

61ST CONGRESS }
2d Session }

SENATE

{ DOCUMENT
{ No. 593

NATIONAL MONETARY COMMISSION

The German Great Banks and
Their Concentration

in connection with

The Economic Development of
Germany

By

DR. J. RIESSER

Geheimer Justizrat and Professor at the University of Berlin

Third edition completely revised and enlarged



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PREFACE.

In publishing the third edition of the present book, which first appeared in 1905, the author has tried to comply with the general wish to avoid as much as possible the mere reproduction of the text of the ten lectures on which the early editions were originally based. Instead of this, the present edition marks the partial realization of the idea of the larger work which the author has constantly had in mind from the very beginning.

The author has tried to fulfil the expectation and wishes of the critics (whose suggestions are always welcome) to the best of his ability and so far as the time at his disposal permitted. The present edition has been completely reshaped and considerably enlarged—as indicated in the title of the book—although the fundamental features of the work and the particular treatment of the concentration movement have been retained.

For this purpose it became necessary in the first place to enlarge on the description of German economic development from 1848 to 1870, and from 1870 up to the present day, in so far as this development exercised a determining influence on the growth of German banking. In the second place an attempt has been made, as far as existing material permitted, to present in nearly every chapter the separate development of each great bank, without, however, obscuring the picture of the general development.

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In a separate chapter a comprehensive view is given of the general management and development of the six great Berlin banks. Accordingly it also became necessary to present a systematic description of the most important debit and credit transactions of the banks. This permitted the generally desired and fully justified examination of the question whether and to what extent the German great banks have actually fulfilled in the interests of the community the important and numerous tasks set forth in the introductory chapter.

In discussing the credit and debit business of the banks it became possible also to devote some space to the treatment of questions of technical methods and business policy, which had been entirely kept out from the earlier editions.

It will be found that the chapter (VIII) devoted to the analysis and criticism of the reform proposals in the field of bank deposits, which were discussed quite fully even in the first edition, has been greatly enlarged, for the reason that these proposals may be said to occupy at present the center of German banking discussion. A further reason was that in the meantime the views of the various experts have been published, as presented before the Bank Inquiry Commission, of which the author was a member. An analysis and appreciation of these views seemed therefore pertinent.

Another subject which had to be passed over lightly in the former editions—though against the wishes of the author—viz, industrial concentration and the influence which the concentration of banking exercises on it, has now been treated in greater detail. However, for lack of

Preface

space this chapter even now is limited to a study of this movement in a few typical and specially important branches of industry.

Suggestions as to form have also been adopted as far as possible. Much discursive matter, hitherto contained in the notes, has been incorporated in the text. On the other hand large statistical tables, which formerly were part of the text, and thus broke up the continuity of presentation, have been removed to the end of the book in the form of appendices.

A series of what I consider very important statistical appendices has been substituted for those printed in the earlier editions. For the preparation and checking of these tables I desire to express my best thanks to Dr. Berthold Breslauer, of Berlin, the editor of the statistical part of the *Bank Archiv*. The tables showing the amount of listed securities issued by the six great Berlin banks—constituting Appendices V and VI—for the first time provide complete material based on official data concerning this important subject.

Appendix VIII—treating of the course of the concentration movement in the case of the eight greatest Berlin banks—has been brought down to December 31, 1908.

It is hoped that the book in its new shape will meet with the same friendly reception which has been accorded to its earlier editions and that it will be found a reliable reference work, equally free from fulsome commendation and from undue depreciation of the work of the German credit banks.

ROME, April, 1909.

TRANSLATOR'S NOTE.

Prof. Riesser's work, *Die deutschen Grossbanken und ihre Konzentration*, of which the present volume is a translation, gives the most recent and fullest account of the development, present organization, and practices of the more important German so-called credit banks, particularly the six largest banks, which, with the possible exception of one, may be said to have their central office in Berlin. The name *credit bank*, which has been retained in the translation, in no way characterizes the actual scope of activity of these banks, but is the term used in recent German banking literature to differentiate the commercial joint-stock and kindred banks without the note-issue privilege from other banks having a more restricted and special field of operations, such as the mortgage banks, the mutual or cooperative banks, the savings banks, etc.

The book abounds in technical legal and banking terminology, for which no exact equivalents in English exist. In numerous cases no translation was attempted. In other cases where the terms occur frequently throughout the volume, a choice of an English equivalent, though more or less arbitrary, had to be made. This applies particularly to the term *Depositen*, the definition of which the author declares to be impracticable. (See p. 196 et seq.) In German bank statements different meanings are attached to the term by various institutions, the only common feature being that interest is allowed on these "deposits."

Translator's Note

An important function of the German credit banks is the financing of corporations and the selling to the public of the newly created securities of these corporations. Throughout the volume this latter practice has been designated as the *issuing* activity of the credit banks. The success of these operations depends largely upon the "issue credit" of the bank—i. e., the confidence of the investing public in the soundness of the securities offered by the bank. In several cases a literal translation of German technical terms seemed entirely proper, though such terms as *pure* and *mixed* works (p. 175), *mine furnaces*, *furnace mines* (p. 369), *heavy industry*, and the like, even with proper explanations in the text, may be regarded by some as literary barbarisms.

The proofs of the translation have been submitted to the author, who made several changes in the text which do not appear in the German original. The figures bearing upon American banking have been revised and brought up to date. Thankful acknowledgment is due to Dr. Robert Stein, of Washington, D. C., and Dr. H. G. Friedman, of New York City, for valuable help rendered to the translator.

MORRIS JACOBSON.

WASHINGTON, D. C., *August, 1911.*

THE GERMAN GREAT BANKS AND THEIR CONCENTRATION.

PART I.

INTRODUCTION—THE TASKS OF BANKS IN ECONOMIC LIFE.

(I) GENERAL CONSIDERATIONS.

Walther Lotz, in his excellent book on the methods of floating securities (*Die Technik des Emissionengeschäfts*, 1890), makes the following statement (p. 60):

“One of the most prominent financiers in Berlin once remarked to me that his profession was not affected by the social question, which was usually regarded as the most important factor in economic development, and that the speculative banks adopted a neutral attitude toward it.”

To my mind this statement proves that the Berlin financier in question has strangely misconceived the position and duties of German banking within the realm of “capitalistic economics.”¹ To prove this in detail is neither the least nor the most unimportant aim of the present work.

Within the range of capitalistic economics there is a whole series of important and special economic tasks devolving on banks and bankers.

To begin with, the funds are capital in the popular sense of the word (that is, sums of money constituting com-

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ponent parts of wealth to be devoted to producing income)² which accumulate in the safes of banks and bankers. It is the bankers' profession and duty not only to take care of the capital, but to turn it to good account, i. e., to make it productive, particularly by placing it at the disposal of others for industrial and other purposes.³

Banks have to receive the funds placed at their disposal for the purpose of investment and profitable utilisation, and to direct them into proper channels through the granting of credit.

The bank enters into relations on the one hand with the capitalist who entrusts to it his available money for productive investment and thus becomes its creditor, and on the other hand, with entrepreneurs and others who receive money for their ventures, and thus become its debtors.

The part which a bank plays in its relations between capitalists and persons engaged in various enterprises is similar and as important as that of the trader who acts as independent middleman between producer and consumer, and who participates in the increase of values by transporting goods with or without intermediate manufacture from districts where supply is plentiful to districts where demand is great.

The so-called regular or current banking business is confined to the acceptance and granting of such or similar credit (so-called credit and debit transactions). It includes deposits, current accounts, bill, contango, lombard, and commission business.

The tasks involve, as far as is practicable within such limits, the direct furtherance of the power of production of

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all industries, including (after what has been said above) commerce,⁴ and indirectly the furtherance of the purchasing power of all classes of the community.⁵ They necessitate endeavors for the investment of surplus capital in a suitable and economic manner, and its utilisation for credit transactions.

In the next place, banks and bankers have to provide for a sound and constant regulation of the circulation of money and the adjustment of money settlements in so far as these functions do not fall within the province of special public banks. They also have to provide for a banking organisation of the whole commercial system of payment, and above all for an increase of those forms of settlement which tend to take the place of cash: in particular the employment of checks, transfers (*giro*), and bank clearing.⁶ Finally, they have to establish organic relations between the systems of credit and payment, by using their credit to convert the claims of their customers in the shape of bills, checks, money orders, etc., into current paper, and thus into ready money, using this latter for the purpose of meeting payment on matured obligations.⁷

The historical development of German banking, however, has considerably enlarged the scope of these duties.

The transformation effected since the middle of the nineteenth century in the whole system of communications through the use of steam for ships and railways (see p. 34), and the revolution in many industrial branches, caused by the appearance of the steam engine, in conjunction with the creation of a large and unified German economic territory through the customs union of the Ger-

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man States (*Zollverein*, 1833), paved the way for the expansion and world-wide aspirations of German industry, and thus gave the impulse to large-scale production in many branches of industry.

Thus it became necessary that capital as well as credit should be devoted to the building of plants and works in sums and for periods hitherto seldom required, if production on a large scale was to be maintained and extended. This could only be made possible by the issue of shares or debentures.

The joint stock company proving the most reliable ally of trade and industry, conducted on a large scale, it became necessary to transform private concerns into joint stock companies and to establish new industrial enterprises in the shape of stock companies, whenever it was desired to increase the credit of existing private concerns, to enlarge or diversify production, or to enable domestic industry to enter into competition with foreign producers.

The general public in Germany, whose funds were meager compared to those of England, was neither able nor willing at this juncture to participate directly or permanently in such ventures as mentioned above. The private individual fought shy of investing his capital in enterprises, and, content with smaller interest, bought government securities.⁸

Adequate assistance for the demands of capital and credit could not be expected from the existing note-issuing banks,⁹ whose increase had long been advocated in the interest of increased facilities of payment, as the extent of their activity was naturally limited by their special functions. In the same manner private bankers, who at

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that time were very powerful, at least in several centers (see below, p. 39), could supply only modest means for such purposes—means which could neither suffice, nor be tied up for any length of time. In addition to this, the organisation of the banking business at that period was in general neither prepared for, nor adapted to operations of such a comprehensive and difficult nature (see below, p. 40).

For these reasons such new and enormous demands could be met only by the creation of special organs, namely joint stock banks, which were called into existence to satisfy these very requirements. In the natural course of things the banks gradually became the professional and expert intermediaries in meeting the new financial wants. This they were able to do only through continuous and systematic study of the money market, as well as of the markets for the newly created securities, especially among their own customers. Moreover, both the continuity of their existence and regard for their own issue credit (*Emissionskredit*), i. e., the permanent ability of maintaining among the German public a market for new securities issued under their auspices, insured a permanent interest on the part of these banks in the newly created undertakings as well as in the securities which they were instrumental in placing on the market.

It is, therefore, too narrow a view, and consequently incorrect, to assume that ⁽¹⁰⁾ "the assistance of the numerous private bankers, equally conspicuous for intelligence and wealth, would have amply sufficed for all the tasks described above," and that the German credit banks grew up solely, or almost exclusively, because the general public

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'rushed madly after the most speculative of securities,' and because of the endeavours made to cater as far as possible to this speculative craze for railway, mining, and foundry shares." It must, however, be acknowledged that these reasons did play a certain part in the matter, especially the desire of the smaller capitalists to participate indirectly in the industries promoted by the new banks by the speculative acquisition of shares in these banks ("speculating on speculation").

It has been said concerning Saxony, that although the number of private banks was large for the time in question, yet "their powers were inadequate to satisfy the credit requirements."¹¹ There is ample testimony to prove that this was not solely a local symptom, and a mere glance at the security issues made during that first period leaves the same impression. Moreover it is stated that it was just among private bankers of that period that "the necessity for concentration of capital was felt the most, and that a remedy was being looked for."¹² We know that the committees which in almost all German States were petitioning for concessions (in Prussia long in vain, as is well known) for the establishment of note issuing and credit banks, were composed for the most part of private bankers.¹³

Schäffle ¹⁴ goes even further in the following statement published in a monograph about 1856:

"When industrial development has reached the stage at which great industries are forced to acquire their capital largely through the gathering of small capitals, special economic organisations must develop on which special functions regarding the initiative in stock transactions

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devolve. Banks for the promotion of such enterprises meet this need.

“As long as these premises for the economic justification of speculative banks have not been scientifically refuted scientists should not allow themselves to be terrified by the mere catchword ‘*crédit mobilier*’, like children by a bogy.”

In this manner then, according to historical development, the stock issuing, promotion, and conversion business in Germany became a regular banking business, i. e., a branch of the regular business of credit banks, which at the same time carried on the so-called current business. On the other hand, in view of the relatively small amount of the available funds for bank investment proper, no attempts were made to establish special deposit banks, as under the circumstances but little profit could be expected from them.

Even those persons who on principle are opposed to the whole capitalistic and industrial development as it manifested itself in Germany during the last decades, and who have no sympathy for this expansion of the regular business of the German banks, but rather deplore and find fault with it, will not be able to alter this course as long as the reasons exist which have led up to this development.

I am convinced that these reasons will continue to exist for some time to come, owing to Germany's rapidly increasing population, her moderate wealth (at least in comparison to other countries), also because of her international position in trade and industry, a position attained with difficulty, but which it will be even harder to maintain permanently.

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It will be seen by the description of the historical development of the sphere of activity of the German banks, that a proper and socially sound administration and organisation of the different departments of banking (especially of the last-mentioned branches), is one of the most important social problems. Moreover as there are as many social problems as there are spheres of social activity, and the various branches of banking are of the utmost importance in the economic life of the nation, the banking problem is closely interwoven with the majority of the other social problems, a fact which is in absolute contradiction with the statement of the eminent financier quoted by Lotz.

2—SPECIAL CONSIDERATIONS.

(a) THE TASKS OF BANKS DURING NORMAL TIMES.

The proposition last enunciated must be proved in detail by a discussion of the main directions of banking activity.

It certainly does not lie within the power of the individual or the legislator, or even of the administration of the largest bank, to arrange matters in such a manner that only the best sides of the capitalistic system may prevail in economic life. It is, however, the most urgent and eminent duty of banks and bankers to endeavor, at least within the scope of their activity, and as far as is within their powers, to effect this as far as practicable, and to see that the profit and loss account of capitalistic economics is closed with a balance in favour of economic progress.

Above all, they must promote all the economic interests of the nation, i. e., the interests of all producing classes

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without distinction, in so far as the services and the credit required by them come within the sphere of banking activity, and do not conflict with the necessary premises of sound banking policy. These latter conditions are determinative of the kind and extent of support which the so-called "credit banks" are in a position to grant to agriculture.

In the next place they have to keep the amount of credit to be granted within reasonable bounds, and to offer, as far as is within their power, the utmost opposition to an unsound demand for credit. The banks must therefore endeavor to obtain at all times a comprehensive and accurate insight into the general conditions of the branches of industry and trade chiefly dependent on them for support, in order to be able to discriminate between necessary requirements and false hankerings after expansion and aggrandizement. They should also be able to intervene, or at least restrain and check, in cases where the form and extent of the credit received cause the fear of unsound development.

