in the efficiency with which international clearance is carried out must result. Even if the assumption is continued that on balance none of the four countries is a net creditor or debtor as a result of the ten transactions, it may still be true that each country may be a debtor in its transactions cleared through one market and a creditor in its transactions cleared through the other. An additional burden is thus placed upon the foreign exchange mechanism. Debits established in one market will have to be met by credits established in the other market instead of being offset by credits established in the same market. Changes in the volume of international business activity will have larger effects on the volume of foreign exchange remittance than if the international market place were more centralized. Larger working balances will have to be kept in the two markets combined to transact the same amount of business. Finally, as long as the transfer is not sufficient to change established habits of remitting through London, London balances will be drawn down and replenished in a more erratic manner, the exchanges on London of other countries using the American market will consequently be subject to more frequent disturbance, and the sterling-dollar exchange will be subjected to severer strains than when the international markets were more highly centralized in London. It is a general characteristic of all clearance that the more divided the clearing mechanism the greater the volume of final means of payment passing between the parties in proportion to the *gross* volume of payments to be effected.

A Divided Responsibility for Long Term International Lending

Removal of the Assumption of Perfect Clearance

A highly artificial assumption has been carried through the preceding discussion in order to abstract from other elements

in the problem and place in clear relief the loss of international stability arising from the partial transfer of part of the international market for goods and services, from London to New York; namely, that each country maintained in its dealings in the central international markets, wherever these were assumed to be, a balanced position in relation to all other countries combined. This simplified assumption of course was not and never could be true. There will always be net payments to be made or received by any given country as a result of its transactions concluded in the international markets for goods and services. These net payments will be greater when the international financial centers are many than when they are one. Whether these net payments contribute to international stability or not depends upon their place in the total balance of payments of the countries concerned and upon their repercussions in the international money markets where the transactions are concluded. The importance of this second consideration in its relation to the first can be brought out by considering the effect of the transfer of a substantial part of the market in international securities from London to New York without the limiting assumption concerning perfect clearance thus far adopted.

The import and export of securities, in its effect upon bank deposits and bank assets, is the same as the import and export of goods and services. All the observations already made concerning clearance when the international market for goods is transferred or divided are applicable to securities also. In its general aspects, therefore, the problem of clearance involved in a divided market place for security dealings has already been discussed, and we may simply substitute for 'goods' in our ten illustrative cases, securities. When the assumption is dropped that each of the four countries maintains a balance in its total securities transactions, but the assumption that all ten security transactions are carried out in London is retained, then, whatever the relations between any two of these four countries, such as England and Argentina, and America and Argentina, the net change in the volume of the sterling

deposits of Argentine, Swedish, and American banks will reflect the net long term capital exports or imports of their respective countries and only that, and the net change in the total of all these deposits will represent the net long term capital export or import of England. If it is assumed that the whole market is transferred to New York then the result is the same with the positions of New York and London reversed, provided however that the customary methods of remittance through London are replaced by remittance through New York.

The Conditions most favorable to Exchange Stability under Imperfect Clearance in a Single Central Money Market

Under these conditions many possible situations may arise, some of which are more likely to produce stable conditions in the central money markets and in the foreign exchanges than others.

THREE LIMITING CASES, ENGLAND ASSUMED TO BE THE MARKET

In order to establish the conditions most favorable to exchange stability, three limiting cases are considered: when the country in which the market is located is (1) the only capital exporter; (2) the only capital importer; (3) neither capital exporter nor capital importer. In terms of the ten transactions used as illustrations these limiting cases appear as follows when the market is in London:

Case 1. We may first assume that England is a net exporter of capital, America is a net importer of capital, and the rest of the world, represented by Argentina and Sweden, is a net importer of capital. This was substantially the position during the period of England's greatest dominance in world trade before the war, though, of course, there were other capital exporting countries. In this example, however, the 'rest of the world' is considered as a whole in order to establish the theoretical case in which England's foreign exchange position is least complicated by the international securities transactions of third countries in the London market.

If all transactions are completed in London under these conditions:

a) All ten transactions are carried out on the books of London banks by transfers between foreign banks, and between English depositors and foreign banks, and there is an increase in the total sterling deposits of foreign banks equal to the net decrease in the total sterling deposits of English purchasers of securities. The net increase in the sterling deposits of foreign banks represents the net export of capital from England.

b) The distribution of the increased total of sterling deposits of foreign banks between American banks and the banks of the 'rest of the world' is determined by the net position of America and of the 'rest of the world' as capital importers.

c) This is consistent with a large number of possible capital export and capital import relations existing between any two pairs or groups of countries.

d) The stability of this position depends upon whether English capital exports are properly related to England's capacity to export capital. If they are, then the distribution of the sterling balances made available to foreign capital importers as a result of the clearance taking place on the books of London banks is followed by a second distribution through the operation of the foreign exchange markets which brings this sterling into the hands of people having debts to pay in England.[8]

[8] Although it is a case that could never occur in practice, this rather simple and effective result of the location of the international securities market in London may be contrasted with the situation that would prevail if all the transactions were carried out in New York while England alone was a capital exporter. In that case the English banks would find their dollar deposits in New York reduced by the full amount of their net purchases of securities from Americans, Argentinians, and Swedes. In order to replenish these balances they would purchase dollars and the American banks would find themselves in possession of a new banking asset, sterling deposits in London. Against this the American banks would have an increased deposit liability in part in favor of American sellers of securities and in part in favor of Argentine and Swedish banks. The distribution of these dollar deposits between the Argentine and Swedish banks would be in accordance with the net capital import position of their respective countries. Just as when the market was assumed to be in London, the increased sterling obligations of the British

Case 2. If the highly improbable case is assumed that England is the sole capital importer and the market for international securities is still in London, then it would also be true that the British banking system would find itself faced only with the consequences of England's own capital transactions. Clearance of the ten transactions on the books of London banks would be completed by the net transfers from the accounts of foreign banks to English sellers of securities.

Case 3. In order to indicate the effect upon the position of the London banks of the passage of net capital exports or imports of other countries through the London market, it may next be assumed that such a movement takes place while England is neither importer nor exporter of capital, but that America is a capital exporter, and Argentina and Sweden are capital

banking system to foreigners would reflect only the British net capital export position, but instead of being distributed among the various banking systems of capital importing countries, it would be concentrated as an obligation to American banks. On the other hand, Argentine and Swedish banks and the American sellers of securities would be in possession of dollars representing their borrowings from England. American banks would be in the same position as if America had been a capital exporter to Argentina and Sweden and a capital importer from England to the extent of English purchases of Argentine and Swedish securities in New York. The clearance of the ten original transactions on the books of New York banks would not be complete. Newly created dollar balances of Argentine or Swedish banks and sterling balances of American banks would remain outstanding. A secondary redistribution of these dollar deposits would be necessary in order to bring them into the hands of people who were debtors to England. Unless remittance through New York were the customary method of remittance between other countries and England, this would involve foreign exchange arbitrage transactions. There would be a strong probability, however, that if London remained the usual channel of remittance between New York and other countries, the Swedish and Argentine banks would remit the proceeds of the sales of Swedish and Argentine securities in New York to London as soon as these sales were completed. If they did so, the dollar accounts of English banks would be replenished and as far as the distribution of bank deposits internationally is concerned, the same simple position would result as if the markets for securities had been in London. In this case also the final situation would be one in which both markets had to deal only with the consequence of their own capital transactions. The only difference would be a greater activity in the sterling dollar exchange.

importers. This assumption, like those of Cases 1 and 2, does not require any further assumption with respect to the relations between any two of the four countries involved. America may be capital exporter to England, Argentina may be capital exporter to Sweden, and England, capital exporter to Argentina, but in such amounts that on balance the American capital export equals the sum of the Argentine and Swedish capital import.[4]

If all ten transactions are completed in London under these conditions:

a) All ten transactions are cleared in the London market by transfers between foreign banks, and between English domestic depositors and foreign banks. The debits and credits to English domestic depositors are offsetting, and the total of the sterling deposits of foreign banks is unchanged.

b) There is a redistribution of existing sterling balances between American banks and the banks of the rest of the world which is determined by the net position of America as a capital exporter, and of 'the rest of the world' as capital importer.

c) This is consistent with a large number of possible capital export and capital import relations existing between any two countries. In particular, England's capital exports and imports to and from America, Argentina, and Sweden separately complicate the process of clearance but do not affect the final distribution of foreign bank balances in London.

d) The stability of this position depends on whether the debits to the balances of the American banks correspond to the capacity of America to export capital and whether the credits to the balances of the Argentine and Swedish banks

[4] The excess of America's purchases of English, Argentine, and American securities over English, Argentine, and American purchases of American securities in London (America's net capital export) is assumed to be *equal to* the excess of English, American, and Swedish purchases of Argentine securities over Argentine purchases of English, American, and Swedish securities in London (Argentina's net capital import) *plus* the excess of Argentine purchases of Swedish securities over Swedish purchases of Argentine securities in London (Sweden's net capital import).

correspond to the need of these countries to import capital. If they do, a secondary redistribution of the sterling balances takes place which depletes the new balances of Argentine and Swedish banks and replenishes the balances of American banks,[5] by bringing them into the hands of people indebted to the United States. If these conditions are not fulfilled, that is, if America is over- or under-lending, and Argentina and Sweden are over- or under-borrowing the exchanges of the three countries on London will be subjected to various strong pressures. If, for example, America were over-lending, then the secondary redistribution of sterling balances would not bring them into the hands of people indebted to America. The increases in the sterling balances of Argentina and Sweden (the 'rest of the world' in our illustrations) would remain in existence. If then American banks replenished their sterling balances, an increase in the dollar deposits of English banks would result, which would be the asset corresponding to the increased Argentine and Swedish deposits in London. A new volume as well as a new distribution of interbank indebtedness would thus be created, more gold movements and more exchange arbitrage operations would be necessary and the problems of credit control in England would be multiplied.

THE THREE LIMITING CASES, NEW YORK ASSUMED TO BE THE MARKET

If the situation in Case 1 were exactly reversed and America were the sole net capital exporting country and New York the market for international securities, then complete clear-

[5] Unless other transactions in the balance of payments make it possible for the American banks to replenish their balances by purchases of sterling deposits the ten transactions cannot be settled by transfers of bank deposits in London, but under the gold standard must be settled in part by gold movements. If the capacity of America to export capital is great, Americans will not have to take the initiative in replenishing their balances. Others will do it for them. As shown elsewhere in these studies, initiative in the foreign exchange markets is closely related to capacity to export capital.

ance of all ten transactions could take place on the books of New York banks except for America's own net capital exports. This almost happened when American war lending was at its height. If the situation in Case 2 were exactly reversed and New York were the sole net capital importing country and also the market for international securities, then complete clearance of all ten transactions could take place on the books of New York banks except for America's own capital imports. If the circumstances of Case 3 were exactly reversed and New York assumed to be the market with America neither capital exporter nor capital importer, then the American market would find itself confronted with foreign exchange difficulties arising from over- or under-lending by England, or under- or over-borrowing by Argentina or Sweden from England.[6]

CONCLUSIONS DRAWN FROM THE LIMITING CASES

From a consideration of these three cases it is apparent that the conditions most favorable to exchange stability are found when the country in which the international securities market is located is also the only important capital exporting country. The problem of the control of the foreign exchanges is then limited to making an appropriate adjustment between the capital exports of that country and its own capacity to export capital. Under these conditions there is the best chance that exchange stability can be achieved by appropriate credit control policy in a single country. When the capital exports of other countries are accomplished through a central money market then the problem of exchange stability is complicated for the country where the market is located, and its credit control policy is subjected to difficulties not of its own making.

[6] The highly abstract character of these possible situations serves to emphasize the type of disturbances created by large movements of securities internationally that are not truly related to genuine capital export and import transactions begun by security purchases and sales and completed by a movement of goods.

Imperfect Clearance in a Single Market when both England and America are Capital Exporters

None of the three limiting cases is of course applicable to the situation prevailing after 1925. If it is next assumed that both England and America are large capital exporters and the 'rest of the world' is a capital importer the actual situation is more nearly approached. This case is first examined while still retaining the assumption that all the transactions are carried out in a single market.

LONDON ASSUMED TO BE THE MARKET

Under these conditions the characteristics of Cases 1 and 3 are both present:

a) The banks of Argentina and Sweden (the 'rest of the world') acquire sterling deposits representing the net export of capital from *both* England and America.

b) The distribution of these sterling deposits among the banks of the 'rest of the world' is determined by the net position as an importer of capital of each country included in this expression.[7]

c) Whether, under these circumstances, all the transactions may be cleared by transfers from one foreign bank to another on the books of London banks except for the increase in foreign bank balances due to England's own capital exports depends on the character of the secondary distribution of sterling deposits which brings them into the hands of people who have debts to pay *both* in England and America.

d) Whether this leads to a further net increase in interbank indebtedness depends upon the appropriateness of the volume of security purchases by America, and sale by Argentina and Sweden, to the capacity of America to export capital and the need of the 'rest of the world' to import capital as described in Case 3.

[7] There is here a further assumption that every country included under the designation 'rest of the world' is a capital importer. Without this the argument would become very burdensome, without material change in its significance.

e) Under the assumptions of this case many situations may arise leading to instability in the exchanges. If, for example, American purchases of securities from the 'rest of the world' in London exceed very greatly, even for a short period, the return flow of payments to America through London, sterling will be strengthened in New York but will be weakened in other centers. Irrespective of England's own capacity to meet the obligations created by her own capital exports, England does find herself obliged to assume obligations to the 'rest of the world' arising from America's capital export. The movement of the exchanges may be corrected by the mechanism of exchange arbitrage which effects a new redistribution of England's dollar balances. If this is not sufficient, the weakness of sterling in other exchanges and its strength in dollars may, under gold standard arrangements, draw gold from America through London to the capital importing countries or their assigns.[8] But England might not find that London was a mere channel for the adjustment of America's position. The adjustment might be too late, or only partial, for many reasons. Among them is the fact that the same volume of transactions affects very differently the great 'trunk line' of the world's exchanges—the sterling-dollar rate—and the sterling exchanges on the various capital importing countries and the various cross rates used in effecting exchange arbitrage adjustments. London might be obliged to give up gold to other countries without drawing it from America. To prevent this a credit control policy might have to be instituted not really required by England's *own* balance of payments position.

The opposite effects might result if American purchases of foreign securities in London were regularly, or even for short periods, less than the stream of payments being made through London to America, the existence of which gives to America the opportunity, or imposes upon it the duty, of becoming a

[8] The common post-war case of capital flights to America would be illustrated by making assumptions opposite to those here postulated, i.e., that Argentina and Sweden were capital exporters and America a capital importer, and London the market.

capital exporter. There would be no assurance that the stream of payments through London resulting from American capital exports, and of payments due America and made through the London foreign exchange markets, would synchronize in either time or amount. The flow of American capital exports might be erratic or regular, while the flow of payments to America might be the opposite for any given period. Even if American purchases of foreign securities in London were fully offset by a return flow of payments due America as a result of her service and goods exports, these payments might be made to a larger extent through direct exchange transactions with New York. This would necessitate still further triangular operations in the exchanges.

The exigencies of England's own situation, or that of some country not related to these American capital exports passing through London, might also impede the smoothness by which the clearance of American payments in London could be made. At times sterling might be strong both in dollars and in the currencies of countries that are creditors of America. For example, American net purchases of foreign securities in London might take place at the same time that Bank of England policy was making short term investments in London particularly attractive to the recipients of these new sterling balances. Another set of circumstances might mean that sterling would be weak both in dollars and in the other exchanges in spite of the net movement of American capital through the London market.

In summary, therefore, it may be said that when London is the market place for international securities, and at the same time England shares with America the function of long term lending to the rest of the world, then the deposit obligations of English banks to the rest of the world arising from the purchases and sales of securities in the London market do not represent the result of her own capital export alone. It has become *inextricably bound up* with the capital export of the United States. It is affected by the relation existing be-

tween the volume and regularity of American capital exports to America's capacity to export capital, and by the relation between the volume and regularity of her own capital exports and her own capacity to export capital, and also by the channels chosen by other countries for remitting to or receiving payments from America.

NEW YORK ASSUMED TO BE THE MARKET

If under these conditions the market were transferred to New York, the ten transactions would for similar reasons not be completely cleared on the books of New York banks. The banks of the rest of the world would acquire dollar deposits representing the net export of capital of both England and America. The distribution of the dollar deposits coming into existence in New York among the different importing countries would be determined by their net position as capital importers from England and America combined. The position of the American banks would be the same as that of the English banks if the market were in London under the same assumptions with respect to capital exports. The transfer of the market to New York would simplify the English problem by leaving the English banks, as far as their deposit and foreign exchange situation is concerned, faced with the problems raised by English capital exports only, while the American banks would find their foreign exchange problem and their deposits and assets influenced by the capital export position of England as well as that of America.

But here again if London continued to be the customary channel of remittance between America and other countries, the position would be reversed in part at least by the remittance to London of their dollar balances by Argentine and Swedish banks. In that case the American and the English banking systems would be jointly affected by the foreign exchange consequences of the capital exports of both countries. Complete clearance of the ten transactions upon the books of banks of either center would be impossible and an added

burden would be thrown upon the world's foreign exchange markets.

The writer has carried the analysis here presented still further, in order to include the various possible situations that arise when there is a third capital exporter using either the London or the New York market. From this he has concluded that the center that acts as the actual market for the placement or the purchase and sale of securities becomes more and more involved in the consequences of other countries' net borrowing and lending, and the process of clearance upon the books of banks has to be more and more supplemented by foreign exchange transactions as the number of capital exporting countries increases.

Imperfect Clearance in a Divided Market

All these complications follow from a division of the responsibility for long term lending even if the market for international security dealings is wholly concentrated in a single center. If this unrealistic assumption is dropped and the market is assumed to be divided, then the net balances resulting from the ten transactions that have to be remitted through the exchange markets no longer represent the net capital export or import position of the countries that are parties to the ten transactions. All the complications of clearance described in the general case of a divided market for international transactions are added to those resulting from net imports or exports of securities. The balances between pairs of countries, as well as the net balances of each country with all other countries combined, may result in foreign exchange transactions that are not offsetting.

General Conclusion: the Conditions most favorable to Exchange Stability cannot be approximated in a Decentralized System

An examination of these various possible situations leads to three generalizations with respect to the effect of the creation

of a new international money market performing the time-bridging functions of extending long term international credits and providing a market for internationally traded-in securities:

1) The presence of an international securities market contributes to the stability of the exchange of the country in which it is located by broadening the market in that exchange unless it is used as a channel for persistent one-way payments between other countries.

2) When there are two large net capital exporters, and at the same time the market for international securities is centralized, then the banking system of the country that has the market is inextricably involved in any under- or over-lending operations of the other, provided that it is also the chief foreign exchange market for the other country.

3) When the market for international securities is transferred in part or in whole to a capital exporting country whose currency is not the chief channel for accomplishing the international payments of other countries, then the presence of all or part of the international market in securities does not necessarily involve that country in foreign exchange complications arising from the capital transactions of other countries; nor does the transfer of the market in securities relieve the country whose currency *is* the customary channel of remittance for other countries from the foreign exchange complications arising from the capital transactions of other countries.

These three abstract conclusions may be applied to the post-war transfer of part of the function of long term lending and of international securities dealings from London to New York as follows:

One of the features of the post-war period, including the years following 1925, was that the London market for securities was used as a channel for large one-way movements of capital. The international movement of funds in and out of the London securities market was far more important than

the international shifting of bank balances. It often assumed very great proportions and contributed to a fundamental lack of stability in the world's exchanges. A mechanism designed to provide clearance became a channel of remittance through which reparation payments, flights of capital, and private movements of capital passed without being properly related in either time or volume to offsetting flows of payments in the opposite direction.

The transfer of a portion of the international securities market to New York from London served to disentangle the London banking system from some of these burdens and to transfer them to New York. But to the extent that countries importing capital from America chose to use their dollar balances to buy sterling, London was not really relieved of responsibility through the transfer of the market. As long as the channel for remittance between New York and the rest of the world was predominantly through London, the transfer of the international securities market to New York simply added to the volume of transactions passing over the dollar-sterling exchange and left London in much the same position as if it were still the sole market.

The transfer of a part of the securities market to New York, however, diminished by one the number of influences tending to maintain the sterling exchange as the means of remittance between New York and other countries. And to the extent that it was accompanied by the transfer of commodity markets, and the insurance market in whole or in part, the centralized foreign exchange pattern was changed. To that extent, but to that extent only, the transfer of dealings in international securities from London to New York released the London market from some of its international responsibilities.

Under the conditions prevailing after the war neither of the two cases in which America or England could be independent of problems arising from over- or under-lending by the other country was possible. The rise of an international

securities market in New York in combination with the appearance of America as a large capital exporter made it inevitable that both the English and American banking systems should be inextricably involved in the results of over- and under-lending and over- or under-borrowing wherever and whenever these occurred.

A Divided Responsibility for International Trade Financing

The above analysis has shown that when a financial center takes over part of the function of providing a market for the conclusion of international transactions of various kinds from another financial center there is a substitution of the banks of the one for those of the other as debtors on demand. It becomes necessary for the banks of all countries whose citizens are dealing in the markets of this second financial center to maintain accounts there, and the new concentration of transactions takes the form of a continuous shifting of the control over deposits in the new center from one hand to another. This process is a function of the capacity of the second market to serve as a market place for the conclusion of international transactions. In the special case of transactions in securities, the importance of an appropriate relation between the volume of security transactions and their location to the capacity of the various countries involved to export capital or their need to import capital has been shown.

In this analysis it was assumed that the goods and services bought and sold were purchased not with bank credit but from current income or savings accumulated in the country of the purchaser. When, however, there is a transfer of the function of financing international trade from one market to another a different kind of capacity is involved. The banks in the country to which this function is transferred assume demand obligations (deposits) in exchange for short term claims, and those of the country giving up this function are relieved of both. The service rendered by the financial center

is no longer the mere transferring of deposits from one foreign control to another or from foreign to domestic control, but the creation of a new volume of deposits in exchange for short term claims.

Bank Deposits created and maintained by short term International Trade Financing

The extension by any money market of short term credit to finance the movement of international trade has certain general effects:

1) No matter by whom granted and no matter whether they are in the form of export or import credits, all credit extensions by banks to finance the movement of goods in international trade create bank deposit liabilities in the exporting countries in favor of the exporters and postpone the cancellation of bank deposit liabilities in the importing countries to the debit of the importers.

2) All credit extensions by banks to finance the movement of goods in international trade give rise to interbank deposits or postpone the cancellation of interbank deposits. The location of these interbank deposits and the character of the assets held against the deposits created in favor of the exporters are greatly influenced by a shift in the source of the credits from one country to another.

Whenever the banks of any country finance its own exports in its own currency, then bank deposits are affected as follows:

a) a deposit liability is created in the exporting country in favor of its own exporters;

b) the bank deposits of the importing country are not, during the life of the credit, reduced by a debit to the account of the importers;

c) the bank deposits of the banks of the importing country in the exporting country are not, during the life of the credit, reduced by a debit in payment for imports.

That is to say, one bank deposit is created and two are maintained intact. The importing country has simply had its debt postponed. For example, when English exports to America and to Argentina are financed by sterling credits

granted by London banks, the London banks give credit to the English exporters and in exchange for this increase in their deposit liability acquire 90 day claims [9] upon American and Argentine importers or upon the American and Argentine banks that have arranged the credits on behalf of these importers. Meanwhile, the existing deposits of American and Argentine banks in London, which would otherwise have to be debited in payment for these shipments, remain unimpaired. In Argentina and in America the bank deposits of the American and Argentine importers in dollars and pesos are similarly unimpaired. The debt of these two countries has been postponed.

Whenever the banks of any country finance its own imports in its own currency, bank deposits are affected as follows:

a) a deposit liability is created in the exporting country in favor of the exporters;

b) a deposit liability is created in the importing country in favor of the banks of the exporting country;

c) the bank deposit liabilities of the importing country are not, during the life of the credit, reduced by a debit to the account of the importer.

That is to say, two deposit liabilities are created, and one deposit liability is maintained. The exporting country is relieved of any need for extending credit, for its banks receive a foreign deposit against which they give deposit credit to their exporters. The country has received payment for its exports in foreign bank deposits. For example, when English imports from America and Argentina are financed by sterling credit granted in London, the credit superstructure in London is affected as follows: sterling deposits of American and Argentine banks are credited and against this increased deposit liability the English banks receive 90 day claims upon English importers. Meanwhile, the existing bank deposits of importers in England remain unimpaired. In America and Argentina new bank deposits are created in favor of the

[9] For convenience we assume the credits are for three months.

American and Argentine exporters in dollars and pesos, and against the increase in their deposit liabilities the American and Argentine banks acquire a new asset in the form of sterling deposits. The banks of these two countries are relieved of the necessity of providing the resources against which to extend credit to their own exporters. These two countries receive payment for their exports in the form of sterling deposits.

Whenever the banks of any country finance an export of goods from a second to a third country, bank deposits are affected as follows:

a) a deposit is created in the exporting country in favor of the exporters;

b) a deposit is created in the financing country in favor of the banks of the exporting country;

c) the bank deposits of the importing country are, during the life of the credit, not reduced by a debit to the account of the importers;

d) the bank deposits of the banks of the importing country in the financing country are, during the life of the credit, not reduced by a debit in payment of imports.

That is to say, two deposits are created and two deposits are maintained. The exporting country is paid in deposits in the financing country and the debt of the importing country is postponed. For example, when Argentine exports to Sweden are financed by sterling credits in London, then the effect of the credits granted in London is as follows: sterling deposits are created in favor of the Argentine banks and against this increase in their deposit liability the London banks acquire 90 day claims upon Swedish importers or upon the Swedish banks that have arranged the credit for the importers. The sterling deposits of the Swedish banks in London, which would otherwise have had to be debited to pay for the commodities imported into Sweden, are maintained intact.[10]

[10] This assumes what is actually the case, that remittance from Sweden to Argentina would ordinarily be made in sterling.

Meanwhile in Argentina, the Argentine banks create peso deposits in favor of the Argentine exporters and acquire a new asset against this increased liability in the form of sterling deposits, and in Sweden deposits are not reduced by a debit to the account of the Swedish importers. Argentina receives payment for her exports in sterling deposits, and Sweden has her debt postponed. The case of Swedish exports to Argentina would of course be the same with the two countries in the reverse role, and the financing of American trade with Argentina by means of sterling credits has similar effects upon the credit superstructure in England, Argentina, and America.

EIGHT ILLUSTRATIVE CASES, LONDON ASSUMED TO BE THE CREDIT GIVER

The general effects upon bank assets and deposits of short term international trade financing are illustrated above by the example of eight transactions financed by sterling credits:

1) American exports to England
2) American imports from England
3) Argentine exports to England
4) English exports to Argentina
5) American imports from Argentina
6) American exports to Argentina
7) Argentine exports to Sweden
8) Swedish exports to Argentina

The choice of these examples is governed by the same considerations as the choice of the examples used to illustrate the concentration of transactions in goods and securities, Argentina and Sweden again standing for all countries other than England or America. In all eight cases the English banking system has assumed new deposit liabilities in exchange for 90 day claims. These deposit liabilities are in favor of Englishmen only in the case of English exports, and these claims are against Englishmen only in the case of English imports. As these transactions are continually completed and renewed, a revolving fund of demand deposits in London

under the control of foreigners and a continually maturing stream of payments to London from foreigners comes into existence. By fulfilling the function of granting short term credit, the London banks gain possession of an instrument giving them a certain control over the exchanges if they wish to reduce at any time the amount of the new deposit liabilities being created relatively to the amount of old payments falling due. All the other countries whose foreign trade is financed in this way are put in a position of acquiring banking assets in the form of sterling deposits against which they are able to create deposits in favor of their exporters without strain upon their existing banking resources. The receipt of payment for their exports at the time that they are made in the form of sterling deposits, while payment for their imports is postponed, results in a net addition to the deposits and to the resources of their banks.

Effects of a Complete Transfer of International Trade Financing from London to New York on Bank Deposits and Bank Assets

If the function of international trade financing is transferred from London to New York, then New York banks are substituted for London banks as creators of demand deposits under the control of foreigners. In all eight cases the American banking system assumes new deposit liabilities in exchange for 90 day claims. As far as the financing of American exports is concerned the New York banks find themselves in the position of creating demand deposits in favor of American exporters, no longer against the liquid asset of sterling deposits but against 90 day claims upon English or Argentine importers, or upon the English or Argentine banks that have arranged credits with them on behalf of these importers. As far as the financing of American imports is concerned the American banks find themselves in the position of creating demand deposits in favor of English and Argentine banks against 90 day claims upon American importers instead of

remaining in the status quo made possible by the granting of credits for these transactions by London banks. They become principals rather than channels for the financing of American exports and they become principals in financing American imports instead of having no interest in the matter, except that of arranging sterling credits for American importers.

As far as the financing of the trade between England and Argentina or Argentina and Sweden is concerned the American banks create deposits in favor of English, Argentine, and Swedish banks against claims upon the importers of these various countries. England, Argentina, and Sweden come into possession of a revolving fund of dollar deposits just as America, Argentina, and Sweden came into possession of a revolving fund of sterling deposits when the financing was carried out in London.

The changes in bank deposits and bank assets involved in the change in the credit giver are shown in Chart 29. Their distribution among the four banking systems when London is the credit giver is seen by reading down the left column, and when New York is the credit giver, by reading down the right column. The consequences of the transfer for each country are seen by reading across the chart.

Effects of a Partial Transfer of International Trade Financing from London to New York on Bank Deposits and Bank Assets

The creation of a new international money market in New York in this respect, therefore, involved the creation of an additional international loan fund. If New York had been able to take over from London the function of the short term financing of international trade completely and if, at the same time, the customary methods of remittance had changed so that remittance through New York in dollars had replaced remittance through London in sterling, then the efficiency with which international financial transactions were concluded would not have been reduced. But this was obviously impossible, and the result, as in the case of the concentration

CHART 29

Effect of the Transfer of International Trade Financing from London to New York upon the Deposits and Assets of Banks in Various Centers

Situation is shown immediately after credit is extended. All credits assumed to be for 3 months.

TRANSACTION	ENGLISH BANKS—LONDON IS A CENTER	IF FINANCED IN LONDON				IF FINANCED IN NEW YORK				ENGLISH BANKS—LONDON IS A CHANNEL
		BANK DEPOSITS CREATED IN LONDON	CORRESPONDING BANK ASSETS CREATED	BANK DEPOSITS MAINTAINED IN LONDON	CORRESPONDING BANK ASSETS MAINTAINED	BANK DEPOSITS CREATED IN LONDON	CORRESPONDING BANK ASSETS CREATED	BANK DEPOSITS MAINTAINED IN LONDON	CORRESPONDING BANK ASSETS MAINTAINED	
1 American exports to England		£ deposits of American banks	90 day claim on English importer	£ deposits of English importer	Status quo			£ deposits of English importer	$ deposits of English banks	
2 American imports from England		£ deposits of English exporter	90 day claim on American importer	£ deposits of American banks	Status quo	£ deposits of English exporter	$ deposits of English banks			
3 Argentine exports to England		£ deposits of Argentine banks	90 day claim on English importer	£ deposits of English importer	Status quo			£ deposits of English importer	$ deposits of English banks	
4 English exports to Argentina		£ deposits of English exporter	90 day claim on Argentine importer	£ deposits of Argentine banks	Status quo	£ deposits of English exporter	$ deposits of English banks			
5 American imports from Argentina		£ deposits of Argentine banks	90 day claim on American importer	£ deposits of American banks	Status quo					
6 American exports to Argentina		£ deposits of American banks	90 day claim on Argentine importer	£ deposits of Argentine banks	Status quo					
7 Argentine exports to Sweden		£ deposits of Argentine banks	90 day claim on Swedish importer	£ deposits of Swedish banks	Status quo					
8 Swedish exports to Argentina		£ deposits of Swedish banks	90 day claim on Argentine importer	£ deposits of Argentine banks	Status quo					

TRANSACTION	AMERICAN BANKS—NEW YORK IS A CHANNEL	BANK DEPOSITS CREATED IN NEW YORK	CORRESPONDING BANK ASSETS CREATED	BANK DEPOSITS MAINTAINED IN NEW YORK	CORRESPONDING BANK ASSETS MAINTAINED	BANK DEPOSITS CREATED IN NEW YORK	CORRESPONDING BANK ASSETS CREATED	BANK DEPOSITS MAINTAINED IN NEW YORK	CORRESPONDING BANK ASSETS MAINTAINED	AMERICAN BANKS—NEW YORK IS A CENTER
1 American exports to England		$ deposits of American exporter	£ deposits of American banks			$ deposits of American exporter	90 day claim on English importer	$ deposits of English banks	Status quo	
2 American imports from England				$ deposits of American importer	£ deposits of American banks	$ deposits of English banks	90 day claim on American importer	$ deposits of American importer	Status quo	
3 Argentine exports to England						$ deposits of Argentine banks	90 day claim on English importer	$ deposits of English banks	Status quo	
4 English exports to Argentina						$ deposits of English banks	90 day claim on Argentine importer	$ deposits of Argentine banks	Status quo	
5 American imports from Argentina				$ deposits of American importer	£ deposits of American banks	$ deposits of Argentine banks	90 day claim on American importer	$ deposits of American importer	Status quo	
6 American exports to Argentina		$ deposits of American exporter	£ deposits of American banks			$ deposits of American exporter	90 day claim on Argentine importer	$ deposits of Argentine banks	Status quo	
7 Argentine exports to Sweden						$ deposits of Argentine banks	90 day claim on Swedish importer	$ deposits of Swedish banks	Status quo	
8 Swedish exports to Argentina						$ deposits of Swedish banks	90 day claim on Argentine importer	$ deposits of Argentine banks	Status quo	

CHART 29 (*concluded*)

Situation is shown immediately after credit is extended. All credits assumed to be for 3 months.

TRANSACTION	ARGENTINE BANKS—BUENOS AIRES IS A CHANNEL	IF FINANCED IN LONDON: BANK DEPOSITS CREATED IN BUENOS AIRES	IF FINANCED IN LONDON: CORRESPONDING BANK ASSETS CREATED	IF FINANCED IN LONDON: BANK DEPOSITS MAINTAINED IN BUENOS AIRES	IF FINANCED IN LONDON: CORRESPONDING BANK ASSETS MAINTAINED	IF FINANCED IN NEW YORK: BANK DEPOSITS CREATED IN BUENOS AIRES	IF FINANCED IN NEW YORK: CORRESPONDING BANK ASSETS CREATED	IF FINANCED IN NEW YORK: BANK DEPOSITS MAINTAINED IN BUENOS AIRES	IF FINANCED IN NEW YORK: CORRESPONDING BANK ASSETS MAINTAINED	ARGENTINA BANKS—BUENOS AIRES IS A CHANNEL
3 Argentine exports to England		Peso deposits of Argentine exporter	£ deposits of Argentine banks			Peso deposits of Argentine exporter	$ deposits of Argentine banks			
4 English exports to Argentina				Peso deposits of Argentine importer	£ deposits of Argentine banks			Peso deposits of Argentine importer	$ deposits of Argentine banks	
5 American imports from Argentina		Peso deposits of Argentine exporter	£ deposits of Argentine banks			Peso deposits of Argentine exporter	$ deposits of Argentine banks			
6 American exports to Argentina				Peso deposits of Argentine importer	£ deposits of Argentine banks			Peso deposits of Argentine importer	$ deposits of Argentine banks	
7 Argentine exports to Sweden		Peso deposits of Argentine exporter	£ deposits of Argentine banks			Peso deposits of Argentine exporter	$ deposits of Argentine banks			
8 Swedish exports to Argentina				Peso deposits of Argentine importer	£ deposits of Argentine banks			Peso deposits of Argentine importer	$ deposits of Argentine banks	

TRANSACTION	SWEDISH BANKS STOCKHOLM IS A CHANNEL	BANK DEPOSITS CREATED IN STOCKHOLM	CORRESPONDING BANK ASSETS CREATED	BANK DEPOSITS MAINTAINED IN STOCKHOLM	CORRESPONDING BANK ASSETS MAINTAINED	BANK DEPOSITS CREATED IN STOCKHOLM	CORRESPONDING BANK ASSETS CREATED	BANK DEPOSITS MAINTAINED IN STOCKHOLM	CORRESPONDING BANK ASSETS MAINTAINED	SWEDISH BANKS STOCKHOLM IS A CHANNEL
7 Argentine exports to Sweden				Krona deposits of Swedish importer	£ deposits of Swedish banks			Krona deposits of Swedish importer	$ deposits of Swedish banks	
8 Swedish exports to Argentina		Krona deposits of Swedish exporter	£ deposits of Swedish banks			Krona deposits of Swedish exporter	$ deposits of Swedish banks			

of transactions, was a sharing of these functions between the two markets.

The simultaneous financing by London banks of English exports and imports and of the offsetting exports and imports of other countries resulted, of course, in the familiar phenomenon of the payment of exports by imports, and since all the transactions were carried out in sterling, an international clearance was effected simply on the books of London banks. With the division of the function of financing international trade movements between London and New York, this clearance was left incomplete. All the points already made concerning the loss of international stability resulting from a decline in the degree of concentration of international transactions in London apply also to this form of concentration of loans. The additions to the bank resources of the rest of the world resulting from the extension of credit to finance international trade by the central money market were now partly in the form of dollar deposits and partly in the form of sterling deposits. The utilization of these two international loan funds as part of the general means of settlement of international transactions could not fail to entail a greater strain upon the foreign exchange mechanism of the world than the use of only one—the sterling fund.

The Conflict between Technique and Capacity

One common thread has run throughout this long abstract discussion: the conflict between the technical requirements of the banking process itself and the actual distribution of banking resources. This conflict added to all other sources of instability in the operation of the international gold standard system, after 1925, one very pervasive and important technical weakness. The economies and conveniences resulting from the offsetting of debits and credits of an international character upon the books of banks are increased with every extension of the area within which clearance takes place. Bank clearance by its very nature is always seeking greater and

greater centralization. On the other hand, the provision of the medium in which international clearance is effected and of the place where it is carried out is a function of the development of banking facilities. The centralization of banking facilities depends upon the capacity of the centers where they are located to perform the banking services. The centralization of clearance is, therefore, limited by the centralization of banking resources and banking services. When the international banking function is divided, the international clearing function also is divided. The imperfections of clearing become greater and therefore the reliance upon other means of settlement than those provided by the banking system itself becomes greater. As international banking becomes more decentralized, because of a change in the distribution of the real resources that the banks in the various financial centers command, the technical means of effecting international clearance becomes less simple, and therefore, unless new and effective techniques are developed, less efficient.

CHAPTER 18

The Experiment of Creating an International Money Market in New York

The capacity of any market to be an international financial center is a function of its ability to provide a market place for international transactions in goods, services, and securities and to extend long and short term credit to foreigners. These are the primary services of such a center. The power to render either promotes the power to render the other. The ability to provide a market place for international dealings in goods promotes the capacity to extend short term credit because it attracts working balances from abroad, and increases the familiarity of the bankers with trade practices and credit risks, and because credits in the currency in terms of which dealings in goods are carried out are convenient for all concerned. For equally natural reasons the capacity to grant long term credits adds to the capacity to provide a market for dealings in securities. From the performance of the two primary services springs the capacity to perform two derivative services also—to act as holder and employer of foreign funds, and to provide a channel of international remittance.

The rise of the United States as a capital exporter forced the London market to share with, but not to surrender to, New York the function of providing an international market place for securities and to sacrifice a part of its deposit-compelling power. But Great Britain retained her predominance as a market place for goods. This is well brought out by Madden and Nadler (*op. cit.*, pp. 222–3):

"The fine mechanism of the London money market is the result of the international economic position of Great Britain. In Lon-

don and a few other British cities are found some of the most important commodity markets of the world, such as Manchester for cotton, Liverpool for grain, London for metals. Any commodity of world importance can find a ready sale in these commodity markets, and the transactions are financed through the London money market. The fact that under normal conditions a large number of world commodities are quoted in pounds sterling creates a large amount of sterling bills and necessitates the maintenance of banking connections in London by important merchants throughout the world. British shipping is world-wide, and the operations of the merchant marine create a continuous supply of sterling bills. In addition, shipping bills of other countries are often stated in pounds sterling. British insurance companies operate throughout the world, and their international financial transactions contribute to the activity of the London money market. The strength of London as a financial center is, therefore, based primarily upon the turnover of commodities and of services; and thus the London market differed from the New York market, which, under conditions as they existed prior to 1933, was based largely on the turnover of securities."

These circumstances imposed distinct limitations upon the capacity of New York to be a great international money market, and also greatly increased the concern of the London market in the manner in which America exercised her new powers as a creditor nation. The international difficulties that arose from the competition between New York and London as international markets were not a mere reflection of the disordered economy of the war years. They were permanent and altered the very nature of the problems with which the two markets had to deal. The strength of the London market before the war lay in its unrivaled capacity to perform the two primary and therefore the two derivative services of an international money market for the whole world and in its possession of the most highly developed institutional equipment for doing so. The competition of another growing market impaired this capacity and was, in a measure, destructive

of old established techniques in London. It was in part responsible for a loss of integration and coordination in the response of the London market to Bank rate and for the substitution of new methods of control in that market. The weakness of New York as an international market after the war lay in the unequal development of its capacity to perform the international money market services and in the experimental character of its institutional equipment. In both these respects the entrenched position of the London money market seriously impeded the development of New York as a stable international financial center. Both markets were deeply influenced by the loss of technical efficiency in international clearance inherent in the decentralization of the pre-war London-centered system of world finance.

The answer to the question whether there was a loss of stability in international financial relations attributable to the particular circumstances in which New York actually began to assume international money market functions on a large scale lies partly, but not wholly, in an examination of the sources of weakness just referred to. These may be placed in proper perspective by again emphasizing a distinction previously made between the surface pull and the basic pull of an international money market over the world's exchanges.

Surface Pull and Basic Pull

When a given international money market is in a position to control certain flexible items in the balance of international payments of its country it may be said to possess a surface pull over the exchanges. Under these circumstances the financial authorities, or, in a well integrated, firmly established market, the financial community as a whole acting in accordance with customary and empirically developed banking practices, may modify the currently accumulating debit (import) items in the balance of payments in such a way as to allow the currently accumulating credit (export) items

that constitute the country's basic pull over the exchanges to correct any weaknesses that may from time to time develop. An international money market is in the best position to contribute to the stability of the world's exchanges, assuming that the basic pull exists, if, first, it can control the volume of its international lending, both long and short term, so that by a marginal adjustment in this component of the debit (import) side of the balance of payments, the total imports of the country may be cleared against the total exports at a given rate of exchange; and, second, it can establish stable domestic credit conditions that will contribute to stable interest rates and prices within its own country so that the required adjustment will not be subject to swift and violent alteration. The greater the volume of international transactions concluded in that market and the more its currency is used as an international means of remittance, the broader will be its exchange market and therefore disturbances arising from particular circumstances will be more likely to be offsetting and their influence upon the market will be proportionately less. Provided the first two requirements are met, the broader the market the easier it will be to keep the exchanges stable. In a divided system, world-wide exchange stability is best promoted if the center countries *all* meet the first two requirements. If they do, then the disturbances arising from difficulties in other countries are likely to be of a magnitude that can be effectively dealt with, but if one great money market meets the first two conditions and another does not, then the difficulties suggested in Chapter 17 are unavoidable.

The New York market found it hard to meet these requirements and to develop appropriate techniques for the exercise of its surface pull over the exchanges so as to promote international stability under the gold standard after 1925. Its difficulties in this respect can best be brought out by considering certain peculiarities of the American balance of payments.

The American Balance of Payments Problem

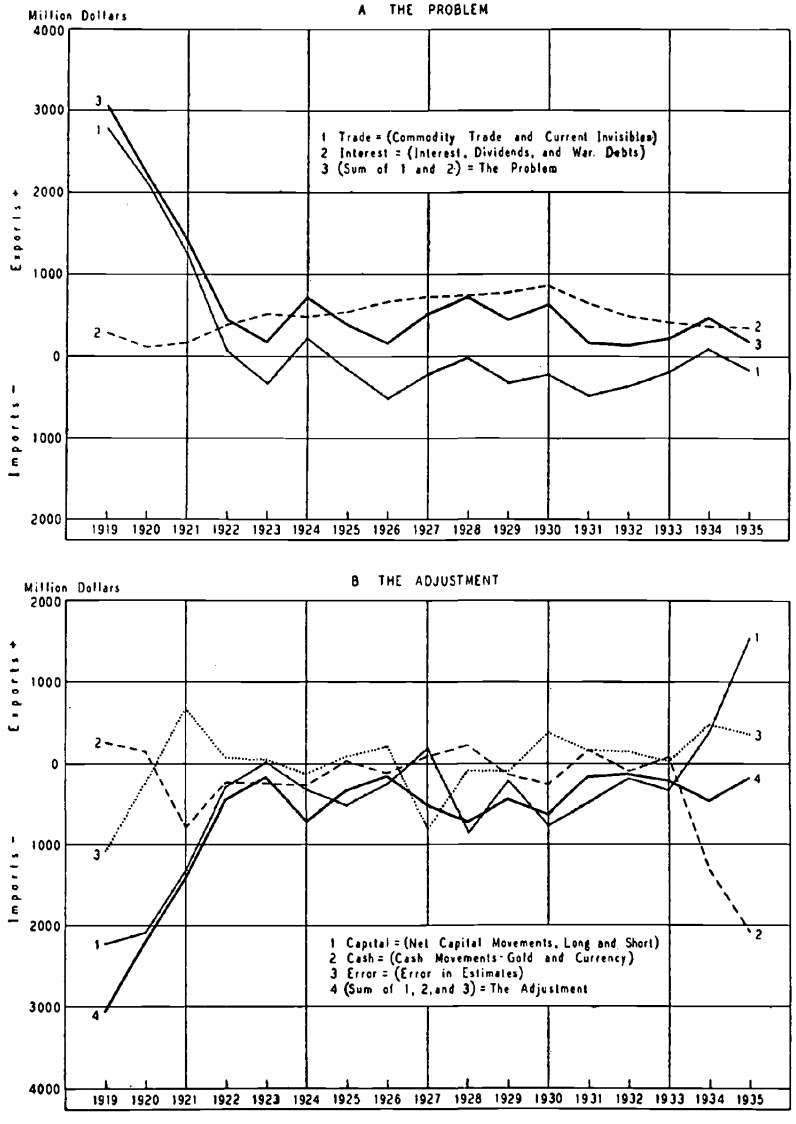
The Problem—The Underlying Strength of the Dollar

All students of the international balance of payments of any country are aware that it is impossible to assume that any item is offsetting against any other item.[1] The total is always being adjusted through the influence of continually changing conditions upon marginal elements in all the items. Nevertheless, a measure of the adjustment that has to be made in the balance of payments of any country through long and short term credit operations and through the movement of gold and currency may be found in the current position of the trade of that country in goods and services together with the payments due as a result of past financial operations. The position of the United States in this respect after 1919 (Chart 30 A) indicates that during the period 1919–31 the dollar exercised a strong basic pull over the world's exchanges. Until 1922 this was due to large surpluses of commodity exports over imports. These began a violent four year decline in 1919, and by 1922 the United States reached an even balance with the rest of the world in the exchange of goods and services. Thereafter, with the exception of a very small export balance in 1924, goods and services combined gave a relatively small import balance. By the end of the war, however, past capital advances to foreigners had produced a net credit (export) in the interest and dividend account, and from 1920 on this began to grow, being swelled after 1923 by the beginning of regular war debt repayments. The steadily increasing net payments on this account kept the total of trade plus interest a credit rather than a debit item. New York, therefore, continued to develop as an international money market under circumstances in which the dollar had a fundamental pull over the exchanges resulting from the basic transactions of

[1] For a warning on this point cf. T. E. Gregory, 'The Causes of Gold Movements into and out of Great Britain, 1925 to 1929,' *Selected Documents of the Gold Delegation* (League of Nations, 1931), passim.

CHART 30

American Balance of Payments Problem, 1919-1935, First Statement



commerce and the service of past debt. That there was an export balance to be adjusted was due to the interest item, but the fluctuations in its size were due to trade in goods and services. The adjustments required were not especially great. In the main, America was faced with a problem of reinvestment of interest (Table 37).

The Adjustment—Offsetting the Basic Pull

The offsetting of the net credit item in the American balance of payments resulting from trade in goods and services and the payment of interest and dividends on past debt was accomplished by means of capital and currency movements that exhibited quite different characteristics at various times.

