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Monetary Commission

MISCELLANY

1 NJ MONO. SEC.

TABLE OF CONTENTS.

- CHAPTER I.**—*The evolution of central banks.*
- II.**—*Principles common to European banks.*
1. Concentration of reserves.
 2. Freedom of note issue.
 3. Ready convertibility of assets.
 4. The central bank and the deposit banks.
 5. The central bank and the international market.
- III.**—*How European banks influence the money market.*
1. Changing the rate of discount.
 2. Rediscounting commercial paper.
 3. The purchase of gold.
 4. Borrowing from the market.
 5. Holding and dealing in foreign bills.
- IV.**—*Systems of note issue.*
1. System of the Bank of England.
 2. System of the Bank of France.
 3. System of the Bank of Germany.
 4. Systems of note issues of other countries.
- V.**—*Elasticity in the supply of credit.*
1. Operation of the English system.
 2. Operation of the French system.
 3. Operation of the German system.
- VI.**—*Policy pursued by European banks in times of pressure.*
- VII.**—*Nonpayment of interest on deposits.*
- VIII.**—*Special taxes and the apportionment of profits.*
1. The Bank of England.
 2. The Bank of France.
 3. The Imperial Bank of Germany.
 4. The Austro-Hungarian Bank.
 5. The National Bank of Belgium.
 6. The Bank of the Netherlands.
 7. The National Swiss Bank.
 8. The Bank of Italy.
 9. The Bank of Norway.
 10. The National Danish Bank.
 11. The Bank of Portugal.
 12. The National Bank of Roumania.
- IX.**—*The government of European banks.*
1. The Bank of England.
 2. The Bank of France.
 3. The Imperial Bank of Germany.
 4. The Austro-Hungarian Bank.
 5. The National Bank of Belgium.
 6. The Bank of the Netherlands.
 7. The National Swiss Bank.

21 NJ MONO. SEC.

DEVELOPMENT OF CENTRAL BANKS IN EUROPE.

CHAPTER I.—THE EVOLUTION OF CENTRAL BANKS.

In every European country of any commercial importance there exists at the present time a single bank of issue charged either by statute or by the traditions of the financial community with general supervision over the maintenance of the metallic reserves through control of the exchanges.

Relics of the system of the issue of notes by local banks still survive in a few countries of Europe, but are for the most part in process of extinction. In Scotland and Ireland the issue of notes is permitted by local banks which were in existence in 1844, but under laws which are very restrictive and under which the number of institutions has declined to eight in Scotland and six in Ireland. In Germany, when the Bank of Prussia was raised to the dignity of the Imperial Bank of Germany in 1875, the number of banks issuing notes was 33, but many of these banks have since from time to time voluntarily given up the power of note issue until the number which still avail themselves of it is only four. Two of these are the Bank of Bavaria and the Bank of Saxony, which serve States of much importance which have not desired to merge their political and economic life entirely with that of Prussia. In Italy there are still three banks of issue—the Bank of Italy, the Bank of Naples, and the Bank of Sicily—but the latter two serve sections of country quite distinct from the northern and central portions which are served by the National Bank, and the Bank of Sicily operates in a large island having an economic life largely independent of that of the Italian peninsula. It thus appears that, with only insignificant exceptions, every European country has adopted the system of a central bank of issue.

The Bank of England and the Bank of France are the oldest important banks now doing business in Europe. The Bank of England was established in 1694, and the Bank of France in 1800, but not until near the middle of the last century were they intrusted with practically complete control over the note issue. All the other central banks, under their present form of organization, date from 1850 or later. Many of them have been established or given their present form within a generation. The Bank of Prussia, which is now the Imperial Bank of Germany, dates back to 1765, but its business was not organized upon modern methods until a much later date, and only by the law of 1875, after the unification of the currency system of Germany, did it acquire the position of the dominant bank of the German Empire. The Austro-Hungarian Bank dates back to the time of Napoleon, but for many years was little more than an instrumentality for the issue of irredeemable paper to meet the needs of the Government. It was not until 1878 that the National Bank of Austria, as it was then called, was expanded into the Austro-Hungarian Bank under a modern charter.

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The National Bank of Belgium, whose charter became in 1882 the model for that of the Bank of Japan, was established only in 1850. The Bank of the Netherlands, while created in 1814, was reorganized on the model of the Bank of Belgium in 1864. Italy had several additional banks of issue before they were reduced to three, after the crisis of 1893. Spain unified her note-issuing system in 1874, when 18 local banks were ordered to transfer their circulation to the Bank of Spain. It was as recently as 1888 that Portugal granted monopoly of note issue to her central bank. In the three Balkan States, which became independent of Turkey after the war of 1877—Roumania, Bulgaria, and Servia—central banks were established between 1880 and 1885. In Greece the Epiro-Thessalian Bank was absorbed by the National Bank in 1899. Sweden continued the system of local banks until 1897, when provision was made for transferring their circulation to the Royal Bank before the close of 1905. Switzerland also, finding exchange almost uniformly adverse under the system of note issues by some 30 local banks, was finally driven, after a discussion of nearly twenty years, to the creation of a central bank, which began operations in the summer of 1907.

The most obvious characteristic which the European banks of issue have in common, in spite of differences in detail, is that they have become, either by statute or by long-continued practice and tradition, the custodians of the metallic reserve and the regulators of the foreign exchanges. In this capacity the bank of issue has come to be looked upon as the ultimate source from which gold and currency are to be obtained by other banks and by individuals in case of need.

It should be constantly kept in mind that this concentration of the power of note issue and guardianship over the national stock of gold has not by any means been accompanied by a concentration in the central institution of the control of deposit banking. On the contrary, there has grown up in the leading commercial countries a body of joint-stock and private banks, many of which

3 NJ

MONOTYPE SECTION

far surpass in the magnitude of their transactions the banks of issue. The evolution of the central bank in Europe has not represented the concentration of banking power, but only the concentration of a few special banking functions. The process of development has been toward a specialization and separation of functions rather than toward the aggregation of functions. The central banks have tended to acquire great and exclusive powers in their particular field, but the limits of that field have in most respects been narrowed and other fields have been left for the exclusive cultivation of the deposit, finance, and mortgage loan banks. Thus has developed a system of which the bank of issue is the pivot, but in which it is the servant or an aid to other types of banks rather than a competitor with them in their peculiar fields.

In considering the problems submitted to the monetary commission for solution we have been led to make a careful analysis of the structure and methods of these foreign banks. For the purpose of coordinating the results of these investigations it seems desirable to outline the character of the more important central banks, especially those at the three centers of international exchange in Europe—London, Paris, and Berlin—and the methods by which they meet the demand for currency and protect the metallic reserve under the conditions of their national financial development.

CHAPTER II.—PRINCIPLES COMMON TO EUROPEAN BANKS.

If light on the best banking policy in respect to the issue of circulating notes were to be sought among the principal countries of Europe, the choice would be open between a system severely restrictive, as in England; one of almost complete freedom, as in France; and one of modified and attenuated restriction, as in Germany and Austria-Hungary. In all these countries, however, and in substantially all other countries of Europe, the system of note issue has two things in common—that the notes are issued by a single institution with large powers over the money market and that they are issued upon the basis of commercial paper and gold. Nor are these the only functions and methods which the European banks have in common. In spite of differences arising from statute law or from long-continued traditions, there has grown up among European banks of issue a series of banking principles and of methods of fulfilling their functions which differ little in substance throughout the European Continent. The more important of the principles of European banking may be defined thus:

I. The metallic reserves of a country are substantially concentrated in the central bank of issue.

II. The authority to issue circulating notes is comparatively unlimited so long as they are issued against gold or commercial paper of a prescribed character.

III. The assets of the central bank of issue consist almost exclusively, apart from the metallic reserve, in commercial obligations for short terms, capable of being realized quickly, without depreciation.

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IV. The central bank of issue forms an important agency in the development of other institutions of credit and their support in times of stress.

V. The central bank of issue forms the natural and most important connection between the local and the international money market.

It is desirable that we should examine the manner in which these principles have been worked out in practice in the principal European countries.

I. CONCENTRATION OF RESERVES.

The concentration of metallic reserves in a single strong establishment in each European country has several objects—to create a fund of gold so large that it shall prevent any fear of its exhaustion; to enable the bank to convert its credit into notes without trenching upon its gold, for meeting internal demands for currency; and to impose upon a single body, the governor and directors of the bank, the responsibility for protecting the money market against domestic stringency and foreign drains.

The tendency, especially since 1875, toward the concentration of reserves in a single institution has been due to the conclusion of European bankers that such an institution is more efficient than small independent banks in meeting internal needs for currency and in controlling the international movement of gold by means of the discount rate. Their experience, illustrated by the early history of banking in England, France, Sweden, Switzerland, and other countries, has been that local banks, operating without concerted policy and responsible only to their shareholders, do not cooperate efficiently in raising the general discount rate; they do not take harmonious and effective steps to withdraw redundant funds from the money market; and they can borrow abroad only to a limited extent, from their own correspondents and upon their own limited credit.

Special and almost inexhaustible powers are given to the central bank by the function of note issue. The bank protects its gold by meeting the demand for currency with notes; it is able to exchange notes for good assets until legitimate demand is satisfied; and it is able to influence the foreign exchanges by its ability to change the discount rate. Thus there can be no fear of a currency famine; there can be no fear on the part of a solvent merchant that his credit will be arbitrarily cut off; and there can be no panic. This, at least, is the

4 NJ MONO. SEC.

theory of central banking and the concentration of reserves in Europe; and while European banks have not been without their problems, they have escaped in modern times such upheavals as have affected the countries where the system of banking is without a central reserve organization.

The position of the principal European banks of issue in respect to gold resources has greatly improved since the great increase in the production of gold from the mines which began to acquire momentum about 1892. Prior to that date anxiety was sometimes felt as to the relations of the gold supply to the volume of note issues of the central banks and to the credit obligations of other banking institutions. In England there was much discussion of the importance of strengthening reserves in some manner, even if it was done by the joint-stock banks rather than by the Bank of England. In France, Belgium, and the Netherlands the situation was complicated, during the period of the rapid fall of silver, by the existence of large amounts of legal-tender silver money, of which the face value was much in excess of the bullion value. To a certain extent, but not to the same degree, the same situation existed in Germany, while in Austria-Hungary, Italy, Spain, and Greece bank notes were not redeemed in specie, less because of direct fault on the part of the banks than because of heavy demands by the Government for loans.

Since 1892 the status of banking reserves has followed, in the chief commercial countries, two lines of development—a great increase in the gold stock of the central bank in relation to its own obligations, but at the same time a great increase in the volume of credit obligations of the joint-stock banks, which depend for their ultimate solvency upon the central bank. The increase in the gold stock has reduced to insignificance the adverse influence of the legal tender silver held in reserves, because the amount of the latter has remained practically stationary, and from constituting more than one-third of total metallic reserves in 1883, came to constitute only about one-fifth as early as 1906. The proportion at the present time is only about one-sixth.

The ratio of gold to outstanding notes, which was only about 29 per cent in 1883, rose as early as 1896 to 54 per cent, and after the accumulation of idle funds which followed the panic of 1907 attained at the close of 1908 a ratio of 58 per cent. Without discussing at this point the greatly increased obligations of the joint-stock banks, which depend for their ultimate reserves upon the central bank, it is sufficient to say that the growth in the absolute mass of gold held, as well as the ratio of this mass to outstanding note issues, is such as to remove any anxiety in the leading commercial countries as to the sufficiency of the reserves of the central bank.

The gold reserves of all the European banks of issue were in 1877 only about \$575,000,000. They had risen in 1885 to \$700,000,000 and in 1890 to about \$900,000,000.^a

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^a Figures for 1877 and 1885 are based upon the calculations of Soetbeer, *Bimetallism in Europe*, 50th Cong., 1st sess., S. Ex. Doc. 34, p. 180. The figures for later years are based upon the calculations published from week to week in *L'Economiste Européen*, Paris.

Between 1890 and 1902, however, these reserves nearly doubled in amount, without a corresponding increase in the volume of outstanding notes, so that the ratio of gold to notes, in all cases excluding the silver reserve, increased from 35 per cent to 54 per cent. Since about 1902 the ratio of increase in the amount of notes outstanding has practically kept pace with the increase in gold reserves. There was a material increase in the issue of notes after the effects of the panic of 1907 had partially worn off, which reduced the ratio of gold reserves to outstanding notes to 56 per cent at the close of 1910.

The following table gives, in millions of francs, the gold reserve, the silver reserve, the circulation, and the percentage of gold to notes in European banks of issue at the close of each year for representative years, beginning with 1883:

Reserves of European banks of issue.

[In millions of francs.]

December 31—	Gold reserve.	Silver reserve.	Circulation.	Per cent of gold to notes.
1883.....	3,555.9	2,049.9	12,246.9	29
1888.....	4,376.1	2,517.0	12,757.8	34
1890.....	4,592.7	2,339.2	13,205.8	35
1892.....	6,207.1	2,495.1	14,805.5	42
1894.....	6,952.0	2,603.7	15,539.5	45
1895.....	7,963.0	2,484.0	15,485.0	51
1896.....	7,859.9	2,512.7	14,536.6	54
1898.....	8,160.0	2,636.0	14,975.0	54
1900.....	8,211.0	2,607.0	15,906.0	51
1902.....	8,752.0	2,821.0	16,215.0	54
1904.....	9,837.0	2,841.0	16,737.0	59
1905.....	9,683.0	2,713.0	19,000.0	51
1906.....	9,954.0	2,678.0	19,667.0	50
1907.....	10,041.0	2,610.0	20,286.0	49
1908.....	12,105.0	2,848.0	20,863.0	58
1909.....	12,576.0	2,840.0	21,478.0	59
1910.....	12,531.0	2,759.0	22,244.0	56

^a Response of the Secretary of the Treasury to S. Res. No. 33, of Dec. 12, 1907, 60th Cong., 1st sess., S. Doc. No. 208, p. 14.

It is considered by European experts important to the working of the central banking system that the central reserve of money should be in the custody of an institution which is responsible in some measure for the general financial system of the country rather than responsible purely to its shareholders for earning a profit. It is considered important also that such resources should be in the hands of an institution capable of converting them into the most available forms of credit. For this reason, their use is much more effective in the hands of a bank than in the hands of the Government.

5 NJ MONO. SEC.

It is a remarkable fact that while the banks of the United States were drawing gold from Europe in the crisis of 1907, the stock of gold in the United States was larger by hundreds of millions than the stock of any European country, and larger than that of several important countries taken together. The total gold stock of the United States on July 1, 1907, including coin in circulation, according to the calculations of the Director of the Mint, was \$1,466,056,632. The amount of gold estimated for the six European countries having the largest stock, with the amount in their bank reserves, on December 31, 1907, was as follows:^b

^b Annual report of the Director of the Mint for the fiscal year 1908, p. 68.

Gold stock of leading countries, December 31, 1907.

	Total stock.	In banks and treasuries.
Germany.....	\$1,044,400,000	\$147,000,000
France.....	926,400,000	520,900,000
Russia.....	917,300,000	597,400,000
United Kingdom.....	564,500,000	162,000,000
Austria-Hungary.....	303,100,000	226,200,000
Italy.....	258,200,000	258,200,000

These figures show that the two largest gold stocks of foreign banks are those of the Bank of France and the State Bank of Russia. Of the former institution the average circulation for the year 1907 was about \$925,000,000, showing a ratio of gold to notes of about 56 per cent. This is exclusive of the silver reserve, which raised the average reserve for 1907 to a little more than 75 per cent. At the Bank of Russia the circulation on January 1, 1908, was about \$601,000,000 and the value of the gold cover, including foreign bills, was \$490,000,000, or more than 80 per cent. Corresponding figures for the close of 1910 were as follows:

French and Russian gold reserves, end of 1910.

	Circulation.	Gold resources.	Ratio of gold to notes.
Bank of France.....	\$1,015,000,000	\$633,000,000	62.2
Bank of Russia.....	642,100,000	624,600,000	97.3

It is not necessary to discuss at length the situation of the Bank of Russia, because the financial centers of that Empire are not in such close touch with international exchanges as are Paris, London, and Berlin. It may be worth while to note, however, the comment of M. Patron:^a

^a The Bank of France in its Relation to National and International Credit, National Monetary Commission, 61st Cong., 2d sess., S. Doc. No. 494, p. 130.

"The recent Russo-Japanese war, for which financially Russia was as well prepared as, from a military standpoint, it appeared to be poorly prepared, furnished a striking example of what may be expected in time of war from a firm financial organization. During that distant and costly war, despite disorders at home, Russia was able to maintain its credit at a high level by reason of its immense holdings of gold, only little impaired, and at the same time to acquire, on advantageous terms, all that was necessary to meet the imperious needs of war."

The holdings of the Bank of France have been sometimes criticized as a waste of economic power. The experience of recent years, however, when the bank has come to the rescue of other markets by loans or advances of gold, without subjecting industry at home to serious pressure, has raised up for her policy earnest defenders. Typical of

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^b Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 217.

"It is true that France keeps locked up in its bank a proportionately larger amount of specie than any other country, but this policy is not without important compensations. Suppose the French public, changing its mind, should reduce by one-half its monetary reserve of which the bank is the guardian. It would gain thereafter the interest on perhaps two milliards of francs released and which would have become productive—that is to say, a saving of from 80,000,000 to 100,000,000 francs per year at the maximum—but if one reflects that it would lose the advantage of the reduced rates of discount which the extent and character of our reserves enable us to maintain and from which all French production profits; that it would lose in addition the sentiment of absolute security, of complete financial independence, which every crisis has strengthened, one would be less tempted to conclude—with certain critics—that the policy of maintaining heavy reserves, the natural expression of the country's instincts, is an unwise policy from an economic and practical standpoint."

So well established in Europe is the principle that metallic reserves are kept almost exclusively in the bank of issue that it is rare that any attention is paid to holdings of gold or silver by other institutions. For information as to the country's monetary strength the financial world looks to the weekly reports of the central bank—its stock of gold, its supply of foreign bills, and the ratio of gold to note issues and other liabilities. It is expected that discount rates will be advanced or reduced according to the index of monetary weakness or strength which these figures afford. The duty of maintaining an adequate reserve is so clearly understood by everyone to rest upon the central bank that other bankers consider simply

6 NJ MONO. SEC.

the quality of their commercial assets and their power to draw upon the central bank in case of need, either by a deposit account or by rediscount of their good paper. In the reports of the condition of their own banks they do not fear to disclose low reserves, and they treat deposits at the central bank in the same manner as cash. Thus, in the reports of English joint-stock banks, it is usual to group under one item, "Cash in hand and at Bank of England." In the case of French banks, credits at the Bank of France are mingled with cash kept on hand under the caption, "Specie in the vaults and at the Bank." (Espèces en caisse et en banque.)

Thus at the five great French joint-stock banks, with deposits, current accounts, and acceptances amounting on December 31, 1910, to 5,161,400,000 francs (\$996,300,000), the amount of cash held, including that at the Bank of France, was only 377,900,000 francs (\$72,930,000), or less than 7½ per cent. The reason for such small reserves is not any lack of conservatism, but the knowledge that in case more cash is needed it can be obtained by taking some of the best assets of these institutions to the central bank. This was, indeed, the policy pursued during the year 1910, as the account was analyzed by M. Théry, the eminent French financial writer.^a He declared that those reports

^a *L'Économiste Européen*, Mar. 17, 1911, XXXIX, p. 330.

which stated rediscounts showed that the banks had procured supplementary resources, notably by turning over a part of their commercial paper to the Bank of France, and that these funds, obtained at a low rate, they had utilized abroad, where money had so long been high.

In the case of the joint-stock banks of England there has been some disposition to accumulate additional reserves in recent years, but this has been primarily because the Bank of England is not a "State bank" in the continental sense of responsibility to the Government, and secondarily because its privilege of issuing notes is confined within narrow limits. The increase in reserves made by the joint-stock banks consists in part of a deposit credit at the Bank of England, and in nearly all cases, as already noted, the two items are merged in one.^b

^b Cf. *The English Banking System*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 86, where it appears that the Union of London and Smith's Bank, which alone separates its reserve items, shows: "Cash in hand, £3,353,635; cash in Bank of England, £3,528,438."

Even in England, in spite of the peculiar organization of the banking system, the tendency of the "one-reserve system" has always been to increase the balances of other bankers at the Bank of England instead of imposing a domestic drain upon the bank such as was felt by the banks of New York in the crisis of 1907. The joint-stock and private banks, in the country as well as in the city, instead of drawing gold and notes from the center to put in their own vaults, as is done by the banks of the United States in periods of distrust, obtain rediscounts at the Bank of England and carry the proceeds to their deposit accounts there in order to be able to draw checks freely on the bank, which can be exchanged for notes if desired. Thus in 1857 bankers' balances increased from £3,400,000 on November 4 to £5,400,000 on November 25. In 1866 in one week, between May 9 and May 16, bankers' balances rose from £5,000,000 to £7,900,000 and in 1875 there was an increase from £7,274,000 on

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^a Palgrave: Bank Rate and the Money Market, pp. 24-25.

separate returns were no longer published, the influence of the bankers' balances was shown by the increase of general deposits from £30,286,000 on November 12 to £36,365,000 on November 19.

In a country where there is no central banking mechanism the local banks have no line of defense to fall back upon when their reserves of legal-tender money are depleted. In a country having such a mechanism the local banks know that so long as they keep within the lines of prudent banking they can obtain aid without limit. The consequences of this fact were thus stated by the governor of the Bank of France:

"In France we consider that the strength of a bank consists more in the composition of its portfolio, i. e., in the value of its commercial bills, rather than in the importance of its cash reserve. * * * The part which the Bank of France plays toward the private establishments permits the latter, as has many a time been proved, to reduce to a minimum their cash reserves and to devote, without exceptional risk, a larger part, perhaps, than elsewhere to productive commercial operations."^b

^b Interviews on Banking and Currency Systems, etc., National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 495, p. 201.

2. FREEDOM OF NOTE ISSUE.

Where the issue of bank notes is under the control of a single institution upon which has been imposed the custody of the metallic reserve of the country, European experience has indicated that the quantity of notes in circulation adjusts itself to the needs of commerce so long as the notes issued are kept in proper relation to the international movement of gold by redemption in coin on demand. There has not developed, in modern experience, any undue tendency to inflation of note issues where coin

7 NJ MONO. SEC.

redemption prevails because the central bank and its branches act to a large extent as the clearing house for other banks. The latter, keeping their reserves largely with the central institution, send in bank notes when they are received for deposit, and such notes are canceled.

Differences exist among European banks of issue, as already pointed out, as to the manner and degree in which the issue of notes is restricted. Practically, however, such restrictions are limited, outside the Bank of England, to the requirement that gold or coin shall be held in a certain proportion to the volume of notes outstanding. In some cases even this requirement is not made.

The Bank of France is the most conspicuous example of a power of note issue which is practically unrestricted. Nominally there is a restriction upon the issues of the Bank of France, but it is purely arbitrary in its character. When specie payments were suspended in 1870—not because of the inability of the bank to pay gold, but because of the apparent wisdom of husbanding the gold resources of the bank during the war with Germany—it was first provided that the total circulation should not exceed 1,800,000,000 francs. Upon further deliberation this limit was considered insufficient and was raised two days later (Aug. 14, 1870) to 2,400,000,000 francs (\$463,200,000). So prudent was the conduct of the bank that the premium on gold did not rise higher at any time than $2\frac{1}{2}$ per cent, and this was attained after the war, when the pressure for exchange was intensified by the payment of the great war indemnity to Germany. Under these requirements the limit of circulation was raised on December 29, 1871, to 2,800,000,000 francs; and again on July 15, 1872, in order to facilitate the issue of the great loan of 3,000,000,000 francs, the limit was raised to 3,200,000,000 francs.

When the occasion arose for another increase of the circulation in 1884 the Government proposed the abolition of the limit. This was refused by the Chambers, but the maximum was raised by the law of January 30, 1884, to 3,500,000,000 francs. Other advances in the limit were made by the law of January 25, 1893, to 4,000,000,000 francs; by the extension of the charter in 1897 to 5,000,000,000; and again by the law of February 9, 1906, to 5,800,000,000 francs.

On all these occasions the maximum was advanced as soon as it was apparent that the circulation was approaching a point where the old limit might be restrictive. When the advance was made in 1884 from the old limit of 3,200,000,000 francs the actual circulation had attained 3,162,000,000 francs. On January 12, 1893, the actual circulation rose to 3,473,000,000 francs, and thirteen days later the measure became law extending the limit. The average circulation of 1897 was still well within the legal limit of 4,000,000,000 francs, but it seemed advisable, in extending the charter, to give latitude for the further expansion of the demand for currency.

Thus, in effect, there have been no legal restrictions upon the issue of the notes of the Bank of France. The bank has been able to discount freely for solvent clients, and the country has passed through no such convulsions of credit as have affected those countries where arbitrary restrictions have been put upon the note issue or where the notes have not been linked to the international move-

later the measure became law extending the limit. The average circulation of 1897 was still well within the legal limit of 4,000,000,000 francs, but it seemed advisable, in extending the charter, to give latitude for the further expansion of the demand for currency.

Thus, in effect, there have been no legal restrictions upon the issue of the notes of the Bank of France. The bank has been able to discount freely for solvent clients, and the country has passed through no such convulsions of credit as have affected those countries where arbitrary restrictions have been put upon the note issue or where the notes have not been linked to the international movement of gold. On several occasions the influence of the issue of notes in meeting critical conditions stands out clearly. One of these was the occasion of the collapse of the copper corner in 1889, the suicide of M. Denfert-Rochereau, and the run which was precipitated upon the *Comptoir d'Escompte*, which had advanced large sums to sustain his speculations. It was the eve of the exposition of 1889 and it was felt that a financial panic would have been fatal to this international festival of commerce and industry. The situation was saved by the offer of the Bank of France to loan 140,000,000 francs (\$27,000,000) to the *Comptoir* on its commercial paper and securities. The demand being entirely domestic, the bank was not compelled to take anything from its gold reserve, but made the loan almost entirely in notes and without raising its rate of discount. The circulation, which on March 7, 1889, was 2,741,000,000 francs, rose by degrees to 2,888,000,000 francs on April 4.^a

^a André Liesse: *Evolution of Credit and Banks in France*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 522, p. 184.

In the crisis of 1907 the Bank of France slowly followed the other great banks in advancing its discount rate, but the advance left French merchants free to borrow money at 4 per cent, while those of London were paying 7 per cent and those of Berlin $7\frac{1}{2}$ per cent. The discount rate at the Bank of France remained unchanged at 3 per cent from May 25, 1900, to January 16, 1907, when it was advanced for a brief period to $3\frac{1}{2}$ per cent, then fell back again on March 21 to 3 per cent, and was not put at 4 per cent until November 7, two weeks after the suspension of currency payments by the American banks.

Where undue restrictions have been imposed upon the issue of notes, as in the case of the Bank of England, they have hampered its power to meet a crisis. The bank act of 1844 in England undoubtedly put a stop to the practice of allowing the metallic reserve of the bank to dwindle away until the soundness of the monetary system was threatened. But in curing this evil it created a new one.

8 NJ MONO. SEC.

Henceforth the bank was prevented from employing freely the resources which it possessed, and public attention was fastened in every crisis upon the point at which the bank might be compelled to stop lending, under the restrictions of the law governing its note issue, even though its gold resources were large and its reputation was unimpaired. The remedy was found in 1847, 1857, and 1866, in the suspension of the bank act, but only when the financial community was in convulsions and credit seemed on the eve of shipwreck.

Even as late as 1866, although the Bank of England is credited by Mr. Bagehot with having "in their till an exceedingly good reserve according to the estimate of that time"—the banking reserve, which was governed by the note issue and determined lending power, was allowed to run down until panic succeeded pressure and appeal to the Government for suspension of the bank act was decided to be the only means of salvation. The bank had acted generously on this occasion in granting discounts, and if it had possessed the power of issuing notes without restriction upon good commercial paper there would have been no question of its ability to meet all legitimate demands. On Government securities there were advanced in five days £2,874,000, and upon bills £9,350,000. But these advances so reduced the banking reserve that at the excited conference which took place on Friday night, May 11, between the chancellor of the exchequer and the deputation from the banks one of the representatives of the joint-stock banks is reported to have said to the representatives of the Bank of England: "I can draw a couple of checks to-morrow morning which will shut you up at once."^a

^a Gilbart; *The History, Principles, and Practices of Banking*, II, p. 319.

Domestic exchanges in Great Britain have gradually adapted themselves to the limited note-issuing power of the Bank of England, and the pressure of 1890, 1906, and 1907 was met by other methods than the suspension of the bank act of 1844; but it will be seen in the discussion under other heads that it has been largely the complacent aid of the Bank of France which has saved the Bank of England from serious embarrassment or at least the suspension of the bank act.

Germany profited by the experience of England in framing the charter of the Imperial German Bank in 1875. The English system was adopted in part—provision for a fixed limit of issue, beyond which every note should be covered in full by gold. Authority to exceed these limits was granted, however, in case the bank saw fit to pay a tax at the rate of 5 per cent per year upon the notes thus issued. A similar provision was engrafted upon the Austro-Hungarian banking law in 1887 and was made a part of the system of the National Bank of Japan in 1888.

This restriction was felt to be justified in a measure at the time when it was imposed in Germany, in 1875, by the fact that the country was entering upon a new experiment in her political organization and in her monetary system, as well as in banking. It was thought wise that some assurance should be given to the public that the new banking system was adequately safeguarded. A similar conclusion might be deduced from the political and economic conditions of Austria-Hungary and Japan, neither of which was in a strong monetary position.

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In practice the restriction upon the Imperial Bank of Germany has imposed serious charges upon the bank, but has hampered German commerce only to a limited degree because of the safety valve afforded by the power to issue notes under the tax of 5 per cent. It has been found advisable, however, to raise the limit of untaxed circulation at each revision of the charter. With the rapid expansion of German industry the amount of taxed notes has tended to increase toward the end of each decennial term and to emphasize the necessity for greater latitude of issue. Thus in 1897 the number of weeks in which circulation was issued subject to the 5 per cent tax was nine; in 1898, sixteen; in 1899, twenty; and in 1900, twenty. The amount of tax paid rose to 2,517,853 marks (\$600,000) in 1900, and total payments for the five years ending with 1900 were 8,525,265 marks (\$2,025,000). The limit of authorized issues was raised on this occasion from the original amount of 250,000,000 marks to 450,000,000 marks (\$107,140,000), which was increased by the lapsed issues of local banks to 472,829,000 marks (\$112,570,000).

With the approach of another decennial period, however, circulation was issued subject to the tax for seventeen weeks in 1906 and for twenty-five weeks in 1907. At the close of the latter year circulation subject to tax was outstanding to the amount of \$149,000,000, and taxes paid for the year amounted to \$1,350,000. Obviously, a further increase of the limit was called for, if German commerce was not to be seriously hampered, and such an increase was made by the law of 1909 to 550,000,000 marks, with authority to issue an additional 200,000,000 marks free from tax at the end of each quarter.