Their duties toward the investment-seeking public are those of the honest broker, who, by reason of his experience and expert knowledge, is able to draw attention to the advantages and dangers of investments, and particularly to explain in a purely objective manner the dangers connected with securities yielding excessive interest or dividends.

As regards acceptances, they ought to place their services at their customers' disposal only for economically sound purposes. They should keep the brokerage, the contango and deposit business within normal limits, and,

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as far as it is possible to divine the purposes aimed at, to operate in such a manner that these transactions may not become a cloak for reckless and unsound speculation.

In the issue business they should take particular care not to burden the market by an overproduction of securities or by the promotion of shaky ventures, for thereby they might not only cause heavy loss to the purchasers of such securities, but also inflict lasting and severe injury on their own issue credit.

More especially they should transform only such undertakings into joint stock companies as are naturally suited to that particular form of commercial organisation. Before deciding to promote or transform such undertakings, they should make very cautious estimates regarding the possible profits of these undertakings. In addition to this, they should investigate the financial position of the whole branch of industry, or business concerned, and, as far as possible, form an opinion as to its future prospects and risks. Finally, they should pursue not only a sound dividend policy, but also a proper economic policy; resisting the temptation of momentary profits, they should abstain from business that does not appear economically sound, or might be detrimental to the business interests of the nation.

The problems which the German banks have to solve during ordinary times have become, step by step, more comprehensive, more difficult, and more important. The number of these tasks and the sphere of activity of the German banks have grown with the increasing size, consolidation, and power of the country. The banks, particularly the "great banks," were called upon to lend

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intelligent support to the Reichsbank (founded in 1875-76) in its currency and discount policies, and in its endeavors to introduce and promote "giro," clearing, and check transactions, though this support was not always forthcoming to the full extent. Another task which fell to their lot—and of which they can neither be said to have acquitted themselves quite satisfactorily—was to support the land policy of the government and municipalities by means of the mortgage banks and real-estate companies which they had established against purely speculative and other undertakings which made no allowance for public interests. In countless ways, especially by an active participation in the organisation of state and municipal credit, they were called upon to make possible the accomplishment of important state and administrative tasks, as well as to promote the growth of German towns and the development of German ports, railroads, and highways. They were called upon to organise German inland navigation, as well as to provide for the development of the German railway system, and for the industrial utilisation of electric light and electric power. They had to assist by counsel and deed the business man crossing the seas as pioneer of German trade. It became their function to support the industrial export policy of the nation when it came to be considered in Germany an economic necessity, and to promote the economic development of the colonies, as well as of German cable communications by a series of undertakings not promising immediate returns. They had to strengthen our financial, and with it our political, influence abroad; nor was this done without many a bitter experience. For in this field they met the

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competition of the majority of the great powers in the underwriting of foreign loans, the promoting of foreign undertakings, and the opening of international business relations, with the disadvantage that their rivals had entered the field long before them. By assisting German navigation, and establishing German banks abroad, they imparted to the German name a renown previously undreamed of, thus extending by their activity the sphere of German business and political influence. Finally, by a cautious financial policy, they prepared our financial readiness for war, and for the carrying on of war.

How and to what extent German banks acquitted themselves of all these tasks will be set forth in the following pages.

Difficult and numerous as are the problems of external policy, those of internal policy are no easier. Success in the latter field became conditioned upon the recognition of two principles as the basis of all business activity. Furthermore these principles had to be observed under all vicissitudes, in the hurry of everyday life, in the pursuit of business, and in the finding of ways and means for the carrying out of new and urgent tasks as they continually crop up.

These two principles are: The principle of the distribution of risks, on the one hand, and the principle of the liquidity of assets on the other.

Nearly all the mistakes made in German banking, and the reproaches leveled against it, can be traced back to the violation, or misconception, of these fundamental principles underlying every sound banking policy. The principle of the distribution of risks must be observed in almost

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all branches of banking activity; not only in the granting of short or long credit, but also in the promotion, conversion, emission, and syndicate business. It implies, among other matters, that no single branch of current business shall be exclusively fostered in an excessive and unsound manner at the expense of others; that the entire amount of blank credit, granted after the most careful scrutiny, shall not bear an unsound proportion to the total of secured credit; further, that credit granted to a single undertaking, or branch of industry, shall not be too high; that in case of underwriting and share issues provision shall be made for a fitting distribution of participations; for there is always the possibility of a sudden change in political and economic conditions, as well as of changes in the market which may affect particular cases. It therefore becomes necessary to bear in mind constantly the need of the diminution of risk, even in the most promising ventures and during the most favored state of the market.

The securing and maintaining of the liquidity of the assets is another most essential task incumbent on a banker. Indeed, in view of the variety of claims made on the resources of bankers and banks, and of the multiplicity of aims pursued by them, it is one of the most difficult problems of banking policy. It is all the more difficult, since the establishment of the right proportion of the so-called quick assets to the liabilities, especially to the obligations falling due at any time, or within a certain period, does not always depend solely on the will and discernment of the Bank. Possibilities have constantly to be reckoned with; for instance, that the issue of new

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shares required to restore the necessary liquidity of the bank's resources after a great increase of business is impossible during bad or critical times; that consequently its assets would be tied up just at the very moment when it might be called upon to relieve general embarrassment by proper intervention.

It is, therefore, a matter of necessity to constantly control the liquidity of the resources by frequent general inventories (*Generaldispositionen*)—as is done, for instance, with the greatest care, and at short intervals by the German “great banks”—in addition to the daily cash inventories (*Kassendisposition*),¹⁵ further, to increase the amount of the quick assets by a proper composition of the security and bill holdings; to strengthen both the visible and invisible reserves; and to regulate with the greatest vigilance the extent of the obligations, as well as their proportion to the liquid resources.

It may well be said that, on the whole, the German banks, or at least the greater part of them, and more especially the “great banks” have accomplished and are accomplishing a good deal in this respect. In this way the objections which are continually urged against the inclusion of the deposit business in our banks' spheres of activity are most effectively refuted, or reduced to narrow limits. For there can hardly be any question of “danger” when the deposits, and the other obligations due at short notice are balanced by more than ample security in the shape of the quickest assets, and if, in addition, special caution is exercised in the selection of the securities owned by the bank, as was the case with the Deutsche Bank, which on the last day of its fiscal year (December 31,

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1908) held among its assets some 40,900,000 marks of securities, acceptable for investment in trust funds.

We shall have to go into this question later on in a more detailed manner.¹⁶

(b) THE TASKS OF BANKS DURING CRITICAL TIMES.

If the sphere of activity of the banks, of which naturally only the most important features have been barely outlined, is exceedingly extensive even during normal times, necessitating great discernment, caution, knowledge, and experience, it follows that the extent and difficulty of such tasks becomes considerably augmented during and after those economic crises which all countries experience periodically.

There will probably never be a permanent cessation of crises, any more than there will ever be permanent peace. However, just as it is the duty of diplomats and statesmen constantly to reduce the possibility and probability of wars by the prudent removal, prevention, or mitigation of all disturbances of the political equilibrium, so it is the duty of the directors of the great banks to prevent in an ever-increasing degree the breaking out of crises, to guard against a disturbance of the economic equilibrium as much as can be done by external influence, and by a cautious and preventive business policy in all the above-mentioned spheres of activity.

This implies to a continuously increasing degree an accurate knowledge of the internal conditions of industry, commerce and the exchanges, also of the financial and commodity markets, and the general international situation.

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This duty entails above all a keen perception of those symptoms which, like storm-petrels flying before the storm, act as signals to the experienced observer.

Science, in modern times, with the aid of particularly delicate instruments, has been able to record earthquakes, and with accurate knowledge of the factors determinative of a change of weather (as contained in the reports of meteorological stations) to predict storms and give timely warning to those concerned.

Similarly, undeterred by the course of contemporary events, experienced observers, with the help of modern scientific resources, and knowledge gained from former crises, ought to be able to read disturbances of equilibrium as from an economic seismograph, and thus predict the approach of crises.

The study of the history of crises¹⁷ shows in the most striking manner that, provided the same causes exist, the effects are as similar as if one crisis had "copied" its predecessor, as a schoolboy copies his neighbor's essay, or as a legislator frequently copies the draft of his fellow-legislator's bill. Crises may be defined as lengthy and serious disturbances of the bases of either the production, supply, or market systems, of the payment and credit systems, or of the mutual relations of these systems.

From the history of crises,¹⁸ the knowledge of which I regard as indispensable to every director of a bank, it can be established with certainty that almost without exception every crisis (stock exchange, credit, commercial, production crisis, etc.) is preceded by a more or less rapid rise of the rates for short-time credit, i. e., of the discount rates.

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It will also be noticed that the cause of such a rise in the discount rate is almost invariably an increase in the demand for credit, a demand far exceeding the available resources, which, wherever a central state note bank exists, finds expression in a great increase in the demands made on its funds.

The banks, by virtue of their accurate knowledge of stock exchange conditions, of market quotations, of "reports" and "deports," and of the rates for daily and ultimo money, are best qualified to answer the question whether such an increase in the demand for credit is accompanied by a corresponding increase in stock-exchange speculation. They are also able to draw fairly accurate conclusions, from the extent and kind of bill, acceptance and current account credit required by their customers, as well as from the volume of their report and collateral accounts, as to the existence, or the approach, of such excessive speculation as is likely to cause the outbreak of a crisis on the exchange. The greater their clientele the more reliable are such conclusions.

The approach of an industrial or a commercial crisis can be perceived or inferred not only from general economic conditions, but also from a series of phenomena which take place in the field of bank transactions. The imminence of such crises can be inferred from the rapid growth of the claims made on the credit of the central note bank, and in view of the growing intimacy between industry and the banking world, from a series of occurrences that become reflected in the internal bank management, as well as in the impaired liquidity of the bank's assets and the decrease of available cash resources.

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These symptoms need not manifest themselves in their entirety nor simultaneously. Some of these occurrences are: The increased credit demands, growing by leaps and bounds and becoming more striking each day, and the excessive, and finally complete withdrawals of existing cash deposits. Further, the displacement of short-term credit by long-term credit; the rapid rise in the number of bills due that have to be extended; the constantly increasing offer of securities of an inferior and unsound nature from a banking standpoint. Other signs (though they are at first not easily recognised as such) are the demand by manufacturers of bank credit, especially of acceptance credit, not intended for current operating expenses but for paying dividends, or for considerably augmenting fixed capital, i. e., extension of plant, new machines, premises, etc.¹⁹ Next, the continual demand for advances without any stated reasons, or for veiled purposes; the constantly growing delay in the receipt of payments due, and of the so-called "specifications" in industry (which only gradually become known to the bankers, and seldom to their full extent); the great and rapid changes, especially the sudden rise of prices of raw materials and manufactures; finally, a superabundance of promotions, conversions, and flotations, and the wholesale establishment of subsidiary, affiliated, and trust companies.

Although Helfferich²⁰ has proved (I venture to say with mathematical exactness), that in most cases (especially as regards the last German crisis) the amount of the gold production, gold imports and exports, never had the importance which Sombart ascribed to them; still, like the fluctuations of the rates of exchange and discount (bank

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and private discount), these factors should also be carefully watched.

Finally, important aids have recently been made available which in a characteristic manner—though with some limitations—help to diagnose the approach of industrial or commercial crises. I have in mind the valuable reports first published in Germany by J. Jastrow, the editor of the *Arbeitsmarkt* and later continued in the Official Labor Gazette (*Reichsarbeitsblatt*). These reports give data regarding the labor market, especially the demand and supply at the public labor exchanges and the extent of unemployment. It was these reports I had in mind when I referred above to modern scientific auxiliaries.²¹

Laxity in the observation and appreciation of such causes, especially if produced by ignorance of former crises at home and abroad, is one of the gravest and most fatal mistakes of which bankers can be guilty. It is the less excusable the larger the power and the capital of the bank, the wider the field of economic observation and the greater the influence which may be exercised by means of a prudent business policy.

A deficiency in this respect prevents the bank management from taking measures at the proper time, i. e., before the outbreak of the crisis, and thus if not preventing a crisis, at least mitigating its severity. The extent, nature, and opportuneness of such measures above all serve as a reliable gauge of the efficiency, prudence, and foresight of a bank management.

For, during a crisis, it is difficult, often impossible, to pursue a restrictive business policy, to collect outstanding debts, to call in credits, to decline to discount bills and

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acceptances; indeed such a policy is generally a serious mistake, likely to cause an increase of the extent and intensity of the crisis, for it may give rise to the disastrous notion that money and credit are not merely dear, but are not to be had at all.²² What is required is a preventive policy, a cautious intervention before the outbreak of the crisis. To do this it is necessary to give opportune warnings against drawing bills, increasing engagements, and credit; to make seasonable reference to the above-mentioned indications of the probable approach of a crisis, while making provision at the same time for a slow and prudent though consistent increase in the liquidity of the bank's resources. Provided this is done, the bank can not only await quietly all dangers, but is also able to offer support and aid in the form of discreet help, or energetic and conspicuous intervention in order to prevent or at least lessen and mitigate the collapse of otherwise sound undertakings, temporary embarrassments of clients, and serious disturbances of the market.

In this manner, the suddenness of the outbreak, as well as the extent, duration, and seriousness of a crisis are reduced. A further effect of such a policy is that the crisis is not followed by a period of lingering and latent depression, which is frequently worse than the crisis itself, and which renders recovery, i. e., return to normal conditions, much more difficult. It must be acknowledged, however, that for persons standing in the midst of business and practical life, and who are frequently confronted by occurrences of a contradictory nature, or difficult to fathom, it is far more difficult to perceive the approach of a crisis, than for critics, who *ex post*, or after the outbreak, can

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easily review circumstances and symptoms that have then become clear and connected.

As a general rule, however, threatening signs such as are described above (p. 17) as almost regular harbingers of a crisis, ought to be correctly diagnosed whenever they occur not singly, but as connected or mutually complementary symptoms of a serious affection of the body economic.

It is a *nobile officium*, especially of the great banks, to intervene after the outbreak of a crisis, not only where their own clients or interests are concerned, to lend their support, attempt reconstruction and thus to prevent or at least remedy a serious disturbance of the market by conspicuous and therefore especially efficacious action.

It will always redound to the credit of the great Berlin banks and bankers that through their intervention immediately after the collapse of the *Preussische Hypotheken-Aktienbank*, of the *Deutsche Grundschuldbank* and of the *Pommersche Hypotheken-Aktienbank*, they prevented (with almost immediate and favorable effect) the absolute demoralization of the entire mortgage bond market, and that through the reorganization of these concerns²³ they reduced to a minimum the losses sustained in wide circles on account of the securities issued by these establishments.²⁴ The same applies to their intervention during the catastrophe in Saxony.