For the three years of the immediate post-war readjustment, 1919–21, the adjusting items were: (1) large government loans; (2) private capital exports on long term; (3) a large import of gold; (4) a very large return of short term

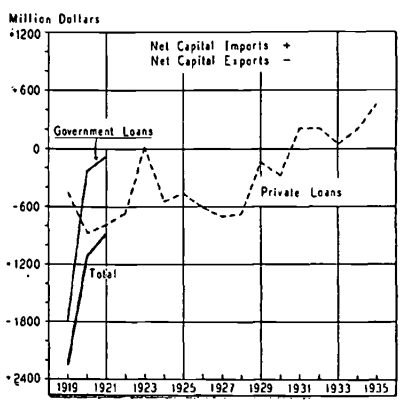


CHART 31

The International Movement of Long Term Capital in the American Balance of Payments, 1919-1935

balances belonging to foreigners and accumulated in New York during the war. These have all been referred to in preceding chapters. In 1919 the continuance of large government loans together with withdrawals of short term capital filled the gap. In 1920, when government loans tapered off (Chart 31), long term private capital exports and continued very

TABLE 37

The Balance of Payments of the United States, 1919-1935

Exports (credits) +, Imports (debits) – (millions of dollars)

	1919	*1920*	*1921*	*1922*	*1923*	*1924*
I The Problem and the Adjustment, First Statement						
1 Commodity trade (net)	+4,016	+2,950	+1,976	+719	+375	−981
2 Current invisibles	−1,244	−849	−729	−651	−716	−756
(1) + (2)	+2,772	+2,101	+1,247	+68	−341	+225
3 Int. + Div. (incl. war debts)	+293	+103	+167	+382	+508	+487
The Problem (1) + (2) + (3)	*+3,065*	*+2,204*	*+1,414*	*+450*	*+167*	*+712*
4 Long term capital	−2,157	−1,069	−757	−717	+1	−602
5 Short term capital		−985[1]	−435[1]	+375	+3	+216
Net capital movements (4) + (5)	−2,157	−2,054	−1,192	−342	+4	−386
6 Gold + Currency	+250	+50	−786	−235	−245	−266
The Adjustment (4) + (5) + (6)	*−1,907*	*−2,004*	*−1,978*	*−577*	*−241*	*−652*
7 Error	−1,158	−200	+564	+127	+74	−60
Net adjustment	−3,065	−2,204	−1,414	−450	−167	−712
II The Problem and the Adjustment, Second Statement						
1 Commodity trade + current invisibles	+2,772	+2,101	+1,247	+68	−341	−225
2 Int. + Div. (incl. war debts)	+293	+103	+167	+382	+508	+487
3 Long term private capital (excl. new issues)	−19	−368	−124	−32	+381	+250
The Problem (1) + (2) + (3)	*+3,046*	*+1,836*	*+1,290*	*+418*	*+548*	*+962*
4 New foreign issues	−357	−461	−547	−685	−380	−852
5 Short term capital		−985[1]	−435[1]	+375	+3	+216
6 Government loans	−1,781	−240	−86			
(4) + (5) + (6)	−2,138	−1,686	−1,068	−310	−377	−636
7 Gold + Currency	+250	+50	−786	−235	−245	−266
The Adjustment (4) + (5) + (6) + (7)	*−1,888*	*−1,636*	*−1,854*	*−545*	*−622*	*−902*
8 Error	−1,158	−200	+564	+127	+74	−60
Net adjustment	−3,046	−1,836	−1,290	−418	−548	−962
III Subsidiary Tables						
Interest and Dividends						
1 War debt receipts	+243	+53	+87	+157	+258	+182
2 Int. + Div. rec'd from foreigners	+150	+150	+180	+350	+400	+455
(1) + (2)	+393	+203	+267	+507	+658	+637
3 Int. + Div. paid to foreigners	−100	−100	−100	−125	−150	−150
Net Int. + Div. (incl. war debts) (1) + (2) + (3)	+293	+103	+167	+382	+508	+487
Long Term Capital						
1 Government capital	−1,781	−240	−86			
2 Private capital	−376	−829	−671	−717	+1	−602
Net long term capital movement (1) + (2)	−2,157	−1,067	−757	−717	+1	−602
Private Long Term Capital						
1 New foreign issues	−357	−461	−547	−685	−380	−852
2 Other private capital movements	−19	−368	−124	−32	+381	+250
Net private long term capital (1) + (2)	−376	−829	−671	−717	+1	−602

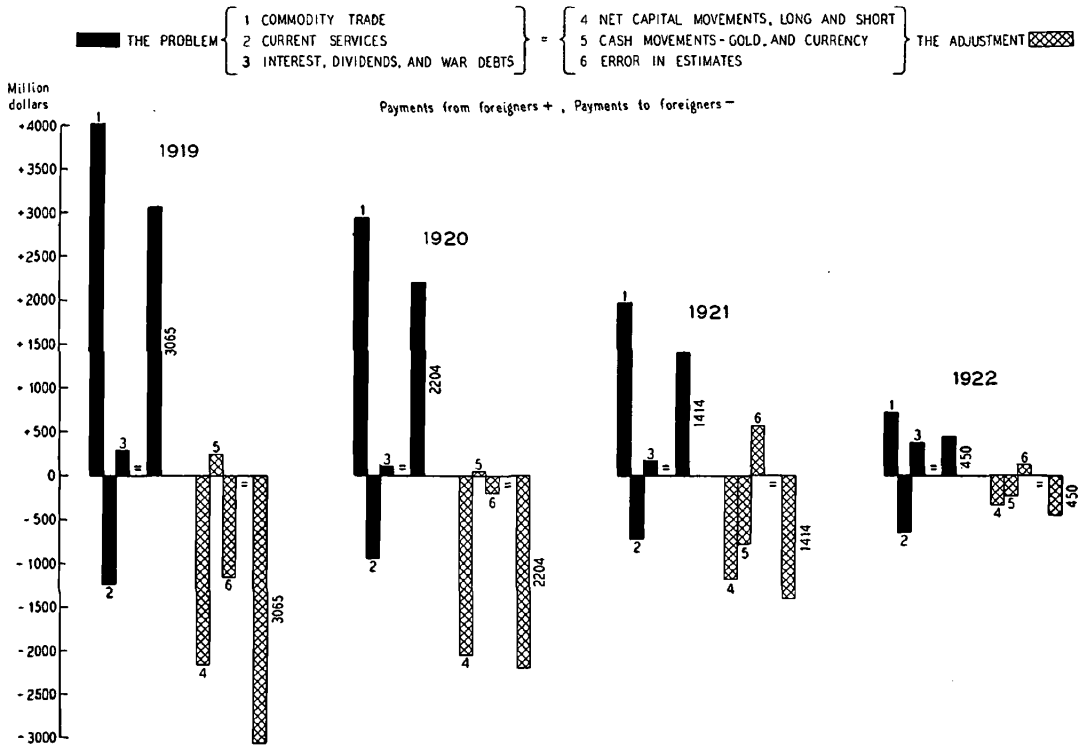
SOURCE: *The Balance of International Payments of the United States in 1936* (Department of Commerce, 1937), pp. 93-5

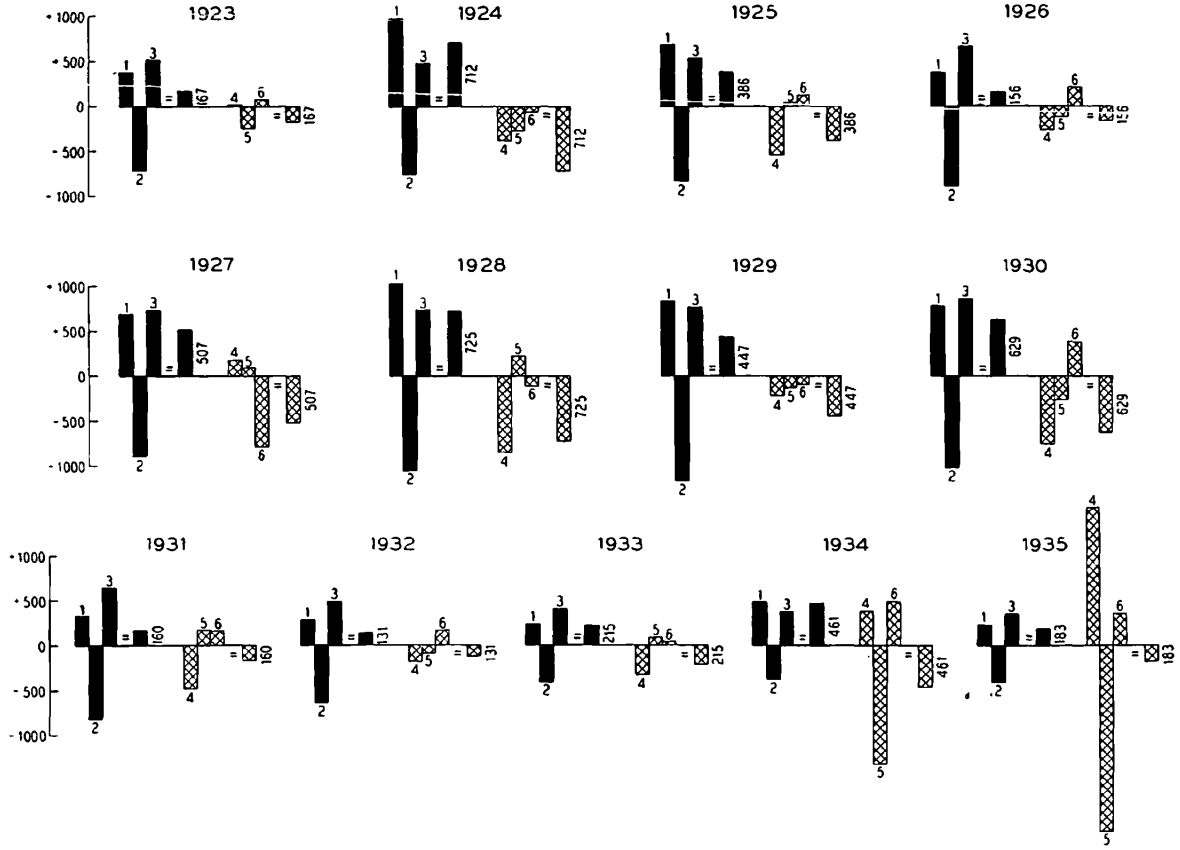
1925	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*
+683	+378	+681	+1,037	+841	+782	+334	+289	+225	+478	+236
−839	−884	−899	−1,053	−1,166	−1,010	−823	−650	−414	−385	−403
−156	−506	−218	−16	−325	−228	−489	−361	−189	+93	−167
−542	+662	+725	+741	+772	+857	+649	+492	+404	+368	+350
+386	*+156*	*+507*	*+725*	*+447*	*+629*	*+160*	*+131*	*+215*	*+461*	*+183*
−487	−602	−723	−662	−137	−267	+219	+217	+49	+202	+462
−61	+350	+900	−188	−80	−485	−709	−409	−385	+184	+1,075
−548	−252	+177	−850	−217	−752	−490	−192	−336	+386	+1,537
+42	−112	+99	+232	−135	−258	+166	−91	+83	−1,329	−2,075
−506	*−364*	*+276*	*−618*	*−352*	*−1,010*	*−324*	*−283*	*−253*	*−943*	*−538*
+120	+208	−783	−107	−95	+381	+164	+152	+38	+482	+355
−386	−156	−507	−725	−447	−629	−160	−131	−215	−461	−183
−156	−506	−218	−16	−325	−228	−489	−361	−189	+93	−167
+542	+662	+725	+741	+772	+857	+649	+492	+404	+368	+350
+461	+397	+478	+449	+494	+555	+431	+244	+59	+202	+506
+748	*+553*	*+985*	*+1,174*	*+941*	*+1,184*	*+591*	*+375*	*+274*	*+663*	*+689*
−948	−999	−1,201	−1,111	−631	−822	−212	−27	−10	0	−44
−61	+350	+900	−188	−80	−485	−709	−409	−355	+184	+1,075
−1,009	−649	−301	−1,299	−711	−1,307	−921	−436	−395	+184	+1,031
+42	−112	+99	+232	−135	−258	+166	−91	+83	−1,329	−2,075
−967	*−761*	*−202*	*−1,067*	*−846*	*−1,565*	*−755*	*−527*	*−312*	*−1,245*	*−1,044*
+120	+208	−783	−107	−95	+381	+164	+152	+38	+482	+355
−847	−553	−985	−1,174	−941	−1,184	−591	−375	−274	−663	−689
+187	+195	+206	+207	+207	+241	+113	+99	+20	+1	0
+520	+735	+800	+893	+979	+916	+662	+461	+452	+493	+521
+707	+930	+1,006	+1,100	+1,186	+1,157	+775	+560	+472	+494	+521
−165	−268	−281	−359	−414	−300	−126	−68	−63	−126	−171
+542	+662	+725	+741	+772	+857	+649	+492	+409	+368	+350
−487	−602	−723	−662	−137	−267	+219	+217	+49	+202	+462
−487	−602	−723	−662	−137	−267	+219	+217	+49	+202	+462
−948	−999	−1,201	−1,111	−631	−822	−212	−27	−10	0	−44
+461	+397	+478	+449	+494	+555	+431	+244	+59	+202	+506
−487	−602	−723	−662	−137	−267	+219	+217	+49	+202	+462

[1] Department of Commerce Estimates of 1922, *The International Financial Position of the United States* (National Industrial Conference Board, 1929), p. 80.

CHART 32

American Balance of Payments, the Problem and the Adjustment, 1919-1935




1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
+1000
+500
0
-500
-1000

large withdrawals of short term capital from America bore the main burden, and in 1921 these were supplemented by heavy gold imports. From 1922 to 1924 the adjustments required were moderate and were met by a combination of continued gold imports and moderate net capital exports. America began to attract short term capital in the manner appropriate to the position of a creditor country with an international money market. After 1924 the movement of capital, which was facilitated by the confidence inspired by the return to gold, was ample to make the necessary adjustments without a continued drain of gold from the rest of the world (Table 37).

The dimensions of the problem, and the nature of the adjustment in each year are shown in Chart 32, and the contribution of capital and cash movements in offsetting the basic underlying pull on the exchanges represented by the trade and interest items is shown for the entire period in Chart 30 B.

The picture of the international position of the United States disclosed by these charts suggests that the long run problems of adjustment were not overwhelming and could be solved by the development of money market techniques and by gradual evolutionary changes in the basic items in the balance of payments of the following types:

1) the temporary smoothing out of short run fluctuations through the development of a broad market for dollars in the various exchanges and the management of the flow of short term credits upon the British model

2) the development in America of a technique of cyclical adjustment between long and short term advances to foreigners which would prevent the stream of capital exports from becoming excessive at some times and stopping altogether at others

3) the growth of an American market for foreign securities in which loans for productive purposes could be profitably placed in response to differential interest returns reflecting the relative abundance of capital in America and in other countries

4) the establishment in the merchandise and service items in the

American balance of payments of a long run trend which would gradually bring the United States into the next stage of the international investment cycle, that of receiving payment for interest on past investments largely in goods.

There was, indeed, no way by which the United States could escape the economic adjustments necessarily involved in a sudden change from a debtor to a creditor status, or evade the duty of coordinating her international and her domestic financial and economic policy, but the balance of payments figures did not, at the time of the return to gold, carry on their face any apparent threat to international economic and financial stability.

The Major Complicating Factor—The Private Import of Capital into America

There was, however, a complicating factor; one that was not present for Great Britain while she was dominant in the management of the international gold standard system before the war. From 1923 on, not only was America an interest-receiving country but foreign capital resumed its steady migration to the United States. It was not the net export of goods and services that created the major money market problems of the United States in the period immediately following Great

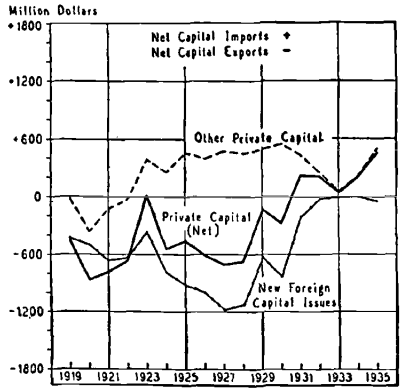
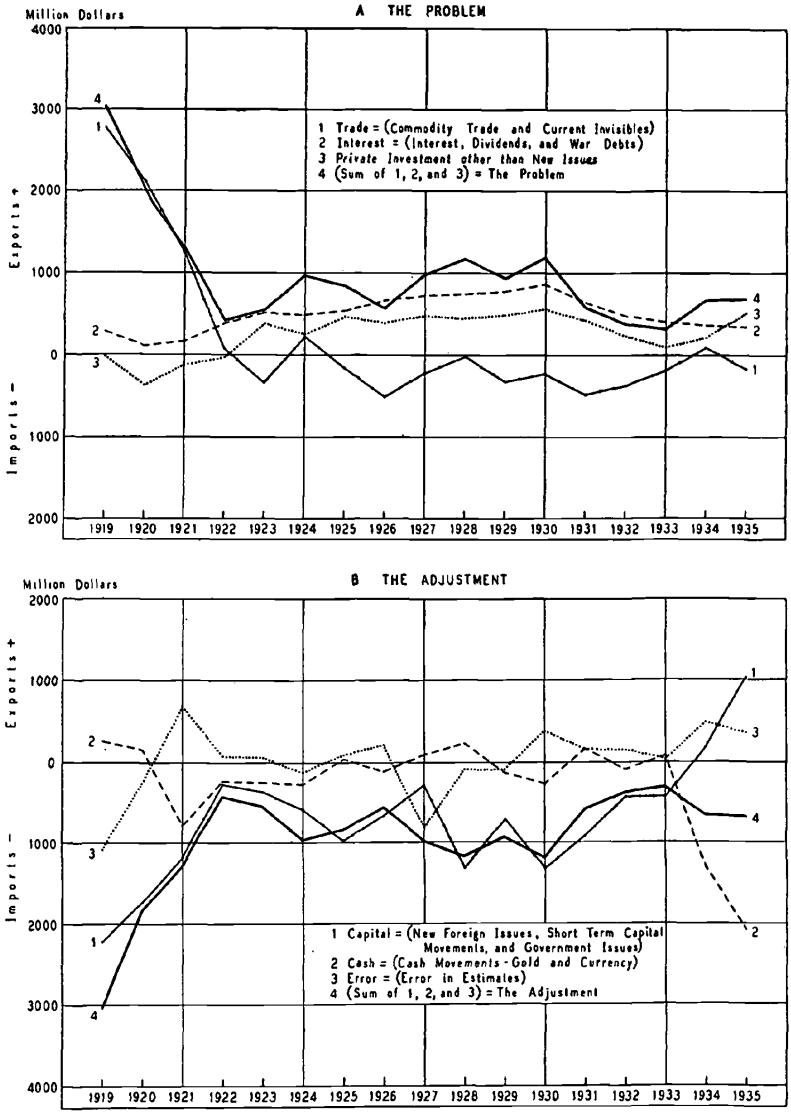


CHART 33

The International Movement of Long Term Private Capital in the American Balance of Payments, 1919-1935

CHART 34

American Balance of Payments Problem, 1919-1935, Second Statement



Britain's return to the gold standard in 1925, but the size of these items plus the capital import accomplished through private dealings in outstanding securities.

When the composition of the capital items in the American balance of payments is more closely examined, the true magnitude of the American money market problem begins to become evident. In Chart 33 the total long term capital movement is shown together with its two component parts—new foreign issues placed in the American market and net security movements exclusive of these new issues. In Chart 34 A the net inward movement of capital resulting from private long term transactions other than new issues is represented as part of the basic pull of the dollar over the world's exchanges, and in Chart 34 B new foreign issues placed in the United States are included among the balancing operations. Chart 34 A thus constitutes a second statement of the American balance of payments problem, more accurate than the first because the motives leading to foreign investment in America were strong and persistent. In this statement the basic pull continues after 1925 to fluctuate with America's trade in goods and services, but the annual adjustment required is some $300 million to $400 million greater than that indicated by Chart 30 A. The need for new foreign issues is shown in its true dimensions, and the problem of adjustment, as a money market problem, is not minimized.

Obstacles to the Development of Appropriate Techniques of Adjustment

An Improvised Institutional Equipment

In meeting this situation the New York money market was faced by certain difficulties of an institutional character peculiar to itself. One of the most familiar was the artificial character of the American discount market. This was far from an equivalent of the London discount market before the war as an instrument for controlling the international

flow of funds. In the first place it was built up upon the thesis that the finance bill was undesirable whereas in the pre-war London market the finance bill was one of the chief instruments for the international equalization of interest rates and one of the most sensitive parts of the money market in the international movement of funds. The following extract from an interview of the writer with a man of long pre-war experience in the London market brings out this point:

"The idea of the Federal Reserve system of setting up rules as to what is eligible, and the prejudice which was created against finance bills is alien to the whole nature of the international banking business before the war. The kite or finance bill drawn for interest arbitrage purposes was useful and necessary. Why interfere with the natural process by which the interest rates of the world are brought into a better balance and are steadied by the drawing of bills which increased the demand for money where it is cheap and decreased it where it is dear. The alternative constantly present of borrowing in London was an important stabilizing influence on world trade everywhere before the war."

In his study of the New York bill market, Professor Beckhart has shown that the volume of dollar acceptances was after 1925 actually quite insensitive to changes in differential interest rates between London and New York.

Not only did New York not possess a short term credit instrument well adapted to interest arbitrage transactions, and thus helpful in promoting exchange stability, but in the call loan it possessed one that gave the dollar an erratic and intermittent pull over the exchanges. The call loan rate, being connected with the rate of the Federal Reserve banks only through the general rate structure and fluctuating through a wider range than any of the rates in the London market, was peculiarly inappropriate as the major short term interest rate of an international money market.

Far more important was the general lack of experienced organization in the New York market for the conduct of for-

eign business. In America there was little expert institutional buying of foreign securities like that of the British investment trusts. There were no well developed 'usual channels' through which foreign securities were placed. As a result, both the bidding for loans and their placement with the investing public were carried on with an extraordinary lack of restraint and care.[2] Unrestricted competition within the New York market and between the New York and the London markets, at a time when there was a shortage of capital in many parts of the world, produced a set of circumstances in international lending wholly dissimilar to any with which the pre-war British financial system had to contend. Finally, the absence of a system of payment for securities by installments made necessary the use of large syndicate operations in placing new loans and led to a degree of artificial support of security prices on the exchanges which the London market had long outgrown.

The improvised and experimental character of parts of the institutional equipment of New York for performing international money market functions rendered very difficult an appropriate response in total long and short term lending to the requirements of the international position of the United States.

Lack of Integration between Long and Short Term Foreign Lending

THE DILEMMA OF A CAPITAL IMPORTING CREDITOR COUNTRY

The major complicating factor in the adjustment of the American balance of payments has been shown to be the movement of 'other private capital,' exclusive of new issues (Chart 33). This inward movement of capital had three constituents: (1) funds seeking safety in a world filled with monetary, exchange, and political uncertainty; (2) a speculative, or semi-speculative movement caused by prospects of

[2] Cf. H. E. Peters, *The Foreign Debt of the Argentine Republic* (Johns Hopkins Press, 1934), pp. 123, 129–30.

capital appreciation and not responsive to changes in the relative interest rates brought about by the discount policy of central banks; (3) a backwash of American foreign lending itself. Higher yields were regularly obtainable in America than in Great Britain and other European creditor countries on securities of essentially similar types.[8] This was necessary for the first placement of new foreign issues in the undeveloped American market, but it resulted in the early repatriation of many foreign securities originally placed in New York. The relative importance of these elements in contributing to the continuous stream of foreign investment in America varied at different periods in the post-war years. The first was undoubtedly the more important from 1922 to 1924, the third immediately after 1925, and the second after 1927, but all were in greater or less degree, present throughout.

This created a situation quite new for an international money market. In the pre-war international gold standard world securities traded in internationally were purchased

[8] At the time of England's return to the gold standard the following circular was sent out to its clients by a well known international banking firm in New York:

"A most interesting sidelight on the foreign bond situation in this market is afforded by a comparison with corresponding issues quoted in London. London has, of course, been the traditional market for flotation of the bonds of all nations for many years. The excellent background thus afforded has naturally made British investors keen judges of values in respect to foreign issues. The following is a comparison of the current prices and yields of a number of foreign bonds dealt in on the New York market with the prices and yields of corresponding issues dealt in on the London market. In every case the yield on the issues quoted in New York is higher than in London. In the case of the French issues the difference is especially great, amounting in some instances to about 1¼%. The fact that so great a difference in yields exists between practically identical issues in New York and in London suggests that as soon as we become more thoroughly acquainted with the various foreign situations our opinions of these types of securities will improve, with a corresponding effect on the market quotation. In this connection it should be borne in mind that the difference in yields just referred to is not due to the money situation inasmuch as the London money market is higher than the New York market, time money being approximately 4½% in London as compared with 4% in New York. The table follows:

predominantly for yield and income. Great Britain as a major capital exporter provided for her own domestic capital needs and new foreign lending was sensitive in both time and amount to changes in interest rates.[4] The flow of international securities, therefore, was in the main one of the important elements of adjustment in the gold standard mechanism, and bears little resemblance to the foreign buying of securities in America after 1925. For example, no pre-war precedent could be found for the very complicated situation that arose when England and America, by a policy of central bank coopera-

FOREIGN BONDS ON NEW YORK MARKET

	CURRENT MARKET PRICE	YIELD TO MATURITY (Per Cent)
Argentine Ext. 6s, 1957	96½	6.25
Austrian Guar. 7s, 1943	96	7.41
Czechoslovak Ext. 6s, Ser. B, 1952	99	8.09
German Ext. 7s, 1949	94¼	7.51
Jap. Ext. 6½s, 1954	92¾	7.09
Kingdom of Norway Ext. 6s, 1952	99¾	6.02
Rep. of Finland 6s, 1945	86	7.33
Paris-Lyons-Medit. Ext. 6s, 1958	75¾	8.13
Paris-Orleans R.R. Ext. 7s, 1954	83	8.60
Rep. of Peru Sec. 8s, 1944	100	8.00
Dutch East Indies Ext. 6s, 1962	102	5.87
City of Bergen 6s, 1949	97¼	6.22
City of Greater Prague 7½s, 1952	90	8.45
Queensland 6s, 1947	104	5.68

FOREIGN BONDS ON LONDON MARKET

	CURRENT MARKET PRICE	YIELD TO MATURITY (Per Cent)
Argentine 5s, 1949	89½	5.82
Austrian Guar. 6s, (sterling) 1943	96¼	6.33
Czechoslovak Ext. 8s, Ser. B, 1952	100	8.00
German Ext. 7s, 1949	99½	7.04
Jap. Ext. 6s, 1959	90½	6.71
Kingdom of Norway 6s, 1961	103	5.41
Rep. of Finland 6s, 1963	88	6.90
Paris-Lyons-Medit. Ext. 6s, 1958	87½	6.97
Paris-Orleans R.R. Ext. 6s, 1956	84½	7.26
Rep. of Peru 7½s, 1948	104	7.14
Dutch East Indies 5s, 1962	96¾	5.19
City of Bergen 5½s, 1963	100	5.50
City of Greater Prague 7½s, 1952	94	8.05
Queensland 5% stock, 1960	99½	5.03

The discrepancy in yields did not come to an end with the removal of the restrictions in the capital market in London, but had a tendency to persist.

[4] Cf. Ch. 19, The Pre-War Technique of Shifting from the Long Term to the Short Term Shoulder in International Lending.

tion, were attempting to divert capital to the London market by making investment in sterling deposits, bills, and prime British securities attractive through higher interest rates in London than New York. Agreed upon inter-market interest rate differentials, as an instrument of international cooperation, it was then found, had to meet a serious technical obstacle in the different interest rate structures in the two markets. It was not easy to pursue a policy of attracting lenders to London and borrowers to America if America, though able to attract long term borrowers, could not repel long term lenders.

A DEPOSIT-ATTRACTING AS COMPARED WITH A DEPOSIT-COMPELLING POWER

Difficulties of a somewhat different nature were present in the short term markets. Before the war the bulk of the foreign deposits held in London and many foreign short term investments in sterling, especially in acceptances, were in a true sense part of the basic pull of sterling over the exchanges. They were funds held in London as working capital and have, therefore, frequently been referred to in these studies as being the result of London's deposit-compelling power. Because New York did not fully perform all the functions of an international money market, fewer foreign funds held or employed in New York were of this character. A larger proportion were held there because New York was *attractive* to foreign short term lenders, and a smaller proportion because they *had* to be there. This was particularly true of the balances of foreign central banks which amounted in 1927 to over a billion dollars,[5] and were largely invested in bankers acceptances through the agency and with the guarantee of the Federal Reserve banks. It was also true of foreign funds attracted to the call loan market when the rate was relatively high, and of funds coming to New York as a haven of refuge. Consequently the influence of a rise in the Federal Reserve discount rate, when

[5] Young, *op. cit.*, pp. 141–4, 167.

reflected in the general rate structure of the New York market, resulted not so much in a reduction of American foreign short term lending as in an increase in American short term borrowing (attraction of foreign funds). A reduction in American interest rates, conversely, depended for its immediate international effects more upon a decrease in American short term borrowing (repulsion of foreign funds) than on an increase in American short term lending. In combination with the lack of direct responsiveness of the call loan rate to changes in the discount rate, this meant that the response to American credit control policy of the flexible item, short term capital, in the American balance of payments depended more on the power of New York to attract or repel foreign lenders than on its power to grant or deny the applications of foreign borrowers. This situation may with some license of expression be summed up by saying that New York was carrying on international deposit banking instead of international commercial banking.[6]

SHIFTING FROM THE LONG TO THE SHORT TERM SHOULDER

In spite of these imperfections in the organization and functioning of the New York market, Chart 35 is evidence of the beginnings of an adjusting mechanism whereby fluctuations in long term foreign lending were offset by fluctuations in short term capital movements. The comparison from year to year is not satisfactory because of changes in the method by which the Bureau of Foreign and Domestic Commerce has calculated the capital items. In particular, the very large apparent import of short term capital in 1927 is due to changes in the methods of compilation. In this year the amount of foreign balances was first ascertained by questionnaire, and the 'error' in the balance of payments computations is exceptionally large. In analyzing the *changes* in the volume of foreign bank deposits in the United States between the end

[6] All banking is deposit banking, but the phrase in this context seems to the writer to convey the distinction intended. It is used in the Macmillan Report.

of 1926 and the end of 1927 the Bureau of Foreign and Domestic Commerce reached the conclusion that there had been no change.[7] A more accurate picture of the situation, therefore, is obtained by plotting the year 1927 as exhibiting no change

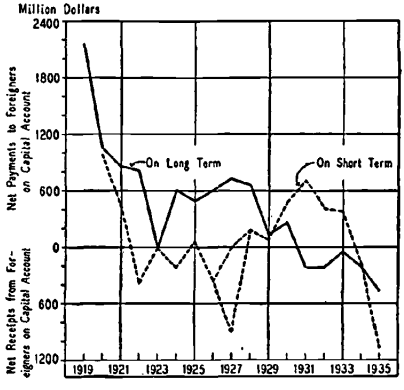


CHART 35
Long and Short Term Capital Movements in the American Balance of Payments, 1919-1935

in short term capital movements than by plotting the published figure.

From 1922 to 1926 and in 1931 the net movements of long and short term capital show an inverse relationship which represents in a rough way the use of short term credit to offset the effects of declines in long term lending. In the case of the United States, however, during these years most of the important offsetting movements of long and short term capital were influenced by special circumstances and it is hazardous to base any generalization upon the relation shown.

A Fortuitous as compared with a Functional Relation between Goods Export and Capital Export

The difficulties of working out appropriate techniques of adjustment after 1922 were accentuated in the case of the United States by two circumstances: (1) the absence, or at least the suspension, of the economic forces that, in the theory of the international investment cycle, result in a unfavorable

[7] *The Balance of Payments of the United States in 1927*, pp. 45–6.

merchandise balance in a creditor country;[8] (2) a lack of functional connection between the volume of goods exports and the amount of savings available for lending abroad. R. A. Young has described the special forces that prevented the United States from developing a merchandise import surplus from 1922 to 1928 (cf. Table 37). American demands for foreign products did not widen during the period sufficiently to overturn the balance of merchandise trade, partly because American credit expansion did not stimulate industrial and trade expansion on lines that would greatly stimulate commodity imports. Foreign production and international trade were too thoroughly demoralized from monetary disruption, and foreign enterprise was too concerned with reconstruction and readjustment to take full advantage of the potential capacity of the American market. The American tariff policy contributed to keeping down imports. The disorganized productive conditions prevailing abroad increased foreign dependence upon American raw materials, foods, and manufactures, to which the war had given rise, and American manufacturers engaged in an aggressive campaign to expand their foreign markets under the urgent necessity of employing war-stimulated productive capacity.[9] To this last may be added the fact that export prices in the United States were declining from 1925 to 1928. In the export trade of the United States raw materials were becoming as before the war relatively less important than finished goods, while in the import trade they were becoming relatively more important than finished goods.[10]

From a banking point of view the strong pull on the exchanges, to which this failure of the merchandise trade bal-

[8] A question may be raised as to the general appropriateness of applying the theory of the international investment cycle, developed on the basis of British experience, to a country with relatively small international trade and large agricultural production.

[9] Young, *op. cit.*, p. 141.

[10] E. J. Stone, unpublished thesis, Certain Post-War Balance of Payments Problems of the United States, pp. 52–3.

ance to turn over so largely contributed, meant a growth of bank balances abroad which confronted American banking institutions with foreign connections, taken collectively, with a problem of remittance home. Net exports of goods, services, and securities increase both the foreign assets and domestic deposits of the banks. Banks whose foreign assets accumulate too rapidly attempt to replace them by domestic assets, which contributes to easy money in the home market. A connection is thus established between the current accumulation of foreign credits through trade by a country having an international money market and the creation of favorable conditions in that market for the placement of foreign loans. In London interviews granted the writer it was repeatedly stated by investment bankers that before the war they never concerned themselves with the position of the balance of payments, but that when money was knocking around, looking for employment, they felt that to be a good time for bringing forward foreign issues. In a market so sensitive as London to international considerations the pressure for the remittance home of balances accumulating abroad was probably sufficient to account for the closeness with which net foreign lending approximated the need for such lending as suggested by the position of the exchanges. The same banking connection unquestionably existed in the New York market when its international functions were being developed. But international considerations were of relatively minor importance compared with the domestic interests of a great continent, and therefore this mechanism could not always be relied upon to bring about an adjustment in net foreign lending sufficiently close to avoid recourse to large movements of gold and currency. The continued foreign lending of America in amounts sufficient to support the purchasing power of her export markets to the degree necessary to maintain the volume of her goods exports was largely due to pressure exerted within the American banking system for the employment of bank funds not closely connected with the current international balance of

payments position of the country. The capacity of the New York market to extend long term credit was great, but the economic connections between the volume of savings available for lending abroad and the character of the country's foreign trade were very loose. The harmony between America's need for foreign lending and her capacity to lend was in large degree fortuitous. It was the product of an inflationary setting.

The Critical Decisions of 1927 in their Inflationary Setting

The difficulties of the New York market in making appropriate marginal adjustments in the financial items in the balance of payments of a capital importing, deposit-attracting country with the aid of an improvised institutional equipment were aggravated by the failure of the American banking community as a whole to achieve stable domestic credit conditions. While the rest of the former gold standard world was preparing from 1920 to 1924 to return to the gold standard the seeds of a great inflationary movement were being sown in the receptive soil of a one-way banking system in the United States (cf. Ch. 10 and 12). During the years when the international gold standard facade was being completed, these seeds yielded an abundant harvest.

BENEVOLENT NEUTRALITY AS A GUIDE TO CREDIT CONTROL, APRIL 1925 TO MARCH 1927 [11]

The technique of credit control employed by the Federal Reserve authorities after 1925 was on the whole one of benevolent, though anxious, neutrality toward the behavior of the credit base and the credit superstructure of the member banks. Though the speculative movement already in progress late in

[11] This month is taken as the end of a period, not because it is an entirely satisfactory dividing line, but because March 23, 1927 was the call date closest to the beginning of the gold export movement from the United States of 1927–28.

1924 continued, subject to one temporary interruption, throughout 1925, 1926, and the first part of 1927, no large scale open market operations were undertaken. The active checks imposed upon speculation were limited to changes in the discount rate, but great reliance was placed on the deter-

TABLE 38

American Credit Base and Credit Superstructure Factors of Change

THE CREDIT BASE

TRANSACTION (millions of dollars)	EFFECT ON MEMBER BANK RESERVE ACCOUNTS	
Increase in Monetary Gold Stock	+251	
Decrease in Money in Circulation outside the Reserve Banks, the Treasury, and All Reporting Banks (estimated)	+17[1]	
Increase in Cash in Vault of All Reporting Banks (estimated)		−34[1]
Decrease in Treasury Currency		−29
Decrease in Government Securities held by the Reserve Banks		−20
Decrease in Bills Bought held by the Reserve Banks		−81
Increase in Bills Discounted at the Reserve Banks	+66	
Decrease in Other Deposits at the Reserve Banks	+17	
Increase in Unexpended Capital Funds of the Reserve Banks		−34
	+351	−198
Increase in Member Bank Reserve Accounts due to these Items	+153	
Actual Increase in Member Bank Reserve Accounts	+160	

[1] Cf. Ap. Table 2, subsidiary Table 2, for the method of estimating these figures.

rent effects of member bank indebtedness to the Reserve banks.

In 1925 the securities markets were very active. Brokers loans, especially by banks outside New York City, and loans on securities increased rapidly throughout the year. During the latter half money rates rose rapidly, the average call loan rate rising from 4.09 per cent in July to 5.32 per cent in December. The rate on time loans, however, rose only from 4 to 4⅞ per cent, and this discrepancy in the behavior of the

two rates afforded an excellent example of the intermittent pull over the exchanges caused by the roving position of the call loan in the rate structure of the New York market. The Federal Reserve banks kept their portfolio of government securities fairly constant, and the increase in banking reserves

TABLE 38

April 6, 1925–March 23, 1927, a Period during which the Federal Reserve System was not actively buying or selling Government Securities

THE CREDIT SUPERSTRUCTURE

TRANSACTION [2] (millions of dollars)	EFFECT ON DEPOSITS (EXCL. INTERBANK DEPOSITS) OF ALL BANKS REPORTING TO THE COMPTROLLER	
Increase in Monetary Gold Stock	+251	
Decrease in Money in Circulation outside the Treasury, the Reserve Banks, and All Reporting Banks	+17	
Decrease in Treasury Currency		−29
Increase in Commercial Bank Float (incomplete)	+4	
Increase in Loans plus Investments (adj.) of All Reporting Banks	+4,623	
Decrease in Government Securities held by the Reserve Banks		−20
Increase in Bills Bought held by the Reserve Banks		−81
Increase in Real Estate held by All Reporting Banks (estimated on basis of a monthly increase of 10 million)	+240	
Increase in Capital Funds of All Reporting Banks		−816
	+5,135	−946
Increase in Deposits (adj.) of All Reporting Banks due to these Items	+4,189	
Actual Increase in Deposits (adj.) of All Reporting Banks	+3,943	

[2] Cf. Table 25, note 3.

called for by the credit expansion was provided partly by an increase in bills bought by the Federal Reserve banks, but chiefly by an increase in member bank borrowings. The fact that interest rates in the market were forced up beyond the Federal Reserve discount rates was an encouragement to borrowing and prevented the liquidation of rediscounts at the Federal Reserve banks.[12] This situation finally led to increases

[12] Beckhart, *op. cit.*, IV, 55–6, quotes A. C. Miller of the Federal Reserve Board in support of this view.

in the discount rates at the Federal Reserve banks from 3½ to 4 per cent. The last rate to be increased was that of the Federal Reserve Bank of New York on January 8, 1926. These increases, when applied for, were granted reluctantly and with considerable delay by the Federal Reserve Board.

With the increase in the Federal Reserve rates stock prices and brokers loans began a decline that continued until May 1926. The speculative movement seemed to be checked. Money rates fell and in April the discount rate of the Federal Reserve Bank of New York was reduced from 4 to 3½ per cent. This proved, however, to be only an interruption in speculative activity. During the latter part of 1926 and the first quarter of 1927 the New York stock market was very active. Call loan rates again rose rapidly, and the discount rate of the Federal Reserve Bank of New York was again raised to 4 per cent in August. The effectiveness of this slight increase in checking the speculative boom was, however, minimized by continuous [18] additions to American gold supplies. As in 1920 and 1921, this gold was used by American banks in 1926 and 1927 to reduce their borrowings at the Reserve banks and to increase their reserves to the extent necessary to finance the speculative credit expansion. Once again the power of the American banking system to acquire reserve funds from sources independent of the Federal Reserve banks had weakened the effectiveness of the discount rate as an instrument of domestic credit control.

The influences affecting the American credit base and superstructure from April 1925 to March 1927 are shown in Table 38. Changes in the domestic circulation had little effect on reserve balances. Open market holdings of government securities declined only $20 million, but bills bought declined $81 million. Most of the effect of this decline on member bank reserve accounts was neutralized by an increase in bills discounted. Federal Reserve operations taken as a whole only

[18] In only 5 months out of the 24 between April 1925 and March 1927 was there a net export of gold from the United States.

partly offset the effects of a net increase in monetary gold stock of $251 million. By going only $66 million further into debt the member banks were able to increase their reserves $160 million, and this was sufficient to make possible an increase in 'deposits adjusted' of all banks in the United States of $3,943 million and an increase in 'loans and discounts adjusted' of $4,623 million. The size of this multiple expansion was partly due to the difference in the legal reserve required against time and demand deposits of member banks and partly to the great power of expansion residing in the American system of redeposited reserves of non-member banks. The more rapid growth of loans and investments than deposits was due to the expansion of capital funds.

Throughout this period the management of the Federal Reserve system was faithful to the guiding principle of its Tenth Annual Report—that it should maintain sufficient credit to allow the free flow of goods through the production process. It adhered to what C. O. Hardy has called the 'Sound Credit Conditions Standard,' [14] but in so doing it found itself upon the horns of a dilemma, namely how to carry out its dual mandate to accommodate industry, agriculture, and trade but not to allow the use of its funds for speculative purposes. The difficulties of its position were greatly aggravated by a still further dilemma, well illustrated by the extreme sensitiveness of the London market during the period just described to changes in American interest rates,[15] namely how to combat speculative tendencies in the American credit system without attracting gold from abroad.

The Critical Decisions of 1927

THE CONCEPT OF GOLD HELD IN TRUST

Prior to 1917 the United States had shared some of the apprehensions of countries practicing a gold repulsion policy

[14] C. O. Hardy, *Credit Policies of the Federal Reserve System* (Brookings Institution, 1932), pp. 74–95 passim.

[15] Cf. Ch. 19, Bank Rate and the Defense of Sterling.

(cf. Ch. 2). With the recovery from the 1920–21 depression, the same anxiety over the consequences of excessive gold accumulation was again acutely felt by some American bankers. As early as 1923 the Tenth Annual Report of the Federal Reserve Board emphasized the view that the gold then accumulating in the United States should be regarded as, in a sense, held in trust for other nations, which upon their return to gold would need to draw upon the surplus American supplies. G. E. Roberts has described the attitude of these American bankers:

"The attitude of the reserve authorities and of bankers generally towards gold during these years was one of apprehension and anxiety. Far from being viewed as advantageous and desirable, they were regarded as abnormal, temporary, and therefore a menace to financial stability. Bankers generally viewed with misgivings the development of a structure of credit upon them, considering it probable that within a short time the reestablishment of Europe upon a gold basis, together with economic recovery, would result in the recall of a substantial portion of this gold, thereby possibly requiring a drastic contraction of credit in the United States. Competitive conditions practically compelled an expansion of credits, as additions to reserves occurred, but a wholesome prudence forbade them to incur continuing indebtedness at the reserve banks for the purpose of serving the speculative operations of the stock markets, by this time of increasing importance." [16]

When, therefore, a conjuncture of events arose in Europe in 1927 that seemed to require from the United States a contribution of a part of her existing gold stocks in order to assist Great Britain to maintain her position on the gold standard without great deflationary pressure on her banking system and to assist France to prepare for a definitive stabilization of the franc, the basis for a sympathetic response to the situation on the part of the United States was already in existence.

[16] 'Gold Movements in and out of the United States and Their Effects,' *Selected Documents of the Gold Delegation*, p. 47.

THE FRENCH ENTRY INTO THE GOLD MARKET, 1927

In the spring of 1927 France actively re-entered the London market for gold. As already indicated the Bank of France at the same time began to ship gold released from pledge at the Bank of England to the United States.[17] This gold was sent in $10 million lots and when $30 million had been shipped, the Federal Reserve banks purchased the remaining $60 million to prevent its coming to New York and soon after disposed of it in London.[18] This operation was not allowed to interfere with the policy of benevolent neutrality toward the credit base in America, for the Federal Reserve banks sold securities to offset the easing effects of the gold purchase abroad. In the latter part of May they increased their portfolio $100 million to offset the tightening effects of an equivalent increase of gold under earmark. American credit control policy took the form at this time of stabilizing interest rates in the face of exceptional inter-central bank gold transactions.

THE POLICY OF GOLD REDISTRIBUTION

In June 1927 American gold exports, including in this term sales of gold abroad, gold shipments, and gold earmarkings, became substantial and a definite policy of encouraging this movement was decided upon at a conference of central bankers held in New York in July 1927 and attended by Montagu Norman, Hjalmar Schacht, Charles Rist, and Benjamin Strong. It was agreed, in harmony with the Moreau-Norman conversations of the preceding month, that France should buy the bulk of the gold she desired from the United States and that in order to facilitate this the Federal Reserve Bank of New York would take the lead in bringing about easier money conditions.[19] In this decision international considera-

[17] Cf. Ch. 15, The De Facto Adherence to the Gold Exchange Standard and the Realization of Potential Elements of Strength.

[18] Roberts, *op. cit.*, p. 49.

[19] Beckhart, *op. cit.*, IV, 71. For this whole episode, and especially the Chicago

tions were uppermost, but the beginnings of a mild cyclical depression in business made the solution of the international problem seem to harmonize with the requirements of domestic credit policy.

On July 29 the Federal Reserve Bank of New York reduced its buying rate on bankers acceptances and on August 5 lowered its discount rate from 4 to 3½ per cent. The London open market rate had been raised in June close to Bank rate, and in August the differential rate relationship between London and New York of July 1924 was once more reestablished (Chart 49). In June, July, and August the Federal Reserve banks invested the proceeds of their sales of gold in London in sterling bills. Sterling was strengthened and in November 1927 was higher than at any time since December 1914.

The Attempt to Offset Gold Redistribution without having previously offset Gold Accumulation

OFFSETTING OPEN MARKET OPERATIONS, MARCH 1927 TO DECEMBER 1927

The definite adoption of an easy money policy, accompanied by purchases of securities by the Federal Reserve banks to offset gold exports, was a signal for renewed speculative activity on the New York Stock Exchange. Stock prices advanced so greatly that the dividend yield on stocks fell below the bond yield. Most of this advance took place during the period of open market purchases, which were brought to an end in November. During the rest of 1927 the portfolio policy of the Federal Reserve banks was neutral.

The forces affecting the American credit base and credit superstructure between the call dates March 23, 1927 and December 31, 1927 are shown in Table 39. The drain on reserves caused by losses of gold was supplemented by a rise in

rate controversy that followed, cf. Beckhart, Vol. IV, Ch. III, passim. Dr. Beckhart points out that Dr. Schacht preferred to have the American policy related purely to American domestic conditions.

money in circulation. This was, however, of a seasonal character. The increase in government securities held by the Federal Reserve banks was more than sufficient to offset the effects of the gold loss, and reserves were further replenished by a large increase in 'bills bought.' The two items together more than offset the combined drain of gold exports and increase in circulation. The resulting net increase in reserves was not offset by a corresponding decrease in bills discounted. There was no shift from the discount to the open market shoulder. On the contrary both bills discounted and member bank reserve accounts rose. The superstructure of credit built up on this increased credit base was very large. Both 'loans and investments (adjusted)' and 'deposits (adjusted)' of all banks increased at an annual rate of 8.1 per cent (Table 45).

CREDIT RESTRICTION, JANUARY TO JUNE 1928

The increasing speculative activity in New York brought about a complete reversal of Federal Reserve policy. The Federal Reserve banks began to dispose of their portfolio, and between January 25 and February 3, 1928 a general advance in discount rates from 3½ to 4 per cent was carried out. Open market rates were rising in New York from the beginning of the year, and since the London rate was falling, the differential interest rate, as far as time and call rates are concerned, once more left New York the higher market. Until March 7 the restrictive policy of the Reserve banks, which still included definite encouragement of gold exports, seemed successful, but in the spring stock prices again rose, and brokers loans began to grow rapidly once more. Market rates of interest continued to rise rapidly and on May 18 the New York Federal Reserve Bank rate was raised to 4½ per cent. This was followed, after a break in the stock market in June, by a further advance to 5 per cent in July. Open market sales were on a large scale. By June 1928 the New York-London interest rate differential was completely reversed (Chart 49) and foreign funds were flowing in large volume to the New York

market both for employment at short term at the high yields prevailing and for speculative investment.

The forces playing upon the American credit base and

TABLE 39

American Credit Base and Credit Superstructure Factors of Change

THE CREDIT BASE

TRANSACTION (millions of dollars)	EFFECT ON MEMBER BANK RESERVE ACCOUNTS	
Decrease in Monetary Gold Stock		−218
Increase in Money in Circulation outside the Reserve Banks, the Treasury, and All Reporting Banks (estimated)		−171
Decrease in Cash in Vault of All Reporting Banks (estimated)	+30 [1]	
Increase in Treasury Currency	+8	
Increase in Government Securities held by the Reserve Banks	+261	
Increase in Bills Bought held by the Reserve Banks	+154	
Increase in Bills Discounted at the Reserve Banks	+152	
Increase in Other Deposits at the Reserve Banks		−12
Increase in Unexpended Capital Funds of the Reserve Banks		−9
	+605	−410
Increase in Member Bank Reserve Accounts due to these Items	+195 [1]	
Actual Increase in Member Bank Reserve Accounts	+131	

[1] The large discrepancy between the calculated and actual increase in Member Bank Reserve Accounts is probably due to a change in the proportion that Cash in Vault of Member Banks bears to Cash in Vault of All Banks at the year end, rendering the method employed in estimating the item Cash in Vault unsatisfactory when the period begins or ends on December 31. This probability is confirmed by the large discrepancy in the opposite sense for the next period.

credit superstructure during this period are shown in Table 40. The effects of gold exports on the reserves of member banks were largely but not wholly offset by changes in the monetary circulation and in cash in vault of commercial

banks. Reserves were still further diminished by the sale of government securities and by a reduction in bills bought by the Federal Reserve banks, but were built up in almost equal

TABLE 39

March 23, 1927–December 31, 1927, a Period during which Gold Exports were taking place and the Federal Reserve System was actively buying Government Securities

THE CREDIT SUPERSTRUCTURE

TRANSACTION (millions of dollars)	EFFECT ON DEPOSITS (EXCL. INTERBANK DEPOSITS) OF ALL BANKS REPORTING TO THE COMPTROLLER	
Increase in Monetary Gold Stock		−218
Increase in Money in Circulation outside the Treasury, the Reserve Banks, and All Reporting Banks (estimated)		−171
Increase in Treasury Currency	+8	
Increase in Commercial Bank Float (incomplete)	+385 [2]	
Increase in Net Indebtedness to Foreign Banks (Member Banks only)		−323
Increase in Loans plus Investments (adj.) of All Reporting Banks	+3,051	
Increase in Government Securities held by the Reserve Banks	+261	
Increase in Bills Bought held by the Reserve Banks	+154	
Increase in Real Estate owned by All Reporting Banks (estimated on basis of a monthly increase of 10 million)	+90	
Increase in Capital Funds of All Reporting Banks (estimated)		−450
	+3,949	−1,162
Increase in Deposits (adj.) of All Reporting Banks due to these Items	+2,787 [2]	
Actual Increase in Deposits (adj.) of All Reporting Banks	+3,107	

[2] The large discrepancy between the calculated and actual increase in Deposits (adj.) is probably due to the fact that the incomplete figure for Commercial Bank Float introduces a larger error into the calculation for periods that begin or end on December 31 than for other periods. This consideration affects the results for the next period in the opposite sense.

amounts by an increase in rediscounts. During the expansion phase of this cycle of open market operations there had been no shift from the discount to the open market shoulder. During the period of restriction there was a shift from the open

market to the discount shoulder. The experience of 1922–24 was not repeated,[20] and a large volume of indebtedness to the Federal Reserve banks was built up. This was helpful in making discount policy effective, but it also restored once more

TABLE 40

American Credit Base and Credit Superstructure Factors of Change

THE CREDIT BASE

TRANSACTION (millions of dollars)	EFFECT ON MEMBER BANK RESERVE ACCOUNTS	
Decrease in Monetary Gold Stock		−270
Decrease in Money in Circulation outside the Reserve Banks, the Treasury, and All Reporting Banks (estimated)	+70	
Decrease in Cash in Vault of All Reporting Banks (estimated)	+136 [1]	
Decrease in Government Securities held by the Reserve Banks		−392
Decrease in Bills Bought held by the Reserve Banks		−162
Increase in Bills Discounted at the Reserve Banks	+422	
Decrease in Other Deposits at the Reserve Banks	+4	
Increase in Unexpended Capital Funds of the Reserve Banks		−20
	+632	−844
Decrease in Member Bank Reserve Accounts due to these Items	−212 [1]	
Actual Decrease in Member Bank Reserve Accounts	−87	

[1] Cf. Table 39, note 1.

the now familiar situation in which a future gold import movement might fix the reserve credit represented by these rediscounts permanently in the American credit system.

Though reserve balances were reduced, 'deposits (adjusted)' of all banks increased nearly half a billion dollars. Once again this was possible because of the conversion of

[20] Cf. Ch. 10, Shifting from the Open Market to the Discount Shoulder.

demand into time deposits. The rate of increase in deposits, however, was much reduced, falling to 1.8 per cent, but 'loans and investments (adjusted)' increased $1½ billion, that is, at an annual rate of 5.5 per cent, although the banks were not increasing their loans on securities. During January and

TABLE 40

December 31, 1927–June 30, 1928, a Period during which Gold Exports were taking place and the Federal Reserve System was actively selling Government Securities

THE CREDIT SUPERSTRUCTURE

TRANSACTION (millions of dollars)	EFFECT ON DEPOSITS (EXCL. INTERBANK DEPOSITS) OF ALL BANKS REPORTING TO THE COMPTROLLER	
Decrease in Monetary Gold Stock		−270
Decrease in Money in Circulation outside the Treasury, the Reserve Banks, and All Reporting Banks (estimated)	+70	
Decrease in Commercial Bank Float (incomplete)		−44 [2]
Decrease in Net Indebtedness to Foreign Banks (Member Banks only)	+165	
Increase in Loans plus Investments (adj.) of All Reporting Banks	+1,551	
Decrease in Government Securities held by the Reserve Banks		−392
Decrease in Bills Bought held by the Reserve Banks		−162
Increase in Real Estate owned by All Reporting Banks (estimated on basis of a monthly increase of 7 million)	+42	
Increase in Capital Funds of All Reporting Banks (estimated)		−360
	+1,828	−1,228
Increase in Deposits (adj.) of All Reporting Banks due to these Items	+600 [2]	
Actual Increase in Deposits (adj.) of All Reporting Banks	+489	

[2] Cf. Table 39, note 2.

February 1928 brokers loans tended slightly downward, the loans of New York banks falling rapidly. Loans for out-of-town banks increased and, with rising money rates, 'loans for the account of others' were growing. This was the source of the net increase in speculative credit for the period. Beginning on March 7 all three classes of loans increased until

June 8, when total brokers loans were one billion dollars greater than the year before when the gold redistribution program first went into effect.

TABLE 41

American Credit Base and Credit Superstructure Factors of Change

THE CREDIT BASE

TRANSACTION (millions of dollars)	EFFECT ON MEMBER BANK RESERVE ACCOUNTS
Decrease in Monetary Gold Stock	−488
Decrease in Money in Circulation outside the Reserve Banks, the Treasury, and All Reporting Banks (estimated)	−101
Decrease in Cash in Vault of All Reporting Banks (estimated)	+166 [1]
Increase in Treasury Currency	+8
Decrease in Government Securities held by the Reserve Banks	−131
Decrease in Bills Bought held by the Reserve Banks	−8
Increase in Bills Discounted at the Reserve Banks	+574
Increase in Other Deposits at the Reserve Banks	−8
Increase in Unexpended Capital Funds of the Reserve Banks	−29
	+748 −765
Decrease in Member Bank Reserve Accounts due to these Items	−17 [1]
Actual Increase in Member Bank Reserve Accounts	+44

[1] The considerations making the estimate of changes in Cash in Vault unreliable when the period begins or ends on December 31 apply in slightly less degree when the period begins or ends on June 30. The basis of the estimate does not permit allowance for seasonal changes.

THE PERIOD OF GOLD REDISTRIBUTION AS A WHOLE

The forces playing upon the American credit base and credit superstructure for the period of gold redistribution taken as a whole are shown in Table 41. The full force of gold exports was allowed to take effect in diminishing reserves. The net

gains in reserves drawn from changes in monetary circulation and cash in vault were more than offset by the reduction of $131 million in the security holdings of the Federal Reserve

TABLE 41

March 23, 1927–June 30, 1928, a Period during which Gold Exports were taking place and the Federal Reserve System made Net Sales of Government Securities

THE CREDIT SUPERSTRUCTURE

TRANSACTION (millions of dollars)	EFFECT ON DEPOSITS (EXCL. INTERBANK DEPOSITS) OF ALL BANKS REPORTING TO THE COMPTROLLER	
Decrease in Monetary Gold Stock		−488
Decrease in Money in Circulation outside the Reserve Banks, the Treasury, and All Reporting Banks (estimated)		−101
Increase in Treasury Currency	+8	
Increase in Commercial Bank Float (incomplete)	+341	
Increase in Net Indebtedness to Foreign Banks (Member Banks only)		−158
Increase in Loans plus Investments (adj.) of All Reporting Banks	+4,602	
Increase in Government Securities held by the Reserve Banks		−131
Decrease in Bills Bought held by the Reserve Banks		−8
Increase in Real Estate owned by All Reporting Banks (estimated)	+132	
Increase in Capital Funds of All Reporting Banks (estimated)		−810
	+5,083	−1,696
Increase in Deposits (adj.) of All Reporting Banks due to these items	+3,387	
Actual Increase in Deposits (adj.) of All Reporting Banks	+3,596	

banks. Yet the member bank reserves were slightly increased owing to an increase in rediscounts of $547 million. By going into debt to this amount the member banks were able to maintain their reserves, and on this nearly stationary reserve base a great superstructure was reared. In spite of factors directly reducing them by $1½ billion (Table 41), 'deposits

adjusted' increased $3½ billion, at an annual rate of 5.2 per cent, and 'loans and investments (adjusted)' increased $4½ billion, or at an annual rate of 6.7 per cent (Table 45).

TABLE 42

American Credit Base and Credit Superstructure Factors of Change

THE CREDIT BASE

CHANGES (millions of dollars) IN	EFFECT ON MEMBER BANK RESERVE ACCOUNTS			
	June 30, 1920 to Oct. 10, 1924		Oct. 10, 1924 to June 30, 1928	
Monetary Gold Stock	+1,854 [1]			−379 [1]
Money in Circulation outside the Reserve Banks, the Treasury, and All Reporting Banks (partly estimated)	+470			−41
Cash in Vault of All Reporting Banks (estimated)	+135		+141	
Treasury Currency	+320			−23
Federal Reserve Float		−123 [2]	+25 [2]	
Government Securities held by the Reserve Banks	+229			−370
Bills Bought held by the Reserve Banks		−224	+46	
Bills Discounted at the Reserve Banks		−2,165	+765	
Other Deposits at the Reserve Banks		−22 [3]	+29	
Unexpended Capital Funds of the Reserve Banks		−34		−27
	+3,008	−2,568	+1,006	−840
Increase in Member Bank Reserve Accounts due to these Items	+440 [1]		+166	
Actual Increase in Member Bank Reserve Accounts	+358		+155	

[1] Until April 1925, Gold Coin and Bullion in the United States. The substantial difference between the calculated and the actual change in Member Bank Reserve Accounts from June 1920 to October 1924 occurred in the early part of that period and is probably due to differences in the behavior of Gold Coin and Bullion as given by the Treasury in the earlier years and the behavior of the actual Monetary Gold Stock.