Of the actual operation of the German system of note issue more will be said in the discussion of the experience of the European banks in affording elasticity in the supply of credit. It is believed by many German economists that the effect of the tax on excess circulation has been

9 NJ MONO. SEC.

largely sentimental. The Imperial Bank has not failed to issue notes when required by demands for rediscount or for the needs of the circulation, even though the discount rate has not in all cases been raised to compensate for the tax on the notes; but the rise of the circulation to the point where taxed notes must be issued has come to be regarded as a sort of danger signal of the impending curtailment of banking accommodation. As the matter was put by Dr. Adolph Wagner, in the sittings of the commission on the renewal of the bank charter in the spring of 1908:^a

^a German Bank Inquiry of 1908, National Monetary Commission, 1910, 61st Cong., 2d sess., Senate Document No. 407, p. 209.

"As soon as the cash reserve in the banking department or the note reserve in our bank is much diminished there arises great anxiety on the part of the business world that has need of credit; the demand for credit is correspondingly increased and makes itself felt earlier and more urgently than is necessary, and the establishment of the contingent serves to make the situation in the money market more tense, and even to bring about a panic."

Doctor Wagner expressed the opinion that such a restriction was even more unsuitable to Germany than to England, because as soon as the note reserve began to fall off people began to say that the bank would be obliged before long to take more strenuous measures for raising the rate of discount, and that it might even happen that shipments of gold from abroad, intended for Germany, might be held back to get the benefit of the higher discount rate. He called attention to the remarkable strength of the Bank of France, which had the largest supply of cash in the world, and which was free from such restrictions and subject only to the discretion of its managers to determine the proper relation between the quantity of notes and cash. In his opinion, the danger signal in the case of the German bank came at the wrong place and at the wrong time and its effect was too acute, and he quoted the dictum of the English expert, Lord Ashburton, that there is really nothing more absurd and presumptuous in dealing with such matters than to put a mechanism in the place of the human understanding.^b

^b *Ibid.*, p. 211.

Owing to the peculiar organization of German finance, unusual demands for currency arise at the end of each quarter, which is made the settling day for rents, interest on mortgages, and other obligations. They impose such a heavy burden upon the bank that it was seriously proposed in 1908 that it should refuse to discount bills or make advances on quarter days beyond a certain amount corresponding to its existing position. It will be seen, under the discussion of the function of the banks of issue in affording elasticity in the supply of credit, that the experiment has recently been tried by the bank of imposing heavier charges on quarter days on rediscounts than are imposed on other occasions, but the proposal to limit such credit absolutely was not seriously entertained. It was condemned by Mr. Waldemar Mueller for the following reasons:^c

^c Miscellaneous Articles on German Banking, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 508, p. 160.

corresponding to its existing position. It will be seen, under the discussion of the function of the banks of issue in affording elasticity in the supply of credit, that the experiment has recently been tried by the bank of imposing heavier charges on quarter days on rediscounts than are imposed on other occasions, but the proposal to limit such credit absolutely was not seriously entertained. It was condemned by Mr. Waldemar Mueller for the following reasons: ^a

^a Miscellaneous Articles on German Banking, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 508, p. 160.

"By doing so, the Reichsbank would abandon its *raison d'être* as well as the task devolving on it of facilitating the adjustment of payments; for a central note-issuing institution, with privileges such as are accorded to the Reichsbank, is useless if it can grant credit and issue notes only during periods when business is quiet. For such purposes even the deficient note-issuing banking system of the United States would suffice. It is just at heavy settling days and during crises that the Reichsbank must prove itself capable of fulfilling its purposes. It is in the latter sense that the Reichsbank has viewed its tasks and has fulfilled them amply."

It is not necessary to analyze in detail the restrictions or lack of them which exist in regard to note issue at other European banks of issue, because those of the three most important countries are typical—England, of severe restrictions; France, of practical freedom; and Germany, of an intermediate policy. It happens that at other European banks of issue than those of England and Germany such restrictions as exist do not ordinarily hamper the granting of discounts. The Bank of Austria-Hungary is governed by the same system as the Imperial Bank of Germany and frequently issues notes subject to tax, but has not been subjected to such pressure as to cause any change in the limit of authorized circulation. Other banks are regulated in some cases by the requirement that a certain percentage of notes issued shall be covered by gold. This makes it possible to increase the circulation without limit so long as the legal proportion of gold is drawn into the bank by changing the discount rate or by the other means which will be hereafter discussed for attracting and retaining the metal. At the State Bank of Russia there is nominally a limit of circulation as rigid as that of the Bank of England, but as the gold stock is many million rubles in excess of legal requirements there is a margin for the legal issue of additional

10 NJ MONO. SEC.

notes which has never been threatened. At the National Bank of Belgium an administrative regulation requires a reserve to be kept of $33\frac{1}{3}$ per cent, but foreign bills may be counted in the reserve, and the Government has power, without change of law, to modify the reserve requirement. At the Bank of The Netherlands a reserve must be kept of 40 per cent against bank notes and all other demand liabilities, and at the National Bank of Switzerland 40 per cent against outstanding notes.

3. READY CONVERTIBILITY OF ASSETS.

It has required experience, in the form of some severe lessons, to convince bankers that the assets of a note-issuing bank should be of a character capable of quick convertibility into cash without depreciation in value. To meet the latter condition it has been the experience in Europe that commercial paper is superior to corporate bonds and similar so-called "securities," because the latter fluctuate in value and are unsalable in time of panic. Commercial paper, on the other hand, fluctuates but little and being payable in short terms is converted into cash automatically, so to speak, by payment at maturity. If it is paper which is the legitimate outcome of manufacturing or distributing operations, it is extinguished in the ordinary course of business when these operations are completed and the obligations arising from them are settled. These principles are now recognized at the chief banks of issue in Europe and govern the bank strictly in its relations with borrowers and with other bankers.

In the infancy of banking it was not generally understood why any form of property, whether quickly convertible into cash or not, was not good security for the issue of notes. Hence such proposals as those of John Law and the French revolutionary authorities to issue notes based upon the wealth of the country. Even after the principle of basing active banking operations upon land and general wealth had been abandoned, the distinction between quick commercial credit and credit employed in financing operations for long terms was not sharply defined. The experience of Belgium upon this point is illuminating. Both the *Société Générale*, which was in operation when the Belgian Kingdom was created in 1830, and the Bank of Belgium, which was founded in 1835, locked up considerable amounts of capital in industrial ventures. When the crises of 1837 and 1838 arrived, these banks encountered a demand from two sides—for the redemption of their notes in coin and for carrying through the panic the industrial enterprises which they were supporting. Their metallic reserves began to dwindle, there were no available means of replenishing them, specie payments were suspended, and the Government was compelled to come to the rescue with the grant of special credits.^a

^a Charles A. Conant: The National Bank of Belgium, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 400, p. 14.

Even from this experience the lesson of the distinction between financing and short-term credits was not fully learned. Both of these Belgian institutions were again in difficulties in 1842 and were again compelled to suspend specie payments in 1848. It was after these examples of unsound banking methods that the charter of the Bank of Belgium was enacted in 1850. In substantially the form

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^a Documents Parlementaires, 1900, p. 400.

"Every enterprise or form of commerce of a nature to impair its credit ought to be carefully avoided. It ought not to lock up its capital. It ought not to borrow, but should operate with its own resources. It should not carry on industry, but it ought to be impartial and to discount paper which embodies the required conditions. It ought to stand as intermediary between the capitalist and the producer, to distribute capital with justice and liberality through all parts of the body corporate."

In carrying out this doctrine, the business of the bank was confined substantially to strictly commercial operations—that is, to investments in commercial paper and bills of exchange. Advances on securities were limited to those of the Government or securities guaranteed by it, and the amount of such advances was to be confined "within limits and conditions to be fixed periodically by the administration of the bank, jointly with the Council of Censors and the approval of the Minister of Finance." There were definite prohibitions against borrowing or making loans on mortgages or on the deposit of industrial shares. The bank could not lend on its own shares nor buy them. It was forbidden to take part, directly or indirectly, in industrial enterprises, to engage in any form of commerce except that in gold and silver, or to acquire any real property except such as might be strictly required for its offices and necessary business. So rigidly were these rules interpreted that, at the time of the revision of the charter in 1872, it was reported that the bank was

11 NJ MONO. SEC.

refusing to discount paper based upon purchases of materials. The reply of the Government showed that this charge was not true, but that the bank would refuse to grant to the owners of an industrial enterprise the credit necessary for the building or enlargement of their factories.^b

^b Charles A. Conant: The National Bank of Belgium; National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 400, p. 40.

The example thus set by Belgium has been recognized as the sound one at the central banks of other European countries. When the independent banks of Italy violated the true rule, by making advances for new construction and for developing industrial enterprises, they awoke, in the crash of 1893, to find gold at a premium of 15 per cent, their capital nearly wiped out, and bankruptcy staring them in the face. Three of the six institutions then existing went out of business, and the survivors were subjected to requirements that they should limit their operations to discounts for four months and to advances on national securities.^c

^c The law of 1893, by which these regulations were established, is somewhat complicated and permits several other classes of business; but it is described as "necessarily a transitional law" and therefore not one to be commended for imitation.—Vide Canovai: The Banks of Issue in Italy, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 575, pp. 119-126.

The Imperial Bank of Germany is limited by law to keeping its notes covered by commercial paper "in discounted bills which mature not later than within three months," so far as they are not covered by cash.^a The

^a Section 17 of the bank act of Mar. 14, 1875, German Imperial Banking Laws, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 574, p. 41.

reasons for this policy are thus defined by Doctor Koch, the late governor of the bank:^b

^b Renewal of Reichsbank Charter, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 507, p. 210.

"The bill business is by far the leading asset business of the central bank of issue. The economic strength of the bank rests primarily upon this class of business, especially upon the great liquidity of its bill holdings. The bank is thus enabled to withstand successfully even severe crises. It can enlarge the circulation of its notes without hesitation, since it knows that the ensuing return current will bring back to it the means required for their redemption."

It is pointed out in the jubilee memorial of the Reichsbank, published in 1900, that "in point of quick and safe realization the investments in loans on collateral are in no way to be compared with bill holdings, carefully selected in accord with banking principles." A loan on collateral, it is declared by Doctor Koch, "is always far less transparent than a bill." Even with the most careful discrimination in accepting such pledges, the quickness and possibility of realization depend upon the absorbing power of the market. "Experience has proved," he continues, "that in times of severe crises even the most solid securities can not be disposed of at all or only at a great loss."^c

^c *Ibid.*, p. 212.

By the requirement that the notes not covered by cash shall be covered by commercial paper, the Imperial Bank is restricted in any event to its capital and deposits for making loans on securities, and while loans of the latter class are large in the aggregate, they form only a modest proportion of the total assets of the bank. The bank

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^a *Ibid*, pp. 67-69.

A preferential rate, which was granted for a time on bonds of the Empire and the German States, was suspended in 1897, with the result that loans on securities fell from 106,000,000 marks (\$25,150,000) in 1896 to 83,600,000 marks in 1906, and the decline was entirely in the formerly favored class.^b For these and similar loans the Imperial

^b *Ibid*, p. 225.

Bank is willing to remit borrowers to the joint-stock and private banks, which are not charged with maintaining the convertibility of the paper circulation.

As the charter of the National Bank of Switzerland, granted in 1905, is the most recent of the charters of European banks of issue, it may be considered as representing the most mature judgment of the character of business which such an institution should carry on. The provisions of article 15 of the charter are as follows:^c

^c Julius Landmann: The Swiss Banking Law, National Monetary Commission, 1910, 61st Cong., 2d sess, S. Doc. No. 401, p. 209. These provisions were slightly amended by a law of June 24, 1911.

12 NJ MONO. SEC.

"ART. 15. The National Bank, as a pure note, transfer, and discount bank, is allowed to transact only the following business:

"1. Issue of bank notes, according to the provisions of this law.

"2. Discounting of bills on Switzerland maturing in not more than three months and bearing at least two signatures of known solvency. Bills arising out of agricultural business which are based on a commercial transaction are to be placed on the same footing as other bills.

"3. Purchase and sale of bills and checks on foreign countries the currency of which is on a metallic basis. The bills must mature in not more than three months and must bear at least two signatures of known solvency.

"4. Granting of loans bearing interest for not more than three months against deposit of securities and title deeds. Shares are not accepted as security for loans.

"5. Acceptance of moneys upon deposit without interest, and in the case of the Confederation and of the administrations under its supervision also of deposits bearing interest.

"6. Transfer and clearing house business; issue and cashing of drafts.

"7. Purchase of interest-bearing bonds of the Confederation, the Cantons, or foreign countries, vesting in the holder and easily realizable; this, however, only for the purpose of a temporary investment of moneys.

"8. Purchase and sale of precious metals in bars and coin, for its own account and for account of third parties, and the granting of loans on the same.

"9. Issue of gold and silver certificates.

"10. Acceptance of securities and valuables for safe-keeping and management.

"11. Receiving of applications for loans of the Confederation and the Cantons, on commission, all participation in the permanent taking over of such loans being forbidden to the banks."

At practically all the European banks of issue except the Bank of England a distinction is made in regard to loans which is not usual at American banks—discounts and rediscounts of commercial paper being classified separately from loans on securities, which are classed as advances. The fact disclosed by this classification is that the larger proportion of the business accepted is in the form of discounts. In a comparative summary for three representative years printed by M. Edmond Théry, the editor of the French financial weekly, *l'Economiste Européen*, in the issue of July 8, 1910, the division between discounts and advances (omitting the Bank of England, where the two items are merged) works out as follows:

Loans of European banks of issue.

[In thousands of francs.]

December 31—	Discounts. L.	Advances.
1880.....	3,344,000	1,791,000
1895.....	4,311,000	2,722,000
1909.....	6,615,000	4,045,000

These figures for the entire body of European banks of issue do not fairly represent the position of the institutions having the most liquid assets, because they include

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Loans of European banks of issue.

[In thousands of francs.]

December 31—	Discounts.	Advances.
1880.....	3,144,000	1,791,000
1895.....	4,211,000	2,722,000
1909.....	6,615,000	4,045,000

These figures for the entire body of European banks of issue do not fairly represent the position of the institutions having the most liquid assets, because they include advances at the banks of Spain, the Netherlands, Russia, and Switzerland which exceed the volume of discounts. The conditions vary widely under which these advances are made and do not indicate on the part of the banks of Russia and the Netherlands any lack of ability to meet legitimate demands. At the four institutions which conform most closely to scientific principles of management the ratios of loans and advances at the close of 1909 are thus stated:

Loans of certain banks of issue, Dec. 31, 1909.

[In thousands of francs.]

	Discounts.	Advances.
Bank of France.....	889,000	533,000
Bank of Germany.....	1,546,000	365,000
Bank of Belgium.....	716,000	63,000
Austro-Hungarian Bank.....	785,000	94,000

The apparently large proportion of advances at the Bank of France was due rather to the shrinkage of the volume of discounts than to any radical increase in the advances. There were several occasions during the year 1909 when discounts exceeded 1,000,000,000 francs, while there was but one week when advances were in excess, and then only a trifle, of the amount at the close of the year. At the Imperial Bank of Germany also the proportion of advances is above the normal because special demands fall upon the bank at the end of each quarter and peculiarly at the end of the year.

In pursuance of the purpose of keeping assets in a form quickly convertible, modern European bank charters impose a narrow limit upon the term for which commercial credit is granted. In the case of the National Bank of Belgium the maximum duration of paper accepted for discount is 100 days. At the Bank of France and at several

13 NJ MONO. SEC.

other European banks it is 90 days. These limitations of law, however, are far from indicating the actual degree of convertibility of the assets of the banks. The average term of paper discounted is far within the legal limit, not only because much commercial paper is made for 60 days or less, but also because of the system of rediscounts, by which much of the paper held by the central bank of issue reaches the bank only after it has been for some time in the custody of the joint-stock banks, by whom it was first discounted. In the case of the National Bank of Belgium the highest average for accepted paper during the 12 years ending with 1908 was 46 days and for nonaccepted paper 43 days. At the Bank of France the average maturity of paper at the time it reached the bank was, during the year 1907, 26.06 days; in 1908, 25.65 days; in 1909, 22.53 days; and in 1910, 24.46 days.

From a purely theoretical standpoint it lay in the power of the Bank of France, by simply refusing further discounts, to have collected in cash the entire volume of its assets within less than ninety days. While this would have been in fact impossible without wrecking the financial and industrial fabric, the fact that its entire holdings of commercial paper matured within this time gave to the bank the necessary power to control the movement of currency, capital, and credit upon the margin of demand. A contraction of credit equal to a tenth part of the obligations to the bank could be accomplished in a few days. If, on the other hand, expansion became advisable, new notes could be put in circulation to an equal amount if paper were brought in by the joint-stock banks for rediscount.

Stating this high quality of convertibility in another form, in the case of the Imperial Bank of Germany it is disclosed by analysis of its assets that of the bills outstanding at the close of the year 1906, the proportion maturing in fifteen days or less was 42 per cent; those having thirty-one to sixty days to run, 27 per cent; and those running from sixty-one to ninety days, only 15 per cent. Similar statistics for the Austro-Hungarian Bank showed that of the paper held at the close of 1907 the proportion which matured during January was 62.67 per cent of the whole and during February 25.47 per cent, leaving maturities of longer than two months of only 11.86 per cent.

It is by constant scrutiny of the character of paper presented for discount, and the elimination, so far as possible, of discounts based upon investments of fixed capital and financing, that the soundest of the European banks maintain their strength. In the centers of great financial operations—London, Paris, and Berlin—it has become comparatively easy to limit the loans of the central bank to legitimate commercial paper. In countries where the amount of free capital is less there is a tendency to invest all the capital which can be obtained in extensions of the producing machinery of the community. Under such conditions it is more difficult, with the best of intentions, to limit the loans of the banks of issue to paper which is strictly convertible, representing transactions which actually mature within a short period. It was thus that in Mexico, in spite of a careful organization of the banking system in 1897, the banks became loaded up with long-time obligations, which required the intervention of the Government to obtain aid abroad after

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^a Charles A. Conant: The Banking System of Mexico, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 493, pp. 93-99.

4. THE CENTRAL BANK AND THE DEPOSIT BANKS.

That the central bank holds, in European countries, the effective gold reserve and the power to issue notes for the purpose of converting credit freely into transferable forms, has already been set forth. It remains to consider how far the system has afforded an opportunity for the safe development of other forms of banking institutions by enabling them to lean in emergencies upon the central bank. For this purpose it is interesting to examine the evolution of the joint-stock banks of France and Germany.

In France, prior to the expansion of the *Crédit Lyonnais* about 1881, banking was largely in the hands of small private institutions, which would have been found practically incapable of the great operations in foreign exchange, in issuing and distributing new securities, and in transferring securities from one market to another which have become necessary with the development of saved capital in France and its investment in the negotiable securities of governments, railways, and industrial enterprises both at home and abroad. It was not until 1865 that a legal definition was given in France to the check as an instrument for transferring funds, and it was not until after the war with Germany in 1870 that the joint-stock banks and credit societies acquired any considerable development. When the first railways were built in France, direct appeal was necessary to the Bank of France for the flotation of their securities. But when,

14 NJ MONO. SEC.

at a later date, the distribution of Russian Government loans and industrial securities began upon a large scale, the joint-stock banks were in a position to engage in the flotation. Branches were established throughout France by the *Crédit Lyonnais*, the *Comptoir d'Escompte*, and the *Société Générale*, with the object of gathering up the great savings of the French masses in the form of deposits or for investment in securities. The *Crédit Lyonnais*, which in 1880 had only 70 agencies, increased the number by the year 1900 to 184 and by 1907 to 246. The *Comptoir d'Escompte*, with 9 branches in 1880, had 212 in 1908, while the *Société Générale*, of much more recent origin, advanced from 308 in the year 1900 to 499 in 1908.^b

^b Vide Liesse: Evolution of Credit and Banks in France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 522, p. 201.

This extension of local branches by the credit societies was encouraged rather than retarded by a similar extension of branches on the part of the Bank of France, because at the branches of the Bank of France could always be found, through the process of rediscount, the resources in gold and notes necessary to meet any unusual demand upon the branches of the joint-stock banks. The relations between the joint-stock banks and the Bank of France were thus defined by one of the officers of the *Crédit Lyonnais*, in an interview with members of the National Monetary Commission: ^c

^c Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, pp. 224, 239.

"In France we have the Bank of France, which regulates the currency of the whole country, and any bank, if it has need for additional cash, may present for rediscount at the Bank of France the bills and other commercial paper which it has in its vaults. The amount we carry in the Bank of France may vary greatly according to circumstances. It is not to our advantage to have too large a sum at the bank, because the Bank of France does not allow any interest. * * * There is no competition between the Bank of France and the other banks, because they do not do the same kind of business. The Bank of France receives deposits, but does not allow interest upon them; it only discounts bills with three signatures; it is the bankers' bank; it acts as the regulator of the money market."

The joint-stock banks could, therefore, afford to keep their assets chiefly in commercial paper, because this paper was convertible practically at will into coin or notes at the central bank. Under these favoring conditions the four chief credit societies were able to increase their total deposits from 790,000,000 francs in 1885 to 1,626,000,000 francs in 1895; 2,438,500,000 francs in 1905; and 4,940,000,000 francs (\$953,500,000) on June 30, 1911. While at the Bank of France deposits have remained almost stationary for the last fifteen years, the stock of gold has increased in a manner which has tended to keep pace with the increased liability imposed upon the bank as the pivot of the credit system of the country. While the Bank of France is not prohibited from dealing directly with the public, it was estimated by the governor, in his interviews with the monetary Commission, that 70 per cent of the paper in the bank bore the signature of other banking institutions and therefore represented rediscounts. It is significant of the opinion held in French banking circles on the functions of the Bank of France that M. Henri

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^a Interviews on Banking and Currency Systems, etc., National Monetary Commission, 1910, 61st Cong., 2d sess, S. Doc. No. 405, p. 197.

Of a character somewhat similar to this evolution in France has been the development of the joint-stock banks of Germany since the control of exchanges throughout the Empire was conferred upon the Imperial Bank. During the period from 1888 to 1907 the paid-up capital of all the banks increased from 846,720,000 marks to 2,873,300,000 marks (\$685,000,000), or 239 per cent, while their total capital resources, including reserve funds, rose from 971,910,000 marks to 3,517,230,000 marks (\$836,000,000), or 265 per cent. Groups of banks have spread like a network all over Germany, under the leadership of a half-dozen strong Berlin institutions, which have lent their efforts without ceasing to the development of German industry at home and abroad. The resources controlled at the close of 1907 by the group of which the Deutsche Bank is the center was 3,601,770,000 marks; by the Disconto Gesellschaft group, 2,025,690,000 marks; by the group of the Dresdner Bank, 2,170,930,000 marks; and by the group of the Bank für Handel und Industrie, 934,920,000 marks. The 8 leading banks of Berlin, with their affiliated institutions, represent resources of 9,849,180,000 marks, or about 74 per cent of the entire resources of the 421 German banks, which amount to 13,294,220,000 marks (\$3,160,000,000).^a

^a Robert Franz: Development of the German Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess, S. Doc. No. 508, p. 87.

15 NJ MONO. SEC.

This development would have been much retarded, in the opinion of German authorities, but for the support given to the banking system by the central bank. In Germany, as in France, the joint-stock banks have been able to aid in the development of industry and the extension of German international finance, because their chief care has been centered upon obtaining sound assets for their loans. They have been unhampered by the necessity of piling up idle stocks of gold or by the haunting fear that such stocks would prove inadequate to meet some great strain. These functions have been the special care of the Imperial Bank. Upon its scrutiny of the international horizon, upon its control of the movement of gold, and upon its power to issue its notes to supply the currency needs of the country has depended the ability of the joint-stock banks to go about their business, making commercial loans, making advances where prudent for the development of German industry, and embarking in railway and colonial enterprises beyond sea.

When the rapidity of this expansion has brought reaction and aroused doubts of the ability of the joint-stock and private banks to weather the storm, it has been the leadership and the resources of the Imperial Bank which have saved the situation. In 1898, when the gold reserve was threatened by the outbreak of war between Spain and the United States and heavy payments on the Chinese loan, the bank paid out within a few weeks about \$25,000,000 in coin and \$58,000,000 in notes; but the discount rate was promptly raised to 6 per cent, foreign bills were purchased to the amount of \$20,000,000, international securities began to leave Berlin to establish credits abroad, and gold poured into Germany from England, France, Austria, and China. "If the balance turned in favor of Germany," Raffalovich declares, "the merit of the change must be attributed to the measures taken by the Imperial Bank."^a In the graver crisis of 1901, which

^a *Le Marché Financier* en 1898-99, p. 254.

carried down the Leipziger Bank and caused runs on several others, the Imperial Bank increased its volume of discounts for the purpose of aiding commerce, but found its deposits so swelled by the funds withdrawn from the private banks that it reduced instead of raising its lending rate.^b

^b Raffalovich; *Le Marché Financier* en 1901-2, pp. 219-220.

Through the pressure of 1901 and through the American panic of 1907 the Imperial Bank of Germany successfully piloted the finances of the country, with no greater burden than a discount rate at times of 6 per cent and, finally, in 1907, of 7½ per cent, which was considered so severe and unusual a tax upon German industry that a special commission of the ablest bankers and economists was appointed to determine how such a catastrophe as a 7½ per cent rate could be guarded against in time to come.

It is a part of the theory of a central bank of issue that it should possess reserve powers capable of being called into play when other financial powers are exhausted, or at least impaired. It is not desirable, therefore, that these reserve powers, existing in the form of a large metallic stock and the right to issue notes, should be employed up to the limit

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16 NJ MONO. SEC.

V. THE CENTRAL BANK AND THE INTERNATIONAL MARKET.

The central bank of issue fulfills in European countries one of its most important functions in its relation to the international money market. In fulfilling this function, it guards the national stock of gold by its influence over exchange, affords a refuge for other banks in periods of stress, and in some cases actively encourages national banking ventures in the colonies and in foreign countries. Only institutions of well-established strength are fitted to maintain successfully the necessary relations with foreign money markets. In times of financial peace this service may be performed by large joint-stock banks and private bankers, but in emergencies reliance is placed upon the central bank of issue, not merely for sustaining the local banks, but for giving a guaranty of security to loans contracted abroad.

Preeminence has been claimed for many years as the center of the world's banking by the Bank of England. While its relative gold resources have not kept pace with those of certain other great banks, and it has been compelled in several emergencies to rely for assistance upon the Bank of France, there has been no serious effort to transfer elsewhere its function, as defined by Mr. Withers, that of "custodian of the gold store for international banking."^a

^a The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 16.

The Bank of England in fulfilling this obligation has to be prepared at any time to meet demands from abroad, based on credits given to foreigners by the English banking community. It is thus required to observe the signs of financial weather in all parts of the world and to regulate the price of money in London so that the foreign exchanges may not become unduly adverse. Surrounded by joint-stock banks, colonial banks, and branches of foreign banks with liabilities running in the aggregate into hundreds of millions of pounds, the management of the reserve of the Bank of England is delicate and difficult. Its duty in this respect has always been fulfilled, but in the absence of freedom of note issue has required the adoption of special devices for controlling the money market which have not been resorted to at other central banks. Obviously, the position of London as the center of international exchanges could not be maintained if the regulation of the market were left to independent and competing banks. As the problem is stated in a study made for the commission:^a

^a *Ibid.*, p. 22.

"If a banker wants to increase his holding of bills, he naturally does so at the market rate, without considering whether his doing so is likely to turn the foreign exchanges against London and so cause a demand on London for gold. Consequently, the exigencies of their daily business and the strong competition between them impel the banks and discount houses to do business at rates which may sometimes be dangerous to the general interest, and it is thus clearly necessary that some institution with a com-

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In each of the principal European countries the function of the central bank of issue as the ultimate guardian of the national credit and gold reserve has been often and clearly recognized. In several cases in recent times the Bank of France, with its great stock of gold and its unfettered power of note issue, has come to the aid of the banks of other countries. As early as 1839, when the reserve of the Bank of England fell to £3,000,000, the Bank of France advanced £2,000,000 in gold upon the indorsement of the Barings. In 1890, when the Barings themselves were the cause of disaster, the Bank of England gave such help as it could, but was not able to prevent the flooding of the Paris market with international securities, which were thrown over in order to obtain gold. It was then that the Bank of France again came forward with a loan of 75,000,000 francs in gold for three months, with a promise of renewal, secured by Exchequer bonds. So complete was the restoration of confidence in London as the result of this action that this gold was not only returned to the Bank of France with seals unbroken, but was not even sent across the channel. The Bank of France was not affected by this operation. Its average metallic reserve for the year 1890, including silver, was 2,513,000,000 francs (\$485,000,000), while in London at the height of the crisis the bank reserve was under \$100,000,000. It is pointed out by M. Liesse that, as the crisis was local, the remedy was close at hand. If the Bank of England had been able to issue notes for £15,000,000—the amount of its loan—in order to meet the crisis, there would not have been the slightest need for an appeal to the credit of the Bank of France.^a

^a Evolution of Credit and Banks in France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 522, p. 189.

Since the renewal of the charter of the Bank of France in 1897, the occasions have been frequent when aid has been extended by the bank to other institutions. In May, 1906, the sum of 40,000,000 francs was forwarded to the Bank of England to relieve it from the necessity of advancing the rate of discount. In the autumn of the

17 NJ MONO. SEC.

same year, when acute stringency affected the London market and the demand for gold was intensified by pressure in the United States, as well as by demands from Egypt and Brazil, the Bank of France again came to the rescue, but by a more refined method than the earlier loans of physical gold. The bank discounted English commercial paper to the amount of about 75,000,000 francs and afforded indirect aid in another direction by releasing about 5,000,000 francs in gold for shipment to Egypt. The Bank of France would not on this occasion furnish gold directly for New York, because of the conviction that the Secretary of the Treasury should first give such support as was in his power to the market and because disapproval was felt of the extent to which speculation in New York had been carried.

When the crisis of 1907 broke the Bank of France again stood ready to aid the international market, and in answer to a mere telegram forwarded to London \$16,000,000 in American gold eagles. The explanation of the attitude of the Bank of France in this emergency toward American bankers, given by a recent French author, is as follows: ^a

^a Maurice Patron: *The Bank of France in its Relations to National and International Credit*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 494, p. 144.

"It was at the time of this developing crisis that the Bank of France was unreasonably reproached with its indifference to the monetary situation in the United States and its refusal to give aid. The critics forgot that the bank was prevented by its statutes from the direct shipment of sums for which the Federal Government refused to become responsible, and that, nevertheless, it forwarded 80,000,000 francs in American coin, which merely passed through London. Certain negotiations took place at that time between the American Government and the Bank of France with a view to dealing directly, without the intervention of the London market. It is only because that Government would not or could not offer such guaranties as the Bank of France considered adequate that it made use of the London market, which has a much greater interest than ours in the prosperity of the United States."

In the case of Germany the Imperial Bank has not only fulfilled, even at heavy cost, the function of guardian of the national gold stock and of German monetary credit abroad but has lent its encouragement to the joint-stock banks in their ventures into foreign banking fields. Down to the period of the early seventies the financial operations growing out of the foreign trade of Germany were almost exclusively in the hands of London banks. The establishment of the Deutsche Bank at Berlin in 1870 marked the first important effort to turn this traffic into German channels. The founders of this institution recognized that there existed a gap in the German credit organization which needed to be filled in order to render the foreign commerce of the country independent. This program was not at first easy to carry out, because Germany had not yet established the gold standard and bills of exchange drawn in the currencies of the various German States were neither widely known nor liked in the international

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^b Robert Franz: Development of the German Banking System, 1888-1907, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 508, pp. 31-32.

the unification of the banking system in 1875 tended to remove these difficulties, and other German joint-stock banks followed the example of the Deutsche Bank in gathering up the saved capital of the people and applying it to the development of German industry at home and over seas.