(c) THE TASKS OF THE BANKS IN TIME OF WAR AND IN PREPARING FOR WAR (FINANCIAL READINESS FOR WAR AND FINANCIAL CONDUCT OF WAR).²⁵

Banks have also to make timely provision (as far as possible) in times of peace for the eventuality of war.

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The marshaling of financial forces must correspond to that of military forces, and just as military mobilisation is made possible by careful plans made in times of peace, so too the marshalling of financial forces should be facilitated by schemes likewise devised in times of peace. Weaknesses and gaps in the financial mobilisation may be paid for as dearly as mistakes in the tactical deploying of forces, for to both applies what I have said elsewhere, "that it is impossible without severe losses to evolve a battle formation in the face of the enemy."

The most important preparation for financial mobilisation consists in fashioning the credit system in such an elastic manner that in case of war it can cope with the agitated and suddenly increasing calls for credit.

To meet this contingency, reserves must be created in time of peace: reserves of considerable extent which can be realised rapidly, i. e., mobilised. These must include on the one hand a considerable amount of domestic first-class securities, especially government and municipal bonds, which in war times can be pledged, if necessary or desired, at the "war lombard offices" (*Kriegs-Lombard-Kassen*).²⁶ On the other hand, they must include foreign *Goldvaluten*, i. e., bills and other claims receivable abroad in gold, and prime foreign gold securities negotiable on various foreign bourses, consequently possessing an international market.²⁷ Through the realisation of these gold equivalents, and by calling in outstanding debts from abroad, i. e., by utilising these reserves (the value of which in such cases will be comprehended by the veriest layman), a panic will usually be averted.

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The enemy, however, may endeavor to aggravate a panic of this description by the sudden collection of outstanding claims, by an unlimited sale of our home securities, and by other attempts to deprive Germany of gold. Attempts may also be made to dislocate our capital, bill, and security markets, and to menace the basis of our system of credit and payments. Such a panic might easily occur during the first few days after the declaration of war if the impetuous demand for ready cash and cash reserves (*Angstreserven*)²⁸ is not amply and immediately satisfied. The latter demand often leads to precipitate withdrawals of giro and current account balances and of deposits, to the recall of credit, and to the precipitate sales of merchandise and securities.

Accordingly, the banks must endeavor to terminate such conditions as rapidly as possible, as well as to stem the feverish demand for, and the collection of ready money from all depositories, and places of hoarding and storing, so that normal conditions are reestablished, under which all the expedients and substitutes obviating the use of cash will once more assume their normal importance for circulating purposes.

Above all, the business policy described above (p. 20) as indispensable during a crisis, must be pursued in times of tension and agitation, which generally precede a war long before its outbreak. Among others, restrictive measures, such as the withdrawal of credit, the refusal to accept bills, or to discount customers' bills, must be avoided. In the next place, interventions should be made in the market, and all means used for the gradual restoring of public confidence in the solid groundwork of our finance and

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credit systems. It is such confidence which underlies not only the acceptance of all cash substitutes (*Geldsurrogate*), which abound to a far greater degree than ready money, but also the determination to fulfil all pending engagements, or at least to terminate them slowly and cautiously, as well as the resolution not to withdraw deposits, nor to flood the market with securities at extremely low rates, &c.

The "great banks" should coöperate in all these directions, not only by word or through influencing their clients, but by their own example, especially by exercising the greatest reserve in withdrawing their credit balances from the Reichsbank, and in presenting bills for re-discounting.

Besides this, they should aid those "financial precautionary measures" which come within their sphere of activity—i. e., those measures which may be undertaken after the declaration of war in order to ease the market and credit demand and to maintain our gold standard, and the circulation of our bank notes.²⁹

In Germany, as I have endeavoured to prove elsewhere,³⁰ these tasks would be facilitated to some extent during the critical weeks immediately following a declaration of war by the amount of bullion likely to be at our disposal, which includes the "war treasure" of 120,000,000 marks in the Julius tower³¹ at Spandau (this latter, however, would not go far); and by the further fact that the expenses of mobilisation,³² as far as can be judged to-day, could be covered by the issue of bank notes.³³ Another gratifying consequence would be that during this particularly critical time the Government would not have to apply to the Reichsbank with extensive demands for cash; and further, that in so far as the State did not prefer to meet

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its requirements by additional taxes,³⁴ it could await a calmer and more favorable condition of the money market for contracting loans to defray the cost of war.³⁵

The most important consequence of this fact is, that in negotiating such loans,³⁶ the coöperation and good offices of the "great banks" and great banking establishments can be counted on to a far greater degree, and with much more certainty than if the negotiations took place during the days immediately following the declaration of war, when the resources of the banks would be taxed to an extraordinary extent.

It is impossible for the Reichsbank in Germany to execute smoothly and successfully its numerous and difficult tasks in war time without the assistance of the great banks which form such an important factor in the whole economic organisation of the country. The latter, however, must prepare in times of peace in the manner described above, if they are to render effective support during war time. On the other hand, it would be preposterous to demand of them complete "readiness for war," such as would exclude or paralyse the banks' capacities for doing their customary business.³⁷

During the stages of deliberation by the administration of the imperial treasury and the Reichsbank concerning the adoption of the sometimes extremely complicated financial measures for the maintenance of the German currency and credit systems, as well as for affording relief to the market, and facilitating money and credit transactions during war times,³⁸ the directors of the great banks and banking houses by reason of their practical experience, their intimate acquaintance with the situation and the receptive capacity of the money market, particularly

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by reason of their exact knowledge of the requirements and capabilities of their clientele, should be amongst the first called upon to serve as a "financial general-staff" to the imperial treasury and the Reichsbank.

The above presents a broad outline at least of the most essential of the many and gradually increasing duties performed with untiring perseverance by the German banks.³⁹ In order to appreciate their achievements, it should be borne in mind that during the first period (1848-1870) their work and progress was greatly hampered by crises and European wars, by German political impotence and lack of unity, by our lack of capital, and the medley of German monetary and coinage conditions of those years.

I shall now proceed to outline the growth of these duties during the two epochs of general economic development, and the development of the German banks (with particular reference to the great banks). These two clearly marked epochs extend from the middle of the nineteenth century to 1870, and from that year to the present day.

As far as is possible without effacing or obscuring the picture of the general course of development of the German great banks, I shall endeavor to do what I omitted in former editions of this book, namely, to show in what manner, and with what success each individual great bank participated in the common work. Indeed, a thorough and proper appreciation of the course of development of each great bank will become possible only after detailed monograph studies of each of these shall have been published.⁴⁰

The most important works of reference used in this book will be found in the appendix.

PART II.

THE FIRST PERIOD (FROM THE MIDDLE OF THE XIX CENTURY TO THE YEAR 1870).

CHAPTER I.—SKETCH OF THE ECONOMIC CONDITIONS IN GERMANY AT THE TIME OF THE ESTABLISHMENT OF THE OLDEST EXISTING CREDIT BANKS.

In 1848—the beginning of the period about to be discussed—about 200 years had passed since the end of the Thirty Years' War (1618–1648).

Even then, however, Germany, which in consequence of her geographical position from remote ages presented a favorite battlefield for the whole of Europe, had not yet completely recovered from the thorough spoliation and devastation she had undergone.

A re-establishment of her completely ruined trade and of her shattered fortunes was impossible during the period from 1648 to 1815, owing to a series of European wars. These were in particular the campaigns of Louis XIV, the Spanish War of Succession, the Seven Years' War, and the struggles against Napoleon. Those wars and campaigns were once more fought on German soil by powerful enemies, who like Louis XIV seized parts of the country (for instance, Strassburg, 1681), and devastated anew other parts, such as the Palatinate and other Rhenish countries. During the latter years of that period (1806–1815), the wars carried on with changing fortune against Napoleon I, which terminated with his dethronement and

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banishment, prevented the beginning of recovery. It was only during the three decades of undisturbed peace (1815-1848), which preceded the economic epoch about to be described (1848-1870), that the German nation had time to recuperate and to engage in the first attempts to rehabilitate trade, industry, and agriculture.¹

Evidently, it is only possible to outline here the main points in the economic conditions of Germany brought about by this lengthy period of peace, and only in as far as they bear on the development and tasks of German banking.

The population of Germany numbered at that time about 35,000,000, and was not more than that of France (34,500,000). Of capital there was but little; it was estimated that in Prussia there were 720 marks per head of the population, whereas the amount for England was 2,860 marks, according to an estimate made almost simultaneously (1845).² At that period England had almost completed her transition to a great industrial and manufacturing country, supplying more than half of the world's requirements. Her annual coal production at the beginning of the 19th century was about 10,000,000 tons, while that of Germany toward the end of the century was little more than 120,000,000 tons.

In accordance with French example, serfdom, as well as the hereditary subjection of the peasants had ceased in the country during the first half of the 19th century, although its abolition was slow, especially in the east of Germany, where it had been firmly rooted for centuries. The abolition of hereditary subjection did away not only with the obligation to furnish hand and team for the benefit of the

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landlords, but—what proved of even greater and increasing importance—with the obligation on the part of the peasant to remain on the estate, or in the village belonging to the same. In German industry, despite modest attempts at reform undertaken by the legislation of the individual states, the system of guilds (*Zunftwesen*) was predominant. Only a few German States, e. g., Prussia (by the laws of 1810 and 1811) and Nassau, had abolished the obligation of craftsmen to join guilds, and to obtain certificates of ability (*Befähigungsnachweis*), and had introduced, on principle, freedom of trade, an action against which a vigorous protest was launched by the craftsmen's "parliament" sitting at Frankfort-on-the-Main from July 15 to August 18, 1848. Fairs continued to enjoy great importance in some towns even after 1850, at least for a number of special wares.³ Trade was confined mostly to local markets and fairs. Delivery trade by sample had, however, started on a small scale. But the conditions for economic reform in most of the German States had already been created by the establishment in 1834 of the German *Zollverein*. It may be justly said, that this great Prussian innovation, which transformed the participant German States into a unified economic area, dealt the death blow to the mediæval economic system in Germany. It was only then that a uniform economic policy became possible in the participating States, a policy which soon asserted itself by its urgent demands for protection of new and growing industries against the overwhelming economic superiority of England.

The average annual value of the imports into the territory included in the *Zollverein* for the period 1842-

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1846 has been calculated by K. H. Rau (*Grundsätze der Volkswirtschaftslehre*, 8 ed., part 2, p. 318) at 210,303,000 thalers, or about 630,000,000 marks, while the exports have been valued at 170,089,000 thalers, or about 510,000,000 marks, which amounts should be used only with reservation. During the last decade of that period the exports rose quite considerably. Industry was still mainly of the so-called domestic type, and principally carried on in the country. This applies particularly to the manufacture of textiles (spinning and weaving).⁴ In the country it was still customary to manufacture at home nearly all the personal requirements in the shape of clothing, linen, and other textile goods. Almost the whole of the German industry seemed to center at that time in the textile and mining industries, both of which were chiefly carried on in the country.⁵ The number of workmen⁶ employed in these industries exceeded by far the combined number of workmen employed in all other industries.

The total number of workmen employed in the mining and smelting industries within the limits of the Zollverein (created on January 1, 1834) about the middle of the nineteenth century was 60,800.⁷ In Prussia there were 48,659 workmen employed in the same industries (average of the years 1848-1857), as compared with 101,908 according to the trade census of 1895. In 1840 the number of steam-engines employed in the industrial area comprised in the German Zollverein was not quite 500, whereas there were over 5,000 steam-engines at work in England about 1810. According to the Prussian Statistical Annual (*Preussisches Statistisches Jahrbuch*),⁸ there were in 1852 only 2,124 steam-engines, developing 43,051 horse-power, employed in the entire industry of Prussia, of which almost

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half (according to number and power) belonged to mines and foundries; machine factories occupied only the fourth place in the list.

In the Kingdom of Saxony⁹ the number of steam-engines used for industrial and agricultural purposes amounted in 1846 to 197 only, with 2,446 horse-power. At the end of this period (1866), however, there were already about 92,000 motors (100,000 H. P.) in use in Germany, whereas in 1895 the total horse-power of all engines in use was 3,400,000, of which 2,000,000 horse-power was employed in industry. In 1840 the whole German freight traffic (with the exception of ocean, town, and rural traffic) was calculated at about 2,000,000,000 ton-kilometers, whereas in 1900 it was estimated at 40,000,000,000 ton-kilometers, or almost twentyfold.¹⁰

In 1860 the whole of Germany's industrial output equalled only about half that of France; whereas to-day she ranks second to England in Europe, and takes third place in the world, only the United States and England outranking her.

About the middle of the nineteenth century the proportion to the total population of industrial workmen¹¹ (including those engaged in flour mills and all home industries) amounted in Prussia to only 2.98 per cent.

The enormous industrial growth that manifested itself shortly after the establishment of the Zollverein and its economic measures was due not entirely to that organization, but primarily to the construction of (private) railways, begun in 1835 with the line between Nuremberg and Fürth. This led at the outset to an almost feverish activity in the mining, smelting, machine, and kindred industries.

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As early as the middle of the last century there was quite a considerable demand for pig iron, chiefly by reason of the above-mentioned construction of railways. According to Oechelhäuser¹² over 17,500,000 quintals (Zentner) of pig iron were used in railway construction from 1836 up to the beginning of our period (1850). The home consumption, however, was not met by the home production. England had obtained a great start in the manufacture of that material,¹³ coke blast furnaces having been used as early as the eighteenth century in place of the expensive charcoal fuel almost universally in vogue in Germany during the middle of the nineteenth century. In the Siegerland not a single coke blast furnace existed at the beginning of the forties; the first coke blast furnace in the Ruhr district was erected in 1847; moreover, the existing blast furnaces were not very efficient.¹⁴ In 1847 the consumption of iron in the region comprised within the Zollverein amounted to 28 *Zollpfund* (= 14 kilograms) per head of the mid-year population (Sering, loc. cit., p. 51), as compared with 309.8 pounds in 1899.

The production of pig iron in 1850 was less than that of France, and even of Belgium; it amounted to 208,000,000 kilograms (1875, 2,029,000,000 kilograms).

The output of coal amounted in 1850 to 5,800,000 tons, as against 109,220,000 tons in 1900.¹⁵

In the district of Siegen 38,880 tons of iron ore, valued at 124,974 thalers, were brought to the surface in 1850, as compared with 997,680 tons, valued at 11,857,779 marks, in 1900.¹⁶

In 1858 (according to Sering, loc. cit., p. 82) of the total number of blast furnaces in Prussia, 56.9 per cent

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(1,328,429 Zentners) used charcoal, 37.2 per cent (1,527,989 Zentners) coke, 5.9 per cent (243,516 Zentners) coke and charcoal. Mineral fuel (coal) was not used before 1844 except in Silesia, and even there only in small quantities.