Contingent Liabilities of American Banks

This great increase in the credit superstructure upon a practically stationary credit base coincided with a striking growth

TABLE 42

June 30, 1920–October 10, 1924, the Period of Preparation for the Return to Gold; October 10, 1924–June 30, 1928, the Period of the Completion of the Gold Standard Facade

THE CREDIT SUPERSTRUCTURE

CHANGES (millions of dollars) IN	EFFECT ON DEPOSITS (EXCL. INTERBANK DEPOSITS) OF ALL BANKS REPORTING TO THE COMPTROLLER			
	June 30, 1920 to Oct. 10, 1924		Oct. 10, 1924 to June 30, 1928	
Monetary Gold Stock	+1,854 [1]			−379 [1]
Money in Circulation outside the Reserve Banks, the Treasury, and All Reporting Banks	+470			−41
Treasury Currency	+320			−23
Commercial Bank Float (incomplete)		−217	+473	
Net Indebtedness to Foreign Banks (incomplete)		−147 [4]		−158 [4]
Loans plus Investments (adj.) of All Reporting Banks	+4,813		+10,783	
Government Securities held by the Reserve Banks	+229			−370
Bills Bought held by the Reserve Banks		−224	+46	
Real Estate owned by All Reporting Banks (partly estimated)	+727		+444	
Capital Funds of All Reporting Banks (partly estimated)		−1,037		−1,806
	+8,413	−1,625	+11,746	−2,777
Increase in Deposits (adj.) of All Reporting Banks due to these Items	+6,788		+8,969	
Actual Increase in Deposits (adj.) of All Reporting Banks	+6,155		+9,333	

[2] Calculated from Federal Reserve Bank statements.

[3] From June 1921.

[4] No estimate from December 1923 to March 1927; from March 1927 to June 1928, Member Banks only.

in 'loans for the account of others.' This was of great importance to the banking system, for such loans constitute, in effect, contingent liabilities of banks. When loans are placed by banks for non-banking lenders, they have the same immediate effect on bank assets and liabilities as the sale of any security or other asset by banks. Assets and deposits both fall, but the banks remain under a non-contractual, but nevertheless economically binding compulsion to take back the loans and reconstitute the deposits of non-banking lenders upon demand. The replacement of loans transferred to 'others' by new bank loans meant that the lending power of banks was being employed without regard to this contingency. From a money market point of view, 'loans for the account of others' were part of the vast superstructure of bank credit brought into existence during the period of gold redistribution.

The One-Way American Banking System

Domestic Credit Expansion, 1920–1928

THE CREDIT BASE AND CREDIT SUPERSTRUCTURE

The behavior of the American credit base and credit superstructure during the years when the preliminary preparations were being made for the return to gold (1920–24) was in striking contrast to their behavior during the period when the return to gold on a world-wide basis was actually completed (1925–1928). This is brought out in Table 42, the main features of which may be summarized briefly. From June 1920 to October 1924 member banks acquired reserve funds from outside sources amounting to $2,779 million, for to the increase in the gold supply was added an increase in reserves from changes in the circulation and composition of the currency of $925 million, made up of a $470 million return of currency from circulation, a $135 million decrease in cash in vault, and a $320 million increase in Treasury Currency. The relatively moderate increase in reserve balances is explained by the slight decrease in the portfolio and float

of the Federal Reserve system and by the repayment of $2,165 million in rediscounts.

From October 1924 to June 1928 reserve balances also increased moderately, but this was accomplished despite a loss in gold of $379 million and a reduction in the open market portfolio of the Federal Reserve banks of $370 million. Currency factors contributed somewhat to the net increase in reserves, but it was due chiefly to a large increase in rediscounts. The real shift from the open market to the discount shoulder occurred in this period. The real contrast between the two periods, as far as the growth in the basis of credit is concerned, is that between acquiring reserve funds outside the central banking system in the first period and going further into debt in the second.

The striking features of the erection of the increased credit superstructure on the increased credit base were that the increase in reserves was greater in the first period than in the second, while the increase in deposits was greater in the second period than in the first; and that the increase in deposits was greater than the increase in loans and investments in the first period and less in the second. Even more surprising for a country continuously on the gold standard was the fact that while the increase in reserves during the first period was more than double the increase in the second, the increase in loans and investments in the second period was more than double the increase in the first. Since the first period was one of gold imports and the second one of gold exports, the expression 'delayed gold inflation' takes on a very powerful statistical meaning, as is indicated by the following figures taken from Table 42:

	June 1920–October 1924 (51 months)	October 1924–June 1928 (45 months)
	(millions of dollars)	
Monetary Gold Stock	+1,854	−379
Member Bank Reserves	+358	+155
Deposits (adj.) of All Reporting Banks	+6,155	+9,333
Loans and Investments (adj.) of All Reporting Banks	+4,813	+10,783

The major explanation of the much more rapid growth of deposits than of loans and investments during the first period was the gold inflow. During the second period the major explanation of the much more rapid growth of loans and investments than of deposits was the great increase in capital funds of American banks. The major explanation of the more rapid proportionate growth of deposits to reserves is found in the institutional factor already frequently mentioned, the transfer of deposits from the category of demand deposits to that of time deposits.

THE RATIO SYSTEM OF THE REPORTING MEMBER BANKS

This reclassification of deposits was, in effect, a reduction in the *basic banking ratio,* primary reserves to total deposits. In

TABLE 43

The Expansion of Deposits of All Reporting Member Banks, 1920-1928, selected intervals (millions of dollars)

A DEPOSITS—ACTUAL AND POTENTIAL

	TOTAL DEPOSITS (1)	CASH AND AT RESERVE BANKS (2)	RATIO OF (2) TO (1) (PERCENTAGE) (3)	MAXIMUM DEPOSITS POSSIBLE ASSUMING NO CHANGE IN THE RATIO: From the preceding date (4)	MAXIMUM DEPOSITS POSSIBLE ASSUMING NO CHANGE IN THE RATIO: From June 1920 (5)
June 1920	14,036	1,752	12.482		
June 1922	14,504	1,719	11.851	13,771	
Nov. 1924	17,954	1,991	11.089	16,800	15,779
June 1928	20,719	2,021	9.754	18,225	16,191

B EXPANSION BY PERIODS—PERMISSIVE FACTORS

	ACTUAL INCREASE IN DEPOSITS (6)	INCREASE ATTRIBUTABLE TO CHANGES IN RESERVES (7)	INCREASE ATTRIBUTABLE TO CHANGES IN RATIO (6)−(7)
June 1920–June 1922	468	−265[1]	733
June 1922–Nov. 1924	3,450	2,296[1]	1,154
Nov. 1924–June 1928	2,765	271[1]	2,494
June 1920–Nov. 1924	3,918	1,743[2]	2,175
June 1920–June 1928	6,683	2,155[2]	4,528

[1] Difference between (4) at the end of the period and (1) at the beginning of the period.

[2] Difference between (5) at the end of the period and (1) in June 1920.

the case of the member banks of the Federal Reserve system primary reserves are 'cash' and 'due from the Federal Reserve banks.' The figures for all reporting member banks disclose a steady reduction in this ratio from 12.5 per cent in June 1920 to 9.7 per cent in June 1928 (Table 43). From 1920 to 1922 this was due to a decline in cash in vault, but from then on it was due to a steady and persistent reduction in the ratio of deposits at the Reserve banks to total deposits.

This was the third great increase in the potential lending power of the American banking system after 1914. It is in a direct line of descent from the changes in the reserve requirements accomplished by the passage of the Federal Reserve Act itself, and the war-time amendments of June 1917. Quantitatively, for 1920–28, it was more important as a *permissive* factor of bank credit expansion than all the changes in actual reserves during the period. Of the total expansion of deposits of all reporting member banks from June 1920 to June 1928 67.7 per cent was made possible by the changes in this ratio. The relative importance of the two factors for various periods between 1920 and 1928 is shown by the accompanying figures derived from Table 43. The form in which the figures of the

	PERCENTAGE OF THE INCREASE IN TOTAL DEPOSITS ATTRIBUTABLE TO CHANGES IN		
	AMOUNT OF RESERVES	RATIO OF RESERVES TO DEPOSITS	
		Within the Period	Since June 1920
June 1920 to June 1922	0	100	
June 1922 to November 1924	66.6	33.4	
November 1924 to June 1928	9.8	91.2	
June 1920 to November 1924	44.5		55.5
June 1920 to June 1928	32.3		67.7

reporting member banks are published does not admit of presenting a ratio of 'secondary reserves' to 'total deposits' corresponding to the ratio 'money at call and short notice' to 'total deposits' of the London clearing banks. The dominating influence of loans to brokers in the total figure of 'loans on

TABLE 44

Reporting Member Banks in Leading Cities, Various Balance Sheet Items as Percentages of Total Deposits,[1] October 1924–December 1928

	NET DEMAND DEPOSITS	TIME DEPOSITS	TOTAL LOANS AND DISCOUNTS	LOANS SECURED BY STOCKS AND BONDS	ALL OTHER LOANS	TOTAL INVESTMENTS	TOTAL LOANS AND INVESTMENTS	CASH ON HAND	RESERVE DEPOSITS WITH RESERVE BANKS	CASH AND AT RESERVE BANKS
1924										
Oct.	73.4	26.6	71.9	24.7	46.2	30.6	102.6	1.6	9.3	11.0
Nov.	73.4	27.1	71.4	24.7	45.8	31.3	102.7	1.6	9.5	11.1
Dec.	73.2	26.8	72.2	25.6	45.5	31.1	103.2	1.9	9.4	11.3
1925										
Jan.	73.3	26.7	72.1	25.7	45.4	30.5	102.5	1.7	9.5	11.2
Feb.	72.5	27.3	73.5	26.4	46.0	30.1	103.6	1.6	9.2	10.8
March	72.1	27.9	74.0	27.0	45.8	30.9	104.9	1.6	9.2	10.8
April	71.6	28.4	73.9	26.5	46.2	30.7	104.7	1.6	8.0	9.6
May	71.4	28.6	73.4	26.9	45.4	30.4	103.7	1.6	9.0	10.6
June	71.3	28.7	73.1	27.8	44.4	30.7	103.8	1.5	9.2	10.7
July	71.5	28.5	73.2	27.9	44.4	30.2	103.4	1.5	9.1	10.6
Aug.	71.3	28.7	73.9	28.1	44.9	30.3	104.2	1.6	9.0	10.6
Sept.	71.4	28.6	74.9	28.2	45.7	30.1	105.0	1.5	9.0	10.5
Oct.	71.5	28.5	75.2	28.2	46.1	29.6	104.9	1.7	9.0	10.7
Nov.	71.3	28.7	75.5	29.2	45.4	29.1	104.6	1.5	9.1	10.6
Dec.	71.5	28.5	75.9	29.7	45.2	29.7	105.6	1.7	9.1	10.8
1926										
Jan.	71.2	28.8	75.5	29.9	44.8	29.2	104.7	1.7	9.1	10.7
Feb.	70.6	29.4	75.7	29.5	45.3	29.6	105.4	1.5	9.1	10.6
March	70.4	29.6	75.5	28.9	45.7	30.8	106.3	1.5	9.0	10.5
April	70.1	29.9	75.5	28.6	46.1	30.4	105.9	1.6	9.3	10.9
May	70.1	29.9	75.1	28.5	45.7	30.5	105.7	1.5	8.8	10.3
June	69.7	30.2	75.3	29.3	45.3	30.6	105.9	1.5	9.0	10.5

July	69.7	30.4	74.8	29.2	44.8	30.2	104.9	1.6	8.9	10.5
Aug.	69.3	30.7	75.7	29.4	45.5	30.2	105.9	1.5	8.8	10.3
Sept.	69.9	30.0	75.4	29.4	45.2	29.8	105.2	1.5	9.3	10.8
Oct.	69.6	30.4	76.3	29.4	46.2	29.6	105.9	1.7	8.7	10.4
Nov.	69.2	30.8	76.3	28.4	47.1	29.6	105.9	1.7	8.9	10.4
Dec.	69.6	30.4	75.7	28.8	46.1	29.2	104.9	1.7	9.3	11.0
1927										
Jan.	69.0	31.0	75.7	29.2	45.6	29.2	104.8	1.4	8.9	10.3
Feb.	68.7	31.3	75.0	28.8	45.2	29.7	104.7	1.4	9.0	10.4
March	67.9	31.2	74.8	28.9	45.1	31.0	105.8	1.5	8.7	10.2
April	68.4	31.6	75.1	28.8	45.5	30.7	105.8	1.4	8.8	10.2
May	68.2	31.8	74.6	29.1	44.7	31.1	105.7	1.3	8.8	10.1
June	69.0	31.0	73.6	29.5	43.5	31.0	104.7	1.3	9.1	10.4
July	68.2	31.8	74.6	29.8	44.3	30.8	105.4	1.3	8.8	10.1
Aug.	68.0	32.0	74.9	29.9	44.3	30.3	105.1	1.3	8.5	9.8
Sept.	67.6	31.7	74.9	30.3	43.9	30.0	104.8	1.4	8.6	10.0
Oct.	67.8	32.2	76.0	30.7	44.7	30.7	106.7	1.4	8.6	10.0
Nov.	68.2	31.8	75.0	30.9	43.5	31.2	106.1	1.3	9.1	10.4
Dec.	68.1	31.6	74.6	31.3	42.7	31.1	105.6	1.6	8.7	10.3
1928										
Jan.	67.8	32.2	74.4	31.7	42.1	31.8	106.2	1.3	8.8	10.1
Feb.	67.3	32.7	74.3	31.2	42.4	32.1	106.3	1.3	8.6	9.9
March	67.3	32.7	74.8	31.1	42.9	31.9	106.7	1.2	8.5	9.7
April	67.0	33.0	75.9	32.3	43.1	31.9	108.0	1.2	8.5	9.7
May	66.6	33.4	76.5	33.1	42.8	31.9	108.4	1.1	8.5	9.6
June	66.2	33.8	76.6	32.7	43.3	32.1	108.8	1.2	8.5	9.7
July	65.6	34.4	78.4	33.0	44.7	32.7	111.0	1.2	8.4	9.6
Aug.	65.2	34.8	79.3	33.1	45.6	32.5	111.7	1.2	8.4	9.6
Sept.	65.7	34.3	78.7	32.9	45.3	31.8	110.5	1.3	8.6	9.9
Oct.	65.8	34.2	78.9	32.9	45.5	32.0	110.9	1.2	8.5	9.7
Nov.	65.9	34.1	78.8	33.1	45.2	31.3	110.0	1.3	8.5	9.8
Dec.	66.2	33.8	80.3	34.9	45.4	29.3	110.1	1.5	8.6	10.1

Compiled from *Federal Reserve Bulletins*

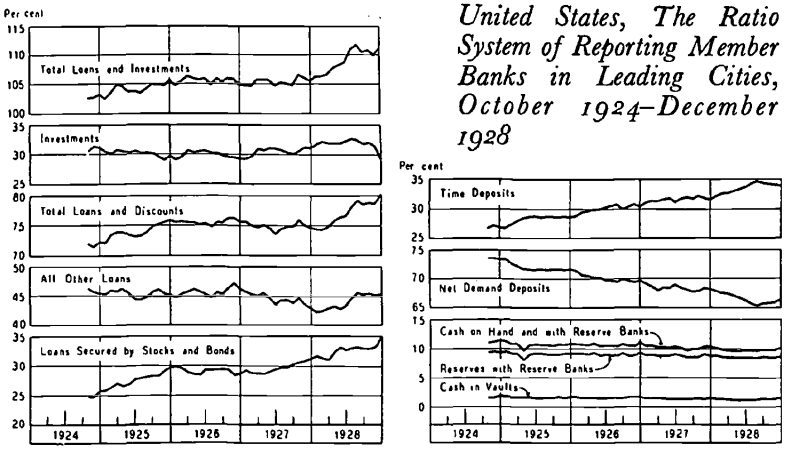
[1] Government deposits not included in total deposits.

securities,' however, makes it possible to indicate in the growth of the ratio 'loans on securities' to 'total deposits' the steady increase in the proportion of the secondary reserve to the deposits of the reporting member banks (Chart 36 and Table 44).

During the entire post-war period the American banking system was changing the proportionate distribution of its

CHART 36

United States, The Ratio System of Reporting Member Banks in Leading Cities, October 1924–December 1928



assets. It was not, as the British banking system was, working back to a traditionally established set of ratios (Charts 46 and 47). The Federal Reserve banks were, as a consequence, deprived of one of the prime essentials of effective credit control—a stable set of ratios of primary and secondary reserves to total deposits in the banking system. Their efforts to restrict credit met with failure. They were attempting to carry out a tug-of-war with an elastic rope.

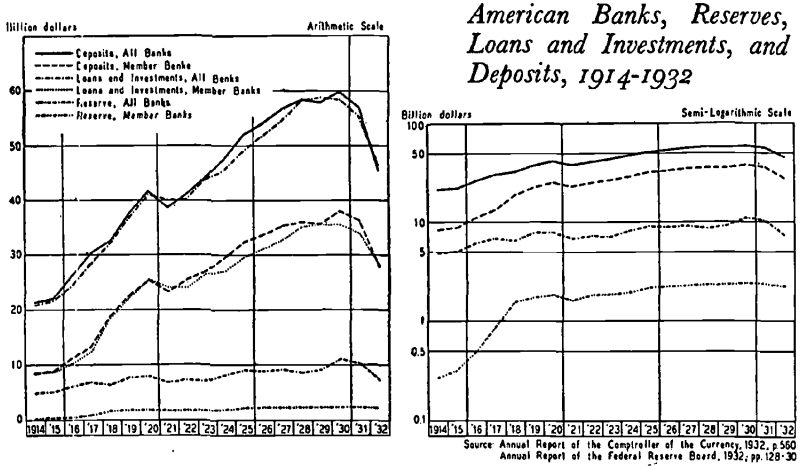
RATE OF GROWTH OF THE AMERICAN CREDIT SUPERSTRUCTURE

Despite the depressions of 1920, 1924, and 1927 and the periods of gold loss of 1925 and 1927 the American banking system was elastic in one direction alone. Bank deposits in June 1922 were, although there had been a decline in prices of 44

per cent, still at the level of June 1920, the peak of war and post-war inflation, and between 1922 and 1924 they were growing at an annual rate of 7.2 per cent.[21] The year 1924 stands at the peak of a bank credit expansion virtually unbroken since 1914 (Chart 37). The general return of other countries to gold did not halt this expansion. The period of benevolent neutrality as a guide to credit policy, April 1925

CHART 37

American Banks, Reserves, Loans and Investments, and Deposits, 1914-1932



to March 1927, during which loans and investments were increasing at an annual rate of 4.4 per cent and deposits at 3.9 per cent, represents merely an interlude between two periods of much more rapid growth, and even when there was a substantial check to the growth in deposits from December 1927 to June 1928, loans and investments were still increasing at a rapid rate (Table 45).

The One-Way American Banking System in its Relation to American Foreign Lending

The pressure for the employment of bank funds in America, which was the outstanding characteristic of American bank-

[21] Cf. Ch. 10, The Complete Cycle of Open Market Operations, June 30, 1922 to October 10, 1924.

TABLE 45

Rate of Growth of Loans and Investments and of Deposits of All Banks Reporting to the Comptroller, 1920-1928, selected intervals

	LOANS AND INVESTMENTS (adj.) ($000,000 omitted)	GROWTH DURING PERIOD (percentage)	ANNUAL RATE OF GROWTH (percentage)	DEPOSITS (adj.) ($000,000 omitted)	GROWTH DURING PERIOD (percentage)	ANNUAL RATE OF GROWTH (percentage)
June 30, 1920	41,435			38,006		
June 30, 1922 (24 months)	39,697	−4.2	−2.1	37,874	−0.4	−0.2
June 30, 1922	39,697			37,874		
Oct. 10, 1924 (27 months)	46,077	16.1	6.8	44,160	16.2	7.2
Oct. 10, 1924	46,077			44,160		
April 6, 1925 (6 months)	47,560	3.2	6.1	45,954	4	8.2
April 6, 1925	47,560			45,954		
March 23, 1927 (24 months)	52,114	9.6	4.4	49,802	8.4	3.9
March 23, 1927	52,114			49,802		
Dec. 31, 1927 (9 months)	55,165	5.8	8.1	52,909	6.2	8.1
Dec. 31, 1927	55,165			52,909		
June 27, 1928 (6 months)	56,726	2.8	5.5	53,398	0.9	1.8
June 30, 1920	41,435			38,006		
Oct. 10, 1924 (51 months)	46,077	11.2	2.5	44,160	16.2	3.6
Oct. 10, 1924	46,077			44,160		
June 27, 1928 (45 months)	56,716	23.1	5.7	53,398	20.9	5.2
March 23, 1927	52,114			49,802		
June 27, 1928 (16 months)	56,716	9.0	6.7	53,398	7.2	5.2

ing after 1924, coincided with a very strong demand for capital from other countries. This demand had three outstanding characteristics: it was in part (1) directly connected with the completion of the currency reforms discussed in Chapter 14; (2) a function of the destruction of working capital in Central Europe; (3) related to the economic development of the

less highly industrial areas of the world, particularly South America. These characteristics of the demand for capital were stamped upon the record of American foreign lending as soon as the feeling of confidence necessary to release the abundant supply of funds was established by the German and British return to gold. The supply steadily increased from October 1924 to June 1928 with the inflationary situation in American banking and the mushroom growth of the highly competitive, improvised institutional equipment of the American market for the placement of foreign loans, as may be clearly seen in the annual lists of American foreign investments compiled by Max Winkler and published by the Foreign Policy Association. These lists are comprehensive, and include refunding operations, large bank credits, and direct capital investments. In Table 46 the items given by Dr. Winkler for 1923–28 are distributed by major geographical areas, divided into groups affording a convenient basis for tracing the major changes in the direction of the American capital export.

An examination of the individual items included in these totals reveals the relatively great importance in 1924 and 1925 of loans and credits connected with currency stabilization operations and their progressive decline thereafter, the rise in importance in 1925 and 1926 of provincial state and municipal borrowing and the later very vigorous growth of corporate borrowing and direct investment of capital, and finally the growing element of general investment abroad through investment trusts and similar types of financial organization. The progressive pushing of American capital more and more into capital-poor regions and regions of rich but relatively undeveloped natural resources, and the appearance of progressively poorer credit risks among the borrowers reveal the pressure of competitive lending by a new creditor country with superabundant deposits and an inflationary psychology.

In Table 46 the investments and credits placed in Great Britain and Canada are eliminated from the totals in order to

TABLE 46

Geographical Distribution of American Foreign Investments Refunding included, 1923-1928 (millions of dollars)

	1923	*1924*	*1925*	*1926*	*1927*	*1928*
Total Europe	126	673	1,334	730	838	1,028
United Kingdom		1	329	3	31	115
Former European Neutrals	75	202	262	122	172	248
France, Italy, and Belgium	11	248	298	107	123	142
Germany		176	308	414	313	422
Other Central Europe	40	46	137	84	199	101
Total South and Central America	131	263	358	630	625	638
South America	62	221		506	506	578
Central America	69	42		124	119	60
Canada	160	371	432	504	490	359
Total Oceania	70	187	157	36	155	148
Japan	20	187	67	30	32	91
Australia			90	6	98	57
Dutch East Indies	50				25	
All Other	56	95	201	135	203	208
Grand Total	543	1,589	2,482	2,035	2,311	2,481
Total, excl. the United Kingdom and Canada	383	1,217	1,711	1,528	1,791	1,907
PERCENTAGES OF THE GRAND TOTAL EXCLUDING THE UNITED KINGDOM AND CANADA						
Former European Neutrals	19.6	16.5	15.2	8.0	9.6	13.0
France, Italy, and Belgium	2.9	20.4	17.3	7.0	6.9	7.4
Germany		14.5	17.9	27.1	17.5	22.1
Other Central Europe	10.4	3.8	7.9	5.5	11.1	5.3
South America	16.1	18.1	20.8	33.1	28.2	30.3
Central America	18.1	3.5		8.1	6.6	3.2
Japan	5.2	15.4	3.8	2.0	1.8	4.8
Australia			5.2	.4	5.5	3.0
Dutch East Indies	13.1				1.4	
All Other	14.6	7.8	11.9	8.8	11.4	10.9
	100.0	100.0	100.0	100.0	100.0	100.0
Germany plus Other Central Europe	10.4	18.3	25.8	32.6	18.6	27.4
South and Central America	34.2	21.6	20.8	41.2	34.8	33.5
Central Europe plus South and Central America	44.6	39.9	46.6	73.8	53.4	60.9

Compiled from lists published by Max Winkler in *Foreign Policy Information Service*, Vol. III, IV, and V, Special Supplements

remove the effects of the single great credit operation in connection with the British return to gold and of the steady Canadian borrowing. The capital exports to other groups are expressed as percentages of the remaining total. In order to bring out more clearly certain aspects of the geographical concentration of capital exports the percentages for Germany and Central Europe and for South and Central America are given separately.

Concentration of Liabilities in New York

The promotion and sale of this great volume of foreign loans was in large measure due to the employment of the abundant lending power of the American one-way banking system in the securities markets. The rising and active markets of this period did not, on this account, as was often supposed, deprive industry and trade of needed funds, or indeed, except for the increases in working balances needed to operate them, 'absorb' bank credit at all. They did, however, cause a steady decline in the relative importance of the commercial loan as compared to the loan on securities and in the investments of American banks. This was a genuine source of instability. Not only were the banks less closely in touch with the day to day operations of their commercial customers, as indicated in Chapter 10, but the value of their assets became subject to a wider range of fluctuation and hence, in time of stress, the forces tending to contract bank credit were likely to be more severe.

In addition, the growth in loans on securities, to which foreign lending contributed, enormously increased the concentration of liabilities in the New York market because it created a growing claim on bank deposits throughout the country that would be exercised as soon as brokers loans began to be called in and securities margins increased. The foreign lending also promoted an international concentration of liabilities in New York in the form of an extreme dependence of certain areas in the world upon new American loans to

meet their current international obligations. Both these forms of concentration of liabilities are, in themselves, appropriate to a large domestic and international capital market, but the inflationary setting in which New York became an international financial center developed them both to a dangerous degree.

The One-Way American Banking System in its Relation to the International Distribution of Gold

These dangers were not generally recognized, and for four years American loans supported the whole structure of the world's exchanges.[22] They helped to provide a general setting

TABLE 47

The Chief Gold Importing Countries other than the United States and the United Kingdom, 1925-1928

Net imports +, Net exports − (millions of dollars)

	1925	*1926*	*1927*	*1928*
Germany	+150	+135	+45	+218
France	+3	+2	−20	+254
Argentina	+8	+2	+84	+84
Brazil		+1	+43	+47
British India	+222	+85	+60	+77

SOURCE: 'Statistics of Gold Movements 1925-1930,' Table II, *Selected Documents on the Distribution of Gold* (submitted to the Gold Delegation of the Financial Committee, Geneva, League of Nations, 1931), p. 67

in which a gold redistribution program could be conceived and attempted, and therefore stamped upon the international distribution of gold from 1925 to 1928 a distinctive pattern. This was the satisfaction of the demand of certain major gold importing areas jointly by Great Britain, as distributor of the South African output, and by the United States as distributor of existing stocks. This division of the role of gold distributor was complicated by the drawing of gold from Great Britain

[22] Cf. Ch. 4, Loans in Support of the Foreign Exchanges in their Relation to International Clearance. It was not common for American lenders to stipulate that the proceeds of their loans should be spent in the United States; Young, *op. cit.*, p. 211.

to the United States in 1925 and 1927 when the underlying pull of the dollar over the world's exchanges was insufficiently offset.

The post-1925 pattern of international gold distribution may be represented simply in two short tables. The chief gold importing countries other than the United States and Great Britain from 1925 to 1928 are shown in Table 47. The relative importance of the contributions of the United States and Great Britain to the satisfaction of their demand is indicated in Table 48 A, in which the gold exports of the United States and Great Britain are grouped by major 'export areas,' as was done by T. E. Gregory in the League of Nations report on British gold movements in *Selected Documents of the Gold Delegation*. The sources from which the gold supplies of Great Britain and the United States were replenished in the face of this demand are indicated in Table 48 B. The place of the gold imports and exports from the areas included in these tables in the total gold trade of Great Britain and the United States and therefore the role of these two countries as gold distributors is shown in Table 48 C.

These tables illustrate perfectly the statistical difficulties encountered whenever the official statistics of different countries bearing on the same transactions are compared, but they clearly establish a pattern of international gold distribution. The sole important source for the replenishment of the British gold supply was the South African production. After the American gold shipments to Australia just before the British return to gold, Australian gold moved to the United States, and America also regularly received the surplus gold production of Canada as well as some shipments from Japan (cf. Ch. 14). The building up of the gold reserves of Germany was, until 1928, shared between Great Britain and the United States, but the gold taken by South American central banks in connection with currency stabilization was drawn mostly from the United States, and that taken by the central banks of the smaller European countries, from Great Britain. In-

dian demand was largely satisfied outside Great Britain and the United States as far as these statistics show, but probably a large portion of Indian gold imports was shipped directly from South Africa as a result of sales negotiated in the Lon-

TABLE 48

United Kingdom and United States as Gold Distributors

Net imports +, Net exports − (millions of dollars)

	1925	*1926*	*1927*	*1928*
A TRADE WITH EXPORT AREAS				
United Kingdom [1]				
France and Belgium	−3	−7	−4	−96
Germany and Holland	−23	−13	−20	−109
South America		−1	−5	
British India	−64	−12	−12	−10
Switzerland	−25	−4	−6	−13
The United States	−29	−1	−19	
United States [2]				
France	+5		+11	−308
Germany	−68	−47	−13	−28
South and Central America	−12	+39	−85	−101
British India	−58		−3	−1
B TRADE WITH IMPORT AREAS				
United Kingdom				
Africa (except Egypt)	+124	+167	+133	+153
Russia	+19	+7	−6	+18
Spain		−2	−7	+10
United States				
United Kingdom	+43	+1	+30	+5
Holland	+6		+7	−4
Canada	−12	+40	+34	+80
Japan	+11	+14	+20	
Australia	−27	+51	+22	
C SUMMARY BY TRADING AREAS AND TOTAL TRADE				
United Kingdom				
Net loss to export areas	−144	−38	−66	−288
Net gain from import areas	+143	+172	+119	+181
Balance with these two groups	−1	+134	+52	−47
Net balance with all countries	−40	+55	+21	−62
United States				
Net loss to export areas	−133	−8	−90	−438
Net gain from import areas	+21	+106	+113	+81
Balance with these two groups	−112	+108	+23	−357
Net balance with all countries	−34	+98	+6	−392

[1] T. E. Gregory, 'The Causes of Gold Movements into and out of Great Britain, 1925 to 1929,' *Selected Documents on the Distribution of Gold*, p. 30.

[2] Federal Reserve Board, *Annual Report, 1928*, pp. 88-9.

don market. After Great Britain returned to the gold standard America did not share the burden of meeting Indian demand. The diversion of the new French demand from Great Britain to America is clear, but even in the figures for 1928 the secondary effects of the American gold redistribution policy begin to appear in the substantial British exports of 1928 to Germany.[23] The simultaneous strengthening of the German exchange through German borrowing in America in the latter part of 1928 and the weakening of sterling through the general attraction of European funds to New York to share in the speculative activity stimulated in the easy money policy canceled in large part the advantages of the diversion of French demand for gold from London in 1927 (cf. Ch. 19, Bank Rate and the Defense of Sterling).

These secondary consequences of the American gold redistribution policy were a final chapter in the long and intricate history of the relations between America's one-way banking system and the international distribution of gold that has occupied a substantial part of our whole analysis of the war and post-war period. Our emphasis upon this relationship began with the discussion of the pull of America on the world's gold supplies early in the war before America became a belligerent. It was continued in the history of the American gold concentration policy during the war, and in the distinction made between the legal and the economic significance of gold reserves during the post-war boom. The whole subsequent history of gold accumulation in America from 1920 to 1924 and of the treatment of that gold in the American banking system illustrated the dangers inherent in clinging to the outward forms of an international institution no longer truly international. Only in the light of this history can the interrelations between the one-way American banking system and the international distribution of gold from 1925 to 1928, and especially the failure of the gold redistribution policy of 1927, be satisfactorily interpreted.

[23] Cf. Ch. 16, The Modification of the Principle of Gold Economy.

The Continental Background

Many of the special circumstances that attended the development of an international money market in New York may be considered either as exceptional aspects of the post-war readjustment or as institutional difficulties that could be overcome by learning from experience. There was always present, however, one important and permanent factor that must never be overlooked, namely that New York is the domestic money market for a continent. The economically diverse geographical areas of this continent require for the maintenance of an even and balancing flow of inward and outward payments two general types of service from central money markets. The first is clear and obvious—the provision of a continuous and flexible flow of short term credit to facilitate non-local settlements and to finance imports from other parts of America and abroad, and the provision of long term credit to supplement local capital accumulations when these are insufficient to develop local resources. The second type is not so obvious—the maintenance, free from violent interruption, of the purchasing power of customers in other parts of America and abroad through the rendering of similar services to the areas in which local products are marketed.

After the war New York assumed the major responsibility for rendering both types of service instead of sharing this responsibility with London.[24] In taking over much of London's share of the first type of central money market service, the New York market was simply enlarging its direct financial assistance to domestic clients. Its relation to the welfare of America was perfectly obvious to all parties concerned. In taking over, however, a share in London's financial services to foreign countries, American banks were assuming entirely new responsibilities. These were not felt to be as binding upon American banks as the responsibilities assumed toward

[24] Cf. Ch. 7, 'The Release of Forces leading to the Rise of an International Money Market in New York' and 'Sharing with London during the War,' and Ch. 11, The Competitive Position of London in World Finance.

domestic clients. They had been discharged for years outside the American banking system, and the resulting benefits to the American economy had long been accepted by American bankers without much thought or analysis. The new banker-customer relationships established with foreigners did not have the stability acquired by long experience and mutual confidence. The connection between individual business transactions with foreigners and the general welfare of the various economic areas in the United States and of the individual American clients of American banks was by no means always apparent. Though important, it was diffused. Consequently it was almost inevitable that whenever any conflict arose between the obligations of American banks to their established domestic clients and their new responsibilities to foreign clients, the former would predominate. The shift in the source of international credits from a market in which for generations international considerations had played a major role to one in which they were traditionally of minor importance involved, at least at the outset, a loss in the regularity and appropriateness with which such credits were extended. The mere size and diversity of the economic interests of the United States compelled this result.

J. G. Smith has attempted a rough statistical measure of the relative importance of the foreign and domestic flow of funds through the New York markets:

"The total ebb and flow of funds of the New York market due to foreign trade relationships during 1929 amounted to approximately $24 billion, whereas the ebb and flow of funds due to domestic economic relationships in that year amounted to at least ten times as much, or $262 billion. This is about the ratio of the domestic to the foreign trade of the United States." [25]

In a world economy in which the general flow of goods and services, both interregional and international, had attained, by a slow process of adaptation, a certain approximate bal-

[25] Beckhart, *op. cit.*, II, 313. Professor Smith uses the term "foreign trade relationships" in its broadest sense, including goods, services, securities, and financial equilibrating operations.

ance, this circumstance would perhaps be of relatively small importance. Under such conditions the international movement of funds through the New York or any international money market would be in general harmony with the domestic flow of funds through that market. Neither would interfere with the other, and some element of both would enter into the balance of payments of any economic area, no matter how small, that had any part in both interregional and international trade. But since such economic conditions were not realized after the war, the minor role of international trade in the American economy became important in the functioning of New York as an international money market.

Under a wide variety of circumstances the New York banks might find that they were not acting as channels of remittance between the rest of the country and foreign countries. They might at times be accumulating cash and deposits from both, and at other times they might be losing to both. Under such circumstances a credit policy based primarily on international considerations might not be the same as one based primarily upon domestic considerations. A policy of credit restriction, for example, might seem to be imperatively called for to check an unequally rapid development of certain portions of the American economy, leading to a lack of balance in the distribution of domestic purchasing power at the same time that the position of the American balance of payments and of American foreign commerce might seem to require an opposite policy. A conflict of this sort arose in 1927, but its true nature was not understood, and long run domestic considerations did not prevail in the formulation of policy. As a result, the economic trends within the United States, which constituted America's special contribution to the causes of the approaching world economic depression, were accentuated.

After 1927 American prosperity exhibited certain peculiar traits which may be summarized briefly.

1) The Prosperity of Industry. Manufacturing production in-

creased steadily from November 1927 to June 1929, but not until the spring of 1929 in an extraordinary degree. This increase was very unevenly spread over different industries. Production of iron and steel was at a record level owing to the activity of the automobile, the machinery, and railway equipment industries. The machinery and electrical equipment industries were active in response to export demand, and there was record production in the new rayon industry. On the other hand, while textiles, both wool and cotton, and boots and shoes were active, none of these industries was in a really satisfactory position. Resources were diverted on a great scale into certain lines in which mass production was highly developed. In these lines a technological revolution was taking place that was producing technological unemployment impossible for new industries, such as hotels and gas stations, to absorb. The development of mass production industries was greatly stimulated by cheap and abundant capital. Furthermore, the demand for a substantial portion of the increased manufacturing output was dependent upon exports, indirectly made possible by foreign lending and by credit extended to finance installment sales. America was not, in an economic sense, receiving payment for a large part of its manufacturing output.

2) The Prosperity of the Extractive Industries. Copper production was at record levels, largely reflecting the development of the electric power industry, but in the spring of 1929 this resulted in a record accumulation of stocks. Record production of petroleum also resulted in a record accumulation of stocks. Coal mining, however, continued to be depressed.

3) The Condition of Agriculture. Throughout the period of prosperity the position of agriculture was unsatisfactory. The value of agricultural crops increased from 1928 to 1929 only 1.5 per cent. The increases were in hay, potatoes, fruits, vegetables, and sugar, but the value of the cotton and grain crops, in which acreage was being increased without regard to world forces of supply and demand, was decreasing.

4) The Prosperity of the Building Industry. For eight years after the war demand for the products of American heavy industry and many of the extractive occupations and light industry was stimulated by a building boom. Under the stimulus of cheap and abundant capital this had by 1928 more than made up the deficit in war-time construction and satisfied the demand created by a continuous drain of population from the farms to industrial and urban centers. In 1928 the boom began to peter out and between 1928 and 1929 building contracts awarded fell nearly a billion dollars.

For years the American economy had been allowed to expand without regard to the true possibilities of its markets or the production of other countries. For years this expansion had been concentrated largely in a relatively few lines of production, and the prosperity of the country as a whole had been predominantly urban and manufacturing while agriculture was relatively depressed. Finally, for years credit had been allowed to expand more rapidly than production and trade. If in 1927 these trends had been checked and the economic adjustments, so painfully accomplished during the world depression of the 'thirties, had been then forced upon America, the prosperity phase of the international business cycle of 1920–29 would have been shorter but the trough of the world economic depression, in all probability, would not have been so deep. The facade of the international gold standard would probably not have been completed, the crisis in German reparation would have been advanced four or five years, the false confidence introduced by the return to gold would have been temporarily shattered, and Great Britain would have had to face realistically the internal problems of a readjustment of her industry to her new international position. The long run benefits would, in the light of subsequent history, have been very great, but the price would have been great too. Even if the financial statesmen of 1927 could have had a clear vision of the future, it is doubtful if they would

have been allowed to pay that price. From a world point of view 1927 was a turning point, but that fact only became clear long after the critical decisions had been made.

The continuation of urban and manufacturing prosperity in America in 1927 obscured one further set of potential problems arising from the growth of a powerful international money market in New York. Because America is a continent, New York is the center of a great domestic gold standard system, in addition to being a central market in an international gold standard system. It is subject to certain obligations toward the domestic part of the total gold standard area of which it is the center that it does not have toward the foreign part. For example, the forces that affect the international prices of basic raw materials operate upon certain sections of the American economy as they do upon countries whose economy is built largely around the production of certain raw materials. In the international gold standard system of prewar days the traditional remedy for economic depressions bearing heavily upon countries producing primary raw materials was for those countries to be tided over by credits from central money markets or, if these were not adequate, to abandon their membership in the gold standard system temporarily.[26] But it is not possible for Kansas to go off the gold standard while the United States remains on it. The banking

[26] H. E. Peters concludes his monograph, *The Foreign Debt of the Argentine Republic,* in the following words:

"It is difficult to see how the existence of even an ideal banking system would have greatly helped the Argentine nation during the past ten years. Possibly the government finances would have been forced to a higher plane by a severance of connections with the state bank; private institutions might have been placed in a stronger position requiring smaller reserves for safety. But the decline of agricultural prices could not have been affected in any way, since the Argentine must remain purely passive in its relation with world price levels. More than likely the central bank, had it existed from 1928 to the present, would have made vigorous efforts to keep the peso at par with the gold currencies. In the writer's opinion, this would have had much more disastrous effects than the policy actually followed. That Argentina suffered so little from the world depression, in spite of the fact that the country produces those com-

systems of parts of the United States, when subject to the same kind of drain upon reserves experienced by outlying countries in the international gold standard system, cannot be relieved by suspending gold payments and allowing their exchange rates to fall, while continuing to provide the essential banking services at home. A general deterioration, possibly ending in a general suspension in their banking systems, can be avoided only by drawing upon advances from the central money market in some form. There is, therefore, an overriding responsibility upon the New York money market to meet this type of domestic need or to take steps to prevent the development of such a need, though these may involve the adoption of credit policies contrary to those required by the other responsibilities of New York as an international money market. There can be little doubt that if the territories of Argentina and of Australia had been geographically contiguous to, and politically part of, England, the history of London as the center of the world's international financial machinery before the war would have been different.

Conflicts between its international responsibilities and the passing requirements of situations of mainly domestic origin are always present in any international money market. They have been stressed at this point because the continental background of the New York money market inevitably increased the importance and frequency of such conflicts. This circumstance permanently adds to the number of the problems involved in the decentralization of the world's international credit system. It accounts in part for the fundamental doubt entertained in other countries concerning the continued availability of credit facilities in New York of the type that could be relied upon in London before the war.

modities whose values were most seriously affected by price declines, must be at least in part attributed to the behavior of the peso. Inelastic, rigid, uncontrolled, and subject to numerous other theoretical objections, the peso has sustained an extraordinarily constant level of prices. This is probably the greatest single advantage that a currency can possess."

The Capacity of New York to be an International Money Market, Summary

The great strength of the London market before the war lay in its possession of the capacity to perform the two primary functions of an international money market—to be a market place for the conclusion of international transactions and to extend credit, and therefore to perform the derivative functions of such a market—to provide the means for temporary employment of international funds and to serve as a customary channel of international remittance. The performance of each international money market function forwards the performance of the others and when they have been rendered for a long period by a given center an immense institutional momentum tends to perpetuate the rendering of these services by that center even when its capacity to do so is impaired. The fact that New York was second in the field had a bearing on all its efforts to make itself into an international money market of the first rank. New York was not able to and in the nature of things could not attain the completeness of the London market. At most it could share the field in very unequal degree in the various departments of international financial activity, and at the cost of the technical disadvantages inherent in a decentralization of international clearance.

The special circumstances that have been passed in review contributed to the unequal development of the various elements of capacity of the New York money market to be an international money market. These various elements of capacity may be summarized and commented upon as follows:

1) The possession of a volume of savings and banking resources sufficient to carry out time-bridging credit operations of an international character;

2) The possession of banking facilities adequate for the proper administration of a revolving fund of deposits for financing international transactions.

These first and most obvious requirements of an interna-

tional money market were adequately met by the New York market. They were indeed present in excess, for New York as a great international money market was born and developed in an inflationary setting.

3) The possession of a geographical location and the technical equipment necessary to provide international markets in commodities, and in various types of service, such as ship chartering, and in securities;
4) The possession of a favorable balance of payments in goods, services, and current payments arising from past international indebtedness.

These two elements of capacity are fundamental. The first is responsible for the breadth of the international relations of the market. The second is the foundation of its power to extend international credits without imperiling its own exchanges, often referred to above by such terms as 'strong underlying position' or 'the possession of a basic pull over the exchanges.' The international money market in New York was created under circumstances in which the first of these elements of capacity was only partly exploited and developed. The second was present throughout, but after 1922, an unusual and complicating factor was also present—a large and continuous import of capital into the United States as a result of private investment and private dealings in securities other than new foreign issues.

5) The possession of the power to attract the resources of others for employment in the performance of part of these international functions through the creation and maintenance of markets for attractive short term instruments of investment;
6) The possession of the technical equipment and ability necessary to harmonize the size and flow of balancing financial items in the total balance of payments with the essential need for them.

These two elements of capacity we have referred to at times as the surface pull of the money market over the exchanges. The power of an international money market to alter the flow of funds internationally by reducing the current creation

of present deposits and future claims, while allowing past claims to accumulate, is dependent upon the responsiveness of the amount of foreign and domestic funds employed in international financial transactions in the market to changes in interest rates or other forms of control. The exercise of this control in a manner contributing to international financial stability, moreover, involves the resolution, in some manner, of conflicts arising between internal domestic credit requirements and the special international responsibilities assumed by the market. In both these respects the circumstances under which New York became an international money market were unfortunate. The competitive relations between the New York and London short term credit markets complicated one aspect of the problem and the continental background of the New York money market complicated the other. The new and untried nature of the financial instruments and techniques developed in New York for carrying out its international responsibilities complicated them both.

7) The possession of the confidence of the whole international trading and financial world.

During the period when the international money market in New York was being created America enjoyed the immense prestige of being the only country on the gold standard. Moreover, America had great credit resources and enormous real wealth. Together with an earnest desire on the part of the New York market to assume international financial responsibilities, these factors contributed to the creation of confidence. But this confidence did not extend in all respects to the banking practices and techniques developed in the New York market. There was always an element of doubt as to the solidity of the new international banker-customer relationships established in New York—an element of doubt that could be eliminated only by long years of successful experience in their administration.

All these elements of capacity are mutually dependent and

intricately interrelated. Together they contribute to a final element of capacity.

8) The possession for a broad foreign exchange market with many countries that can provide a general instrument of international clearance and an habitual channel of international remittance.

The continued use of the sterling-dollar exchange as the 'trunk-line' rate for the Empire and the continent of Europe and even for certain other countries, notably Japan, China, and Argentina, in their dealings in New York was evidence of the failure of the New York market to develop this characteristic of a central international money market. Consequently, the impact of all the elements of international instability arising from the sum total of the international transactions of the United States was instantly and directly felt in London.

CHAPTER 19

The Experiment of Defending Sterling

In the thirty-five years from 1880 to 1914 sterling was on an average below par in New York in only ten, and above par in twenty-five. In the twenty-seven years from 1888 to 1914, the average annual rate was below par only four times. In striking contrast, the only year between 1925 and 1931 in which the annual average rate was above par was 1928, when it was 4.8666 (Table 49). From the moment of the return to gold,

TABLE 49

Sterling-Dollar Exchange, 1880-1914 and 1925-1931
Annual Average Rates

1880	**4.8490**	1890	4.8703	1900	4.8717	1910	4.8676	**1925**	**4.8310**
1881	4.8460	1891	4.8677	1901	4.8786	1911	4.8660	**1926**	**4.8589**
1882	4.8757	1892	4.8777	1902	4.8764	1912	4.8701	**1927**	**4.8616**
1883	**4.8543**	1893	4.8704	1903	4.8682	1913	4.8678	1928	4.8666
1884	4.8590	1894	4.8819	1904	4.8717	1914	4.8844	**1929**	**4.8568**
1885	4.8597	1895	4.8944	**1905**	**4.8663**			**1930**	**4.8625**
1886	4.8682	1896	4.8774	**1906**	**4.8573**			**1931**	**4.5176**
1887	**4.8617**	1897	4.8673	1907	4.8667				
1888	4.8826	**1898**	**4.8536**	1908	4.8684				
1889	4.8811	1899	4.8715	1909	4.8759				

The pre-war figures were compiled by A. G. Silverman from the National Monetary Commission reports and other sources; the post-war figures were compiled from *The Economist;* cf. Table 57.

the Bank of England was continually resisting a tendency to lose gold,[1] though Great Britain was still the greatest creditor country in the world and the British international banking system was still without a peer. In the examination of the operation of the gold bullion standard in Great Britain after 1925, there are therefore three threads to be followed—the

[1] Committee on Finance and Industry (Macmillan Committee), Report (1931), Cmd. 3897, p. 70.

causes of this pressure on sterling, the techniques by which it was combated, and the progress made toward its elimination.

The Weakening of Great Britain's Basic Pull over the Exchanges

Aside from the war-time reduction in British overseas investments, two major groups of causes contributed to the underlying weakness of sterling—those growing out of the imperfect adaptation of Great Britain to new competitive conditions and those directly connected with the restoration of the international gold standard system.

The Phenomenon of 'Unsheltered' Trades

After the return to gold in 1925 British trade and industry were by no means uniformly inactive or unprofitable.[2] Professor Bowley's index of earnings showed a fall of only about 1 per cent from December 1924 to December 1929 in comparison with a fall of about 8 per cent in the cost of living, indicating that real wages for those employed were rising. Production also was increasing, but relatively to the rest of the world British industry was depressed and the number of unemployed remained steady at about a million.[3] This persistent unemployment was very unevenly distributed among the various sectors of the British economy and was highly concentrated in the chief export industries,[4] which had become known as the 'unsheltered' trades.

INFLUENCE OF LONG RUN TRENDS

The difficulties of the 'unsheltered' trades which had come rapidly to the forefront of discussion after July 1924[5] were from 1925 to 1931 both chronic and acute. In Chapter 11 we

[2] *Ibid.*, Lord Bradbury's Minute of Dissent, p. 277. [3] *Ibid.*, p. 47.

[4] It had begun after the war in the munitions industries, and by the time of the Macmillan investigations, had spread to building, public works, and road transport. Memorandum of Henry Clay, *Minutes of Evidence* (Macmillan Committee), II, 253.

[5] Cf. Ch. 10, A New Starting Point for the British Return to Gold.

have indicated the attitude taken by the Balfour Report toward this old [6] problem in the greatly accentuated form it assumed after the war but before the return to gold. The relatively optimistic conclusion of that report with respect to the future of British trade was based upon three postulates which may be briefly repeated:

1) In an international trade based upon quality Great Britain is in a strong competitive position;

2) The growth of new industry creates new wants and therefore new trade;

3) Great Britain is a tremendous consuming market of the products of other countries and, therefore, is in a peculiarly advantageous position for receiving her share of exports.

In 1925 British industry had not yet adjusted itself sufficiently to take advantage of the first of these circumstances. The long run effects of the second, also involving great readjustments in British industry, had not had time to work themselves out, and not until after the second breakdown of the gold standard was full advantage taken of the third.[7] The hopes of the Balfour Committee were therefore disappointed. British industry was very slow to recognize its new position and to adapt itself to the long run economic trends described in Chapter 7. As late as 1930 Professor Clay was able to write in the Memorandum already referred to (p. 253):

". . . [the war] rendered profit-making easy, and so deterred industry from making the normal and necessary adjustment to the continuous technical, commercial and competitive change that would have gone on even if there had been no war; with the result that, when the post-War boom ended, there was six years' adjustment to be made all at once. In the case of the coal and heavy industries, the necessity of this adjustment was further de-

[6] The historical origins of the difficulties of British 'unsheltered' trades go back to fundamental changes in world trade in the 1870's. Cf. L. H. Jenks, *The Migration of British Capital to 1875* (Knopf, 1927), pp. 327–31.

[7] The third circumstance was, of course, extremely important in the formation of the sterling area. It was, however, not specifically taken advantage of until the conclusion of the Ottawa Agreements and the other bilateral trade agreements after the breakdown of 1931. Cf. Ch. 31, Cultivating England's Garden.

ferred by the misfortunes of Germany until 1924 or 1925. It may be doubted whether even now all the industries that are faced with an entirely new situation compared with pre-War realize the need of reorganization to meet it.

Among the changes to which adjustment of this kind is necessary, and has been delayed, are the decline in birth-rate all over the world, slowing down of rate of growth of industries supplying necessaries; the shift of expenditure from necessaries to luxuries, helped by the reduction in the size of families; the decline of saving; fuel economy affecting the coal industry; disarmament affecting heavy steel and ship-building."

ACCELERATION OF TECHNOLOGICAL ADVANCE, ESPECIALLY IN THE UNITED STATES, AFTER 1925

One reason for the urgency of radical measures of reorganization in the British export industries was the failure of Great Britain to keep fully abreast of technological advances continuously taking place in competing countries, particularly in the United States after 1925. Both W. W. Stewart and O. M. W. Sprague, who in turn served as economic advisers to the Bank of England, tried to impress upon the Macmillan Committee the view that since the difficulties of the export industries were the result of their failure to reduce costs and redistribute labor and capital in the new proportions required, they could not be cured by any monetary means. Professor Sprague even went so far as to say that if the economic remedy was not applied the country would suffer decline or revolution.[8]

THE RETURN OF THE RUHR TO PRODUCTION

The unsheltered trades of Great Britain had enjoyed during the Restoration period one temporary respite of major importance—reduced German competition because of the disorganization of production in the Ruhr—but this ended with the stabilization of the mark and the beginnings of the flow

[8] *Minutes of Evidence* (Macmillan Committee), II, 185–6, 309, especially answers to questions 7636, 7650, and 9286.

of foreign capital to Germany. The return of the Ruhr to production was the decisive factor in British unemployment in 1925, and would in any event have added to the difficulty of defending sterling, but it was the strike of 1926 that, by stimulating competing sources of supply, made Ruhr competition the dominating influence in British unemployment throughout the period of Experimentation.[9] Not only was the British coal strike important, as we have shown, in the Belgian and Italian stabilizations, and a primary factor in the history of the consolidation of the gold standard in Germany, but it weakened Great Britain's basic pull over the exchanges and undermined her position in the central nucleus of the gold standard world.

THE EFFORT TO FACE THE BASIC PROBLEM OF INDUSTRIAL RECONSTRUCTION

In addition to the causes suggested above, certain general conditions peculiar to the British economy contributed to relatively high costs of production. Among them were the additions to costs represented by the evolution of the unemployment insurance scheme into a relief scheme and the weight of taxation. These diminished the amount of profits added to reserve, which had been the chief source of British pre-war capital accumulation. Finally, the difficulty of reducing costs was greatly increased because money rates of wages were maintained though the cost of living was declining.

Countless examples of the failure of British costs to meet those of competitors may be cited.[10] Yet some progress was being made toward a basic readjustment. For an objective appraisal of that progress and of the road still to be traveled, one cannot do better than quote again from Professor Clay's Memorandum (pp. 254–6):

[9] Cf. *ibid.*, p. 185, especially answer to question 7635; cf. also Henry Clay, *loc cit.*

[10] E.g., those mentioned in Brown, *op. cit.*, pp. 247–8, in Mr. Bevin's evidence before the Macmillan Committee, and in J. M. Keynes, *The Economic Consequences of Mr. Churchill.*

"The 9 per cent of unemployment that persisted through all other changes from 1921 to 1929 I should attribute . . . to the dislocation by war of the adjustment of British industry to world demands, and to the delay in affecting a readjustment to the changed post-War demands. Much has been done—the demobilisation of the munitions industries; the big reduction in costs (other than by reduction of wage-rates) in coal, iron and steel, engineering and shipbuilding, and, to a less extent, in textiles; the development of a number of new industries, and the reorganisation of some old industries; the writing off of large amounts of indebtedness incurred during the boom or subsequently—but our dependence on external trade remains substantial, and our costs in competitive industries are still so high, compared with other countries, that we tend to be the marginal producer, the first to be squeezed out when anything affects demand. . . .