CHAPTER III.—HOW EUROPEAN BANKS INFLUENCE THE MONEY MARKET.

The development of European banking has followed such well-defined channels and has resulted in such a general agreement among conservative bankers upon the rules to be followed in given contingencies that an examination of these rules and the manner in which they have been applied seems likely to be advantageous, even if they might not be found applicable, without certain modifications, to banking conditions in the United States. The scope of such an inquiry is so wide, if it is extended to all branches of the subject, collateral and remote, that it seems advisable, at least as a first step, to confine it to those powers exercised by the European banks which affect most directly the character, amount, and regularity of the accommodation extended to industry and commerce. These are the powers which these banks exercise in performing the two functions of supplying the internal circulation with an adequate stock of bank-notes and in conserving the national gold stock. Simple as these two propositions seem, they embody a large part of the fundamental duties of the central banking mechanism. How these duties are performed by the chief European banks may be conveniently considered under the following heads:

18 NJ MONO. SEC.

I. CHANGING THE RATE OF DISCOUNT.

This is now the most generally accepted method by which a central bank protects the national stock of gold. From about 1860 down to near the close of the last century it was believed by many financiers to be practically the only scientific method of exercising control over the exchanges and so arresting the outflow of gold. During every autumn and at every other period of "tight money," the financial world waits with keen interest to see if the directors of the Bank of England will raise the discount rate at their regular weekly meeting on Thursday and if the Imperial Bank of Germany will follow them on the next day. The crisis requires to be a very grave one to lead the directors of either institution to change the rate except on the day of the regular weekly meeting. When a second change occurs inside the week, or when, as in 1907, at the Bank of England, there are three changes within eight days,^a it is a signal that the situation is

^a The rate was advanced on Oct. 31, 1907, from $3\frac{1}{2}$ to $4\frac{1}{2}$ per cent; on Nov. 4, to 6 per cent; and on Nov. 7 to 7 per cent.

acute, and that the central bank is exerting all its great powers to check the outflow of floating capital and to attract it from abroad in the form of gold.

The underlying principle of an advance in the discount rate is to make the return upon capital more attractive in the place where the advance is made, and thereby to draw capital from without into the country and check its exportation from the country. There are under modern conditions many forms and representatives of capital—commodities, the precious metals, negotiable securities, bills of exchange, and other forms of banking credit. The transfer of some of these forms of credit may take place without the physical transfer of anything but paper, and in some cases by a mere message by cable. It is not necessary here to discuss at length the theory of the balance of trade or the large part which securities play in the transfer of capital. It is sufficient to call attention to the fact that an advance in the rate of discount which makes the return on capital at a given financial center more attractive than it has previously been, or than it is in other markets, is sufficient to work marked change in the degree of pressure upon the money market. Defining some of the methods in which a change in the discount rate operates in Germany, Mr. Fischel, of the Berlin firm of Mendelssohn & Co., speaking before the German commission which considered the renewal of the charter of the Imperial Bank in 1908, expressed himself as follows:^b

^b German Bank Inquiry of 1908, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 407, Pt. I, pp. 447-448.

"If the bank puts up its rate the first effect is to cause Germans to demand payment of sums due them abroad, and a further effect is to cause foreign creditors to extend the term of loans made to Germans, either by not demanding immediate payment on account of the higher rate of interest or by the much more natural method exemplified by the action, let us say, of an American holder of a bill

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So little was the principle understood of raising the discount rate sharply that prior to 1844 comparative uniformity in discount rates prevailed at the Bank of England. For more than a century, down to 1839, "the bank rate" never exceeded 5 per cent nor fell below 4 per cent. During the pressure of 1839 it was raised for some months to 6 per cent, but in January, 1840, was reduced to 5 per cent, where it remained until the passage of the act of 1844.^a At that time the open market rate was not

^a Palgrave: Bank Rate and the Money Market, p. 49.

above 2 per cent, and the bank was "out of the market." It was in August, 1844, that the bank rate was reduced to 2½ per cent, and since that date the changes in rate have been more numerous at the Bank of England than at any other bank in the world.

19 NJ MONO. SEC.

The total number of changes from 1844 to the close of 1909 was 443, of which by far the greater number were made after the change of policy in 1857, to be presently referred to. During the thirty-eight years from 1857 to the period of "cheap money" in 1894 occurred 330 changes, or an average of more than 8 per year. The year 1873 witnessed 24 changes and 15 other years 10 or more changes each. The frequency of the changes in 1873 was due to the large operations in bills arising out of the payment of the French war indemnity to Germany. The result of these repeated variations was to afford a low rate for money during a large part of the period covered. A rate not exceeding $2\frac{1}{2}$ per cent was charged during 7,036 days, from 1844 to 1909, or more than one-quarter of the time; a rate not exceeding 3 per cent was charged during 12,895 days, or more than half the time (including the lower rate); and a rate not exceeding 4 per cent was charged during 18,588 days, or more than three-quarters of the time.^b

^b Palgrave: The English Banking System, National Monetary Commission, 61st Cong., 2d sess., S. Doc. No. 492, p. 197.

Of the potency of raising the discount rate sharply, the discovery came after the panic of 1857. Only then did the directors of the Bank of England realize the dynamic powers which lay ready to their hands by a simple decision in the bank parlor of a Thursday afternoon. Of the effects of the adoption of that policy by the Bank of England in those early days, Mr. Bagehot speaks thus:^a

^a Lombard Street, Works, V., p. 118.

"The beneficial results of the improved policy of the bank were palpable and speedy; we were enabled by it to sustain the great drain of silver from Europe to India to pay for Indian cotton in the years between 1862 and 1865. In the autumn of 1864 there was especial danger; but by a rapid and able use of their new policy, the Bank of England maintained an adequate reserve and preserved the country from calamities which, if we had looked only to precedent, would have seemed inevitable. All the causes which produced the panic of 1857 were in action in 1864; the drain of silver in 1864 and the preceding year was beyond comparison greater than in 1857 and the years before it, and yet in 1864 there was no panic. The Bank of England was almost immediately rewarded for its adoption of right principles by finding that those principles, at a severe crisis, preserved public credit."

Change of the discount rate is now recognized at central banks as the chief means of controlling the foreign exchanges. It is supplemented, as will presently appear, by other methods of influencing the supply of loanable funds and the movement of gold and does not occupy so nearly exclusive a place at the Bank of France, the Bank of Austria-Hungary, and the Bank of Belgium as at the Bank of England, and in a lesser degree at the Imperial Bank of Germany. Apart from the use of other methods of influencing the exchanges, however, the discount rate at the Bank of England has been changed more often than at other banks of issue, because London is so dis-

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^b Palgrave: The English Banking System, National Monetary Commission, 61st Cong., 2d sess., S. Doc. No. 492, p. 185.

Changes in discount rate, 1844-1909.

Bank of England.....	442
Bank of Germany.....	196
Bank of France.....	115
Bank of the Netherlands.....	188
Bank of Belgium ^c	192

^c Only from 1851 to 1909.

20 NJ MONO. SEC.

Examination of the records in greater detail shows that during the whole period there have been only two years when no change in the rate of discount took place at the Bank of England; while there have been twenty-seven separate years when no change has been made during the year by the Bank of France; ten years at the Bank of Germany; fifteen at the Bank of The Netherlands; and eleven at the Bank of Belgium. The widest fluctuation in any one year at the Bank of England was in 1866, when the minimum rate was $3\frac{1}{2}$ per cent and the maximum rate was 10 per cent. Never since 1866 has there been a higher rate than 7 per cent.

In steadiness of rates since the efficacy of changes in the discount rate was discovered, the Bank of France has the most remarkable record, due to its large stock of coin and to other causes which are discussed elsewhere in this paper. During the earlier years of its history, from January 13, 1820, to January 14, 1847, the rate was kept uniformly at 4 per cent. In more recent years the rates fixed on May 19, 1892— $2\frac{1}{2}$ per cent for commercial discounts and $3\frac{1}{2}$ per cent for advances on securities—remained unchanged for nearly three years, when they were reduced on March 14, 1895, to 2 and 3 per cent. There were changes resulting from the South African war in 1898, which for brief periods in 1899 and 1900 carried the rate for discounts as high as $4\frac{1}{2}$ per cent; but on May 25, 1900, this rate was fixed at 3 per cent and for advances at $3\frac{1}{2}$ per cent. The latter rates remained unchanged for nearly seven years, until the growing pressure in international markets at the beginning of 1907 led to an increase. The discount rate was advanced on January 17, 1907, to $3\frac{1}{2}$ per cent, fell back on March 21 to 3 per cent, and was again advanced on November 7 to 4 per cent, while at London it stood at 7 per cent and at Berlin at $7\frac{1}{2}$ per cent. With the passing of the storm, the rate at the Bank of France was reduced on January 9, 1908, to $3\frac{1}{2}$ per cent, and on January 23, to 3 per cent, where it remained until September 23, 1911.^a

^a Full details of the history of the discount rate at leading European banks can be found in *The English Banking System*, National Monetary Commission, 61st Cong., 2d sess., S. Doc. No. 492, pp. 184-201.

In 1858, after the system of sharp and radical changes in the discount rate had demonstrated its efficacy at the Bank of England, a similar policy was pursued for a time at the Bank of France; but this policy was abandoned in 1864 in favor of greater stability of rates. It was felt that the policy of advancing the discount rate in order to influence the exchanges caused commerce alone to bear the brunt of all demands for currency, contracted credit, and hampered business. Under present conditions, therefore, the bank, in the language of a French authority, "though sometimes forced to resort to this expedient, only uses it in cases of extreme necessity, and * * * taxes its ingenuity to find certain devices which may defer the rise in the discount rate."^b

^b Maurice Patron; *The Bank of France in its Relation to National and*

in 1864 in favor of greater stability of rates. It was felt that the policy of advancing the discount rate in order to influence the exchanges caused commerce alone to bear the brunt of all demands for currency, contracted credit, and hampered business. Under present conditions, therefore, the bank, in the language of a French authority, "though sometimes forced to resort to this expedient, only uses it in cases of extreme necessity, and * * * taxes its ingenuity to find certain devices which may defer the rise in the discount rate."^b

^b Maurice Patron; The Bank of France in its Relation to National and International Credit, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 494, pp. 133-134.

Inevitably it has developed that control of this character could be achieved only where its exercise was in strong hands, dowered with leadership in the money market. Such power is exercised effectively in Europe by a central bank. Wherever the attempt has been made to regulate the movement of gold through independent banks, even where they have sought to act together, it has usually failed. Down to the close of the last century Switzerland and Sweden were without central banks and both suffered an adverse rate of exchange and a drain of gold, which have been practically cured since the adoption of a central banking system. In Switzerland exchange was for years steadily adverse and the drain of gold and even of subsidiary silver compelled the banks to import gold at their own cost in order to maintain their cash reserves. In vain were repeated efforts made to secure harmony of policy by clearing-house agreements and by special committees. It is declared by a well-known economic writer that, as each bank acted according to its own convenience, "common action was prevented and the measures of precaution taken by some establishments to strengthen their position were not only without result, but were generally counteracted by establishments which operated only from day to day and without regard to the general situation."^a

^a Raffalovich, *Le Marché Financier en 1898-99*, p. 565.

21 NJ MONO. SEC.

II. REDISCOUNTING COMMERCIAL PAPER.

Rediscounting commercial paper for other banks is one of the strongest weapons of the central bank. Rediscounting consists in the discounting by one banking institution for another of commercial paper which has already been discounted by the latter for a client. Its essential advantage lies in the fact that an institution which finds itself without an adequate cash reserve may replenish its cash by pledging its best paper with another institution having a larger stock of cash or wider powers. To a limited extent rediscounting is done in the United States for country banks, but rarely for the larger banks of the cities. In England the custom is somewhat more extended and is resorted to by the joint-stock banks in periods of crisis, but only at the continental banks is the system so well established and regularly pursued that it reflects no discredit upon the largest joint-stock and private banks to rediscount their paper with the central bank.

Closely related to the system of rediscount is another practice common in Europe—that of acceptance. As acceptances are not widely employed in this country, it may be instructive to quote the definition of the term given in a French dictionary of commerce and based upon the French commercial code. This definition is as follows:

“Acceptance.—This is the act by which the person drawn upon engages to pay the amount of a bill of exchange to the person who may be at maturity the regular holder of such bill. It is accomplished by the indorsement on the bill of exchange made by the drawee of his signature, preceded or not with the word ‘accepted’ (art. 122). Acceptance, besides the general conditions relative to consent, must be the work of a person capable of obligating himself by a bill of exchange. It may be partial, but not conditional (art. 124). Its effect is to create an obligation on the part of the drawee toward the holder at maturity, with all the consequences attached by law to obligations arising from a bill of exchange.”—Commercial Code, arts. 118–125.

Acceptance often, however, takes the form of the guaranty by the accepting bank to pay the draft in case of default on the part of the drawee. It has the advantage of putting behind the less known credit of other parties to a bill of exchange the credit of a well-known bank. Through this acceptance, which is practically an indorsement, the paper, from being a dead instrument and a nonliquid asset, becomes a liquid asset, which is negotiable at any sound banking institution. In the language of Mr Warburg: ^a

^a The Discount System in Europe. National Monetary Commission, 1919, 61st Cong., 2d sess., S. Doc. No. 402, p. 7.

“Through the addition of the banker’s signature the question of the maker’s credit is eliminated and the note, instead of being a mere evidence of an advance, is transformed into a standard investment, the purchase and sale of which will be governed only by the question of interest. This investment commands the broadest possible market.”

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question of the maker's credit is eliminated and the note, instead of being a mere evidence of an advance, is transformed into a standard investment, the purchase and sale of which will be governed only by the question of interest. This investment commands the broadest possible market."

Thus, through the system of acceptances a negotiable character has been given to bills of exchange payable at European banking institutions which puts them in a different category from promissory notes of individual firms held in the vaults of an American bank. The latter represent until maturity credit in a form which is not readily convertible into cash. From this difference between American and European methods of banking it results that, no matter how good may be the credit of the American purchaser or of an American bank whose acceptance may be offered to a shipper in China, South America, or Europe, shippers in such countries will not, as a general rule, take such an acceptance, because the American bill does not have the same ready sale as the European bill.

For granting acceptances where there is no actual investment of capital, a commission of a fraction of 1 per cent is charged by the banker to the merchant. Large business firms arrange for acceptance of their bills at different financial centers up to a certain limit, but are charged only upon the acceptances which are actually granted. Thus a considerable profit is obtained by the banks without the employment of cash. Large firms having credits in different markets are able to save more than the commission on acceptances by drawing against these credits in the market which has for the time being the lowest discount rate. They may use all foreign credits at the same time when the interest rate at home is higher than the rates ruling abroad, and, conversely, they may at times cover all their foreign credits and use only the financial accommodation offered at home if the rate there is for the time being lower than rates abroad.^a

^a *Ibid.*, p. 10.

The fact that a bill of exchange has been accepted not only gives it much higher value as a convertible asset than a mere promissory note with individual or firm indorsements, but it may considerably diminish the demand for discounts by enabling the owner of the bill to retain it until the occasion arises for obtaining cash. Otherwise, he might feel compelled to discount it immediately after receiving it, if money conditions were favorable at the moment, in order to know that he could have the cash when he needed it.

The existence of a great mass of accepted paper in European markets enables the joint-stock banks of

22 NJ MONO. SEC.

Europe to rediscount such paper at the central bank whenever they need cash, and only when they need it. It is in France and Germany, among the leading countries, that the system of rediscounting has attained its most complete development. The system which has grown up at London, as the result of the restricted power of the Bank of England in the issue of notes, is complicated and somewhat artificial, but accomplishes in the end the same purpose as direct rediscount in France and Germany. Rediscounting for the joint-stock banks by the Bank of England is exceptional under ordinary conditions, but a similar result is attained through the relations of the bill brokers and the private bankers to the joint-stock banks and the Bank of England. It was only after the influence of changes in the rate of discount upon the foreign exchanges came to be clearly understood that the English system began to assume definite form. Even after this discovery the Bank of England adhered for some years to the policy of an official minimum rate of discount, which was the same to all comers; but in 1878 the bank announced that it would no longer feel bound to adhere to the rule of maintaining a fixed minimum rate as closely as it had formerly done.

At the same time another change was announced having an important influence upon the London money market—that the bank would, when desired, make advances to bill brokers. In 1890, a further change was made, in adding to the privilege of advances on bills to bill brokers and discount companies the right to have bills directly discounted at published rates when having not more than fifteen days to run. The currency of such bills has since been extended to sixty days. Under the operation of this system, when a banker requires a broker to repay his "call money," the only source from which the broker can obtain the means of payment is the Bank of England. He therefore pledges what are virtually the banker's own bills, and thus is able to repay the banker. These bills may have but a few days to run, but the money on them must be had at once, and a demand for a comparatively small sum may produce a visible effect on the money market. The defects of this system are set forth by Mr. Palgrave thus: "

^a Bank Rate and the Money Market, p. 52.

"This arrangement is not favorable to the quiet working of the money market. If the custom generally followed on the Continent prevailed in this country and bankers laid themselves out to discount freely for their customers, feeling at liberty to rediscount these bills whenever needed with the Bank of England, all the work of intermediaries would be saved and business would be on a sounder foundation. It is the custom of banks at foreign centers, as at Berlin, to rediscount thus habitually. The arrangement is a good one in many ways; it helps the central bank to keep in touch with the smaller business houses which surround it, and it enables those houses to carry on their business with perfect smoothness."

It is through the system of rediscount, which has been brought to perfection in France and Germany, that the central bank performs one of its most essential functions. Through its reserve resources it protects the other banks when their liquid assets are impaired. The policy of the

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It is through the system of rediscount, which has been brought to perfection in France and Germany, that the central bank performs one of its most essential functions. Through its reserve resources it protects the other banks when their liquid assets are impaired. The policy of the Bank of France was thus defined to the members of the Monetary Commission in their interview with Baron Brincard, one of the officers of the *Crédit Lyonnais*:^b

^b Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 224.

"In France we have the Bank of France, which regulates the currency of the whole country, and any bank, if it has need for additional cash, may present for rediscount at the Bank of France the bills and other commercial paper which it has in its vaults. The amount we carry in the Bank of France may vary greatly according to circumstances. It is not to our advantage to have too large a sum at the bank, because the Bank of France does not allow any interest."

As the result of this policy, every crisis since sound banking methods were understood has witnessed a great expansion of discounts at the Bank of France. In 1907 commercial discounts increased from 855,700,000 francs (\$165,200,000) on August 22 to 1,396,800,000 francs (\$269,600,000) on October 31. In 1908, after the pressure was over, the figures for corresponding dates were 673,200,000 francs (\$130,000,000) and 823,200,000 francs (\$159,000,000).^a Even average discounts for the year

^a Bulletin de Statistique, LXIII, p. 235, and LXV, p. 201.

showed an increase from 897,700,000 francs for 1906 to 1,125,700,000 francs for 1907, with a prompt decline for 1908 to 897,200,000 francs.

The following table shows the total volume of discounts, average for the year, and average rate of discount for representative years since 1896:^b

^b From Liesse, Evolution of Credit and Banks in France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 522, p. 228; completed from Bulletin de Statistique, February, 1911, LXIX, p. 164.

Discounts at Bank of France.

[In thousands of francs.]

Year.	Total sum discounted.	Average of balance sheet.	Average rate.
1897.....	28,364,800	730,400	2.00
1900.....	12,247,600	875,200	3.25
1902.....	9,555,900	546,300	3.00
1904.....	10,834,300	699,600	3.00
1906.....	13,980,900	897,700	3.00
1907.....	15,769,100	1,125,700	3.45
1908.....	12,800,600	897,200	3.04
1909.....	12,336,372	761,500	3.00
1910.....	14,580,730	927,300	3.00

23 NJ MONO. SEC.

While it can not be stated with precision what proportion of the discounts of the Bank of France represent rediscounts, it has been seen that they were estimated by the governor of the bank in 1908 at 70 per cent of the total. One of the reasons for the appearance of a large volume of rediscounts in the assets of the bank is the fact that its machinery of collection is employed by the joint-stock banks for paper for very small amounts discounted for the retail shopkeepers of Paris. The ratio of such bills to the total number discounted has been almost steadily growing and has kept down to a low amount the average value of discounts per piece. Thus, for 1907 the average value of discounts per piece was 732 francs (\$141.28); for 1908, 586 francs; for 1909, 573 francs; and for 1910 620 francs (\$119.66). Of 7,503,127 bills discounted at Paris in 1907, 3,646,229, or 48 per cent, were for 100 francs (\$19.30) or less, and this has been about the proportion during the present century.^a These are

^a Maurice Patron: *The Bank of France in its Relation to National and International Credit*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 494, pp. 82-86.

practically all rediscounts, for which the discounting bank is responsible in case of default.

■ The manner in which rediscounting at the Imperial Bank of Germany is relied upon by the joint-stock banks was thus stated to the Monetary Commission by an officer of the Deutsche Bank:^a

^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 374.

"The great strength of our financial system in Germany is the Reichsbank. Under that system the question of our own cash reserve is of secondary importance, as we can at all times convert our holdings of commercial paper into cash at the Reichsbank. I may mention that of the prime commercial bills we are carrying, from \$1,500,000 to \$2,000,000 fall due each day; for these we get cash or credit at the Reichsbank at maturity."

It is declared by Doctor Koch, long time governor of the Imperial Bank, that the institution gathers among its holdings a very considerable proportion of all the bills drawn and put in circulation in Germany. As a rule the bank attracts a larger share of the bills in circulation in times of business expansion than in times of stagnation and depression, because under the latter conditions money is easy and the joint-stock banks are able to underbid the Imperial Bank in the rate of discount.^a

^a Renewal of Reichsbank Charter, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 507, p. 209.

This condition varies, however, in a period of tension, because the joint-stock banks then seek to increase their balances at the Imperial Bank by means of rediscounts.

Statistics based upon the stamp taxes are obtainable in Germany in regard to the number of bills drawn. These statistics show that, in spite of the organization of other institutions and the economic progress of the empire

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Statistics based upon the stamp taxes are obtainable in Germany in regard to the number of bills drawn. These statistics show that, in spite of the organization of other institutions and the economic progress of the empire within the past thirty-five years, the ratio of bills held by the Imperial Bank to the total amount drawn has not decreased. Whereas, in 1876, the Imperial Bank purchased 33.3 per cent of all the bills put in circulation during that year, this share, after many fluctuations, rose by the year 1899 to 39 per cent, declining in 1900 to 36.7 per cent. The ratio of the average investment in bills to the total value in circulation is smaller, because the Imperial Bank does not hold the bills from the date when they are drawn. Its ratio of bill holdings to the total fluctuated prior to 1900 between 11.3 per cent in 1881 and 15.8 per cent in 1893. In 1900 it amounted to 13.3 per cent. For years the Imperial Bank has been far ahead of other central banks of issue in its average investments in bills.^a

^a The Reichsbank, 1876-1900, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 408, pp. 146-49.

The short average maturity of the bills in the portfolio of the Imperial Bank is in itself evidence of the large volume of paper which is rediscounted. Other evidences are afforded by the sharp upward movement of discounts in times of pressure and by the accommodation extended to small borrowers through the rediscount of the paper of the cooperative societies. There is usually an increase in the volume of discounts at the Imperial Bank with the approach of the autumn, but this increase was much more notable during the pressure of 1907 than in ordinary years. In 1905, when conditions were comparatively normal, the amount of discounted paper in the portfolio of the bank increased from 845,267,000 marks (\$200,750,000) on August 23 to 1,109,485,000 marks (\$263,500,000) on October 31. In 1907 the increase for the corresponding weeks was from 1,034,439,000 marks (\$245,679,000) to 1,322,833,000 marks (\$314,200,000). The average of discounts in the portfolio of the bank, which was 908,816,000 marks for 1905, was 1,104,537,000 marks for 1907.

It is through the cooperative societies which have grown up under the laws of 1889 and 1896 that the small tradesman is able in an indirect way to obtain credit from the Imperial Bank. The bank now accepts for rediscount many small bills bearing the guaranty of a cooperative society. The average face value of domestic bills discounted was, in 1876, 1,480 marks (\$352) and in 1906 1,689 marks (\$402).

24 NJ MONO. SEC.

3. THE PURCHASE OF GOLD.

This has become an important auxiliary method of protecting national credit where the raising of the discount rate is not required by business conditions.

The occasions when it is wiser to purchase gold than to raise the discount rate are those which cause a temporary and local demand for currency or credit, without indicating the need for imposing a burden on general trade. The Bank of France has been the most conspicuous example of the policy of purchasing gold at its own expense rather than raising its rate of discount to merchants. As early as the three years 1855-58, the Bank of France expended 15,893,000 francs (\$3,068,000) in premiums on the purchase of gold bullion to the amount of 1,384,553,000 francs (\$267,000,000).^a In later years the same policy has been

^a Patron: The Bank of France in its Relation to National and International Credit, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 494, p. 124.

from time to time pursued, with the essential purpose of imposing upon the profits of the bank the charges for incidental needs for gold, instead of imposing them upon the business community by an advance in the rate of discount. The French method, however, is not so efficient in a serious crisis as raising the rate of discount, because it does not operate upon the entire commercial structure in a manner to restrict loans and speculation and to attract capital from abroad.

The practice of purchasing gold has gained increasing recognition at the central banks in recent years as an auxiliary to raising the rate of discount. In England the bank is the chief purchaser of the gold which comes into the open market. Practically all the gold which arrives from South Africa goes into the bank when it is not bid for more resolutely by some other country. The Bank of England is bound by law to pay 77s. 9d. per ounce for gold presented in proper condition. The amount paid at the mint is 77s. 10½d., but there are advantages to the private owner of bullion in taking the metal to the bank rather than to the mint. When the Bank of England is hard pressed for gold it raises to the amount of the mint price or above it the rate which it offers. The bank does not always, however, pay the open market rate, because this rate may be artificially advanced by the determination of some other government, like that of Russia or Austria-Hungary, to obtain the metal, even at a premium.

Several facts, which are the outgrowth of the strong commercial position of Great Britain, but are in a sense influences independent of that position, contribute to make London the international market for gold. No obstacle is thrown in the way of obtaining gold at the Bank of England and exporting it, except the change in the rate of discount. This fact—that gold can at all times be had and that England was for many years the only

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In other markets, where it has been thought proper to charge a defensive premium for the yellow metal or to discourage its exportation, international bills drawn on these other markets have not had the same definite gold value as those drawn on London. As was stated by Mr. Fischel in the German inquiry, "while in the case of sterling exchange only a small margin has to be allowed for loss, the loss in transactions in German exchange in foreign countries is always treated as an unknown quantity."^a

^a German Bank Inquiry of 1908, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 407, Pt. I, p. 475. Mr. Fischel added that he considered it "extremely injurious that a doubt should arise at any time as to whether gold can be exported from Germany," and that he wished "that there might be no further occasion even for the mild reproach that we are not glad to do it."

Another factor contributing to keep at London the international market for gold is the fact that in England there is no seigniorage charged upon coinage. If a bar of gold is taken to the British mint, its full value comes back in coined sovereigns, weight for weight, without any deduction whatever. The cost of coinage is assumed by the Government. The same is true at the mints of the United States. In France and Germany, on the other hand, a deduction is made for the cost of coinage. France has accumulated so large a stock of the yellow metal that it is not necessary to abolish the coinage charge in order to attract gold, but the range of fluctuation in foreign exchange is wider than if such a charge did not exist and Paris is thereby barred from becoming a free market for gold in the same sense as London.

25 NJ MONO. SEC.

In Germany a pound of gold brought to the mint is charged the sum of 3 marks (71.4 cents) by way of seigniorage. The Imperial Bank pays back to the depositor of a pound of gold, worth 1,395 marks (\$332), the sum of 1,392 marks. This subject was seriously discussed in the German bank inquiry of 1908, and it was strongly urged^a by Mr. Fischel that the seigniorage charge should be abolished and that the price paid for gold at the Imperial Bank should be fixed at 2,790 marks per kilogram of the pure metal, or 1,395 marks per pound.^a If such a price

^a German Bank Inquiry of 1908, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 407, Pt. I, p. 455.

were paid permanently, it was contended, gold would more frequently come to Germany in the course of the year and the cost to the bank would be less than some other devices resorted to for obtaining gold. A different method of attaining the same result was proposed by Doctor Lexis—that the Imperial Bank should be permitted to count its bullion and foreign gold coins at 1,395 marks to the pound and to pay for such gold any price which market conditions might suggest, between 1,392 and 1,395 marks. It would be unnecessary in most cases to convert such gold into German coin and it could be furnished for export at the coinage parity of 1,395 marks.^b It was suggested by

^b *Ibid.*, p. 324.

Doctor Wagner that the bank, in its own discretion, might even pay higher than 1,395 marks. Upon the question of its responsibility in the matter, he made these declarations:^c

^c *Ibid.*, p. 412.

“The fact is that the Reichsbank has once for all the function of regulating the currency and is more directly concerned with the operations relating to the gold supply than is the administration of the mint, and it is therefore more expedient that it be charged with the business in question. Of course, it must be ready to thrust a certain pecuniary interest of its own into the background. From what I can gather, the Reichsbank has itself held this view of the matter. The sums in question are indeed not so large as to play any rôle by the side of the regular profits of the Reichsbank.”

Even without the direct authority to alter the price paid for bullion, the Imperial Bank of Germany purchased from 1876 to 1907 no less than \$821,700,000 in gold bars and foreign coin.^a It was declared by Doctor Reisser, in

^a Renewal of Reichsbank charter, National Boundary Commission, 1910, 61st Cong., 1st sess., S. Doc. No. 507, p. 42. The gold purchases in 1908 were 298,879,768 marks; in 1909, 155,241,355 marks; and in 1910, 164,619,385 marks.

the commission on the renewal of the charter in 1908, that “the amount could undoubtedly have been greatly increased if the directors could have made up their minds not to stick at the price.”^b A measure having the effect

^b German Bank Inquiry of 1908, Nat. Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 407, pt. 1, p. 144.

of increasing indirectly the amount received for gold by the holder, which was discussed in 1908, was put in operation by the Imperial Bank at intervals from 1879 to 1881, but proved only moderately effective. This was the grant of advances free of interest on deliveries of gold to the bank—in normal cases for five days and under special

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of increasing indirectly the amount received for gold by the holder, which was discussed in 1908, was put in operation by the Imperial Bank at intervals from 1879 to 1881, but proved only moderately effective. This was the grant of advances free of interest on deliveries of gold to the bank—in normal cases for five days and under special circumstances for eight days. Several branches of the bank were even permitted to pay a higher price than the rate fixed in the bank act (1,392 marks per German pound), 1,393 marks for amounts of at least 500,000 marks, and 1,393½ marks for amounts of at least 2,000,000 marks.^c

^c The Reichsbank, 1876-1900, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 408, pp. 236-237.