As a result the iron imports from Great Britain reached 52 and 55 per cent of the total German consumption up to the middle of the last century. This state of affairs underwent a change only with the rapid growth of the use of coal in Germany, and when the Zollverein abandoned its free-trade policy by the imposition in 1844 of a duty on iron, which till then had entered free. It is due to the energetic support of the German credit banks that before long the following prophecy, contained in the business report of 1856 of the A. Schaaffhausen'scher Bankverein (p. 53), was fulfilled to the letter:

"The iron and coal output of Westphalia, and the Rhineland, in the course of a few years, will not fall short of that of Belgium; in the more distant future it will compete successfully in the international market with that of England, provided one of the most important conditions for such competition—namely, the construction of cheap means of communication—receives proper attention."

The following figures, giving the proportion of persons engaged in industrial pursuits, as compared with the entire population, apply to Prussia for the middle of last century (1843):¹⁷

	Per cent.
Agricultural population.....	60.84 to 61.34
Industrial population.....	23.37
Persons employed in commerce.....	0.97

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In 1846 there was only 1 person employed in trade and industry to every 12.2 inhabitants, though in 1850 the figures were already 1 to every 8.5 inhabitants. In 1849 only 28 per cent of the entire population¹⁸ of Prussia lived in towns, and the population of Berlin did not exceed 331,894¹⁹ (exclusive of soldiers) in 1840, and not quite 500,000 in 1858, and gave employment to only 3,000 workmen in 1840, a number which rose, however, to 10,242 in 1856.²⁰ In 1849 there were only 15 towns in Prussia the population of which exceeded 30,000.²¹ Excluding Berlin, the following now important industrial towns had the greatest number of inhabitants:

Aix-la-Chapelle (about).....	46,000
Elberfeld (about).....	35,000
Crefeld (about).....	30,000
Chemnitz and Düsseldorf each (about).....	26,000
Dortmund, Duisburg, Essen, and Solingen each (about) ²²	7,000

With the aid of foreign (English) capital, gas lighting was gradually adopted²³ after 1826 by the larger German towns (first of all by Hanover and Berlin); it was only after 1859 that petroleum became popular for lighting, especially among the middle classes.

The construction of railways may be said to have started on a large scale only about the middle of the nineteenth century. From 1835 to 1842 only railways of short length and of merely local significance (between large towns) to a total length of 87 German miles had been constructed. These were the Nuremberg-Fürth railway in 1835; the Berlin-Potsdam, and the Braunschweig-Wolfenbüttel railways in 1838; the Leipzig-Dresden line in 1839; the Leipzig-Magdeburg, the Munich-Augsburg, the Mannheim-Heidelberg, and the Frankfort-Mainz lines in

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1840; and in 1841 the Berlin-Anhalt, the Düsseldorf-Elberfeld, and the Cologne-Elberfeld railways. Up to 1855, the date when the credit banks appeared on the scene, only 7,800 kilometers of railways had been built, which, spread over the twenty years from 1835, meant only 390 kilometers of new line annually. On the other hand, in 1865, ten years later, almost double the amount of railway mileage (13,900 kilometers) was finished, or 610 kilometers of new line per year, a performance in which the credit banks had taken an active share. In 1875, or ten years later, there were no less than 27,981 kilometers of railways in operation, again a twofold increase.

This corresponds to the enormous increase of capital invested in German railway construction during that period. At the beginning of the fifties the amount of this capital was stated as 140,000,000 thalers, in addition to 206,000,000 thalers preference shares, or a total of 346,000,000 thalers (1,038,000,000 marks); somewhat over a billion marks.²⁴ At the end of that period (1870) the invested capital amounted, according to Engel, to over 4,000,000,000 marks (4,072,167,621 marks), in which sum the preference shares are included.

As far as the means of transit in Germany were concerned, so-called "*Chausseegeld*," or road toll, had in many cases to be paid to the end of the sixties, as a contribution toward highway construction and maintenance. In Frankfort-on-the-Main, for instance, this toll was only abolished on May 18, 1866. The highways in Germany had in 1857 a length of only 30,000 kilometers as against 150,000 kilometers in 1900.

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The inland toll-gates in the majority of German States, however, had already been abolished in 1834-35 by the foundation of the Zollverein. This proved a great boon in the economic field.

Equally beneficial in the legal field proved the adoption in the fifties and sixties by the various German States of uniform commercial legislation in the shape of the *Allgemeine Deutsche Wechselordnung* and the *Allgemeines Deutsches Handelsgesetzbuch*.

As far as means of transport were concerned, steam-navigation made a modest beginning on the Weser in 1817 and on the lower Rhine and Elbe in 1818. During the middle of the nineteenth century, however, steam-navigation made more rapid progress.

At the end of the fifties Germany had no less than 17 different independent postal administrations in addition to the Prussian-Austrian *Postverein*.²⁵ In 1867 the Thurn and Taxis postal monopoly came to an end by transfer to Prussia.

Up to 1844 fees for forwarding ordinary letters within the confines of Prussia went as high as 19 silbergroschen (1 silbergroschen = $\frac{1}{30}$ thaler, or about 2½ cents). And it was considered great progress when an agreement was made in 1850 with Austria, whereby the cost of forwarding letters weighing less than 1 lot (lot = about half an ounce) to the farthest of the three zones, or over 20 German miles (1 German mile = 7,420 metres), was fixed at 3 silbergroschen, or 9 kreuzer. It was only as a result of this agreement that, at the beginning of 1850, stamps were introduced in Prussia. Up to that time the fee for conveying letters had to be paid in ready money at the

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post-office. Even during the forties the post-offices were only opened on certain days in the week. There were no postmen, not even in the towns, to say nothing of the country; so that letters had to be called for at the post-office. Letter-boxes were introduced for general use only after 1850.

The slow development of postal facilities is best illustrated by a statement of Karl Lamprecht (*loc. cit.*, p. 143) that in Saxony, the "land of the Leipsic fair," the postal regulations remained unchanged between 1713 and 1859.

In Great Britain, on the other hand, uniform penny-postage had been introduced in 1840; uniform postage was introduced in Austria in 1861, and in the North German Federation only in 1868.

The receipt of a letter, even as late as the middle of the last century, must have been regarded as quite an event, except by large mercantile firms, for there were only 1.5 letters per head of population in Prussia during 1842, and even in 1851, the beginning of the period under consideration, only about 3 letters annually.

The telegraph system²⁶ was first opened for public use in Prussia (Aix-la-Chapelle) in 1843, in Bavaria and Saxony in 1850, in Wurttemberg and Baden in 1851, in Hanover in 1852, and in Mecklenburg in 1854. "The charges of telegraphing were high and ill-arranged. According to the zone tariff of 1858, which on the face of it had already been reduced, it cost 2 gulden 6 kreuzers to send 20 words from Frankfort-on-the-Main to Nuremberg, or almost as much as to Amsterdam or Como (2 gulden 48 kreuzers); the shortest telegram to Bochum cost 4 gulden 12 kreuzers, almost as much as to Tilsit or Orsova (4

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gulden 54 kreuzers.)”²⁷ In 1850 only 35,000 telegrams were sent in Prussia, as against 1,500,000 in 1865.

Only 102 joint-stock companies of all kinds, with a total capital of 638,000,000 marks, or an annual average of less than 27,000,000 marks, were formed in Prussia between the years 1826 and 1850, that is in twenty-four years.²⁸

On the other hand, during the following nineteen years, the period from 1851 to the first half of the year 1870, 295 joint-stock companies, or almost three times as many, with a total capital of about 2,405,000,000 marks,²⁹ were formed in Prussia, making an annual average capital of over 124,000,000 marks, or more than four times as much as in the preceding period.

Among the German exchanges at the beginning of this period, the one at Frankfort-on-the-Main was the most influential for state loans and similar securities, whereas the Berlin exchange took the lead in railway securities, the amount of which, however, was not yet great.³⁰ Sixty-three securities were quoted on the Berlin Stock Exchange in 1850 as against 309 in 1870, and 1,872 in 1900. At Frankfort-on-the-Main the first special organs dealing with financial and commercial questions were published, viz: The *Aktionär*, on January 1, 1854; the *Frankfurter Geschäftsbericht*, on July 21, 1856 (which, on August 27, 1856, became the *Frankfurter Zeitung und Handelsblatt*). In the meantime, however (before the publication of the *Frankfurter Geschäftsbericht*), the *Berliner Boersenzeitung*, with the Thursday supplement, the *Berliner Boersen-Courier*, was published on July 1, 1855, in Berlin.

As far as the systems of coinage, money, and banks are concerned, the following details may be of interest:

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During the whole of the period under consideration, and to the final adoption of the common German coinage system in 1870, no less than 7 different kinds of coinage existed in the various German States, which, with the exception of that of Bremen, were all based on the silver standard. Between the South German gulden and the North German thaler standards a fixed ratio had been established at the general coinage conference in 1838 (*Dresdner Convention*), but solely for purposes of calculation,³¹ i. e., no State belonging to the convention was obliged to admit the circulation of the coins of any other State belonging to the convention.

The variety of the systems of coinage and standards at home and abroad was doubtless one of the main reasons why bankers, who were called money changers at that time, in the centers of trade and traffic at least, formed a prosperous and well-filled profession. At the center of money changing for middle and south Germany, namely, the free town of Frankfort-on-the-Main, there were 109 private bankers in 1855, among a total of 1,131 firms; and toward the end of the period under discussion (1868-69), 192 private bankers out of a total of 1,829 firms.³² These private bankers, who in numerous cases carried on simultaneously commission business or commission and forwarding business, formed a very respected class, especially at Frankfort-on-the-Main, a long time before the period in question, having identified themselves with the general existing commercial interests. A most striking proof of this is an occurrence which took place in 1810: "By the order of Napoleon (at the time of the Continental System) two French officials in Frankfort

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confiscated 185 chests containing English goods, the property of Frankfort merchants, and burnt them in front of the gates of the town. Upon this the Frankfort bankers refused to continue the discounting of French bills, and caused thereby numerous failures in Strassburg, Nancy, Rheims, and other places.”³³ Thereupon the Continental System was soon repealed in Frankfort-on-the-Main.

What was true of Frankfort-on-the-Main, however, is not applicable to other towns and districts. In Stuttgart, for instance, there were in 1855 only 14 firms (including the Royal Court Bank) which claimed to belong to the banking and discounting profession, and only one each in Heilbronn and Ulm. “These were, however, partly carried on in connection with other occupations, especially with the forwarding business.” The modest position held by these firms appears best from the fact that in the industrial census taken in 1855 (no changes of importance took place between 1852 and 1855) 25 banking firms are mentioned employing only a total number of 68 assistants.³⁴

In the whole Kingdom of Prussia (in the territory before 1866) the number of persons employed in the money and credit business during 1858 (after several years of economic prosperity), including principals and assistants, amounted only to about 1,800 (1,774), and these were distributed among 602 enterprises, so that there were 602 principals and 1,172 assistants, or about two assistants to each business.

Of these 1,800 persons, 384 were employed in Berlin alone.³⁵

At the beginning of the period under consideration modern methods of payment and credit had not yet devel-

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oped, and the giro and current-account business was "almost unknown," with the exception of places like Hamburg, where special conditions prevailed. Even in a large commercial center such as Frankfort-on-the-Main, at the beginning of the fifties, numerous porters with small trucks laden with sacks and barrels of silver money could be seen moving about the streets "at any hour in the forenoon."³⁶ The discounting of bills was "seldom practiced"³⁷ in Germany, except in chief trade centers and exchange towns, and a systematic fostering of the deposit business was still less in evidence, either at the credit banks (p. 73) or at the note-issuing banks existing at the beginning of the period. The amount of deposits at the Prussian Bank, for instance, totaled only about 22,740,000 thalers (equal to 68,220,000 marks)³⁸ in 1850, in spite of the inflow of capital which had taken place in consequence of the discovery of gold mines in California (1848) and in Australia (1851), and the simultaneous discovery of new quicksilver mines in Mexico. In other banks of issue the deposits were for the most part much smaller.³⁹

At the same time, however, powerful factors (mentioned above on p. 28) were making for progress.

Above all, the era of peace that had prevailed in Germany for an unprecedented length of time (1815-1848) had caused a relatively large accumulation of capital, which was seeking profitable investment.

As early as 1844 the first industrial exhibition in the Zollverein area stimulated industry in numerous directions. The international exhibition in London in 1851, at which the latest industrial progress and inventions were shown, exerted a powerful influence on Germany. A

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few years later (1856) a great revolution took place in the iron industry through the application of Bessemer's principle of turning pig iron into steel⁴⁰ without the aid of human power by inclosing the pig in pear-shaped chambers (converters) and by conducting heated air through it from powerful blast apparatuses—a process adapted in 1865 by Martin to ore containing small amounts of phosphorus and, in 1879, by Thomas and Gilchrist to ore rich in phosphorus.

In the years 1834–1854 aniline colors were invented, and in 1868 alizarine colors.

In 1840, Liebig published his manual on chemistry and its use in agriculture, which laid the foundation of modern agriculture. From 1831–1840 to 1871–1880 constant progress, with few interruptions, was experienced in agriculture. In the old Prussian provinces during this period, the price of rye rose 69 per cent, that of wheat 60 per cent, and of barley 90 per cent; the selling price of land not less than 200–300 per cent; the rents of the Prussian domains increased from 4,500,000 marks, or 13.9 marks per hectare (1 hectare = 2.471 acres), in 1849, to 10,200,000 marks, or 35.6 marks per hectare, or an increase of 156 per cent. These rises were frequently out of proportion with the increases in the prices of agricultural products and in the productiveness of the area used for agricultural purposes.⁴¹

As stated before, various industries, such as cotton spinning, at the beginning of this period introduced manufacturing on a large scale (production on a large scale had commenced in the mining industry many years before). The large industries were, however, unable to attain a

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dominant part in the whole of industry, in which home production still played a leading part. In the last decade of this period we can also perceive a tendency toward increasing the exports of industrial products the rapid development of which in the second period gradually caused a complete transformation in the character of the whole German economic organization.

Hand in hand with the large increase of population, a serious transformation deeply affecting the whole of agriculture (which at this period was at the height of prosperity) had been gradually developing, which led to a considerable portion of the country's agricultural requirements being met by foreign imports; whereas at the beginning of this period, the exports of important German agricultural products, with the exception of rye, considerably exceeded the imports.⁴² (As early as 1860, the imports of rye exceeded the exports by 259,000 tons.⁴³)

Industry, particularly the mining, machine construction, and metal industries, etc., received large orders owing to the rapid increase of railway construction, and was protected and strengthened, to some extent at least, through the measures taken by the Zollverein against foreign importations. The expansion of industry, however, and with it the growing transition to large-scale industry (*Grossbetrieb*), became an absolute necessity for the support and employment of the population, which showed its greatest increase at the beginning of this period, and continued to grow in later years.