The dislocation from which British industry has suffered since 1920 is so much greater than any dislocation caused by trade fluctuation, as to differ almost in kind; but it can be cured only by the same kind of readjustments as brought about trade recovery before the War. The income-receivers who employ British industry have reduced their spending on its products, either because its prices are too high or because investment in its products does not offer an attractive enough return. Recovery can be effected only by getting its prices down, by reducing costs; or finding new outlets for the employment of labour, in which prices can be obtained which will cover the costs. The diversion of industry to new directions, however, takes time and initially would probably require lower wage standards; it could not be carried far enough to remove the specific post-war unemployment in less than a generation; and it involves the scrapping of the skill and capital specialised to the industries in which at present our prices are too high to permit full employment, and our costs too high to encourage investment."

Difficulties attributable to the Return to Gold Itself

These serious, non-monetary causes of pressure on sterling were aggravated after 1925 by several special difficulties arising from the long series of independent sovereign acts by

which the stabilization principles of the Brussels Conference of 1920 were finally put into effect.

THE OVERVALUATION OF THE POUND

In returning to gold on the basis of the old parity with the dollar Great Britain deliberately assumed the burdens entailed by an overvaluation of sterling against the dollar. The architects of the return to gold admitted that a certain readjustment of British prices downward would be required, but the official opinion was that this could be easily accomplished and that the burdens entailed would be small relative to the general advantages of the return to gold at the old rate. The subject is dealt with in the Report of the Committee on Currency and Bank of England Note Issues (sec. 20):

". . . the adjustment of price levels required to restore and maintain pre-war parity needs to be only some 11½ per cent larger than that required to hold the exchange at its present rate. If the adjustment of price levels necessary to attain this end is long deferred, the exchange will inevitably fall back to the rate justified by comparative price levels—or below it, since the psychological causes which have operated to force it up will tend to act in the other direction—and a period of fluctuating values is likely to ensue. To allow the exchange to fall back now, with the certainty of having later on to raise it again, would be a short-sighted policy injurious to trade and industry. But, if this view is accepted and we are prepared to face any price adjustment which may be necessary to maintain the present exchange rate, there is nothing to be said for refusing to accept the very small (1½ per cent) extra adjustment involved in the re-establishment of an effective gold standard."

It was the opinion of competent witnesses before the Macmillan Committee that in the main the adjustments required by this overvaluation were accomplished shortly after the return to gold. The following testimony of Walter Stewart before that Committee presents this view (questions 7614–19):

"Have you anything to say on the appropriateness of the time

and manner of the return to the gold standard in this country? —There is never a perfectly appropriate time for doing an inconvenient thing, but I do not feel that postponement would have reduced the difficulty of readjustment. 'The manner,' I take it, refers chiefly to the question of the parity on return?

Yes?—On that, I feel that this country had no real alternative. The degree to which sterling was below par in the years immediately preceding the return was not of sufficient magnitude to be a determining factor in the competitive position of British industry subsequent to the return. I say 'subsequent' because after the return to gold in this country the return of France and Belgium to gold at relatively very much lower rates of exchange meant that even if there had been, say, ten per cent devaluation in sterling most of the problems that have to do with money costs in industry in this country compared with industry in France and Belgium would have been very much the same.

So that in your view the sooner it was got over the better, so to speak?—It was a question not only of getting over, but of getting forward. The general return to gold, in which this country took the lead, by making the decision that it did in 1925, restored confidence and laid the basis for foreign investment and capital expenditure all over the world. It was not merely that prices in gold standard countries began to move in unison, but capital and enterprise were willing to go into countries where they never would have assumed the risk if there had not been a stable currency.

So the step has your approval?—Yes.

At the same time I suppose the readjustment consequent upon the return to the gold standard has been one of the difficulties with which we have been faced?—I quite agree. The extent of those difficulties depends upon the length of time, after the return to gold, during which the adjustments required by that particular change were made.

You think it has expired now?—I should think that by the end of 1925, so far as the effects of that particular adjustment are concerned, it had been completed."

In this testimony the important distinction is stressed between the overvaluation of the pound with reference to the

dollar and the subsequent difficulties arising from the French and Belgian stabilizations.

THE DEPRECIATION OF THE FRENCH AND BELGIAN FRANCS SUBSEQUENT TO THE BRITISH RETURN TO GOLD

In another part of the published evidence before the Macmillan Committee appears the following exchange between Governor Norman and Lord Macmillan concerning the appropriateness of the date chosen for the return to gold (questions 3353–63):

"Was that [i.e. the opinion that April 1925 was an appropriate time to return to gold] because the circumstances as they were then conceived were thought to render the change as little disturbing as possible?—As little disturbing as possible, and the fact that a decision at that moment had to be taken to go either to the right or to the left.

But were not the hopes that the change would be made with the least possible disturbance to a large extent falsified—in short, those who thought that the time was apposite and who prophesied that the change could be made with comparatively little disturbance were out in their calculations, because it turned out in the event that it did cause very considerable disturbance, either by itself or in association with those other causes. You see what I mean?—Yes.

It may be quite true that a person says now is the moment to do a thing, now is the most favourable moment, and that is, of course, a judgment proceeding upon a survey of the whole position. Those who came to that decision may have been wrong in their survey, or things may have occurred to falsify their prediction?—I should think it was true that some of the events which occurred in association with or subsequent to that change were unexpected in regard to time and extent, and have made the position of industry as you have described it more difficult than was foreseen. I have not the exact sequence of events very clearly in my mind; it was some years ago—but that is the impression I have.

That is how it appears to me following up Mr. Bevin's point, that if all had turned out as was expected, or shall I say, hoped,

the disturbance with which he and those associated with him were confronted would have been much less serious?—I agree.

But in consequence of the other causes that have conspired since that time to falsify that expectation the result has been, in fact, very serious?—Very serious for industry.

And if these circumstances which have supervened had been foreseen it may be that you would not have reverted to the gold standard at the time you did?—I will not say that.

That is, of course, speculation?—Yes.

Mr. Keynes: May we ask what those other circumstances were? —I think they were very largely France and Belgium—the stabilisation of France and Belgium.

Their return to the gold standard?—Yes, at certain levels. Germany, for that matter, too. As I remember it those were the principal questions.

You mean their stabilising their money at a low level rather than at a high level?—At a very low level.

Mr. Newbold: What do you think induced them to do that at a very low level while we did it at a high level?—I do not know. I think the levels they chose were largely fortuitous."

This colloquy has a double significance: it contains a recognition by the Bank of England of the serious consequences of an overvaluation of the pound and a strong implication that even had the subsequent history of the French and Belgian francs been foreseen, the date of the British return to gold and the choice of the old par would not have been altered. The foundations of that choice were far too deeply laid in the character of British banks and British bankers, and in the traditional policies of British government.[11]

MACMILLAN COMMITTEE SUMMARY

It is extremely difficult to measure the influence of the under- and overvaluation of currencies at the time of stabilization upon the subsequent course of events. There has been general

[11] Cf. Ch. 9, The Recognition and Measurement of the Problem by Great Britain. In another part of his testimony Governor Norman again stressed the importance of the expiry of the Gold and Silver (Export Control) Act of 1920.

agreement, however, that the difficulties that placed the Bank of England upon the defensive in maintaining sterling after 1925 were partly due to the initial overvaluation of sterling and to the stabilization of the reichsmark, the franc, and the belga at levels favorable to German, French, and Belgian export industries. The cautious statement of the Macmillan Committee on this point is probably as definite an appraisal as can be safely given:

"Great Britain established a gold-parity which meant that her existing level of sterling incomes and costs was relatively too high in terms of gold, so that, failing a downward adjustment, those of her industries which are subject to foreign competition were put at an artificial disadvantage. France and Belgium, on the other hand, somewhat later established a gold-parity which, pending an upward adjustment of their wages and other costs in terms of francs, gave an artificial advantage to their export industries. Other countries provide examples of an intermediate character. Thus the distribution of foreign trade, which would correspond to the relative efficiencies of different countries for different purposes, has been seriously disturbed from the equilibrium position corresponding to the normal relations between their costs in terms of gold. . . ." [12]

THE BRITISH ECONOMIC ADJUSTMENT TO THE RETURN TO GOLD

The price difficulties created by the choice of various levels of currency stabilization in the general process of returning to gold were only part of the explanation of the weakness of sterling from 1925 to 1931. Their relation to, and relative importance in comparison with, the more deep-seated difficulties of British export trade is clearly set forth in the testimony before the Macmillan Committee by Dr. Stewart (questions 7621–5 and 7633–5):

[12] *Report*, p. 106. The statement as here quoted is taken from its context where it forms a part of a general interpretation of the difficulties encountered in operating the gold standard after 1925. It is not given here as representative of the broad view of the Committee on the whole problem, but only to indicate their acceptance of the fact of relative under- and overvaluations of currencies as an element in weakening the position of Great Britain.

"Mr. Keynes: You think at the end of 1925 our wages were adjusted to the situation?—No; I think that with the movements of finance and of commodity prices, there had been adjustment by the end of 1925.

The prices of international commodities must make adjustment on the next day. One is really thinking of those commodities which are not the subject of international trade?—If one refers to the competitive level of money costs and local costs I should regard the further depreciation of the franc, both in France and Belgium, as a much more serious factor in affecting the competitive costs of industry in this country than the further appreciation of sterling which was necessary to bring the pound to par. When I refer to the end of 1925 I mean before the franc's further depreciation during 1926.

What had happened before the end of 1925 to make our adjustment complete? We had increased the value of our money, we had not by that date increased our efficiency or diminished our money costs?—You had brought the financial position into line with the financial position in other countries.

What do you mean by 'the financial position in other countries'?—The general balance of payments as affected by short money and long money.

But we had not brought costs into line?—No. I had not regarded that as being primarily a financial question. If the return of sterling to par was expected to bring about an entire readjustment of costs between the different countries, then the adjustment has not been completed.

Chairman: What have you to say in regard to the figure of 10 per cent that has been spoken of, as a measure, so to speak, of the readjustment?—I have no real basis for measuring the extent of adjustment required if both finance and industry are included. I quite agree with the statement made a moment ago, that the measure of the full problem was the measure of your relative money costs. The adjustment to the return to gold that appeared to be necessary then, because the dollar was the only gold currency, was an adjustment to the American situation. Subsequent adjustments, which became more difficult, were adjustments to the Continent. There were factors which obscured the real problem at the time. The occupation of the Ruhr in 1923–24, which

put the German economic machine out of action, gave an appearance of industrial strength to this country which was really artificial. The subsequent depreciation of the franc in 1926 gave sterling an appearance of financial strength at that time which was really artificial. That, I think, obscured the reality of the competitive position, and made it appear that all that was necessary was to adjust to the American position. I think it was not possible at that time to have foreseen the extent to which the French franc would fall.

So, if one is judging the wisdom and propriety of the return to the gold standard as and when it took place it scarcely seems fair to form a judgment in the light of what has happened since?—I agree.

Mr. Keynes: Your argument is that the position was really worse than it looked? That is to say, that we were not in 1925 as strong as we seemed to be, that the events in the Ruhr strengthened us. Therefore, this burden of 10 per cent was not on top of a good situation but on top of a situation which was worse than people thought it was?—It was worse than it looked to most publicists at the time, and they therefore ascribed the subsequent difficulties to the return to gold rather than to the return of the Ruhr to production. In other words, I believe there would have been a coal stoppage in this country in 1926 whether you had returned to gold or not. It was the return of the Ruhr to production which was the decisive factor in 1925. In 1925 most of the increased unemployment in this country was in the coal industry. There would have been an increase in unemployment, and you would have had a coal problem, whether you had returned to gold or not. Further, when you speak of the situation having been worse than was anticipated, I think it would have become increasingly worse if you had not returned to gold in 1925."

British Capital Exports and the Amount Available for Investment Overseas

The Relation of Capital Export to Goods Export

Because of this situation the placing of new foreign capital issues in London after 1925 did not have the effect of stimulating British trade to the extent that was true before the war.

Great Britain was no longer the cheapest or most convenient market in which to spend the proceeds of British foreign loans. In Chapter 12 we noted that this lack of direct connection between capital export and goods export had raised the question of over-lending from 1922 to 1924, and had led to the imposition of the embargo on new issues for foreign countries, and the partial embargo on colonial issues, the effects of which were shown in Table 32. In November 1925 this embargo was lifted, but the dilemma that had led to its imposition remained. The position of the export trades required all the stimulation that could be drawn from foreign loans, but the loss of direct connection between new lending and new export orders made that lending dangerous from a balance of payments point of view. A powerful sanction therefore existed for insisting upon the spending of the proceeds of British loans at home. Other pressures, however, worked against this tendency. The general interest of Great Britain in completing the process of post-war currency stabilization and general reconstruction was still strong and her response to the demand for cooperation in that process through loans was still to be depended on. The City, moreover, was directly interested in maintaining its position as the world's banker against the increasing competition of Wall Street and was also subject to the general financial factors that always lead to new loans in a period of optimism.

New British Foreign Lending, 1925–1929

In the last two months of 1925 new issues for foreign countries reappeared in the London market, especially Italian and German industrial issues, and some Argentine loans. In 1926 foreign government issues again began to be placed, and Empire borrowing again reached the levels of the Restoration period. In spite of internal industrial trouble and an unprecedented adverse merchandise trade balance, overseas lending began in 1926 to approach that of 1922–24. It increased throughout 1927, 1928, and the first four months of 1929 but without any

very close correlation with the changes in industrial conditions at home. British industry was becoming less able to carry on the old traditions of self-financing and a demand was growing for a better organization of the new issues market to meet the needs of domestic borrowers. Before the war four-fifths of the new issues in London were for overseas purposes, but after 1925 overseas issues were only about two-fifths of the total according to figures published by the Midland Bank. While

Percentage of Overseas to Home Applications for New Capital in the United Kingdom [13]

1919	21.0	1922	57.4	1925	39.9
1920	15.5	1923	66.8	1926	44.4
1921	53.6	1924	60.0	1927	44.1
				1928	39.5

New York was hastily improvising a new market for foreign issues, London was failing [14] to adapt itself to a relative decline in the importance of its foreign issue business. At no time during these years did Great Britain approach her pre-

TABLE 50

New Foreign Capital Applications in London 1925-1928 (millions of pounds)

	1925	*1926*	*1927*	*1928*
Total Overseas	87.8	112.4	138.7	143.3
British Commonwealth	57.5	52.0	87.7	86.1
India and Ceylon	3.4	2.1	1.4	7.7
Australia and New Zealand	25.5	31.5	41.0	34.7
Canada and Newfoundland	2.0	6.0	7.0	20.0
Africa	15.0	6.5	28.0	16.5
Asia other than India or Ceylon	11.0	5.0	5.0	4.3
Foreign Countries	30.4	60.4	50.9	57.3
Europe	11.0	24.8	21.5	33.8
South America	14.0	26.5	26.0	19.8
Other	5.4	9.1	3.4	3.6
Germany		6.0	7.0	8.3

SOURCE: Midland Bank, *Monthly Review*, Dec. 1928–Jan. 1929, pp. 7-8; Dec. 1926–Jan. 1927, pp. 3-4

[13] Midland Bank, *Monthly Review*, February–March 1929, p. 6.

[14] Cf. Macmillan Report, pp. 161 ff.

war status as a provider of capital for employment overseas.[15] The annual totals of new foreign capital applications in London and their geographical distribution for 1925–28 (Table 50) are in striking contrast to the corresponding figures for the United States. The role of the two countries as international lenders may be roughly compared by placing the Midland Bank figures by the side of those of the *Commercial and Financial Chronicle* for the United States, though because of the exclusion of offers of vendors' shares and short term anticipatory borrowings from the Midland Bank figures, this may somewhat underestimate the British share.

New Foreign Lending exclusive of Refunding [16] *(millions of dollars)*

	1925	*1926*	*1927*	*1928*
British	406	546	673	696
American	1,086	1,145	1,561	1,348
British as a percentage of American	36.4	47.7	43.1	52.4

Great Britain's participation in the great mass of long term European and South American lending following the return to gold was relatively small. Of the British total for the four years 58.8 per cent went to the Empire, and of this Australia took 46.6 per cent. The very moderate amount of long term loans to Germany and the relative importance of stabilization loans, such as those to Belgium and Poland in 1926, were notable features of British capital export to Europe. Throughout the period Argentina and Brazil continued to be steady borrowers, but British lending to South America showed no such rising trend as that of the United States (Table 46).

Steadiness and moderation seem to be the characteristics of British long term foreign lending when compared with American foreign lending, but not when it is considered in relation to the amount available for investment overseas.

[15] Midland Bank, *Monthly Review,* December 1926–January 1927, p. 4.

[16] The American figures (*Commercial and Financial Chronicle,* Vol. 128, Part 1, p. 316) are, of course, much smaller than the all-inclusive figures based on Dr. Winkler's lists used for another purpose in Ch. 18, The One-Way American Banking System in its Relation to American Foreign Lending (Table 46).

The Amount available for Investment Overseas

The outstanding features of the Board of Trade estimates of the British balance of international payments from 1925 to 1929 were the heavy excess of imports over exports of goods, and the small margin available for foreign lending. That a fundamental change as compared to pre-war conditions had taken place in the merchandise items is shown by the figures for volume, rather than value. According to the Midland Bank the volume of imports in 1925 was 111.5 per cent of 1913, and of exports only 76.0 per cent of 1913. In value, imports of both raw materials and manufactured goods increased heavily in 1925. The import of meat and manufactured iron products increased notably. The latter item, in conjunction with a decline in coal and iron and steel exports, provided a measure of the difficulties of the unsheltered trades in the year of the return to gold.[17]

During 1925 the statement was often made in England that the country must actually be living on its capital, because the current invisible credits were not fully offsetting the net merchandise debit, but subsequent revisions of the Board of Trade estimates disclosed £54 million available for investment abroad. In 1926 the preliminary figures again seemed to justify similar statements. That year was dominated by the coal and general strikes. For the first time England imported coal, to the extent of £43 million, and exported £34 million less than in 1925. Total imports fell £80 million but total exports fell £150 million. In the final estimates a record adverse merchandise balance of £477 million seemed to be fully covered by current invisible credits, but only a nominal amount, £9 million, was left over for overseas investment. In 1927 the consequences of industrial disputes were still being felt. Although imports fell and exports rose the surplus of imports was still unusually heavy, £388 million. Some improvement in shipping income and a continued return from foreign invest-

[17] Midland Bank, *Monthly Review*, January–February 1926, p. 6.

ments at a higher level than in 1925, together with the reduction in the merchandise adverse balance, however, combined to give a surplus available for investment overseas of £114 million. The trends in the merchandise trade of 1927 continued in 1928 and in spite of a slight drop in invisible items, the surplus for foreign investment reached £137 million (revised figure, £149 million). Nevertheless, this was still far below pre-war. In 1929 the current items in the British balance of payments changed only slightly, and the surplus available for investment overseas was approximately at the level of the preceding year.

Statistical Evidence of British Over-lending

The Midland Bank figures of new overseas lending regularly exceeded the Board of Trade figures of the amount available for investment overseas from 1924 to 1928. These two estimates were published by the Macmillan Committee in Appendix IV of its Report in such a way as to bring out the contrast very clearly, though not as part of a single table in which the new foreign lending is a balancing item. In the Board of Trade figures the excess of imports of merchandise and bullion is set over against net government receipts from overseas, national shipping income, income from overseas investments, receipts from short interest and commissions and other sources. The net credit balance resulting is compared with the figures for new foreign loans (millions of pounds) in the accompanying table.

	CREDIT BALANCE ON OTHER BALANCE OF PAYMENTS ITEMS	NEW FOREIGN LOANS		CREDIT BALANCE ON OTHER BALANCE OF PAYMENTS ITEMS	NEW FOREIGN LOANS
1924	86	134	1927	114	139
1925	54	88	1928	137	143
1926	9	112	1929	138	94
			1930	39	109

These estimates have frequently been quoted together as direct evidence of over-lending.[18] Though far from conclusive,

[18] E.g., by H. E. Fraser, *Great Britain and the Gold Standard* (London, Macmillan, 1933), pp. 107–8.

they undoubtedly show that the weakness of Great Britain's basic pull over the exchanges, combined with her effort to maintain her position as an international lender from 1925 to 1928, made the attraction of foreign balances and the sale of securities to foreigners of the greatest importance in maintaining her position as a gold standard country. The problems raised by this situation cannot be satisfactorily dealt with except in the light of the new techniques employed by the London money market in exercising its surface pull over the exchanges.

Changes in Money Market Technique

The gold standard was defended after 1925 by a money market technique that in all its externals appeared to be the same as that employed before the war. Instead of spectacular new types of organization or newly invented machinery, there were merely modifications of practice. Yet these, when considered as a whole, produced a subtle but pervasive change, the importance of which for the interpretation of the post-war gold standard cannot be exaggerated.

Competition and Monopoly in the London Money Market

THE DOCTRINE OF THE USUAL CHANNELS

The business of the London money market is conducted on the basis of oral agreements, with a minimum of formal correspondence. The men in the market do not change as readily from one connection to another as they do in other markets. This is one of those extremely important non-statistical facts that must be given weight in discussions of money market technique, for it is a force making for the type of stability that goes with 'old-established' institutions and methods. It has been said that it is one of the characteristics of the peculiar British business genius that when, by a process of trial and error, a method of doing a given type of business has been worked out that in general gives satisfactory results, the business community stops at this point and continues to use that

method as long as it proves serviceable. It was by such a process of finding the appropriate means of carrying out its business and stopping short when it was found that the monopoly element in the London market had its origin and sanction. The internal organization of the London money market is evidence of the British conviction that international banking cannot be carried out under a complete laissez-faire system.

In connection with the discount market proper it is correct to say that the monopoly element was and is enforced by the Bank of England. In 1933 there were twenty-two acceptance houses in London. There could be no more, for the Bank of England would not discount the bills of any other acceptance house. Since that date the number has been somewhat reduced by amalgamations and increased by the admission to discount at the Bank of England of certain 'purchase' paper, that is, the bills of firms employed in the finance of installment sales. The principle of strict limitation of the number of houses by the customary sanctions has, however, not been infringed. Similarly, the Bank of England will not permit the establishment of new discount houses unless it is to replace one that has gone out of business.

In general, however, the monopoly in the London market is one of clients based upon traditional connections. This has brought with it a geographical division in the field of business also. It is not now (1939), and was not before the first world war, rigid and inflexible. But it was, and is still in somewhat less degree, a hard fact to be reckoned with. In order to describe it without exaggeration, yet with due recognition of its importance, we call it the Doctrine of the Usual Channels.

The Doctrine of the Usual Channels did not come to be observed in the London money market because it was in the public interest. It was not a hard and fast principle established by agreement. It was respected simply because, from a private business point of view, it had been shown to be profitable and safe. One of the reasons, for example, for the development of a London tradition under which various merchant bankers

respected the field of activity of other merchant bankers was that capital issues had often come into the market for the purpose of taking up short term advances made by merchant banking houses directly or through the discount market. It was natural for the discount market to look for the short term borrowing from the same sources that customarily arranged the long term issues. Respect for the usual channels was especially marked in the issue business. The founders of Hambro's, for example, were originally Danes, and the Danish business has always been regarded as belonging to them, though this does not mean that new Danish borrowers who had not previously approached the London market might not use some other house. Baring's had the Russian and Argentine connection, Rothschild's the Spanish connection. Many other examples might be cited. The division of the field of business in this way was not limited to the underwriting of foreign issues but extended to the acceptance business also, although in less degree. The word would go out among the drawers that so and so knows the cotton business. "You won't have to explain to them what form of insurance policy is used and the usual trade customs and so forth. It saves a lot of time and troublesome explanation to get credit from them." This was a cumulative and genetic process and by it a particular acceptor became the recognized channel for certain types of bills. If, therefore, a London house had for many decades specialized in a particular country or in a particular type of business, such as foreign treasury bills, it could be assumed that the transaction had been carefully looked into and, as far as the judgment of that house could guarantee it, was safe. Powerful considerations of self-interest, therefore, developed this important type of monopoly in an otherwise intensely competitive market. It is, moreover, a characteristic British attitude, as expressed to us in interviews abroad, to cling to the Doctrine of the Usual Channels because "it saves a lot of thinking."

The establishment of these usual channels through which

business came into the London market prevented certain types of competition, notably the duplication of credit lines from various sources to the same borrower. The situation arose, for example, in which one might say that if a loan for Greece could not be secured at Hambro's, it could not be secured in England. It prevented certain types of cut-throat competition in rates and introduced into the customer-banker relation an element of stability and responsibility that comes from long continued business contact. The fact that before the war customers could not turn readily to another market, such as New York, for their accommodation, or go from bank to bank in London in search of the best terms, was unquestionably one of the important factors in the development of the technique of the London money market as the world's financial center.

General Encroachment of the Joint Stock Banks upon all Fields in the Money Market

Though the Doctrine of the Usual Channels is still observed in the London money market, an intensification of competition since the war has tended to undermine it. The outstanding cause of this change is the encroachment of the great joint stock banks upon every field of money market activity. They were becoming more interested in the foreign exchange market, and were assuming new responsibilities in connection with the capital market. Before the war they were, in the great majority of issues, merely agents. After the war it became more common for purchasers of new issues to have the joint stock banks make the issue, acting under their instructions. After the return to gold, the joint stock banks also acted more frequently as principals in making new issues. They continued to act as agents for the borrowers of course, but that had become 'the old-fashioned way.'

The growth of the acceptance business of the joint stock banks is obvious from the regularly published figures of their acceptances. Concerning its effect two opposite opinions are

held in the market. The joint stock banker takes the view that the change was inevitable because drawers are becoming more and more great corporations or aggregrations of capital, and personal contacts, so important in the business of the merchant banker, are becoming inevitably less frequent and less close. This view asserts that consequently nothing is lost in this respect through the entry of the joint stock banks into the acceptance business. Many merchant bankers feel, however, that there is an element of bureaucracy inseparable from the joint stock bank merely because of its size, which inevitably leads to a loss of flexibility and adaptability in the conduct of the acceptance business. Whatever may be the judgment formed on this point the entry of the joint stock banks into the acceptance business has at times affected the stability of the market because of the competition they introduced by cutting rates. At one time rates of acceptance were actually cut in half; and, in consequence, the acceptance houses were obliged to seek twice as much business in order to secure the same income. This factor is always either actually or potentially present and leads to an abandonment of the attitude of waiting for and selecting business characteristic of the prewar acceptance market in favor of an active promotion of business with a consequent danger of loss of quality.[19]

In general, the post-war tendency was for the joint stock banks to take care of all the business of their British clients, including their foreign business. The 'exchange banks' and the 'foreign banks' tended to retain the business of their particular countries, and many of the acceptance houses and merchant bankers were obliged more and more to seek business in countries where there was definite lack of working capital, such as Germany and Poland.

The effect of the internal competition in the London market in the field of acceptances as well as of underwriting, when brought into combination with the new external com-

[19] Testimony of Sir Robert Kindersley, *Minutes of Evidence* (Macmillan Committee), I, 72, especially answers to questions 1161 and 1165.

petition of the New York money market, is part of the explanation of the great extensions of credit, especially short term, to Central Europe, the results of which were manifest after 1929.

COMPETITION AMONG THE JOINT STOCK BANKS

Before the war competition among the joint stock banks was very active, but was tempered by agreement upon certain principles. Since the war competition has become much more active but there are still general principles of agreement, regular and friendly consultation, and avoidance of the cut-throat competition in rates that was at times a feature of the New York market. Such a generalization can be made on the basis of statements by those in a position to know but is impossible to document. Nevertheless, two examples of the increasing competition may be cited—the location of banks and the rate of credit interest. Before the war each of the big banks had a recognized predominance in certain parts of the country, and when other banks thought of establishing branches, they did not try to break in there. They pursued a live and let live policy in this respect, but since the war, branches of all the banks may be found in almost every hamlet in England. Before the war the rate of credit interest paid to depositors was restricted to an agreed maximum. This was generally respected after the war in the metropolitan area, but in the provinces unrestrained competition in this respect reigned for years among the managers of the branches of the big banks until the situation was finally taken in hand by concerted action of the head offices in the early 1930's.

COMPETITION OF FOREIGN BANKS IN THE LONDON MONEY MARKET

Before the war the chief competition offered by foreign banks domiciled in London was that of the D banks of Germany. In particular, the German banks offered on occasion higher credit interest rates and more liberal terms of credit on ac-

ceptances, but this competition was not generally regarded as unfriendly by the British banks on the characteristic ground that whatever stimulated trade helped England. In contrast, the establishment of American banks in London after the war often resulted in a competition in rates of commission and in services rendered that tended to ignore some of the traditional restraint that London institutions had learned to regard as in their own interest. This was, however, but a minor factor in comparison with the general impact of the competition of the alternative money markets in which international trade and finance could be arranged.

If we now turn from an examination of the monopoly and competitive aspects of the money market as a whole to an examination of its various departments, it becomes clear that in all there were changes in practice or in attitude or in the quality and quantity of the business done.

The Bullion Market

The London bullion market is an old institution. Before the war it consisted of four brokers: Mocatta and Goldsmid, Pixley and Abell, Sharp and Wilkins, and Samuel Montagu and Company; and two refiners: Johnson Matthey and Company, and N. M. Rothschild and Son. All four brokers were established before the international gold standard was widely adopted, and one was in the bullion business before the Bank of England was founded. The business of N. M. Rothschild and Son as refiners dates to Napoleonic times, and, in addition, this house had long acted as agents for many South African gold mines on account of its connection with the early financing of the industry. For many years these brokers met in the office of Sharp and Wilkins for what was known as the weekly 'fixing' of the prices of gold and silver. For them the adoption of the gold standard meant a restriction of business and narrow profit margins because of the limits placed upon the fluctuations in the price of gold by the Bank of England's standing offer to buy gold at 77 s. 9 d. per standard ounce

(84 s. 9.81 d. per fine oz.) and to sell it at 77 s. 10½ d. per standard ounce (84 s. 11.45 d. per fine oz.).[20] Though from a private profit point of view silver was much more important to the bullion market than gold, the brokers continued to 'fix' the price of both metals and to provide the machinery for bringing bids and offers together. Through their hands flowed the vast and complex stream of gold transactions exhaustively analyzed in the pre-war part of these studies. The gold movement through London was, until the World War changed the whole course of events, responsive to the fluctuating currents of world trade. It reflected the seasonal movements of the exchanges, the changing relations of debtor to creditor countries in the different phases of the business cycle, and the secular trends in the development of the banking systems of the world. It was intimately connected with the functioning of the London-centered international banking and credit system and with the volume and direction of British capital export.

THE ABDICATION AND RECOVERY OF ITS PRE-WAR FUNCTIONS BY THE BULLION MARKET, 1914–1925

During the war the London bullion market abdicated these pre-war functions. The direction of gold distribution was taken over by the government and the Bank of England. Gold and credit were used together to 'force a balance' on the books of England and on the world's books,[21] at the cost of breaking the organic connections between gold distribution, credit distribution, and goods distribution established in the course of a century in the hierarchy of financial centers dominated by London. The organization of the bullion market, however, remained intact. With only slight changes in the representation of the South African mines, it once more took over after the war the function of distributing newly pro-

[20] For the justification of using the term 'sell' in this connection cf. Ch. 2, The Minimum Change in Legal Form consistent with the Necessary Changes in Practice.

[21] Our whole discussion in Book One, Breakdown, is a marshaling of evidence bearing on this point.

duced gold. From September 1919 to April 1925 it operated as an insulated compartment in the London money market, having no direct connections with or influence upon the English credit base. A distinction was drawn between gold in England and gold with a license for export. South African gold was once more sold to the highest bidder through agents in London. The demand was once more expressed through bids made by the bullion brokers for clients. The price was based upon the bid of that country whose fixed obligatory purchase price for gold yielded, at current exchange rates, the highest price in sterling, provided that bid was above 84 s. 9.81 d. per fine ounce, the standing bid of the Bank of England. Only one outstanding modification of the pre-war position remained. There was no upper limit to the price of gold except that fixed by the fluctuations in the exchange rates because of the suspension of the Bank of England's obligation to redeem its notes.

The return of England to the gold standard in April 1925 once more fixed this upper limit at 84 s. 11.45 d., and for the first time since 1914 made the buying price of the Bank of England a competitive bid. The pre-war range of fluctuation in price was restored. The international flow of gold through the market was once more modified by Bank of England purchases and sales, and the bids made in the market once again directly influenced the credit base. The distinction between gold in England and gold with a license for export disappeared, and the statement of the value of the gold held by the Bank of England in pounds sterling in its balance sheet once more corresponded to the valuation placed upon that gold by the highest bidder in the world's markets.

CHANGES IN THE TECHNIQUE OF THE MARKET AFTER THE RETURN TO GOLD

The return to gold had certain repercussions upon the technique of the bullion market as a mechanism for bringing bids and offers together. With the rise of the South African pound to its old parity with the dollar and the fall of the price of

gold in sterling, the so-called 'premium' on gold in South African pounds disappeared in January 1925. It became more profitable for South African mines to bring their output to the Pretoria mint for coinage into sovereigns than to send it to London for sale, and South African gold shipments were temporarily suspended.[22] New arrangements were needed to allow the London bullion market once more to function freely as the distributor of South African gold throughout the world. The South African Reserve Bank undertook to buy gold from the producers and to sell it in London through N. M. Rothschild as their agents in the bullion market, and thus became the principal buyer, taking over 84.64 per cent of all gold produced in South Africa in 1926 and 90.9 per cent in 1927. In order to avoid fluctuations in its own reserve resulting from differences in the amount bought in South Africa and sold in London in a given week the Reserve Bank adopted a system of earmarking sovereigns and releasing sovereigns from earmark at the Bank of England. The gold sent by it to London for sale was consigned to the Bank of England, checked and weighed, and held at the bullion office pending sale in the open market. Together with certain direct shipments to N. M. Rothschild from Rhodesia and other parts of Africa, the South African Reserve Bank shipments were the bulk of the new gold physically handled by the market, but did not measure completely its actual work. Substantial shipments were made directly from South Africa to India, to Argentina, and sometimes to other countries to take advantage of economies in transportation costs. This gold, however, was sold and paid for in the London bullion market and the financial results of the shipments were the same as if they had passed through London. For this reason the gold distribution figures in Table 48 understate the role of England as a gold distributor.

The technique actually employed in the bullion market

[22] For a discussion of the 'premium' on gold in South Africa and the consequences of its disappearance cf. Brown, *op. cit.*, pp. 75–9, 181–6, 280–1.

after 1925 has been described by the writer in *England and the New Gold Standard* (p. 283):

"The exact manner in which the open market price of gold is fixed is not a matter of record. No account of the meeting at which the open market for gold is conducted has ever been given. But it is clear that the prevailing rates of exchange, the demand of India and the trade, and the presence or absence of special buyers in the market will determine whether or not Messrs. Rothschild, as agents for the producers, can obtain for them a price higher than the buying price of the Bank of England. If they cannot dispose of all the available gold to better advantage on the first day after its arrival and if, in their judgment, no buyers at a higher price are likely to come forward the following day, what remains is sold to the Bank of England. In the case of Reserve Bank gold the transaction is closed by a transfer to the credit of the Reserve Bank's account, which takes the form of a cheque drawn by the Bullion Department of the Bank on the Issue Department with whom the gold is lodged. In the case of other gold the Bank of England makes payment by a Bullion Office cheque, which is cleared the same day, and increases its deposit liability, presumably to some one of the Joint Stock Banks. In the meantime, the gold sold to other buyers is delivered over to them by Messrs. Rothschild, who, in the case of Reserve Bank gold, call for it at the Bank of England, making payment by cheque on some Joint Stock Bank, which is likewise cleared the same day and the account of the Reserve Bank credited. The whole transaction is on a cash basis without involving interest adjustments. The gold itself is sent immediately to ships or airplanes for dispatch to its various destinations, these arrangements for rapid handling being of the very essence of the transactions on account of the importance of interest charges in the cost of shipping gold."

CHANGES IN THE FLOW OF GOLD

The pre-war mechanism of the market was restored in all its essentials in 1925, but the flow of gold through the market after 1925 was not essentially like that of pre-war years. The difference was more subtle and more profound than has sometimes been assumed. An analysis of the gold standard that

stresses corrective forces set in motion by gold gains and losses in countries whose exchanges have been displaced by some force from a position within gold points is not a good guide toward forming a judgment concerning this difference, for it runs the following serious dangers:

1) It is likely to assume implicitly a type of money market organization in most countries of the general type of that prevailing in London. This is natural in an analysis evolved in England and primarily related to English experiences, but it is contrary to fact.

2) It overlooks, or at least it does not stress, the connection between the process of distribution of additions to the world's gold supply and of the existing supply as a long run dynamic force in the world's banking and credit system and the temporary corrective shifts of gold backward and forward with which it is chiefly concerned. These two types of gold movement, however different their economic significance, are still intimately connected in the actual mechanism of the money markets, and neither can be fully understood without reference to the other.

3) It directs attention to the delicate and indeed wonderful mechanism in which the final balance of a world economic system, already fundamentally in equilibrium, is achieved, and is often in danger of neglecting the deeper relationships between gold movements and the great credit operations involved in long term international lending and the financing of international trade. The credit judgments and the banking management, which enter into each and every one of these credit transactions, are of the very substance of the environment that produces a so-called automatic, corrective movement of gold.

Avoidance of these dangers is important in interpreting the role of the London bullion market as a distributor of gold after 1925.

The contrast to pre-war years was not primarily in the type of transaction carried out in the market. After the return to gold the market continued to satisfy the consumer demand of the East and of the arts as it had done before the war. It continued to offer an opportunity for gold arbitrage whenever the exchanges provided a prospect of profit, and many of

the important movements during 1925–31 were of this type. It continued to be the source through which many central banks replenished their reserves, and to be subject to various strategems by which gold was attracted to one country or another for purposes connected with the monetary and banking needs of particular countries, such as:

1) Shipments carried out by gold arbitrage but induced by changes in the costs of arbitrage transactions resulting from government or central bank action, including that of the Bank of England, in order to divert the stream of gold as a matter of high policy;

2) Purchases made in the open market without reference to exchange considerations for building up bank reserves in particular countries;

3) The use of the proceeds of foreign loans in the London market for the purchase of gold.

Pre-war shipments of these three types were, in the aggregate, an imposing total. For twenty years before the war the Bank of England probably bought more gold at slightly above its buying price than at its buying price. Many countries, including Austria, Brazil, Italy, Russia, and the United States were, upon occasion, buyers of gold in the market irrespective of exchange rates, to strengthen banking reserves. The case of Germany, which accumulated gold irrespective of exchange rates for ten years before the war, is prominent in the memory of pre-war London money market men.[23] Examples of all three were frequent in the bullion market after 1925.[24] From 1925 to 1928 the market continually felt the demand of central banks, especially European central banks including those of Belgium, Switzerland, Poland, and Italy, for gold to build up their reserves. Collectively these banks enjoyed the market pseudonym of 'the unknown buyer,' and the presence of the unknown buyer was evidence of what came to be called

[23] This is confirmed by a special study of German gold movements, 1904–11, carried out in connection with these studies by Max von Zabern.

[24] Cf. Ch. 16 for examples of changes in gold points due to central bank action.

a scramble for gold. In this scramble for gold the Bank of England participated. As in times past, it was frequently in the market at above its statutory price, and in addition it strengthened its reserves directly through special purchases from Germany, the Netherlands, Russia, and Spain.

Though the nature of the transactions carried out remained the same, there was a great change in the relative importance of the different types of transaction and in the general relation of the whole gold flow to banking practice in the various countries, to the course of international trade, and to international lending.

The return of England to the gold standard greatly widened the area to which gold could profitably be sent as an arbitrage transaction, but it did not widen to an equal extent the area from which gold could be taken as an arbitrage transaction. The postponement of de jure stabilization on gold by countries stabilized de facto whose central banks were willing and indeed obligated to buy gold at fixed prices, the spread of the gold exchange standard, and the impediments placed upon gold exports by some nominally gold standard countries, all contributed to this result. Not only was the inter-central bank flow of gold impeded, but gold exports and imports also had different effects upon the world's banking systems from those associated with pre-war gold movements. The whole discussion of the role of gold in the monetary systems of the United States, France, Germany, Argentina, and other countries already presented, and the discussion of the English credit base and credit superstructure and of the 'typical year' of the Bank of England still to be given, is cumulative evidence of the infinite variety of the treatment given to gold in gold standard countries.

Before the war gold arbitrage transactions were closely related to seasonal fluctuations in the foreign exchanges which were familiar to exchange traders and repeated from year to year. Many of these seasonals reflected the movement of the world's agricultural products into the channels of distribu-

tion. They were modified by international lending operations, particularly those of the London capital market, and were also part of the technical method by which long run trends in gold distribution were worked out. For example, some countries took gold during the financing of their crops to build up the reserves of their currency systems, and paid it back from the proceeds of the shipments; whereas other countries, able to finance their crop production themselves, took gold as profit after the shipment of their crops. In either case the amounts remaining in these countries represented part of the long run distribution of the metal through the London gold market. After the war gold arbitrage transactions no longer reflected with the same fidelity the course of world trade and transactions directly connected with developing and financing world trade. It was a truism of the post-war foreign exchange markets that familiar seasonals associated with the movement of crops were no longer to be relied upon as a guide to trading. They were overlaid by a mass of other transactions of a financial nature, chiefly the movement of balances and securities. Only the most powerful seasonal influences, among them the autumn weakness of sterling, were still predictable market factors. Even the major seasonals in the sterling-dollar exchange were modified in various ways in 1927, 1928, and 1929 (cf. infra, Bank Rate and the Defense of Sterling).

More important than any of these changes was the fact that the relative importance of the London bullion market as a whole in the world distribution of gold was less than before the war. This was chiefly because gold distribution through London no longer stood in its pre-war relation to international long term lending. Before the war gold was distributed to new and rapidly developing countries largely because of their regular borrowings in London. These loans directly increased deposits and circulation in borrowing countries and therefore their requirements for gold reserves, and at the same time strengthened their exchanges and gave them an

effective demand for gold in the London market (cf. Ch. 4). The fact that there was a market in London whose function was to distribute a steady stream of newly produced gold was of the greatest importance in this connection. It distributed the 'gold income' of Great Britain to those countries whose exchanges were strongest in terms of sterling and thereby acted as a first line of defense for Bank of England gold reserves. In combination with the strong underlying pull of Great Britain over the exchanges this made it possible to maintain the legal guarantees of the gold standard without restricting the freedom of the London capital market in promoting overseas development. This view has been expressed to the writer by a man of wide pre-war experience in the bullion market in the following terms:

"If England had had a static gold reserve [before the war] which could only have been increased by getting gold from someone else's reserve, she could never have carried out her great financial operations."

After 1925, England's gold income was not an additional safeguard reinforcing a fundamentally strong underlying position, but an offset against an underlying weakness. It was no longer an adequate defense for the gold reserves of the Bank of England against the potential and the actual effective demand for gold of the rest of the world. The system of stable exchange rates of the gold standard was no longer primarily supported by the reinvestment of international credits by Great Britain, but by British and American lending together. The burden of satisfying international demands for gold was shared with the London bullion market by the American banking system in the manner and in the proportions indicated in Chapter 18. From 1925 to 1927 the Bank of England was protected from German gold demands by the administrative acts of the Reichsbank. The main burden of supplying gold to South American countries in connection with currency reforms and as a result of trade balances was taken from the London market as a result of American loans. The sudden

French demand for gold in 1927 was diverted to the United States by inter-central bank arrangements. The greatest single change in the economic significance of the flow of England's gold income through the London bullion market after 1925 as compared to pre-war days was that it no longer gave adequate assurance that her international credit operations could be carried out without apprehension. The protection of the British gold standard was confided in large measure to the American capital market, and sterling was exposed to danger whenever America was under-lending (cf. Ch. 17, The Conditions most favorable to Exchange Stability cannot be approximated in a Decentralized System).

The gradual withdrawal of the support given the whole system of stable exchange rates by American lending, beginning toward the end of 1928 at the same time that the attitude of Germany and France toward the gold exchange standard was changing, brought to the surface all the latent differences between the flow of gold through the London bullion market after 1925 and that of pre-war days. Finally, the redistribution of international balances following the crisis of 1929, and the reappearance of the pre-war phenomenon that during depressions gold flows from debtor to creditor countries introduced a new phase in the history of the London bullion market as a first line of defense for the gold standard in England that will be discussed in Chapters 22–28.

The Foreign Exchange Market

THE SHIFT IN INITIATIVE IN FOREIGN EXCHANGE TRADING

Before the war London was not greatly interested in foreign exchange dealings. The foreign exchange market, in fact, was not an active market before 1900. The big issue houses and the 'foreign banks' bought and sold for requirements and there was no trade in the exchanges as a separate business for profit. Until about 1906 the joint stock banks did no foreign exchange business at all, and the few specialists in the exchanges were regarded as exercising a mystery apart. After

1900 the market increased in activity, especially with the beginning of trading in the exchanges by the joint stock banks, but even then British merchants still bought and sold for sterling and knew nothing of the foreign exchanges. That was for the foreigner to try to understand. Pounds, shillings, and pence were good enough for them.

For this there were two important reasons. The first and most fundamental was the nature of British home trade. English merchants were not in the habit of giving credit for exports or taking it for imports. British export trade was cash against documents. The foreigner purchasing British goods, of course, might come to the acceptance bankers and ask for a credit with which to get the pounds to pay the British exporter. If his credit with these bankers was not good, he had to buy from England on a cash basis. In any event, the English merchant and manufacturer did not have to know anything about the credit conditions of foreign customers and of their country. He sold for cash. As far as imports were concerned, it is obvious that the foreign shipper to England was glad to take cash against documents and there was so much home saving that English importers did not have much need for credit. On the whole, they could afford to pay cash. The foreign shipper was always ready to take his cash payment in pounds sterling, and hence the English importer did not have to bother about exchange rates.

The second reason for the inactivity of the London exchange market before the war was precisely that London was the world's clearing center. Because sterling bills were the primary instrument for financing world trade and sterling balances were the medium for offsetting the world's debits and credits arising from that trade, there was no occasion for the British to initiate foreign exchange transactions. Commerce was often carried out between foreign countries in pounds sterling without the transaction affecting London at all except as a transfer of bank balances. Exports of sugar from Austria-Hungary to Russia, for example, were invoiced

in pounds and the insurance policy was written at Lloyd's. Wool tops were bought and sold in France in terms of sterling, and it was possible in Amsterdam to buy and sell dollars for sterling without the guilder entering into the transaction at all. Probably the most important exception to the general rule of conducting international trade in sterling was the dealings in cotton before the war which were carried out in dollars, but even the rate for dollars was as a rule fixed in New York, and London followed the New York quotation.

Since it seemed unnecessary for any definite activity to be undertaken in London to keep the exchanges steady people in London assumed that an automatic economic process was at work and that no one need worry about the exchanges. But outside London, in all other countries of the world, people were very much concerned about keeping their rates on London steady, and it was as a result of their dealings that they were kept steady. The idea of conscious regulation of the exchanges according to plans laid down by monetary experts and commissions was entirely foreign to the pre-war point of view and experience. Yet there was an element of control that was not very obvious and that was the result of the operation of ordinary considerations of self-interest. It was of the type suggested by the following hypothetical cases. Let us assume, for example, that interest or sinking fund on a Peruvian loan had to be met in London. More sterling was demanded, as a result, than the weekly accumulation of drafts on London in Peru could meet. The little Peruvian market was short of sterling. Rather than let this disturb the exchange someone in Lima who had credit in London would permit his correspondent to be drawn upon in the expectation that in the following weeks sterling would become available to pay him back. Meanwhile, an acceptance appeared in the London market which was really drawn to supply sterling exchange and to support the Peruvian pound. No one in London, however, had to take any initiative in the matter and the sinking fund and interest payments were made without affecting the exchange.

Transactions of this type, of course, were merely adequate to bridge over temporary situations and could not meet long term dislocations in trade relations between Peru and England. Or, we may assume that as the result of a Brazilian loan placed in London there was a large amount to be remitted to Brazil as compared to the current supply of milreis. In such a case one of the British controlled Brazilian banks would be likely to borrow a round amount of milreis from a bank in Brazil. It would sell the milreis so acquired to meet the pressure arising from the remittance of the Brazilian loan and buy them back later gradually as British credits accumulated in the market for remittance to London. The exchange would not be disturbed. No one in the acceptance or the discount market, or the joint stock banks, or the Bank of England had to worry about the matter. Furthermore, if sterling did become weak as a result of the remittance of proceeds abroad, an opportunity for profitable interest arbitrage would open up to foreigners and would be taken advantage of.

These examples are hypothetical, but similar or equivalent transactions were continually being carried out before the war outside England, and a wonderful appearance of automatic stability in the London market was the result. This circumstance was of the utmost importance in connection with the attitude of British underwriters in permitting borrowers to utilize the proceeds of their borrowings without restriction.

After the war the situation was altered. It had been observed even before that the refusal of British exporters to grant export credits had caused export business to be lost, particularly to Germans who made it a point to grant liberal export credits and even borrowed from the London discount market to obtain the necessary means. The imperative need of Great Britain after the war to stimulate her exports led to a concerted effort to break down this attitude and to grant export credits. The government took an active part in this effort and through its export credit guarantee schemes succeeded

in filling a serious gap in the credit information of British commerce. British exporters became interested in credit conditions abroad and in foreign exchanges as they never had been before.

The fact that before the war the foreign exchange rates were as a rule managed outside England, and the active interest of other markets in keeping their exchanges stable in sterling relieved London of great responsibilities and indeed made the gold standard a true sterling exchange standard. In a very deep sense the transfer of initiative in foreign exchange trading to, or at least the sharing of that initiative by, London was symptomatic of the whole process of decentralization taking place in the world's international credit machinery.

THE FORWARD EXCHANGE MARKET

One other important post-war change in the foreign exchange market was a function of the instability of the exchange itself. This was the immense development of the market in forward exchange contracts which was necessary to provide hedges for merchants attempting to engage in international trade without becoming exchange speculators. The forward exchange contract has sometimes been described as being governed solely by discount rates in the respective markets. If the exchange trader can earn 1 per cent in London and 1½ per cent in New York he may buy spot dollars and cover his position by selling a contract to deliver dollars for sterling in three months. He will thus secure a ½ per cent additional income from the employment of his funds. To secure this added income he will be willing to accept less sterling for his dollars three months hence than he gives for them now. Forward dollars will be at a discount. Were interest arbitrage the only consideration governing dealings in forward contracts, then ½ of 1 per cent for three months, expressed in the rate, would, in this example, be the limit beyond which the discount on forward dollars could not go. But during the

period of widely fluctuating exchange rates, interest arbitrage did not dominate, and the rates for forward exchange were a combination of three factors: (1) the interest rate differential, (2) the genuine demand and supply for the given exchange for the month of the contract, (3) the speculative attitude of the dealers in the market with respect to the future of the given currency.

The growth of the market in the forward exchange, especially in the sterling-dollar market, has a broad general significance in the functioning of the international clearing system of London. It was always true that one of the most sensitive elements in the international movement of funds was the movement of balances by traders in the foreign exchanges from one market to another in the ordinary course of their trading operations and usually, in large institutions, without special intent or direction on the part of the management. The development of the forward exchange market on a large scale greatly increased this part of the mobile international loan fund. The use of the sterling bill as the instrument for carrying out interest arbitrage operations was, after the war, greatly reduced, and the dealings in forward exchange performed the functions it formerly performed. A new technique for the moving of balances internationally was substituted for an old one. The generation of experts familiar with the skillful use of the sterling bill as an instrument for moving balances from one country to another to carry securities or obtain a temporary advantage from interest differentials has passed from the financial scene, and at the date of writing, its survivors can be found only in their places of rural retirement. The new technique of the forward exchange market is not subject to the restraint present in the old technique of bills because forward exchange contracts, unlike finance bills, do not have to pass the scrutiny of the market and secure the approval of an acceptor before they can even come into existence. The international loan fund became more volatile and less subject to control as a consequence.

The Discount Market

THE DECLINE OF THE COMMERCIAL BILL

Professor Ohlin in *The Course and Phases of the World Economic Depression* writes in a passage dealing with the period after 1925:

"It is probable that the need for short-term banking credits for the financing of trade and production was smaller than before the war. Manufacturers kept smaller stocks of raw materials, and traders of finished goods. A more rapid turnover of operating capital has been achieved in manufacture by improved technique. Sales on credit by producers to traders, among traders themselves, and by traders to retailers were less popular. Instalment selling, which grew in favor, was largely financed not through direct bank credit but by special finance companies through the sale of finance paper. Mergers, combines and chain stores eliminated small firms, replacing them by large corporations. They preferred the more permanent method of raising money on bonds and stocks in order to finance their business." [25]

These generalizations record a phenomenon of common observation in the post-war years. Large business units tended to do their foreign business through bank advances or by means of increased working capital, instead of by bills. The London acceptance market consequently suffered from a shortage of supply of the genuine commercial bills that had constituted its bread and butter business before the war.[26]

General Decline in the Quality of Bills. Not only was the amount of bills coming forward declining, but their quality

[25] League of Nations (Geneva, 1931), p. 27.

[26] In September 1928 Mr. Spring-Rice estimated that there were about £240 million bankers acceptances in the market, of which one-half were acceptances of the joint stock banks; *Journal of the Institute of Bankers* (London), September 1928. F. W. in the *Financial News* (London), October 20, 1928, estimated that there were only £150 million prime bankers bills in the market. In a speech at the Mansion House on October 7, 1936, Governor Norman said that the bills in the market "five years ago" were about £230 million as compared to £120 million in July 1936. *Bankers Magazine* (London), November 1936, p. 674.

also was deteriorating, partly because of the disturbed condition of trade and partly because many gaps in international trade which would, under other circumstances have been taken care of by capital exports, had to be bridged by the use of short term credit. This provided a standing temptation to the abuse of the bankers acceptance. The outward sign of this deterioration in quality was the change in the drawer. Before the war the drawer of a trade bill was the seller of goods, domiciled in a country other than that of the debtor under the credit. The drawing of such bills was the genuine reimbursement credit business of pre-war days and at least as far as the number of bills and activity were concerned it was the backbone of the market until the beginning of the war. After the war the drawer was often the importer, or some holding company, or bank making use of a general acceptance credit line. Such bills often represented goods not yet sold. Bills that were really finance bills were also frequently disguised as trade bills. The former clear cut distinction between the two was lost not only by the change in the drawer but also by the frequency of renewals. It was a rare event before the war for a genuine trade bill to be renewed in the London market. Such bills were paid out of the proceeds of the passage of commodities into consumption, or from bank accommodation extended in the country of destination for storage and distribution. After the war it may be said on good money market authority that there was a revolution in this respect in the whole acceptance business. Only a small proportion of the bills in the market were true commercial bills representing the genuine financing of goods already sold. This was especially true of German bills which were often drawn for three months but sometimes represented as much as three years' credit. Such bills were continually renewed and changed for others in such a way as to conceal their true underlying relation to the commodities against which they were ostensibly drawn.