This policy was abandoned after 1881, but was resumed in 1908, with allowances of interest for as long a period as six weeks. It was contended that to its operation was due in a measure the importation of \$56,170,000 in gold during the first nine months of 1908, as compared with \$9,400,000 for the whole of the year 1907 and \$54,000,000 for 1906.^d

^d Renewal of Reichsbank charter, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 507, p. 34.

At the National Bank of Belgium the obligation is recognized to maintain the national stock of coin, even at heavy cost to the bank. In 1906 gold was imported by the bank to the amount of 81,500,000 francs and in 1907 98,500,000 francs (\$19,000,000). The question has often been raised in Belgium whether it would not be sounder policy for the bank to retire its small notes and advance its rate of discount, but it has been argued in favor of the policy pursued that the cost of importing coin was a bagatelle to the amount of the tax which would have been imposed upon Belgian industry if the average discount rate, which in 1906 was 3.84 per cent, had been maintained at 5 per cent or some other rate high enough to turn the course of the exchanges. In other words, the development of national industry and not the mere earning of dividends was recognized as the practical as well as the abstract duty of the bank.^e

^e Charles A. Conant: The National Bank of Belgium, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 400, pp. 191-92.

4. BORROWING FROM THE MARKET.

"Borrowing from the market" is a means of withdrawing surplus funds from the open market which is practiced by the Bank of England for making effective the rate of discount when the official rate fixed by the bank fails to influence sufficiently the market rate. The growth of the joint-stock banks of London and the great increase in the volume of banking transactions carried on there, coupled with the restraints put by the act of 1844 upon the lending capacity of the Bank of England through its power of issue, have impaired somewhat the ability of the bank to influence the market by the simple device of raising the official discount rate. This failure of a change in the official rate to control the market is a comparatively recent development. In Bagehot's time, a generation ago, any change made by the Bank of England would at once affect the open-market rate. The other banks have created such a mass of credit, however, that they do not always feel compelled to follow the central bank. Much of this credit is derived from the deposit of foreign money in London joint-stock banks and from the exchange operations of important foreign banks having branches in London.

With this money at command the bill brokers by their discounts counteract unconsciously the effects of changes in the official bank rate. An individual banker or bill broker who wants to add to his holdings of bills or to renew his maturities naturally discounts good paper at the best rate he can get. He can not be expected to stop and wonder whether his purchase below the bank rate will have an adverse effect on the foreign exchanges. The obligations of the Bank of England, however, are of a different character. It feels under the necessity of regulating the price of money in London in order to maintain its banking reserve and protect the national stock of gold. As the matter is put by one of the authorities consulted by the Monetary Commission:^a

^a Hartley Withers: The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 22.

"This necessity for regulation is a fact which is only dimly grasped by the London money market as a whole, which frequently resents the operations of the Bank of England and contends that the price of money ought to be left to the natural laws of supply and demand. The position of the London money market, however, as the only one in which gold can at all times be obtained, to any extent and without question, clearly makes some regulation of the rates at which it is prepared to work inevitable. None of the various items which compose the market can be expected to conduct their business with a view to the necessities of the market as a whole. * * * Consequently the exigencies of their daily business, and the strong competition between them, impel the banks and discount houses to do business at rates which may sometimes be dangerous to the general interest, and it is thus clearly necessary that some institution with a commanding position at the head of the machine should occasionally intervene and regulate its operations."

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* * * Consequently the exigencies of their daily business, and the strong competition between them, impel the banks and discount houses to do business at rates which may sometimes be dangerous to the general interest, and it is thus clearly necessary that some institution with a commanding position at the head of the machine should occasionally intervene and regulate its operations."

The action taken by the Bank of England under such circumstances is to get rid of the pressure of surplus money by the simple expedient of itself borrowing the surplus. This is accomplished by selling consols for "money," and buying them back for the "account." The "account" price, at which they are bought back, is of course higher than the "money" price, at which they are sold (because it includes a larger proportion of the accruing dividend), and the difference between the two prices represents the interest paid for the loan.

The effect of this policy is to reduce the surplus of capital in the market. The buyers of consols for money give checks on their bankers in payment, which tend to create balances against these banks in the settlements through the clearing house. Their balances at the Bank of England are, therefore, reduced, and they are compelled to rectify their position by refusing further accommodation to the bill brokers. At the Bank of England the holding of securities is reduced by the sales for money; the amount borrowed cancels a part of the bank's deposit

27 NJ MONO. SEC.

liabilities to the joint-stock banks whose balances are reduced, and thus the basis of credit is narrowed, money becomes dearer, the open-market rate of discount is brought into closer relation with the official rate, the foreign exchanges are influenced, and the probability is increased that gold will come to London or will not be taken for export.

This system is characterized by a recent English writer as "clumsy and artificial," and as "having been brought into existence by the great development of the activities of the other banks, which have manufactured credit so successfully that part of the output has sometimes to be absorbed by the Bank of England, which does not want it but has to prevent the evil consequences that might result from its overabundance."^a

^a Withers: *The Meaning of Money*, p. 230.

The reason for the failure of the Bank of England to control the market is the absence of the powers in respect to note issue which belong to the Bank of France and to the Imperial Bank of Germany, and also the comparative absence of the policy of rediscount, which would tend to make the joint-stock banks more dependent upon the central bank. The difficulty arises, however, in times of abundant money rather than in times of peril. At a time of stress there is usually an exhaustion of the supply of credit outside the Bank of England, so that the open-market rate responds quickly to an advance in the bank rate. Under such circumstances the other banks, wishing to strengthen their position, call in a large portion of their loans to the market. The situation is thus forced into the hands of the Bank of England, which is enabled to raise rates to such a height as it thinks necessary to prevent the further export of gold from the country and to attract fresh supplies.

5. HOLDING AND DEALING IN FOREIGN BILLS.

Dealing in gold bills drawn on London or other financial centers has been one of the methods which have acquired considerable development in recent years at European banks as a means of protecting of their gold stock and at the same time avoiding undue pressure in the market. If a central bank can buy bills on favorable terms when they are freely offered and can, on the other hand, offer them for sale when the demand is heavy for exchange, it can do much to restrict the shipment of gold and to minimize the effect which such shipments produce. The policy is not a new one in theory or in practice, but has been adopted on a large scale only recently at the Imperial Bank of Germany and the Austro-Hungarian Bank. The largest use of the system prior to the present generation was made by the National Bank of Belgium, both under the special pressure of the Franco-Prussian war and in the ordinary management of its reserve.

The fact that Belgium was neutral territory during the war of 1870 led to the transfer of both French and German business operations to the markets of Brussels and Antwerp and to the imposition of a heavy strain upon the limited resources of the Belgian Bank. There was for a time a run upon the bank for the redemption of its notes. This required gold, which was obtained by the sale of the bills drawn on foreign centers.

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This policy of carrying foreign bills in its reserves was not discouraged at the Bank of Belgium by the experiences of 1870. Almost from the beginning the bank was allowed by the Government to count such bills as the equivalent of coin, without any specific provision to this effect in its statutes, and as the bills drew interest they afforded a more profitable form of reserve than idle metal. Constituting, according to Prof. Denis, from 1872 to 1876, only about 6 per cent of the total discounts of the bank, they grew for the period from 1893 to 1897 to 25 per cent of discounts and to a much larger proportion of the metallic reserve.^a In the discussion of the policy of

^a Charles A. Conant: The National Bank of Belgium, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 400, p. 79.

the bank on the subject, which took place on the renewal of the charter in 1900, it was declared that the drafts carried were of the first order and were protected by the indorsement of the most important banking houses of Paris, London, Berlin, Amsterdam, Hamburg, Cologne, Frankfort, and Vienna. At no time had the bank suffered the slightest loss upon these securities. The average rate of operations in foreign bills during the year 1897 was 2.53 per cent, with an average maturity of 47 days; in 1906, 2.51 per cent, with an average maturity of 48 days.^b

^b *Ibid.*, p. 84.

It was explained on behalf of the Government that the paper discounted came from third parties, through banking firms which gave it their indorsement. These institutions bound themselves, moreover, to rediscount such paper at any time at a rate which should not be higher than the official rate of the central bank of the country from which the paper emanated and should protect the National Bank, according to its instructions, either in bills of exchange at market quotations or in gold coin or bullion. It is declared by an English economist that the bank has been enabled to carry on its operations with a comparatively small bullion reserve through its skill in discounting, and through the power of regulating the foreign exchanges which it possesses by means of the quantity of foreign paper which it holds. "The moderate rates of discount charged and the comparatively small range of fluctuation," he declares, "show how carefully, especially of late years, the Bank of Belgium has maintained this power."^a

^a Palgrave; *Bank Rate and the Money Market*, pp. 184-185.

The holding of bills simply as investments was long practiced by European bankers, but did not expand into their general use as a resource for protecting the national gold stock until a comparatively recent date. At the Imperial Bank of Germany, the system of carrying foreign bills has attained serious proportions only during the twentieth century. It was long understood that the bank could prevent a sudden and forced rise of exchange rates by selling such bills; but as late as 1898 the amount carried amounted to but a few million marks. The commission for the purchase of long-time foreign bills was then reduced from one-tenth of 1 per cent to half this amount.^b After this change, business of this sort in-

^b *Renewal of Reichsbank Charter*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 507, p. 35.

creased rapidly. The maturity of the bills, which in 1895 did not exceed 17 days, gradually rose until in 1907 they ran 60 days. Summing up the progress made and the reasons for the change of policy, the "Frankfurter Zeitung" declared:^c

^c *Ibid.*, p. 36.

"Of all bills bought by the Imperial Bank in 1907, 4 per cent were foreign bills, while the Austro-Hungarian Bank's proportion of foreign bills amounted to 8.3 per cent, that of the Bank of The Netherlands to 12 per cent, that of the National Bank of Belgium (which treats them like its metal reserve as cover for outstanding circulation) to 23.9 per cent. The restraint of the Reichsbank can not be ascribed to any reluctance on its part to make material sacrifices. The explanation is to be sought rather in the fact that for years the management held the opinion regarding gold imports and foreign exchange that it would be better not to interfere with the international movement of money because attempts at artificial improvement were apt to be succeeded by vehement counter movements. Under the present management the Reichsbank has come to share our conviction that, when the balance of payments is favorable, it is wiser not to look on idly until the natural movements of foreign exchange

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The sale of foreign bills was much discussed by the members of the special commission which considered the renewal of the bank charter of 1908, and was strongly commended by members of the governing board of the Imperial Bank and by leading private bankers. It was pointed out by Mr. Fischel, of Mendelssohn & Co., that the sale of foreign bills was likely to have a much greater effect when made by the Imperial Bank than when made from the supply of foreign bills possessed by private bankers or by private banks, because, through the distribution of the bills by the Imperial Bank, money flowed out of general business and out of the open market into the bank. A contraction of the general note circulation resulted, which had the same effect as the raising of the rate of discount and which so far tended to lower the rate of foreign exchange. In the transactions of the private banks, Mr. Fischel declared, money merely changes hands, but through the lowering of the rate of exchange the exportation of gold could at times be diminished, retarded, and perhaps even prevented. Another benefit of the system Mr. Fischel found in the fact that the appearance of the Imperial Bank in the market as a purchaser of bills tended to set a limit to the downward movement of the rate of exchange.^a

^a German Bank Inquiry of 1908, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 407, Pt. 1, pp. 482-483.

29 NJ MONO. SEC.

The importance of intrusting dealings in foreign bills to the bank of issue was maintained also by the chief officers of the Austro-Hungarian Bank and was made the basis of an important change in the policy of the bank in 1901. After measures had been initiated in 1892 for the resumption of gold payments it gradually became apparent that some influence must be exerted over the foreign exchanges in order to complete and maintain the reform. The specie paid into the government treasuries had been previously deposited with private bankers, who allowed a low rate of interest and who contracted to furnish the sums needed for foreign payments by the Government in the kinds of coin required up to the amount of the credit balances. This led periodically to excessive advances in the rate of gold exchange. It was charged that these rises were brought about artificially and that the government funds were used in international speculations.^a In the summer

^a Zuckerkandl: The Austro-Hungarian Bank, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 586, p. 111.

of 1901 Count von Bilinski, the governor of the bank, after much previous negotiation, arranged a meeting on August 8 at his home at Ischl with the finance ministers of the two Governments of Austria and Hungary. It was agreed that the deposits of public money should be transferred to the Austro-Hungarian Bank and that the latter should not only furnish the exchange for Government obligations abroad, but should provide it also for private parties. The task assumed was a heavy one, but has been resolutely pursued with a high degree of success for ten years.

The fundamental policy of the Austrian Bank has been to substitute dealings in exchange for movements of gold. The redemption of the notes of the bank in gold has not been made obligatory by law, but gold is furnished in many cases where required for special purposes. Among the steps taken at the beginning was the issue of gold customs drafts in exchange for foreign and domestic gold coin. This measure had the advantage not merely of economizing the physical handling of gold, but of transferring disputes as to the value of foreign coins from the customs office to the bank. The bank was formally authorized to adopt the policy of carrying gold bills payable within three months as a part of its metallic reserve. They could not be held for this purpose to a greater amount than 60,000,000 crowns (\$12,000,000), but there was no limitation upon the amount which might be held as assets against the uncovered note issues.^b

^b Mises: The Foreign Exchange Policy of the Austro-Hungarian Bank, Economic Journal, June, 1909, XLIX, p. 293.

By maintaining large deposits and credits abroad the bank was able to sell bills at such rates that exchange never rose higher than would have been the case with a gold circulation. When exchange was placed wholly within the control of the bank after the negotiations of 1901, bills were steadily offered to meet the usual foreign demands, and were thereby substituted for the shipment of gold. If the demand proved greater than the bank was able to meet from bills on hand or from its foreign credits, it shipped gold on its own account to cover further sales of

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The success of the policy of the bank has thus far been striking. As its physical gold has not been impaired, and as it has gathered up surplus bills which have come upon the market, to be used later when there was a demand for them, there has been less fluctuation in the discount rate at the Austro-Hungarian Bank than at any other of the important central banks of Europe, except at the Bank of France. In the critical November days of 1907, when the London rate of discount was 7 per cent and the Berlin rate $7\frac{1}{2}$ per cent, the rate of the Austro-Hungarian Bank did not exceed 6 per cent, and the average for the year was only 4.9 per cent. This rate has never fallen below $3\frac{1}{2}$ per cent, because that would be contrary to the ratio of demand and supply for free capital in Austria. From 1892 to 1907, both inclusive, however, while the English bank rate was changed 74 times and the German rate 57 times, that of the Austro-Hungarian Bank was changed only 21 times. The private bank rate in Vienna, moreover, during the last quarter of 1907 was 5.28 per cent, while that of London stood at 6.54 per cent and that of Berlin at 6.62 per cent. The character and results of its policy are thus summed up by an eminent economist: ^a

^a Zuckerkandl: The Austro-Hungarian Bank, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 586, p. 110.

30 NJ MONO. SEC.

"It is universally admitted that the bank has developed its foreign exchange and foreign coin business along model lines with the achievement of the complete control of the market, and it has done this, not for the sake of profit, but solely in the interest of the public. The maintenance of a rate of exchange as close as possible to parity is rightly considered as a matter to be dealt with by the national administration and as a function appertaining to the central bank of issue, which is not supposed to act in this capacity as an institution organized for profit, but as an organ of the Government instituted for the purpose in question, and which, it is presumed, will be ready to incur losses should circumstances demand it."

The experience of the Austro-Hungarian Bank in using foreign bills to maintain the parity of exchange, with similar experiences in Russia in establishing the gold standard, and with the experience of Mexico and the Philippine Islands in maintaining the gold exchange standard, may be said to have added a new chapter to banking methods. There have been cases of failure to control exchange in this manner, notably in Spain in 1903, but these failures seem to have resulted from incomplete understanding of the principle or from the inadequacy of the resources employed. With the thorough discussion which the subject has recently received in Germany and its success there, so far as applied, in relieving commerce from the burden of too frequent changes in the discount rate, there seems little doubt that in the accumulation of a portfolio of foreign bills and the skilful use of them for protecting the home market and the national gold stock, the central banks have found a new weapon of high precision and long range in defending their stocks of gold.

CHAPTER IV.—SYSTEMS OF NOTE ISSUE.

While the chief European banks of issue have much in common in the principles governing their policy, there are differences in their organic structure which modify in some respects the methods by which these principles are enforced. These differences, apart from those of form of organization and administration, are the product chiefly of differences in the regulations governing the issue of notes, and it is desirable to a clear understanding of the measures which these banks take under varying conditions of the money market to understand the fundamental elements of their system of note issue. To this end an outline will be given of the three systems of note issue in operation at the Bank of England, the Bank of France, and the Imperial Bank of Germany, with brief references to the systems prevailing at other important banks. This subject will be discussed under the following subdivisions:

1. System of the Bank of England.
2. System of the Bank of France.
3. System of the Bank of Germany.
4. Systems of note issue in other countries.

1. THE SYSTEM OF THE BANK OF ENGLAND.

The system of note issue of the Bank of England is governed by the act of July 19, 1844 (7 and 8 Victoria, cap. 32) generally referred to as "the bank act," and sometimes as "Peel's Act," because it was introduced and supported in Parliament by Sir Robert Peel, then prime minister. The system of circulation established by this

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The panic of 1836 was marked by the failure of a number of important commercial banks and such demands upon the Bank of England that its specie reserves were nearly exhausted. The result of these experiences was a demand for a radical revision of the charter of the Bank of England, especially with reference to its privilege of issuing notes. To meet this demand was framed the act of 1844, whose declared purpose was "to cause our mixed circulation of coin and bank notes to expand and contract, as it would have expanded and contracted under similar circumstances had it consisted exclusively of coin."

The bank was accordingly given authority to issue notes upon securities to the amount of £14,000,000—of which £11,000,000 was to be based upon the old loan of that amount by the bank to the Government and £3,000,000 upon exchequer bills or other securities, over which the bank was to have entire control. The adoption of this limit was based upon the theory, proved by experience, that the demand for notes by the public for the ordinary purposes of carrying on exchanges would never fall below this amount; but out of abundant caution the bank was given power to diminish the £3,000,000 in miscellaneous securities for the purpose of finding the means for redeeming the notes.^a The bank might issue notes to any amount

^a Sir Robert Palgrave, *The English Banking System*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 166.

in excess of £14,000,000, but only under the restriction that they must be covered for their full value by coin or bullion. These additional notes, therefore, constituted substantially only gold certificates and their issue afforded no increase in what is called elasticity, like the issue of

31 NJ MONO. SEC.

notes against a limited percentage of reserve. The circulation of the Bank of England outside the bank has ranged at times nearly as high as £30,000,000, but that portion not represented by securities has been fully covered by gold.

To offset the contraction in the gross circulation of the country which might be caused by the gradual disappearance of the country bank notes, it was provided that the limit of authorized issues of the Bank of England might be increased from time to time by two-thirds of the amount of country bank notes retired. The theory of this provision was that the issues retired had been protected by one-third of their amount in gold, so that the net curtailment in the supply of currency caused by their withdrawal would be offset by the two-thirds in new issues allowed to the Bank of England. The right to make the new issues did not, however, fall to the bank automatically, but required an order from the Crown in Council. Such increases were authorized by the Government from time to time as country notes were retired, until they amounted in the aggregate to £4,450,000 and raised the authorized circulation of the bank to £18,450,000.^a

^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 13.

In order to make clear the character of the system of note issue established by the act of 1844, and to insure its operation without evasion or modification, the accounts of the Bank of England were separated into two distinct departments. These departments are called the "issue department" and the "banking department." The issue department, although under the direction of the bank, might just as well be an office of the treasury, so far as any discretion lies with the officers of the bank in regard to its administration, except in the matter of changing the securities above £11,000,000. In this department are kept all the securities held against notes and the gold coin and bullion deposited for additional notes. On the liability side of the account stands just one item—"notes issued." On the credit side stands the Government debt held, other securities, and gold coin and bullion. These credit items always exactly equal the amount of notes issued.

Entirely distinct from the issue department is the banking department, with its own separate balance sheet. In the statement of this department appear on the debit side the capital, "rest" (or surplus), and deposits. On the credit side appear only four items—Government securities, other securities, notes, gold and silver coin. The item "other securities" includes not only such stocks and bonds as the bank may own, but all the commercial bills and other collateral deposited to secure loans, discounts, and advances made in the course of its ordinary banking business. The bank makes weekly reports, showing its condition under these broad classifications, but does not subdivide its deposits or its loans in such a way as to indicate whether in the one case they are time deposits or current accounts or in the other case whether they are commercial paper, advances

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The separation between the issue department and the banking department accomplishes the purpose intended, of preventing absolutely any interference on behalf of the banking department with the assets of the issue department. It is the banking department which purchases gold from the public and determines the price to be paid for it. If the price is above the mint price, the difference is a loss to the banking department. Such gold is turned over at once to the issue department and notes are issued against it at the mint price of the metal. These notes appear in the weekly statement of the bank as assets of the banking department. It is the relation between the deposits and the reserve of notes in the hands of the banking department which commands attention as the "bank return" is made public from week to week. If the bank lends these notes to a large amount, thereby increasing its holdings of other securities and its deposits, the result is a fall in the ratio of the banking reserve.

The essential feature of this system of note issue is that the reserve of notes in the banking department may be greatly depleted or it may greatly increase without affecting the solvency of the issue department. In the issue department, if the quantity of notes issued is increased, the quantity of gold coin and bullion is increased by exactly the same amounts. Of the total note issue, however, the amount in the hands of the public is not usually much more than half. The remaining notes are in the reserve of the banking department and constitute its visible means of meeting demands for credit.

This segregation of the issue department from the banking department was one of the distinctive merits claimed for the act of 1844. The result of nearly seventy years' experience has been, however, that while the soundness of the bank note has been beyond question, the bank has many times been reduced to great distress through the reduction almost to the vanishing point of the notes in

32 NJ MONO. SEC.

the banking department. This reserve of lending power was seriously depleted in the panics of 1847, 1857, and 1866, and the knowledge of this fact added greatly to the intensity of those panics. They were checked in each case by the declaration of the Government, in a formal letter, that if the bank should arbitrarily increase its lending power in violation of law by issuing notes which were not covered by gold the Government would bring into Parliament an act of indemnity, relieving the bank from the penalties of violating the law. As such penalties were not specifically set forth, however, the Government did not think it necessary after the panic was over to bring in the proposed act.

It is not necessary here to pass upon the question, which has been discussed in England and elsewhere, whether the act of 1844 has been a serious detriment to English finance by the limitations which it has imposed upon the power of note issue. Subsequent crises, like that of 1890, were met without suspension of the bank act. The influence of that act was felt in the restrictions which it imposed upon the power of the bank, but the difficulty was overcome by the borrowing of gold from the Bank of France, which thus increased the potential power of note issue and the lending power of the Bank of England. In these later crises the bank acted more resolutely than in the earlier ones upon the rule now generally recognized as the proper one for checking panics, that "he gives twice who gives quickly." Whatever may have been the merits or defects of the act of 1844, therefore, they have ceased to influence directly and acutely periods of stress in England, but they have had an indirect influence, which has been important, in shaping the evolution of the credit mechanism in Great Britain. The restriction upon the power to issue notes has led to the development of the use of checks and the clearing system to a greater extent than in any other country except the United States. As conditions under the English system are summed up by an English banking expert in his monograph for the Monetary Commission,^a

^a Palgrave, *The English Banking System*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 261.

"Bank notes are now no longer in England the means by which the ordinary business of the country is carried on. They are valued as the representatives of gold, and London being the principal and practically the only free market for gold in Europe, is naturally more exposed to demands for specie than any other monetary center in the world. It is true that for more than forty years 'the Government has not had occasion to sanction any suspension of the Peel Act,' but the price which has had to be paid for this has been an extremely high one, and the adoption of the arrangements of the act of 1844 can not be recommended to any other country."

SYSTEM OF THE BANK OF FRANCE.

From such restrictions upon the right to issue circulating notes as exist in England the continental banks are practically free. This is especially the case in France, where there has been an almost uninterrupted increase in the use of bank notes for more than sixty years. There is a legal limitation upon the amount of notes which may be issued by the Bank of France, but it is a limit which is

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The revolution of 1848, following close upon the heels of the panic of 1847, caused a suspension of specie payments, both by the Bank of France and the departmental banks. Decrees were issued giving forced legal-tender character to the notes of the Bank of France throughout the Republic. These decrees were followed almost immediately (April 27 and May 2, 1848) by others providing for the fusion of the departmental banks with the Bank of France and the substitution of the notes of the latter for all other notes in circulation. A limit of total circulation was first imposed upon the Bank of France by the decree permitting the suspension of specie payments. The maximum was then fixed at 350,000,000 francs, which was increased soon after the absorption of the departmental banks to 525,000,000 francs (\$101,325,000).

The restoration of specie payments in 1850 was accompanied by the removal of any arbitrary limitation upon the note issues of the bank. When specie suspension again became advisable, in the opinion of the Government, at the outbreak of the war with Germany in 1870,

33 NJ MONO. SEC.

an arbitrary maximum was again fixed for the circulation of the Bank of France. This limit was at first 1,800,000,000 francs, but was increased from time to time until it was fixed on July 15, 1872, during the operations required to adjust the war indemnity, to 3,200,000,000 francs. Subsequent increases have been made in the maximum until it was fixed by a law of February 9, 1906, at 5,800,000,000 francs (\$1,119,400,000). In all cases an advance in the amount has been made promptly when it appeared that the bank would be in any way hampered by the restriction. The fact that there is a statutory limit is a survival of the precautions taken at the time of the suspensions of specie payment, when the reasons for such a restriction rested upon different grounds from those which exist when notes are redeemable in coin on demand.

In one important respect the privilege of the Bank of France has been restricted—in the minimum denomination of the notes which it issues. Even this restriction since 1873 has been due to its own volition, but would perhaps have been enforced by the Government if the bank had shown a spirit in the matter lacking in conservatism. The lowest denomination of note now issued is for 50 francs (\$9.65). This leaves the channels of circulation below that point to be filled by coin, and has made France nearly as rich in gold in general circulation as in the great reserve in the vaults of the bank.

In the early history of the bank the denomination of its notes was limited to 1,000 francs (\$193) and 500 francs (\$96.50). Obviously, the purpose which they served was for settlements of some magnitude between merchants and bankers at a time when the check and deposit systems were almost unknown. At the country branches a minimum denomination was soon allowed of 250 francs (\$48.25), but it was not until 1847 that this reduction was extended to the main office at Paris, with a further reduction to 200 francs. At about the same time notes were issued for the accommodation of banks of the denomination of 5,000 francs (\$965). At the renewal of the charter of the bank in 1857 the minimum denomination was reduced to 50 francs for the first time, in spite of some misgivings lest this "democratization" of the bank note should tempt counterfeiters and drive out coin.^a

^a Noel, *Banques d'Émission en Europe*, p. 166.

Thus matters stood at the time of the suspension of specie payments in 1870. No change was made in the denominations of the notes at the time of specie suspension, but the disappearance of coin because of the slight premium on gold and silver led to the grant of authority to the bank in the latter part of 1871, to issue notes for 25, 20, 10, and 5 francs. The smallest of these denominations, however, had been in circulation less than two years when the bank, on November 7, 1873, began the payment of silver 5-franc pieces for 5-franc notes. Gold pieces of 5 and 10 francs soon followed the coins into the channels of circulation, and in November, 1874, the standard napo-

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^a Arnauné, *La Monnaie, le Crédit et le Change*, third edition, 1906, p. 431.

When it is taken into consideration that neither the charter of the Bank of France nor any provision of law imposes any requirement of a minimum metallic reserve, the almost absolute freedom of the Bank of France in the matter of the amount of its note issue is brought into higher relief. It may be stated, however, without going in detail into the magnitude of reserves, that the Bank of France has for many years carried a metallic reserve much larger than is required in any country except where the notes are covered in full, and which has stood for a generation almost uniformly above 50 per cent and sometimes at 75 per cent or higher.

Possessed of these unrestricted powers in the matter of note issue, the Bank of France is not hampered in extending to commerce any amount of accommodation which circumstances may seem to require. It is restricted neither by the amount of capital intrusted to its custody by others, like the ordinary bank of deposit, nor by the obligation of keeping any fixed percentage of gold to protect increased liabilities, nor by any other restrictions upon its freedom of issue except that its notes must be covered by short-term commercial paper so far as they are not covered by cash, and that the total issue must be kept within a certain maximum, which thus far has always been promptly raised when there has been need for it.

3. SYSTEM OF THE BANK OF GERMANY.

In distinguishing between different systems of note issue, the German system, which dates only from the year 1875, occupies a sort of middle ground between the extreme restrictions of the English system and the substantial freedom of the French system. When the circulation of the German Empire was unified by the law of March 14, 1875, the system of the Bank of England was followed to the extent that an authorized limit of circulation was adopted, which was fixed at 250,000,000 marks (\$59,375,000). The English system was followed in principle also in another provision—that when any existing bank of circulation should surrender or lose its note-issuing privilege, the amount should be added to the authorized circulation of the Imperial Bank. These lapses of provincial circulation amounted, before the revision of the charter in 1889 took effect in 1891, to 43,400,000 marks (\$10,310,000), raising the total limit of the Imperial Bank to 293,400,000 marks. The authorized circulation was fixed by the renewal of the charter in 1899 at 450,000,000 marks (\$107,000,000), which was increased by lapsed issues before the renewal of 1909 to 470,000,000 marks. The limit of authorized issues was advanced by the law of 1909 to 550,000,000 marks (\$130,650,000), to take effect on January 1, 1911, with a special provision for quarter-ends to be presently referred to.^a Only four

^a Compare German Imperial Banking Laws, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 574, pp. 71, 129.

other banks retained at this time their power of note issue, amounting in the aggregate to 68,771,000 marks. Against its authorized circulation, the Imperial Bank is required to hold a reserve of one-third in coin or legal German money.

In one important particular the German system departs from the English system. It follows the English system in providing for the issue of notes without restriction upon the deposit of gold to the full amount of the notes issued. Under this provision the circulation is always much above the limit of the so-called authorized circulation, the excess being fully covered by the large gold holdings of the bank. The novel feature of the German law, in which it departs from the English system, is the provision that additional circulation may be issued, without increasing the gold reserve, subject to a tax at the rate of 5 per cent per year. Periodical reports of the condition of the bank are required by the Government and to the amount that the circulation exceeds the authorized limit and the excess of free gold a tax is imposed of five forty-eighths of 1 per cent per week. This figure is obtained by dividing the year, for the purpose of the tax, into 48 equal parts, or 4 per month, instead of following the irregularities of the calendar. Under this provision additional notes have been issued from time to time in large amounts, but have

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A new provision was introduced in the revision of the charter in 1909, by which the authorized circulation of the bank might rise for the last week of each quarter of the calendar year to 750,000,000 marks (\$178,250,000). This provision was due to the facts that transactions in Germany are still carried on largely by means of bank notes rather than by the use of checks and similar instruments of credit, and that settlements with retail tradesmen and others are usually made at the end of each quarter. The demand for currency at such times is, therefore, exceptional, just as in the United States at the time of the movement of the crops. Experience under the German law has indicated that the excessive demand for notes at the end of each quarter was promptly followed by the return of the notes for redemption through deposit in the various banks. The new provision was based upon the conclusion that it was unnecessary to impose upon the country the burden of importing gold or raising the discount rate to meet conditions which are essentially temporary, and that a special increase of circulation for each of these four weeks would cause no injurious impairment of the strength of the bank or any adverse influence on the exchanges.*

* Compare German Bank Inquiry of 1908, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 407, pp. 203, 215.