Between 1816-1845 the population had increased from 24,800,000 to 34,400,000 (by about 9,600,000 or 38.7 per cent), whereas between 1845-1875 it had increased only

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by 8,300,000, or 24.1 per cent, and between 1865-1895 only 31.8 per cent.

This growth, noticed in most of the German States up to the middle of the last century, was almost entirely in favor of the rural population, though we must not lose sight of the fact that a great many of the industrial concerns (as has been already mentioned), (p. 30) were situated in the country. Loud complaints were heard almost everywhere at that time that "there were too many people in the country," and it was frequently stated with the greatest emphasis that the country was unable to support a population of that number, and ways and means should be devised to meet the new conditions.⁴⁴

As a matter of fact the population of the agricultural districts (especially those east of the river Elbe) increased in the period 1816 to 1877 nearly 91 per cent, while that of the industrial western and southern parts of Germany increased only somewhat over 23 per cent, whereas between 1871 and 1900 the proportions were exactly the reverse (26 and 79 per cent).⁴⁵

It was under such economic conditions that the first German credit banks were established.

CHAPTER II.—THE GERMAN BANKS DURING THE FIRST PERIOD (1848-1870).

It is easy to realize at present the exceptionally strong influence exercised at the beginning of this period (about the fifties) by the very great and rapid development of the German railway system, above all on the mining and machine industries. In order to appreciate it, we need only recall the startling growth of the mining and machine

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industries, occasioned by the rapid development of the electrical industry during the second period, although quite different financial and banking conditions exist today. In both cases, however, the immediate consequences were serious crises (1857 and 1900), which were brought on, however, in part by other causes.

The mining and smelting industries were the first to undergo this transformation of which we have been amazed witnesses.⁴⁶ It is these industries which are mainly responsible for the spread of capitalism and the development of large-scale production, as well as the gradual and radical change in the general economic conditions of the country.⁴⁷

The enormous demands of the newly constructed railways for iron, coal, sleepers, locomotives, cars, etc., could not be met even approximately by the means at the disposal of the industry of those days. New undertakings of all descriptions, and the enlargement of existing ones, were necessary. Figures and requirements, however, were calculated at ten times the right amounts, as is the wont of reckless persons in agitated times, in whose minds the prospective profits are sure to assume gigantic proportions. Thus, at the beginning of our epoch, following the new railway enterprises, there arose in rapid succession, and in strange medley, a large number of other new joint-stock companies, especially in the fields of mining, smelting-machine construction, and banking.

The list of German credit banks founded during the first eight years of this period (1848-1856), and which were mostly provided with share capital ample at least for the period in question, will be found in Appendix II at the

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end of this book. Among them the following were prominent at that time, according to the amount of their capital:

(1) 1848: The *A. Schaaffhausen'scher Bankverein* at Cologne, formed as the result of the reorganisation of the old banking firm of Abraham Schaaffhausen (which had been seriously affected by the troubles in 1848), with a capital of 5,187,000 thalers, or, in round numbers, 5,200,000 thalers = 15,600,000 marks, of which about 3,000,000 (3,199,800) thalers was immediately issued.

(2) 1851: The *Disconto-Gesellschaft* in Berlin, which started however as a mere "credit partnership" (*Kreditgesellschaft*). In 1856 it was transformed into its present shape, namely, a joint stock company *en commandite* under the name of the *Direction der Disconto Gesellschaft*, with a capital of 10,000,000 thalers = 30,000,000 marks, which was issued in two instalments of 5,000,000 thalers each.

(3) 1853: The *Bank für Handel und Industrie*, which took up its headquarters at Darmstadt because no concession could be obtained at that time for a joint-stock banking company, either in the free town of Frankfort-on-the-Main or in Prussia. The nominal capital amounted to 25,000,000 florins = 42,750,000 marks, of which, however, only 10,000,000 florins = 17,100,000 marks was issued at first; it was only in the year 1856, when the Disconto Gesellschaft was transformed, that the Darmstädter Bank assumed the size first contemplated.

(4) 1856: The *Mitteldeutsche Creditbank* at Meiningen, with a capital of 8,000,000 thalers (24,000,000 marks), of which, however, 3,000,000 thalers (9,000,000 marks) remained in the portfolio of the bank; in reality, there-

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fore, the capital was made up of 5,000,000 thalers only, divided into 50,000 shares of 100 thalers each; moreover, of this amount 1,000,000 thalers were redeemed in 1859.

(5) 1856: The *Berliner Handelsgesellschaft* with a share capital of 15,000,000 thalers (45,000,000 marks), of which only a small part was paid in at first, namely, 3,740,150 thalers; of this latter sum 800,000 thalers (4,000 shares of 200 thalers each) remained in possession of the company.

In the four years (1853-1857) the paid-up share capitals of the railway companies newly formed in the various German States, which were almost exclusively in private hands (see p. 35), amounted to over 140,000,000 thalers, and that of the joint-stock banks (*Bankaktiengesellschaften*) to over 200,000,000 thalers (600,000,000 marks).

Of 259 mining, foundry, steamship, machine-construction, sugar, and spinning companies, etc., existing during this period, with a total capital of over 260,000,000 thalers (780,000,000 marks), more than half were founded during the four years mentioned above (1853-1857).⁴⁸

During the one year, 1856, new joint-stock companies with a nominal capital of about 150,000,000 thalers were chartered in Prussia alone.

In order, however, to comprehend properly the rush that took place just then, it must be remembered that during this whole period (about twenty years), from 1851 to the first half of 1870, only 295 joint-stock companies, with a total capital of about 2,405,000,000 (2,404,760,000) marks (see p. 38), were chartered.

Of this total almost half, namely 1,020,000,000 marks (340,000,000 thalers), represented the capital of the railway and joint-stock bank companies founded in Prussia

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during these four years (1853-1857). Of the total capital of 2,404,760,000 marks invested in Prussia in joint-stock companies during 1851-1870 (first period), 2 250,960,000 marks were invested as follows:

	Marks.
Mines, foundries, and salt works.....	275, 410, 000
Banks.....	94, 650, 000
Insurance companies.....	158, 460, 000
Railways.....	1, 722, 440, 000

so that these four classes of industrial and commercial undertakings absorbed 92.7 per cent of the capital of all joint-stock companies founded in Prussia during the period in question.⁴⁹

During this great process of transformation, which took place in the same manner in all the other German States up to 1856, scarcely any other aid could be called in than that of the Bank für Handel und Industrie, founded in 1853, which we shall style in the future, after its headquarters and conforming to public custom, the *Darmstädter Bank*. For the Disconto Gesellschaft, founded in 1851, emerged from the narrow confines of a "mutual credit partnership" (*auf Gegenseitigkeit beruhende Kreditgesellschaft*) only after 1856, while the attention of the A. Schaaffhausen'scher Bankverein was necessarily occupied during those years with strengthening the inner affairs of the firm of Abraham Schaaffhausen which it had taken over.

The Darmstädter Bank, founded at the beginning of this process of transformation, purposely assumed the title of "Bank für Handel und Industrie."

"It is in no way the task of the bank," it was stated in the first business report for 1853, "to pave the way for stock-jobbing operations, and to stimulate capitalists to

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unproductive gambling on 'change. On the contrary, the bank is expected to promote sound and extensive undertakings by its own participations, and by investing outsiders' funds intrusted to its care. By means of its eminent position and clear insight into the whole situation of German industry it is fitted to assist to the fullest extent of its powers in directing capital and the spirit of enterprise into the channels corresponding to the requirements of the moment. Its offices at home and abroad are intended to facilitate export and the thousand and one other relations between German industry and the money market. It is the right and the business of the bank to receive the funds which some manufacturers may have available for the time being and supply them to other manufacturers who may require them. Through such a constant exchange it hopes to stimulate and promote industrial activity. Aside from the bank's participation in great industrial undertakings, it is likewise authorized to participate in the great creations and financial transactions of the governments, and to act as intermediary in the placing of securities of foreign governments."

There is no doubt that part of this program, including the statutory regulations,⁵⁰ was influenced by the organization and aims of the *Crédit Mobilier* (*Société générale de Crédit mobilier*) founded in November, 1852, with a capital of 60,000,000 francs. This is particularly true of the debentures idea,⁵¹ and the fixing of the amount of the capital. As a matter of fact among the founders of the *Crédit Mobilier* was Abraham Oppenheim, of Cologne, one of the co-founders of the *Darmstädter Bank*, while one of

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the higher officials of the *Crédit Mobilier* (Hess), was one of the first directors of the Darmstädter Bank.

It may be of interest to note that the French establishment alluded to, which was intended to put the Saint Simon ideas into practice under the direction of the Péreires, was heartily welcomed by the Government, as well as by the general public, as an institution likely to form a counterpoise to the excessive power of the private bankers, and more especially of the house of Rothschild.

“The founding of the Contango Bank, or *Crédit Mobilier*,” says an article ⁵² published in Germany in 1856, was based on a genuine and true principle belonging entirely to our age. Enormous capitals had accumulated in the hands of several banking houses in different towns in Europe. They dominated all business through the enormous proportions of their capital. * * * They made their own conditions as though they held a monopoly. * * * No limits can be discovered to these tendencies. This monopoly can be broken only by opposing large capital with a still larger one, and this can be done only by the association of many small capitals. Thus on November 12, 1852, the *Crédit Mobilier* Company was founded with a capital of 60,000,000 francs, in 120,000 shares of 200 francs each.

The French Government desired simultaneously to weaken the Bourbonist and Orleanist aspirations, which were supposed to be represented by the house of Rothschild, through the concession of a *Banque Gouvernementale* which among other things was to influence the quotations

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of government stock—of course in an upward direction only!

Accordingly the Rothschilds (after co-operating in the beginning) formed a very powerful syndicate of private bankers as early as 1855 to fight the *Crédit Mobilier*.

It is principally the *Crédit Mobilier*, its organisation, its unparalleled growth and decline within the short period of fifteen years, that has influenced the public mind to such an extent that German banks almost without distinction, and even up to the present day,⁵³ are designated as *Crédit Mobilier* banks. The formation and activity of that establishment form to a great extent⁵⁴ the subject of one of the most brilliant French novels, namely, "L'Argent," by Émile Zola.

This result was largely the work of contemporary writers, who, impressed by the failure of the *Crédit Mobilier*, naturally gave vent only to very adverse criticism.⁵⁵ A prominent place in this field belongs to the voluminous work by Aycard,⁵⁶ published during the year of the failure of the *Crédit Mobilier* (1867). This book, containing 595 pages, which unfortunately was used and is still used constantly as an authority, is from beginning to end (and in this particular I quite agree with Plenge⁵⁷) nothing but a pamphlet. It is a clumsy work, overflowing with repetitions and exaggerations, which had its origin in the spite and jealousy of a small banker, whose small power of discernment prevented him from perceiving side by side with the undeniable mistakes and faults of the *Crédit Mobilier* the incontestable services which that institution had rendered to the economic progress of his country.

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The Crédit Mobilier, which, according to the amount of its capital and the program outlined in its reports and in the statements of its managing directors, was never intended to be solely a flotation bank (*Effektenbank*), at the very outset fixed its aims far too high, until they became almost fantastic. For this program (although it may have been the result of much forethought), was not one that could be carried out with the ordinary means of a bank, as it purposed an economic transformation on a grand scale of the entire railway, industrial, and credit systems.

Further, the Crédit Mobilier injured its own interests to a great extent (as was recognised when too late), through the distribution of excessive dividends (1855 over 40 per cent), as well as by persistent adherence to its scheme of the issue of debentures, a matter generally impracticable within the compass of any bank, and especially of one that had so many aims in view. That scheme, rightly enough, was never executed owing to the opposition of the Government. Thus it was debarred above all from gradually increasing its share capital⁵⁸ in accordance with its growing business, and from strengthening its reserves in order to attain the liquidity of resources which is the sole justification and qualification for the pursuit of constantly increasing tasks.

It is also true that through its precipitate procedure, and through the attempt to carry out simultaneously all parts of its program, which in turn necessitated constant and increased support of the Bourse, as well as through the flotation of a superabundance of new securities and companies,⁵⁹ the Crédit Mobilier paved the way in no

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inconsiderable measure for stock gambling, agiotage, and share swindling pure and simple. The last-mentioned effect was largely due to the business reports, which were true paradigms of inadmissible concealments and puffing advertisements (justly denounced, at least in most cases, by Aycard, although he does so in endless repetition), which in turn caused the shares of the *Crédit Mobilier*—not without the influence of the institution itself—at the very outset to become gambling stock of the very first rank.⁶⁰

The *Crédit Mobilier* did not foster the regular customer business to any extent worth mentioning. The large amount of deposits (up to 145,000,000 francs), however, that were intrusted to its care by the large railway companies which it formed, were invested to a considerable extent in other railway shares, and industrial securities of all descriptions, as well as in its numerous subsidiary companies.⁶¹

This circumstance, coupled with the enormous and permanent advances made to these subsidiary companies (especially to the *Société Immobilière* which it had founded), led to the complete immobilization of its share capital, and thereby to the downfall of the bank, which actually took place in 1867.

Moreover, strong speculation on the part of the bank⁶² itself, in the closest relation to the enormous amounts of the tied-up securities, took place, which resulted occasionally in considerable gains, but frequently and probably in the majority of cases, in great losses.

On the other hand, however, it must not be forgotten that it was due above all to the boldness and tenacious

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energy of the Péreires that the enormous extension of French railways, and partly also of foreign lines, was brought about⁶³ in the period from 1850 to 1860,⁶⁴ when the Péreires were acting independently. This opened up new fields of activity to French industry, and gave it an undreamed of power, extension, and organisation.

In addition it must be admitted in praise of the *Crédit Mobilier* that, as Aycard himself is obliged to recognise, it continued to protect the enterprises it had founded and the securities it had issued, and that it was just the persistent exaggeration of this principle, which in itself is not reprehensible, that constituted the main though not sole cause of its downfall.

This downfall, however, was not prevented by the control on the part of the shareholders, a remedy recommended as most efficient in many quarters, and facilitated by the by-laws of the *Crédit Mobilier*, according to which any 10 members at a general meeting by a written application could place any subject on the order of the day.

Further (and this is not less important), the downfall was neither prevented nor foreseen by the existing substantial governmental control. No less important an authority than Adolf Wagner,⁶⁵ while under the first impression of the crisis of 1900, thought it necessary to propose for all German Banks a "State Control Bureau," an institution which in the case of the *Crédit Mobilier* had existed from the very beginning in a form which partly met, and partly even exceeded the wishes of Adolf Wagner. The charter, dated November 20, 1852, contains

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the following regulations regarding the government control which was by no means "an empty form:"⁶⁶

"ART. 3. La société sera tenue de remettre, tous les six mois, un extrait de son état de situation au Ministère de l'Intérieur, de l'Agriculture et du Commerce, au préfet du Département de la Seine, au préfet de police, à la chambre de Commerce et au greffe du Tribunal de commerce de Paris.