The growth of such changes is difficult to trace, but they

unquestionably began to appear during the period of Restoration. They reflected in some degree the competition with another growing discount market and in some degree the internal competition within the London market. The growing share of the joint stock banks in the acceptance business resulted in an increased use of the forms of the old reimbursement credit to provide in effect working capital for correspondent banks abroad. This whole tendency was immensely accentuated after the war when trade was restricted and the need for working capital increased.

The New Relation to Commodities. The traditional relation between the acceptance houses and the actual handling of commodities was also changing. Even after the return to gold four or five typical firms of merchant bankers were still left in London who had built up their business by interesting themselves in particular parts of the world and financing certain commodities from planting to delivery in London either as principals or for commissions. But, in general, the consignment business of the merchant bankers was already greatly reduced before the war, and by 1925 the continuous and close supervision over the whole process of production and distribution which the London merchant banker provided had become a thing of the past. The relations of the acceptance houses to the commodity brokers had also changed, for fierce competition for a restricted business obliged these brokers to arrange intermediate financing for the producers. For example, none of the large timber brokers for Finland since the war had been able to arrange contracts for the sale of the commodity unless they could also arrange to finance it. The sellers were in a position to demand and to secure this credit. The brokers had to find an acceptance house to provide funds for cutting, shaping, and preparing for shipment. The acceptance house, in granting such credit, financed a self-liquidating transaction, but it came into the picture at the end of the negotiation and was much less closely related

to the commodity than were the merchant bankers in pre-war days.

Changes in the Attitude toward Documents. The discount market also reflected the general uncertainties and distrusts introduced into business transactions by the war and its aftermath by taking an entirely new attitude toward documents. This may seem a matter of small importance, but it had great psychological significance. The whole business of handling documents had become one of scrupulous adherence to every term of the written contract on the part of acceptors for fear that if an 'i' were not dotted, or a 't' not crossed one party or the other would seize upon the technicality to get out of the contract if some reason for doing so arose. This new attitude, plus the general unwillingness to ship goods on consignment or to keep bids and offers open for more than a very short time, was a genuine new impediment to trade. It was a diversion of attention from the essential services of international finance in moving the world's goods to a meticulous preoccupation with details for the safeguarding of the parties engaged in commerce against one another's bad faith. This whole attitude marked a change in the conduct of the acceptance business in London. Before the war the British merchant bankers were never very much concerned with small irregularities in documents and bills of exchange. They knew the trade and it was perfectly apparent to them why these small irregularities should crop up. The large number of letters of guarantee required in connection with post-war credits were then quite unknown. The banker giving an acceptance credit did not wish to be burdened with the details of the transaction. He wanted to know that the credit was against wool and that the credit taker was good, and not that the credit was against 50 bales of wool, Ex. SS. so and so and marked in a particular way.

Changes in the Bank of England's Attitude toward Various Classes of Bills. The decline in the volume of bankers accept-

ances forced upon the Bank of England a reduction in its standards in the definition of the bills it would take from the market when the market was in the Bank. Such a reduction in standards was never made openly or willingly, but it was a hard money market fact that the decline in the average quality of bills and in their total amount obliged the Bank to take under discount some bills it would otherwise not have taken. The Bank's willingness to purchase acceptances drawn against goods in warehouse was an evidence of this type of relaxation in standards.

The Bank of England's attitude toward the finance bill was modified by the fact that sale of treasury bills by tender had created a new instrument of short term money market control of great power but also of great complexity. This has been ably described by a writer in the *Financial News* (October 20, 1928):

"It will readily be imagined that the existence of such a large volume of Treasury Bills, of which probably about £450,000,000 are held in the market, as distinct from Public Departments, must exercise an important effect on money and discount rates. As a guess, one may hazard that the volume of first-class bank paper in the market is roughly £150,000,000, so that about three-quarters of the bills in which the Money Market now deals are Treasury Bills. Inevitably, discount rates for three months' bank bills are strongly influenced by the rates ruling for Treasury Bills, which are of the same usance and have the backing of the British Government behind them. The Treasury, acting, of course, in close co-operation with the Bank of England, is thus able to exert a powerful effect on Money Market conditions. If, on the one hand, it is desired to bring rates down, the amount of new Treasury Bills offered may be reduced considerably below the amount of the corresponding maturities. The result is that the market receives more money from the bills which are running off than it is called upon to pay for the new bills offered. Money is plentiful, and rates will tend to fall. In the meantime, the Government will finance itself, if necessary, on Ways and Means advances from the Bank of England. Sometimes, of course, the authorities may

wish to force rates higher, in which circumstances the amount of new Treasury Bills offered may be fixed so as to take more from the market in payment than is flowing into the market from the bills running out. Clearly, in normal circumstances, the Bank and the Treasury are in a position to manipulate the market to a very considerable extent."

On this account the finance bill lost much of its importance as an instrument of domestic credit control. Its displacement in the field of interest arbitrage by the forward exchange contract had diminished its value as an instrument for controlling the foreign exchanges. Consequently it was no longer so intimately related to the mechanism of adjustment to Bank rate as it had been and it occasionally constituted undesirable competition for short term credit with the government. Because of the loss of the clear line of demarcation between the genuine trade bill and the finance bill it was no longer possible to take the attitude characteristic of some departments of the market before the war that the finance bills were the finest bills in the market. For all these reasons the attitude of the Bank of England toward the finance bill was less favorable than before the war.

CHANGES IN THE ECONOMIC FUNCTIONS OF THE DISCOUNT MARKET

The decline in the volume of bankers acceptances did not reduce the total volume of business passing through the market, for treasury bills took their place. However, this change in the instrument dealt in made the discount market lose, in part, its functions of attracting foreign balances and broadening the market for sterling exchange. The accumulation of sterling to meet the customary requirement that acceptors should be in funds a week in advance of due date resulted in the constant presence in London of a substantial volume of foreign deposits. Though the treasury bill offers to foreigners an investment in sterling as attractive as the sterling acceptance, it does not share with the acceptance this power to

draw balances to London and maintain them there. The larger the volume of sterling acceptances on foreign account, the more likely the offsetting of random and seasonal exchange fluctuations. Therefore, the larger the volume of sterling acceptances, the more stable the exchange rates on London which were the key rates of the world system of exchange rates. Moreover, the advantages of a broad market to which the existence of a large volume of bankers acceptances contributed were cumulative. Stability of rates encouraged the use of sterling for other purposes than the financing of trade and, in particular, encouraged its use as a medium for the short term employment of funds. To all these international effects the treasury bill contributed in much less degree.

There was still another consequence of the changing character of the bills in the market of even more fundamental importance. The growth in the number of acceptances bearing the names of the joint stock banks seemed to the discount houses to improve the quality of bills. At the same time, however, this change in names together with the predominant importance of the treasury bill was gradually taking from the discount houses their genuine economic function of making a market for, maturing, and judging bills. There is little need for a special type of business organization to purchase and resell treasury bills at a small merchant's profit. The substance was going out of the business of the discount houses.

These considerations do not complete the list of significant consequences of the rise of the treasury bill in the London discount market. There remains for discussion the decline in the efficiency of the market as a technical instrument for making changes in Bank rate effective.

THE INFLUENCE OF THE RISE IN THE TREASURY BILL ON THE TECHNIQUE OF MAKING BANK RATE EFFECTIVE

In Chapter 11 we suggested that the rise of the treasury bill impaired the sensitivity of the market to changes in Bank

rate. It did so partly because it increased the magnitude of the central banking operations needed to influence short term interest rates and partly because changes in Bank rate affect both borrowers and lenders on commercial bills, but only lenders on treasury bills. These technical points concerning the money market effects of the rise in the treasury bill, together with certain further indirect implications springing from it concerning the distribution of the economic burdens of a high Bank rate, have been ably set forth by Lord Bradbury. In his *Minute of Dissent* appended to the Report of the Macmillan Committee he vigorously criticized Bank of England policy after 1925 as insufficiently deflationary and therefore as responsible for the accumulation of a large volume of short term funds in London. In the course of this criticism Lord Bradbury said (pp. 274–5):

". . . quite apart from the undue accumulation of short money which results from attempting to deal by means of bank rate alone with a situation for which the proper remedy is an efflux of gold, the volume of such money generally since the War has been of such magnitude as to render the task of the Bank of England in controlling the supply (as distinct from the price) of the basis of credit extremely difficult. *The main cause of this has been the enormous amount of Treasury bills.* This has resulted not only in increasing the dimensions of the bill market (and so making larger scale operations necessary to produce a given effect) but also in altering its character. When the holdings of the market were mainly commercial bills drawn on London on foreign account, a rise in bank rate diminished the supply of these bills. Now that the market holdings are largely Treasury bills and other Government 'floaters,' a restriction in the volume of bankers' cash, followed by a reduction of their market money, merely drives the 'market' 'into the Bank,' i.e., forces the Bank of England to recreate the credit it has previously withdrawn—largely mitigated by the fact that the general taxpayer bears a large part —sometimes more than the whole—of the expense in the form of a higher discount rate when the bills fall due for renewal.

Apart from the difficulty which it creates in the control of the volume of credit by the Bank of England, the excessive volume of

Treasury bills has harmful effects of a more general character. When credit has to be restricted the renewal of the bills comes into direct competition with the demands of industry, tending to force up the rates which industry has to pay for accommodation. Further it encourages both directly and indirectly the accumulation of liquid funds by industrial concerns. Treasury bills not only provide a convenient and profitable vehicle for the employment of such funds, but they enable the banks to hold large fixed deposits at comparatively high rates of interest without risk to themselves.

The result has been that large and wealthy concerns to a much greater extent than formerly carry on their business by means of accumulated funds instead of with borrowed money. The consequence of this is that the pressure of credit restriction, when it becomes necessary, is rendered very unequal in its incidence. These large concerns are in no way hampered by a rise in short money rates—indeed they actually profit by it—and the whole burden is thrown on the weaker concerns which trade with borrowed money. Insofar as the latter may be compelled to curtail their activities, the former can expand to fill the gap without cost to their profit and loss account for interest charges, since the loss of interest on the liquid funds so employed will be offset by the higher rate on the remainder.

It thus follows that the first result of an attempt to restrict credit is merely to transfer business from the weaker to the stronger concerns, and before an impression can be made on the total volume of active purchasing power the pressure on the weaker concerns may become so acute as to drive them out of business altogether."

The fact that changes in Bank rate do not directly affect the *supply* of treasury bills had serious consequences not only in the London short term money market, but in the foreign exchange market as well. The treasury bill gives foreigners a prime short term investment. In this respect it resembles the 'call loan' in the American market or the bankers acceptance. Changes in the yield of the British treasury bill, reflecting changes in the Bank of England discount rate, affect the exchange market through attracting or repelling lenders. A rise

in the rate of discount can attract investment from abroad to the treasury bill, as to the bankers acceptance, and therefore strengthen the sterling exchange. A fall in the rate can repel investment in both instruments and, by inducing the sale of bills or acceptances held by foreigners, weaken the rate of sterling exchange. It is within the power of the foreigner to respond or not to respond to the change in the rate of return offered him, and the initiative lies with him.

A rise in the discount rate can also discourage, and a fall can attract, foreign borrowers in London who wish to arrange to draw under sterling acceptance credits, but the amount the British Treasury wishes to borrow on short term is very little affected by changes in Bank rate, unless these are sufficiently important to influence the government's refunding program. Since sterling borrowed by foreigners on sterling acceptances must be repaid, a change in Bank rate *now* alters the amount of sterling foreigners are able to *sell now,* and the amount they must *buy later.* Consequently when the acceptance, rather than the treasury bill, is the chief short term instrument, the effects of changes in Bank rate in attracting or repelling lenders and borrowers are always counteracted or reinforced, depending on whether the change is in the same or in the opposite direction, by the effects of previous changes in Bank rate on the stream of repayments that must currently be made.

The following analysis brings out the fact that these differences between the treasury bill and the bankers acceptance made it impossible to substitute the former for the latter in the discount market on a large scale without reducing the effectiveness of foreign exchange control by changes in Bank rate. The reaction of the London discount market before the war to a change in Bank rate was to leave the basic volume of commercial acceptances substantially unchanged,[27] but to

[27] The qualification 'substantially' is necessary because a high discount rate had the effect of transferring a certain amount of borrowing from the bankers acceptance to the bank loan.

alter the volume of bills drawn for interest and exchange arbitrage and other purely financial purposes. Changes in the amount of finance bills, responding to changes in Bank rate in this way, were under the control of the grantors of sterling credit in London. It was not within the power of the foreign borrowers from London to postpone the date of repayment of old acceptances, which were, of course, obligations quite independent of any changes in the terms offered to those who wished to acquire new credits in London. Therefore, the relation between the supply of sterling made available to foreigners by the creation of new acceptances and the demand for sterling by foreigners to meet old acceptances at maturity was subject to alteration by a change in Bank rate.

Furthermore, these effects were cumulative. A rise in the discount rate, for example, by attracting foreign investors to the sterling acceptances, increased the amount of potential future sales of sterling exchange. By discouraging borrowing through the London acceptance, it reduced the future demand for sterling exchange for the repayment of outstanding acceptances. Both these circumstances reinforced the effect of a subsequent reduction in the discount rate. Such a reduction, following a previous increase, tended to make the potential supply of sterling exchange created by the purchase of acceptances by foreigners as investments an actual supply by inducing the sale of such acceptances. By attracting foreign borrowers and by bringing a new supply of sterling into their possession by the creation of new acceptances, the reduction in the rate added further to the supply of sterling. Both these additions to the supply were made in a market in which the demand had already been reduced as a consequence of the previous increase in the rate. Similarly, the effects of a decrease in the discount rate reinforced the effects of a subsequent increase.

When, however, the chief instrument of investment in the London discount market is the treasury bill, then the effect of an increase in the discount rate attracts foreign investment

in treasury bills and creates a potential supply of sterling that may come on the market in the future. A decline in the rate of discount may make this potential supply of sterling actual, but this exhausts the effects upon the exchanges of changes in the discount rate. Such changes do not, under these conditions, have any influence upon the size of the flow of obligatory purchases of sterling by foreigners to meet currently maturing sterling obligations. This is a far less effective mechanism of control than that of bills.

CONSEQUENCES OF THE RISE OF THE TREASURY BILL AND THE DECLINE OF THE COMMERCIAL BILL UPON LONDON AS AN INTERNATIONAL FINANCIAL CENTER, SUMMARY

In summary, therefore, it may be said that the substitution of the treasury bill for the sterling acceptance weakened the international effectiveness of the London market because

1) the existence of a large volume of treasury bills increases the difficulty of the task of the Bank of England in influencing the cash reserves of the banking system;

2) the treasury bill does not broaden the market for sterling exchange in the same degree as the sterling acceptance;

3) the treasury bill does not draw deposits to London as the sterling acceptance does;

4) the treasury bill does not multiply the effectiveness of changes in Bank rate in the exchange market as the sterling acceptance does;

5) the replacement of the bankers acceptance by the treasury bill transfers to a certain degree the initiative in the control of the sterling exchange from the grantors of sterling acceptance credit to foreign investors in British treasury bills.

The New Issues Market

We have had frequent occasion to note that before the war the issuers of foreign securities and the merchant bankers made no stipulation or agreement whatever with respect to either the expenditure of the proceeds of loans or their remittance, and to indicate the reasons why this point of view

had to be abandoned. The war-time victory of the principle that the proceeds of loans placed in England should be spent in England was general and when England once more returned to the gold standard, stipulations with respect to the expenditure of the proceeds in England were the general rule. A natural corollary of this change in attitude was the post-war attention to the problem of providing specific British industries negotiating or executing long term contracts abroad with the type of financial connection long characteristic of German finance. Proposals for providing this through a closer relation between the joint stock banks and industry and through the formation of special institutions were in sharp contrast to pre-war practice. In the Macmillan Report this new attitude is clearly stated (p. 165):

"Industry is yearly becoming more internationalised, and British industry, if it is not to be stranded in a back-water, will find institutions closely in touch with international finance invaluable in many ways as intermediaries. British companies in the iron and steel, electrical, and other industries must meet in the gate their great American and German competitors who are generally financially powerful and closely supported by banking and financial groups, with whom they have continuous relationships. British industry, without similar support, will undoubtedly be at a disadvantage. But such effective support cannot be obtained merely for a particular occasion. It can only be the result of intimate co-operation over years during which the financial interests get an insight into the problems and requirements of the industry in question and the industrial interests learn the value of the support which financial interests can give. The future development of British industry, particularly in the establishment of enterprises abroad, is greatly dependent on co-operation of this character, since a knowledge of foreign conditions, farsighted planning and large supplies of capital will be, or may be, all required. And in the realm of foreign investment it is primarily towards British-owned enterprises abroad that we should wish to see our energies and capital turned rather than merely towards subscribing to foreign Government and municipal loans, which absorb our available foreign balance while doing little for our industry

and commerce. So far as heavy industry is concerned, we may find ourselves cut more and more out of the world if our competitors, advancing with combined and powerful industrial and financial resources, develop abroad one 'tied' enterprise after another, or in the alternative purchase from us enterprises previously 'tied' to us."

We have already pointed out in connection with the discussion of war-time lending (Ch. 4) the fundamental inconsistency between this new point of view and the requirements of an international gold standard system of the pre-war type. This post-war control over the proceeds of new issues was achieved by the private action of the underwriting houses and others interested in the capital export. That was only part, however, of the new situation prevailing in the new issue market. Both the spacing in time and the amount of new issues were subject after the war to a new type of control. In his testimony before the Macmillan Committee Sir Ernest Harvey of the Bank of England spoke as follows of the relations of the Bank to the issue business:

". . . our relations are absolutely informal—that is to say, the Issuing Houses that undertake the issue of the higher class of issues. It is the practice for them to keep us informed; it is simply a practice. They are under no compulsion to come, no obligation whatever and we have no right to demand that they shall come, but they do in practice come and tell us what their intentions are. They come to consult us obviously, partly for their own advantage and partly for ours. It helps to the orderly issue of loans. That is to say that too many loans of a particular character are not thrown on to the market at any given time, and if the British Government has an operation in view it gives us the opportunity, without disclosing the fact in any shape or form, to exercise some sort of restraining hand so that the operations of the British Government will not be prejudiced by other people coming out and blocking the way. The relations are purely informal, absolutely unofficial, but I think I can claim that they work pretty efficiently and that they are really to the advantage of the community and everybody concerned." [28]

[28] *Minutes of Evidence,* I, 26, col. 2.

It was the unanimous opinion of bankers consulted by the writer in London that this statement represented entirely a post-war point of view. It was quite common before the war to postpone issues to prevent too many of the same type being thrown on the market at the same time, but it would be a euphemism to say that they were postponed out of deference to the general interest as represented by the Treasury through the Bank of England, or by the Bank of England itself. Issues were postponed out of consideration for the interests of particular issuing houses. These may have been the same as the general interest, but the things that counted were higher Bank rate or the threat thereof, or some untoward political event.[29] A few issues were dropped altogether before the war because of the wishes of the Bank of England. Most of these were related to the general foreign policy of the British government and have been recorded in Herbert Feis' *Europe, the World's Banker, 1870–1914*. General embargoes on new capital issues of the post-war type were not necessary, for it never occurred to anyone that England might go off the gold standard. It was universally believed that long before any such danger had arisen there would have been the necessary counteraction in some part of the system or the exchanges would be rectified by gold losses and the usual consequences of such losses.

Behind the informal cooperation of the post-war period in the spacing or the dropping of issues, described by Sir Ernest

[29] The manager of the issue department of an important London issue house put the matter as follows to the writer: "The Bank of England was informed of the loans in prospect through the membership on the Court of a partner of our firm. The postponement of issues when coming at the same time as government operations was only of the following kind: Suppose the Bank of England had a large Indian Government loan and we, a large loan to be issued on the same day. That would be inconvenient because, though they did not interfere with each other because they appealed to entirely different groups of investors, yet the simultaneous issue would cause a drain upon the floating funds of the market and unnecessary disturbance. We would put forward the issue a few days or wait until a few days after the India loan had gone off. It was a purely technical question of proper timing and had nothing whatsoever to do with the balance of payments or the state of the exchanges."

Harvey, there were certain positive sanctions. These have been described authoritatively in the League of Nations document already referred to in Chapter 11 (pp. 12–3):

[Before the War] "the fundamental strength of England's financial and trading position rested on the fact that it had leadership and almost monopoly in dictating the direction of foreign loans. If over-lending happened to occur, the indebtedness so created was rapidly extinguished by the cancellation of a few foreign credits under the stimulus of a high Bank Rate at home, and, in a smaller degree, by a modification in the balance of visible trade.

This picture has changed altogether since 1914. The Bank of England, acting in the interests of the country as a whole, and executing a duty which in most other centres devolved directly on the Government, has on occasions placed an embargo on foreign lending. It has of course no official or statutory authority empowering it to prevent foreign loans from being publicly offered in the London market. But, it has long been the practice of the principal financial houses of the City to notify and consult the Bank of England before proceeding to the flotation of important loans for foreign account. And this procedure has, if anything, been followed even more closely since 1918. Thus, without legislation or State action, the Bank of England has in fact, though not in law, been constituted the arbiter and controller of the foreign lending activities of the City. (It does not, however, concern itself with the nominally short term operations of the banks). For the clearly expressed disapproval and discouragement of a particular operation by the Bank is invariably respected.

A second line of defence against evasion of the Bank's dictates exists—the strict prohibition now enforced by the Committee of the Stock Exchange of dealings for which permission has not been given. The financial developments of the post-war era have led to a universal consensus of opinion that although direct intervention by the Government in the management of a private institution such as the Stock Exchange would be embarrassing for the Government as well as highly undesirable in the best interests of the investing public, yet the protection of those interests does in fact require close co-operation by the Committee with the Treasury and the Bank in all matters relating to foreign loans. Apart from the open revolt against the financial policy pursued by the Gov-

ernment a repetition of a certain pre-war intransigeance would now be impossible."

Security Arbitrage

Among the changes in the reaction of the London money market to changes in Bank rate none was more important than the transformation in the role of security arbitrage. Trading in securities having an international market in a world in which demand and supply were more responsive to changes in yield than in the speculative possibilities of capital appreciation or depreciation provided an almost ideal 'cushion' tending to counteract changes in exchange rates. Since the exchange risk involved in the purchase of securities in one market and their sale in another had to be covered immediately, small movements in the exchange were often quickly counteracted by a transfer of part of the floating supply of these international securities. These had a tendency to move as a counterweight to the net balance of other items. In the post-war world, however, as has been shown earlier in these studies, the international movement of securities, far from being a source of strength and stability in the exchanges, had become one of the most disturbing of all the influences in the market.

The Surface Pull of London over the Exchanges after the Return to Gold

When considered individually, the changes in the various departments of the London money market do not seem revolutionary. When, however, they are considered cumulatively they leave a clear impression that the techniques through which London exercised its surface pull over the exchanges were not so highly coordinated as before the war, and that the effort to control the exchanges in emergencies was subject to new dangers.

One of the most important of the pre-war techniques of adjustment was the modification, to suit the needs of the mo-

ment, of the total flow of new foreign lending by the joint, but unplanned cooperation of the long and short term capital markets. This was in part a seasonal adjustment and in part a coordinated response to changes in Bank rate.

Seasonal Peaks in the Discount and New Issues Markets

The writer's analysis of new foreign, colonial, and Dominion capital applications in London before the war,[30] shows that during the forty-four years ending in 1914 a seasonal distribution of new foreign loans was developing in which lending activity was regularly greater in the first part of the year than in the second. The seasonal peak in sterling acceptances drawn to finance current trade was highest in the latter part of the year. The occurrence of these lending peaks at different periods tends to smooth out seasonal pressures on the exchanges. The post-war decline in the bankers acceptance, therefore, probably had some adverse effect on the adaptation of the whole foreign lending process to seasonal requirements. This was, however, a minor factor compared to a change in the way in which the market as a whole responded to changes in Bank rate, which was sufficient in itself to justify the description of 1925–31 as a period of experimentation in the London money market.

The Pre-War Technique of Shifting from the Long Term to the Short Term Shoulder in International Lending

It is generally true of any large financial center, and was true in especial degree of the London market before the war, that the connections between the capital issue business and the discount market are very close. Before the war the business of the London issue houses was directly responsible for the existence of many short term credit instruments which provided a means of temporary employment for the funds of large investors, both institutional and individual. The business of the issue houses also contributed very substantially to the

[30] Cf. Introduction, pp. xviii–xix.

supply of funds available for investment in bills or other short term instruments. This is only another way of saying that the London money market, both short and long term, functioned as an integrated whole.

The offer of short term obligations in anticipation of long term issues was a regular feature of the discount market. Though there was no guarantee that long term issues would be forthcoming to provide funds for their redemption, such obligations were freely purchased because the honor and reputation of the issue houses arranging the short term financing were really bound up in a strong implied obligation to relieve the discount market in due course. Foreign treasury bills also were regularly placed in the market, not, as was often the case after the war, to support the exchanges, but simply because London was temporarily unwilling to absorb long term loans on favorable terms.

Many short term obligations were placed privately with insurance companies, banks, and wealthy individuals. Canadian treasury bills, for example, were regularly placed by the Bank of Montreal directly with the big banks. Occasionally bills were drawn upon the issue houses for acceptance in anticipation of the proceeds of long term loans. If a merchant banker had an issue coming forward for a foreign borrower and the borrower wanted part of the proceeds at once, the merchant banker might allow the borrower to draw upon him for 90 days. The discount market eagerly took such bills, since they bore a prime name, and were certain to be provided for at maturity by the proceeds of a new long term issue. This was not a usual transaction, for it was seldom necessary, but since there were no rules in the English system, and the business was safe and legitimate, there was no reason why such bills should not be drawn, and they are mentioned here primarily to indicate the flexibility of the arrangements in the market, once the initial decision to extend credit had been reached. Because this anticipatory borrowing assumed so many forms, it is impossible to estimate its amount from published pro-

spectuses, yet these afford some indication of its frequency. As a byproduct of the writer's compilation of pre-war foreign capital applications, 47 cases were noted between 1892 and 1914 in which the new issue was itself a short term loan of one sort or another, or was a long term loan the proceeds of which were to be used to retire temporary advances of various kinds.

The continuity of British lending abroad was thus greatly facilitated by the ability of the market as a whole to shift from long to short term as occasion arose. It was usual for the anticipatory borrowing to be considerably less than the long term loans, which ultimately took up the short term instruments. The immediate need of the borrowers was satisfied by an advance of a portion of the total amount required, and the system was given great flexibility. The men in the London money market most experienced in these matters agree that the market was never entirely closed to foreign borrowers.

THE RESPONSE OF THE NEW ISSUES MARKET TO CHANGES IN BANK RATE

Borrowers in London before the war did not have the ready alternative of going elsewhere to satisfy their requirements. Consequently changes in Bank rate had the effect of altering the timing rather than the amount of foreign borrowing, and largely determined the shifts between the long and short term markets. Since the yield on securities was closely associated with changes in Bank rate as shown by the classic inverse relation between Bank rate and the price of consols, the issue houses were deeply interested in the probable future course of that rate. Large and expert buyers of securities, such as the investment trusts and the insurance companies, would not be eager purchasers of foreign bonds priced on the basis of a market rate of interest that was expected soon to change in favor of the buyers. Conversely these buyers, whose knowledge of the market and appreciation of the indications of approach-

ing changes in Bank rate were nearly as great as that of the issue houses themselves, would be encouraged if they expected an early reduction in the rate. The new issue business was therefore *geared to anticipated changes in Bank rate.*[31] This was, however, almost exclusively due to the effect of expected changes on lenders. It would have been to the interest of borrowers to try to take advantage of the relatively favorable interest rate basis existing prior to an expected increase in Bank rate, and to hold off in expectation of a fall, but in practice they could not do so. Interest rates were in general lower in London that elsewhere, except in Paris where the foreign loan market was subject to strict regulation by both the Treasury and the Foreign Office. Moreover, the prices at which new loans were issued in London were sufficiently low so that ½ per cent more or less in the interest rate did not matter very much to the borrowers. Borrowers in fact needed money and had to pay the price whatever it was.

An increase in Bank rate from 3½ to 4 per cent had a much greater effect in postponing new issues than an increase from 2 to 2½ per cent. A 4 per cent Bank rate meant the existence of a more serious pressure on Bank of England reserves, greater strain upon the exchanges, and a smaller available surplus for lending abroad. In the days before the statistical calculation of totals of the items in the international balance of payments, merchant bankers and other issuers felt that it did not look right and was not right to bring out large capital issues for foreign account when Bank rate was 4 per cent or over. There were not many such issues. Temporary financing by treasury bills or otherwise was then the order of the day. The borrower could get part of his requirements by this means if he was willing to pay the price, and for the rest he had to be content to wait for a better market. The effect of an expected rise in Bank rate on the long term market, there-

[31] A statistical proof of this generalization has been prepared by me for the pre-war part of these studies.

fore, increased the amount of short term instruments offered in the discount market. At the same time it reduced, though only very slightly, one element in the demand for such instruments.

Because of certain customary practices in the new issues market, the funds of British savers in the course of being sent abroad as capital exports halted for a period of temporary employment in the London discount market, as did the funds of foreigners in the course of being returned to British savers in the form of interest and sinking fund payments. Borrowers in London before the war normally left the proceeds of their loans with the issue houses until they were required. Even if they were needed at once for remittance abroad, the banks that acted as agents for the borrowers [32] would retain sterling assets, while placing the borrower in possession of bank credit abroad, rather than depress the exchanges by making large and sudden offers of sterling in the foreign exchange market. Moreover the proceeds of foreign loans were almost always made available to borrowers gradually through payment by the investor in installments. Therefore, a certain volume of sterling deposits, which represented the proceeds of loans awaiting disposal by borrowers or held by foreign banks and agencies for gradual sale abroad, was always in existence in the London market. The postponement of new capital issues in response to expected or actual changes in Bank rate diminished this supply of funds available for short term investment. It did not, however, do so abruptly, for the proceeds of issues placed in the past continued to become or remain available because of the operation of the installment system and the administrative acts of the banks through which remittance abroad was accomplished.

It was also a practically binding custom for the remittance

[32] E.g., the Bank of Montreal for many Canadian, the 'exchange banks' for Far Eastern, and the London and Brazilian or Anglo-South American banks for South American borrowers.

of sinking fund and interest payments to be in the hands of the paying agencies in London for specified periods in advance of the date on which they were due. Before the war sinking fund money was regularly brought to London and placed with issue houses a month or six weeks in advance, often by contractual arrangement. It was for this reason that the Bank of Montreal, for example, was long a substantial lender in the London discount market, and ceased to be so when Canadian borrowing was transferred to New York. The issue houses definitely expected, as additional compensation for their services in making capital issues, that this arrangement should be followed, and that interest should be on hand possibly a week in advance. So important was this source of foreign funds in London that a good money market authority has suggested the possibility of actually calculating the average amount of such funds that had to be in London at all times during the year.[38]

The funds of British savers awaiting remittance abroad, and the funds of foreign borrowers awaiting the due date of sinking fund and interest payments had to find employment, and were the source of a steady demand for bills which was, in the short run, relatively insensitive to changes in Bank rate.

THE RESPONSE OF THE SHORT TERM MARKET TO CHANGES IN BANK RATE

Changes in Bank rate did not alter either the willingness of London banks to extend acceptance credit on good commercial risks or the demand for such credit. They shifted a small portion of trade financing to or from bank advances; but in

[38] The procedure suggested is to calculate the interest and sinking fund payments due during the year on foreign loans outstanding. This would give the minimum amount of foreign funds that had to be brought to London. If a minimum period, such as 3 weeks for sinking fund money and 1 week for interest money, is taken to represent the time during which these funds were held in London, the average amount that had to be on hand at all times can be estimated.

the main did not interfere with the financing of genuine commercial transactions by bills. Acceptance houses did not refuse to accept good bills because the exchange rate was moving against London, nor did commercial borrowers change long-standing credit lines and banking connections for temporary interest advantage. The response of the finance bill, however, to changes in Bank rate was quite different. Many bills were drawn on the acceptance houses for the sole purpose of taking advantage of low interest rates in London. For example, one of the regular methods of placing blocks of American securities in the London market involved the use of such bills during the period of accumulation and marketing. Bills were continuously being drawn to move funds from one market to another, especially between Paris and London. All such transactions were very delicate and, unlike trade borrowing, were sensitive to changes in differential interest rates.

While some borrowers were eliminated wholly or in part from the long term market because they *could* not borrow when Bank rate was rising, others were eliminated from the short term market because they did not *wish* to borrow under these conditions. In contrast to the situation in the new issues market there was no lack of short term lenders. The influence of an expected increase in Bank rate in contracting the demand for bills arising from the technical procedures of the capital market was slight compared with its influence in attracting to London a part of the mobile international bill portfolio.

The so-called 'foreign banks' in London and the private bankers in general that did a foreign business regularly kept a portfolio of foreign bills. This was moderate in amount and largely continental in character, including French bons de tresor and acceptances on Germany, Belgium, the Netherlands, Switzerland, and France. A few American and other acceptances were also held, as well as deposits in American banks which were sometimes substantial. Conversely banks of every kind throughout the world held large amounts of

sterling bills. These were much greater than the British portfolio of foreign bills and had continually to be replaced at maturity. Ordinary business prudence dictated that when Bank rate was expected to rise and the chances of replacing bills at a better price in the near future were good this portfolio should run down. This did not drive funds in substantial amounts from London, but it hastened the adjustment of the market rate of discount to the expected change in Bank rate. When this adjustment had taken place, and Bank rate was raised, a demand came into the bill market not only to meet replacement requirements, but also to increase the foreign portfolio of sterling bills. At the same time the British 'foreign banks' sold part of their foreign portfolio and bought sterling bills. This consideration applied also, mutatis mutandi, to a reduction in Bank rate.

THE COORDINATED RESPONSE

The supply of short term instruments in the London market had two components—a stable base made up of bills drawn to finance trade and a sensitive superstructure, made up of finance bills. The demand for such instruments also had a stable base—the need for secondary reserves and for outlets for short funds made available by the techniques of the new issues market—and a flexible superstructure—the shifting ownership of the international bill portfolio. An increase in Bank rate reduced the amount of finance bills drawn, left the amount of commercial bills and the stable elements in demand very little changed, and increased the flexible elements in demand. It therefore made room for the additional short term securities offered to take care of the temporary needs of prospective long term borrowers. Its effect on the market as a whole was to reduce the total of long and short term securities offered for sale, but to distribute the reduction in such a way as not to shut down entirely on foreign applicants for long term credit, and not to contract legitimate commercial credit lines needed to carry on international trade.

The Loss of Integration in the Money Market's Response to Changes in Bank Rate, Summary

Before the war the raising of Bank rate postponed new capital loans for foreign account, and it did so the more effectively the higher the level from which the rate was raised. The postponement of new foreign lending and the prudent management of the remittance abroad of the proceeds of foreign loans placed in the recent past and still being paid in London, while income from abroad for interest and sinking fund payments on past loans continued as before, increased the demand for sterling relative to the supply. Meanwhile, the discount market was required to take over part of the burden of new foreign lending from the new issues market. But this increased new short term foreign lending was less than the decrease in new long term foreign lending resulting from the postponement of new issues. At the same time sterling bills drawn for speculative purposes with the intention of remitting the proceeds abroad were reduced more than new short term lending taken over from the capital market was increased. The amount of sterling made available to foreigners as a result of new short term loans was therefore reduced on balance. In addition, the demand of foreigners for investment in sterling short term instruments was increased in response to the higher interest yield. The whole process of adjustment in the discount market reinforced and was harmonized with the response of the new issues market to a higher Bank rate. An instantaneous and double adjustment in both markets brought about a new demand for and decreased the supply of sterling in the foreign exchange and market.

After the war the great and direct interest of the government in the state of the capital market and in the interest rate because of its unprecedented refunding problems; the new elements of direct control in the market for foreign issues; the new attitude of British lenders toward the employment of the proceeds of new issues; the substitution of the treasury

bill in large measure for the genuine commercial bill in the discount market; the substitution of the mechanisms of the forward exchange market for the technique of interest arbitrage through bills; the increasingly conscious regulation of the foreign exchanges; and the fact that sterling had to be persistently defended during the process of returning to gold and after the return to gold—all combined to break down this remarkable integration in the response of the London money market as a whole to changes in Bank rate.

New Dangers in the Market

In contrasting the pre-war and post-war situations, two other circumstances must be stressed. In the first place, when there are two or more large and willing lenders in the world's international banking system, the situation may arise in which an increase in Bank rate in one of the two lending centers does not redistribute the capital loans in that center in time, but definitely drives the borrowers from one market to the other. Sinking fund and interest on old loans may be pouring into one center while new loans are going out of the other. This almost certainly will accentuate the interest differentials between the two centers, disturb the exchange rates, and increase gold movements; in addition, it will make the genuine time-bridging function of capital loans very much more difficult to accomplish. Such a situation prevailed from 1925 to 1929 when New York and London were competing for prestige as the world's banker.

In the second place, the use of the pre-war techniques of adjustment were subject to new dangers arising from changes in the distribution and amount of internationally mobile funds in the London market and the increased importance of private security transactions. These tended to create new problems and to diminish the effect upon the market as a whole of the type of adjustment just described. Because of the position of her international payments Great Britain found herself obliged to pay for imports in part by her promises to

pay of one kind or another. She would buy, for example, Argentine meat and Argentina would pay out the sterling received to meet her own obligations, and through the international clearance in the foreign exchange markets this sterling claim would lodge in the possession of other important creditor countries, particularly France and the United States. These countries would use the sterling to buy the only British exportable article that appealed to them, since British goods were still too dear, namely, British promises to pay, particularly balances, treasury bills, and war loans. This created a type of international debt with which the London market had not previously had to deal. Many countries not indebted to Great Britain acquired claims on London, whereas many countries that were indebted to Great Britain were unable to maintain the substantial sterling balances and sterling portfolio they had held before the war.

UNFAITHFUL BALANCES

This new type of distribution in the ownership of foreign funds in London was in conflict with the traditional view that the presence of foreign balances was merely an international application of the ordinary banking principle by which customers are required to maintain average balances in banks.[84] London bankers had always been confident that when such balances were withdrawn they would be passed on, through the system of international clearance, to others who required sterling and would find a lodgment once more in the London market. For this reason many of them felt that the figures published by the Macmillan Committee concerning the short term indebtedness of London gave a greatly exaggerated impression of the vulnerability of the market. They maintained that borrowing short and lending long *is* banking and that the normal condition of a creditor country is to be a short term debtor. In this they were partly justified. Even at the time of the publication of the Macmillan Report

[84] Cf. Ch. 1, The Breakdown of International Clearance through London.

balances amounting to perhaps £150 million were in London as a result of the deposit-compelling power often referred to in these studies, and could not be withdrawn unless foreign banks proposed to stop doing business in London altogether. The position was, nevertheless, new. Internationally mobile balances in London, such for example as those kept afloat by the British oil and tobacco monopolies and other big industrial corporations, were very much larger, and foreign balances were both larger and less diversified. Before the war small volatile balances moved in waves over the surface of the ocean of foreign balances in London. After the war these waves upon the surface were much deeper.

After England returned to the gold standard, therefore, the London market was subject to the withdrawal of balances on such a scale as to raise the question of 'unfaithful money.' Large movements of balances were, however, very often the result of security transactions, and the shifting of deposits as such frequently assumed a disproportionate share in the discussion of this problem.

UNFAITHFUL SECURITIES

After 1925 the Bank of England kept a high Bank rate as part of the technique of defending sterling. Consequently prime British securities, including the war loans, sold on a favorable yield basis and were attractive to foreign purchasers. The nationals of many countries that had placed loans in London also bought the sterling issues of their own countries freely for, as before the war, they liked the combination of their own country's credit and a sterling claim. These foreign holdings of sterling securities were far more important than foreign deposits. As expressed to the writer in London 'ready money is *tiny* compared to securities.' If we enlarge the usual connotation of the phrase 'unfaithful money' as applied to money markets after the war to include investments by foreigners as well as their deposits, then the true magnitude of the problem is apparent. After the war an adverse British bal-

ance of payments was offset by large foreign holdings of both sterling securities and deposits, but Great Britain obtained these foreign funds because she paid for them, not because foreigners had to have sterling assets. It was the difference known to every banker between live and active and idle deposits held by Great Britain for her customers.

New Criteria for Bank of England Policy

The evidence taken before the Macmillan Committee abounds in references to the question whether under these circumstances the old criteria of action were still adequate guides for the Bank of England. On the other hand, this evidence also includes several direct statements by Mr. Norman and Sir Ernest Harvey to the effect that the Bank of England continued after the war and after the return to gold to be guided in its formulation of credit policy solely by the behavior of the short term market and of the exchanges. These statements seem to contain a certain element of nostalgia, for there is no doubt that during the long interregnum of 1914–25 the 'semi-conscious' elements of management of pre-war days [35] had been developed into a direct and conscious grappling with the problems lying behind money market phenomena in all their various aspects, and that this new attitude was continued after the return to gold. The Bank of England was not accustomed before the war to assign to itself or to the public definite economic reasons for the various steps of policy upon which it embarked. It was in intimate contact with the daily 'feel' of the market and in possession of a great fund of experience. This was the basis of its conduct, and policies formed in this way were justified by their practical success. But after the war something more was needed. The discount market had, as a matter of hard fact, lost its paramount significance as the nerve center of the whole money market sys-

[35] This expression came to the writer from an excellent London money market source.

tem and the infallible guide to policy. Not by accident did the Bank of England greatly develop its own agencies of statistical research after the war and seek the advice of its own economic experts drawn from outside the ranks of the practitioners of the market.

These changes were at bottom due to the fact that the money market was operating in a new environment in which the defense of sterling was a continual preoccupation. Their immediate explanation lay in the first place in the technical changes described, particularly the loss of integration in the response of the money market to changes in Bank rate. In the second place, the relations growing up between the Bank of England and other central banks required an ever increasing control of the domestic market. Sir Ernest Harvey gave testimony before the Macmillan Committee that, as part of the arrangements made with other central banks, assets bought by the Bank of England for such banks could be offered to the Bank of England for discount, and could be turned into Bank of England deposits at will.[36] Though in practice the balances of foreign central banks were steady because the Bank required free balances as compensation for its expenses in rendering various services to them,[37] nevertheless what amounted to a new form of contingent liability was created, of which the Bank had to take account in formulating policy. New and vital relations had also been estab-

[36] During the hearings held by the Macmillan Committee Mr. McKenna tried to get Sir Ernest Harvey to admit that these were really demand deposits not included in the statement of the Bank, and held that, unless shown, the real obligations of the Bank of England to foreign central banks were understated (*Minutes of Evidence*, I, 16, questions 217–9). Mr. McKenna seemed to ask for the inclusion in the Bank's balance sheet of an item similar to that of the Federal Reserve banks showing their contingent liability for bills bought for foreign correspondents, but Sir Ernest Harvey held that item to be misleading because the Federal Reserve banks do not publish the amount of government securities they purchase for foreign central banks (*ibid.*, p. 17, question 231).

[37] *Ibid.*, pp. 20–1; evidence of Sir Ernest Harvey, question 285.

lished between the Bank and the Treasury, not only in the administration of the public funds but also in so regulating rates as not to impede refunding operations. In particular, the problem of refunding the £2,000 million 5 per cent War Loan was always a market factor. The Bank probably did not gain full liberty of action with respect to interest rates until after the great national effort to refund this issue was completed in 1932 (cf. Ch. 31). Finally the Bank's relations with the joint stock banks had changed. The Bank took a new interest in obtaining direct information from them concerning the needs of industry, and did, in practice, recognize their increased importance in all money market matters, and its own greater dependence on their cooperation in making its rate effective. This was partly due to the new weapons by which the joint stock banks could resist Bank of England pressure exerted upon them indirectly through the discount market—the non-renewal of their investment in treasury bills, the use of gold held outside the Bank, the willingness to allow their ratio system to vary. It was partly due to the fact, brought out by the Macmillan Committee, that the joint stock banks after the return to gold played a much greater direct role than formerly in attracting foreign deposits to England because they accepted such deposits at interest rates that did not always vary with the market rate of discount.

Cooperation by the joint stock banks was therefore important to the Bank of England, and was in the main forthcoming. At the same time the Bank relied more heavily upon its own direct initiative in influencing the credit base, depending less upon the indirect effects of changes in Bank rate upon the discount market. In view of the increased volume of public transactions it was possessed of great potential power to do so by working in close cooperation with the Treasury in the management of the 'public deposits,' and in the Currency and Bank Notes Act of 1928 it quietly took power to prevent its policies from being opposed through private gold transactions. For this reason and others the discussion of changes

in the position of the Bank in the London money market and its criteria of action is not complete without a consideration of that Act.

The Final Legal Form of the British Gold Bullion Standard

The Currency and Bank Notes Act of 1928

Great Britain's position in the international gold standard system was, after 1925, *in substance* different from her pre-war position in the various respects analyzed above. The changes in the *external form* of her adherence to the gold standard, begun in the Currency and Bank Notes Acts of 1914 and continued through the administrative decrees of the war period, the Gold and Silver (Export Control) Act of 1920, and the Gold Standard Act of 1925, were completed by the Currency and Bank Notes Act of 1928. From a broad international viewpoint this Act, which finally completed the legal framework of the post-war British gold bullion standard, could properly and logically have been treated in Part II. This would, however, have removed from its proper setting the discussion of certain techniques of credit control practiced in Great Britain during Experimentation which were intimately related to, and indeed, the expression of, long range policies laid down by the Cunliffe Committee in 1918 as an integral part of the British program not only of returning to, but also of maintaining the gold standard.

The Cunliffe Committee in its Interim Report of 1918 recommended:

1) The amalgamation of the Currency Note Issue and the Bank of England note issue and a return to the basic principles of the Peel Act of 1844;

2) A method of determining the future size of the fiduciary issue after the amalgamation had been carried out;

3) A policy to be pursued in anticipation of and in preparation for that amalgamation;

4) Complete centralization of British gold reserves.

The first recommendation contained three elements set forth in paragraphs 21, 32, and 33 of the Report (our italics):
1) ". . . . it is, in our judgment, imperative [to protect the gold standard against domestic inflationary tendencies] that the issue of fiduciary notes shall be, as soon as practicable, once more limited by law, and that the present arrangements under which deposits at the Bank of England may be exchanged for legal tender currency *without affecting the reserve of the Banking Department* shall be terminated at the earliest possible moment. Additional demands for legal tender currency otherwise than in exchange for gold should be met from the reserves of the Bank of England and not by the Treasury, so that the necessary checks upon an undue issue may be brought regularly into play. Subject to transitional arrangements which we propose . . . we recommend that the Note Issue . . . should be entirely in the hands of the Bank of England."
2) ". . . . We are of opinion that the principle of the Act of 1844 should be maintained, namely that *there shall be a fixed fiduciary issue beyond which,* subject to emergency arrangements which we recommend below, *notes should only be issued in exchange for gold.*"
3) ". . . . We are of opinion that the provisions of the Currency and Bank Notes Act of 1914 under which the Bank of England may, with the consent of the Treasury, temporarily issue notes in excess of the legal limit should be continued in force. It should be provided by Statute that Parliament should be informed forthwith of any action taken by the Treasury under this provision by means of a Treasury Minute which should be laid before both Houses. The Statute should also provide that any profits derived from the excess issue should be surrendered by the Bank to the Exchequer. It will of course be necessary that Bank rate should be raised to and maintained at a figure sufficiently high to secure the earliest possible retirement of the excess issue."

Since, in view of future changes in total note circulation, it was technically impossible to estimate the size of the fiduciary issue that would be appropriate to the situation prevailing at the time of the proposed amalgamation the Committee recommended (sec. 41 and 45) that:

1) the procedure of fixing upon a desirable central gold reserve and deriving the size of the fiduciary issue from it be followed.
2) on the basis of a pre-war Bank of England gold reserve of £38 million and a pre-war gold reserve of £123 million in the pocket of the people, "the normal minimum amount of the central gold reserve should be £150,000,000."
3) when the exchanges were working normally on the basis of a minimum reserve of £150 million the position should again be reviewed in the light of the dimensions of the fiduciary issue as it then existed.
4) when the fiduciary position of the issue was reduced to the amount which experience showed to be consistent with the maintenance of a gold reserve of £150 million in the Issue Department of the Bank, the outstanding Currency Notes should be retired and Bank of England Notes of low denomination substituted, the Bank of England fiduciary issue being simultaneously increased by an amount equal to the issue of Currency Notes covered by government securities.

The Committee dealt with the policy to be pursued pending the amalgamation in the following terms (sec. 43 and 44, our italics):

1) "There would be some awkwardness in transferring the issue of Currency Notes to the Bank of England before the future dimensions of the fiduciary issue have been ascertained. We therefore recommend that *during the transition period the issue should remain a Government issue,* but *that such post-war expansion* (if any) *as may take place should be covered,* not by the investment of the proceeds of the new notes in government securities as at present, but *by taking Bank of England Notes from the Bank of England and holding them in the Currency Note Reserve,* and that, *as and when opportunity arises for providing cover for the existing fiduciary portion of the issue, the same procedure be followed.* The effect of this arrangement would be that the demands for new currency would operate in the normal way to reduce the reserve of the Banking Department of the Bank of England, which would have to be restored by raising money rates and encouraging gold imports."
2) "We should then in the course of time have a Currency Note

Issue covered partly by the £28,500,000 of gold at present held and partly by Bank of England Notes covered by gold in the Issue Department, the balance, *forming the Fiduciary part of the Issue properly so-called,* being covered by Government securities."

This policy for the transition period was, as shown in Chapters 9–10, put into practical effect in its essential meaning if not in the precise accounting form suggested by the Committee. Expansion of the note issue was provided for after the war "by taking Bank of England Notes from the Bank of England," and putting them into actual circulation instead of transferring them to the Currency Note Reserve Account as backing for new Currency Notes (some notes were transferred in this way). The effect was identical, except that an intermediate term, an increase in Currency Note reserves and Currency Notes in circulation, was dropped out. The system "under which deposits at the Bank of England may be exchanged for legal tender currency without affecting the reserve of the Banking Department" was terminated. The Committee's recommendations did not include a correlative proposal that the arrangements under which legal tender might be exchanged for deposits at the Bank of England *without affecting the reserve of the Banking Department* should be terminated. Quite the contrary. The Committee recommended that, as, and when opportunity arose for providing cover for the existing fiduciary portion of the Currency Note Issue Bank of England Notes should be transferred to the Currency Note reserve. Such an opportunity arose with the return flow of currency in 1920–22. Here again the policy was carried out in substance rather than in form. Instead of withdrawing Bank of England Notes from circulation and transferring the resulting increase in the reserve of the Banking Department to the Currency Note reserve, Currency Notes were retired. The effect was the same, the only difference being that an intermediate transaction—an increase in Notes in the Banking Department and their transfer to the Currency Note reserve—was omitted.

The Cunliffe Committee Report confined itself to the effect of the administration of the dual system of note issue on the reserve of the Banking Department, leaving its effect on 'bankers balances' to be inferred. The increase in circulation from 1919 to 1920 put pressure on both the Bank's own reserve and 'bankers balances at the Bank.' The decline in circulation during 1920–22 relieved neither. It failed to relieve 'bankers balances,' however, only because of the employment of another technique—that of keeping 'public deposits' steady without recourse to additional Bank of England credit in spite of the drafts made upon them to redeem Currency Notes.[88] By this second technique seasonal fluctuations in the total note issue were prevented during the first three and a half years after the return to gold from having any appreciable influence on 'bankers balances' at the Bank of England.

In these ways the technical details of the plan to reduce the fiduciary element in the note issue and prepare for the amalgamation became part of the domestic policy of deflation followed by stability that played so great a role in the world drama of England's effort to return to and maintain the gold standard.

Concerning the policy of concentration of gold reserves the Cunliffe Committee made the following recommendations (sec. 24, 25, and 44, our italics):

1) ". . . while it is a necessary condition of an effective gold standard that the import of gold should be free from all restrictions it is not necessary to allow gold coin and bullion *obtained otherwise than from the Bank of England to be exported.* In view of the fact that it is convenient for the Bank of England that the Bank of England have cognizance of all gold exports we think it desirable *that the export of gold coin and bullion should be subject to the condition that such coin or bullion has been obtained from the Bank of England.*"

2) ". . . in view of the withdrawal of gold from circulation, it is, we think, desirable that the gold reserves of the country should be held by one central institution, and we recommend therefore

[88] Cf. Ch. 10, The Administration of the Dual System of Note Issue.

that all banks should transfer any gold now held by them to the Bank of England except such small amounts as they may require to keep for the convenience of travellers."

3) ". . . During the transition stage the greater part at any rate of the demand for gold for export will fall upon the Bank of England, since currency notes are not likely to be presented to any large extent for actual payment in gold, but will be paid in by the banks which collect them to the credit of their accounts with the Bank of England, the balances thereby created being used when necessary to draw gold from the Bank of England for export in the ordinary way. We accordingly think that it will be desirable that Bank of England notes should likewise be substituted in the currency note reserve, either immediately after the war or from time to time by instalments, for the £28,500,000 gold now held by that reserve, so that when the time is ripe for the final transfer the whole of the gold reserve may be in the hands of the Bank."

The second recommendation was carried out in February 1920 under circumstances in which the interests of the banks coincided strongly with the recommendation of policy (cf. Ch. 9), and the third was acted upon immediately on the return to the gold standard. The first amounted to a proposal to direct the whole international flow of gold through London through the Bank of England, thus transferring to the Bank the major functions of the bullion market. It was not put into effect as suggested, but its central aim was attained by certain provisions of the Currency and Bank Notes Act of 1928 and by the inconspicuous procedure of carrying out the customs formalities concerning gold at the Bullion Office of the Bank of England.

The Report of the Committee on Currency and Bank of England Note Issues, upon whose recommendations England acted in returning to gold in April 1925, took "as its natural starting point" in dealing with the amalgamation of the note issues the recommendation of the Cunliffe Committee that the Currency Note Issue should be transferred to the Bank of

England when it had been ascertained by experience what fiduciary issue was consistent with the maintenance of a centralized reserve of £150 million (sec. 4). That figure, it recalled, was based upon the assumption that gold circulation within the country was not to be resumed, and was, indeed, a luxury not essential to a modern gold standard (sec. 41, 43, and 44). In view of the establishment of a gold bullion standard, it considered the actual date of the amalgamation of the note issues not of vital importance, and therefore merely recommended a continuation of the policies laid down by the Cunliffe Committee (sec. 39). It held that the experience needed to determine the size of the fiduciary issue should have been obtained by 1927, and that since about a year would be required to establish the machinery for the transfer, steps should be taken at once to prepare the technical details (sec. 49). It suggested that the actual amalgamation might be effected early in 1928 or even before (sec. 50).

In March 1925 the £27 million gold remaining in the Currency Note Reserve Account was transferred to the Bank of England in exchange for Bank of England Notes as recommended by the Cunliffe Committee, and public deposits continued to be so managed as to prevent seasonal fluctuations in the currency from greatly influencing bankers balances.