4. SYSTEMS OF NOTE ISSUE IN OTHER COUNTRIES.

The system of note issue of the Austro-Hungarian Bank is the same in principle as that of the Imperial Bank of Germany. There is an authorized limit of circulation which is not required to be covered in full by coin, which has remained since the reorganization of the bank in 1878 at 400,000,000 crowns (\$80,000,000), or its equivalent. Against this must be held a reserve of 40 per cent in coin and foreign gold bills. Above this amount the bank may issue notes only to the value of the coin deposited, but at the revision of the charter in 1887 the German system was adopted of permitting supplementary issues under a tax of 5 per cent.

At the National Bank of Belgium there is no limit upon the total circulation, and no limit is fixed by law upon the amount of reserve required. The law of 1850,

35 NJ MONO. SEC.

which established the bank, provided that there should be a relation established between the metallic stock and the circulation, but left to the statutes of the bank, to be determined upon by the Government, the decision what this relation should be. The proportion is fixed by Article XXXIV of the present bank statutes at one-third of the amount of notes and other obligations payable at sight, but it is provided that the cash reserve may be allowed to go below this minimum under circumstances and limits to be authorized by the minister of finance. The bank is allowed to make another important departure from the actual holding of coin by counting first-class foreign bills as the equivalent of coin.*

* Charles A. Conant, *The National Bank of Belgium*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 400, p. 74.

The State Bank of Russia adopted in 1894 the English system of separating note issues from commercial operations and fixing the "authorized circulation" at 769,342,911 roubles (\$396,000,000). Circulation beyond this sum was required to be covered by the coin reserve. This system of circulation was modified after the restoration of gold payments in 1897. By a ukase of August 29, 1897, the system of separating the issue department from commercial operations was abandoned and the accounts were fused into a general balance sheet. The system of a fixed limit of authorized circulation was, however, retained and the amount of such circulation was reduced to 600,000,000 roubles (\$309,000,000), which is required to be covered in the proportion of 50 per cent by gold. Issues in excess of this amount can be made only for gold, but the amount of gold held by the State Bank has continued so large, even during the war with Japan, that the margin of available issue in excess of the notes outstanding has never yet raised any question of the need for additional powers. In Russia, as in Austria-Hungary and in Belgium, first-class foreign bills are counted as the equivalent of gold.

In some of the other European States the status of the central bank is less strong than in the countries above named, because of the demands by the Government for advances which have exceeded the powers of the bank and hampered its capacity to meet the requirements of commerce. This was notably the case at one time in Italy, Spain, and Greece, but radical reforms were introduced into the Italian banking system after the crisis of 1893, and material improvement has taken place in recent years in the condition of the central banks of Spain and Greece.

CHAPTER V.—ELASTICITY IN THE SUPPLY OF CREDIT.

One of the most important purposes for which banks exist is to convert credit into negotiable forms and to afford a sufficient supply of such negotiable credit for carrying on the production of natural products and manufactured goods and the distribution of such products and goods. It has been the most persistent and severe criticism which has been directed for at least fifteen years against the existing banking system of the United States that it does not adequately meet these requirements. American banks, it is admitted, have performed this func-

exist is to convert credit into negotiable forms and to afford a sufficient supply of such negotiable credit for carrying on the production of natural products and manufactured goods and the distribution of such products and goods. It has been the most persistent and severe criticism which has been directed for at least fifteen years against the existing banking system of the United States that it does not adequately meet these requirements. American banks, it is admitted, have performed this function of creating negotiable credit in some degree and indeed in a very large degree. The occasions on which they are criticized for having failed to perform it have been periods of special pressure for currency and for credit accommodation. The failure to perform this function as well on such occasions as it seems to have been performed by certain foreign banks is attributed to the fact that the isolated local banks with which the country is provided, to the number of over 7,300 under the national system and nearly 15,000 under other systems, have each acted for themselves, with only limited and precarious support from other institutions. They have used their credit to the full limit authorized by law and by sound banking rules under ordinary conditions of demand for it, and have had no resource to which they could turn for meeting additional demands except institutions sometimes larger in their resources in the aggregate, but hampered by similar limitations in the power to use such resources and under no binding obligation to use them except for their own protection. Without entering here upon a further analysis of conditions in America, it is proposed to outline the method by which the central banking institutions of Europe are organized for meeting such demands for credit and to examine how far they have been able to fulfill this purpose under conditions of pressure or threatened crisis.

The gradual evolution of European banking has tended to a separation of functions, by which local banks without the power of note issue have felt relieved from the necessity of maintaining large independent reserves in currency because the function of maintaining such reserves has devolved by law or public policy upon the central bank of issue. Inevitably, relief from the necessity of maintaining large cash reserves has increased the lending power of the local banks, has thereby enabled them to offer credit on better terms and at lower rates to their native manufacturers, merchants, and exporters than could be offered under other conditions, and has even enabled them in some cases to devote a larger proportion of their assets to loans for industrial development than would be safe if the fluidity of their assets depended entirely upon their own resources in money and quickly convertible credit.

36 NJ MONO. SEC.

In examining the question whether European banks of issue have succeeded in performing this function of a reserve resource for other institutions, and how they have performed it, it is not necessary to go much beyond the experience of the three leading commercial countries—England, France, and Germany. In order to determine whether the operation of their systems has guarded against violent and unnecessary changes in the rate for the loan of capital and has averted such monetary crises as affected the United States in 1873, 1893, and 1907, it is necessary to examine the actual operation of the system of note issue and of the relationship between the central bank and the joint-stock and private banks. It is to be considered that the mechanism of the central bank of issue is relied upon in these countries, not to avert only those severe crises which recur at intervals of a number of years, but also to afford that elasticity in the supply of credit which permits the movement of the crops or the settlement of periodical obligations without those acute disturbances in rates for money, in the calling of loans, and in the consequent disastrous effect upon speculative commitments which have sometimes marked conditions in the United States, even in the absence of a severe crisis.

II. OPERATION OF THE ENGLISH SYSTEM.

The English banking system, as has been frequently pointed out, is the unique product of the adaptation of business to peculiar conditions and, in the opinion of one of the authorities quoted by the Monetary Commission, "can not be commended to any other country."^a It is,

^a Palgrave: The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 261.

nevertheless, essential to examine its operation with some care, because of the importance of London as the gold market of the world, and in order to bring into clear light the differences between the English system and the systems of France and Germany.

Elasticity in the English banking system is secured largely through other forms of credit than the issue of bank notes. There is no power in the Bank of England to extend credit by the *issue* of notes in exchange for commercial paper. It can discount such paper with such notes as it has, but under the bank act of 1844 new notes can be issued only for gold. The result of the substitution of check and deposit credit for the issue of notes has been to leave the note circulation of the Bank of England comparatively uniform throughout the year. It is declared by Sir Robert Palgrave, in the analysis of the statistics of the Bank prepared for the Monetary Commission, that it is not possible to trace any absolute rule governing the fluctuations in the amount of notes in the hands of the public. The increase in the amount of notes thus held may be influenced by the ordinary holiday season and is no doubt influenced by many other requirements, as for till money by the banks in England

It is declared by Sir Robert Palgrave, in the analysis of the statistics of the Bank prepared for the Monetary Commission, that it is not possible to trace any absolute rule governing the fluctuations in the amount of notes in the hands of the public. The increase in the amount of notes thus held may be influenced by the ordinary holiday season and is no doubt influenced by many other requirements, as for till money by the banks in England and Wales, where the notes are legal tender. There is also some increase in the demand for notes for holiday and harvest purposes, which usually reaches its maximum in August.^b

^b Vide Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 15.

A table, based upon the average of the weekly statements for the twenty years 1888-1907, shows an amount of Bank of England notes held by the public on the average for the year of £27,122,000. The lowest point is afforded by the average of the eighth week, or near the end of February, while the highest point of the averages is attained in the twenty-seventh week, or early in July. The variation is from a minimum of £25,827,000 to a maximum of £28,339,000.^a This variation of about

^a Statistics of Great Britain, Germany, and France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 578, p. 88.

£2,500,000 would fall a little short of 10 per cent of the average circulation. The percentage of variation is somewhat larger if the figures of more recent years are considered, but the periods of minimum and maximum circulation coincide only roughly with those for the period of twenty years. For the 6 years ending with the year 1900, the average circulation by months showed a maximum in September of £35,557,000 and a minimum in December of £31,575,000.^b

^b Palgrave: Bank Rate and the Money Market, p. 71.

The elastic element in the accounts of the Bank of England depends not upon the amount of notes which the bank has issued but the amount which it has on hand in its banking department. When gold comes to the bank on deposit, notes are issued to the banking department by the issue department for the amount of such gold and are held by the banking department as its means for making additional loans. It is this surplus of notes in the banking department, with such small amounts of till money as may be on hand, which is referred to in the weekly reports as the "reserve" of the bank. In the language of the London money market, the reserve of the Bank of England does not correspond to the surplus, as understood in American banking, nor strictly to the

37 NJ

MONO. SEC.

metallic reserve, but represents the unused lending power of the bank. There is no legal restraint upon the impairment of this reserve, except that the lending power of the bank ceases after the whole of the reserve has been exhausted. It has never been completely exhausted since the enactment of the bank act of 1844, and this fact is claimed as one of the merits of that act.

The banking reserve consists, therefore, of the notes and coin which are held in the banking department for the purpose of making new loans and advances. It is the percentage of this reserve to deposit liabilities which forms the barometer of the strength of the bank and to some extent of the condition of the English money market, and which must, therefore, be studied to determine the degree of elasticity given to credit by the resources of the Bank of England. These items show a much wider range of elasticity than the changes in the volume of notes in the hands of the public.

The system of averaging the returns for the twenty years 1888-1907 shows the banking reserve at its maximum in the eleventh week of the year, or about the middle of March, and its minimum in the fifty-second week, or just before the close of the year. The maximum average for the twenty years was £24,477,000, and the minimum was £18,335,000.^a This difference of about £6,000,000 repre-

^a Statistics for Great Britain, Germany, and France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 578, p. 88.

sents about 27 per cent of the average for the year; but the actual variations between the high and low points of the reserve may be much greater in any given year, and they have in fact been so in nearly every year. While the high and low points may under similar conditions converge on approximately the same dates in different years, they are profoundly disturbed by special occurrences in the market for money and credit.

The proportion of reserve to deposit liabilities has varied as widely between 1888 and 1907 as from 27 per cent on January 1, 1890, up to 71 per cent for several weeks in the summer and autumn of 1894. A low minimum percentage of the reserve is not always indicative so much of a serious reduction in the absolute amount of the reserve as of a large increase in liabilities, due to special circumstances. The lowest point to which the actual amount of the reserve has been allowed to fall since 1887 was £9,309,000, on January 1, 1890, when the ratio to liabilities was 27 per cent. The highest point in the amount of the reserve was attained at the time when the influx of gold from South Africa first attained magnitude and before the new gold was widely distributed to other countries. The amount of the reserve at this time reached £40,996,000, on February 26, 1896; but the highest ratio of reserve to liabilities came at an earlier date because of the small demands at that time upon the bank.^b The following

^b The weekly statements for twenty years appear in Statistics for Great Britain, Germany, and France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 578, pp. 102-121.

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table shows the amount of the reserve and its ratio to deposit liabilities in representative years, at the high and low point of the amount of reserve and the average for the year:

Ratio of banking reserve at the Bank of England.

[In thousands of pounds.]

Year.	Maximum reserve.	Per cent.	Minimum reserve.	Per cent.	Average.	Per cent.
1888.....	16,596	45	10,302	34	12,686	41
1890.....	17,407	51	9,309	27	13,683	41
1895.....	35,958	61	23,972	52	29,875	62
1896.....	40,996	63	24,068	48	34,645	58
1898.....	27,959	49	18,350	37	22,919	46
1900.....	24,950	45	16,503	38	21,455	43
1901.....	28,011	54	16,211	30	24,046	48
1902.....	27,140	45	17,209	34	24,166	46
1903.....	27,309	47	17,669	37	23,781	47
1904.....	29,005	59	19,531	37	24,574	49
1905.....	31,532	55	17,629	34	25,306	47
1906.....	28,988	46	17,849	30	23,500	44
1907.....	28,257	52	17,695	35	24,434	45
1908.....	31,279	51	19,357	38	26,748	50
1909.....	39,753	49	19,990	36	26,649	49

It should be noted that the low point of the reserve has occurred in recent years usually at the end of the year, when large loans and advances were made by the Bank of England for temporary purposes in making the annual settlements and with the knowledge that a large part of these credits would be extinguished and the percentage of reserve thereby increased within a week or fortnight. The present policy of the bank in this particular is thus set forth by one of the experts consulted by the monetary Commission:^a

^a Hartley Withers: The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, pp. 20-21.

"At the end of the half year it is sometimes applied to for fresh credits to the extent of over twenty millions sterling, chiefly in the form of advances for a few days. On one side of its account its holding of securities is

38 NJ
MONO. SEC.

expanded by this amount and on the other its liability on deposits is similarly swollen. At the end of 1902, the last occasion when the bank's weekly return was made up on December 31, and so showed the full extent of the extra credit provided by it at the end of the year, the other securities rose from £27,647,000 on December 17 to £47,736,000 on December 31. The other deposits at the same time rose from £36,653,000 to £55,259,000, and this increase in the basis of credit was perhaps used by the other banks for the provision of five to ten times as much accommodation for their customers. A week later the other securities had declined to £29,625,000 and the other deposits to £41,073,000, though reenforced in the meantime by the payment of Government dividends; the emergency credit had been wiped out, when no longer required, by the simple process of repayment to the Bank of England of the sums borrowed from it; and the bank's proportion of cash to liabilities, which had fallen to 28 per cent on December 31, had risen to 38 $\frac{3}{8}$ per cent."

The whole organization of British credit rests upon the reserve of the Bank of England and the ability of the bank to maintain this reserve. Not only is this true of England and Wales, but of the whole United Kingdom, including the banks of Scotland and Ireland. While these banks are nominally banks of issue, they were subjected in 1845 to substantially the same rules in regard to circulation as were established for the Bank of England by the act of 1844. They can only increase their issues to meet the demand for currency by increasing their holdings of gold. They rarely put the gold in circulation, but issue notes against it, of which a large proportion are for £1. In Scotland so much use had been made prior to 1844 of the freedom to issue notes, which were paid at the market places in the purchase of cattle and other supplies from farmers, that a violent protest went up from the banks as well as the public against cutting off the £1 notes. While in England the restriction to a minimum denomination of £5 had been in force since the resumption of specie payments in 1821, and was not seriously objected to, in Scotland notes for £1 had been in constant use and had obviated the necessity for carrying about large amounts of gold coin. The evidence given by the Scottish bankers of the utility of the £1 notes was so strong that the provision for restricting the minimum denomination to £5 was dropped from the act of 1845 during its discussion and was not embodied in the measure as enacted.

In Scotland and Ireland the demand for notes at certain seasons of the year is met by borrowing gold from the Bank of England, which is treated as the ultimate reserve resource of the Scotch as well as the English banks. This obligation was felt by the Bank of England as early as the panic of 1857, when the governor of the bank, in reporting to the treasury on the measures taken to stay the panic, said:*

* The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 208.

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^a The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 208.

"Upon this state of things, however, supervened the failure of the Western Bank of Scotland and the City of Glasgow Bank and the renewed discredit in Ireland, causing an increased action upon the English circulation by the abstraction in four weeks of upward of £2,000,000 of gold to supply the wants of Scotland and Ireland."

The influence of this Scottish and Irish demand for gold is felt by the Bank of England, not only in periods of severe stress, but also in the autumnal pressure which occurs almost annually, especially in Scotland, in connection with the marketing of the crops. On such occasions it is customary for the Scotch banks to send to London for such amounts of gold as they need to cover their increased issue of notes and to return the gold when the need for it has passed. The effect of these conditions, as described by Mr. Palgrave, one of the authorities consulted by the commission, is "to transfer every fluctuation in the note circulation of Scotland, where the issue is always above the authorized limit, and many of those in Ireland, where the issue as a rule is closer to the authorized limit, directly to the reserve of the Bank of England."^a

^a The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 169.

It is the growth in the importance of the joint-stock banks, however, which has imposed the heaviest obligations upon the Bank of England. Its obligations in this respect may be summed up by saying that the bank, by reason of the fact that a credit in its books is as good as gold, enables the banking community, represented now chiefly by the joint-stock banks, to expand credits and create check currency so long as it is prepared to lend credit. And, as no specific reserve requirements are

Imposed upon English banks, the extent to which the banking community is prepared to lend is regulated only by its own discretion and consideration for the proportion between its cash resources and its liabilities. The system has thus come to work, according to one of the experts consulted by the Commission, "with extreme elasticity and banking facilities can be provided in England with extraordinary ease."^b The note issues, of which the minimum

^b Hartley Withers, The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 26.

limit is £5, are used in circulation to only a minor degree, a large proportion being absorbed as reserves in banks and their branches. It is estimated that there are in England and Wales fully 4,600 bank offices which require Bank of England notes in their reserves, which did not do so in 1872. If, on the average, each of these offices required about £700 in notes, the increase in the Bank of England issue in lieu of country notes withdrawn would be roughly accounted for. The results of this system are thus summed up: ^c

^c *Ibid.*, p. 30.

"It follows that this system, by which checks drawn against banking credits are the chief currency in England, while banking credits can be multiplied to any extent that the prudence of bankers considers right and are based on credits at the Bank of England which can again be multiplied without any legal restriction, has completely freed the English monetary machine from any regulations except those imposed by its own sense of duty and the possible criticism of the public; and the development of the use of checks has thus completely nullified the attempt to regulate the English currency system made by Peel's bank act of 1844."

The magnitude of the obligations thus created by the joint-stock and private banks increased enormously during the last two decades of the nineteenth century and the increase has not ceased during the present century. The compilations made by financial journals, although not absolutely complete nor official, afford a pretty accurate idea of this movement. For periods of years the deposits and current accounts, exclusive of those of the Bank of England, are reported as follows: ^a

^a For explanations and further details, *Vide*: Statistics for Great Britain, Germany, and France, 578, pp. 27-28.

Bank deposits in the United Kingdom.

October—	England and Wales.	Scotland.	Ireland.
1878.....	£133,258,000	£8,797,000	£17,208,000
1880.....	242,290,000	75,583,000	17,167,000
1885.....	331,679,000	83,434,000	23,587,000
1890.....	390,752,000	89,076,000	39,072,000
1895.....	485,277,000	93,489,000	43,613,000
1900.....	620,169,000	103,674,000	47,726,000
1905.....	672,329,000	101,538,000	53,093,000
1908.....	712,282,000	108,718,000	58,306,000

These figures are swollen in some of the statements made for recent years by adding the deposits of colonial banks with London offices and foreign banks with London offices. The deposits of the former class were reported for 1908 at £253,453,000 and of the latter class at

1895.....	485,277,000	93,489,000	43,613,000
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These figures are swollen in some of the statements made for recent years by adding the deposits of colonial banks with London offices and foreign banks with London offices. The deposits of the former class were reported for 1908 at £253,453,000 and of the latter class at £360,749,000. It is proper that the influence of these institutions upon the London money market, which is very considerable, should not be ignored in dealing with the position and responsibilities of the Bank of England; but it is somewhat misleading to include in a report of British deposits the many millions of scattered in Australia, India, Africa, China, and America, and especially those in independent banks on the Continent of Europe, which have established offices in London chiefly for the conduct of exchange operations. Thus, of the deposits reported by foreign banks in 1908 not less than £208,000,000 represented the gross deposits, at home and abroad, of the *Comptoir Nationale d'Escompte* and the *Crédit Lyonnais*, both of Paris, and the three principal Berlin banks—the Deutsche Bank, Disconto Gesellschaft, and Dresdner Bank.^a While the appearance of these foreign institu-

^a *Ibid.*, p. 40.

tions in London has undoubtedly added to the volume of exchanges there, it would somewhat exaggerate this influence upon the Bank of England to treat it as creating an obligation of the same character as the deposits of the banks operating or controlled in the United Kingdom.

The extent to which the use of checks and deposit credit has expanded in England is illustrated by the growth of transactions through the clearing houses. The origins of the London Clearing House date back to the eighteenth century, and its activities have been extended and reduced to system from time to time with the growth of the demands upon it.^a While the Bank of England performs

^a Vide Robert M. Holland: *The English Banking System*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, pp. 267-94.

no such functions in clearing credits as we shall find performed by the Bank of France and the Imperial Bank of Germany, and did not enter the London Clearing House until 1864, it performs a function for which there is no equivalent in the American clearing system. As the clearing banks have balances at the Bank of England, their debits at the clearing house are settled in checks upon these balances instead of by currency. This practice in itself results in an economy in the use of Bank of England notes which would amount to a considerable proportion of the total circulation. A view of the volume of business done through the London Clearing House is afforded by the following figures:

Operations of the London Clearing House.

Year.	Total clearings.	Daily average.	Proportion on stock-exchange settling days.
			<i>Per cent.</i>
1868.....	£3,425,185,000	£10,978,000	15.3
1870.....	3,914,220,000	12,545,600	16.2
1875.....	5,685,793,000	18,520,500	18.3
1880.....	5,794,238,000	18,812,500	19.8
1885.....	5,511,071,000	17,951,400	17.0
1890.....	7,801,048,000	25,410,600	18.1
1895.....	7,592,886,000	24,732,500	17.1
1900.....	8,960,170,000	29,186,200	14.9
1902.....	10,028,742,000	33,098,100	15.6
1905.....	12,287,935,000	40,156,600	16.8
1906.....	12,711,334,000	41,405,000	15.9
1907.....	12,730,393,000	41,467,100	14.3
1908.....	12,120,362,000	39,351,800	13.8
1909.....	13,525,446,000	44,056,800	15.7
1910.....	14,658,863,000	47,748,700	15.4

The concentration on the London market of such a mass of credit has, naturally, strained at times the resources of the Bank of England and has led to suggestions for increasing its reserve or imposing additional legal obligations upon the joint-stock banks. How completely the joint-stock banks have been accustomed to lean upon the Bank of England is indicated by a quotation from an eminent banker, chairman of the largest joint-stock bank in England, in regard to an institution which had been absorbed by his own. He said: "

^a The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 92.

"I may add that a joint-stock bank which came into our fold some years ago, whose reputation and position were second to none in the Kingdom, and justly so, too, and was a model of good management in other respects, employed every farthing they possessed, save and except what they required for till money, up to the hilt every day; feeling sure that by means of their investments, which were gilt-edged, though not consols, they would always be helped over the stile if pressure came. And that, I may say, is not an exceptional case."

After the crisis of 1890, when the Bank of England was saved largely by gold loans negotiated in France and Russia, it was strongly urged by Lord Goschen that the metallic banking reserves of the country should be increased and that the position of the joint-stock banks should be disclosed by the publication of a monthly statement.

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After the crisis of 1890, when the Bank of England was saved largely by gold loans negotiated in France and Russia, it was strongly urged by Lord Goschen that the metallic banking reserves of the country should be increased and that the position of the joint-stock banks should be disclosed by the publication of a monthly statement. The latter suggestion was adopted by a majority of these banks, but none of the private banks or the country banks joined in the movement. It has been stated by a president of the Bankers' Institute that the proportion of cash to liabilities shown by country banks ranges down to a point as low as 2.2 per cent. The joint-stock banks have shown a reserve as high as 15.8 per cent in cash and cash obligations, which is a great improvement over the conditions of a generation ago, but there is no reason to believe that this favorable condition is constant or that it extends to the country banks.^b

^b Hartley Withers, new edition of Bagehot's "Lombard Street," p. xvi.

2. OPERATION OF THE FRENCH SYSTEM.

Elasticity in the supply of credit in France is afforded, up to the limit of legitimate demands, by the resources of the Bank of France. The comparatively settled condition of industry and commerce in France, and the absence of demands for new capital for enterprises within the country, make the fluctuations in the note circulation of the bank comparatively moderate. The absence of restrictions upon the proportion of gold required against notes or deposits, and the large resources in gold which the bank has possessed in recent years, enables it to make such rediscounts as business may require without fear of reducing its reserves unduly and without the necessity ordinarily of taking strong measures to retain gold. The fact that the loans of the bank are made chiefly by the discount of commercial paper makes the volume of circulation respond quickly to business conditions. As stated by M. Pallain, the governor of the bank, in an interview with members of the National Monetary Commission:^a

^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 212.

"By virtue of the statutory machinery, the emissions of the bank are essentially variable and are commanded precisely by the discount or loan operations. It is therefore the bills presented for discount and the requests for loans—that is to say, the requirements of business—which fix the amount of the issue."

Further questions put to M. Pallain regarding the elasticity of the note issue at certain seasons brought out the following replies:^b

^b *Ibid.*, p. 213.

"Q. Does this demand for increase come more largely from the banks or from customers in general?"

"A. Both banks and other clients. The demands of the banks are particularly important, as they centralize the demands of their numerous clients.

"Q. The fluctuations are more or less automatic? If there is an excess of notes, it is, I assume, soon taken care of by presentation for redemption?"

"A. The mechanism is quite automatic. When circumstances demand a reduction of issue the notes are naturally presented for redemption, and it seems to us that as long as this redemption is made without difficulty there can never be an excess of notes in circulation."

The absence of any legal requirements as to the gold reserve of the Bank of France has not prevented the accumulation of a large reserve—the strongest in Europe, with perhaps the exception of that of Russia—but enables the bank to make new discounts without studying carefully the ratio of reserve to note issue. As put by M. Pallain: "It may happen that among our assets a certain fraction of the gold is replaced by an equal amount of bills in our portfolio, and that without changing the total of notes in circulation." Conclusions based on the fluctuations in the note issue of the Bank of France must, therefore, be corrected by consideration of the changes in the gold stock, in order to arrive at the net influence upon the position of the bank caused by an increase or decrease in the volume of paper discounted. The average fluctuation in the volume of notes outstanding does not often exceed 10 per cent of the total amount, but the fluctuations in discounts granted show a much wider range. The difference in this range of variation is accounted for chiefly by changes in the gold stock. If the volume of discounts granted is increased, the amount required for the new discounts appears in the balance sheet partly in the issue of additional notes and partly in the reduction of the stock of gold. When the volume of discounts granted is decreased, the influence of the decrease is reflected both by a decrease in the amount of notes outstanding and by increase in the stock of gold. The notes are paid out by way of granting discounts; they are retired and canceled when they are received back into the bank in payment of those discounts. The gold is paid out also in granting discounts; it comes back into the bank when the bills discounted are paid. If these considerations are kept clearly in mind, they will throw light on the table which appears below in regard to the functions of the Bank of France in giving elasticity to the supply of credit:^a

^a Vide Statistics for Great Britain, Germany, and France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 578, pp. 294-313.

[In thousands of francs.]

Date.	Discounts.	Circulation.	Gold stock.
<i>Variations in discounts at Bank of France.</i>			
[In thousands of francs.]			
Date.	Discounts.	Circulation.	Gold stock.

[In thousands of francs.]

Date.	Discounts.	Circulation.	Gold stock.
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Variations in discounts at Bank of France.

[In thousands of francs.]

Date.	Discounts.	Circulation.	Gold stock.
1890—Sept. 11.....	496,600	2,954,500	1,292,100
Nov. 27.....	978,600	3,061,400	1,114,900
1892—Jan. 7.....	762,200	3,161,500	1,340,200
Sept. 23.....	421,400	3,086,900	1,677,100
1893—Sept. 21.....	482,000	3,392,700	1,684,400
Nov. 30.....	739,800	3,558,500	1,705,600
1894—Apr. 26.....	983,400	3,470,100	1,743,400
Sept. 6.....	360,000	3,362,600	1,906,300
1896—Sept. 10.....	522,000	3,503,300	2,030,400
Dec. 31.....	1,050,100	3,838,800	1,914,600
1898—Sept. 8.....	578,900	3,517,700	1,879,100
Nov. 3.....	1,032,100	3,811,800	1,833,200
1900—Jan. 4.....	1,267,600	4,163,000	1,865,300
Sept. 20.....	632,100	3,943,200	2,263,900
1902—Jan. 2.....	846,100	4,284,600	2,449,000
Aug. 21.....	393,100	3,991,700	2,625,400
1904—Mar. 31.....	975,600	4,427,900	2,362,600
Sept. 8.....	483,100	4,180,800	2,664,000
1905—June 8.....	470,300	4,345,000	2,866,900
Dec. 28.....	1,097,900	4,565,900	2,878,400
1906—Jan. 4.....	1,339,200	4,905,300	2,851,300
Aug. 23.....	635,000	4,413,800	2,923,400
1907—Jan. 3.....	1,555,800	5,092,700	2,664,800
Aug. 22.....	855,700	4,598,100	2,810,400
1908—Jan. 2.....	1,549,500	5,066,900	2,676,200
Sept. 10.....	553,600	4,765,900	3,220,200
1909—Feb. 4.....	1,094,600	5,171,800	3,633,600
Aug. 12.....	572,400	4,948,800	3,702,600
1910—Sept. 22.....	762,900	5,024,700	3,379,600
Nov. 3.....	1,493,700	5,495,800	3,303,100

The figures show for each year quoted the maximum and minimum points in amount of discounts granted as shown by the weekly reports of the bank and the state of the circulation and the gold stock at the same dates. It will be found that in nearly every case the amount of the increase in discounts from the minimum to the maximum of the year is represented substantially by the increase in notes outstanding plus the decrease in gold, and conversely, that the decrease in discounts is represented substantially by the decrease in notes outstanding plus the increase in the stock of gold. Where there seems to be a serious departure from this result it may be due to an increase of a temporary nature in advances on securities or to the increase in deposits, such a showing resulting occasionally from operations in connection with the distribution of Government loans.

42 NJ MONO. SEC.

To illustrate more clearly the automatic character of the elasticity which these figures indicate, one or two concrete cases may be selected. Thus, the figures for 1906 afford the following results:

	Francs.
Discounts:	
January 4.....	1,339,200,000
August 23.....	635,000,000
Decrease.....	704,200,000
Decrease in outstanding notes.....	491,500,000
Increase in gold stock.....	72,100,000
Total.....	563,600,000

These figures show that with a decrease in discounts between January 4 and August 23 of about 700,000,000 francs (\$135,000,000), note circulation was curtailed nearly 500,000,000 francs (\$96,300,000) and the gold stock of the bank was increased by about 75,000,000 francs (\$14,475,000). The figures for 1908, when the bank found its discounts swollen at the beginning of the year by the heavy accommodation extended to those having relations with London and New York, afford even more striking confirmation of the rule that a decrease in the volume of discounts is reflected by a decrease in the outstanding note issue and an increase in the gold stock. The decrease in discounts between January 2 and September 10, 1908, was 996,000,000 francs (\$192,300,000). This is accounted for by a decrease in the note issue of 301,000,000 francs and an increase in the gold stock of 544,000,000 francs.