"ART. 4. En outre, la Société devra fournir au Ministre des Finances sur sa demande, ou à des époques périodiques par lui déterminées, les mêmes états présentant la situation de ses comptes et de son portefeuille, ainsi que le mouvement de ses opérations.

"Les opérations et la comptabilité de la Société seront soumises à la vérification des délégués du Ministre des Finances, toutes les fois que celui-ci le jugera convenable. Il sera donné communication à ces délégués du registre des délibérations, ainsi que de tous les livres, souches, comptes, documents et pièces appartenant à la société. Les valeurs de caisse et de portefeuille lui seront également représentées."

[ART. 3. The Company shall transmit every six months abstracts of its condition to the Minister of the Interior, Agriculture and Commerce; to the prefect of the police, to the Chamber of Commerce and to the file office (*greffe*) of the Commerce Court in Paris.

ART. 4. The Company shall furthermore furnish to the Minister of Finance, either upon demand or at intervals prescribed by him, statements of the condition of its accounts and portfolio, also of the movement of its operations.

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The operations and the books of the Company shall be subject to examination by the representatives of the Minister of Finance at any time he may deem proper. These representatives shall have access to the minutes of the deliberations, also to the books, stubs (*souches*), accounts, documents and other papers belonging to the Company. They shall also have power to ascertain the value of the cash and of the portfolio of the Company.]

I trust that I have given above, though only in brief form, everything essential to form an opinion as to the growth and downfall, the faults and excellencies of the *Crédit Mobilier*, without having omitted any of the important points which formed the bases of Sattler's⁶⁷ and Max Wirth's⁶⁸ criticisms. I shall now take up the question whether and in how far it is correct to designate the German banks (especially those of the first period) unreservedly as "*Crédit Mobilier*" banks.⁶⁹

In the first place, as far as the by-laws are concerned on which the *Darmstädter Bank* (*Bank für Handel und Industrie*) was founded, it may be asserted, that taken as a whole, i. e., as regards the large majority of its regulations, they are copied, not from those of the *Crédit Mobilier* (which was founded the year before), but consciously, and in some cases literally, from the statutes of the *A. Schaaffhausen'scher Bankverein*, established in 1848. Consequently, they rest essentially on a German, and not on a French foundation, and were the product of German business customs and views.

This applies especially—I can only refer to a few instances here—to the most important part of the program, namely to Chapter III, in which the "sphere of

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activity and the powers of the bank" (sec. 10)⁷⁰ are gone into minutely, and which is almost an exact copy of the corresponding paragraph in the Schaaffhausen by-laws (sec. 20). This is preceded, in the by-laws of both banks, by the following fundamental principle of sound banking policy (sec. 10, par. 1 of the by-laws of the Darmstädter Bank and sec. 20 of the Schaaffhausen Bank by-laws):

"The bank is authorised to carry on all kinds of banking business—that is, such business from which it can easily withdraw its money in case of need."

The additional regulations of Chapter III of the by-laws of the Darmstädter Bank are interesting. They were evidently made with regard to the needs of the times.⁷¹ I have pointed out above that they were partly a reproduction of the corresponding clauses in the Crédit Mobilier's program.⁷² They were lacking⁷³ in the Schaaffhausen Bank by-laws, which had been prepared five years earlier, and under different economic conditions. According to these regulations the bank was authorised:

(i) To undertake all loans, or enterprises of a public nature on its own account, or partly on its own account, to assign or transfer them, to realise them, or to participate in underwriting them, as well as to put in circulation bonds payable to names or bearer to the limit of its undertaking or participation.

(k) To arrange for and effect the union, or consolidation of various anonymous companies, as well as the transformation of industrial undertakings into anonymous companies.⁷⁴

The programs of both of these two large banks belonging to the period under consideration⁷⁵ (the by-laws of the

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Disconto Company were, in accordance with its origin as a credit partnership, if anything more restricted) were consequently neither fantastic, nor calculated to effect revolutionary changes.

Naturally these pregnant differences in the by-laws and programs could hardly be noticed, far less appreciated, during the fifties. For the situation of general economic conditions was almost identical at that time in France and Germany, in so far as similar causes (described above) produced similar results in both countries. In France, as well as in Germany, an impetuous rushing forward manifested itself from 1852-53 in all branches of industry, especially in the mining and machine industry, caused by the great haste with which railways were being constructed. In both countries a vast number of promotions, transformations, and flotations came to the fore during a very short period; these, naturally, required the aid of the newly founded banks which perceived in such undertakings a rich source of gain. Added to this (and again as a result of the same causes, accompanied by the ever present and apparently irrepressible spirit of speculation in both countries), discount rates went up strongly in consequence of the excessive demand for capital. The rate of discount of the Bank of France, which together with that of the Bank of England, was above all determinative for Germany at that time, stood at 3 per cent as late as 1852 (beginning with March), and that of the Bank of England at only 2 per cent during April-December, 1852.⁷⁶

During the year 1853 the discount rate of the Bank of England gradually rose to 5 per cent between the 29th

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September and the 21st December. In 1855, between autumn and the end of December, it went up to 5½ per cent and 7 per cent, after some fluctuations again to 7 per cent at the end of 1856, next to 8 per cent beginning with October 19, 1857, to 9 per cent on November 5, and to 10 per cent on November 9, 1857, a sufficiently sure sign of an approaching storm. Similar conditions prevailed in the Bank of France, while the highest rate recorded by the Hamburger Bank in 1857 was as much as 12 per cent.⁷⁷

A commercial and bourse crisis which was greatly intensified by severe commercial crises in England and the United States, broke out in 1857 simultaneously in England, France, and Germany.

The situation in the two last-named countries was bound to develop into a bourse crisis, even without the simultaneous commercial crises in the United States and England, in consequence of the excessive number of company promotions, transformations, and new issues, as well as through the collapse of the normal organisation of the credit and money market produced thereby.⁷⁸

The course of events on the Bourse was that which has been constantly recurring. First of all, professional speculators, upon learning at the Bourse of the universal improvement in the economic situation, found that the improvement was not sufficiently reflected in the bourse quotations, and by heavy and continued purchases, endeavored to bring about a lasting rise. It was only then, as is generally the case, that the general public, for the most part guided and influenced by the quotation list, took up the matter. Its opinion, however, is based

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on slight practical knowledge. During times of a visible rise of the market its credulity is exceeded only by its hopes; it accepts the existing exchange quotations, however high, as the basis for calculating the intrinsic value of securities, while these calculations grow more and more fantastic from day to day.

As the economic development and the course on the bourses of both countries at that time proved nearly the same, and as the participation of the banks of both countries in excessive and irrational promotions, issues, and flotations, above all in mining enterprises and railway building (which first gave rise to the crisis,) was only too obvious, the natural inference was drawn, that these banks were identical in character and kind.

This conclusion, however, overstepped the mark. It is true that the banks dating from this period, endeavored from the very commencement to vindicate their right, and even duty, to promote commerce and industry in the most effective way, by participation in flotations, foundations, and transformations. The Darmstädter Bank in particular had contemplated from the very outset the creation of special "organs at home and abroad"⁷⁹ for this purpose.

This bank accordingly⁸⁰ began, during the first years of its existence, to create such "organs" on a large scale. But it is equally true that attempts to found branches in the various German States were unsuccessful, chiefly because of the opposition of the different governments, which gave home banks the preference over the branch establishments of outside institutions.⁸¹ Thus only an agency could be established in Frankfort-on-the-Main in 1854,

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which existed until 1864, when it was replaced by a branch. Only at Mainz, in the Grand Duchy of Hesse, where the headquarters of the bank were situated, did the bank succeed in opening a branch establishment as early as 1854, while in the same year a silent partnership (*Kommandite*) had been formed in New York (G. von Baur & Co.), which, in 1856 and 1857, was followed by the founding of further commandite connections in Berlin, Heilbronn, Mannheim, Breslau, and Leipsic, and in the sixties also in Hamburg, Stuttgart, and Vienna.⁸²

Accordingly the account "commandites, branches and agencies" stood in the books of the bank at 8,433,701.43 florins as early as 1856.

The promotion of industry, however, was not the only aim that the banks had in view at that period. It had been emphasized at the very beginning that participation "in the great creations and financial transactions of the Governments" also formed an essential part of their program. This constituted a sphere of business activity which the *Crédit Mobilier* had constantly neglected in favor of railway and industrial transactions, except in so far as the exigencies of its position as a "banque gouvernementale," a position which it aimed at and which it was intended to fill, necessitated a different attitude. In contrast to this all German banks, (especially those founded during the period under consideration,) fostered from the very outset this special branch, namely, public loan credit (state, provincial, and municipal), and have attended to this branch of business effectively and successfully ever since.

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In the following list the principal loan transactions of the Darmstädter Bank and the Disconto Gesellschaft, (the two most prominent banks of the period,) are given: ⁸³

STATE AND MUNICIPAL LOANS.

DARMSTÄDTER BANK.

- 1854: Baden state loan.
Bavarian state loan.
- 1858: Bremen state loan.
Swedish state loan.
- 1860: Swedish state loan.
- 1861: Swedish mortgage loan.
(Lottery) loan of the Canton Fribourg.
- 1862: Worms municipal loan.
- 1864: Austrian state lottery (Rothschild syndicate).
- 1866: Bavarian state loan.
Saxon state loan.
Württemberg state loan.
- 1868: Hessian state loan.
Brunswick (railway) loan.
Prussian 4 per cent state loan.
Hamburg 4½ per cent state loan.

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- 1859: Prussian (mobilisation) loan of 30,000,000 thalers, effected jointly with the leading Berlin banks and firms under the management of the Disconto-Gesellschaft, which was the origin of the so-called "Prussian Consortium (syndicate)" constituted during subsequent years.
- 1866: Four per cent Baden Loan (30,000,000 thalers), effected jointly with the Seehandlung, and the banking firm of W. H. Ladenburg & Sons, at Mannheim.
Four per cent Bavarian issue of premium loan bonds (35,000,000 florins), jointly with the Royal Bavarian Bank and the banking house von Erlanger & Sons, Frankfort-on-the-Main.
Brunswick loan (2,000,000 thalers).
- 1867: Four per cent Baden premium loan bonds (12,000,000 thalers).
- 1868: Four and one-half per cent Mannheim municipal loan (3,200,000 thalers) for the construction of the Mannheim-Karlsruhe Railway; effected jointly with the banking firms of W. H. Ladenburg & Sons and M. A. v. Rothschild & Sons in Frankfort-on-the-Main.
Prussian state loan of 40,000,000 thalers and 5,000,000 thalers (Prussian syndicate under management of the Seehandlung).

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1869: Danzig municipal loan.

Prussian loans (agreement with Frankfort-on-the-Main) of 4,450,000 thalers and 550,000 thalers.

The German banks, following the example of the *Crédit Mobilier*, also founded industrial companies as early as this period. Thus the Darmstädter Bank undertook the promotion of the *Wollmanufaktur Mannheim* (paid-up share capital 400,000 florins), of the *Württembergische Kattunmanufaktur* (paid-up share capital 500,000 florins), of the *Oldenburgische Ostindische Reederei* (paid-up share capital 250,000 florins), the *Kammgarnspinnerei und Weberei, Marklissa* (paid-up share capital 300,000 florins), the *Ludwigshütte*, near Biedenkopf (paid-up share capital 360,000 thalers, jointly with the *Mitteldeutsche Kreditbank*), and participated in the transformation of the *Maschinenfabrik und Eisengiesserei Darmstadt* into a joint stock company (paid-up capital 200,000 florins), as well as in that of the *Heilbronner Maschinenbaugesellschaft*.

The example of the *Crédit Mobilier* in creating subsidiary companies was also followed; thus the Darmstädter Bank on November 5, 1855, founded the Hessian Note-Issuing Bank, known as the *Bank für Süddeutschland*, with a capital of 20,000,000 florins. Finally the Darmstädter Bank, like the *Crédit Mobilier*, made it a business principle from the very outset to remain permanently interested in the companies which it promoted, not only through permanent representation of its own directors on the board of managers, but also by the holding of a large number of shares, through which, however, severe losses were frequently sustained.

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Thus it participated in the seven industrial and commercial companies which it promoted or transformed during 1856 (with a total capital of 1,580,000 florins) with about one-third of the combined share capital of these concerns (813,157 florins). In contrast, however, to the *Crédit Mobilier*, the German banks never consented to tie up their capital during the period in question by unlimited advances to such subsidiary or affiliated companies.⁸⁴

Furthermore, during those first years of impetuous growth, some of them, like the *Crédit Mobilier*, became interested too extensively and too rapidly in railway and industrial securities and enterprises, though thereby they doubtless rendered great and permanent service to the nation. The list below is intended to give a detailed idea of the most important railway transactions in which the *Darmstädter Bank* and the *Disconto-Gesellschaft* participated at that time.

DARMSTÄDTER BANK.

- 1854: Austrian State Railway (taking over of shares).
- 1855: Extension of the Rhine Railway from Nymwegen to Bingen. Theiss Railway (taking over of shares).
- 1856: Financing the Bingen-Aschaffenburg Railway (via Mainz) and promoting the Elizabeth Railway (taking over of shares).
- 1859: Four and one-half per cent bonds of the Rhine-Nahe Railway (guaranteed by State) 4,500,000 thalers, jointly with the *Disconto-Gesellschaft*.
- 1861: Preference shares of the Cologne-Minden Railway.
Private sale of shares and bonds of the Hessian Ludwig Railway.
- 1862: Placing of bonds of the Livorno Railway.
Conversion of the 4¼ per cent Thuringian Railway preference shares
Issue of 1,200,000 florin preference shares of the Hessian Ludwig Railway.
- 1863: Preference silver shares of the Galician Carl-Ludwig Railway, exempt from taxation (Rothschild syndicate), of 6,000,000 florins.
Five per cent preference shares of the Moscow-Riazán Railway of 5,000,000 rubles, guaranteed by State.