On July 2, 1928 the Currency and Bank Notes Act was passed, carrying into effect the long maturing and carefully prepared program for a return to normal techniques in the administration of the note issue, subject to the changes required by the transition to a gold bullion standard and with the addition of a legislative substitute for the old-fashioned practice of suspending the Bank Act under a Letter of Indemnity in times of emergency. This Act was a tribute to the consistency of the fundamental British monetary policy carried out over a whole decade, 1918–28, characterized by such remarkable changes in other respects. It provided

1) for the amalgamation of the two note issues through the issue of £1 and 10 s. Bank of England Notes having legal tender power

and payable only at the head office of the Bank of England, the transfer of the assets of the Currency Note reserve to the Bank of England, and the assumption by the Bank of England of the obligation to meet outstanding Currency Notes pending their exchange for Bank of England Notes (sec. 1, par. 1 and 3, and sec. 4 and 5);

2) the fixing of the fiduciary issue at £260 million to consist of securities appropriated by the Bank to the Issue Department, including silver coin not in excess of £5½ million (sec. 2, par. 1, and sec. 3);

3) the provision of elasticity in the note issue by giving the Treasury the right to (a) *reduce* the fiduciary issue at the request of the Bank for periods determined by the Treasury (sec. 2, par. 2); (b) *increase* the fiduciary issue to a specified amount at the request of the Bank for periods not to exceed six months with three renewals; i.e. a total period of not exceeding 2 years unless Parliamentary authority for a further extension was secured (sec. 8);

4) the payment of profits earned by the Bank on the fiduciary issue to the Exchequer (sec. 6);

5) the modification of the form of the Bank statement as agreed upon by the Bank and the Treasury (sec. 10);

6) the granting of power to the Bank of England to compel the sale to it of gold held in England outside the Bank as long as the gold bullion standard remained in effect (sec. 11).

The provisions under headings 1–4 were all in strict accord with the technical recommendations of the Cunliffe Committee. The granting of the power to the Bank to commandeer gold was in harmony with, though it did not go as far as, the recommendations of that Committee in centralizing control over gold in the hands of the Bank. The text of this provision (sec. 11, par. 1 and 2, our italics) reads:

"With a view to the concentration of gold reserves and to the securing of economy in the use of gold, the following provisions of this section shall have effect as long as subsection (1) of section one of the Gold Standard Act, 1925, remains in force.

Any person in the United Kingdom owning any gold coin or bullion to an amount exceeding ten thousand pounds in value

shall, on being required so to do by notice in writing from the Bank, forthwith furnish to the Bank in writing particulars of the gold coin and bullion owned by that person, *and shall, if so required by the Bank, sell to the Bank the whole or any part of the said coin and bullion,* other than any part thereof which is bona fide held for immediate export or which is bona fide required for industrial purposes, on payment therefor by the Bank, in the case of coin of the nominal value thereof, or in the case of bullion at the rate fixed in section 4 of the Bank Charter Act of 1844."

The functions of the bullion market were in this way continued undisturbed, but the Bank was armed against any interference in its policies by privately accumulated gold hoards or gold reserves.

On November 21, 1928 the amalgamation was successfully carried out, and the Bank's first statement in its new form published. As a result of the transfer of assets from the Currency Note reserve a certain amount of foreign exchange was for the first time included in the assets of the Issue Department of the Bank of England under the head 'other securities,' but this was restricted to the currencies of countries with a free gold market.[39]

The English Credit Base during Experimentation

The preceding discussion of the experiment of defending sterling, and indeed the whole treatment of the international gold standard in these studies, forms a background against which the behavior of the English credit base and credit superstructure after the return to gold may be examined statistically, and which gives a rich historical and technical significance to the bare figures.

The return to the gold standard in April 1925 marked the end of a little over three years of stability in the 'reserve of notes and coin' in the Banking Department of the Bank of England (Chart 14), but it did not on that account inaugurate a period of instability in the credit base of the commer-

[39] Sir Ernest Harvey's evidence before the Macmillan Committee (*Minutes of Evidence,* I, 14, answer to question 156).

cial banking system. The whole course of Bank of England credit policy was designed to prevent domestic currency movements and international gold flows from influencing directly the balances of banks at the Bank of England while the treasury bill technique, described in Chapter 10, prevented these balances from being directly influenced by the flow of public revenue.

The Reserve of the Bank of England

The range of fluctuation in the 'reserve of notes and coin' of the Banking Department of the Bank of England was very much wider after the return to gold than before owing to the

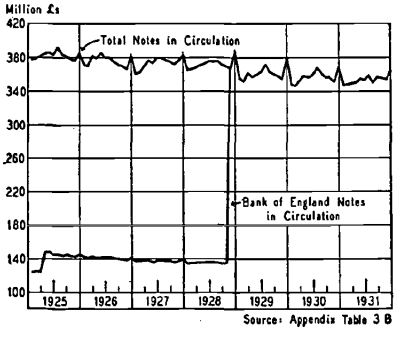


CHART 38

United Kingdom, Note Circulation, 1925-1931, last week of each month

joint influence of the renewed contact established between the bullion market and the Bank of England by the Gold Standard Act of 1925 and of the amalgamation of the note issues by the Currency and Bank Notes Act of 1928. They were not affected by the transfer of gold to the Bank from the Currency Note Reserve Account in March 1925 (Chart 39), for this was offset by a corresponding increase in Bank of England Notes. These were transferred to the Currency Note Reserve Account, and the total note circulation was also unchanged (Chart 38). Until the amalgamation, the reserve of the Banking Department was not influenced by major seasonal fluctuations in total circulation, for these continued to take place in the Currency Note component (Ap. Table 3 B and Chart 38), but after November 1928 this was, of course, no

longer possible. Throughout the period changes in gold coin and bullion of the Bank of England once more reflected the Bank's participation in the international distribution of gold. In combination with the Bank of England note component of total note circulation, with the one exception noted, they determined the fluctuations in the 'reserve of notes and coin of the Banking Department.' After November 21, 1928, for the first time since 1914, fluctuations in the reserve of the Bank of England reflected fully the changes in the domestic circulation, and for the first time since the adoption of the gold standard, it became a simple statistical task to separate and measure the influence of changes in the domestic circulation and of international gold flows upon the Bank of England reserve. Before the war it was necessary, because of the wide use of sovereigns, to eliminate the domestic gold flow from total gold movements at the Bank, and to combine it with changes in notes in circulation in order to separate the domestic and international influences playing upon Bank of England reserve,[40] and from August 1914 to November 1928 the Bank of England reserve was influenced only by a fraction, and by no means a considerable or a constant fraction, of the fluctuations in the domestic circulation.

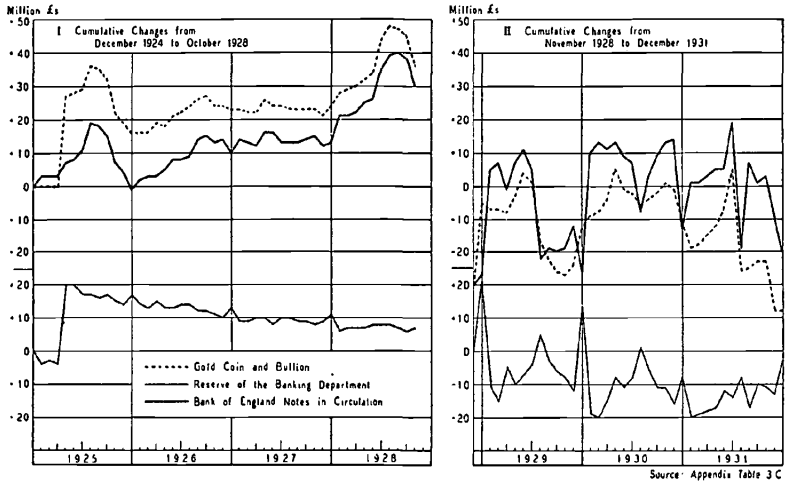
The joint influence of these two factors on the reserve of the Banking Department may be shown by using the method of graphical presentation employed in dealing with the dual system of note issue in Chapters 9 and 10 (Charts 5 and 16). To bring out the effects of the amalgamation of the note issues the periods 1925 to November 1928 and December 1928 to 1931 are presented separately in Chart 39. The figures for the last Bank of England statement of each month are used in order to emphasize the seasonal factors. Until the amalgamation of the note issues the reserve of the Banking Department fluctuated in close correlation with gold holdings—except for the transfer of gold from the Currency Note reserves in March

[40] Mr. Smit has carried out elaborate computations of this sort in the pre-war part of these studies.

1925 which was neutral as far as the Banking Department was concerned—but a gradually declining trend in total note circulation was reflected in a decline in Bank of England notes in circulation, and consequently gave regular relief to the reserve of the Banking Department. This is reflected graphi-

CHART 39

Bank of England, Factors affecting the Reserve of the Banking Department, 1925-1931, last week of each month



cally in the gradual coming together of the gold and bullion line and the reserve line. From December 1928 to August 1931 the main pattern of the fluctuations in the reserve of the Banking Department was determined by the gold movements. As in the preceding years a declining trend in the circulation gave relief to the reserve, which appears graphically in the tendency of the reserve line to rise above the gold coin and bullion line. But upon these relations were now superimposed sharp seasonal fluctuations in the note issue resulting chiefly from the introduction of £1 and 10 s. notes. The seasonal movements of the reserve were in close and inverse correlation with those of the note issue. These relations were

interrupted in August 1931 by an increase of £15 million in the reserve due to the increase in the fiduciary issue made to meet the emergency of that time, but were thereafter resumed.

The course of the reserve of the Banking Department for the whole period of Experimentation is shown in Chart 40, which is a continuation of Chart 14 and is plotted from average monthly figures.

Bank of England Credit

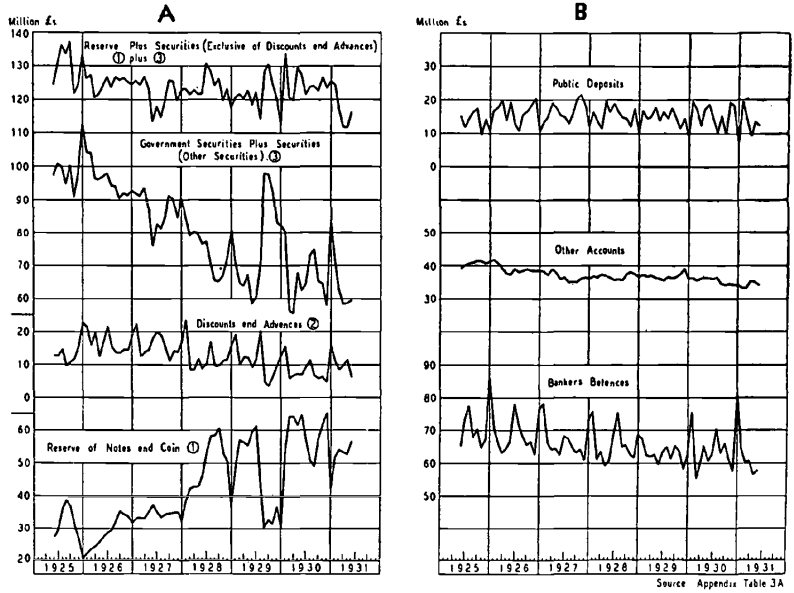
The declining trend in the note circulation up to 1930, which accounted in part for the behavior of the reserve of the Banking Department was itself partly a consequence of the type of credit superstructure built upon the reserve, the major characteristic of which was stability imposed by Bank of England policy. In Chart 40 the course of 'government securities' held by the Bank of England, plus the 'securities' component of the balance sheet item 'other securities,' is plotted. The settled policy of offsetting the influence of changes in the reserve of the Banking Department upon the English credit base is clearly revealed by inspection of the relation of this line to that showing fluctuations in the reserve. This is not so readily apparent from an inspection of the components of the security holdings of the Bank, shown separately in Chart 41. The net effect of these offsetting operations upon total Bank of England credit is seen when 'total securities' held by the Bank of England and the 'reserve of the Banking Department' are combined (top line of Chart 40). No trend of any kind appears in this line. As a consequence, any growth in total Bank of England credit had to come from changes in the 'discounts and advances' of the Bank if it was to come at all. It is at this point that the maintenance of a steadily high Bank rate throughout the period by discouraging applications to the Bank for discounts and advances exerted its maximum effect. 'Discounts and advances,' plotted separately in Chart 40, showed no rising trend. On the contrary, its trend was slightly downward, if anything.

Bankers Balances at the Bank of England

The distribution of Bank of England credit between 'public deposits,' 'other accounts,' and 'bankers balances' (Chart 40) indicates that the full force of this restrictive policy was brought to bear upon the banks. The outstanding feature of

CHART 40

Bank of England, Assets and Liabilities of the Banking Department, May 1925–May 1931

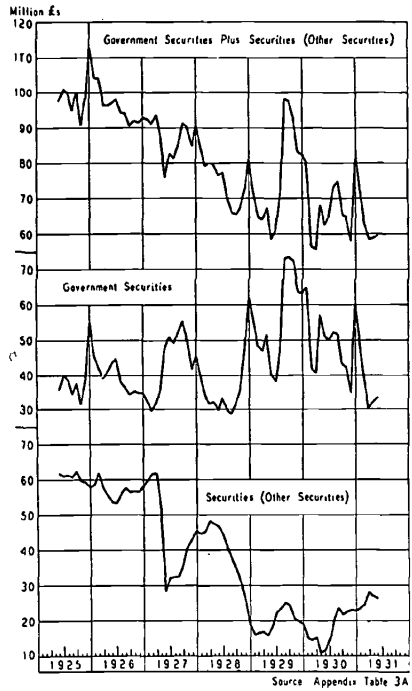


Source Appendix Table 3A

the behavior of Bank of England deposits is the stability of the three components. Public deposits, in spite of all the stirring events of the period, fluctuated within the range of £10 to £20 million. This was a great achievement when the size and complexity of the financial transactions of the British government are considered. It was mainly the result of the treasury bill technique previously described. The amalgamation of the note issues transferred the task of offsetting the effect on 'bankers balances' of seasonal changes in the circula-

CHART 41

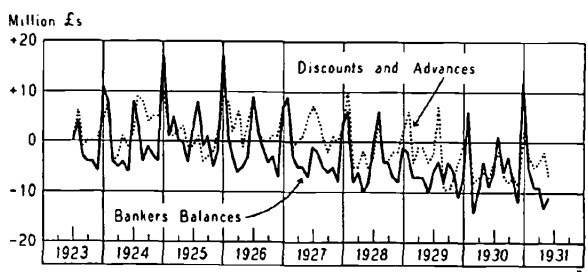
Bank of England, Securities in the Banking Department, May 1925–May 1931



tion from this technique to that of Bank of England open market operations. No trace of this transfer appears in the behavior of 'public deposits,' but it is clearly evident in the securities line in Chart 40, for this follows inversely the re-

CHART 42

Bank of England, Bankers Balances and Discounts and Advances June 1923–May 1931, changes cumulated monthly



serve line, which after 1928 included as a component the seasonal changes in the circulation.

From 1925 to 1931 'bankers balances' at the Bank of England gradually declined, though the gold reserves of the country rose. Their fluctuations corresponded closely in size, and in the main in direction, with the fluctuations in 'discounts

TABLE 51

Bank of England, Bankers Balances and Discounts and Advances 1923-1931, changes cumulated monthly (millions of pounds)

BANKERS BALANCES

	1923	*1924*	*1925*	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*
Jan.		8	1	1	9	6	−2	6	−5
Feb.		−4	5	−3	−3	−8	−7	−14	−9
March		−5	0	−6	−5	−6	−7	−10	−9
April		−4	0	−5	−5	−10	−7	−4	−13
May		−6	−4	−3	−7	−8	−10	−9	−11
June	0	8	4	9	−1	−1	−6	−6	
July	4	2	8	2	−2	6	−4	1	
Aug.	−3	−4	−1	−1	−5	−4	−8	−6	
Sept.	−4	−1	1	−4	−6	−4	−4	−3	
Oct.	−4	−3	−5	−3	−5	−7	−6	−8	
Nov.	−6	−4	−2	−7	−8	−8	−11	−12	
Dec.	11	17	17	−7	4	−1	−7	12	

DISCOUNTS AND ADVANCES

Jan.		7	4	8	9	10	6	2	−3
Feb.		−4	1	2	−1	−5	−4	−8	−5
March		−3	2	6	0	−5	−1	−7	−4
April		1	3	−1	1	−2	−1	−6	−2
May		−1	−1	4	5	−5	−4	−7	−7
June	0	2	−1	8	7	−3	−2	−4	
July	6	9	1	2	5	4	7	−2	
Aug.	−1	8	−4	0	1	−4	−9	−7	
Sept.	0	4	−3	0	−2	−4	−10	−8	
Oct.	0	5	−2	1	1	−2	−7	−7	
Nov.	0	5	2	1	0	−2	−4	−9	
Dec.	4	10	9	6	3	2	−1	2	

Compiled from Ap. Table 3 A

and advances,' as seen in Chart 42, in which monthly changes in 'bankers balances' and 'discounts and advances' are plotted cumulatively from June 1923 to June 1931. The seasonal pattern of the fluctuations was almost exclusively a reflection of the visits of the market to the Bank in connection with mid-year and year-end settlements.

The British banking system was subject to a well defined technique of credit control, not only from year to year, but within each year. This is evident when the 'typical year' of the Bank of England for the decade 1922–31 is compared with the 'typical years' of pre-war decades analyzed by Mr. Smit.

The Typical Year of the Bank of England, 1922–1931

In his analysis Mr. Smit has carried forward by decades up to 1911 a method first used by Jevons. The typical year for each decade is arrived at by adding the amounts of each major balance sheet item for the first week of each of the ten years, and then dividing by ten to get the value of that item for the first week of the 'typical year,' and repeating this operation for the second, third, and all succeeding weeks throughout the year. For example, the figure for 'total securities' for the first week of the 'typical year 1902–11' is the average of 'total securities' appearing on the balance sheet in the first weekly statement of each of the ten years in this decade. In Charts 43 and 44 Mr. Smit's 'typical year 1902–11' is plotted by the side of the 'typical year 1922–31.' To make the pre-war and post-war decades comparable the items for the 1922–31 decade are given in accordance with the form of the Bank of England balance sheet regularly published before November 21, 1928, with the exception of 'notes in circulation.' In view of the amalgamation of the note issues within the period, the figure presented for the post-war decade is for total notes in circulation which, after the amalgamation, became identical with Bank of England notes in circulation.

Chart 43, in which the typical year is plotted on semi-logarithmic paper, shows that the seasonal fluctuations in many individual items in the post-war period were proportionately of the same order of magnitude as in the pre-war period, notably 'total securities,' 'other deposits,' 'public deposits,' and the 'reserve of the Banking Department,' whereas this was not true of 'government securities' and 'gold coin and

CHART 43

The Typical Year of the Bank of England 1902-1911 and 1922-1931 (semi-logarithmic scale)

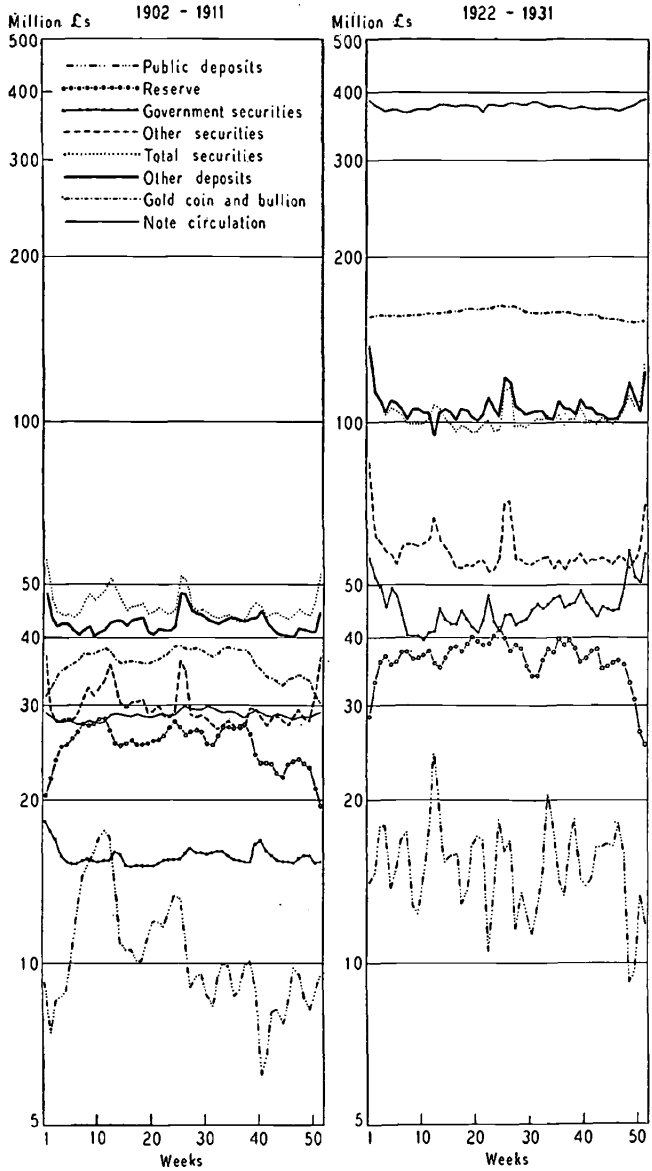
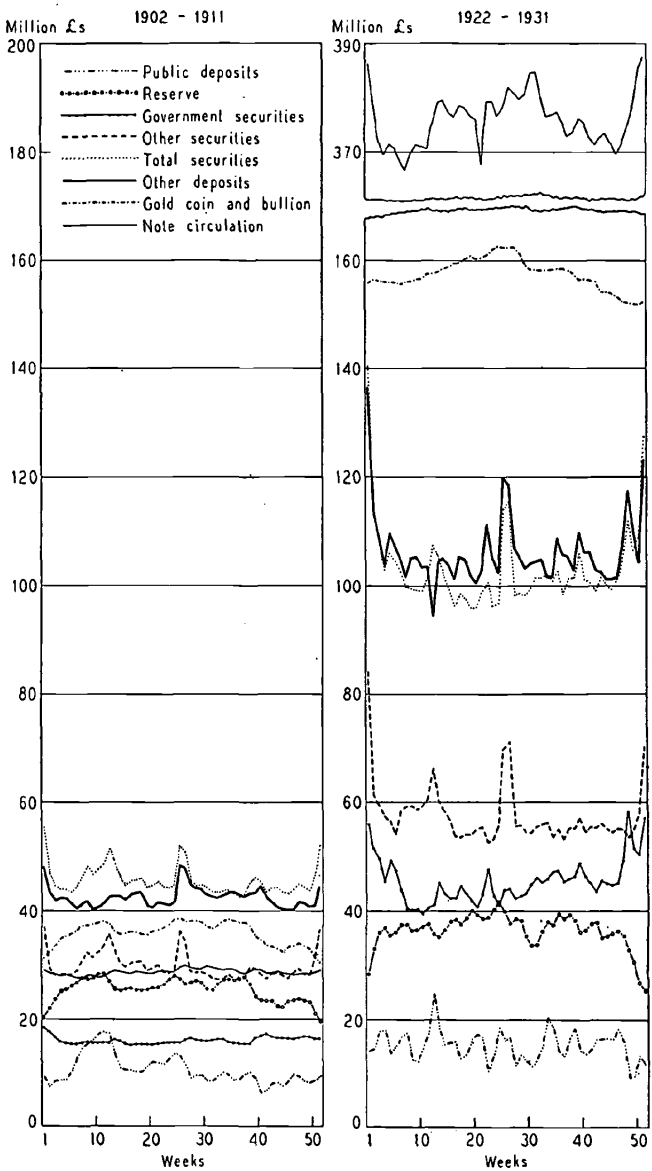


CHART 44

The Typical Year of the Bank of England 1902-1911 and 1922-1931 (arithmetic scale)



bullion.' 'Note circulation' appears as nearly a straight line in both decades. One would expect seasonal forces affecting bankers balances at the Bank of England to express themselves in changes different in absolute amount but similar in proportion, especially at the year end and the half year, when the total means of payment and volume of monetary transactions in the country had greatly increased. This expectation, however, would not be justified in the case of 'government securities' which is only one component of 'total securities,' while the gold concentration policy and the transition to a gold bullion standard so increased 'gold coin and bullion' and 'notes in circulation' as to rob proportionate changes in these items of significance. Large seasonal fluctuations in the note circulation resulting from the elimination of gold in hand to hand payments and the amalgamation of the note issues appear as insignificant proportionate changes in 'total circulation' after the great increase in the fiduciary issue. The importance of seasonal changes in 'note circulation,' and to a less degree in 'gold coin and bullion' is therefore not suggested in this chart. Furthermore the same proportionate changes in the various items, being very different in absolute amount in the 1922–31 decade as compared to pre-war, no longer had, in combination, the same effect upon the reserves and deposits of the Bank. The effect of the change in the total means of payment in England upon the technical problems of Bank of England credit control is entirely obscured by presenting the typical year figures on ratio paper. But plotting on ratio paper brings out the fact that some changes in the problems confronting the Bank of England were due to the persistence of old, and in many cases, routine elements in the operation of the banking system subsequent to a period of credit expansion. Chart 43, therefore, serves a useful purpose, but the detailed comparison with the pre-war position is made from the absolute changes in the figures in Chart 44.

The notable features of the typical year 1902–11 were: 1) The marked inverse relation between public and private

deposits, which Mr. Smit found to be characteristic of earlier decades, does not appear. 'Other deposits' did not decline sharply in the latter half of the first quarter when government revenues were flowing in and 'public deposits' were being built up, nor did they increase gradually toward the end of the year corresponding to a gradual decline in public deposits.

2) 'Public deposits,' however, continued to show an increase toward the last half of the first quarter and then declined gradually until nearly the end of the year.

3) Though this was not reflected directly in 'other deposits,' it afforded the Bank of England a grip upon the market, for 'other deposits' were built up in the first quarter partly by a seasonal increase in gold and bullion, but largely by an increase in 'other securities.' Throughout the year 'other securities,' of which the chief constituent was undoubtedly 'discounts and advances,' representing accommodation sought by the market at Bank rate, fluctuated with the variations in 'public deposits,' except for the two seasonal peaks at the end of the half-year and of the year. 'Government securities,' on the other hand, remained practically constant throughout the year.

4) The 'reserve of the Banking Department' during this decade was high during the last half of the first and second quarters and during the entire third quarter, and declined seasonally in the final quarter of the year. This was due to a combination of the international gold flow and an internal movement of circulation of a type similar to that observable in the figures for the post-war decade, described below. Consequently when 'public deposits' were being built up by the inflow of the revenue in the first quarter, the need of the market to apply to the Bank for accommodation was reduced but not eliminated. The general strength of the 'reserve' from about the eighth to the fortieth week built up 'other deposits,' but these were brought under pressure in the last quarter. It was this autumn pressure that first led Jevons to undertake

the analysis here continued, but by the decade 1902–11 its severity had been much reduced.[41] Though 'other deposits' were reduced in the autumn, the market does not seem to have been forced heavily into the Bank.

From this examination of the figures of the typical year 1902–11 it is clear that before the war the seasonal patterns in 'public deposits' and 'Bank of England reserve' were both active forces playing directly upon 'other deposits,' that is, chiefly upon bankers balances, and that they were not offset in any degree by the open market operations of the Bank. It is also clear that the influence of the seasonal flow of public revenue upon 'public deposits' early in the year continued to put the Bank in a strategic position to make Bank rate effective during the rest of the year.[42]

In contrast, the typical year 1922–31 clearly shows a new technique of credit management:

1) During this decade the collection of the bulk of the public revenue in the first quarter of the year did not impress a pattern on 'public deposits' and 'other securities' throughout the year. Its influence on the Bank of England balance sheet was concentrated in the thirteenth week, the last week of the first quarter, during which there was a sharp peak in 'public deposits' and in 'other securities,' and also a sharp trough in 'other deposits.' Throughout the year 'public deposits' did not exhibit any general seasonal pattern. There were larger and sharper fluctuations than in the pre-war decade owing to the increase in government transactions, but the influence of the treasury bill technique in keeping the general level of 'public deposits' stationary is clearly apparent.

2) Fluctuations in the 'reserve of the Banking Department'

[41] This may have been due to a gradual mastering of the seasonal influence of cotton bills upon the exchanges. The writer was told in interviews in London that just before the war the actual remittance for cotton had been so spread over the year that it would in any event soon have ceased to exercise a dominant seasonal influence on the exchanges.

[42] Mr. Smit discusses these problems fully in his pre-war studies.

were accentuated as compared to the pre-war decade, but in spite of all the changes that had taken place, including the amalgamation of the note issues, the seasonal pattern was about the same. The separation of the influence of domestic circulation and the international gold flow in the two figures 'notes in circulation' and 'gold coin and bullion' during this decade indicates that the general seasonal factor in the reserve followed approximately the following course.[43] During the first quarter a return flow of notes from circulation in the early weeks was supplemented by imports of gold from abroad, owing to seasonal strength in the exchanges, and the reserve rose. Early in the second quarter gold imports continued, but a larger increase in domestic circulation pulled down the reserve somewhat. A peak in note circulation at the mid-year coincided rather closely with a seasonal peak in gold imports, but soon after the middle of the year a declining note circulation coincided with seasonal gold exports. These two influences were about offsetting until the beginning of the fourth quarter. Reserves therefore did not decline until the fourth quarter when seasonal gold exports were greater than the decline in note circulation. Finally, toward the end of the year a rapid seasonal increase in circulation and continued gold loss combined to put severe pressure on the reserve.

3) In sharp contrast to the pre-war decade 'government securities' in the post-war decade showed a clear inverse correlation with fluctuations in the 'reserve of the Banking Department.'[44] The most noteworthy feature of this relation was the sharp increase in 'government securities' in November when the fall in the reserve was most rapid.

[43] The fact that during the greater part of the decade seasonal fluctuations in notes were largely eliminated as an influence on reserves subjects this generalization to an unavoidable margin of error.

[44] There seem to be two exceptions of importance, the first in the 6th and 7th week when there was a shift from 'public' to 'other securities,' the second in the 23rd week (middle of May), when a sharp increase in 'public securities' led to an increase in 'other deposits.'

4) 'Other securities' no longer exhibited a seasonal pattern connected with the seasonal of 'public deposits' or of 'reserve,' except for the sharp increase in the thirteenth week. Their chief seasonal characteristic was the half-year and year-end expansion due to the building up of balances by the banks for their periodic public statements.

5) The movement of 'total securities' therefore did not coincide *in its general configuration* with the movement of 'other deposits,' because of the inverse correlation between 'government securities' and the 'reserve,' but with the exception of the thirteenth week it corresponded closely with the movement of 'other deposits' in its week to week changes. This was a reflection of the correspondence between 'bankers balances' and 'discounts and advances' (Chart 42).

Our examination of the typical year 1922–31 therefore confirms and illustrates statistically the change from a semi-automatic to a deliberately planned method of credit control. It also illustrates the persistence of many of the most characteristic features of the life of the money market of pre-war days—notably in the preservation of the general seasonal pattern of the behavior of the reserve of the Banking Department, of the semi-annual visits of the market to the Bank, and of the Bank's advantageous position in the market, resulting from the collection of government revenue in the spring.

The English Credit Superstructure during Experimentation

Upon the stable credit base established before the return to gold and maintained thereafter a credit superstructure was built that was stable but not static. It deviated sufficiently from the pattern established in 1922 [45] to allow a substantial but steady expansion. This may be seen from an examination of the behavior of the assets and liabilities of the London clearing banks (Ap. Table 3 D).

[45] Cf. Ch. 12, The End of the British Campaign for Parity with Gold.

Assets and Liabilities of the London Clearing Banks, 1925–1931

Chart 45 A in which the major balance sheet items of the London clearing banks from 1925 to 1931 are plotted in the same form as in Chart 19 A indicates that while 'cash and at the Bank of England' was throughout practically constant, yet from the middle of 1926 to the end of 1928 'total deposits' rose steadily. This increase in 'total deposits' was chiefly the reflection of a steady growth in 'advances,' which had begun to be noticeable at the close of 1923 and was not interrupted until the crisis of 1929. In November 1923 'advances' of the London clearing banks were £718 million; in March 1929, £969 million, an increase of £250 million, or 35 per cent, in just under five and one half years. It is evident that the deflationary pressure upon the British economy during these years was considerably less than would be suggested by an examination of Bank of England figures alone. The behavior of the 'advances' of the London clearing banks gives support to views of the type expressed by Lord Bradbury in his Memorandum of Dissent to the Report of the Macmillan Committee (*Report*, p. 277):

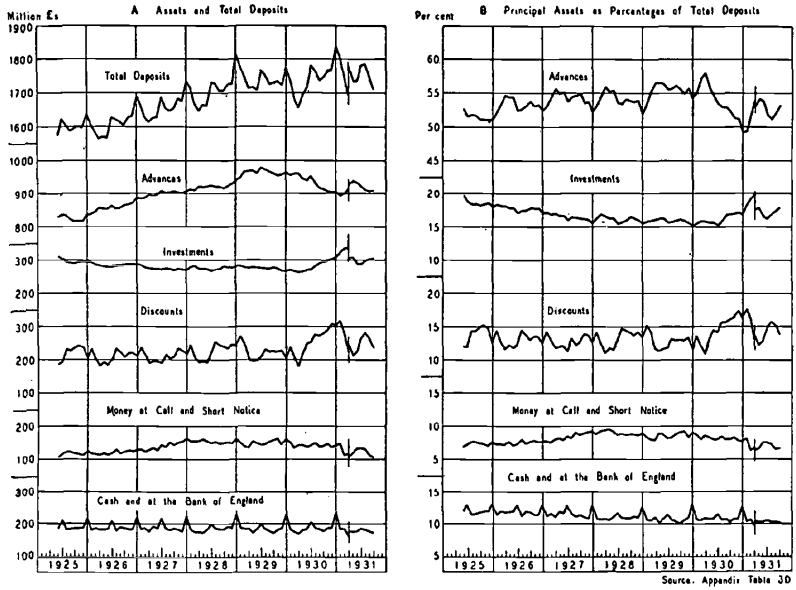
"Generally speaking, apart from the export industries and industries (including agriculture) directly exposed to foreign competition in the home market profits were [from 1925 to 1929] above the normal, and this notwithstanding the burden of taxation, unemployment and high money rates. This to my mind proves that the trouble was due not to a shortage but to an excess of money and credit which had the effect of raising prices wherever prices could be raised and raising costs generally, including those in the exports industries and in industries in which prices could not rise because of foreign competition."

From 1923 to 1926 the increase in 'advances' was largely offset by a decrease in 'investments,' and 'total deposits' remained steady, but thereafter 'investments' were maintained at just under £300 million and 'total deposits' began to grow.

More reserves were therefore needed, and since 'cash and at the Bank of England' could not be increased, the secondary reserve, 'money at call and short notice,' was expanded steadily from 1923 until it reached about £150 million in 1927. In 1928 the third line of reserve, 'bills discounted,' began to grow slightly. These increases in reserves of course

CHART 45

London Clearing Banks, Selected Balance Sheet Items May 1925–September 1931



added to the general rise in deposits. The position at the beginning of 1929, when evidence was being taken before the Macmillan Committee, was not substantially altered during the next year, but by spring 1930 a new position began to develop connected with the onset of the world depression. 'Advances' began to decline and were replaced by 'investments,' while 'bills discounted' and 'total deposits' both rose sharply. At the same time the very gradually declining trend

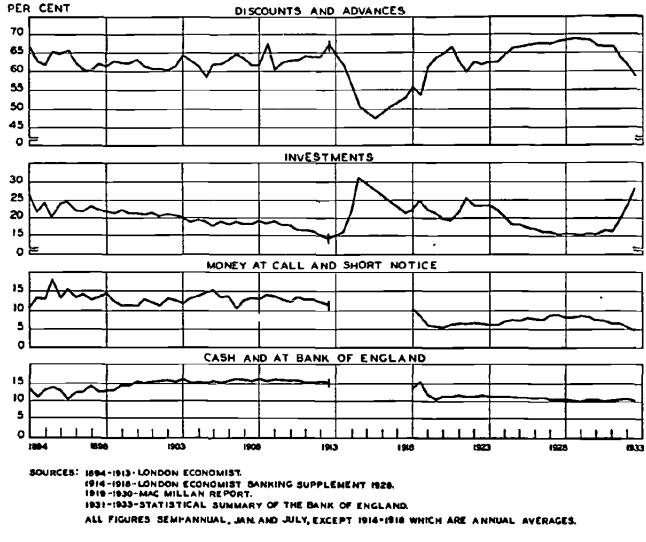
of 'cash and at the Bank of England' was replaced by a definite increase. The interpretation of these events, however, is part of the general history of the depression period (Ch. 27, The English Credit Base and Credit Superstructure under Emergency Measures).

The Ratio System of the Joint Stock Banks, 1925–1931

The growth in 'advances' of the London clearing banks in the face of the credit control policy of the Bank of England

CHART 46

English Joint Stock Banks, Principal Assets as Percentages of Total Deposits, 1894-1933



SOURCES: 1894-1913-LONDON ECONOMIST.
1914-1918-LONDON ECONOMIST BANKING SUPPLEMENT 1928.
1919-1930-MAC MILLAN REPORT.
1931-1933-STATISTICAL SUMMARY OF THE BANK OF ENGLAND.
ALL FIGURES SEMIANNUAL, JAN. AND JULY, EXCEPT 1914-1918 WHICH ARE ANNUAL AVERAGES.

—the most striking feature of Chart 45 A—could not have taken place had not a certain flexibility remained in the ratio system of the banks. This appears clearly in the divergent movement of the ratio, 'cash and at the Bank of England' to 'total deposits,' as compared with the ratio, 'money at call and short notice' to 'total deposits,' and the divergent movement of the ratio, 'investments' to 'total deposits,' as com-

pared with the ratio, 'advances' to 'total deposits.' From 1925 to 1930 the clearing banks were allowing their cash ratio to decline slightly but steadily. Up to 1928 they were increasing their ratio of 'money at call and short notice' to

TABLE 52

English Joint Stock Banks, Principal Assets as Percentages of Total Deposits, 1894-1913, January and July

	CASH AND AT BANK OF ENGLAND	MONEY AT CALL AND SHORT NOTICE	INVESTMENTS	DISCOUNTS AND ADVANCES	TOTAL
1894	13.4	10.5	26.7	66.6	117.2
	11.2	13.4	21.7	62.9	109.2
1895	13.4	13.2	24.8	61.9	113.3
(Aug.)	14.0	18.5	20.1	65.7	118.3
1896	13.1	13.0	24.2	64.9	115.2
	10.4	15.4	24.6	65.9	116.3
1897	12.4	13.5	22.1	62.6	110.6
	12.8	14.2	21.8	60.5	109.3
1898	14.1	12.9	23.2	60.3	110.5
	12.8	13.3	22.3	62.1	110.5
1899	13.0	14.2	21.9	61.4	110.5
	13.2	12.4	21.6	62.7	109.9
1900	14.5	11.1	22.3	62.4	110.3
	14.4	11.3	21.4	62.4	109.5
1901	15.3	11.1	21.3	63.2	110.9
	15.0	13.1	21.0	61.3	110.4
1902	15.3	12.4	21.5	60.7	109.9
	15.5	11.6	20.6	60.7	108.4
1903	15.8	13.2	20.9	60.3	110.2
	15.6	12.9	20.8	61.1	110.4
1904 (Feb.)	16.0	12.0	20.2	64.4	112.6
	15.2	13.3	19.1	63.0	110.6
1905	15.3	13.9	19.6	61.7	110.5
	15.2	14.7	19.1	58.2	107.2
1906	15.5	15.4	18.0	62.1	111.0
	15.2	13.7	19.1	62.0	110.0
1907	15.7	13.9	18.5	63.2	111.3
(Aug.)	16.1	10.4	19.0	64.8	110.3
1908 (Feb.)	16.0	13.0	18.6	63.7	111.3
	15.9	13.7	18.5	61.8	109.9
1909	16.2	13.4	19.3	61.8	110.7
	15.8	14.4	18.7	67.7	116.6
1910	16.0	14.1	19.3	60.8	110.2
	15.9	13.3	18.3	62.4	109.9
1911	15.7	12.7	18.1	63.1	109.6
	15.7	13.7	16.9	63.2	109.5
1912	15.2	13.0	16.8	64.2	109.2
	15.1	13.0	16.4	64.0	107.2
1913	15.4	12.5	15.5	64.1	107.5
	15.3	11.9	14.8	67.2	109.2

Compiled by C. J. Smit from published balance sheets in *The Economist*

'total deposits.' A change in the relative importance of primary and secondary reserves was in progress. At the same time the ratio of 'investments' to 'total deposits' fell while that of 'advances' to 'total deposits' first rose, then remained nearly stationary with only a very slight rising tendency. The behavior of these two ratios was a simple consequence of the fact that the major element in the rise of 'total deposits' was an increase in 'advances.' These relations are clearly shown in Chart 45 B. By the middle of 1929 a point of equilibrium seems to have been reached. The ratios of both 'investments' and 'advances' to 'total deposits' were then in close accord with pre-war practice. The proportion of primary and secondary reserves to 'total deposits' seemed to have become settled at a lower point than before the war, and to have established new customary norms.

The contrasts and similarities between the pre-war norms and those of 1929, as well as the process by which they were established, is brought out in Charts 46 and 47. In Chart 46 the ratio figures of the London clearing banks after the war are plotted, together with pre-war joint stock bank figures collected by Mr. Smit. In most of the pre-war statements 'discounts' and 'advances' were not separated and the combined ratio is therefore plotted for the entire period. For the war period the figures of 'discounts and advances' and 'investments' presented in Chapter 5 are plotted. This chart indicates an apparently steady decline in the ratio of 'investments' to 'total deposits' before the war. This does not, however, seem to have been related to any general factor, such as a more rapid growth in 'deposits' than in 'capital.' From 1896 to 1904 the decline in this ratio was offset by a rise in the cash ratio. Cash reserves were being strengthened relatively at the expense of investments. From 1904 to 1909 the ratio of 'investments' to 'total deposits' did not show any trend. From 1909 to 1913 it declined, but this decline was offset by an increase in the ratio of 'discounts and advances' to 'total deposits,' a relationship to be expected in times of active

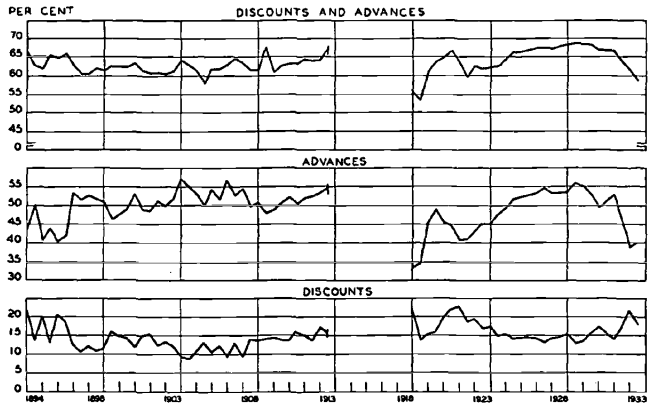
business and repeated from 1923 to 1929. The chart clearly indicates the disturbing effect of the war on the ratio system and the gradual adjustment to a new 'normal.' The contrasts and similarities between the pre-war and the post-war 'normal' ratio systems are brought out in the accompanying table.

RATIOS (PERCENTAGES)	AVERAGE *1894–1903*	AVERAGE *1904–13*	JULY 1, *1913*	JULY *1919*	JULY *1929*
1) 'Cash and at the Bank of England' to 'total deposits'	13.9	15.1	15.3	15.2	10.3
2) 'Money at call and short notice' to 'total deposits'	13.1	13.3	11.9	8.6	8.3
(1) plus (2)	27.0	28.4	27.2	23.8	18.3
3) 'Investments' to 'total deposits'	22.2	18.2	14.8	24.7	15.7
4) 'Discounts and advances' to 'total deposits'	62.4	63.2	67.2	53.4	68.9
Total, (1) to (4)	111.5	109.8	109.2	101.9	103.2

In Chart 47 the ratios of 'discounts' to 'total deposits' and 'advances' to 'total deposits' are compared with pre-war

CHART 47

Certain English Joint Stock Banks, Discounts and Advances as Percentages of Total Deposits, 1894-1913 and 1919-1933



SOURCES: 1894-1913-LONDON ECONOMIST.
1919-1930-MAC MILLAN REPORT.
1931-1933-STATISTICAL SUMMARY OF THE BANK OF ENGLAND.

THE 1894-1913 FIGURES RELATE TO ONLY A FEW BANKS WHICH PUBLISHED DISCOUNTS AND ADVANCES SEPARATELY.

THE 1919-1933 FIGURES RELATE TO ALL LONDON CLEARING BANKS.

figures compiled by Mr. Smit for those few banks that reported 'discounts' and 'advances' separately. In view of the smallness of the sample and the fact that the same banks are

TABLE 53

Certain English Joint Stock Banks, Deposits, Discounts, and Advances, and the Percentages that Discounts and Advances constitute of Total Deposits, 1894-1913, January and July

	DEPOSITS (1)	DISCOUNTS (2)	ADVANCES (3)	PERCENTAGE (2) is of (1) (4)	PERCENTAGE (3) is of (1) (5)
	(thousands of pounds)				
1894	83,928	18,594	36,060	22.2	43.9
	67,662	8,946	33,924	13.2	50.2
1895	105,019	21,313	42,982	20.3	40.9
	62,451	8,247	27,479	13.2	44.0
1896	101,777	21,090	40,901	20.7	40.2
	131,265	24,916	54,727	19.0	41.7
1897	80,187	10,051	42,894	12.5	53.5
	84,741	9,194	43,747	10.8	51.6
1898	92,057	11,139	48,411	12.1	52.6
	94,414	10,250	48,832	10.9	51.7
1899	105,936	12,178	53,872	11.5	50.9
	158,080	25,738	73,174	16.3	46.3
1900	155,551	23,177	74,361	14.9	47.8
	162,357	23,638	79,479	14.6	49.0
1901	124,822	15,023	66,000	12.0	52.9
	170,341	25,677	83,528	15.1	49.0
1902	131,183	20,428	63,854	15.6	48.7
	168,782	21,350	86,366	12.7	51.2
1903	185,215	25,076	92,507	13.5	49.9
	182,501	23,035	94,761	12.6	51.9
1904	133,874	12,448	76,704	9.3	57.3
	125,794	11,074	69,534	8.8	55.3
1905	141,148	15,269	75,275	10.8	53.3
	178,793	24,041	89,181	13.4	49.9
1906	151,278	16,314	82,290	10.8	54.4
	197,690	24,515	101,975	12.4	51.6
1907	155,845	15,703	87,979	9.4	56.5
	161,669	21,505	85,012	13.3	52.6
1908	79,022	7,574	43,104	9.6	54.5
	215,372	30,787	106,845	14.3	49.6
1909	228,525	31,715	115,457	13.9	50.6
	75,244	10,750	35,999	14.3	47.9
1910	266,378	38,755	129,888	14.6	48.8
	277,040	38,582	140,939	13.9	50.9
1911	278,142	38,423	145,504	13.8	52.3
	289,846	46,354	146,855	16.0	50.7
1912	311,385	47,688	162,327	15.3	52.1
	306,031	42,356	160,640	13.8	52.5
1913	205,865	35,970	110,009	17.5	53.4
	297,810	47,737	162,879	16.0	54.7

Compiled by C. J. Smit from published balance sheets in *The Economist*

not included in the series throughout, the correspondence is remarkable (see the accompanying table). The ratio figures

RATIOS (PERCENTAGES)	AVERAGE *1894–1903*	AVERAGE *1904–11*	JULY 1, *1913*	JULY *1919*	JULY *1929*
1) 'Discounts' to 'total deposits'	14.7	13.1	16.0	14.0	13.1
2) 'Advances' to 'total deposits'	48.3	52.4	54.7	39.4	55.8
(1) plus (2)	63.0	65.5	70.7	53.4	68.9

for July 1913 and July 1929 measure the permanent decline in the reserve ratios. When considered in the light of the tendency of the clearing banks to keep 'advances' down to about 55 per cent of 'total deposits,' as shown in Chart 45 B, and of the evidence of Mr. Hyde of the Midland Bank before the Macmillan Committee [46] to the effect that this figure represented a maximum for his bank, they also bring out the very important fact that the flexibility in the ratio system of the joint stock banks, which had made possible an expanding superstructure in England upon a stable credit base from 1923 to 1929, had reached its limit. This view is further confirmed by the statements made by Governor Norman to M. Moreau in May 1927.

Bank Rate and the Defense of Sterling

At the outset of our account of the experiment of defending sterling, the annual average exchange rates between London and New York were presented as prima facie evidence of the changed position of the pound. The underlying circumstances were such that Great Britain's position as a gold standard country had to be maintained by unorthodox methods pending a reduction in her costs and a redistribution of her productive powers. These methods involved the artificial maintenance of a stable credit base. It was, indeed, the contention of the Macmillan Committee that the Bank of England could not have increased the credit base and at the same time have maintained the gold standard from 1925 to 1929.[47] The

[46] *Minutes of Evidence* (Macmillan Committee), I, 56, answer to question 877.
[47] *Report*, sec. 230, pp. 101–2.

tendency of the joint stock banks to take full advantage of the flexibility still remaining in their ratio system indicated that such a policy, at a time when production was expanding, was at least restrictive, if not actually deflationary. The new methods also involved the relegation of Bank rate to a subordinate role as an instrument of credit policy. A relatively high rate was in harmony with the general policy of restricting the growth of credit but was not the essential force in bringing about such a restriction. It was, however, a necessity in the exercise of London's surface pull over the exchanges. A brief statement of the sequence of events in the gold and foreign exchange markets brings out its role in the defense of sterling and also gathers many of the threads in the history of the Experimentation period that have been followed in dealing with other countries.

In order to facilitate this summary Charts 48 and 49, showing the course of interest rates in London and New York, are presented here together with two charts specially constructed to bring out certain aspects of the relation between exchange rates and the London price of gold.

The first (Chart 50) shows the London market price of gold, weekly, from May 1925 to September 1931 together with the sterling-dollar exchange rate for the day for which the gold price is given whenever that rate was a factor in the bullion market. Paul Einzig gives the gold export point from London to New York as $4.85\frac{25}{32}$ when the London price of gold was 84 s. 10 d. and as $4.85\frac{5}{32}$ when the London price of gold was 84 s. $11\frac{1}{2}$ d. per fine ounce.[48] These gold prices correspond roughly to the buying and selling prices of the Bank of England. Whenever the sterling-dollar rate was above $4.85\frac{25}{32}$ the statutory bid of the Bank of England for gold was above the dollar-parity price, and the market would sell to the Bank rather than to America. Whenever it was below $4.85\frac{5}{32}$, gold could be taken from the Bank of England for shipment to New York as an arbitrage transaction.

[48] *International Gold Movements* (London, Macmillan, 1929), p. 107.

Therefore 4.85$\frac{5}{32}$ was the Bank of England gold export point and 4.85$\frac{25}{32}$ was the market gold export point. Whenever the rate was between these points, the American bid for gold in the market was higher than the Bank of England bid, but not high enough to take gold from the Bank. Therefore if the gold prices and the sterling dollar exchange rates are plotted on scales in which the interval between 84 s. 10 d. and 84 s. 11½ d. is equal to the interval between 4.85$\frac{25}{32}$ and 4.85$\frac{5}{32}$ the appearance of New York as a competitive bidder for gold in London can be graphically portrayed. Gold points, however, are variable. Those given by Einzig are for the end of 1928, and if applied throughout the period a major source of error would be introduced. This can be partly eliminated, for Einzig states that in 1925 the rate at which gold could be taken from the Bank of England for shipment to New York was 4.84$\frac{29}{32}$.[49] This was the 1925 Bank of England gold export point, and the corresponding market gold export point is 4.85$\frac{17}{32}$. If these export points are used for the first part of the period, and the 1928 export points for the latter part of the period a fairly accurate result is obtained. This is done in Chart 50.

Chart 51 shows the monthly average sterling-dollar rate from May 1925 to August 1931. In order to indicate its general position in relation to the gold points, lines have been drawn depicting the Bank of England gold export point and the bullion market gold export point, that is, the range included in Chart 50, and also the gold import point. In this chart no correction for changing gold points is attempted, and the 1928 figures are used. A line is also drawn at mint par, 4.8665. The gold export points fall much nearer to the mint par than the gold import point, because the Bank of England gold export point is based on a gold price of 84 s. 11.4545 d. and the Bank of England gold import point is based on a gold price of 84 s. 9.818 d., whereas mint par is calculated on the basis of 84 s. 11.4545 d. On the other hand,

[49] *Ibid.*, p. 94.

the Bank of England gold import point and the market gold export point are both based on a gold price of 84 s. 9.818 d. These are the working gold points of the London bullion market, and therefore Samuel Montagu and Company, in their weekly exchange letters, give as the pre-war working gold parity, not 4.8665, but 4.8744—the parity based on the price, 84 s. 9.818 d. A line is drawn in Chart 51 at this point because it provides a more accurate dividing line between strength and weakness of the dollar in London than does 4.8665. To make the graphical presentation in this chart consistent with that in Chart 50, strength of sterling is represented by a declining line and weakness of sterling by a rising line.

These two charts, in conjunction with Charts 48 and 49 and Chart 40 showing the behavior of the reserve of the Bank of England, provide the basis for a clear view of the relation of Bank rate to the defense of sterling, from 1925 to 1931. At this point only the period from the return to gold to the financial crisis of 1929 will be considered.

The general weakness of sterling from 1925 to 1929 is abundantly clear from even a casual inspection of Charts 50 and 51. Almost the whole range of fluctuation of the sterling-dollar rate was below the working gold parity. The London market price of gold, moreover, showed a persistent tendency to remain at or near the Bank of England selling price. The occasions on which the Bank's buying price for gold was an effective bid in the market were infrequent and of short duration. Because of this and because of the numerous occasions when the London price of gold was at or near 84 s. 11½ d. when the New York rate was not a factor in the market, Chart 50 gives a clearer picture of the general weakness of sterling than Chart 51. Both charts show very plainly that the sterling-dollar rate was a factor in driving up the London price of gold to the Bank of England selling price in the autumns of 1925, 1926, and 1928, and was not a factor in the bullion market during the rest of those years. This normal

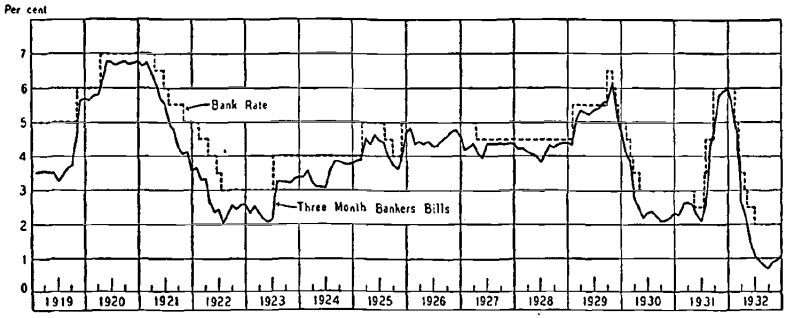
seasonal phenomenon, however, was not present in 1927 and 1929, when the situation was indeed almost exactly reversed. The American bid for gold was competitive in the early part, but not in the latter part of these years. Clearly very powerful forces were then obliterating the usual seasonal influences. This circumstance provides natural dividing points between various phases of this part of the history of the role of Bank rate in the defense of sterling.