The figures given above indicate in a measure to what extent the Bank of France is relied upon by the joint-stock banks to grant rediscounts in periods of pressure. They show that during years of comparative financial tranquillity, as in 1902 and 1904, the maximum discounts are much less than in years of disturbance, as in 1906, 1907, and 1908, but that in periods of monetary pressure they may increase by 100 per cent or more without seriously affecting the resources of the bank. Even the year 1909, which was one of ample supplies of credit at the joint-stock banks, shows a much lower maximum of discounts and less fluctuation than 1908 or 1910. The average discounts of the last few years—some of them years of tranquillity and others of financial disturbance—with the average note issue, gold stock, and rate of discount in those years, appear in the following table:

Average discounts and discount rate at Bank of France.
[In thousands of francs.]

Year.	Average discounts.	Average note issue.	Average gold stock.	Average discount rate.
1875.....	559,000	2,461,100	1,135,200	4.00
1880.....	758,500	2,305,400	777,700	2.84
1885.....	784,300	2,846,000	1,103,400	3.00
1890.....	677,200	3,060,400	1,256,300	3.00
1895.....	543,600	3,526,700	2,047,900	2.10
1900.....	875,200	4,034,100	2,103,100	3.25
1903.....	640,500	4,408,200	2,854,700	3.00
1906.....	897,700	4,058,800	2,880,200	3.00
1907.....	1,125,700	4,800,400	2,703,200	3.45
1908.....	897,200	4,853,400	3,052,000	3.04
1909.....	761,500	5,079,900	3,630,400	3.00
1910.....	977,300	5,197,700	3,400,000	3.00

The fact that the volume of discounts at the Bank of France has failed to increase as rapidly as the gold stock and note issue is due to two circumstances—the

1880	784,300	2,225,000	2,102,000	3-00
1885	677,200	3,050,000	2,250,000	3-00
1890	543,600	3,526,700	2,047,900	2-10
1895	875,300	4,034,100	2,103,700	3-25
1900	640,500	4,408,300	2,824,700	3-00
1905	897,700	4,658,800	2,889,300	3-00
1906	1,125,700	4,800,400	2,703,300	3-45
1907	897,200	4,853,400	3,052,000	3-04
1908	761,500	5,079,900	3,630,400	3-00
1909	977,300	5,197,700	3,400,000	3-00

The fact that the volume of discounts at the Bank of France has failed to increase as rapidly as the gold stock and the issue of notes is due to two circumstances—the absorption of new business by the joint-stock banks during the past generation and the fact that a large part of the resources of the Bank of France consists of coin held against notes and therefore not available for discounts.

The joint-stock banks attained their chief importance after 1880 and have since that time gradually spread a network of branches throughout France. The *Crédit Lyonnais* had, in 1880, 70 branches; the *Comptoir d'Escompte* only 9; and the *Société Générale* did not exist. The figures for 1908 were, for the *Crédit Lyonnais*, 246 branches or banking offices; the *Comptoir d'Escompte*, 212; the *Société Générale*, 499; and the *Crédit Industriel et Commercial*, 34. The total number of banking agencies established by the joint-stock banks in France is now over 950, of which about 250 are in Paris and the remainder in the provinces. The Bank of France, under various requirements of law, has increased its number of banking offices from 252 in 1890 to 466 in 1907 and 512 in 1910. The manner in which the Bank of France supports the financial fabric of the country is thus defined by one of the experts consulted by the Monetary Commission:^a

^a André Liesse: Evolution of Banks and Credit in France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 522, p. 200.

"It is here that is seen the intimate connection that exists in France in the organization of credit, such as historical evolution has made it, between the Bank of France and the credit companies. The first is powerful because of its privilege of issue and its considerable metallic reserve, which is due to two causes: First, the continuation of favorable exchanges, resulting from our considerable investments of capital abroad; second, the great credit of the bank note. With these two advantages the Bank of France becomes the pivot of the system; it permits the credit companies to keep a very small metallic reserve; to use constantly in making discounts the capital which is confided to them. The commercial 'portfolio,' as we shall see, ranks next to the metallic reserve among available resources, because it is easily rediscountable at the Bank of France."

43 NJ MONO. SEC.

As a profit-making concern, the Bank of France appears more formidable by the magnitude of its business than it is in fact, because a large proportion of this business is not directly productive to the bank. This follows from the fact that a large proportion of the notes is fully covered by the metallic reserve of gold and silver. Inevitably, a profit is derived only from the excess of issues above the metallic reserve. When the proportion of the reserve to outstanding issues of notes is examined, it becomes apparent that in recent years not more than one-fourth of the total issue, and in many cases a much smaller proportion, is capable of affording a profit to the bank. The following table shows the ratio of the metallic reserve to the circulation for representative years:^b

^b Statistics for Great Britain, Germany, and France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 578, p. 293.

Ratio of reserve to notes at Bank of France.

[In millions of francs.]

Year.	Gold.	Silver.	Total reserve.	Circulation.	Ratio of reserve to notes.
Average:					
1875-1884.....	1,028.9	952.9	1,981.9	2,544.1	77
1885-1894.....	1,342.4	1,214.8	2,557.3	3,012.5	84
1895-1904.....	2,184.7	1,170.6	3,355.3	3,924.1	85
1905.....	2,854.7	1,101.8	3,956.5	4,408.2	88
1906.....	2,829.2	1,060.4	3,889.6	4,658.8	84
1907.....	2,703.3	971.1	3,674.4	4,800.4	76
1908.....	3,052.0	964.7	3,956.7	4,853.4	81
1909.....	3,630.4	893.8	4,524.2	5,070.9	89
1910.....	3,400.0	861.6	4,261.6	5,197.7	82

Examination of these figures indicates in a measure the manner in which the Bank of France has strengthened its position during the past fifteen years in its ratio of gold to silver. The relative magnitude of the silver stock was a source of some anxiety after the great fall in the value of the metal after 1873, and there was a marked tendency for some years for the excess of silver coinage not needed in circulation to accumulate in the vaults of the bank. As the silver 5-franc pieces of Belgium, Italy, and Switzerland were legal tender in France under the terms of the Latin Union of 1865, the coins of those countries tended to flow into France, creating a redundancy, which was relieved only by their payment into the Bank of France.^a

^a A brief account of the Latin Monetary Union is given by Conant, "The National Bank of Belgium," National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 400, pp. 167-172.

The average silver reserve exceeded the gold reserve by considerable amounts during the years 1879 to 1883, and the monetary pressure at the close of 1881 reduced the gold stock to 552,000,000 francs (\$106,550,000).^b The

^b Liess: Evolution of Credit and Banks in France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 527, p. 175.

ratio of the two metals in the reserve then became approximately equal and remained so until 1891. From that date until 1899 the silver stock remained comparatively stationary, while the gold stock rapidly increased, amounting in 1900 to 2,103,100,000 francs (\$406,000,000), as against silver to the amount of 1,134,100,000 francs (\$219,000,000). From that time the increase in the gold stock has been rapid, while the silver stock has been declining until the

most nearly equal and remained so until 1891. From that date until 1899 the silver stock remained comparatively stationary, while the gold stock rapidly increased, amounting in 1900 to 2,103,100,000 francs (\$406,000,000), as against silver to the amount of 1,134,100,000 francs (\$219,000,000). From that time the increase in the gold stock has been rapid, while the silver stock has been declining until the average for 1910 was only 861,600,000 francs (\$166,000,000). The ratio of the silver stock to the gold stock, therefore, which was approximately equal as recently as 1891, and was nearly three to five as recently as 1899, has now fallen to the ratio of about one to four. This has greatly strengthened the ability of the bank to meet demands for gold for export purposes and supports the suggestion of M. Pallain, in his interview with members of the Monetary Commission, that "the extent of our reserves allows us to contemplate without emotion important variations of our metallic stock." The bank was sometimes charged, during its period of large silver holdings, with charging a premium for the redemption of notes in gold. Its policy in this respect was thus explained by the governor:^c

^c Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 216.

"The Bank of France can not, of course, renounce its right to redeem its notes in gold or in silver, since gold pieces and silver coins of 5-francs are equally legal tender in France. But it only uses this right with discretion and to the extent that it appears necessary in order to prevent an unjustifiable weakening of its reserves. In no case, however, whatever may have been said, have we ever charged any premium on French gold in redemption of notes."

While the operations of the Bank of France are more intimately interwoven with the commercial life of the country, by reason of its many branches, than the operations of the Bank of England are interwoven with the commercial life of Great Britain, the Bank of France can not be said to be subjected to the same sudden and intense pressure for gold as that which falls frequently upon the Bank of England.^d The obligations of the joint-stock

^d Cf. Palgrave: *Bank Rate and the Money Market*, p. 149.

banks in France, although they have been growing in recent years, fall much below the total of such obligations in Great Britain. Their deposits, moreover, are less active, and a considerable proportion are payable only on time. To these influences, as well as to the large metallic resources of the Bank of France, are to be attributed in part the greater steadiness in its rate of discount.

44 NJ MONO. SEC.

While the use of the check system is still much restricted in France, a system of economizing the use of money has been long in use at the Bank of France which operates as a form of clearing. This system, which we shall find even more extensively developed in Germany, consists of direct transfers of credit (*virements*) on the books of the Bank of France, not only at the main office in Paris, but between the branches. It is contended by some authorities that these transfers are more direct and economical than the system of drawing checks and clearing them through outside agencies.^b The method by

^b Maurice Patron: *The Bank of France in its Relation to National and International Credit*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 494, pp. 73-75.

which these transfers are made is thus described by one of the experts consulted by the Monetary Commission:^c

^c *Ibid.*, p. 69.

"The operation consists in causing a sum to pass from the credit of one account to the credit of another. From the standpoint of bookkeeping nothing is easier. The simplicity is just as great for the holder of the account. He gives the order to debit his account and to credit such other as he may designate, existing in France. This is done with no other cost than the 10 centimes for the stamp on the receipt which is handed to him.^a He sends

^a The only condition for this free service is that the sender shall have, discounted with the bank, within ten days, a sum equal to the amount he is sending, or that the recipient be a debtor for a similar amount. If one of these conditions is not fulfilled, a commission of 25 centimes per 1,000 francs is charged. But in practice the cases are very rare where commission is charged.

this receipt to the recipient, who is thus notified. If, however, he prefers, he need not take a receipt, the amount being immediately transferred to the new account, which is credited on the day of the transfer. It is clear what economy results from the use of this system for banks with a considerable volume of business. It is especially advantageous for private bankers who must frequently cover themselves, sometimes at the shortest notice."

The transfers made from one account to another within the bank are written on a pink order; those directing payment to a third person from the account of the drawer on a white order. One of the greatest merits of this practice is that it establishes a system of domestic exchange, practically gratuitous and at par, throughout France. How convenient it has proved, in spite of its limited acceptance outside of Paris, may be judged from the magnitude of the operations of this sort carried on by the bank. A regular account has been kept for many years of the payments made into the bank and of their character, whether coin, bank notes, or transfer orders. Figures for representative years appear in the following table:

Annual receipts of the Bank of France.

[In millions of francs.]

Year.	Specie.	Notes.	Transfers	Total.

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Annual receipts of the Bank of France.

[In millions of francs.]

Year.	Specie.	Notes.	Transfers or checks.	Total.
1840.....	955.9	4,150.1	3,281.4	8,387.4
1860.....	6,629.1	15,411.0	11,488.4	33,528.5
1880.....	5,323.3	32,095.1	32,713.5	70,131.9
1890.....	3,098.8	36,437.9	43,330.7	82,867.5
1895.....	2,904.8	33,802.2	52,472.6	89,179.7
1900.....	3,350.5	43,440.6	102,447.0	149,247.1
1902.....	3,898.2	44,138.5	120,233.5	168,270.2
1904.....	4,309.7	48,353.0	152,822.5	205,485.2
1905.....	4,452.4	48,393.3	171,227.7	224,073.5
1906.....	4,476.8	49,318.8	189,233.4	243,029.2
1907.....	4,378.0	53,914.6	179,399.4	237,692.2
1908.....	4,578.0	50,718.2	170,261.3	225,557.5
1909.....	4,268.8	54,873.6	214,191.7	273,334.3
1910.....	4,804.1	54,926.1	245,842.5	305,572.9

These immense totals show that the policy of the Bank of France has accomplished much in substituting transfers of credit by other means than bank notes, in spite of the large use of the latter which has grown up in France since the opening of the era of railways and the general substitution of money for barter in rural communities. The total payments into the bank, as shown by the figures above, were equivalent in 1910 to about \$59,000,000,000, of which payments by checks and transfer orders made up about \$47,500,000, or about 80 per cent. This compares with clearings at New York for the year ending September 30, 1910, of \$102,553,959,069, of which the balances paid in money were \$4,195,293,969, or 4.09 per cent. Up to the present time at the Bank of France the proportion of the receipts coming into the branches in the form of transfers has not attained the same development as at Paris. That progress is being made at the branches is indicated, however, by the following comparison:

Receipts at Paris and branches.

[In millions of francs.]

Place.	Total payments.		Transfers.	
	1895	1910	1895	1910
Paris.....	67,983.4	261,813.2	51,618.3	241,199.2
Branches.....	21,196.3	43,759.7	866.3	4,643.4
Aggregate.....	89,179.7	305,572.9	52,484.6	245,842.5

45 NJ MONO. SEC.

Without pausing to comment at length upon these figures, it is obvious that they illustrate the marked success which has attended the efforts of the Bank of France to extend the use of credit. These efforts have been especially marked since the renewal of the charter of the bank in 1897 for the period ending December 31, 1920. Among the new obligations imposed at that time upon the bank was the creation of at least one branch in each Department where none existed. This obligation has been more than fulfilled. The number of banking offices, which stood at 261 at the close of 1896, was 512 at the close of 1910. Among recent measures taken by the bank to extend the use of credit instruments have been an agreement between the Bank of France and several of the joint-stock banks for the wider use of "crossed" checks and an effort to encourage the payment of small bills of exchange by transfers of credit at the offices of the bank instead of payment in currency at the domicile of the drawee.^a

^a Vide International Conference on Bills of Exchange, 61st Cong., 3d sess., S. Doc. No. 768, p. 483; also *Economiste Européen*, Oct. 14, 1910, XXXVIII, p. 490.

Thus, upon the largest theater of monetary demand in the world outside the United States, the Bank of France fulfills the functions of supplying paper currency practically without restrictions up to the limit of legitimate demand, of rediscounting freely to meet the needs of the joint-stock banks, of affording clearing facilities on a large scale, which it is constantly laboring to extend, and of successfully protecting the largest gold reserve in the world by a rate of discount which for nearly thirty years has never been higher than $4\frac{1}{2}$ per cent, and has for long intervals of time been as low as 3 or even 2 per cent.

3. OPERATION OF THE GERMAN SYSTEM.

The system of the Imperial Bank of Germany for meeting increased demands for credit is distinctively that of the issue of bank notes. The bank is not permitted to issue notes, however, with the same freedom from restrictions as the Bank of France. As already set forth in detail, the German system of note issue establishes an authorized limit of 550,000,000 marks (\$130,940,000), secured by a reserve of one-third in legal money, with the privilege of additional issues without limit upon the deposit of the full value in gold. This corresponds precisely in principle to the English system, and if it had operated without other ameliorating provisions it would have caused during many recent years intense pressure in the German money market.

The additional provision which gives a certain degree of elasticity to the German note system is the authority given to the Imperial Bank to issue notes beyond the authorized limit without the full deposit of gold, provided a tax is paid upon such excess issues at the rate of 5 per cent per

of the full value in gold. This corresponds precisely in principle to the English system, and if it had operated without other ameliorating provisions, it would have caused during many recent years intense pressure in the German money market.

The additional provision which gives a certain degree of elasticity to the German note system is the authority given to the Imperial Bank to issue notes beyond the authorized limit without the full deposit of gold, provided a tax is paid upon such excess issues at the rate of 5 per cent per annum. This provision has attracted much attention among financiers and economists since its adoption in 1875, and has been imitated in Austria-Hungary and Japan. It has received the most severe test in Germany, because in the other two countries in which it has been adopted there has been a less rapid expansion in the demand for credit. When the plan was adopted it was regarded by some authorities as a safeguard only for serious emergencies. Mr. Stanley Jevons, an English authority on monetary subjects, declared that the rate of tax on the excess issues should be much more than 5 per cent, his idea being that the excess issues should only be called into play in some such emergency as those which confronted the Bank of England in 1857 and 1866, when authority was given to the bank to exceed the legal limit of note issue provided that additional loans were made at the rate of 10 per cent.

Experience has resulted, however, in the issue of notes subject to the 5 per cent tax whenever, in the opinion of the management of the Imperial Bank, monetary conditions have required an increase of issues. The resources of the bank, as in the case of the Bank of France, are derived chiefly from its issue of notes. Liabilities to depositors and all other liabilities except capital and surplus scarcely equal a third of the liability on account of notes. In meeting demands for credit in Germany, however, the bank is not able to permit the decline of its gold resources with the same complacency as the Bank of France, because its gold stock is relatively much smaller in proportion to liabilities. Indeed, such has been the pressure of industrial expansion in Germany, with its demand for enlarged credits, that the ratio of cash to notes was reduced at the close of 1907 as low as 41.34 per cent and the ratio of cash to total demand liabilities was only 30.64 per cent.

46 NJ MONO. SEC.

These conditions have imposed upon the Imperial Bank of Germany a policy in regard to the rate of discount and the protection of its gold stock different from that pursued at the Bank of France, by compelling it to rely chiefly upon the issue of notes to meet special demands for credit. The function of the bank was thus described in the memorial volume published under its authority in 1900:^a

^a The Reichsbank, 1876-1900, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 408, p. 41.

"The Reichsbank is the last support of the German home market. It satisfies out of its own funds every increased demand for money by increasing its note issue, even when this largely exceeds its tax-free contingent; on the other hand, it regulates the demand for money and counteracts too great an extension of note circulation by fixing the discount rate. It neither depends on other banks nor does it rediscount bills, as do private banks of issue, for the purpose of diminishing its capital invested in bills and strengthening its funds by claims on third parties.

"In the same way, the supervision of foreign relations of German monetary affairs lies exclusively in the hands of the Reichsbank. It endeavors to hold a sufficient gold reserve, out of which at all times foreign obligations can be settled without causing a shock to our standard."

In the fulfillment of these obligations the Imperial Bank rediscounts freely paper offered by the joint-stock banks, especially in periods of pressure, and issues its notes upon such rediscounts where they are required. The extent to which the joint-stock banks thus lean upon the Imperial Bank is indicated in the interviews held with representatives of those institutions by members of the monetary Commission. Thus, in an interview with two of the directors of the Dresdner Bank, the following questions and answers took place:^a

^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, pp. 395-98.

"Q. Do you endeavor to maintain a certain percentage of cash on hand and in the Reichsbank to your deposit and acceptance liabilities?"

"A. No; we are practically indifferent to the percentage, as long as we know that we have on hand a sufficient amount of prime bills.

"Q. Then, in practice, you and all other banks endeavor to fully employ all available funds?"

"A. Yes; we only carry in the Reichsbank and other banks sufficient for the conduct of business. Of course, we do an important business in various parts of the world, and it is profitable for us to have balances in various centers in order that we may make transfers for the accommodation of our customers. If we should have a debit in the clearing house of more than our cash

amount of prime bills.

"Q. Then, in practice, you and all other banks endeavor to fully employ all available funds?"

"A. Yes; we only carry in the Reichsbank and other banks sufficient for the conduct of business. Of course, we do an important business in various parts of the world, and it is profitable for us to have balances in various centers in order that we may make transfers for the accommodation of our customers. If we should have a debit in the clearing house of more than our cash in the Reichsbank we would immediately send over bills with our indorsements and establish a credit sufficient to pay the amount of our debit. * * *

"Q. You regard your item 'bills discounted' as one of practical reserve?"

"A. Yes; it is immediately convertible into cash at the Reichsbank."

The demand for notes has increased in Germany with the development of industrial activity and increase in population in a much larger ratio than if the check system had been more widely extended. It will be shown hereafter that much has been done by the Imperial Bank to facilitate the transfer of credit without the use of currency; but it has remained true, in spite of these measures, that the check system has been introduced only to a limited extent and that the joint-stock banks do business largely with the money of their shareholders and a character of business which could not be done upon the same scale with deposits repayable on demand. The result has been that the note circulation of the Imperial Bank has increased upon the average to a large amount, apart from the variations at different seasons of the year, and that the requirement for gold for the protection of the notes has increased in corresponding degree. The following table exhibits the average volume of outstanding discounts for representative years, together with the note issue and the metallic reserve:^a

^a Statistics for Great Britain, Germany, and France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 578, p. 173.

Average discounts and note issues at Bank of Germany.

(In thousands of marks.)

Year.	Average discounts.	Average note issue.	Average metallic stock.	Average discount rate.
1876.....	402,909	684,866	510,593	4.16
1880.....	345,726	735,013	562,091	4.24
1885.....	372,746	727,442	586,131	4.19
1890.....	534,142	983,882	801,019	4.59
1895.....	573,924	1,095,593	1,011,763	3.74
1900.....	800,180	1,138,561	817,137	5.33
1905.....	908,816	1,335,701	972,959	3.82
1906.....	989,445	1,387,237	890,965	5.15
1907.....	1,104,537	1,478,783	843,340	6.03
1908.....	967,729	1,524,142	1,019,065	4.76
1909.....	918,894	1,576,532	1,046,333	3.93
1910.....	1,143,628	1,605,882	1,055,803	4.35

47 NJ

MONO. SEC.

These figures show an almost uninterrupted increase in the average annual demand for notes. This increase is due in part to the increased responsibilities assumed by the bank in the form of discounts, but in part also to the same influence which has operated to enlarge the note issues of the Bank of France—the diffusion of the use of currency and the preference for paper over coin. It may be added that in Germany the increase in note issues during the past few years has been due in part to the authority given by the government in 1906 for the issue of notes for 50 marks (\$11.90) and 20 marks (\$4.76). Prior to this law the smallest denomination of bank note was 100 marks (\$23.80). It was the theory of some of those who advocated the reduction of the minimum denomination that it would enable the bank to draw into its reserves the gold which would be displaced in the circulation by the small notes. Without discussing here the soundness of this theory, it may be remarked that it is not universally accepted by economists and financiers. The authority to issue small notes was promptly availed of, but the amount outstanding at the close of 1910 was smaller than at the close of 1907 or 1909. The figures of the number and value of notes of each denomination at the close of 1905, before small notes were authorized, and at the close of 1910 appear in the following table:^a

^a Bulletin de Statistique, I.IX, p. 439, and LXIX, p. 349.

Denominations of German bank notes.

Denomination.	1905.		1910.	
	Notes.	Value.	Notes.	Value.
		<i>Marks.</i>		<i>Marks.</i>
1,000 marks.....	424,186	424,186,000	370,952	370,952,000
100 marks.....	12,324,962	1,232,496,200	14,272,371	1,427,237,100
50 marks.....			2,842,693	142,134,650
20 marks.....			6,622,156	132,442,720

The German note circulation shows greater elasticity, in the sense of increase or decrease from week to week during the year, than that of England or France. An average of the weekly note circulation and bank reserves for the twenty years 1888-1907 shows that the highest point is reached in the week of December 31 and the lowest in the week of March 15. The maximum average is 1,372,043,000 marks (\$326,000,000), and the minimum 968,461,000 marks (\$230,500,000), a variation of 403,500,000 marks (\$95,500,000). As there are special demands for currency at the close of each quarter, which are now met under provisions which will be presently referred to, it might afford a better view in some respects of the ordinary expansion and contraction of the note issue to exclude the final week of each quarter. If this is done, the high point for other weeks will be found in the week of October 15, which shows an average of 1,216,482,000 marks. Comparing this item with the low point of March 15, the variation is shown to be 248,000,000 marks, or a propor-

000 marks (\$95,500,000). As there are special demands for currency at the close of each quarter, which are now met under provisions which will be presently referred to, it might afford a better view in some respects of the ordinary expansion and contraction of the note issue to exclude the final week of each quarter. If this is done, the high point for other weeks will be found in the week of October 15, which shows an average of 1,216,482,000 marks.

Comparing this item with the low point of March 15, the variation is shown to be 248,000,000 marks, or a proportion of more than 25 per cent of the minimum and about 20 per cent of the maximum. This seems to be a fair measure of the variations in the German circulation under conditions essentially normal. The figures for 1907, which was a year of great disturbance and large demands upon the Imperial Bank, showed, as is usual, the highest points at the quarter ends, which reached for December 31, 1,885,922,000 marks. The minimum circulation of the year was 1,274,917,000 for the week of February 23. The highest point, exclusive of quarter ends, was on October 7, when outstanding issues were 1,712,145,000 marks. This shows a wide range of fluctuation, which was reflected in the increase in bills discounted. The following table shows the relationship between the volume of discounts, the note circulation, and the metallic reserve of the Imperial Bank at the maximum and minimum points for representative years since 1887: *

* Statistics for Great Britain, Germany, and France, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 578, pp. 174-193.

Variations in discounts at Bank of Germany.

[In thousands of marks.]

Date.	Discounts.	Circulation.	Metallic reserve.
1888—Jan. 7.....	531,685	971,621	779,576
Aug. 15.....	381,579	916,858	976,446
1890—Feb. 23.....	434,149	886,052	821,288
Sept. 30.....	665,279	1,131,733	724,721
1892—Jan. 23.....	485,013	989,437	959,234
Oct. 31.....	634,746	1,075,800	864,954
1894—Jan. 31.....	483,031	953,172	880,027
June 30.....	619,686	1,109,188	899,366
1896—Feb. 15.....	500,938	1,005,677	952,217
Sept. 30.....	799,507	1,257,418	815,546
1898—Feb. 15.....	512,240	1,012,900	951,416
Oct. 7.....	964,029	1,293,658	726,129
1890—Feb. 23.....	680,738	1,006,052	857,958
Dec. 31.....	1,088,321	1,409,945	729,830
1902—Mar. 7.....	701,980	1,106,341	1,050,759
Dec. 31.....	1,026,225	1,516,469	786,123
1904—Feb. 23.....	732,718	1,137,918	980,785
Mar. 31.....	1,093,485	1,496,935	828,079
1905—Feb. 15.....	661,317	1,194,658	1,110,288
Sept. 30.....	1,343,217	1,682,646	732,215
1906—Feb. 15.....	774,358	1,234,845	996,214
Sept. 29.....	1,396,038	1,704,131	675,301
1907—Feb. 15.....	863,911	1,303,534	890,419
Dec. 31.....	1,493,593	1,885,922	704,179

48 NJ MONO. SEC.

The manner in which the Imperial Bank extends its aid to German commerce is indicated by comparison of the discounts alone. While in years of comparative tranquillity, as in 1902 and 1904, the difference between the maximum and minimum volume of discounts is approximately 50 per cent of the minimum and perhaps 30 per cent of the maximum, the range of variation is much wider in years of monetary disturbance. Thus in 1905 the increase from the low to the high point was more than 100 per cent and in 1906 and 1907 did not fall far short of this proportion.

To the question which naturally arises—By what means was this great expansion of accommodation extended to business houses and to the joint-stock banks?—the answer is that it was chiefly through the issue of additional notes, which promptly returned to the bank when the volume of discounts declined. Thus, as early as 1890 a decline in discounts between February 23 and September 30 amounting to 231,000,000 marks was accompanied by a decline in outstanding notes of 245,600,000 marks (\$58,350,000). On the other hand, the expansion of discounts in 1900, amounting between February 23 and December 31 to 407,500,000 marks, was accompanied by an increase in notes outstanding of 403,900,000 marks. In 1907 when the resources of the bank were severely tested, an expansion of discounts, from the low point of February 15 to the high point of December 31, amounting to 629,000,000 marks, was accompanied by an increase in notes outstanding of 582,000,000 marks. The lack of exact correspondence in these figures is due to changes in the volume of deposits and the movement of gold.

Comparison of these figures with those for France will show that the manner in which the Bank of Germany meets the demand for additional credit differs in a marked degree from the method at the Bank of France. While at the Bank of France the increased demand for discounts is met, it might almost be said indiscriminately, from the large stock of gold and from the issue of notes, at the Bank of Germany it is met almost entirely by the increase of note issues so far as this is practicable. For the purposes of domestic demand the issue of notes meets requirements; it is only in the case of a foreign demand, calling for the export of gold, that the Imperial Bank makes increased discounts by the surrender of the metal or by throwing upon the market a portion of the foreign bills which it has in recent years added to its assets and which satisfy the essential purpose of the export demand for gold by giving to the purchaser a title to gold abroad.

It remains to inquire how far the 5 per cent tax levied upon excess note issues has wisely restrained or unwisely hampered the issue of notes up to the limit of legitimate need. Upon this point it was the general testimony, at the inquiry on the renewal of the bank charter in 1908, that the tax has not restrained the bank from issuing all the notes which it deemed to be required and further that

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^a German Bank Inquiry of 1908, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 427, Pt. I., p. 170.

"The experience of past years establishes beyond a doubt the fact that neither the former nor the present president of the Reichsbank has permitted himself, or will permit himself, to be guided in fixing the rate of discount by the consideration whether the highest limit of the note contingent is passed or not; and I think that, conversely, if the rate of discount should be higher than the tax to be paid upon overstepping the note contingent, this would have no influence upon the further development of the rate of discount. It is well known that other causes operate upon the height of the rate of discount."

Examination of the record of the issue of notes under the 5 per cent tax shows that such issues have increased near the end of each ten-year period for which the bank charter runs. This is due in part to the economic expansion of Germany and the increase of population, which have raised the average amount of notes required in general business. This normal increase was recognized at the renewal of the charter in 1899 and in 1909 by the raising of the limit of uncovered issues. This extension of the limit, by giving a wider latitude to the bank, reduced the amount of issues subject to the tax for the first few years following the change, but excess issues appeared in large amounts in the returns for 1899 and 1900, before the new limit took effect on January 1, 1901, and reappeared also during each of the four years preceding the new limit which took effect on January 1, 1911.

49 NJ MONO. SEC.

Issues of notes subject to the tax were comparatively rare prior to 1896, the whole number of weeks during which they occurred being only nineteen during the fifteen years 1881-1895. During this period a number of years passed without any excess issues and the year showing the largest number was 1890, when the tax was paid for six different weeks. From 1896 downward issues subject to tax have been frequent and have sometimes reached large amounts. This was especially the case in 1899, 1900, 1906, and 1907. The total number of weeks during which notes were issued subject to the tax during the nineteen years 1896-1908 was 159, the largest numbers being in 1899, 20; in 1900, 20; and in 1907, 25. The largest excess of notes outstanding prior to 1905 was 371,233,000 marks (\$88,175,000) for the week ending September 30, 1899. Beginning with 1905, however, still larger amounts appeared, the maxima falling usually at the end of a quarter. The largest excess was for the week of December 31, 1907, which amounted to 625,974,000 marks (\$148,750,000). The record for 1907 showed issues subject to the tax in ten of the twelve months of the year, the only months free from such issues being February and May. Even the year of comparative tranquillity, 1908, showed excess issues in eight months and during fourteen different weeks.^a

^a The details for each week appear in "Renewal of Reichsbank Charter," National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. 307, facing p. 120.