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- Four per cent preference shares of the Hessian Ludwig Railway of about 3,000,000 florins.
Silver preference shares of the Galician Carl-Ludwig Railway of 5,000,000 florins (Rothschild syndicate).
- 1866: Shares of the Hessian Ludwig Railway.
Shares of the Magdeburg-Leipzig Railway Lit. B.
Shares of the Altona-Kiel Railway.
Preference shares of the Upper Silesian and South-North German Junction Railway (Reichenberg-Pardubitz).
- 1867: Common and preference shares of the Fünfkirchen-Bares Railway and construction of the line, as well as of the Siebenbürgen and Franz Joseph Railway (Rothschild syndicate).
First preference shares of the Magdeburg-Halberstadt Railway.
Bonds of the Russian Kozlov-Woronezh and Poti-Tiflis Railway.
- 1868: Shares of the Hessian Ludwig Railway (1,000,000 thalers).
Five per cent bonds of the Hessian Ludwig Railway (guaranteed by State, 4,000,000 thalers).
Five per cent preference shares of the Hessian Ludwig Railway.
Organization of the Alföld Railway (Rothschild syndicate).
Construction of the Arad-Temesvar line (Rothschild syndicate).
Shares and bonds of the Austrian North-West Railway.
Shares of the Rhine Railway Lit. B. (5,000,000 thalers).
- 1869: Five per cent preference shares of the Berlin-Potsdam-Magdeburg Railway of 7,000,000 thalers.
Five per cent preference shares of the Upper Silesian Railway of 13,305,000 thalers.
Four and one-half per cent guaranteed shares of the Thuringian Railway Lit. C of 4,000,000 thalers.
Shares of the Cologne-Minden Railway of 9,068,200 thalers.
- 1869-70: Purchase of the entire Brunswick railway system from the Brunswick government on behalf of a syndicate for 11,000,000 thalers, and an annual payment of 875,000 thalers for sixty-four years, and transfer of its management and of the further extension of lines to a special company.

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- 1853: Five per cent bonds, guaranteed by the State, of the Moscow-Riazán Railway of 5,375,000 thalers; jointly with the Darmstädter Bank, the banking firm of Sal. Oppenheim jr., & Co., and a St. Petersburg house.
- 1856: Three and one-half per cent bonds of the Upper Silesian Railway Company.
- 1857: Four and one-half per cent bonds of the Cosel-Oderberg Railway (1,500,000 thalers).

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1859: Four and one-half per cent State guaranteed bonds of the Rhine Nahe Railway of 4,500,000 thalers (jointly with the Darmstädter Bank).

1866-1868: Shares and bonds of the Bergisch-Märkische Railway.

1867: First preference shares of the Nordhausen-Erfurt Railway.

1868: Shares of the Alsenz Railway.

Five per cent bonds of the Charkoff-Kremenshúg Railway of £1,716,000 (jointly with J. H. Schröder & Co., London).

In considering this great activity displayed by the banks of that time in the underwriting and issuing of securities, we must not forget that (as a glance at the list will show) these operations were almost exclusively confined to first-class securities, the introduction of which has proved of great benefit to the German investment market. It must also be borne in mind that the whole task of carrying out the great development of the German railway system at that period was performed by means of German private capital (which was very small), and by the aid of banks, with a total share capital extremely limited in comparison to the magnitude of the undertakings.

The German banks at that time (almost without exception) when heavily engaged, took immediate steps to restore the liquidity of their resources and the equilibrium between their assets and liabilities, whereas the *Crédit Mobilier*, greatly to its detriment, postponed such attempts till the year preceding its collapse.

Thus the Darmstädter Bank, the capital of which had been paid up in full in the first series (10,000,000 florins in 1855) raised its capital to 25,000,000 florins, though the attempt made in 1857 to bring it up to the amount of 50,000,000 florins (provided for in section 4 of its charter) failed almost entirely by reason of the crisis of that year.⁸⁵

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Consequently the bank, up to 1864, pursued the course (justifiable from the economic point of view, though hardly from a business standpoint) of reducing the loans on current account from 4,500,000 florins (1857) to about 360,000 florins (end of 1859), and of reducing also the "Lombard and covered credits" and the "loan and mortgage" accounts. The same course was followed with regard to the item "illiquid claims," always specified in the reports up to 1864⁸⁶ although the administration was doubtless perfectly aware of the serious objections to such reductions from a business point of view.

The Disconto-Gesellschaft likewise resolved, as early as 1856, or about a year after its transformation into its present form, to raise its commandite capital from 10,000,000 thalers to 20,000,000 thalers. Owing to the crisis of 1857, however, this resolution could only be partly carried out, and was cancelled later on.⁸⁷

Like the *Crédit Mobilier*, the German banks in the early years of their existence (1855 and 1856), mainly under the influence of the highly inflated quotations of their shares, made the great mistake of distributing excessive dividends, instead of holding them down and using the surplus to strengthen their inner position and reserves. Thus the Darmstädter Bank paid dividends of 10.66 per cent in 1855 and 15 per cent in 1856, and the Disconto-Gesellschaft 13½ per cent in 1856 (10 per cent for nine months). This course naturally had to be atoned for, especially by extreme fluctuations of dividends during the next few years, and by large decreases during bad years. The dividends of the Darmstädter Bank and those of the Disconto-

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Gesellschaft during this period (up to, and including 1869) are shown in the following table:⁸⁸

Year.	Darmstädter Bank.	Disconto- Gesellschaft.
	<i>Per cent.</i>	<i>Per cent.</i>
1854.....	5½	
1855.....	10½	
1856.....	15	^a 10
1857.....	5	5
1858.....	5¼	5
1859.....	4	4
1860.....	4	5½
1861.....	5	6
1862.....	6½	7½
1863.....	5½	6½
1864.....	6	6½
1865.....	6½	6½
1866.....	4½	8
1867.....	6½	8
1868.....	8	9
1869.....	10	9½

^a For nine months.

The average dividend rate of the Darmstädter Bank was: during the first decade of its existence (1853-1862), 6¾ per cent; during the second decade of its existence (1863-1872), 8.7 per cent;⁸⁹ that of the Disconto-Gesellschaft during the first ten years (1856-1865) of its existence as a limited joint stock company (*Kommanditaktiengesellschaft*)—6.55 per cent; during the second decade (1866-1875), 13.15 per cent.⁹⁰ It should be said though, that neither bank neglected to increase its surplus, which, for instance, rose in the case of the Disconto-Gesellschaft from 16,600 marks in 1852 to 2,640,495 marks in 1860, and of the Darmstädter Bank from 39,109.8 florins in 1854 to 1,553,363.18 florins in 1868.

In contrast to the *Crédit Mobilier*, current account business was fostered during the period under discussion

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by both banks with the greatest care and success, although, in the case of the Darmstädter bank, not to the same extent as the promotion and issue business.⁹¹

The development of the current account business in the Disconto-Gesellschaft and the Darmstädter Bank during the period is shown in the tables below (pp. 70 and 71).

The tables show that the deposits of the Disconto-Gesellschaft amounted on December 31, 1869, to 2,274,228 marks, and those of the Darmstädter Bank in 1869 (the end of this period) to 10,800,268.34 florins. It should be said, though, that this large amount was due to exceptional and temporary circumstances, discussed on pp. 73 and 74.

The other banks to be considered in this connection, the activity of which during this period has remained almost unnoticed in literature,⁹² likewise show on the whole a satisfactory development.

I. The current business of the Disconto-Gesellschaft, 1852-1861 and 1869.

[According to the Jubilee Report, p. 260.]

Year.	Debits in current account.	Credits in current account.	Deposits.	Income from interest, securities, and bills.	Income from commissions.
	Marks.	Marks.	Marks.	Marks.	Marks.
1852-----	1,470,817	1,482,731	1,921,233	54,441	69,597
1853-----	3,307,677	967,450	2,229,633	144,162	117,690
1854-----	4,732,728	2,854,736	2,145,345	215,538	103,791
1855-----	5,785,026	2,998,599	2,281,473	281,478	131,445
1856-----	31,035,731	8,095,688	1,691,520	1,849,979	284,597
1857-----	31,635,345	4,952,709	1,657,200	2,049,073	554,319
1858-----	27,542,475	4,718,695	2,321,886	1,990,306	452,745
1859-----	25,904,374	6,152,549	2,550,347	1,235,670	417,327
1860-----	31,718,296	12,724,215	3,586,030	1,755,198	394,545
1861-----	35,307,447	14,737,308	4,339,420	2,002,307	461,387
At the end of this period (1869) -----	⁹⁶ 24,270,623	29,596,211	⁹⁴ 2,274,228	3,146,167	801,940

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II. Darmstädter Bank, 1853-1869.

Year.	Credits in current account.	Debits in current account.	Interest-bearing deposits subject to notice.
	Florins.	Florins.	Florins.
1853	212,457.21	935,431.33	412,430.31
1854	632,079.21	2,754,870.35	868,000.00
1855	388,864.34	5,605,238.53	No data.
1856	2,538,430.80	8,972,184.27	No data.
1857	713,507.58	7,043,015.22	1,307,506.30
1858	226,269.39	8,668,037.41	3,337,067.41
1859	674,952.58	7,999,386.39 $\frac{1}{2}$	1,289,928.70
1860	619,384.19	5,674,302.57 $\frac{1}{2}$	1,292,170.48
1861	570,775.55	4,670,961.20	1,276,218.50
1862	935,795.37 $\frac{1}{2}$	3,701,974.15	1,292,170.48
1863	1,228,338.14	2,724,939.47	1,732,989.33
1864	736,860.42	2,261,145.19	No data.
1865	816,519.45	2,961,320.20	1,183,879.18
1866	511,963.36	3,464,719.80	No data.
1867	828,939.41	3,243,465.15	No data.
1868	785,450.58	9,136,926.28	No data.
1869	2,244,432.41	7,429,533.03	10,800,268.34

The *A. Schaaffhausen'scher Bankverein*, founded in 1848 with a business capital of 5,187,000 thalers (see p. 46) (of which, however, only 3,199,800 thalers had been issued at the start), during the first years of its existence⁹⁵ under the cautious and experienced management of W. L. Deichmann, Gustav Mevissen, and Victor Wendelstadt succeeded in starting important industrial undertakings, as well as in establishing numerous industrial connections, especially in Rhenish Westphalia. Thus, for the purpose of mobilizing the industrial participations of the firm of A. Schaaffhausen, it took a considerable part as early as 1851 in the founding of the *Hoerder Bergwerks- und Hüttenverein*, at Cologne,⁹⁶ in 1852 in the *Cölner Bergwerkverein*,⁹⁷ as well as in the establishment of the *Cölnische Baumwollspinnerei und Weberei*; the *Cölnische Maschinenbau-Aktiengesellschaft*, the *Cöln-Müsener*

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Bergwerks-Aktiengesellschaft, and the *Cölnische Rückversicherungs-Gesellschaft*.

"The board of directors," says the business report for 1852 (p. 3), "acted on the principle that the function of a great banking institution is not so much to start new branches of industry through extensive participations, as to induce the capitalists of the country, by recommendations based on exhaustive investigations, to turn idle capital toward such enterprises, which, when properly launched, in response to existing requirements, and offering the guarantee of expert management, bid fair to yield reasonable profits."

As early as 1851, the item "Participations in Industrial Enterprises" amounted to 434,706 thalers. Up to 1858 the following promotions were added to those already mentioned:

The *Concordia*, *Cölnische Lebensversicherungsgesellschaft*; the *Agrippina*, *Cölnische Transportversicherungsgesellschaft*, and the *Cölnische Hagelversicherungsgesellschaft*.

The A. Schaaffhausen'scher Bankverein took part also in the foundation of the *Bank für Handel und Industrie* (Darmstädter Bank), the *Bank für Süddeutschland* in Darmstadt as well as of the *Cölnische Privatbank* at Cologne. Further, it assisted at that time in the amalgamation of the Rhenish, the Bonn-Cologne, and the Cologne-Crefeld railway companies into one unified system of railways, with a union railway station at Cologne.

The development of the current account connections, mostly drawn from the industrial and commercial circles of the Rhineland and Westphalia, is shown in the following table:

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Year.	Debits in current account.		Credits in current account.	
	Number.	Total amount. ⁹⁸	Number.	Total amount.
		<i>Thalers.</i>		<i>Thalers.</i>
1852 ⁹⁹	472	-----	624	-----
1853.....	604	-----	590	-----
1854.....	643	-----	611	-----
1855.....	632	-----	630	-----
1856.....	636	-----	639	-----
1857.....	665	-----	621	-----
1858.....	653	-----	639	-----
1859.....	613	-----	622	-----
1860.....	614	-----	675	-----
1861.....	616	-----	676	-----
1862.....	619	-----	708	-----
1863.....	651	6,959,285.58	692	5,345,243.98
1864.....		7,212,472.05		5,924,497.66
1865.....		8,252,631.32		6,270,191.84
1866.....		7,339,369.58		5,661,290.25
1867.....		7,113,860.39		5,599,028.11
1868.....		7,951,485.26		6,849,356.88
1869.....		8,433,753.36		6,555,008.56

As to deposits (it is important to establish this fact as the result of a deliberate business policy), no appreciable increase during the period under contemplation could be expected, owing to the principles adopted by the A. Schaaffhausen'scher Bankverein as well as by most of the other credit banks.

"According to the principles adopted after discussion with the Board of Managers," says the business report of the Bankverein for 1850 (Appendix 2 to the minutes of the general meeting, September 14, 1850) deposits are received only on condition that three, six, and twelve months' notice be given before withdrawal. It is only because of these principles and the low rate of interest that the amount in hand is insignificant when compared with former years. In the interest of the perfect safety

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of our institution we do not deem it advisable to endeavor to obtain an increase in the deposits through more attractive terms; we much prefer to carry on the business with our own means, to the extent that such action is at all possible in the banking business and is in the interests of our correspondents."

The deposits at the Bankverein at the end of this period (1869) amounted to 883,616.80 thalers.

The dividends paid on stock Lit. B (according to section 10 of the statutes, the capital and fixed dividends of $4\frac{1}{2}$ per cent on stock Lit. A were guaranteed by the State) during this period amounted to:

	Per cent.
1848-1851.....	4
1852.....	$6\frac{1}{5}$
1853.....	$6\frac{1}{2}$
1854.....	$6\frac{3}{4}$
1855.....	9
1856.....	$9\frac{1}{2}^{100}$
1857.....	9
1858.....	6
1859.....	6
1860.....	6
1861.....	$6\frac{1}{2}$
1862.....	7
1863.....	7
1864.....	$7\frac{1}{2}$
1865.....	$7\frac{1}{2}$
1866.....	$7\frac{1}{2}$
1867.....	$7\frac{1}{2}$
1868.....	$7\frac{1}{2}$
1869.....	8
1870.....	$8\frac{1}{2}$

The profits of the business were thus quite satisfactory,¹⁰¹ and the surplus funds amounted, as early as December 31, 1857, to 320,388.63 thalers.

The extension of the business by the establishment of branches, agencies, and commandites had been contem-

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plated as early as 1853 (business report for 1853, p. 3), and at the general meeting of September 29, 1855, a resolution was passed to add a paragraph (par. 82) to the by-laws, which read as follows: "The company is authorised to establish a branch in Berlin, as well as agencies and commandites abroad." This resolution, however, was not carried into effect, owing to the refusal of the Prussian Ministry of Finance and Trade to ratify the change of the by-laws.