May 1925 to December 1926

Great Britain returned to the gold standard with Bank rate at 5 per cent. Market rate was close to Bank rate, and was above both the 60–90 day and the acceptance rates in New

CHART 48

Bank Rate and Market Rate for Three Month Bankers Bills London, 1919-1932, monthly



York. This was the result of inter-central bank cooperation preceding the return to gold (cf. Ch. 12). On several occasions in May and June the market had to borrow from the Bank, but in general the trend of interest rates in London was downward, partly owing to the attraction of funds from the continent for employment in sterling bills at attractive rates, and partly to an abundance of domestic funds seeking employment as a result of the decline in prices and reduction in the cost of imports which followed the rapid rise of the

pound to par. It was also due partly to gold imports and the policy of the Bank with reference to them. From May to July England was gaining gold, not because of inherent seasonal strength of sterling in the exchange markets, for the price of gold did not fall to the Bank of England buying price, but because of special shipments received from Russia and the Netherlands. The resulting increases in the Bank's gold hold-

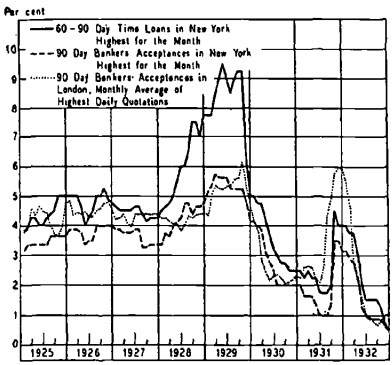


CHART 49

Market Rates of Interest, London and New York, 1925-1932, monthly

ings were not fully offset by open market operations (Charts 39 and 40, particularly the line in Chart 40 showing 'reserves plus securities,' which rises rapidly in June and July and remains at a high level until September). Consequently 1925 was the only year after the return to gold in which the mid-year expansion in bankers balances at the Bank of England took place without an increase in discounts and advances (Chart 42). The characteristic post-1925 open market credit control policy had not yet been fully developed.

In the summer of 1925 Bank rate began to lose touch with the market. The gold accumulations seemed to be sufficient to meet the normal autumn drain, and on August 6 Bank rate was lowered from 5 to 4½ per cent. The declining trend of open market rates continued during the next two months and Bank rate was again reduced, on October 1, to 4 per cent. Meanwhile, the trend of interest rates in New York

was upward. As a result, the differential interest rate relationship between the two markets was reversed (Chart 49). New York was being placed in a more and more favorable position to bid against London for foreign funds, especially for French balances offered competitively to the two markets, and large balances were in fact transferred from London to New York.[50]

Late in August the open market price of gold once more began to hold steadily at 84 s. 11½ d. In September, when seasonal forces added to the pressure on sterling, New York became a competitive bidder in the London bullion market, and early in October, in spite of a gentleman's agreement, entered into at the time of the return to gold, not to withdraw American balances accumulated in London, and the diversion of large foreign loan operations from London to New York [51] as a result of continued restrictions in the new issues market in London, sterling declined below gold export point. A heavy gold arbitrage movement to New York began, followed by an arbitrage movement to the Netherlands.

These gold movements had the effect of tightening interest rates in London and the market had to borrow from the Bank twice in October. The reduction in Bank rate on October 1 did not, therefore, mean any further spread in the differential interest rates between New York and London to the disadvantage of London. The London market, however, was influenced by apprehensions that Federal Reserve rediscount rates might be raised and that the Bank of England would follow. In fact it acted first. On December 3, after the London gold price had been for three months almost continuously at 84 s. 11½ d., Bank rate was raised to 5 per cent and market rate immediately followed. Sterling was improving seasonally in New York and the American gold bid fell just below the Bank of England gold export point (Chart 50).

[50] *Federal Reserve Bulletin,* June 1926, p. 377.

[51] Notably Australian financing and the refunding of German sterling credits maturing in London in 1925 with dollar credits (Brown, *op. cit.,* pp. 295–6). The embargo was lifted in November 1925.

TABLE 54: *Bank Rate and Market Rate for Three Month Bankers Bills in London, 1919-1932*

BANK RATE

1919		*1925*		*1930*	
Prior to Nov. 6	5	March 5	5	Feb. 6	4½
Nov. 6	6	Aug. 6	4½	March 6	4
1920		Oct. 1	4	March 20	3½
April 15	7	Dec. 3	5	May 1	3
1921		*1926*		*1931*	
April 29	6½	All year	5	May 14	2½
June 23	6			July 23	3½
July 21	5½	*1927*		July 30	4½
Nov. 3	5	April 21	4½	Sept. 21	6
1922		*1928*		*1932*	
Feb. 17	4½	All year	4½	Feb. 18	5
April 21	4			March 10	4
June 15	3½	*1929*		March 17	3½
July 13	3	Feb. 7	5½	April 21	3
1923		Sept. 26	6½	May 12	2½
July 5	4	Oct. 31	6	June 30	2
1924		Nov. 21	5½		
All year	4	Dec. 12	5		

MARKET RATE FOR THREE MONTH BANKERS BILLS (average of highest daily rate)

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Jan.	3.50	5.62	6.63	3.65	2.32	3.37	3.86
Feb.	3.53	5.76	6.73	3.30	2.52	3.57	3.89
March	3.56	5.79	6.42	3.31	2.33	3.22	4.52
April	3.51	6.28	6.09	2.67	2.15	3.10	4.34
May	3.50	6.77	5.66	2.38	2.07	3.09	4.62
June	3.26	6.76	5.54	2.42	2.14	3.07	4.48
July	3.42	6.68	4.98	2.01	3.28	3.63	4.40
Aug.	3.65	6.73	4.76	2.32	3.23	3.82	3.99
Sept.	3.72	6.77	4.27	2.56	3.22	3.82	3.73
Oct.	4.50	6.70	4.05	2.44	3.20	3.77	3.63
Nov.	5.64	6.72	4.10	2.57	3.33	3.76	3.96
Dec.	5.69	6.78	3.59	2.58	3.37	3.77	4.73
	1926	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*
Jan.	4.81	4.20	4.21	4.34	4.11	2.28	5.48
Feb.	4.35	4.24	4.22	5.09	3.85	2.60	4.68
March	4.42	4.38	4.14	5.34	2.79	2.63	2.69
April	4.36	4.09	4.06	5.27	2.48	2.59	2.20
May	4.44	3.95	4.01	5.23	2.19	2.26	1.50
June	4.28	4.38	3.83	5.34	2.33	2.10	1.05
July	4.30	4.38	4.01	5.39	2.38	2.60	0.93
Aug.	4.49	4.37	4.31	5.57	2.22	4.32	0.78
Sept.	4.58	4.37	4.25	5.61	2.09	4.82	0.69
Oct.	4.71	4.36	4.34	6.14	2.10	5.78	0.88
Nov.	4.76	4.38	4.38	5.38	2.19	5.91	0.93
Dec.	4.58	4.36	4.39	4.78	2.33	5.96	1.09

SOURCE: *Statistical Abstract of U.K., 1932*, pp. 213, 215

TABLE 55

Short Term Market Rates of Interest in New York, 1925-1932

Highest for Month

60-90 DAY TIME LOANS

	1925	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*
Jan.	3¾	5	4⅝	4½	7¾	5	2½	4
Feb.	4	5	4½	4⅝	7¾	4¾	2¼	3¾
March	4¼	5	4½	4¾	8½	4¼	2½	3¾
April	4¼	4⅝	4½	5	9	4¼	2¼	3
May	4	4	4½	5½	9½	3¾	2¼	2
June	4	4¼	4⅝	6	9	3¼	1¾	1½
July	4¼	4½	4⅝	6	8½	3	1¾	1½
Aug.	4⅜	5	4⅜	6½	9	2¾	1¾	1½
Sept.	4½	5	4¼	7½	9¼	2¾	2	1½
Oct.	5	5¼	4¼	7½	9¼	2½	4½	1¼
Nov.	5	4⅞	4¼	7	6½	2½	4	¾
Dec.	5	4¾	4¼	7¾	5	2½	4	½

90 DAY BANKERS ACCEPTANCES

Jan.	3⅛	3⅞	3⅞	3⅝	5⅛	4⅛	2	3⅛
Feb.	3⅜	3⅞	3⅞	3¾	5⅜	4	1⅝	2⅞
March	3⅜	3⅞	3¾	3⅝	5¾	3⅞	1⅝	2¾
April	3⅜	3¾	3¾	4	5⅝	3⅛	1⅝	2¼
May	3⅜	3⅜	3¾	4⅛	5⅝	2¾	1⅛	1¼
June	3⅜	3½	3⅞	4¼	5⅝	2½	1	1
July	3⅜	3½	3⅞	4¼	5¼	2	1	⅞
Aug.	3⅝	4	3¼	4¾	5¼	2	1	⅞
Sept.	3⅝	4	3¼	4⅝	5¼	2	1⅜	⅞
Oct.	3⅝	4	3⅜	4⅝	5¼	2	3½	⅞
Nov.	3⅝	4	3⅜	4⅝	4¾	2	3½	⅝
Dec.	3⅝	4	3⅜	4¾	4⅛	2	3⅛	½

SOURCE: *Statistical Abstract of U.S., 1926*, p. 291; *1928*, p. 295; *1930*, p. 298-9; *1932*, p. 279; *1933*, p. 263

The market price of gold fell, but the Netherlands continued to take gold heavily in December, apparently not on an arbitrage basis.[52]

For the first nine months of 1926 the sterling-dollar rate was outside the range of competitive bidding for gold in London (Chart 50) though never very far below it (Chart 51). The general strength of sterling against all exchanges was sufficient to make the statutory buying price of the Bank of England effective in the gold market in May, July, and Au-

[52] For the elements of management in these Dutch gold movements cf. Brown, *op. cit.*, pp. 291–2.

gust. From open market purchases and other sources the Bank was able to add to its gold holdings in March and from May to September. There was no repetition of the 1925 policy in which 'normal' pre-war reactions to such a situation were approached. Gold imports were fully offset by open market operations (Chart 40) and Bank rate was kept steadily at 5 per cent. The New York Federal Reserve Bank rate was raised to 4 per cent on January 8, but market rates did not respond. Funds were attracted to London and the spread between market rate and Bank rate was widened by a strong continental demand for sterling bills. In May a 3½ per cent rate was reestablished by the Federal Reserve Bank and for a brief moment London rates again ruled above New York (Chart 49). Hopes were raised for a reduction in Bank rate but the prospect of easy money in London was destroyed by the revival of speculative activity in America.

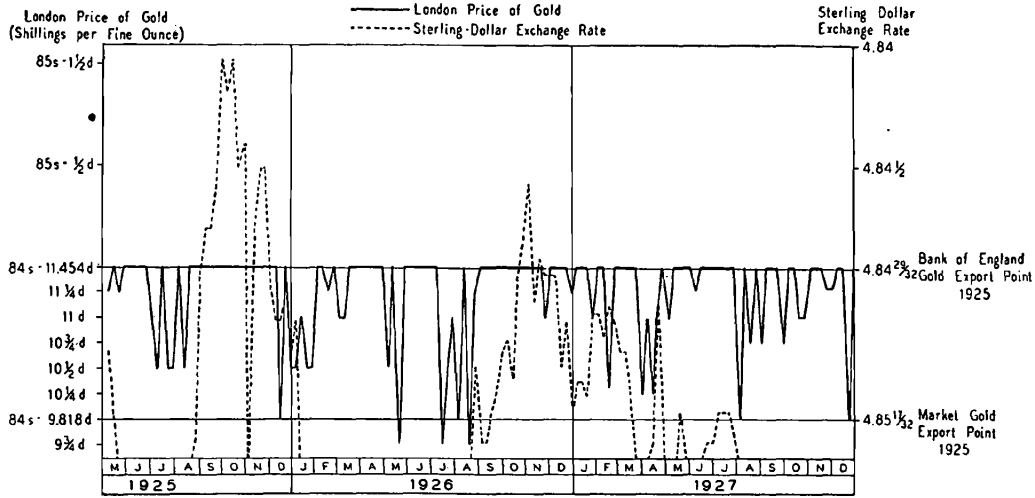
American interest rates began to rise again in June and London rates followed. The New York Reserve Bank raised its rate to 4 per cent, and London acceptance rates once more assumed a position between the 60–90 day time rate and the acceptance rate in New York (Chart 49). In September the sterling-dollar rate reappeared within the range of competitive bidding in the bullion market, but the American bid was not effective at the Bank of England until October. In October and November gold began to move to the United States and also to Germany,[58] but the exports were small, and when, in December, the autumn pressure was over, sterling began to improve.

From the return to gold until December 1926, in somewhat greater degree than was usual before the war, the exchange and bullion markets had been influenced by special transactions. Until the beginning of 1925 the inflow of newly produced gold was cut down by retention of gold in South Africa for currency purposes. The deficit was made up by

[58] For the special inducements offered to gold arbitrageurs, London to Germany, at this time, cf. Brown, *op. cit.*, p. 295.

CHART 50

The London Price of Gold and Fluctuations of the Sterling-Dollar Exchange above the Market Gold Export Point, 1925-1931, weekly



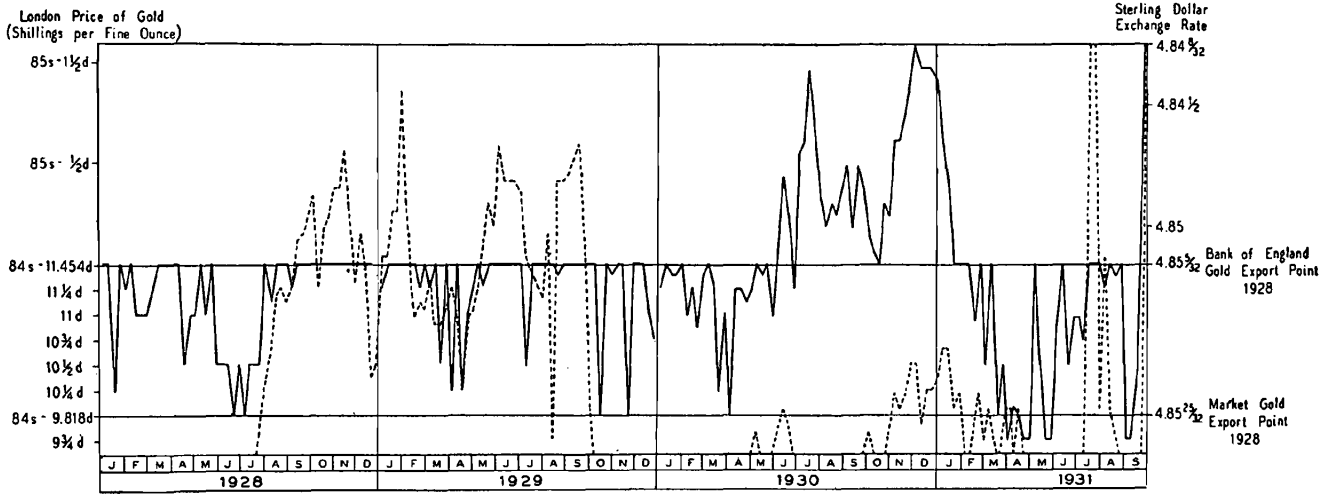

London Price of Gold
(Shillings per Fine Ounce)
85s-11½d
85s- ½d
84s-11.454d
11 ¼ d
11 d
10¾ d
10½ d
10¼ d
84s- 9.818d
9¾ d
Sterling Dollar
Exchange Rate
4.84 5/32
4.84 ½
4.85
4.85 3/32
Bank of England
Gold Export Point
1928
4.85 29/32
Market Gold
Export Point
1928
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S
1928
1929
1930
1931

TABLE 56: *London Price of Gold, 1925-1931, weekly*

	1925		1926		1927		1928		1929		1930		1931	
	s	d	s	d	s	d	s	d	s	d	s	d	s	d
Jan.	87	4	84	10½	84	11½	84	11½	84	11¼	84	11¼	85	0¾
	87	1	84	11	84	11½	84	11½	84	11½	84	11½	85	0¼
	87	3	84	10½	84	11½	84	10¼	84	11½	84	11⅜	84	11½
	87	0	84	10½	84	11	84	11½	84	11½	84	11⅜	84	11½
									84	11½	84	11½		
Feb.	87	1	84	11½	84	11½	84	11¼	84	11½	84	11	84	11½
	86	10	84	11½	84	11½	84	11½	84	11½	84	11¼	84	11½
	86	11	84	11¼	84	10½	84	11	84	11¼	84	10⅞	84	10¾
	87	1	84	11½	84	11½	84	11	84	11½	84	11⅜	84	11½
							84	11						
March	86	9	84	11	84	11½	84	11¼	84	11¼	84	11½	84	10½
	86	7	84	11	84	11½	84	11½	84	11½	84	11¼	84	11½
	86	8	84	11½	84	11½	84	11½	84	10½	84	10¼	84	10
	86	5	84	11½	84	11½	84	11½	84	11½	84	11	84	10½
					84	10¼							84	9¾
April	86	6			84	11	84	11½	84	10¼	84	10	84	10⅛
			84	11½	84	10¼	84	11½	84	11½	84	11¼	84	10
	86	7	84	11½	84	11	84	10½	84	10¼	84	11¼	84	9¾
	86	5	84	11½	84	11½	84	11	84	11	84	11⅛	84	9¾
			84	11½							84	11¼		
May	84	11¼	84	10½	84	11	84	11	84	11¼	84	11½	84	11½
	84	11½	84	11½	84	11½	84	11½	84	11½	84	11⅜	84	10½
	84	11¼	84	9¾	84	11½	84	11	84	11¼	84	11½	84	9¾
	84	11½	84	11½	84	11½	84	11½	84	11½	84	11	84	9¾
							84	10½	84	11½				
June	84	11½	84	11½	84	11½	84	10½	84	11½	84	11½	84	10⅞
	84	11½	84	11½	84	11¼	84	10½	84	11½	85	0⅜	84	11½
	84	11½	84	11½	84	11½	84	10	84	11½	85	0	84	10½
	84	11½	84	11½	84	11½	84	10½	84	11½	84	11¼	84	11
					84	11½								
July	84	11	84	11½	84	11½	84	10	84	11½	85	0⅝	84	11
	84	10½	84	11½	84	11½	84	10½	84	10½	85	0¾	84	10¾
	84	11½	84	9¾	84	11½	84	10½	84	11½	85	1½	84	11½
	84	10½	84	10½	84	11½	84	10½	84	11½	85	1	84	11½
	84	10½	84	11			84	11½			85	0⅛	84	11½
Aug.	84	11½	84	10	84	10	84	11⅛	84	11½	84	11⅞	84	11¼
	84	10½	84	11½	84	11½	84	11½	84	11½	85	0⅛	84	11½
	84	11½	84	9¾	84	10¾	84	11½	84	11½	85	0	84	11⅝
	84	11½	84	11¼	84	11½	84	11½	84	11⅜	85	0¼	84	11½
									84	11½				
Sept.	84	11½	84	11½	84	10¾	84	11¼	84	11½	85	0½	84	9¾
	84	11½	84	11½	84	11½	84	11½	84	11½	84	11⅞	84	9¾
	84	11½	84	11½	84	11½	84	11½	84	11½	85	0½	84	10½
	84	11½	84	11½	84	11½	84	11½	84	11½	85	0¼	100	0
			84	11½	84	10¾							105	3
Oct.	84	11½	84	11½	84	11½	84	11½	84	11½	84	11¾	105	8
	84	11½	84	11½	84	11½	84	11½	84	11½	84	11⅝	106	6
	84	11½	84	11½	84	11	84	11½	84	10	84	11½	104	8
	84	11½	84	11½	84	11	84	11½	84	11½	85	0⅛	105	9
	84	10½					84	11½	84	11⅜	85	0		
Nov.	84	11½	84	11½	84	11½	84	11½	84	11½	85	0¾	110	3
	84	11½	84	11½	84	11½	84	11½	84	11½	85	0¾	109	0
	84	11½	84	11½	84	11½	84	11½	84	10	85	1	108	9
	84	11½	84	11	84	11¼	84	11½	84	11½	85	1⅜	111	10
Dec.	84	11½	84	11½	84	11¼	84	11½	84	11½	85	1¾	126	7
	84	11½	84	11½	84	11½	84	11½	84	11	85	1½	126	6
	84	10	84	11½	84	11½	84	11½	84	10¾	85	1½	119	7
	84	11½	84	11½	84	10					85	1½	122	1
	84	10½	84	11¼	84	11½					85	1⅜	120	8

SOURCE: *The Economist*. Dates chosen as of same day as those for the sterling-dollar exchange in Table 57

TABLE 57: *Sterling-Dollar Exchange, 1925-1931, weekly (dollars)*

	1925	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*
Jan.	4.78	4.85 1/8	4.85 3/8	4.87 7/8	4.85 1/2	4.87 13/16	4.85 1/2
	4.78 1/4	4.85 15/16	4.85 3/8	4.87 13/16	4.85 1/8	4.87	4.85 1/2
	4.80 3/8	4.86 9/32	4.85 7/16	4.87 11/16	4.84 15/16	4.86 15/16	4.85 3/4
	4.79 1/4	4.86 5/16	4.85 3/32	4.87 1/32	4.84 11/16	4.86 5/8	4.85 11/16
					4.84 7/16	4.86 3/8	
Feb.	4.78 3/4	4.86 1/2	4.85 3/32	4.87 3/16	4.85 1/8	4.86 7/16	4.85 15/16
	4.78 1/4	4.86 3/32	4.85 3/16	4.87 1/4	4.85 3/8	4.86 7/32	4.86 1/16
	4.76 7/8	4.86 1/2	4.85 1/16	4.87 5/32	4.85 5/16	4.86	4.85 11/16
	4.74 5/8	4.86 1/8	4.85 1/8	4.87 1/8	4.85 1/32	4.86	4.85 1/8
				4.87 15/16			
March	4.77	4.85 7/8	4.85 1/4	4.87 7/8	4.85 7/32	4.86 1/16	4.85 3/4
	4.78 1/2	4.86 1/8	4.85 1/4	4.87 7/8	4.85 7/16	4.86 3/16	4.85 7/8
	4.77 15/16	4.86 1/4	4.85 5/32	4.88 1/4	4.85 7/16	4.86 5/16	4.85 15/16
	4.78 5/8	4.86 5/16	4.85 1/16	4.88 7/32	4.85 3/8	4.86 1/16	4.85 1/16
			4.85 1/16				4.85 7/8
April	4.77 7/8	4.86 5/16	4.85 1/16	4.88 1/4	4.85 1/4	4.86 1/2	4.85 15/16
	4.78	4.86 5/16	4.85 5/8	4.88 5/16	4.85 3/8	4.86 7/16	4.85 7/8
	4.78 1/2	4.86 3/8	4.85 1/16	4.88 3/8	4.85 13/32	4.86 3/8	4.86 3/16
	4.80 1/2	4.86 9/32	4.85 3/4	4.88	4.85 3/8	4.86 3/8	4.86 3/8
	4.84 1/2	4.86 9/16				4.86 7/32	
May	4.85 1/4	4.85 3/4	4.85 7/8	4.87 31/32	4.85 11/32	4.85 7/8	4.86 1/2
	4.85 1/2	4.86 3/8	4.85 7/8	4.88 3/32	4.85 7/32	4.86	4.86 5/16
	4.86 1/4	4.86 9/16	4.85 1/2	4.88 9/32	4.85 1/16	4.86 1/8	4.86 15/32
	4.86 1/4	4.86 5/8	4.85 13/16	4.88 9/32	4.84 29/32	4.86	4.86 13/32
				4.88 7/16	4.85		
June	4.86 5/32	4.86 9/16	4.85 25/32	4.88 9/32	4.84 31/32	4.85 7/8	4.86 3/4
	4.86 1/8	4.86 5/8	4.85 13/16	4.88 1/8	4.84 13/16	4.85 3/4	4.86 7/16
	4.86 1/16	4.86 5/8	4.85 11/16	4.88	4.84 13/16	4.85 13/16	4.86 7/16
	4.86 1/4	4.86 3/4	4.85 5/8	4.87 31/32	4.84 11/16	4.86	4.86 9/16
			4.85 5/8				
July	4.86 9/16	4.85 17/32	4.85 1/2	4.87 1/2	4.84 27/32	4.86 3/8	4.86 3/8
	4.86 5/8	4.86 3/8	4.85 1/2	4.86 3/8	4.85 1/8	4.86 1/2	
	4.86 1/8	4.86 1/2	4.85 1/2	4.86 5/8	4.85 1/16	4.86 9/16	4.83 1/4
	4.86 1/8	4.86 5/16	4.85 19/32	4.85 13/16	4.85 5/16	4.86 23/32	4.84 1/8
	4.85 3/4	4.86 3/8		4.85 5/8		4.86 15/16	4.85 3/4
Aug.	4.85 3/4	4.86 3/8	4.85 7/8	4.85 17/32	4.85 5/16	4.87 1/4	4.85 1/8
	4.85 3/4	4.86	4.86 1/16	4.85 9/32	4.85 1/32	4.87 1/8	4.85 3/4
	4.85 3/4	4.86	4.86 1/8	4.85 1/4	4.85 1/8	4.87 1/8	4.85 7/8
	4.85 5/8	4.85 5/16	4.86 3/16	4.85 5/16	4.84 13/16	4.87	4.86 3/16
					4.84 13/16		
Sept.	4.84 15/16	4.85 5/8	4.86 1/32	4.85 1/4	4.84 25/32	4.86 9/16	4.86 3/16
	4.84 3/4	4.85 5/8	4.86 3/32	4.85 1/16	4.84 23/32	4.86 1/4	4.85 15/16
	4.84 3/4	4.85 1/2	4.86	4.85 1/32	4.84 21/32	4.86 3/16	4.86
	4.84 9/16	4.85 7/16	4.86 5/8	4.84 31/32	4.85 8	4.86 1/16	4.11
		4.85 1/4	4.86 9/16				3.92
Oct.	4.84 1/16	4.85 7/32	4.86 13/16	4.84 7/8	4.85 3/4	4.85 7/8	3.86
	4.84 3/16	4.85 5/8	4.87 3/32	4.85 1/4	4.86 7/16	4.85 15/16	3.89
	4.84 1/16	4.84 15/16	4.87 1/4	4.85 1/32	4.86 7/8	4.85 15/16	3.96 1/2
	4.84 7/16	4.84 13/16	4.87 5/32	4.84 31/32	4.87 13/16	4.85 13/16	3.90 1/2
	4.84 11/32			4.84 13/16	4.87 13/16	4.85 7/8	
Nov.	4.85 3/4	4.84 9/16	4.87 1/16	4.84 13/16	4.87 7/8	4.85 11/16	3.75 3/4
	4.84 3/4	4.85 1/16	4.87 1/4	4.84 11/16	4.87 5/8	4.85 3/4	3.78 1/4
	4.84 1/2	4.84 1/8	4.87 9/16	4.85 1/32	4.87 7/16	4.85 11/16	3.77 1/2
		4.84 15/16	4.87 31/32	4.85 1/4	4.87 13/16	4.85 9/16	3.62
Dec.	4.85	4.84 15/16	4.88	4.85 1/32	4.88 1/8	4.85 9/16	3.35
	4.85 1/8	4.84 15/16	4.88 1/4	4.85 5/32	4.88 3/16	4.85 13/16	3.28 3/4
	4.85 1/8	4.85 7/16	4.88 9/32	4.85 5/8	4.88 7/16	4.85 11/16	3.46 1/2
	4.85	4.85 1/8	4.88 11/32	4.85 9/16	4.88 9/32	4.85 11/16	3.39
	4.85 1/4	4.85 1/2	4.88 25/32			4.85 5/8	3.40
Annual average	4.83 3/32	4.85 29/32	4.86 5/32	4.86 21/32	4.85 11/16	4.86 1/4	4.51 3/4

SOURCE: *The Economist*

special shipments from Russia and the Netherlands. The National Bank of Austria and other central banks had been in the market to replenish their reserves, while Indian demand had been abnormally stimulated by the speculative possibilities contained in a possible reduction of the rupee rate from 1 s. 6 d. to 1 s. 4 d. London interest rates were unusually sensitive to changes in New York and the difficulty of reducing the generally high level of rates in London had been demonstrated. Nevertheless, the normal seasonal influences familiar before the war were still strong enough to dominate the period as a whole.[54] In 1927, however, this was no longer true.

1927

The recovery of sterling from its seasonally low point in the autumn of 1926 was very slight. Far from ceasing to be a factor in the bullion market the New York rate was just under gold export point from the Bank of England in January and February, and New York was buying gold in the open market. The unknown buyer was also active. The price of gold remained at or near 84 s. 11½ d., and the Bank of England continued to lose gold in moderate amounts. The dominant causes of the unseasonal weakness of sterling were the interruptions and distortions introduced into the course of trade by the British coal strike. These, however, were gradually being eliminated. In March and April sterling was slightly stronger, and the gold price fell pari passu with the weakness of the dollar (Chart 50). In April the Bank was able to buy gold in the open market and increased its gold holdings sufficiently to offset the losses experienced since September 1926.[55]

Having passed through a major economic crisis without substantial gold losses, the Bank of England ventured to re-

[54] For a more detailed analysis of gold distribution through London in 1925 and 1926 cf. Brown, *op. cit.*, pp. 280–96.

[55] These included special shipments of sovereigns to Spain in March 1927 in connection with customs payments.

duce its rate, which had now stood at 5 per cent for 16 months, to 4½ per cent on April 21, 1927. At this moment French demand for gold made itself felt for the first time.[56] Small but unseasonable gold exports took place. That some of these were for France created great apprehension in London and led to a sharp rise in the open market rate (Chart 48). At the same time Argentina began to draw gold both from South Africa direct and from the Bank of England (cf. Ch. 14), for the market price of gold had returned in the middle of May to 84 s. 11½ d. (Chart 50). Meanwhile, the New York bid for gold was hovering only a little below the market, for sterling showed no substantial recovery in New York (Chart 51). Receipts of gold from South Africa were being reduced by direct shipments not only to Argentina but also to India, and a steady demand from the unknown buyer was expected to continue. Germany had already begun to enter into a transition from the gold exchange to the gold bullion standard, and in the summer of 1927 she also seemed likely to become an effective bidder for gold in London.[57] Under these circumstances, and in view of the certainty of increasing pressure upon sterling in the autumn, it was apparent that unless something very exceptional occurred, England could not long remain on the gold standard with a 4½ per cent Bank rate.

Something very exceptional did occur—the inter-central bank agreement of June 1927 for shifting French gold demand to the United States and for inter-central bank cooperation in support of sterling in other ways. Not only was French demand diverted, but the appearance of Germany as a gold buyer was postponed for almost a year. In August 1927, for example, Germany discouraged gold shipments from London in contrast to the opposite position taken in November 1926. The Federal Reserve Bank of New York

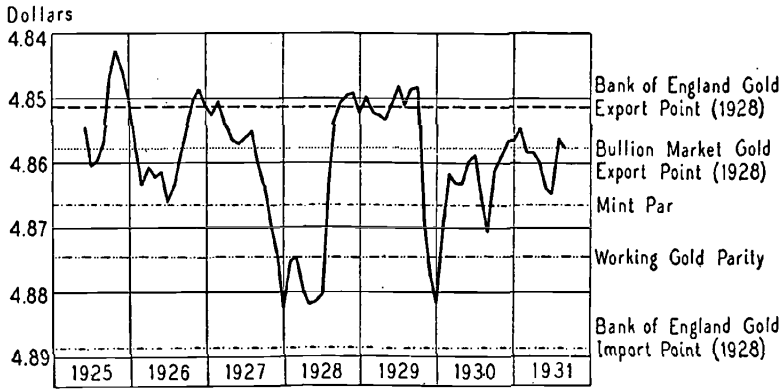
[56] Cf. Ch. 15, The De Facto Adherence to the Gold Exchange Standard and the Realization of Potential Elements of Strength, and Ch. 18, The Critical Decisions of 1927 in their Inflationary Setting.

[57] Cf. Ch. 16, The Modification of the Principle of Gold Economy, 1928.

directly supported sterling in June, July, and August 1927, and took the initiative in restoring the inter-market interest differential in favor of London for the third time since 1924. This was accomplished by a reduction in the Federal Reserve Bank of New York buying rate for acceptances on July 29, and a reduction in its rediscount rate to 3½ per cent on August 5, while the open market rate in London gave every

CHART 51

Sterling-Dollar Exchange
May 1925–August 1931, average monthly rates



evidence of being pegged [68] close to Bank rate, at about 4·37 per cent (Chart 48).

During the first half of 1927 sterling had been weak, even as compared with the first half of 1926, and had remained close to the gold export point. As a result of the 'critical decisions' of the summer of 1927, however, the whole situation was altered. Beginning with the third week in July sterling began to rise in New York, and rose uninterruptedly until it reached 4.882$\frac{5}{32}$ in the last week of December. The New York rate ceased to be a factor in the gold market and

[68] *The Economist* in its Commercial History and Review of 1928, p. 9, says: "In the first week of January (1928) the market broke away from the 'controlled' discount rate of 4$\frac{5}{16}$% on three months bank bills tacitly enforced by the Bank during the preceding autumn. . . ."; cf. Ch. 15, The Moreau-Norman Conversations of May 1927.

the price of gold no longer clung tenaciously to 84 s. 11½ d. The usual autumn seasonal was completely wiped out. In December 1927 the first gold shipment of importance from the United States to London since the return to gold was

TABLE 58

Sterling-Dollar Exchange, 1925-1931, average monthly rates

	1925	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*
Jan.	4.7817	4.8579	4.8526	4.8753	4.8499	4.8688	4.8547
Feb.	4.7724	4.8634	4.8503	4,8748	4,8521	4.8618	4.8584
March	4.7763	4.8608	4.8540	4.8799	4.8526	4.8631	4.8583
April	4.7953	4.8622	4.8565	4.8820	4.8532	4.8631	4.8599
May	4.8547	4.8615	4.8570	4.8816	4.8508	4.8597	4.8640
June	4.8604	4.8661	4.8561	4.8803	4.8482	4.8587	4.8649
July	4.8596	4.8634	4.8551	4.8636	4.8510	4.8657	4.8561
Aug.	4.8569	4.8586	4.8602	4.8535	4.8485	4.8707	4.8577
Sept.	4.8465	4.8542	4.8635	4.8505	4.8482	4.8611	4.5313
Oct.	4.8428	4.8503	4.8697	4.8495	4.8699	4.8590	3.8893
Nov.	4.8459	4.8488	4.8740	4.8492	4.8775	4.8564	3.7199
Dec.	4.8498	4.8512	4.8825	4.8524	4.8816	4.8566	3.3737

SOURCE: *Federal Reserve Bulletin*

made. During the entire year there were fewer fluctuations in the gold holdings of the Bank of England than in any other year from 1925 to 1931.

1928

During the first six months of 1928 sterling fluctuated in general within a range slightly above the 'working gold parity,' and in June was sufficiently strong to make possible heavy gold arbitrage imports from New York. The Bank of England was able to add steadily to its gold holdings throughout this period, especially in January, and in June and July when the market price of gold was down very close to the statutory buying price.[59] This steady gold import movement, in combination with domestic seasonal influences, had the effect of easing money rates in London, though until June the Bank was offsetting gold imports by open market operations.

[59] During April and March 1928 there were large gold exports to France, representing simply the physical transfer of gold previously acquired by the Bank of France. They did not represent current purchases and were not a factor in the money markets. *The Economist,* March 10, 1928, p. 484.

These, however, ceased in June (Chart 40). Hopes of an immediate reduction in Bank rate were revived, and the open market rate dropped to 3⅞ per cent. But once more the market was disappointed. The easing tendency of interest rates in London had been running parallel with rising rates in New York owing to increasing speculative activity. The rate of the Federal Reserve Bank of New York had been raised three times, and when it finally reached 5 per cent on July 13,[60] the interest differential in favor of London, so carefully reconstituted in the summer of 1927, was completely reversed (Chart 49). The grave secondary results of the 1927 decisions were beginning to be felt. A world-wide flow of funds toward New York was setting in, and in July sterling began to weaken. Though it did not fall enough to bring New York into the gold market until September, and England was still gaining gold in July and August, the downward trend of interest rates in London was checked. This was partly because of the transfer of funds to New York and partly because the Bank of England sold securities in July and August well in excess of the additions to its gold holdings (Chart 40). The flow of funds to New York for speculative purposes continued throughout the late summer and autumn, and added greatly to the normal seasonal pressure on sterling which began in September. In August the price of gold returned to 84 s. 11½ d. and remained at that level almost continuously for the rest of the year (Chart 50). England began to lose gold heavily to the United States, to Germany, and to the unknown buyer, but these gold exports were not allowed to reduce the credit base, being offset by Bank of England open market operations (Chart 40).

The technique of the defense of sterling during 1928 was in remarkable contrast to that of 1927. In 1927 the gold reserves of the Bank of England were nearly constant. To keep them so inter-central bank cooperation on a grand scale was called into play. Active intervention by the Bank in the

[60] Cf. Ch. 18, Credit Restriction, January to June 1928.

course of interest rates, both directly through changing Bank rate and indirectly through pegging the market rate, was the most conspicuous feature of British credit control policy. In 1928, though its reserve fluctuated widely, the Bank did not alter its rate or intervene in the determination of open market rates. Open market operations became the major instrument of credit control, and the departure from pre-war practice in this respect was even more complete than in 1925 and 1926.

Quite apart from all considerations of domestic credit control technique, the impression given by Chart 50 that 1928 was a 'normal' year because the customary seasonal forces once more seemed to dominate the gold and foreign exchange markets is to a large degree deceptive. The international distribution of gold was dominated from 1925 to 1928, as from 1919 to 1924, by the process of returning to gold, and the central banks of the world were still actively engaged in strengthening their reserves as part of the general preparation for operating a world-wide international gold standard system. In this sense 'a scramble for gold' was in progress, and in 1928 this increased in intensity. A general feeling of apprehension was spreading in Europe concerning impending trouble in New York, which gave new point to the desire of central banks to attain a high degree of international liquidity. American speculative excesses, therefore, not only weakened sterling and made London the cheapest market in which gold purchases could be carried out, but also led to a feeling of distrust which intensified the demand. At various times in 1928 the Belgian, Swiss, Swedish, and Polish central banks bought gold in London to strengthen their reserves, and in October, November, and December the outstanding feature of the London bullion market was a heavy movement of gold to Germany which caused grave anxiety in London.

In a sense the German purchases were unique, because the strength of the reichsmark, which made them possible, was due wholly to a flood of American foreign lending which

began in June 1928 when the partial checks interposed up to that time by the intervention of the German authorities were removed (cf. Ch. 16). Germany's effective demand for gold in London in 1928 was actually a direct consequence of the methods adopted in 1927 to defend sterling. In another sense, however, Germany's demand for gold was typical of the general policy of central banks of strengthening their gold reserves. Up to 1928 German gold imports had been carried out by the Reichsbank, which was therefore free to choose the market from which it took gold. But in 1928 the Reichsbank abandoned its policy of keeping a fixed proportion of its reserves in devisen, and when the mark reached gold import point, allowed gold to flow to Germany as a gold arbitrage transaction. That meant that Germany was buying gold in the cheapest market to the full extent allowed by the strength of her exchange. The cheapest market was London, now no longer protected by an international gold redistribution policy.

In the latter half of 1928 France was a conspicuous exception to the general policy of strengthening gold reserves. But this was only in appearance, and only because the Bank of France was passing through a particular phase of the technical heritage left by the de jure stabilization of 1928—that of accepting settlement of forward exchange contracts in foreign currencies.[61] This phase of French policy with respect to gold, however, was from its very nature temporary. The threat of renewed French demand for gold in London was a serious factor in the background at the beginning of 1929 as it had been at the beginning of 1927.

1929

The year 1929 resembled 1927 in this respect: sterling was persistently weak in the first part of the year and strong in the late autumn, a complete reversal of the usual seasonal tenden-

[61] Cf. Ch. 15, The Technical Heritage.

cies. In the first part of 1927 the underlying weakness of sterling had been accentuated by a special cause, the coal strike, and as a consequence special demands for gold from various countries in connection with the still incomplete process of returning to gold seemed likely to be concentrated upon London and to become a menace to the gold standard in England. A planned redistribution of these special elements in the demand for gold appeared to be the logical international solution of the problems raised by such a situation. The weakness of sterling in the first part of 1929 was due to the fact that the forces let loose by that policy had not been, or could not be controlled, and that in the presence of these forces the attitude of the gold standard world toward measures of gold economy had changed.

In January and February the New York rate for bankers acceptances began to adjust itself to the high level of time and call money rates, and the disparity between interest rates in New York and London continued to widen (Chart 49). Funds continued to be attracted to New York, and at the end of January gold was taken from London for New York on an arbitrage basis. On February 7 the Bank of England raised Bank rate from 4½ to 5½ per cent, and the London market rate immediately followed. For a time this stopped the gold drain from England. German demand had fallen off early in the year and in March disappeared from the market, for the German exchange also was adversely affected by the New York speculation for reasons given by Carl T. Schmidt in *German Business Cycles, 1924–1933* (pp. 49–50):

"Germany's position as a heavy borrower of foreign capital made its economy sensitive to changes in the international money markets which were especially marked in the twelve months after the middle of 1928. Several factors tended to reduce the volume of German borrowings from abroad, and, for a time in the spring of 1929, even led to heavy net withdrawals of foreign funds. Chief among these factors were the extraordinary speculative activity

in New York, which until the autumn of 1929 attracted money from all parts of the world and tended to tighten the market for long-term investments; in addition, the uncertainty of the protracted negotiations on reparation payments tended to discourage long-term loans. The United States, which had provided most of the long-term funds invested in Germany and a large share of the short-term loans, now changed its position from lender to borrower in the international markets. The withdrawals of American funds in Germany during the autumn of 1928 were offset by new loans from various European countries. In the late winter of 1928–29 and in the spring of 1929, however, there was a net outflow of foreign funds from Germany, accompanied by a transfer of domestic funds abroad."

With continental competition temporarily eliminated the London price of gold receded from the Bank of England selling price pari passu with a slight weakening of the dollar in London (Chart 50), and England was, for about three months, able to gain gold. In March some gold was imported from the Netherlands but most of the acquisitions were South African gold bought in the open market by the Bank of England which as early as January 31 began to pay well above its statutory buying price. On March 8, for example, it paid 84 s. 10⅞ d. per ounce for gold, a price characterized by *The Economist* as "a little too near the Bank's selling price for comfort." [62] During these months the American bid was actively competitive in the bullion market (Chart 50). Interest rates in New York were still mounting and the differential against London was growing even wider. In April, May, and June the general level of time and call rates in New York was between 8 and 9 per cent. At these high rates Europeans were borrowing in London for the purpose of lending in New York, especially since the flood of new American foreign loans had stopped. Sterling went below gold export point in June, and gold again moved to New York. At the same time Germany reappeared in the gold market and took gold until

[62] March 9, 1929, p. 486.

September. The prospect of a new reparation settlement had caused a return flow of funds to Germany that more than made up for the previous outflow.[63] In addition, the German exchange was strengthened by a $50 million credit obtained in New York.[64] To these sources of demand upon British gold supplies a new and powerful demand from France was added in July. French balances in London were remitted home in July and August in connection with income tax payments. These transfers coincided with a large tourist demand for francs. At the same time French banks began to realize balances accumulated before the stabilization in order to meet a domestic demand for francs. These forces expressed themselves in the form of a French demand for gold rather than in an increase in Bank of France foreign exchange holdings, because the stabilization law of June 1928 no longer permitted the Bank of France to issue notes against foreign exchange, and the liquidation of the Bank's forward exchange contracts was completed.

Under this pressure interest rates in London rose rapidly. The gold losses were not fully offset by the Bank in July (Chart 40) and, as in 1927, market rates went above Bank rate. This rather unusual relation may occur for two reasons: (1) the market may anticipate a rise in Bank rate in the expectation that by the time its holdings of bills have been converted from long to short maturities it will be able to sell short bills at a profitable price; (2) the Bank may, at a given moment, be very particular about the bills it takes. The second reason was responsible for the appearance of this phenomenon in 1927. Both were probably present in 1929. Un-

[63] Cf. Schmidt, *op. cit.*, p. 50.

[64] The Berlin correspondent of *The Economist* wrote on June 25, 1929: "The recent money market stringency was largely due to the need of the Republic caused by the old cash deficit. Here the position has been improved by the granting of a credit of 210 million marks (to the government) by a banking syndicate led by Mendelssohn and Co. against which the syndicate is to get an equivalent one-year dollar credit from an American group." *The Economist*, June 29, 1929, p. 1453.

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CHAPTER 20

The Experiment of the Gold Exchange Standard without a Focal Point

At the culmination of the American speculative boom, as at many other points, the history of the two experiments—creating an international money market in New York and defending sterling—was interwoven with the history of the experiment of operating the gold exchange standard without a focal point.

The Gold Exchange Standard as a Gold Economy Measure

The Genoa Principle of Gold Economy

In the account in Chapter 11 of the cooperative aspects of the return to gold the stress laid by the Genoa Conference on the principle of gold economy was emphasized. The resolutions of that Conference recommended a widespread extension of the pre-war practice of the gold exchange standard as a measure of gold economy. This proposal, however, was hedged about by a series of elaborate safeguards, namely, special guarantees of the safety and freedom of movement of inter-central bank deposits; development of a system of forward exchange markets; and the coordination of the demand for gold and stabilization of credit in such a way as not only to keep currencies at par but also to prevent undue fluctuations in the value of gold which might result from the efforts of so many countries to return to gold at the same time.

In putting forward these suggestions the Genoa Conference went far beyond the immediate problem of accelerating the return to gold without incurring the dangers of an unre-

strained inter-central bank competition for the metal, and stated principles of general application to the international gold standard system as a whole. It recognized first and foremost that stable internal credit conditions were the prerequisite of a system of stable exchange rates, especially in the gold centers holding the reserves of other countries. In so doing it gave expression to the most fundamental thesis running through the whole analysis of the international gold standard presented in these studies. Though of general application, these principles were of peculiar importance at a time of world-wide development of the gold exchange standard under conditions in which there was no longer a single focal point where gold exchange balances could be employed, transferred, and offset. The writer is in complete agreement with the judgment of Dr. Blessing in 1932, that if the recommendations of the Genoa Conference had been applied in toto, the defects noted in 1927–31 would not have reached their actual dimensions.[1]

The Geographical Spread of the Gold Exchange Standard

In our account of the completion of the gold standard facade in Chapter 14 we state that early in 1926 39 countries had stabilized their currencies in terms of gold either de jure or de facto. Of these, 5—Nicaragua, Honduras, Salvador, Costa Rica, and Guatemala—were Central American republics of no international financial importance. The other 34 may be classified on the basis of the legal provisions then in force or subsequently adopted: [2]

In 11 countries—the United States, Canada, the United Kingdom, Australia, New Zealand, the Union of South Africa,

[1] The Gold Exchange Standard, B.I.S. Monetary and Economic Department (C. B. 60, Basle, Oct. 26, 1932). The clarity, balance, and condensation of this memorandum, and the harmony of its point of view and conclusions with the views of the writer at most points have led to perhaps an undue use of this source.

[2] Based on *Federal Reserve Bulletin* list (August 1928, p. 562), except for New Zealand, Yugoslavia, Canada, Cuba, the Philippines, Mexico, India, and Siam, which are not mentioned.

the Netherlands, Dutch East Indies, Sweden, Switzerland, and Lithuania—there were no legal provisions permitting the inclusion of anything except gold in the reserves of central banks.

In the other 23 countries foreign exchange in some form and in some amount could be legally included in central bank reserves against notes or against notes and deposits. Of these, 16 were countries in which stabilization programs of what may be called the typical post-war kind had been partly or completely carried out: Germany, Austria, Hungary, Czechoslovakia, Danzig, Denmark, Estonia, Finland, Latvia, and Bulgaria in Europe; Chile, Colombia, Bolivia, and Venezuela in South America. In addition, British India, Siam, and Egypt had retained or returned to sterling exchange standard systems developed long before the war; Cuba, Mexico, and the Philippine Islands were dollar or dollar exchange countries. These were once more brought under the common rubric of gold exchange standard countries after Great Britain's return to gold. Finally, Russia, though separating her domestic currency from international influences (cf. Ch. 14), still counted foreign exchange as part of her legal central banking reserve.

To the 16 countries mentioned as carrying out typical post-war stabilization programs and permitting foreign exchange to form part of the legal reserves of their central banks were added from 1926 to 1928 4 European countries—Italy, Poland, Belgium, and Greece; and 2 South American countries, Ecuador and Peru. It was by this group of 22 countries that the gold exchange standard was most generally regarded as primarily a measure of gold economy. To the 11 countries mentioned as not allowing anything other than gold to count as gold reserve of central banks were added from 1926 to 1928 one European country, Norway, and two South American countries, Argentina and Brazil. These years also included the all important episode of the temporary adherence of France to the gold exchange standard.

In summary, until the end of 1928 the gold exchange stand-

ard spread to at least 31 countries. Every conceivable type of gold exchange standard was included within this group, and to explore these in detail would lead to a prolonged, and for the purposes of these studies, sterile examination of central banking statutes and monetary laws. The simple enumeration just given points with sufficient clearness to the world-wide sources of the growth in the central money markets of foreign balances connected with the gold exchange standard, and defines the boundaries of the area in which the desire for gold economy was a dominating motive in its adoption. This is far from painting the whole picture. Not only was the motive of gold economy of very different importance in different gold exchange standard countries, but the central banks of the United Kingdom, the United States, and Canada were practically the only ones that were not substantial holders of foreign exchange. The use of sterling balances by the central banks of the Dominions was of the essence of the management of the Empire exchanges, and the central banks of the Netherlands, the Dutch East Indies, Sweden, Switzerland, and Norway all held substantial foreign exchange portfolios. In spite of its legal forms the Argentine system was essentially a sterling exchange standard, modified by a series of special transactions in New York. Finally, one important country not mentioned in any of these lists, Japan, was continuously supporting its exchange by the sale in the central money markets of large centrally controlled stocks of foreign exchange.

The Definition of the Gold Exchange Standard

Clearly no very satisfactory results can be obtained from discussing the experiment of the gold exchange standard without a focal point by using any definition of the gold exchange standard found in legal enactments. Dr. Blessing has admirably stated the problem of definition in the opening words of the Memorandum upon which such heavy drafts are being made in these sections:

"The essential feature of the gold standard is the maintenance of a fixed relationship between the national currency unit and gold, which in turn practically implies a fixed relationship with the currency units of other gold currency countries. In regard to the machinery employed for the maintenance of the fixed relationship with gold and with the currency units of the other gold currency countries, three different forms of gold standard may be distinguished:—

a) the *pure gold standard* with free coinage rights, gold coins in circulation and bank-notes redeemable in gold;

b) the *gold bullion standard* with a circulation of notes, not necessarily redeemable in gold, but with the obligation of the Central Bank to buy and sell gold bars without restriction at fixed prices;

c) the *gold exchange standard* with a circulation of notes, not necessarily redeemable in gold, but with the obligation of the Central Bank to ensure the value of the national currency unit in relation to other gold currency countries by buying and selling foreign exchange at approximately the gold parity.

The above three forms accordingly differ in the method by which the exchange rates are kept stable and in the composition of the currency reserves. In practice the systems described do not exist, or exist only rarely, in an unadulterated form; in most cases they overlap. The reserves of those banks of issue which are under obligation to buy and sell gold bars at a fixed price consist for the most part of foreign exchange as well as gold bars, and purchases and sales of exchange frequently play a more important part than purchases and sales of gold. Inversely, those Central Banks which maintain the stability of their currency by buying and selling exchange also hold gold in the form of bars and coins.

So far as the individual currency laws are concerned, a distinction may be drawn between two main forms of the gold exchange standard: the form which allows of holding the legal minimum reserve entirely in foreign exchange and the form which prescribes that a given percentage of the legal minimum cover must consist of gold, while the remainder may be composed of foreign exchange. In general the currency laws allow considerable freedom to the individual Central Banks in the choice of their re-

serves; in particular they make no mention of 'free reserves' and it was just these free reserves over and above the legal minimum which in the past played so significant a part. No appreciation of the gold exchange standard, therefore, can rely on the legal provisions alone; the *de facto* attitude of the Central Banks is a much more important factor.

When reference is made below to the gold exchange standard, the term is not only employed in its narrower sense, in accordance with the above definition; it rather includes all those questions which have their origin in the holding of foreign exchange reserves by Central Banks, irrespective of whether these belong to the legal minimum reserve or to the free reserve."

It is in the sense defined by Dr. Blessing that the term 'the gold exchange standard' will hereafter be used in these studies.

The Foreign Exchange and Gold Reserves of European Central Banks

The published figures of the foreign exchange holdings of central banks do not disclose the full extent of their holdings; the outstanding example, of course, being the accumulation during 1925 and 1926 of foreign exchange by the Bank of France, carried under the head of 'divers' on its balance sheet. Yet an examination of the published figures is very rewarding. They have been compiled for Europe as of the end of December from 1924 to 1930, and quarterly for 1931 and for the first three quarters of 1932, and expressed in millions of Swiss francs by Dr. Blessing. In order to bring out certain special points the countries included in Dr. Blessing's tables have been divided by the writer into four groups: I France, Germany, and Italy, whose central bank gold and foreign exchange holdings fluctuated most widely; II Austria, Danzig, Finland, Hungary, Latvia, Lithuania, Holland, Sweden, and Switzerland, which stabilized their currencies de jure before or at nearly the same time as Great Britain; III Belgium, Bulgaria, Czechoslovakia, Denmark,

Greece, Norway, and Poland, which stabilized their currencies between Great Britain's return to gold and the crisis of 1929; IV Yugoslavia, Portugal, Roumania, and Spain, in which stabilization was still 'unfinished business' in 1929. In Table 59 the monetary gold stock and foreign exchange holdings of the central banks, the sum of these two items representing their total reserves, and the percentages the foreign exchange holdings are of the totals are given for each country and for each of the four groups.