Abundant evidence is afforded, however, by the record of the truth of the assertion made by the officers of the bank that the rate of discount has not necessarily been raised above 5 per cent because of the issue of notes subject to the 5 per cent tax. During the 178 weeks showing an excess of note issue, from the incorporation of the bank in 1876 down to the close of 1908, the number of such weeks in which the rate of discount exceeded 5 per cent was 74. Of these, 14 occurred during the period of considerable pressure in 1899, 10 in the autumn of 1906, and 25 in the year 1907. Of these 74 cases, moreover, there were 24 in which the rate of discount was at 5½ per cent, which, in view of the incidental costs of issue and discounting, would afford a very insignificant profit to the bank. Still stronger evidence perhaps of the policy of the bank in issuing notes up to the limit of legitimate commercial demand, even at a loss, is afforded by analysis of the returns for the 104 weeks in which excess issues were made, while the rate of discount remained at 5 per cent or lower. In only 47 cases was the rate as high as 5 per cent. For seven weeks it was 4½ per cent, for 37 weeks it was 4 per cent, and for 10 weeks it was only 3 per cent.

The demand for bank notes has in recent years been especially keen at the end of each calendar quarter. This was for the first time specially provided for in the amendment to the charter which took effect on January 1, 1911, permitting the issue of 200,000,000 marks (\$47,600,000) for the single week ending with each quarter, in addition to the regular limit of issue in other weeks.^a If such a

afforded by any other means which excess issues were made, while the rate of discount remained at 5 per cent or lower. In only 47 cases was the rate as high as 5 per cent. For seven weeks it was 4½ per cent, for 37 weeks it was 4 per cent, and for 10 weeks it was only 3 per cent.

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^a Law of June 1, 1909, art. 2.

provision had been in force in previous years, it would have made a marked difference in the amount of notes subject to the tax. Thus, in 1908 the excess for March 31, which was 361,657,668 marks, would have fallen to 151,657,668 marks, and a corresponding reduction would have appeared in the excess for June 30, which was 215,800,300 marks; September 30, 320,647,610 marks; and December 31, 454,793,551 marks.

Even this extension of the limit, however, has not proved adequate to meet recent demands upon the Imperial Bank at quarter ends. In order to reduce these demands to the absolutely essential needs for credit, the Imperial Bank adopted in May, 1911, a new rule regarding the short rediscounts which come to the bank at the quarter ends, partly to obtain temporary cash and partly to enlist the services of the bank in the collection of the paper. The new rule was, that beginning at the end of June all discounts asked during the first week of a quarter and all discounts which ran beyond the last day of a quarter should pay a supplementary interest for 10 days. The rule applies, however, only to requests for the discount of sums above 3,000 marks (\$714), thereby seeking to exempt the small clients of the bank.^a

^a *L'Économiste Européen*, June 2, 1911, XXXIX, p. 695.

The pressure at the quarter ends is due to the organization of retail trade and banking methods in Germany, which concentrates a great mass of settlements upon those dates. It is not in itself an indication of abnormal monetary strain, and the recent action of the Imperial Bank has resulted in suggestions that dates for trade settlements and other payments be distributed more

50 NJ
MONO. SEC.

evenly throughout the year and that the use of checks be more widely extended. The tension in the money market produced at the close of June, 1911, found partial relief in the influx of foreign money under the impulse of a high rate of private discount.^b

^b *Ibid.*, July 7, 1911, XL, p. 22.

The increase in the demand for notes in Germany has not taken place without vigorous efforts on the part of the Imperial Bank to extend the use of other means for making payments. The most important department of the bank, apart from note issue and the granting of discounts, is the so-called *giro*, or transfer, system. This system, as it existed at the Bank of Prussia, was reorganized immediately after the passage of the bank act of 1875, and its use has been rapidly and widely extended from year to year. As described in the memorial volume issued on the twenty-fifth anniversary of the bank, the system is as follows:^c

^c The Reichsbank, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 408, pp. 91-92.

"The signature of the depositor to the printed 'Regulations for transfers at the Reichsbank' is required as proof of the conclusion of a contract. The account is opened by a cash deposit called balance (*Guthaben*). This is increased by further cash deposits, by transfers from other current accounts, and by an adjustment of transactions between the bank and the depositor (crediting of discounted bills, granting of loans on collateral, etc.). The depositor can close the account by drawing out the balance in cash, by transferring it to other current accounts, and by settling with the bank (debiting bills made payable at the bank by the account holder, or collateral loans due from him, etc.).

"The red check, which represents the real transfer draft, was introduced for transfers from one account to another. The white checks serve for the withdrawal of cash and for settlement of transactions with the bank. The red check bears the name of the person to whom the transfer is made, and is not transferable. The white check, on the contrary, is made out in the name of the payee, with the addition 'or bearer.' For making payments between different places (distance transactions) the red check—that is, the transfer from account to account—is used almost exclusively, as a fee is charged for cash payment from one account to another by means of a white check, and such payment can be made only after it has been determined whether a balance is at hand at the branch."

The transfer facilities thus provided by the Imperial Bank are open to all classes of the population, to institutions, and to the public authorities. The bank opens an account for anyone who enjoys sufficient standing to command confidence. It is expected that the holder of an account will keep a balance corresponding to the labor involved for the bank, but the amount of such balance is not fixed, but based upon the extent to which the

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Thus, in much the same manner as in France, the Imperial Bank provides a convenient and economical system of domestic exchange. It is the balances kept by clients of the bank for the purpose of making transfers which form the bulk of the obligations of the bank apart from its note issues. These balances are considered by German financiers and economists a safer resource than inactive deposits, because they are needed by the owners for carrying on their daily business and could not be reduced materially, even in a period of distrust, without causing greater inconvenience to the owners than would be suffered by the bank. As their status was put by Doctor Schinckel, president of the Hamburg Chamber of Commerce, in the bank inquiry of 1908: *

* German Bank Inquiry of 1908, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 407, Pt. I, pp. 876-877.

"As a matter of actual experience, a large part of the total deposits in the Reichsbank are, so to say, on the road, being in process of transfer from one locality to another, and therefore are quite incapable of being withdrawn from the bank. And for my part I am sure that everyone at a time of crisis, and just at such a time, is more anxious to increase the balance which he has subject to draft at the Reichsbank than to decrease it. I therefore regard the danger to the Reichsbank arising from the mass of deposits subject to draft as extremely slight and the need of a cover for their protection equally slight."

51 NJ

MONO. SEC.

As these deposit balances are created for the purpose of making transfers, the volume of operations upon them reaches large figures, corresponding in recent years approximately to the amount of similar transfers through the Bank of France. The following figures indicate the gross movement of individual and governmental accounts for representative years:^b

^b Bulletin de Statistique, March, 1911, LXIX, p. 350.

Movement of accounts at Bank of Germany.

[In thousands of marks.]

Year.	Individual accounts.	Public accounts.
1876.....	16,711,245	2,070,624
1880.....	35,234,255	1,372,193
1890.....	79,749,501	4,054,547
1900.....	135,159,940	28,479,195
1905.....	178,572,655	43,578,129
1906.....	194,432,633	51,204,924
1907.....	207,179,650	53,489,114
1908.....	210,181,961	59,778,409
1909.....	225,105,163	69,933,344
1910.....	339,278,106	74,905,917

The total movement of these accounts has risen, according to these figures, from about \$20,000,000,000 in 1890 and \$40,000,000,000 in 1900 to about \$75,000,000,000 in 1910. The total for 1910 exceeds by more than \$15,000,000,000 the similar movement of accounts in France, but with allowance for difference in population would fall somewhat short of the French average per capita. The methods of settlement of the German accounts for 1907 show cash payments in the proportion of 15.4 per cent; balancing of accounts, 22.4 per cent; local transfers, 33.4 per cent; and transfers from and to other cities, 28.8 per cent. The settlements without cash payments, therefore, reached 84.6 per cent of the whole—an average which has been departed from only slightly for the past ten or twelve years.^a

^a Miscellaneous articles on German Banking, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 508, p. 60.

The essential character of these accounts, as means of making transfers rather than as fixed deposits, is brought out in a striking manner in the case of the private accounts by the large average volume of transactions in proportion to average balances. The figures show that on each mark of the average balance the turnover as far back as the year 1900 was 405 marks for the year, and that of this total 266 marks was effected without currency. The average time for which amounts received were left with the bank decreased from three days in 1876 to 1.47 days in 1900.^b The average balance to each account is rather

^b The Reichsbank, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 408, p. 110.

high, by reason of the large balances kept by the banks, but has been decreasing from year to year. The average volume of transactions annually for each account, on the other hand, has shown a tendency to increase, in spite of the decline in the average balance. The following figures for representative years illustrate these tendencies:

Average balances and transactions in giro accounts.

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Average balances and transactions in giro accounts.

Year.	Average balance.	Average volume of transactions per account.
	<i>Marks.</i>	<i>Marks.</i>
1888.....	33,829	7,995,118
1890.....	27,401	8,788,798
1900.....	23,690	9,596,020
1905.....	22,067	9,281,051
1907.....	20,707	10,692,695

The transfer service is availed of by all branches of commerce and finance, but most largely by the banking world. On March 31, 1908, the distribution of the giro accounts of private concerns was as follows: Industry and trade, 27 per cent; commerce, transportation, and insurance, 13.8 per cent; banks, private bankers, etc., 52.6 per cent (banking corporations alone furnishing 36.1 per cent); corporate bodies, foundations, private individuals, etc., 6 per cent; agriculture and allied industries, 0.8 per cent.

Thus, in spite of great commercial expansion in recent years, imposing a severe strain upon her stock of free capital, Germany has been supplied with a flexible currency and with credit accommodation at reasonable rates, through the mechanism of the Imperial Bank and the system of taxed emergency note issues, supplemented by the system of free transfers of credit to all parts of the empire which the bank has organized. Its services are thus summed up by Doctor Stroell, manager of the Bavarian Note Bank: *

* Renewal of Reichsbank Charter, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 507, p. 246.

"The Reichsbank has fulfilled its duty, from without and from within, and this both in normal and in critical times. From without, it has protected the German gold standard; within, it has drawn over the empire a splendid network of institutions dispensing credit and performing monetary transfers. On the basis of a flexible note issue these institutions satisfy the need for credit at a rate of interest which is now higher, now lower, but which is always determined by the existing economic conditions, and is never fixed by considerations other than those pertaining to the public welfare."

CHAPTER VI.—THE POLICY PURSUED BY EUROPEAN
BANKS IN TIMES OF PRESSURE.

The policy pursued by the central banks of Europe in periods of pressure has been an evolution from experience, in which many mistakes were made in the infancy of banking, as was the case in America with the United States Bank and the State banks before the Civil War. The methods of influencing the exchanges by sharp changes in the discount rate, by buying or borrowing gold, and by the use of foreign bills, which have been already described, have come to be understood and effectively employed only within the past forty or fifty years and some of them within a much less time. It is not impossible that further improvement in these methods or the adoption of supplementary methods will emerge from further experience. Under present conditions, however, a system of dealing with periods of pressure has grown up in the European banking world which has averted many of the difficulties which arose in the earlier history of banking. These results are now at the command of any country which desires to establish a similar system of regulating the exchanges, averting pressure, and guarding against panic.

It is not contended by careful economists or financiers that the European banks have discovered any method of preventing absolutely the overextension of credit in periods of commercial expansion or any panacea against human error. It is simply contended that by means of the influence which they exert, directly and indirectly, the banks are able to restrict unwise banking within narrower limits than in those countries where there is not some form of coordination of single banking units into a cohesive whole, and that they are able to correct the results of such mistakes as do occur with a minimum of shock to sound and legitimate business and without permitting the effects of individual errors to be magnified and multiplied by unfounded alarms and unwarranted restrictions of credit.

Inevitably, the measure of success of the central banking mechanism in accomplishing these ends has varied in some degree according to financial conditions in the country where the bank is established. In a narrow sense it is not possible to raise the stream of credit far above its source; but it is contended for the central banks that they can so regulate the stream as to prevent its overflowing its banks with violence or being suddenly dried up without reason. In this respect the policy of the central banking mechanism may be defined as that of a retaining reservoir, which limits the amount of credit released when it is not required, but keeps it available for use when credit from other sources becomes scanty. It is obvious that this is a function which could be performed only with difficulty, at considerable cost and probably only under the compulsion of law, by a loose association of banking institutions without an organized and established head, if it could be performed by them at all.

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As stated above, the policy which is now pursued to avert periods of pressure is the result of experience and evolution and was not well understood or steadily pursued prior to the middle of the last century. The Bank of England was then practically the center of the financial world, but the peculiar conditions under which it was organized and developed prevented its taking the lead for a time so effectively as it has since come to do. In the panic of 1825, according to the well-known work of Mr. Bagehot:

^a Lombard Street, new edition, New York, 1910, pp. 201-202.

"In the panic of 1825 the Bank of England at first acted as unwisely as it was possible to act. By every means it tried to restrict its advances. The reserve being very small, it endeavored to protect that reserve by lending as little as possible. The result was a period of frantic and almost inconceivable violence; scarcely anyone knew whom to trust; credit was almost suspended; the country was, as Mr. Huskisson expressed it, within twenty-four hours of a state of barter."

53 NJ MONO. SEC.

Ultimately, upon the advice of the Government, the bank decided to make liberal advances upon the security of goods and, according to a letter from Sir Robert Peel to the Duke of Wellington, "reluctantly consented, and rescued us from a very embarrassing predicament."

Without discussing at the moment the fetters imposed by the bank act of 1844 upon the Bank of England in later crises, it is desired here simply to bring out the fact that only by degrees was the lesson learned among European bankers, that when a crisis was actually imminent the bank should lend freely, but at a high rate, upon unquestioned security. This policy is very different from that of lending freely before the attempt has begun to check speculative expansion. Such advances are made upon sound commercial paper or temporarily upon first-class securities, in order to protect legitimate trade, and are not made to promote new ventures. The system of making such loans and advances freely in times of threatened crisis is now accepted and acted upon at practically all the leading foreign banks. Thus, in the interview of members of the Monetary Commission with the officers of the Bank of England, occurred these answers: "

^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 28.

"Q. Is it the practice of the bank in times of stress to discount bills of a satisfactory character for its customers freely?

"A. At such times the bank is always ready to discount bills of a satisfactory character for its customers or for the market.

"Q. Is it the policy of the bank to discriminate against finance bills in times of financial crises?

"A. The bank always discriminates against 'accommodation' bills pure and simple, but in times of financial crises each case would be considered on its merits.

"Q. Does the understood policy of the Bank of England to advance bank rates rapidly and at the same time to extend liberal credit in times of serious financial trouble meet with general approval in business and banking circles?

"A. This is a question more for the general public to answer, but it is believed that on the whole the action of the bank during the autumn of 1907 met with general approval."

Substantially similar answers were made by the heads of other great banks in the conferences held with them by members of the commission. In the case of the Bank of France, the matter was thus put by the governor: "

^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, pp. 206-207.

"Q. Do the banks rely implicitly on the Bank of France to grant them credit when they require it?

"A. They know very well that in times of difficulty we are the supreme resource.

"Q. Does the amount and the character of credit granted to other banks depend on the amount and the character of their accounts at the Bank of France?

"A. There is no fixed rule, and although the balance of the account is not a matter of indifference, it is more especially the quality of the paper presented which fixes the extent of the credit. In periods of crisis, in 1830, in 1848, in 1870, in 1889, the general council of the bank,

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The obligation and policy of the Imperial Bank of Germany were defined by one of the officers of the Dresdner Bank in the following terms: "

ibid, p. 398.

"Q. Is it the policy of the Reichsbank and of your own bank, in times of stress, to extend credit liberally to people who are entitled to it?

"A. I think the Reichsbank extends credits liberally, as long as it possibly can.

"Q. We found that policy was adopted by the best banks in England.

"A. We had a very serious crisis here in 1901. It was a money crisis, and at that time the Reichsbank was very liberal in extending credits. The Reichsbank feels that it has a patriotic duty to preserve the credit of the Empire. It is a state institution."

At all the chief banks of issue the fact was emphasized, which has already been referred to in discussing the ready convertibility of assets and the system of rediscounts, that the bulk of their resources were usually employed in the discounting and rediscounting of commercial paper and that so far as possible such discounts were limited to paper based upon real transactions. This fact is brought out in the answer already quoted by the governor of the Bank of England, which goes further in making advances upon securities than do most of the continental banks.

In cases where advances are made to a considerable amount upon securities other than commercial paper, as at the Imperial Bank of Germany, the effort is made to limit them to accommodation extended only temporarily and to bankers rather than to individuals, in the belief that the temporary character of the advance and the knowledge that it must be repaid within a short time will restrict the banker to asking such advances only upon assets which he considers to be sound and convertible. The volume of loans on securities at the Bank of Germany fluctuates within wide limits, being almost invariably largest at the quarter ends. This is due to the fact that the joint-stock banks are called upon for large credits or for considerable amounts of currency at such times by clients who are paying their quarterly accounts. The banker obtains the means of supplying further credit at such times by getting loans on securities at the Imperial Bank, which are often paid off within a week. It was to meet this demand, peculiar to the German method of doing business, that the recent extension was made in the authorized note issue, by which 200,000,000 marks might be issued at the end of each quarter, in addition to the regular issue, without being subject to the tax on excess issues.^a

^a Cf. Dr. R. Koch: Renewal of Reichsbank Charter, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 507, p. 227.

The position of the central banks of issue in Europe is not that of absolute dictators in the money market, but is a position of great influence, more especially in times of pressure. It is not within their power to prescribe directly and arbitrarily the policy of the joint-stock banks, but it is within the scope of their indirect influence to restrict unsound banking by the knowledge that those who practice it will receive less support at the central bank than those who adhere to methods which are sound and conservative. In England, as the result of the absence of participation by the Government in the management of the Bank of England, there is less direct influence of this sort probably than in the countries of the Continent. On this subject the following statement is made by one of the experts consulted by the Monetary Commission:^a

^a Hartley Withers: The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 107.

"The only regulating influence in English banking is that of the Bank of England, and it is only exercised occasionally and under exceptional circumstances. Occasions have been known on which the governor of the bank has summoned the manager of one of the banks whose action

consulted by the Monetary Commission:^a

^a Hartley Withers: The English Banking System, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 492, p. 107.

"The only regulating influence in English banking is that of the Bank of England, and it is only exercised occasionally and under exceptional circumstances. Occasions have been known on which the governor of the bank has summoned the manager of one of the banks whose action he thought fit to question and administered remonstrance and rebuke; but such an occurrence is extremely rare. Moreover, as has been shown in earlier portions of this memorandum, the Bank of England intervenes and regulates the price of money in London by measures which have already been described, namely, by borrowing in order to make its own rate effective, and raising that rate if it thinks it necessary in the interests of the market as a whole."

On the Continent the influence exercised by the heads of the central banks is probably more direct and effective than in England, but this is obviously a question which does not lend itself to precise statement. In all cases, however, the authority and the obligation of the governor of the central bank to take the lead in such joint action as may be required in a critical situation is generally recognized. This has come to be the case even in England, especially since the panic of 1866. There had been declarations previous to that date by the governor of the Bank of England that the bank was under no greater responsibility in maintaining sound financial conditions than any other joint-stock bank. After the panic of 1866, however, the governor of the bank, at a meeting of the proprietors, made an address, in which he used the following words:^b

^b Bagehot: Lombard Street, p. 167.

"This house exerted itself to the utmost, and exerted itself most successfully, to meet the crisis. We did not flinch from our post. * * * It was not unnatural that in this state of things a certain degree of alarm should have taken possession of the public mind, and that those who required accommodation from the bank should have gone to the chancellor of the exchequer and requested the Government to empower us to issue notes beyond the statutory amount, if we should think that such a measure was desirable. But we had to act before we could receive any such power, and before the chancellor of the exchequer was perhaps out of his bed we had advanced one-half of our reserves, which were certainly thus reduced to an amount which we could not witness without regret. But we did not flinch from the duty which we conceived was imposed upon us of supporting the banking community, and I am not aware that any legitimate application made for assistance to this house was refused."

In the later crisis of 1890, when the Bank of England was fortunate in having at its head Mr. Lidderdale, a man of much strength of character, even greater responsibilities were assumed. Mr. Lidderdale refused the offer by the Government of the right to issue notes in excess of the legal limit and took the lead in forming a syndicate of bankers which guaranteed the obligations of the Barings and agreed to divide among them the loss, if any should occur.

In acting as guardians of the monetary situation the central banks have endeavored to avoid as far as possible undue competition with other banking institutions. One of the reasons why the balance sheets of the Bank of France and the Imperial Bank of Germany do not show more rapid growth in the volume of discounts is the fact that these banks permit the market to underbid them at times when money is plentiful. In other words, the private discount rate quoted by the joint-stock banks on the best quality of paper is lower than the official rate of the central bank. An effort has been made in some countries to correct this in a measure by authorizing the state bank to lend under certain circumstances below the official rate. As a broad question of policy, however, the central banks have been disposed to relax their control of the market and to sacrifice profits rather than to compete with the joint-stock banks in lowering the rates for money below the usual and normal rate for short-term loans. This does not seriously impair their control over the market when credit becomes scarce, because the resources of the joint-stock banks are then reduced, they are compelled to recur to the central bank for rediscounts, and they necessarily bring up their own charges to their clients to the rates fixed by the central bank.

It is one of the consequences of the great development of private and joint-stock banking in recent years that the relative power of the central bank has in some countries been diminished. This has been particularly the case in England. The means by which the difficulty is corrected in that country—some of which are not usually employed by other banks—have been already referred to under the discussions on buying gold and borrowing from the market. Upon the whole, however, the central bank has not lost its ability in any European country to influence the general banking situation to the extent required

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^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 27.

"On the 15th August, 1907, the bank rate was raised to 4½ per cent and so continued till the 31st October, when it was further raised to 5½ per cent. On the latter date the total bullion held by the bank was £31,700,000 and the proportion of reserve to deposits 39.9 per cent. On the 4th November, owing to further withdrawals of gold, the governor, acting on his powers, raised the rate to 6 per cent. On the 7th November the court of directors raised the rate to 7 per cent, the total bullion being £28,700,000 and the proportion 35.2 per cent. Thenceforward the inflow of gold was greater than the outflow, thus demonstrating the power of an effective increase of rate. On the 11th December the total bullion was £34,100,000 and the proportion 47 per cent. At the end of January, by which time the rate had been gradually reduced to 4 per cent, the total bullion was £38,500,000 and the proportion 56.6 per cent."

56 NJ MONO. SEC.

It was a significant fact, going to sustain the contention of the officers of the bank in regard to the efficiency of advancing the discount rate under modern conditions, that gold flowed to London from no less than 24 countries, including British colonies.

Upon the subject of possible competition in France between the central bank and the joint-stock banks, one of the officers of the *Crédit Lyonnais* said that the rate of discount of the *Crédit Lyonnais* was rarely higher than that at the Bank of France and at the time of the conference was much lower. He added:^a

^a *Ibid.*, p. 239.

"There would be competition between the Bank of France and the other banks if the Bank of France had a very low rate of discount, but as a matter of fact it does not lower its rate. For loans on collateral the Bank of France only accepts certain classes of securities, and all other classes of securities are left for the other banks."

Upon the same subject in its bearings upon conditions in Germany, the following discussion took place between members of the Commission and officers of the *Imperial Bank*:^b

^b *Ibid.*, p. 346.

"Q. What is the relation between this bank and other banks, such as the *Deutsche* and the *Dresdner*—that is, as to the character of business transacted? Are you competitors?"

"A. It may be said that the *Reichsbank* is more restricted by law. At a private bank the rate of discount may be much cheaper than at the *Reichsbank*. The private banker knows his clients, and he may be willing to accept from them a bill that the *Reichsbank* would not and could not accept.

"Q. Then there is to some extent competition?"

"A. Yes; but that competition is not large. It is not felt that the *Reichsbank* is a competitor of other banks, but it is a public institution. The *Reichsbank* has its official rate, which is higher than the private rate. A bank will take bills on its own account running three months or more and hold them, and in case of need will take bills running ten days or less to the *Reichsbank* for discount. The *Reichsbank* pays no interest, and acts as agent for transfer of currency and credit to all parts of the Empire without charge."

CHAPTER VII.—NON-PAYMENT OF INTEREST ON DEPOSITS.

One of the respects in which the central banks of Europe refuse absolutely to enter into competition with joint-stock and private banks is in the payment of interest on deposits. Such interest is not paid at any of the chief specie-paying banks of issue. The foundation of this policy is the principle that a bank of issue should not encourage deposits for any other than commercial purposes. It was declared by M. Burdeau in the debates on the renewal of the charter of the Bank of France in 1897 that the issue of bank notes and the acceptance of interest-bearing deposits are absolutely incompatible services. Their union in a single hand, he declared, "would replace the present organization by one entirely new, which in case of a crisis would offer much less vitality and power of

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^a Patron: The Bank of France in Its Relation to National and International Credit, National Monetary Commission, 1910, 61st Cong., 2d sess.; S. Doc. No. 494, p. 56.

by M. Burdeau, even at the rate of 1 per cent on deposits subject to check, might draw into the Bank of France a sum in the neighborhood of \$200,000,000. This amount would be taken from the joint-stock banks, with serious results to them, and would impose upon the Bank of France a liability which would be a serious menace in time of peril. The legitimate commercial deposits, however, kept in the bank for the purposes of current business, would not be withdrawn to any large extent and might even increase with the slackening of commercial activity.

57 NJ MONOTYPE SECTION

In Belgium the true rule was understood and followed at the organization of the bank in 1850, and when the proposal was made in 1872 to permit the payment of interest, a strong argument was made by M. Pirmez, the minister of finance, against it.^a Commercial deposits, he declared,

^a Documents Officiels, 1872, pp. 54-56.

receive their remuneration in services rendered. Such deposits are made only when one expects to obtain in the movements of business the advantages which the bank assures, and as the movements of business are for each tradesman a continuing series, it follows that after the exhaustion of a deposit it will almost always be renewed. That which stimulated the first deposit would stimulate later ones. Thus, even the funds which commercial houses leave at the National Bank, rather than keep in their vaults for their daily needs, disappear only to return at once, because they constitute the available reserve of which they have need.

In the discussions on the renewal of the charter of the Imperial Bank of Germany, by the special commission of 1908, expert opinion was so pronounced that it was declared by Dr. Stroll, director of the Bayerische Notenbank of Munich, that "on this particular question there was absolutely no difference of opinion."^b And many reasons

^b German Bank Inquiry of 1908, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 407, Part I, p. 968.

were given for this argument additional to those adduced in France and Belgium. The point was emphasized by Mr. Schnickel, chairman of the Hamburg Chamber of Commerce, that for the commercial deposits reduction in times of crisis would be almost impossible, for no one who is carrying on an active business could get along without some kind of credit balance at the Imperial Bank. As a matter of actual experience, a large part of the total deposits of the bank are constantly in process of transfer from one locality to another, and are therefore incapable of being withdrawn. At a time of crisis, moreover, everyone was more anxious to increase the balance which he had subject to draft than to decrease it.^c It was insisted by Mr.

^c *Ibid.*, pp. 876-877.

Fischel that interest-bearing deposits could be regarded only as capital for long-time investment and that if admitted at the central bank would add a new and incongruous department to its business.^d The prevailing opinion on

^d *Ibid.*, p. 947.

the subject was summed up by Mr. Fischer, chairman of the Chamber of Commerce of Reutlingen, in the declaration that "The best qualified judge of all is the Imperial Bank itself, which has for twenty-five years not exercised this right, and has doubtless refrained from doing so on good grounds."

^e *Ibid.*, p. 932.

CHAPTER VIII.—SPECIAL TAXES AND THE APPORTIONMENT OF PROFITS.

It is proposed under this head to discuss chiefly those taxes which are levied specially upon the issue of notes or other banking functions, in order to illustrate further the relations of the central banks of issue with the Govern-

Bank itself, which has for twenty-five years not exercised this right, and has doubtless refrained from doing so on good grounds.

Ibid., p. 99a.

CHAPTER VIII.—SPECIAL TAXES AND THE APPORTIONMENT OF PROFITS.

It is proposed under this head to discuss chiefly those taxes which are levied specially upon the issue of notes or other banking functions, in order to illustrate further the relations of the central banks of issue with the Government. An effort will not be made to analyze, except incidentally, taxes levied under general laws which are paid by the banks in common with other persons and corporations. These laws vary so much in different countries that it would require much explanation in order to make them intelligible, and they are not pertinent directly to the subject of the special taxes laid upon the banks by virtue of their privileges and functions.

In the infancy of modern banking there was less disposition to restrict the profits of banks of issue than under more recent legislation, because banking in its modern form was more or less of an experiment, and it was felt that its importance to the development of the economic life of the community was such as to justify affording it an opportunity for unfettered service. It was in this spirit that a distinguished English author declared that "restrictions upon banks are taxes upon the public." The tendency in Europe in more recent times has been, however, toward the restriction of special privileges, except in the single matter of the issue of notes and as compensation for the privileges granted in this respect to levy heavy charges upon banking profits. These charges have been directed to two objects—first, to prevent the derivation of excessive benefits from a public franchise, and secondly, to remove the inducement to impose high discount rates and similar charges for the use of credit for the purpose of increasing banking profits. How these two ends have been attained will be best developed by an examination of the special taxes or provisions for the division of profits which are in force in the principal countries of Europe.

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There has been a tendency in recent banking legislation, not only to impose restrictions upon the profit-earning capacity of the banks of issue, but to provide for a division of their profits with the State. In this way the close relation of these institutions with the State has been given emphasis additional to that arising from the appointment of the chief officers by the State and the performance by the bank of the principal functions of the public treasury. There are not less than ten European banks which are required by laws enacted within the past thirty years to divide their profits with the State after the allotment of a moderate dividend to the shareholders.

In discussing these provisions an exception has to be made in regard to the Bank of England, whose privileges, derived from its original charter, have not been radically modified in recent years. Even the Bank of England, however, is required to pay annually to the Government £120,000, in consideration of the exclusive right of note issue in London and the country within 65 miles of London, which was specially granted to the bank by acts 3 and 4 of William IV. The bank is also required to pay a further sum equal to the net profits on all notes in excess of £14,000,000 which are issued against securities under rights which have been acquired since the passage of the bank act of 1844. The total sum paid to the Government under these heads in the fiscal year 1907 was £186,593. A payment of £60,000 is also made annually in consideration of the exemption of the notes of the bank from stamp duty and for the profits of issue.^a

^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 16.

In the case of the Bank of France, the recent legislation for the division of profits of the bank with the State has not followed exactly the same lines as in other recent Continental bank charters, but accomplishes practically the same result of keeping the profits of the shareholders within much narrower limits than if they were subject only to ordinary taxes. As a corporation subject to the general taxes on private companies, including land taxes, the Bank of France paid in 1907 taxes of 2,252,100 francs (\$425,000). The special taxes levied upon the bank are two in number—a stamp tax on notes, which amounted in 1907 to 1,473,000 francs, and the much more important royalty to the State, modified by the renewal of the charter in 1897, which amounted in 1907 to 7,357,000 francs (\$1,420,000). The total taxes or public charges levied upon the bank, therefore, were 11,082,100 francs (\$2,140,000), constituting more than one-third of the net profits, which were 31,000,000 francs.^b In 1910 the total

^b *Ibid.*, p. 203.

of such charges was 9,298,070 francs (\$1,795,000), of which the royalty contributed 5,733,368 francs, carrying the total levies on this account since 1897 to 66,190,929 francs (\$12,775,000).

The stamp tax on notes is imposed in lieu of the similar tax on commercial paper, which is 50 centimes per 1,000 francs (9.65 cents per \$193.) For that portion of the outstanding circulation which is fully covered by coin the rate is calculated at only 20 centimes per 1,000 francs. Un

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^b *Ibid.*, p. 203.

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^a Details of the manner of assessment can be found in Lévy, *Banques d'Emission et Trésors Publics*, Paris, 1911, pp. 37-39.

Another provision of the charter of 1897 provided that three-fourths of the profits arising from a discount rate above 5 per cent should be paid into the public treasury. In view of the low discount rates prevailing for many years at the Bank of France, this provision has not been operative since its enactment.

The Imperial Bank of Germany is the most important of a long line of institutions which are governed by a system of allotting to the State a percentage of the annual net profits. Prior to the revision of the charter in 1889 the shareholders of the German bank were allotted dividends of 4½ per cent, before any other allotment. The new charter reduced this initial dividend to 3½ per cent. Twenty per cent of the remaining profits were then to be carried to a reserve fund, until this fund reached a fourth of the share capital of the bank. The remainder was to be divided equally between the shareholders and the Imperial Treasury until the shareholders had received dividends of 6 per cent. Above 6 per cent the shareholders received only a fourth of the remaining profits and the Imperial Treasury the other three-fourths. If the bank did not earn 3½ per cent, a dividend of this amount was to be paid from the reserve funds.

59 NJ

MONO. SEC.

A further change in favor of the Government was made at the revision of the charter in 1899. The original proposal of the Government was that after setting aside for the shareholders the initial dividend of 3½ per cent, the division of profits between them and the Government should be equal until they had received 5 per cent, after which three-fourths of the remainder should go into the treasury of the Empire. The last clause was stricken out in the Reichstag committee. Under the law as enacted the shareholders were to continue to receive an initial dividend of 3½ per cent, and after its payment 20 per cent of the surplus profits were to be added to the reserve fund, until it should reach 60,000,000 marks (\$14,280,000). After this division, three-quarters of the remaining profits went into the public treasury and only one-quarter to the shareholders.

Only one change was made in 1909, and it was slightly favorable to the shareholders. This change was a reduction of the allotment made to surplus funds to 10 per cent instead of 20 per cent of the balance remaining after the first dividend.^a

^a For further details of these changes, see German Imperial Banking Laws, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 574, p. 79.

The result of these provisions has been to increase the share of the Government in the earnings to a point which has made them materially larger than the share of the stockholders. Under the law as it existed in 1879 the stockholders received 86.7 per cent of the net profits, which were then at the lowest mark, and the Government received only 8.8 per cent. In 1890 the shareholders received only 51 per cent and the Government 34.2 per cent. The amendment of 1899, which took effect in 1891, resulted in the reduction of the proportion of the shareholders to 48.5 per cent for that year and raised that of the Empire to 46.1 per cent. In 1907 the shareholders received only 34 per cent, while the share of the Empire was 66 per cent, nothing being allotted at that time to surplus. The amount of net profits since the creation of the bank and their division between the Imperial Government, the shareholders, and the surplus fund are indicated in the following table:

Division of profits of the Imperial Bank of Germany.

- [In thousands of dollars.]

Period,	Total net profits.	Imperial Government.	Stockholders.	Surplus.
1876-1890.....	39,410	8,280	27,110	4,020
1891-1900.....	46,270	23,470	22,560	2,240
1901-1907.....	51,370	39,440	19,310	2,620
1908.....	8,796	5,475	3,321
1909.....	5,481	2,989	2,492
1910.....	6,586	3,816	2,770

In dealing with these figures it should not be overlooked that before net earnings are computed for distribution two other important items of payment to the State are included in cost of operation. The smaller of these is the regular annual payment to the Government of Prussia of 600,000 thalers (\$445,000) which was fixed in 1876 and

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The proportion of profits going to the Government in Germany is larger than at any other leading bank of issue except those owned entirely by the State, as in the case of the State Bank of Russia and the State Bank of Sweden. The following table shows the average dividends received by the shareholders of several leading banks, on the average for the five-year period ending with 1905, and the amounts and proportions received by the Governments for the single year 1907:^a

^a Renewal of Reichsbank Charter, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 507, p. 25.

Division of profits of certain banks.

Institution.	Divi- dends, 1900-1905.	Amount of profits to Govern- ment in 1907.	Profits to Govern- ment in 1907.
	<i>Per cent.</i>		<i>Per cent.</i>
Imperial Bank of Germany.....	6.22	\$8,210,000	66.0
Bank of the Netherlands.....	9.16	1,360,000	54.8
Bank of France.....	12.60	1,410,000	16.9
Bank of Belgium.....	15.00	500,000	21.0
Austro-Hungarian Bank.....	4.61	2,270,000	37.8

60 NJ MONOTYPE SECTION

In the case of the Austro-Hungarian Bank the laws imposing a division of profits between the bank and the two Governments are similar in general scope to those of Germany. Under the law of 1878, which converted the National Bank of Austria into the Austro-Hungarian Bank, and which was not radically changed in 1889, a dividend of 5 per cent went to the shareholders before any other allotment. Ten per cent of the remainder was added to the reserve, and a further allotment was permitted to shareholders up to a total dividend of 7 per cent. Half of the remainder went into the treasuries of the two monarchies in the proportion of 70 per cent to Austria and 30 per cent to Hungary, and the other half was added to the dividend to the shareholders. This division of profits was modified in 1899 so that the initial dividend to shareholders was reduced to 4 per cent. Ten per cent of the remainder continued to be allotted to the reserve and an additional small amount was allowed for pensions. Half of what was left went to the State and half to the shareholders until the total dividend of the latter reached 6 per cent. Beyond this point the State took two-thirds. The profits of the two Governments during the continuance of the charter were to be devoted to the reduction of the debt of 80,000,000 florins to the bank.^a The share of the State in the profits was no

^a Zuckerkandl: The Austro-Hungarian Bank, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 586, p. 94.

longer to be divided between Austria and Hungary in the ratio of 70 to 30, because Hungary had gained materially over Austria in volume of business. The Hungarian Government made it a condition of entering into the negotiations regarding the renewal of the charter that its share of the profits should be in proportion to the earnings of the bank in Hungary.^b

^b *Ibid.*, p. 109.

Under the distribution fixed by the law of 1899, net profits in 1907 were 29,925,536 crowns (\$6,075,000), of which the shareholders received 16,119,640 crowns (\$3,275,000), or at the rate of 7.67 per cent, while the State received 11,228,216 crowns. There was also paid on account of excess circulation above the authorized limit 1,886,460 crowns, bringing up the total receipts of the State from these sources to 13,114,676 crowns (\$2,662,000). The earnings for this year, however, were swollen by the high discount rate of the autumn pressure caused by the reaction of the panic in America. In 1910 net profits fell to 21,143,444 crowns (\$4,292,000), which permitted dividends to shareholders of 13,545,000 crowns, or 6.45 per cent, and payments to the State of 6,076,153 crowns, in addition to allotments to surplus and pension funds. The amount paid the State under the 5 per cent tax on excess note issues was 2,793,700 marks, bringing up total payments to the State on these items to 8,869,854 crowns (\$1,800,000).

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In the case of the National Bank of Belgium a heavy burden is assumed by the gratuitous services rendered by the bank to the treasury. In special taxes the law follows the principles of the German law, but is somewhat more favorable to the shareholders. Under the extension of the charter which was made in 1872 the bank was required to pay a patent tax on the gross volume of business, a stamp tax on note issues, and a tax of one-quarter of 1 per cent semiannually on the circulation in excess of 275,000,000 francs. These provisions were continued by the law of March 26, 1900. The other principal taxes levied by the law of 1872 were one-quarter of the net profits of the bank after a dividend of 6 per cent and the entire excess of receipts from discounts above a rate of 5 per cent. The tax on excess circulation—amounting to one-half of 1 per cent per year—has been a source of increasing revenue with the increase of the issues of the bank and the substitution of small notes for metallic currency in circulation. The amount received from the tax increased from 413,000 francs in 1888 to 851,173 francs in 1895, and 2,326,937 francs (\$449,000) for 1908. Commenting upon this tendency to increase, the Minister of Finance declared, in the debates on the renewal of the charter in 1898, that the clause imposing a duty upon the circulation was eminently favorable to the State, because it guaranteed a sure return to the treasury, whatever might be the net profits realized by the bank.⁶

⁶ Charles A. Conant: *The National Bank of Belgium, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 400, pp. 132-134.*

61 NJ

MONO. SEC.

The other two provisions of the old charter, providing for the apportionment of net profits and the payment to the Government of the earnings from a high discount rate, were radically changed in 1900. Under the new provisions the initial dividend to the stockholders before division with the state, which had been 6 per cent, was reduced to 4 per cent. After this amount had been allotted, one-quarter of the remaining profits was to go to the state and the remaining three-quarters was left to the shareholders. While this provision was much more favorable to the shareholders than that of the German law, it was more severe than the original charter of the Bank of Belgium. Under the law of 1850, by which the initial allotment of dividends to the shareholders was 6 per cent, the amount of the participation of the state above this amount was only one-sixth. The lightness of this levy was based upon the fact that the institution was necessary to the Government of Belgium when it was established and was still in the stage of experiment. By the renewal of the charter in 1872, the dividend allotted to the shareholders before participation by the state was left at 6 per cent, but the share of the state in the remaining profits was increased from one-sixth to one-quarter. The total allotments of profits to the state from the beginning of 1873 to the close of 1899 were 31,104,864 francs, affording an annual average of 1,152,032 francs (\$223,000).^a The

^a *Ibid.*, p. 135.

amount going to the state in 1908 under the law of 1900 was 2,635,491 francs (\$509,000).

In respect to the payment into the public treasury of the excess of profits from the discount rate above a fixed point, the law of 1900 changes this rate from 5 per cent to 3½ per cent. The returns for circulating capital had been so low in Europe for many years prior to the debates of 1900 that there were only six years between 1873 and 1897 in which the discount rate of the National Bank was at any time above 5 per cent. The largest amount collected under this tax, while the untaxed rate of discount was still at 5 per cent, was in 1873, when the amount paid into the public treasury was 1,336,338 francs (\$258,000). This was more than the entire amount collected in the other five years in which such a tax came into operation, the total collections up to 1899 having been 2,330,182 francs (\$450,000). It was declared during the debates that if the discount rate was raised to an abnormal figure, it was important that the action of the bank should be free from suspicion. Changes in the condition of the international money market made the collections under this tax much larger than was anticipated. The year 1905 witnessed such pressure in the money market that the proceeds of the excess discount rate paid into the public treasury were 471,269 francs; in 1906, 2,025,989 francs; in 1907, 7,002,541 francs; and in 1908, 1,258,706 francs. The total collections during the nine years ending with 1908 were 13,665,788 francs (\$2,635,000).

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In the case of the Bank of The Netherlands the system of a division of profits with the state has been given wide scope in recent years. Under the law of 1898 dividends of 5 per cent were to be paid to the shareholders, even if it was necessary to levy upon the reserve funds to make up the amount. After such payment, 10 per cent of the remainder was to go to the reserve fund until it should attain 25 per cent of capital. The remaining profits were to be divided equally between the state and the shareholders until the dividend of the latter reached 7 per cent. Beyond this point they were to receive only one-third and the state the remaining two-thirds. Under the law of 1903 the initial dividend was reduced to $3\frac{1}{2}$ per cent, 10 per cent of the remainder still going to surplus and 3 per cent of what was left to the managers and supervisors. After this allotment the remaining profits were to be distributed in the proportion of two-thirds to the state and one-third to the shareholders. In the fiscal year 1907 the share of the Government in the profits was 3,397,349 florins (\$1,350,000).^a

^a Van der Borcht: The Bank of the Netherlands, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 586, p. 46.

In the charter of the Swiss National Bank, the division of profits follows substantially the lines of the laws of Germany, Austria-Hungary, Belgium, and The Netherlands, but contains some special provisions growing out of the federal character of the Government. The amendment adopted in 1891 to article 39 of the federal constitution provided that the profits of the proposed central bank, after the deduction of an equitable rate of interest on the capital, should be paid to the cantons in the proportion of at least two-thirds. The provisions of the law of 1905 were that 10 per cent of net profits should be transferred annually to the surplus, but not to a greater amount than 500,000 francs. A dividend of 4 per cent was then assigned to the paid-up capital. Out of the remaining amount the compensation payable to the cantons is to be provided for, after which the dividend to the capital may be increased to a maximum of $4\frac{1}{2}$ per cent. The remainder goes to the cantons and the confederation in the proportion of two-thirds to the former and one-third to the latter.^b

^b Julius Landmann: The Swiss Banking Law, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 401, pp. 150-152.

62 NJ MONO. SEC.

In the case of the Bank of Italy the involved condition of the banks at the time of the crisis of 1893 led to many complicated provisions regarding the note tax, which will not be discussed in detail here. New legislation in 1908 provided that after January 1, 1909, a dividend of 5 per cent of the net profits of the Bank of Italy should be allotted to shareholders, after which one-third should go to the state, but that if the dividend to the shareholders under this provision should carry their total dividend above 6 per cent one-half of the excess should go to the state.^a

^a Carlo F. Ferraris: *The Italian Banks of Issue*, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 575, pp. 250-254 and 275-276.

In the case of the Bank of Norway, although the state is a large shareholder, the policy of limiting dividends was adopted by the law of 1900. The initial allotment to shareholders is 6 per cent. Of the excess, 10 per cent is added to the reserve funds and the remainder is divided equally between the state and the share capital until the proportion of the shareholders reaches 10 per cent, when three-quarters of the remainder goes to the state.^b

^b *Bulletin de Statistique*, October, 1901, L., p. 437.

In Denmark the National Danish Bank is acting under a law of July 12, 1907, which provides that the institution shall pay 750,000 crowns (\$200,000) from its profits into the public treasury before paying a dividend to shareholders, and after paying such a dividend to the amount of 6 per cent shall pay into the public treasury one-quarter of the remaining profits.

In Portugal, under the law authorizing the Bank of Portugal to unify the circulation, in 1891, a dividend of 7 per cent is first allotted to the shareholders of the bank, and after a levy of at least 5 per cent has been made for the ordinary and extraordinary reserves the remaining profits are divided equally between the state and the shareholders.^c

^c Raphael Georges-Lévy, *Banques d'Emission et Trésors Publics*, Paris, 1911, p. 165.

The shareholders of the National Bank of Roumania receive a dividend of 6 per cent, after which 20 per cent of what remains goes to the state. This proportion will be increased after 1913 to 30 per cent.

CHAPTER IX.—THE GOVERNMENT OF EUROPEAN BANKS.

With the exception of the Bank of England, the government of European banks of issue is interwoven more or less closely with the state. In only three cases—Russia, Sweden, and Bulgaria—is the bank actually the property of the Government. In a few other cases the Government owns or has owned some of the shares. Whatever the form of ownership, however, the government in nearly every case selects the governor and deputy governors of the bank.

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In those cases where the Government is the actual owner of a bank, care has been taken to separate the institution from government operations and have it conducted as nearly as possible according to the methods and policy of joint-stock banks. As a bank directly owned by the Government is not likely to be considered seriously in the United States, it is intended to discuss more fully the operation of those important banks—like the Bank of France, the Imperial Bank of Germany, the Austro-Hungarian Bank, the National Bank of Belgium, and the Bank of The Netherlands—which are typical of the methods of central banking which are generally accepted among European statesmen and economists as representing the proper and sound degree of intervention by the state in the business of commercial banking and the regulation of the currency supply. Hence there will be set forth the character of the administrative organization of the more prominent of the European banks, and especially those which have been relatively free from abuse of their privileges by the Government in the form of excessive loans and the use of the power of note issue to meet government needs instead of commercial needs.

63 NJ MONO. SEC.

In the case of the Bank of England the Government, in the words of one of the officers to members of the commission, "has no voice in the management of the bank, nor does it own any stock."^a The supreme control of the

^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 8.

affairs of the institution rests with the governor, deputy governor, and a court of 24 directors, who are elected annually by the shareholders. It is customary for the governor and deputy governor to be reelected, at the close of their first year of office, to the same positions for a further term of one year, and the deputy governor is usually elected to the office of governor after the completion of two years' tenure of his position. The governor, while directing the general policy of the bank and supervising and controlling the whole of its affairs, devotes his attention chiefly to the business of the head office, while the deputy governor concerns himself more particularly with the business of the branches and the maintenance of the bank's various premises.

The holders of bank stock, who are called "the proprietors," constitute, when they formally meet, the general court, which elects the governor, deputy governor, and directors, and may make by-laws for the conduct of the bank's business, provided that such by-laws are not repugnant to the laws of the Kingdom. There are half-yearly meetings of the general court for receiving reports and for the declaration of dividends. To have a vote a proprietor must hold £500 of stock, but no matter how much additional stock he may hold he has no more than one vote. There is no limit to the number of shares which may be held by any one person, and the approval of the bank is not required for a transfer of stock. Directors are usually reelected. There is no legal restriction as to the class from which they may be selected, except that they must be "natural-born subjects of England, or naturalized;" but in actual practice the selection is confined to those who are or have been members of mercantile or financial houses, excluding bankers, brokers, bill discounters, or directors of other banks operating in the United Kingdom. There is no inspection or supervision of the bank by the Government, but by act of Parliament the bank is required to furnish weekly statements of its position to the chancellor of the exchequer and to the commissioners of stamps and taxes.

In the case of the Bank of France the bank is legally a private establishment. The Government does not own any of the shares. The capital of 182,500,000 francs (\$35,225,000) is divided between 30,000 holders, of whom about 10,000 have not more than one share. Only the 200 largest shareholders are allowed to vote for the general council of the bank—its regents and its censors. The shareholders meet only once a year, on the last Thursday in January, and at that time elect or reelect the board of regents and three censors. Five of the regents and the

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The governor and the two deputy governors are named by a decree of the President of the Republic, on the proposal of the Minister of Finance. Their terms of service are not for any fixed period, and they are removable by the Government. The managers of branches are named by decree of the President, on the report of the Minister of Finance, upon the presentation of three candidates by the governor of the bank. Thus all these executive officers represent directly the influence of the Government, and in practice prominent government officials have usually been appointed to the higher places when vacancies occurred. The present governor, M. Georges Pallain, was connected with the customs administration prior to his appointment as the successor of M. Magnin in 1897.

Notwithstanding this potent influence of the state in the government of the bank, there have never been serious charges of its abuse for political purposes. Upon this subject the governor of the bank said, in his conference with members of the commission:^a

^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, p. 189.

"No charge has ever been made that the bank favored or aided any political party. There is never any claim that politics enters in any degree into the management of the bank. Except for the renewal of the charter in 1897, no legislation affecting the bank has been enacted since 1857. There is no sentiment for any change in banking methods nor for any new legislation. It should be added that neither the governor nor deputy governor is permitted to be a member of either body of Parliament."

64 NJ

MONO. SEC. 

The regents correspond practically to the board of directors in an American institution and meet usually once a week. In order to define clearly their power to confine the bank to its character as a commercial institution, this board alone decides upon changes in the rate of discount. The governor can not change the rate without the approval of the regents. Each regent has one vote and decisions are taken by a majority. Notwithstanding the authority of the board over the discount rate, it was intimated by M. Rouland, who was governor of the bank at the time of the official inquiry of 1865, that it had not perhaps happened twice in sixty-two years that the proposal to change the rate of discount had come from the council. The fact that it had originated with the active officers of the bank, however, was emphasized not to demonstrate unwarranted governmental dictation, but to indicate that the financial judgment of the officers and of the board of regents was usually in accord. It was the function of the persons chosen by the state, according to M. Rouland, to see that the business of the bank was carried on for the public advantage. It was their duty to see that the statutes were not overstepped, and that the interests of trade and commerce were attended to. "Nothing of any description which concerns the great interests of the public," he declared, "nothing which concerns the larger duties which the bank has to perform toward commerce and industry, nothing of all that class of business is left to the discretion of the interested party."^a M. Rouland

^a Palgrave: Bank Rate and the Money Market, p. 147.

proceeded to add that the two portions of the governmental body had always worked together in the most perfect harmony and that in this harmony consisted the security of the institution.

In the case of the Imperial Bank of Germany, whose capital was fixed in 1899 at 180,000,000 marks (\$42,750,000), the shares are owned entirely by private individuals, a considerable portion of them in Holland. The administration of the bank is in some respects more completely centralized in the hands of the Government than in the case of the Bank of France. The administration is carried on by three boards—first, the curatorium; second, the direktorium (president and managers); third, the central ausschuss, or governing committee. The curatorium is composed of five members, one being the chancellor of the Empire, who is chairman. The second member is appointed by the Emperor, and has usually been the Prussian minister of finance. The three additional members are appointed by the Bundesrath (Federal Council) from among its own members. This board meets once in three months. The chancellor does not usually attend, but is represented by a substitute appointed by the Emperor, usually in the person of the imperial minister of the interior. The chancellor has supreme power, but he has never exercised it but once in the history of the bank. On that occasion he demanded that the bank should not receive Russian securities as collateral for loans—an order which has since been annulled.

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The so-called directorate consists of the president, the vice-president, and seven active managers of the different departments of the bank. The president and other members of the management are recommended by the Bundesrath to the Emperor, who makes the appointments. In case of the managers, the advice of the central committee is also considered. The power of the directorate is thus defined by the statute:^a

^a Bank act of Mar. 14, 1875, sec. 27; German Imperial Banking Laws, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 574, p. 45.

“The Reichsbank board of directors is the managing and executive authority, as well as the official representative, of the Reichsbank.”

The third body, the central ausschuss, is composed of fifteen shareholders, who are elected at the annual meeting of the shareholders, with fifteen alternates, who serve in the absence of the regular members of the board. The functions of this body were thus described by officers of the bank in an interview with members of the commission:^b

^b Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, pp. 336-337.

“This body meets once a month. From among their number they appoint a subcommittee, known as deputies of the central ausschuss, of three members and three alternates. The deputies meet weekly with the president and directors. The central ausschuss are made familiar with the transactions carried on by the bank and give their advice and recommendations to the direktorium in reference thereto. In practice, their advice is generally carefully considered and taken. In two points they are given actual power: (1) They have the authority to limit the amount of securities which may be purchased by the bank, not as to the character, but as to the amount. (2) They have the power to veto any proposed transactions with the Empire, or any State of the Empire, if such transactions run counter to the general conditions of business. The point of this is that the chancellor might request of the bank loans for the Empire, or for States of the Empire, for the purpose of carrying into effect certain plans, and the central ausschuss have the power of vetoing any such action.

65 NJ MONO. SEC.

"The management is so constituted that the government has actual and final control through the Curatorium. The business of the bank is transacted by the second body, the Direktorium. In the fixing of the bank rate it is their custom to call a special meeting, if need be, of the Central Ausschuss, who always confer in regard to the advisability of a change in the bank rate. The final power, however, lies with the directors, who usually follow the advice of the Central Ausschuss, but who have at times disregarded it."

It was also declared, in this conference with the Commission, that there had been no lack of harmony between the Central Ausschuss and the management, in spite of the exceptional cases when the advice of the former was not followed. The official force of the bank, although paid from the funds of the institution, are subject to the same obligations and enjoy the same privileges as the official employees of the Empire. They are accorded honors and pensions, benefits are voted to the families of deceased employees, the number of posts and the salaries are included in the imperial budget, and the accounts are subject to the control of the accounting officers of the Empire. The employees of the bank, moreover, are forbidden by law to hold stock in the institution.^a

^a Bank act of Mar. 14, 1875, sec. 28; German Imperial Banking Laws, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 574, p. 45.

Contrary to the provisions of the charters of some other important banks, the shareholders of the German Bank are allowed to vote in the general meeting even if holders of only a single share. The number of votes which each person may cast is determined by the face value of his shares, but no single shareholder may cast more than 300 votes. Prior to 1899, when the minimum share was 3,000 marks (\$714), each of these shares had one vote, but after the issue of shares for 1,000 marks under the law of 1899, which were allowed one vote, the shares of 3,000 marks were given three votes in order to maintain the same proportionate voting power.^b

^b German Imperial Banking Laws, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 574, pp. 52, 84 (note 126), and 99.

In the case of the Austro-Hungarian Bank the method of government is similar to that of the Imperial Bank of Germany, but has been modified in some respects to meet the requirements of the dual monarchy. The governor of the bank is named by the Emperor upon the joint nomination of the finance ministers of Austria and Hungary, and two vice-governors and two deputy vice-governors are appointed by the Emperor on the nomination of the respective ministers of finance of the two countries. The two vice-governors had been appointed by the Emperor previous to the revision of the charter in 1899 from a list submitted by the general council, but under the revised charter the transfer of their nomination to the ministers

appointed by the Emperor on the nomination of the respective ministers of finance of the two countries. The two vice-governors had been appointed by the Emperor previous to the revision of the charter in 1899 from a list submitted by the general council, but under the revised charter the transfer of their nomination to the ministers of finance was one of several measures taken to increase the degree of governmental control over the bank.^a

^a Zuckerkandl: The Austro-Hungarian Bank, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 586, p. 104.

It was provided, further, that the resolutions of the general council, the executive committee, and the various standing committees of the general council must receive the approval of the governor in order to become effective and that the resolutions of the two official boards (at Vienna and Budapest) must be submitted to the presiding officer; that is, to the vice-governor or his deputy. The two government commissaries charged with supervising the operations of the bank on behalf of the State were empowered to take part in the deliberations of the executive committee and the standing committees. It was made the duty of each of these officials to protest against any resolutions of the general assembly of the shareholders, the general council, the executive committee, the standing committee, or the management which he might consider opposed to the interests of that part of the monarchy which he represented. The commissaries were to be permitted to acquaint themselves with the details of the management of the bank. The new statutes provided that the governor, the vice-governors, and the deputy vice-governors should be appointed for a term of five years only, but might be reappointed.

66 NJ MONO. SEC.

The central managing body of the Austro-Hungarian Bank is styled the general council and consists of the governor, the vice governors, and deputy vice governors, whose functions have been already described, and of 12 members elected by the shareholders, of whom six must be Austrian citizens and six Hungarians. The executive committee and other committees are equally divided between the two nationalities, and general meetings are held as far as practicable alternately at Vienna and Budapest. At each of the two divisions of the bank—at Vienna and Budapest—the directorate is made up of the local vice governor, the deputy vice governor, and the 6 national members of the general council elected by the shareholders. Those having a right to participate in the general assembly of the shareholders must have at least 20 shares.^a

^a *Ibid.*, p. 85.

The management of the National Bank of Belgium is in the hands of a governor and six directors, or managers, who make up the administrative council. The governor is appointed, suspended, and dismissed by the King. The six directors are elected by the shareholders. The shareholders also elect the council of censors, a supervisory body which inspects the accounts and whose approval is required for important measures of policy.

The governor represents the state in its control over the operations of the bank. He is appointed for five years and may be reappointed indefinitely. He can not be a member of the legislative body or draw a state pension. He has the right to suspend the taking effect of decisions made by the administrative council, in order to submit them to the general assembly of the shareholders, which he may call on urgent occasions. The governor has the casting vote in meetings of the administrative council. He represents the council in the courts and has authority over all the agents of the bank and can suspend them without reference to the council. He must own 50 shares of the bank's stock as security for the performance of his duty. The King selects a vice governor from among the directors, who acts instead of the governor in case of the latter's absence, incapacity, or suspension.

The six directors chosen by the general assembly of the shareholders must be Belgian citizens (native-born or naturalized) and reside in Brussels. They are appointed for six years and may be reelected. Each director must own at least 25 shares in the National Bank, and none of them can belong to the administrative council of any other bank. Besides their general functions, each is intrusted with the control of one department or more of the bank and has authority over the employees under him. The censors are named by the general assembly of the shareholders for terms of three years—three going out the first year, two the second, and two the third. Each censor is required to hold ten shares of bank stock. They meet at the call of the governor of the bank whenever conditions make it desirable, but not less often than once a month.

The governor, directors, and censors constitute the general council, which meets on the last Saturday of each month. The general council exercises supervision over the situation of the bank, acts on questions relating to the regulations, apportions profits, and controls matters

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The governor, directors, and censors constitute the general council, which meets on the last Saturday of each month. The general council exercises supervision over the situation of the bank, acts on questions relating to the regulations, apports profits, and controls matters relating to the manufacture and issue of notes. It selects a discount committee from among merchants or old clients, which examines the paper presented for discount and determines what to accept and what to reject. There is a Government commissioner, appointed by the state, but whose salary is paid by the bank, to exercise the functions of a comptroller, with regard to discounts and the note circulation. He has the right to attend meetings of the various boards of the bank, including the general assembly, and to speak at such meetings, but not to vote.

The general assembly of the shareholders, which meets twice a year or oftener, is limited to those shareholders who possess at least 10 registered shares. A shareholder can be represented by proxy only by another shareholder entitled to vote. No one is allowed more than five votes as a shareholder, whatever may be the number of his shares, nor more than five votes as attorney, whatever may be the number of his principals.^a

^a Charles A. Conant: The National Bank of Belgium, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 400, pp. 102-106.

67 NJ

MONO. SEC.

At the Bank of The Netherlands the active management is exercised by a directorate, consisting of the president, five directors or managers, and a secretary. The president and secretary are permanent officers and are appointed and removed by the sovereign. Since the revision of the charter in 1888, the five directors have been elected by the shareholders for a term of five years, but not all at the same time. Official supervision over the bank has been exercised since 1863 by a royal commissioner. The shareholders are represented by the general assembly, in which the ownership of five shares is necessary to a vote and every additional ten shares confers the right to one additional vote. The general assembly chooses fifteen bank commissaries, who constitute a sort of supervisory council. They are chosen for a term of five years, one-fifth retiring annually.^a

^a Van der Borcht: The Bank of The Netherlands, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 586, p. 47.

The National Swiss Bank is linked rather closely with the Government by reason of the participation of the Cantons in its ownership. The council of the bank is composed of forty members, appointed for four years, of whom fifteen are designated by the general meeting of the shareholders and twenty-five by the federal council of the Republic. The federal council selects the president and vice-president of the bank, who are members of the bank council. The general meeting of the shareholders then nominates its fifteen members and gives notice to the federal council of these nominations. The federal council then proceeds to the nomination of twenty-three other members, of which not more than five can be members of the federal chambers and not more than five members of the governments of the Cantons. In the choice of these twenty-three members equitable representation is sought of the leading banking cities and the principal centers of commerce and industry. The members of the council are not required to deposit shares in the bank as qualifications for membership. The president serves for four years.^a

^a Interviews on Banking and Currency Systems, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 405, pp. 506-507.

Thus a large majority of the governing board owes its selection to the federal council, but the membership is restricted in part to those connected with commerce and industry. This ratio of influence in the selection of the board is based in a measure on the distribution of the capital of the bank, of which two-fifths was assigned to the Cantons and one-fifth to the existing banks of issue.^b

^b Julius Landmann: The Swiss Banking Law, National Monetary Commission, 1910, 61st Cong., 2d sess., S. Doc. No. 401, p. 136.

The general assembly of the shareholders meets once a year. Each shareholder is entitled to one vote per share, but no private shareholder is entitled to more than 100 votes.^c

^c *Ibid.*, p. 192.