From this table certain conclusions can be drawn concerning the gold exchange standard as a gold economy measure in Europe. In the first place the gold and foreign exchange holdings of the central banks of countries that did not carry out stabilization programs before 1929 (Group IV) and of countries that stabilized before or together with Great Britain (Group II), and the proportions between gold holdings and foreign exchange holdings in these two groups were very stable. Most of the large gold holdings of Group IV were Spanish; they were practically immobilized and did not play an important role in European finance (cf. Ch. 28). The foreign exchange of this group fell steadily from 1925 to 1928, owing to losses by Yugoslavia, and were increased in 1929 with the attempted stabilization in Roumania, but were quantitatively unimportant. The banks in Group II, which includes important creditor countries, especially the Netherlands, added substantially to their foreign exchange holdings in 1925, but not to their gold holdings. The holdings of the group as a whole of both foreign exchange and gold remained virtually unchanged during 1926 and 1927. In 1928 these banks began to strengthen their position, but the ratio of foreign exchange to gold varied remarkably little in 1928 and 1929.

The characteristic feature of Group III—the banks of countries carrying out stabilization operations after 1925—was the dominant influence of the Polish and Belgian stabilizations. The group as a whole lost foreign exchange in

TABLE 59

Reserves of Various European Central Banks, December 1924–September 1932

A MONETARY GOLD STOCK (millions of Swiss francs)

CENTRAL BANKS OF	*1924*	*1925*	*1926*	*1927*	*1928*	*1929*	*1930*
				DECEMBER			
Group I, *Total*	7,753	8,311	9,372	9,087	10,913	12,686	15,056
France	5,545	5,548	5,549	5,545	6,465	8,451	10,876
Germany	938	1,491	2,261	2,302	3,070	2,819	2,735
Italy	1,270	1,272	1,562	1,240	1,378	1,416	1,445
Group II, *Total*	1,999	1,842	1,904	1,977	2,138	2,204	2,306
Austria	8	11	38	62	123	123	156
Danzig	0	0	0	0	0	0	0
Finland	43	43	43	41	40	39	39
Hungary	37	53	153	178	182	148	147
Latvia	9	9	9	9	9	9	9
Lithuania	16	17	16	17	18	18	20
Netherlands	1,051	923	861	833	905	932	888
Sweden	329	319	312	320	328	340	334
Switzerland	506	467	472	517	533	595	713
Group III, *Total*	1,114	1,151	1,334	1,554	1,721	1,985	2,083
Belgium	272	274	447	518	651	847	989
Bulgaria	40	41	44	48	50	52	54
Czechoslovakia	140	141	141	154	178	193	237
Denmark	291	291	290	253	240	239	239
Greece	64	66	70	76	37	43	34
Norway	204	204	204	204	204	204	203
Poland	103	134	138	301	361	407	327
Group IV, *Total*	2,902	2,912	2,947	3,004	2,954	2,994	2,683
Jugoslavia	72	76	86	89	91	95	99
Portugal	48	48	48	48	48	48	48
Roumania	247	251	256	263	256	285	288
Spain	2,535	2,537	2,557	2,604	2,559	2,566	2,248
Grand Total	13,768	14,216	15,557	15,622	17,726	19,869	22,128

B FOREIGN EXCHANGE HOLDINGS (millions of Swiss francs)

Group I, *Total*	2,287	2,154	2,404	3,180	8,951	7,694	7,439
France	570	564	405	535	6,657	5,286	5,315
Germany	1,608	1,261	1,189	583	652	1,003	944
Italy	109	329	810	2,062	1,642	1,405	1,180
Group II, *Total*	1,174	1,767	1,617	1,688	1,792	1,889	2,239
Austria	348	407	458	477	458	417	522
Danzig	29	27	39	34	43	42	46
Finland	72	162	141	168	98	89	122
Hungary	182	313	225	188	85	72	61
Latvia	41	20	21	49	72	49	36
Lithuania	33	17	20	27	24	41	45
Netherlands	233	514	390	350	459	458	514
Sweden	189	281	288	366	299	368	542
Switzerland	47	26	35	29	254	353	351

	1931			1932		
MARCH	JUNE	SEPT.	DEC.	MARCH	JUNE	SEPT.
15,711	14,675	15,141	16,654	18,221	19,243	19,350
11,394	11,457	12,050	13,905	15,601	16,670	16,788
2,868	1,754	1,606	1,215	1,085	1,027	983
1,449	1,464	1,485	1,534	1,535	1,546	1,579
2,243	2,532	3,755	4,816	4,885	5,257	5,383
156	156	138	138	131	109	109
0	0	16	22	22	39	22
39	39	39	40	40	40	40
114	101	95	92	91	88	88
9	9	9	17	18	21	21
20	20	20	26	26	26	25
929	1,036	1,463	1,848	1,832	2,042	2,155
333	331	276	286	286	286	286
643	840	1,699	2,347	2,439	2,606	2,637
2,131	2,131	2,880	2,969	2,919	2,838	2,876
1,037	1,034	1,796	1,837	1,812	1,849	1,861
55	56	57	57	57	57	57
237	236	234	253	252	252	254
239	239	228	200	201	186	185
34	33	33	58	48	4	37
203	203	202	215	216	208	198
326	330	330	349	333	282	284
2,838	2,889	2,745	2,754	2,769	2,774	2,777
99	141	151	161	161	161	161
48	48	40	46	65	66	65
271	274	277	300	293	292	294
2,420	2,426	2,277	2,247	2,250	2,255	2,257
22,239	22,227	24,521	27,193	28,794	30,112	30,386
6,686	6,757	5,582	4,988	3,116	1,770	1,504
5,336	5,317	4,610	4,183	2,523	1,232	958
232	370	171	213	175	160	164
1,118	1,070	801	592	418	378	382
1,926	1,841	1,163	565	646	531	599
474	324	147	93	44	31	29
37	34	26	26	31	16	26
124	112	84	53	94	66	57
23	9	6	21	11	10	10
31	22	22	13	14	12	12
37	35	28	17	13	10	8
454	476	456	170	176	143	149
419	409	45	68	156	185	247
327	420	349	104	107	58	61

TABLE 59—*Continued*

Reserves of Various European Central Banks, December 1924–September 1932

B FOREIGN EXCHANGE HOLDINGS (millions of Swiss francs)—*Continued*

CENTRAL BANKS OF	*1924*	*1925*	*1926*	*1927*	*1928*	*1929*	*1930*
				DECEMBER			
Group III, *Total*	715	578	1,081	1,689	1,776	1,488	1,708
Belgium	30	30	322	378	408	416	699
Bulgaria	37	19	25	42	104	43	30
Czechoslovakia	103	183	321	374	385	349	376
Denmark	68	124	38	135	159	126	139
Greece	186	154	167	175	248	167	168
Norway	37	65	85	65	57	81	56
Poland	254	3	125	520	415	306	240
Group IV, *Total*	479	462	388	387	311	564	222
Jugoslavia	385	367	335	347	231	268	120
Portugal	94	95	53	40	80	87	48
Roumania						209	54
Spain							
Grand Total	4,655	4,961	5,490	6,944	12,830	11,635	11,608

C FOREIGN EXCHANGE PLUS MONETARY GOLD (millions of Swiss francs)

Group I, *Total*	10,040	10,465	11,776	12,267	19,864	20,380	22,495
France	6,115	6,112	5,954	6,080	13,122	13,737	16,191
Germany	2,546	2,752	3,450	2,885	3,722	3,822	3,679
Italy	1,379	1,601	2,372	3,302	3,020	2,821	2,625
Group II, *Total*	3,173	3,609	3,521	3,665	3,930	4,093	4,545
Austria	356	418	496	539	581	540	678
Danzig	29	27	39	34	43	42	46
Finland	115	205	184	209	138	128	161
Hungary	219	366	378	366	267	220	208
Latvia	50	29	30	58	81	58	45
Lithuania	49	34	36	44	42	59	65
Netherlands	1,284	1,437	1,251	1,183	1,364	1,390	1,402
Sweden	518	600	600	686	627	708	876
Switzerland	553	493	507	546	787	948	1,064
Group III, *Total*	1,829	1,729	2,415	3,243	3,497	3,473	3,791
Belgium	302	304	769	896	1,059	1,263	1,688
Bulgaria	77	60	69	90	154	95	84
Czechoslovakia	243	324	462	528	563	542	613
Denmark	359	415	328	388	399	365	378
Greece	250	220	237	251	285	210	202
Norway	241	269	287	269	261	285	259
Poland	357	137	263	821	776	713	567
Group IV, *Total*	3,381	3,374	3,335	3,391	3,265	3,558	2,905
Jugoslavia	457	443	421	436	322	363	219
Portugal	142	143	101	88	128	135	96
Roumania	247	251	256	263	256	494	342
Spain	2,535	2,537	2,557	2,604	2,559	2,566	2,248
Grand Total	18,423	19,177	21,047	22,566	30,556	31,504	33,736

1931				*1932*		
MARCH	JUNE	SEPT.	DEC.	MARCH	JUNE	SEPT.
1,551	1,389	530	409	285	307	382
658	630					
22	19	11	10	8	8	6
338	295	181	163	120	161	169
108	80	51	24	13	18	76
152	132	125	71	15	22	25
51	30	17	17	17	6	26
222	203	145	124	112	92	80
296	300	462	439	421	420	434
87	85	50	39	25	28	32
48	38	108	109	107	95	96
41	71	49	10	10	5	17
120	106	255	281	279	292	289
10,459	10,287	7,737	6,401	4,468	3,028	2,919
22,397	21,432	20,723	21,642	21,337	21,013	20,854
16,730	16,774	16,660	18,088	18,124	17,902	17,746
3,100	2,124	1,777	1,428	1,260	1,187	1,147
2,567	2,534	2,286	2,126	1,953	1,924	1,961
4,169	4,373	4,918	5,381	5,531	5,788	5,982
630	480	285	231	175	140	138
37	34	42	48	53	55	48
163	151	123	93	134	106	97
137	110	101	113	102	98	98
40	31	31	30	32	33	33
57	55	48	43	39	36	33
1,383	1,512	1,919	2,018	2,008	2,185	2,304
752	740	321	354	442	471	533
970	1,260	2,048	2,451	2,546	2,664	2,698
3,682	3,520	3,410	3,378	3,204	3,145	3,258
1,695	1,664	1,796	1,837	1,812	1,849	1,861
77	75	68	67	65	65	63
575	531	415	416	372	413	423
347	319	279	224	214	204	261
186	165	158	129	63	26	62
254	233	219	232	233	214	224
548	533	475	473	445	374	364
3,134	3,189	3,207	3,193	3,190	3,194	3,211
186	226	201	200	186	189	193
96	86	148	155	172	161	161
312	345	326	310	303	297	311
2,540	2,532	2,532	2,528	2,529	2,547	2,546
33,382	32,514	32,258	33,594	33,262	33,140	33,305

TABLE 59—*Continued*

Reserves of Various European Central Banks, December 1924–September 1932

D FOREIGN EXCHANGE AS PERCENTAGES OF TOTAL FOREIGN EXCHANGE PLUS MONETARY GOLD HOLDINGS

CENTRAL BANKS OF	*1924*	*1925*	*1926*	*1927*	*1928*	*1929*	*1930*
				DECEMBER			
Group I	22.8	20.6	20.4	25.9	45.1	37.8	33.1
France	9.3	9.2	6.8	8.8	50.7	38.5	32.8
Germany	63.2	45.8	34.5	20.2	17.5	26.2	25.7
Italy	7.9	20.6	34.2	62.5	54.4	49.8	44.9
Group II	37.0	49.0	45.9	46.1	45.6	46.2	49.3
Austria	97.8	97.4	92.3	88.5	78.8	77.2	77.0
Danzig	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Finland	62.6	79.0	76.6	80.4	71.0	69.5	75.9
Hungary	83.1	85.5	59.5	51.4	31.8	32.7	29.3
Latvia	82.0	69.0	70.0	84.5	88.9	84.5	80.0
Lithuania	67.3	50.0	55.6	61.4	57.1	69.5	69.2
Netherlands	18.2	35.8	31.2	29.6	33.6	33.0	36.7
Sweden	36.5	46.8	48.0	53.4	47.7	52.0	61.9
Switzerland	8.5	5.3	6.9	5.3	32.3	37.2	33.0
Group III	39.1	33.4	44.8	52.1	50.8	42.9	45.1
Belgium	9.9	9.9	41.9	42.2	38.5	32.9	41.4
Bulgaria	48.1	31.7	36.2	46.7	67.5	45.3	35.7
Czechoslovakia	42.4	56.5	69.5	70.8	68.4	64.4	61.3
Denmark	18.9	29.9	11.6	34.8	39.9	34.5	36.8
Greece	74.4	70.0	70.5	69.7	87.0	79.5	83.2
Norway	15.4	24.2	28.9	24.2	21.8	28.4	21.6
Poland	71.1	2.2	47.5	63.3	53.5	42.9	42.3
Group IV	14.2	13.7	11.6	11.4	9.5	15.9	7.6
Jugoslavia	84.3	82.8	79.6	79.6	71.7	73.8	54.8
Portugal	66.2	66.4	52.5	45.5	62.5	64.5	50.0
Roumania						42.3	15.9
Spain							
Grand Total	25.3	25.9	26.1	30.8	42.0	36.9	34.4

SOURCE: The Gold Exchange Standard, B.I.S. Monetary and Economic Department (C.B. 60, Basle, Oct. 26, 1932)

	1931			1932		
MARCH	JUNE	SEPT.	DEC.	MARCH	JUNE	SEPT.
29.9	31.5	26.9	23.1	14.6	8.4	7.2
31.9	31.7	27.7	23.1	13.9	6.9	5.4
7.5	17.4	9.6	14.9	13.9	13.5	14.3
43.6	42.2	35.0	27.8	21.4	19.7	19.5
46.2	42.1	23.7	10.5	11.7	9.2	10.0
75.2	67.5	51.6	40.3	25.1	22.1	21.0
100.0	100.0	61.9	54.2	58.5	29.1	54.2
76.1	74.2	68.3	57.0	70.1	62.3	58.8
16.8	8.2	5.9	18.6	10.8	10.2	10.2
77.5	71.0	71.0	43.3	43.8	36.4	36.4
64.9	63.6	58.3	39.5	33.3	27.8	24.2
32.6	31.5	23.8	8.4	8.8	6.6	6.5
55.7	55.3	14.0	19.2	35.3	39.3	46.3
33.7	33.3	17.0	4.2	4.2	2.2	2.3
42.1	39.5	15.5	12.1	8.9	9.8	11.7
38.8	37.9					
28.6	25.3	16.2	14.9	12.3	12.3	9.5
58.8	55.6	43.6	39.2	32.3	39.0	40.0
31.1	25.1	18.3	10.7	6.1	8.8	29.1
81.7	80.0	79.1	55.0	23.8	84.6	40.3
20.1	12.9	7.8	7.3	7.3	2.8	11.6
40.5	38.1	30.5	26.2	25.2	24.5	22.0
9.5	9.4	14.4	13.7	13.2	13.2	13.3
46.8	37.6	24.9	19.5	13.4	14.8	16.6
50.0	44.2	73.0	70.3	62.2	59.1	59.6
15.4	20.6	15.1	3.2	3.3	1.7	5.5
4.7	11.8	10.1	11.1	11.0	11.5	11.4
31.3	31.6	24.0	19.1	13.4	9.1	8.8

1925, owing to the failure of the first Polish stabilization effort; and in 1926 and 1927 gained both foreign exchange and gold substantially, owing to the Belgian stabilization and the second Polish stabilization. Belgian and Polish accumulations of gold were continued in 1928 but on a relatively small scale. The ratio of foreign exchange to gold seems to have been established for this group at about 50 per cent in 1928, but in 1929 it dropped sharply owing to the development of new influences connected with the speculative boom in New York and the approach of an economic depression which necessitated the sale of foreign assets by many central banks.

The behavior of the gold and foreign exchange holdings of the 16 banks in Groups II and III, 1924–30, is shown in the accompanying tabulation. For these banks as a group the

Sixteen Central Banks

End of year figures (millions of Swiss francs)

	1924	*1925*	*1926*	*1927*	*1928*	*1929*	*1930*
Foreign exchange	1,889	2,345	2,698	3,377	3,568	3,377	3,947
Gold	3,113	2,993	3,238	3,531	3,859	4,189	4,389
Total	5,002	5,338	5,936	6,908	7,427	7,566	8,336
Foreign exchange as % of Total	37.7	43.9	45.4	48.9	48.0	44.6	47.4

gold exchange standard, *as a gold economy measure,* seems to have reached a sort of norm. From the end of 1925 to the end of 1930 the percentage of their foreign exchange to their total foreign exchange and gold holdings did not vary over 5 per cent. During 1928, after the vicissitudes of returning to gold were over, the percentage for the group as a whole hardly fluctuated, and for the banks within the group the variations were slight. In 1929, a year of financial crisis, foreign exchange reserves had to be parted with, but the ratio of 1927 and 1928 was reestablished in 1930. The stability of the great international financial centers, and of the international gold standard as a whole was not subject to any serious danger arising from changes in the *proportions* in which these banks, as a group, chose to keep their gold and foreign exchange holdings.

Beginning in 1928, however, the central banks of creditor countries began to gain, and those of debtor countries to lose foreign exchange, a tendency which after 1929 became very important for the gold exchange standard as a gold economy device. This is not brought out in the grouping thus far adopted. In Table 60 therefore the countries are arranged in the order of the gains or losses of gold and foreign exchange

TABLE 60

Sixteen European Central Banks
Net Changes in Foreign Exchange Holdings, 1928-1930

	1928	*1929*	*1930*	*1928-1930*
		(millions of Swiss francs)		
Switzerland	+225	+99	−2	+322
Belgium	+30	+8	+283	+321
Sweden	−67	+69	+174	+176
Netherlands	+109	−1	+56	+164
Austria	−19	−41	+105	+45
Lithuania	−3	+17	+4	+18
Danzig	+9	−1	+4	+12
Denmark	+24	−33	+13	+4
Czechoslovakia	+11	−36	+27	+2
Greece	+73	−81	+1	−7
Norway	−8	+24	−25	−9
Bulgaria	+62	−61	−13	−12
Latvia	+23	−23	−13	−13
Finland	−70	−9	+33	−46
Hungary	−103	−13	−11	−127
Poland	−105	−109	−66	−280

SOURCE: Table 59 B

by their respective central banks for 1928–30; the changes in each of these three years are also given. The tendency toward a concentration of foreign exchange holdings in the hands of the central banks of a few creditor countries is very clear. After 1928 the persistence of the gold exchange standard as a gold economy measure was coming to be more and more subject to the discretion of those central banks whose motives for economizing gold were weakest.

The forces leading to this result were not, however, of major importance until the crisis of 1929. Until that time, and especially before 1928, the gold exchange standard was being successfully used in the spirit of the Genoa resolutions

by this group of countries as a measure of gold economy designed to accelerate the general restoration of stable exchanges by mitigating the competition of central banks for gold. From 1924 to 1929 the 16 central banks of Groups II and III increased their gold holdings a little more than one milliard Swiss francs ($207,668,000) and increased their foreign exchange holdings a little less than one and a half milliard Swiss francs ($287,184,000). Less than half the increase in their reserves was in gold, and the annual increases in both gold and foreign exchange were quite regular. When one considers the figures of gold distribution in Table 48 and an annual average production of new gold of 13½ million ounces ($278 million) for the British Empire and of 19 million ounces ($391 million) for the world, it is clear that an annual import of $41½ million in gold by these 16 countries was not in itself a menace to the stability of the gold distributing centers. An annual increase of $57½ million in foreign exchange held by these central banks did not in itself present a serious problem of unfaithful money or greatly complicate internal credit control in the financial centers, even though these figures were very large judged by the prewar practice of the gold exchange standard.

When Group I is examined the gold exchange standard takes on a different aspect. The transactions were much larger and the proportions of gold and foreign exchange held by the central banks of this group were subject to great variation. The three countries are grouped in order to show their predominant role in the gold exchange standard in Europe, not because of any similarity in their relation to that standard. The foreign exchange accumulations of Italy in 1926 and 1927, behind which was the full force of the fascist state (cf. Ch. 14), were far greater than those of any other central bank of Europe, except the Bank of France. The dominating motive was gold economy, but the methods of accumulation were not typical of those employed by gold exchange standard countries in general. The foreign exchange holdings of

the Reichsbank, which, following the stabilization of 1924, were by far the largest of any central bank in Europe, were rapidly drawn down in 1925 and again in 1927. The gold exchange standard in Germany was less and less dominated by the principle of gold economy—from the beginning it was regarded as a half-way house.[3] The Bank of France in 1926 and 1927 accumulated by far the largest stock of foreign exchange of any central bank in the world, and was the dominant influence in the whole gold exchange standard system, but the motive leading to these accumulations was the prevention of an unwanted appreciation of the franc, and adherence to the system was never regarded as more than a temporary expedient.[4] These three banks at the end of 1928 held more gold and foreign exchange than all the other central banks of Europe combined.

End of December 1928 (*millions of Swiss francs*)	GROUP I (3 BANKS)	GROUPS II, III, IV (20 BANKS)
Foreign exchange	8,951	3,879
Gold	10,913	6,813

CONTRAST TO PRE-WAR

From the figures given by Dr. Blessing and analyzed above, together with his estimates of the pre-war foreign exchange holdings of central banks in Europe, the contribution of the spread of the gold exchange standard in Europe after the war to the growth of short term foreign funds in the central money markets can be estimated. Dr. Blessing has estimated the foreign exchange of nine large European central banks before the war in American dollars.[5] Adding to these figures estimates for undisclosed balances and balances of smaller banks he reaches an estimate for all European central banks

[3] Cf. Ch. 16, The Principle of Gold Economy; also, The Modification of the Principle of Gold Economy, 1928.

[4] Cf. Ch. 15, De Facto Adherence to the Gold Exchange Standard, August 1926 to June 1928, and the Realization of Potential Elements of Strength.

[5] *Op. cit.*, p. 4.

		MILLIONS OF DOLLARS
Russian State Bank	July 27, 1914	72
Reichsbank	Average 1905-13	33
Austria-Hungary	" 1903-13	12-30
Belgium	" 1909-13	29-30
Holland	" 1910-14	6
Switzerland	" 1907-13	10.6
Italy	End of 1913	33
Sweden	1905-13	19
France	1906-13	4

of $250 to $400 million. The contrast is striking when the post-war figures, excluding Russia, are also stated in American dollars.

	END OF *1924*	*1928*	CHANGE
	(millions of dollars)		
16 European banks, Groups II and III	364	788	324
Italy	21	316	295
Germany	310	125	−185
France	98	1,284	1,188
All Europe	899	2,487	1,585

Dr. Blessing's estimate of foreign exchange holdings of central banks before the war for the whole world was $400 to $600 million. It is not probable that the post-war spread of the gold exchange standard outside Europe added very substantially to the total foreign exchange holdings of central banks. In spite of agitation against the gold exchange standard in India, the Indian currency system continued to be managed on pre-war lines through the Council Bill system. The Argentine system was not profoundly altered, and Dominion and Colonial balances in London tended to be small. The large foreign balances held by the Japanese government and the Bank of Japan at the end of the war had been greatly drawn down by 1925, and by 1929 had practically disappeared (cf. Ch. 14). But though the main and striking contrast between the pre-war and post-war gold exchange standard systems lay in the growth of the foreign exchange holdings of European central banks, the cross currents set up in the international movement of funds between the central money markets by its spread throughout the world added a new complexity to the post-war problems.

The Gold Exchange Standard as a Credit Control Device

It is of the essence of the gold exchange standard *as a gold economy measure* that a given amount of gold held in a 'gold center' shall serve as reserve not only against notes and deposits in the country in which it is held, but in a second country as well. Unless the building up of reserves by central banks in the form of foreign exchange makes possible an increase in credit in the markets of the central banks possessing the exchange without a corresponding reduction of credit in the market upon which the exchange represents a claim, there is no gold economy. As Dr. Blessing has pointed out, it was upon the "undeniable tendency to credit expansion in the gold exchange standard" that the experts of the Genoa Conference relied in making their recommendations.[6] The gold exchange standard was not, however, universally adopted as a gold economy measure. In some countries, notably France, the accumulation of large foreign balances by central banks was a byproduct of exchange pegging operations following stabilization. In debtor countries adopting the gold exchange standard as a gold economy measure, the actual size of the gold exchange holdings was a byproduct of the great pegging operation by which the international gold standard as a whole was maintained—the flow of American foreign credits. The rapid growth in foreign exchange holdings by central banks from 1924 to 1929 was composite in its origin and was much greater than had been contemplated by the Genoa experts. Once accumulated, these balances gave to central banks great powers of intervention in the foreign exchange markets, and both the accumulation and subsequent use of these balances presented to them a series of special problems of internal credit management.

Direct intervention in the foreign exchange markets had long been part of the pre-war technique of central bank ad-

[6] *Ibid.*, p. 11.

ministration, as admirably summarized by Dr. Blessing (*op. cit.*, pp. 5–6):

"In the view of the European Central Banks, the maintenance of exchange reserves was a sound means of regulating exchange rates without being obliged in every case to have recourse to measures of discount and credit policy. In particular they thought it necessary to avoid gold movements for which seasonal reasons or other temporary causes (foreign loans, etc.) were responsible. They accordingly bought exchange when the rates were favourable and sold it when they were unfavourable. They further held that a foreign exchange policy enabled them to obtain more stable discount rates, by the omission of changes in those rates which seasonal gold movements would otherwise have necessitated. . . . Furthermore, they looked upon exchange holdings as a convenient working fund which could be employed at any time for the regulation of daily exchange rates, while, last but not least, the circumstance that foreign exchange, unlike gold, is an interest-bearing asset carried great weight."

The influence of the international movement of the central banks' foreign balances upon the volume of credit in gold exchange standard countries was not greatly stressed and its influence upon the volume of credit in the world as a whole was not considered at all. This was no longer true after the war, for the pre-war relationships between the control of the foreign exchanges by central bank intervention in the market and control of the domestic credit system by discount and open market policy had undergone a profound change simply because of the increase in the size of foreign exchange as compared to gold reserves. The behavior of gold exchange reserves became intimately bound up with the behavior of the credit system as a whole in many countries, and attention began to be directed to the influence of the gold exchange standard upon the stability of the world credit structure.

In retrospect the gold exchange standard has been held responsible for many of the weaknesses in the world financial

structure from 1924 to 1929.[7] It has frequently been said that the gold exchange standard is ineffective as a mechanism for setting in motion corrective forces essential to permanent exchange stability because the expansion and contraction of credit that follow changes in the foreign exchange reserves of central banks in gold exchange standard countries do not necessarily entail opposite changes in the gold centers, as is the case when gold moves. Consequently, it is contended, the persistent tendency of these balances to increase after 1924 introduced a very strong inflationary influence into the world credit system. In discussing the international flow of gold through the London bullion market we have stressed the dangers of using the theory of corrective forces as a guide to the interpretation of the causes and effects of international gold movements after the war. Quite aside from the fact that the history of gold movements shows that these provide no simple standard of comparison, many additional pitfalls lie in wait for those who attempt to judge the effect of the international flow of central bank foreign exchange holdings by using the theorem of the one-sided, non-reciprocal effects of such movements in the various money markets. The multiplicity of these pitfalls may be brought out by reverting briefly to the type of abstract statement employed in Chapters 4 and 17.

Pitfalls

In the first place, a sharp distinction must be made between the effects of increases or decreases in central bank holdings of foreign exchange upon the domestic credit structures of countries that use chiefly notes and of those that use chiefly deposits as a means of payment. This is true of central bank gold holdings also, and failure to recognize this distinction

[7] E.g., speech of the French Minister of Finance in the Chamber of Deputies, Dec. 15, 1931, quoted in M. G. Myers, *Paris as a Financial Center* (London, King, 1936), p. 31.

is one of the pitfalls into which those who reason upon the international effects of gold movements solely on general principles often fall. It is, however, particularly important in the case of the gold exchange standard, for gold exchange standard countries in general made less use of deposits than did Great Britain and the United States.

As the banking system of a country that depends mainly upon deposits as a means of payment acquires balances abroad, whether because the country is experiencing a favorable balance of trade or is borrowing heavily abroad or for any other reason, its domestic deposits also increase. If the increased foreign balances are then sold to the central banks there is merely a change in the form of the assets of the commercial banks from foreign balances to deposits with or to notes obtained from the central banks. The increased commercial bank deposits remain in the system, and in addition the commercial banks have secured a further multiple potential lending power. The foreign balances of the commercial banks are unchanged, their reserves and deposits have increased. These are precisely the effects that follow gold imports made through commercial banks. However, potential lending power increases only if the new foreign balances *are* sold to a central bank, whereas in the case of gold imports it increases whether the new gold is sold to a central bank or not. If the foreign exchange is sold to a central bank, and is counted by that central bank as legal reserve, an additional potential lending power comes into existence at the central bank. However, in the case of gold acquired by a central bank this result follows without question, whereas in the case of foreign exchange it is dependent on whether, and in what proportion, the particular type of foreign exchange bought is regarded as legal reserve by the central bank.

Conversely, as the banking system of a country that depends mainly on deposits as a means of payment loses balances abroad, whether because the country is experiencing an unfavorable balance of trade or is being called upon to

make large capital payments abroad, or for any other reason, its domestic deposits also decline. If the decrease in foreign balances is made good by purchase of foreign exchange from the central bank, there is merely a change in the form of the assets of the commercial banks—their foreign balances are restored to their previous condition, but their deposits with the central bank or their note holdings are reduced. The reduction in commercial bank deposits continues, and in addition the commercial banks have experienced a pressure for a further multiple contraction of deposits due to the reduction in their reserves. These are precisely the effects that follow gold exports by commercial banks. However, potential lending power declines only if the decrease in foreign balances is made good by purchase from central banks, and not by some other means such as borrowing abroad, whereas in the case of gold exports it declines whether the gold is obtained from the central bank or not. If the foreign exchange is bought from central banks, and has been previously counted by them as part of their legal reserve, then an additional pressure for multiple contraction of central bank credit comes into existence. However, in the case of gold obtained from the central bank this result follows without question, whereas in the case of foreign exchange it is dependent on whether, and in what proportion, the particular type of foreign exchange sold has been counted as legal reserve.

In the case of banking systems of countries in which credit is extended chiefly in the form of notes different results follow the acquisition and loss of balances abroad. The acquisition of foreign balances by such a banking system is accompanied by payment of notes to exporters or other holders of foreign claims. This means a reduction in commercial bank reserves and an increase in notes in circulation rather than an increase in commercial bank deposits. If the increased foreign balances are sold to the central banks, then the commercial banks replenish their cash reserves by obtaining

notes from the central banks, and their position is restored to what it was in the first place. The central banks, however, have increased foreign balances and an increased liability for notes in circulation. If these foreign balances are considered by the central banks as legal reserve, a further multiple potential lending power at the central banks is introduced into the system. These are the effects of gold imports also, but in the case of gold imports, the deflationary pressure of the increase in circulation upon the commercial banks would be overcome whether the gold were sold to central banks or not, whereas in the case of foreign exchange it could be avoided only by selling the foreign exchange to the central banks. Further, in the case of gold imports the potential multiple expansion in lending power at the central banks would follow without question, whereas in the case of sales of foreign exchange to the central banks this would be dependent upon whether, and in what proportion, the particular foreign balances bought were considered legal reserve.

Conversely, as the banking system of a country that depends mainly on notes as a means of payment loses foreign balances, whether because the country is experiencing an unfavorable balance of payments or for any other reason, its note holdings increase because payment is received for its foreign balances in the form of notes, and notes in circulation are reduced. If the decline in foreign balances is made good by purchase of foreign exchange from the central bank, then the increase in reserves is canceled by payment to the central bank and the commercial banks are restored to their previous position. The central banks, however, have reduced their foreign exchange holdings and their liability for notes in circulation. If these foreign balances were considered by the central banks as legal reserves, then there is a pressure upon the central banks for a further multiple contraction of central bank credit. These are the effects of gold exports also, but in the case of gold exports, the potential increase in commercial bank lending power due to the

increase in their note holdings would have been offset whether gold had been purchased from the central banks or not, whereas in the case of foreign exchange it would be offset only if foreign balances had been obtained from the central banks. Further, in the case of gold exports the pressure for a mutiple contraction of credit at the central bank would follow without question, whereas in the case of foreign exchange this would be dependent on whether, and in what proportion, the particular form of foreign exchange sold had been considered legal reserve.

These abstract considerations may be made the basis of several general observations concerning the gold exchange standard as a credit control device:

1) As a credit control device the gold exchange standard is more dependent upon centralization of reserves than the gold standard. When a country choses to accept payment of a favorable balance in foreign exchange instead of in gold, the increase in its balances abroad will replenish the reserves of its commercial banks and promote primary expansion of credit only if these balances are sold to central banks. This is not true of gold imports.

2) The influence of an increase in the foreign exchange holdings of central banks upon the commercial banking system varies with the extent to which credit is extended by that system in the form of notes or deposits. The more important the use of notes, the less potential lending power is introduced into the commercial banking system through foreign exchange purchases by central banks. This is true of gold imports also.

3) The influence of increases in the foreign exchange holdings of central banks in adding to their potential lending power (i.e., in promoting secondary expansion of credit) is certainly less than that of increases in their gold holdings because, in almost all gold exchange standard countries, not all the foreign exchange holdings of central banks are considered legal reserve.

Two other general observations can be made on the basis of the difference in the transaction that brings gold or foreign exchange to central banks:

1) When the exchanges of a gold standard country are sufficiently strong to bring in gold it is usually imported by an arbitrage transaction. When the exchanges of a gold exchange standard country are sufficiently strong to bring the rates to a point where central banks are willing to buy, foreign exchange is passed to the central bank by the commercial banks by the simple process of selling it in a market in which the central bank is the principal buyer. This transaction is much simpler than gold arbitrage. It requires no capital. More banks can take part in it. The motives that lead to it are quite different. Though both transactions have the effect of bringing home foreign balances previously held or currently acquired by commercial banks, the profit of the arbitrageur is the motive and the remittance home a consequence in one case, whereas in the other, the remittance home is the direct motive. Under circumstances otherwise quite similar the amounts of these remittances may be quite different.

2) The ease with which the commercial banks of gold exchange standard countries may acquire notes from or deposits at the central banks by simply selling them foreign exchange is a standing temptation to use that method of avoiding deflationary pressure at home and to get the advantages of an elastic banking system where elasticity is not otherwise provided. Under the gold exchange standard system this can be done either by borrowing abroad, which would probably be impossible were the proceeds of such borrowings to be remitted in gold, or by a simple variation in the size of balances held abroad.

These five generalizations are made upon purely technical grounds without any assumptions concerning the general credit control policy being pursued by the central banks while their foreign exchange holdings are being increased as

a result of their intervention in the exchange market. These general policies obviously can be, and often were, directed toward offsetting the direct effects of the increase in their foreign exchange holdings upon the reserves and deposits of commercial banks or upon the volume of notes in circulation. Central banks, moreover, need not, and often did not, allow their own increased potential lending power to become actual. On the other hand, the opportunity is open to them, of course, to allow the potential internal inflationary effects arising from increased foreign exchange reserves to have their full effects, and even to supplement them by domestic credit control policy.

Among the instruments of domestic control policy open to central banks of gold exchange standard countries is their power to take the initiative in the purchase and sale of foreign exchange. By selling foreign exchange they can reduce the reserves of the commercial banks while adding to their foreign balances, and by buying foreign exchange they can add to the reserves of commercial banks while reducing their foreign balances. When, for example, a central bank takes the initiative in buying foreign exchange in the market the resulting increases in its foreign balances are clearly not related functionally to any effort by the commercial banks to remit home balances acquired abroad as the result of a favorable balance of payments. From the point of view of their internal banking effects these purchases are open market operations pure and simple.

Similar generalizations could be made, mutatis mutandi, to describe the factors that would have to be taken into account in interpreting the meaning of losses of foreign exchange by the commercial banks or the central banks of gold exchange standard countries. Enough, however, has been said to show that no safe ground can be found in general principles for an interpretation of the gold exchange standard as a credit control device in gold exchange standard countries after 1924. Even less confidence can be placed on general

statements of its effect on the world credit structure, for that is dependent also upon the treatment of their international responsibilities by the gold centers. In the words of Dr. Blessing "on theoretical grounds alone, it is impossible to judge whether and to what extent the gold exchange standard [after the war] led to an expansion of credit; everything depends on what actually happened." [8]

What Actually Happened

The effects of purchases and sales of foreign exchange by central banks upon the domestic credit structures in the gold exchange standard countries themselves were wholly conditioned by their extremely diverse banking and currency arrangements, by the varied nature of their economic problems, the divergent policies of their monetary authorities, and their individual relationships with the central money markets, London and New York. Each gold exchange standard country has to be considered separately, as was done for several in Chapters 14–16.

Every situation described in the above generalizations was illustrated in practice in the post-war period. The first was not of great importance but has been included both for the sake of theoretical completeness and because in fact the principle of concentration of gold reserves with central banks was not fully carried out on the continent after the war. Dutch banks, for example, kept gold in their own vaults, reporting the amount regularly to the Netherlands Bank, and the large French banks all held gold that was not recorded separately in their statements but was included in 'cash.' In 1932 the amount held outside the Bank of France was estimated at from two to two and a quarter milliard francs, of which the Crédit Lyonnais held perhaps a milliard and the Societé Générale 800 million francs. The possibility of publishing these figures if there should ever be a run on these banks was felt to be a sort of 'psychological reserve.'

[8] *Op. cit.*, p. 12.

An equivalent amount of foreign balances, though a ready means of obtaining cash, would not have been considered actual cash and would not have had the same effect upon the lending policies of the banks.

The situation described by the second generalization was of outstanding importance and was illustrated in the experience of France and many other countries. While France was de facto on the pure gold exchange standard the most striking feature of her currency and banking system was the so-called 'closed circuit.' From August 1926 to August 1927 the extraordinary increases in notes in circulation due to the purchase of foreign exchange by the Bank of France merely filled up an equally extraordinary gap in the internal circulation created mainly by the repayment of advances received from the Bank by the government, and by the accumulation of large public deposits. But from August 1927 to June 1928 continued purchases of foreign exchange threatened to do more and to produce an expansion in the note circulation. To avoid this, the Bank of France resorted to the essentially temporary expedient of buying forward exchange.[9] The falling due of these contracts in July and August 1928 did not lead to a corresponding increase in the note issue, for part of the exchange was sold to the government, and the inflationary influence of the rest was offset by a net increase in Treasury deposits due to a continued failure of the floating debt to decline. The inflationary dangers to which France was subjected by the accumulation of foreign exchange by the Bank of France were thus in the main obviated by the peculiar working out of the problems of the public debt in France, but they were at no time nearly as serious as they would have been had the French banking system been vested with the vast powers of expansion possessed, for example, by the Federal Reserve system. It was the characteristic reliance upon notes that produced this result while France was on the gold

[9] Cf. Ch. 15, The De Facto Adherence to the Gold Exchange Standard, August 1926 to June 1928, and the Realization of Potential Elements of Strength.

exchange standard de facto, and that after 1929 enabled her to absorb great quantities of gold without serious inflationary consequences.

Germany provides perhaps the best illustration of the accumulation and use of large foreign exchange holdings by a central bank outside the legal reserve. The support of the reichsmark in the first half of 1927 by sales of foreign exchange by the Reichsbank, one-half of which were taken from holdings not considered legal reserve, certainly reduced the deflationary pressure that would have followed in Germany had the whole drain been either in gold or in foreign exchange legally counted as reserves.[10] This was in fact one of the considerations that weighed heavily in the Reichsbank's decision to move gradually away from the use of devisen as a primary means of meeting adverse foreign exchange situations.

Germany also provided the best illustration of the difference in motive leading to the sale of gold and of foreign exchange to a central bank by commercial banks. In our account of the consolidation of the gold standard in Germany we pointed out that the Reichsbank was brought into possession of a fund of foreign exchange whose size was a function, first, of the amount of foreign exchange accumulating in the hands of German banks as a whole (i.e., of the German balance of payments), and second, of the decision of these banks as to what proportion of the total they wished to hold as working balances abroad. This decision was greatly influenced by the fact that the German banks were deeply indebted to foreign banks and needed to keep certain assets in the form of foreign reserves against this liability. It was simpler and easier to make and execute when the Reichsbank stood ready to buy and sell exchange than it would have been had remittance home depended solely upon driving the exchange to gold import point and then relying upon the gold arbitrageur.

[10] Cf. Ch. 16, The Retreat from the Principle of Stopping Inflation.

The best illustration of the use of the gold exchange standard by commercial banks to offset central banking policy is also found in Germany. In his Annual Report of December 22, 1928 (p. 104), the Agent General for Reparation Payments said that if the Reichsbank discount rate was higher than rates in other markets by an amount sufficient to compensate for fluctuations in the exchange, Germans customarily borrowed abroad and sold the foreign exchange to the Reichsbank. This was also done at other times by Germans who were not in possession of sufficient eligible assets to borrow from the Reichsbank. Conversely, when the Reichsbank rate was low, Germans borrowed at home in order to obtain the foreign exchange to repay short term foreign loans or for other purposes. The problems of the Reichsbank resulting from this situation have been described in our account of the conflict between control of the home market and control of the foreign exchange. This whole situation was a manifestation under a peculiar set of circumstances of a phenomenon already common before the war—the reliance of countries with less fully developed money market institutions and techniques upon London for elasticity in their banking systems. London was used in this way by the United States in 1906 in a spectacular manner. The reliance of French banks upon their London balances as a sort of secondary reserve was traditional. It was made manifest during the Experimentation period by a new seasonal weakness of sterling in Paris just before the annual payment of the French income tax in July. As long as France was on a de facto gold exchange standard and was experiencing a general return of capital, her use of London as a banking reserve was absorbed in the major movements of the foreign exchange holdings of the Bank of France and could not be statistically measured. But after the changes of 1928 it can be identified in the figures of French gold purchases abroad.

The use of balances in the central money markets by the commercial banks in other countries in order to replenish

reserves at home was, as these examples show, by no means peculiar to the gold exchange standard. It was in fact a permanent feature of the system described in Chapter 7 as the hierarchy of financial centers. The gold exchange standard merely made it simpler and easier.

Every country using the gold exchange standard was faced, in some degree, with the problem of harmonizing it with its own domestic credit policy. In Italy, for example, the large increase in foreign exchange holdings of the central bank in 1926 and 1927 was not accompanied by an expansion of Italian credit. On the contrary these were years of deflationary pressure in Italy. In Japan the support of the yen over a period of years by the sale of foreign exchange under the direction of the central bank was accomplished without deflationary pressure on the domestic credit situation because the bulk of the foreign exchange sold, though centrally controlled, was not actually held by the central bank (cf. Ch. 14). In Germany credit rationing was resorted to in 1924, 1925, and 1927 to counteract the inflationary effects of the inflow of foreign exchange. In May 1929, after Germany had been subjected to intense pressure during the negotiation of the Young Plan, this device was again used to prevent borrowing at the Reichsbank for the purpose of getting the means of buying foreign exchange. On the other hand, in several countries the gold exchange standard continued to be used very much on pre-war lines, though the position varied from country to country. In Belgium, for example, central bank foreign exchange holdings were used very largely to smooth out fluctuations in the sterling-belga exchange, whereas in Holland purchases and sales of devisen were more largely used to influence domestic credit conditions. The administration of the gold exchange standard systems of the Orient did not differ essentially from pre-war practice.

None of these uses of the gold exchange standard was of a nature, in itself, to undermine the stability of the world's credit structure and therefore to endanger the system of

stable exchange rates achieved by the return to gold. The case was quite different with the steady accumulation of foreign balances as a byproduct of stabilization. A prolonged inflow of foreign payments to any country, whether it results in sustained gold imports, as under the gold standard, or in large accumulations of foreign exchange, as under the gold exchange standard, is bound to increase the independence of the commercial banks and weaken the power of central banks as a first consequence. Under such circumstances the intervention of the central banks in the foreign exchange market becomes something different in kind from the pre-war type of exchange control described by Dr. Blessing. It becomes a form of exchange pegging through the export of very short term capital, and as a secondary consequence gives to the central bank the opportunity at some future time of dominating the market. The latter circumstance is of peculiar importance in countries subject to what we have called a psychological gold export embargo.

It was this element in the situation which, during the Experimentation period, so greatly swelled total gold exchange standard balances, made the struggle between control of the home market and of the foreign exchanges formidable, and left the dangerous inheritance to be described in the next sections. Two strands were combining to bring about this result. The first was the flow of American and British foreign lending, supplemented by smaller advances from the small group of continental creditor powers. This was the basis for domestic credit expansion within the debtor countries, including South America, but particularly in Central Europe. The second was the accumulation of foreign exchange by the Bank of France.

These two influences combined to make the credit structures of a whole series of debtor countries extremely dependent upon the attitude of the London and New York markets toward the investment and employment of funds in these countries, and to give France a mighty influence in

both London and New York. These relationships formed the essential link between the experiments of creating an international money market in New York, defending sterling, and conducting the gold exchange standard without a focal point.

The Foreign Exchange Portfolio of the Bank of France in 1929

In the last six months of 1928 the foreign exchange portfolio of the Bank of France rose about six milliard francs, but during the first four months of 1929 this increase was entirely disposed of. By no means a simple operation, it was composed of three elements: (1) a reduction of about 1½ milliard as part of the domestic credit administration of the Bank of France; (2) a conversion of about 4½ milliard into gold held abroad; (3) the physical import of a large part of this gold into France.

From December 28, 1928 to May 3, 1929 commercial discounts and advances at the Bank of France rose 851 million francs and public deposits fell 927 million francs. These two operations added to the note issue 1,778 million francs, but at the same time the Bank of France sold 6,132 million francs of foreign exchange and bought 4,485 million francs of gold —indicating a sale of foreign exchange to the market of 1,647 million francs. This canceled the addition to the note circulation from the other two sources combined. As no other important changes took place in the Bank's balance sheet, the note issue remained stationary.[11] The bare figures do not indicate which of these three items was cause and which effect, but they do indicate that the Bank of France either extended enough credit to the market to prevent its support of the exchanges from having a deflationary effect in France or sold foreign exchange to counteract a tendency toward domestic credit expansion. It need not have done so, and the position illustrates the power its large foreign exchange holdings gave to the Bank in its home market. Indeed, from

[11] Hawtrey, *op. cit.*, p. 28, table.

1928 to 1931 the principal instrument of domestic credit control in France was the Bank's domination of the exchanges.

In December 1928 and January 1929 the Bank of France increased its gold holdings about 2 milliard by selling foreign exchange in New York. Most of this gold was placed under earmark at the Federal Reserve Bank of New York.[12] In April and May this operation was repeated and Bank of France gold holdings increased a further 2½ milliard, with a corresponding reduction in its foreign exchange. This was followed by a decrease in gold held under earmark in New York because all the gold bought in April and May and some of that bought in January was physically imported into France.

This was accomplished by means of a triangular arrangement between the Bank of France, the Federal Reserve Bank of New York, and the Reichsbank. The conflict over the negotiation of the Young Plan had caused a drain of funds from Germany which was aggravated by the activities of the New York market where the speculative boom was at its height. In April this drain reached the proportions of a flight of capital from Germany. The way in which this situation was met by the Reichsbank is described in its Annual Report for 1929:

"During the critical weeks in the spring of 1929 the Reichsbank surrendered altogether nearly 1,500,000,000 reichsmarks ($357,300,000) of gold and foreign exchange. Under the influence of the withdrawals of foreign exchange by German and foreign holders the official quotation of the dollar dropped to the gold export point. The necessary consignments of gold to foreign countries were in every case effected by the Reichsbank itself, which sold the gold principally in New York. In order to dispense with the actual shipment of part of this gold to New York, agreements were made on several occasions with foreign (European) banks of issue, which placed the necessary amounts at the disposal of

[12] In January gold under earmark at the Federal Reserve Bank of New York, the bulk of which was for the Bank of France, increased $65 million.

the Reichsbank out of their stocks of earmarked gold on deposit in America. The gold delivered by the Reichsbank in exchange, amounting to about 700,000,000 reichsmarks ($166,740,000), was shipped, not to America, but to the European centers concerned. Altogether some 870,000,000 reichsmarks ($207,234,000) were sold in New York, 40,000,000 reichsmarks ($9,528,000) in London, 17,000,000 reichsmarks ($4,049,400) in Paris, and 28,000,000 reichsmarks ($6,669,600) in Holland and Switzerland." [13]

The transaction was shared by other central banks, but the bulk was with the Bank of France. The ultimate source of the gold into which the Bank of France converted the proceeds of its forward exchange contracts was therefore the Reichsbank, and the ultimate causes of this transfer were first the repercussions of the reparation crisis, and second the dependence of the German banking system on foreign credits.

These transactions restored the foreign exchange holdings of the Bank of France to the point at which they stood when the law of June 1928 was passed. The interpretation of that law under which the Bank was able to retain the exchange acquired before that date fulfilled the dictum of Poincaré: ". . . our bank of issue intends to remain in a condition to direct the exchange market, and direct it always." [14] Because it was not *obliged* to retain it the Bank enjoyed unprecedented power to draw gold from London and New York. Even by remaining passive in the foreign exchange markets, the Bank of France was in a strategic position to get gold from abroad, because the franc was inherently strong as long as France did not invest her currently accumulating inter-

[13] *Federal Reserve Bulletin*, May 1930, p. 299. Earmarked gold in New York fell during April $49 million and during May $16 million, far less than the amount shipped from Berlin to France. Hence the assumption that the Bank of France was selling foreign exchange in New York and increasing its stock of earmarked gold at the same time. During March, April, and May, the United States imported $46,538,000 in gold from Germany.

[14] Speech of Poincaré before the French Parliament in February 1928, quoted in Myers, *op. cit.*, p. 42.

national credits by making foreign investments, or leave them abroad to be employed by others. Moreover the fact that notes could no longer be issued against additions to the Bank's foreign exchange portfolio meant a reversion to the pre-war position in which drafts upon the gold reserve of other countries gave elasticity to the French banking system.

This was the position reached by France about June 1929. By that time the adoption of the Young Plan had brought to an end the flight of capital, and a new flow of short term credits had again put Germany in a position to bid successfully for gold abroad, though it did not alter the fundamental weakness of her position.

For these reasons both France and Germany were in the market for gold in the summer of 1929, and under the system of two gold distributing centers, their bids were effective in the one whose exchange was at the moment the weakest, namely London. Consequently, the Reichsbank gold reserves, which had been depleted by shipments to France, were replenished in London, and there was also a general movement of gold from London to Paris, the causes of which were described by *The Economist* in August 31, 1929 (p. 391):

"Post Stabilization policy has been to keep the note circulation down to the lowest practical limit. To remedy the seasonal shortage of currency the banks had three courses open: (1) to rediscount part of their stock of commercial paper at the Bank of France, (2) to borrow francs against securities, or (3) to draw on their foreign gold balances. The conservative policy of the Bank of France has latterly rendered rediscounting unattractive, and there is also the fact that the Bank has latterly proved exceptionally critical in accepting paper offered to it for either rediscounting or as security for loans. There remained only the third source, and it was obvious, in view of the fact that sterling had dropped below gold import point, that the common sense policy to adopt was to exchange pounds against gold at the Bank of England, transfer the precious metal to Paris and sell it to the Bank of France."

The Gold Exchange Standard and the Gold Centers

Five major consequences of the use of the gold exchange standard as a gold economy measure and as a credit control device were felt in the central money markets, London and New York, all of which were important for the functioning of the international gold standard system as a whole because of the size of the balances involved.

In the first place, as stated by Walter Stewart in his evidence before the Macmillan Committee, such funds being held in short term employment by their very nature were not free to move from short to long term employments in response to interest rate differentials. They therefore constituted an impediment to the mutual adjustment of long and short term rates throughout the world and an obstacle to the effectiveness of bank rate in the central money markets.[15]

Second, the existence of these large balances in a decentralized world credit structure exposed both the New York and London markets to the danger of sudden transfers of such funds from one market to another. This danger, inherent in a large scale extension of the experiment of a gold exchange standard *without a focal point,* has been many times referred to in these studies and has been admirably described by Dr. Blessing (*op. cit.,* p. 7):

"So far as can be gathered from occasional information, the majority by far of the exchange holdings of Central Banks were kept before the War in London. This is not surprising when it is remembered that London was the clearing house and central reserve market of the world for short term money and that confidence in the pound was so firmly rooted that sterling and gold were looked upon as synonymous terms. This circumstance was of considerable significance for the satisfactory functioning of the gold exchange standard before the War. Foreign exchange holdings were not converted into other currencies, and the post-War practice of converting sterling balances into dollars or *vice-*

[15] *Minutes of Evidence,* II, 198, especially answers to questions 7793 and 7794.

versa was unknown. The difficulties encountered since the War by the Central Banks in whose markets the exchange constitutes a claim were practically non-existent. In other words: there was only one reserve centre for the gold exchange standard and none of the difficulties resulting from the multiple reserve system of the post-War period were extant."

This shifting of balances from one market to another accentuated the frequent shifts in the locus of the world demand for gold that were inevitable in a gold standard system without a single dominating center.

Third, the competition between London and New York for gold exchange standard balances led to continuous search for profitable outlets for their employment and helped to swell the flow of international credits to debtor countries.

Fourth, the growth of gold exchange standard balances influenced the international distribution of the ownership of foreign funds in the central money markets in such a way as to make their short term indebtedness a greater factor of instability than before the war. For example, after the return to gold, New Zealand, Australia, and India, all debtors to England, had no balances in London to speak of—Australia in fact being known frequently to be employing overdraft money obtained from one of the joint stock banks. France, the Netherlands, and Switzerland were at the opposite extreme—they had large balances in London, but did not owe England anything. The Scandinavian countries, Egypt, and Argentina were between the two. Such shifts of balances in the central money markets from debtor to creditor countries were accentuated during depressions.

Finally, the accumulation of very large holdings of foreign exchange by central banks of creditor countries was a threat to the central money markets because in these countries in particular, as well as in several of the stronger debtor countries, the gold exchange standard was regarded as a half-way house.

The Gold Exchange Standard as a Half-Way House

A whole series of signposts along the path traversed by our analysis has pointed to one conclusion—that those features of the gold exchange standard which made it more than a simple gold economy measure or an aid to credit control in essentially gold standard countries could not be relied upon as permanent arrangements. Among these signposts were the concentration of foreign assets in the hands of the central banks of creditor countries in 1928 and 1929, the activity of the undisclosed buyer in the London bullion market, the de facto abandonment of the gold exchange standard by Germany and Japan, the legislation of Italy permitting the conversion of the foreign exchange holdings of the Bank of Italy into gold. Most important of all, French balances were retained undiminished only as a matter of policy and largely because of French appreciation of the international repercussions certain to arise from the conversion of a large fraction of them into gold. This introduced an element of great uncertainty, amply confirmed by the words of the Annual Report of the Bank of France for 1932: "Ever since 1928 the Bank has wished to liquidate its foreign exchange."

That the gold exchange standard was regarded by the countries whose central banks held the largest foreign balances not as a permanent arrangement but as a half-way house was the most important single feature of the gold exchange standard in the international gold standard system after 1924.