The *Berliner Handelsgesellschaft*, founded in 1856, devoted itself successfully, from the very outset, to the furtherance of the issue business (in accordance with section 2 of its by-laws, see note 73). Its nominal capital was 15,000,000 thalers, of which, however, only 3,740,150 thalers were paid up (1859, 3,786,200 thalers); of the latter, again, 800,000 thalers (4,000 shares nominally at 200 thalers) remained in the portefeuille of the company.

In 1856 it participated in the Carinthia Railway (merged in 1858 with the Lombard Railway), and in 1862 in the conversion of the $4\frac{1}{2}$ per cent preference bonds of the Hamburg-Berlin-Potsdam-Magdeburg and Thuringia Railway; during 1867, in the flotation of the Baden $4\frac{1}{2}$ per cent state loan and 4 per cent premium loan, of the Magdeburg and Halberstadt original preference shares, and of the Thuringia Railway shares. Further, it negotiated the issue of the 5 per cent Kozlov-Voronezh and the 5 per cent East Prussian Southern Railway preference bonds.

In 1868, when the commandite capital, which had been reduced meanwhile to 7,500,000 thalers (of which at that time 3,786,200 thalers had been issued), was paid up to the amount of 5,625,000 thalers, it participated in

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the issue of the 4½ per cent Upper Silesian preference bonds, the Russian Land-credit mortgage bonds, the Yeletz-Orel preference bonds, the 4½ per cent Prussian state loan of 1867 Lit. D. to the amount of 24,000,000 thalers, part of which was issued in 1868, and in addition arranged successfully for the public subscription and placing of the 5 per cent (state—guaranteed) preference bonds of the Shuya-Ivánovo, Kursk-Charkov, and Charkov-Azov Railway; of the 4½ per cent preference bonds of the Breslau-Schweidnitz-Freiburg Railway; of the 7½ per cent Roumanian Railway bonds, and of part of the first preference bonds of the Halle-Sorau-Gubener Railway.

Finally, in 1869, it took a nominal part in the issue of the 5 per cent bonds of the Moscow-Smolensk Railway; of the 5 per cent preference bonds of the East-Prussian Southern Railway; of the 4½ per cent preference bonds of the Magdeburg-Cöthen-Halle-Leipzig Railway; of the shares of the Breslau-Schweidnitz-Freiburg Railway, and of the Gotha premium mortgage debentures; it also had a secondary participation (*unterbeteiligt*) in the taking over of the original and preference shares of the *Schlesische Zinkhütten*, of the preference shares of the St. Petersburg-Baltishport Railway, and of the loans of the Italian Government raised on the church estates.

The commissions on the current business amounted to—

	Thalers.	Silber- groschen.	Pfen- nige.
1857.....	13, 219	10
1858.....	27, 440	14	6
1859.....	73, 201	18	102 10
1860.....	67, 046	1
1861.....	61, 393	18	11
1862.....	74, 060	1
1863.....	68, 360	3	3

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	Thalers.	Silber- groschen.	Pfen- nige.
1864.....	68, 106	22
1865.....	67, 349	28
1866.....	82, 210	21
1867.....	78, 735	16
1868.....	128, 034	26
1869.....	134, 654	27

The dividends amounted to—

	Per cent.
1857.....	5 ¹ / ₆
1858.....	5 ¹ / ₂
1859.....	5
(About half of which was taken from the surplus fund.)	
1860.....	4 ¹ / ₄
1861.....	5
(About half of which was taken from the surplus fund.)	
1862.....	9
1863.....	8
1864.....	8
1865.....	8
1866.....	8
1867.....	8
1868.....	10
1869.....	10

All arrangements had been made, according to the business report of 1857, for the establishment of commandites in other towns, but the realization of these plans had to be postponed owing to the crisis.

Only the banking firm of Messrs. Breest & Gelpcke in Berlin carried on business on account of the Berliner Handelsgesellschaft since January, 1857. This firm, however, sustained large losses in 1863 through the failure of a large export firm at Danzig.

The *Mitteldeutsche Kreditbank*¹⁰³ was founded in 1856 with a capital of 8,000,000 thalers, of which 3,000,000 remained in the portefeuille of the bank, while of the remaining capital of 5,000,000 thalers, 1,000,000 thalers were redeemed in 1859 (see p. 47.) This bank, as stated

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before, should properly not concern us in this connection, as during the period in question it was a note-issuing bank. Its note issue amounted to 1,688,660 thalers in 1857 and to 4,000,000 thalers in 1868. At Frankfort-on-the-Main an "agency" (August Siebert) was established in 1856, which was transformed into a branch office in 1872.

The Bank took an active part shortly after its foundation in a series of industrial, state, and railway transactions, which, however, were not always successful.

Thus in 1856 it participated to the extent of one-third in the purchase of the *Ludwigshütte*, near Biedenkopf, which was transformed in 1858 (under the name of *Oberschlesischer Hüttenverein*) into a joint-stock company with a capital of 600,000 florins. This operation caused serious losses to both partners (the Darmstädter Bank participated to the extent of two-thirds).

The participation during 1856 in a cigar factory at Wassungen in the Duchy of Meiningen also terminated badly.

On the other hand, it attained satisfactory results in its simultaneous participation in the Hochheim enterprise of sparkling wines (Burgeff & Co.), which was transformed into a joint-stock company in 1857; also in negotiating a 4½ per cent Swedish loan (jointly with the Darmstädter Bank), and in a 100-florin lottery certificate loan, guaranteed by the Austrian Government, as well as in taking over a preference loan of the Werra Railway (1,000,000 thalers), and in its participation in the establishment of the insurance society "Providentia," at Frankfort-on-the-Main.

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It was interested in the development of the brown coal industry in the Nieder-Lausitz district from the very commencement of this industry; particularly in the *Eintracht, Braunkohlenwerke und Brikettfabriken*, and the *Ilse, Bergbau-Aktiengesellschaft*.

In 1858 it participated in taking over the balance of the Werra preference shares of 250,000 thalers; a 4½ per cent loan of the city of Bremen; and the 4½ per cent preference shares of the Frankfort-Hanau Railway.

In 1862 it took a leading part in the founding of the *Deutsche Hypotheken-Bank* at Meiningen.

During the greater part of the period under consideration, it devoted itself to the regular (current) business. Its turnover amounted to—

Year.	At the main office.	At the agency in Frankfort-on-the-Main.
	<i>Thalers.</i>	<i>Thalers.</i>
1858-----	96,095,137.01	84,818,800.50
1859-----	73,318,091.32	115,343,418.70
1860-----	61,213,709.22	113,077,193.43
1861-----	57,790,084.68	104,037,760.17
1862-----	125,932,187.58	122,826,361.49
1863-----	165,869,918.46	90,335,317.34
1864-----	159,529,216.46	103,733,794.54
1865-----	159,087,084.14	105,770,692.99
1866-----	138,819,867.94	102,528,831.20
1867-----	119,031,959.50	95,355,576.96
1868-----	184,301,389.66	166,972,868.90
1869-----	263,770,732.68	234,008,308.20

The commissions amounted to—

	<i>Thalers.</i>
1857-----	58,067.39
1858-----	23,660.02
1859-----	28,962.48
1860-----	34,930.77
1861-----	73,175.81
1862-----	206,847.58

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	Thalers.
1863-----	114,998.13
1864-----	115,046.66
1865-----	101,401.46
1866-----	76,664.87
1867-----	73,268.79
1868-----	115,407.34
1869-----	146,407.43

The current account business showed the following results:

Year.	Credits.		Debits.	
	Number of accounts.	Amount.	Number of accounts.	Amount.
		Thalers.		Thalers.
1857-----		469,268.20		1,594,721.11
1858-----		578,029.84		1,441,089.00
1859-----	210	492,810.82	348	981,676.98
1860-----	205	688,059.09	399	1,642,790.67
1861-----	216	768,511.91	415	2,289,436.34
1862-----	278	1,200,912.81	547	2,673,483.57
1863-----	312	1,561,300.64	687	2,879,205.88
1864-----	309	1,901,955.53	726	3,152,198.46
1865-----	347	1,853,521.41	709	2,949,646.69
1866-----	316	1,254,110.70	677	2,990,217.87
1867-----	239	1,553,950.14	493	3,011,208.17
1868-----	285	1,588,034.88	588	2,933,362.84
1869-----	316	1,947,910.74	656	4,658,450.31

The following dividends were declared:

	Per cent.
1857-----	6
1858-----	6
1859-----	4
1860-----	4
1861-----	6
1862-----	7
1863-----	7
1864-----	7¼
1865-----	7
1866-----	6
1867-----	7
1868-----	8½
1869-----	10

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The deposits increased from 490,599.54 thalers in 1858 to 756,465 thalers in 1869.

The silent partnership (*commandite*) account stood, as early as 1858, at 1,103,111 thalers, without the commandites being named. It is only in the report for 1860 that a Berlin commandite is mentioned, namely, Messrs. A. Wolffsohn & Co., whose place was taken by Messrs. G. Müller & Co. in 1866. This commandite, simultaneously with the Frankfort Agency, was changed into a branch office in 1873.

During 1869, 1870, and 1871 the original capital of the bank, which had been reduced to 4,000,000 thalers, was increased again to 8,000,000 thalers, and in 1872 to 16,300,000 thalers, equal to 48,900,000 marks.¹⁰⁴

The liquidity of the bank's resources was nearly always maintained, although energetic intervention was occasionally necessary. Thus, at the end of 1859 the bank owned securities to the value of 179,813.32 thalers; and succeeded in reducing the same during one year (1860) to 132,210.32 thalers, or by 47,603 thalers.

The attitude of the banks during the crisis of 1857 was, generally speaking, economically correct. The Darmstädter Bank, for instance, could point out in its report for 1857 that during that year it was able to ease and mitigate the economic situation by retarding industrial promotions and by opportune interventions on the stock exchange; through which course, however, its holdings of securities rose from 8,500,000 to 10,500,000 florins in 1858, and to 12,500,000 florins in 1859, causing considerable loss later on. During that year (1857) it was able to advance considerable sums to the Hamburg Senate, as well as to

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several banks, thus proving that it had seasonably and successfully strengthened the liquidity of its resources.

The A. Schaaffhausen'scher Bankverein also emphasized in its business report for 1857 (p. 1) that "its large available means had enabled it at the time of the crisis to continue to grant credit to its old solid clients, as well as to increase the same suitably wherever it appeared advisable."

Similarly, the Berliner Handelsgesellschaft report for 1857 (p. 2) states: "During the crisis we have helped to smooth over difficulties by opportune assistance in numerous cases where a proper assurance was given that the assistance granted would be repaid."

In all issue business and flotation activity, however, the banks at that time were not slow to perceive clearly the importance and necessity of the fundamental principle underlying all prudent banking policy, namely, the distribution of risk; a principle which was adhered to by several banks in their issue transactions to an extent that often proved disadvantageous to their profits.

In 1859 the Darmstädter Bank (probably for the first time) formed a "bank syndicate"¹⁰⁵ for the purpose of taking over several engagements which had to be settled in 1860 (especially the Rhein-Nahe Railway bonds), a proceeding emphasized in the business report of 1860 in the following words: "This form has its decided advantages, as it reduces risk and facilitates operations."¹⁰⁶

It must be admitted that the business reports¹⁰⁷ of that period left much to be desired as far as lucidity and conciseness are concerned (this was owing to the fact that a proper form had yet to be found) thus complaints,

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European wars¹¹⁰ and grave crises¹¹¹—it will be difficult to accept the view of A. Weber that German joint-stock banking may be said to have become a common form only in the beginning of the seventies (op. cit., p. 47).

Neither can we adopt the extremely subjective viewpoint of Max Wirth, the South German contemporary critic, concerning the activity of the German banks during this period. In his book on commercial crises (p. 271) he places the fact that the Darmstädter Bank participated in 1857 in the promotion of the North German Lloyd, under the heading "The requirement of industry and trade," following it up with an exclamation mark, and manifests indignation at the bank's promotion of the "Concordia Spinning and Weaving Works" (formerly S. Woller), still flourishing in Bunzlau und Marklissa, by referring to it as the "Promotion of worsted spinning works in far-away North Germany."

PART III.

THE SECOND PERIOD (FROM 1870 TO THE
PRESENT DAY).

CHAPTER I.

(1) TABLE OF EVENTS DURING THE SECOND PERIOD WHICH
INFLUENCED THE DEVELOPMENT OF THE GERMAN BANK-
ING SYSTEM.

- 1871-72. Termination of the Franco-German war; sudden influx of the war indemnity of 5,000,000,000 francs; irregular expansion of the German system of private railways; impetuous growth of production, rise of workmen's wages, of almost all prices, especially prices of raw material and mining products; strong speculative movement in all branches of commerce and industry; beginning of the industrial cartel movement.
- Establishment of provincial discount companies in Berlin, Hanover, Aix-la-Chapelle, Bernburg, Elberfeld, Hamburg, Duisburg Ludwigshafen.
1871. Foundation of the Deutsche Bank, marking the commencement of a systematic development of the deposit business, of the industrial export policy of the credit banks, and of the concentration of German banking.
1873. Bourse and industrial crisis.
- 1874-1878. Economic depression.
1875. Foundation of the "Reichsbank" (began business January 1, 1876).
1876. Bank discount rate falls to 3½ per cent in Berlin.
- 1877-1878. Russo-Turkish war.
- 1879-1882. Economic revival; formation of foreign railway companies, and the issue of foreign loans.
1879. Bank discount falls to 3 per cent in Berlin.
1879. The commencement of the conversion of German state railway and municipal bonds; reorganization of the German bank and coinage system, adoption of the gold standard; beginning of the state purchase of the German private railways; treaty of alliance with Austria.
- 1883-1887. Depression in all fields; continuation of the issue of foreign securities.

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- 1887.....Alliance with Italy.
- 1888-1890...Boom, large number of promotions, transformations, issues, bourse speculation, difficulties in meeting payments on the state loans of Argentina, Portugal, Greece, etc.
- 1891-1894...Depression and stagnation in all directions.
- 1891.....Failure of several Berlin banking concerns.
- 1893.....Foundation of the *Rheinisch-Westfälisches Kohlen-Syndikat*.
- 1893.....Meeting of the bank inquiry commission.
- 1895.....Commencement of an upward tendency; quotations of the 3 per cent Imperial consols rise to 100.30 and of the 3 per cent Prussian consols to 100.40; beginning of a systematic industrial policy of the banks; foundations, transformations, issues; most of the great banks raise their capital.
- 1896-97....The upward movement intensified; brilliant development of the electro-technical industry; further extension of the German (state) railway system; increase of the Imperial Navy.
- 1897.....Formation of the *Rheinisch-Westfälisches Roheisensyndikat*; fusion of interests (*Interessengemeinschaft*) between the Deutsche Bank on the one hand, and the Bergisch-Märkische Bank at Elberfeld, and the Schlesischer Bankverein at Breslau on the other, in order to promote an industrial banking policy (denoting the commencement of close relations between the great banks and industry) which gave an impetus to concentration of banking.
- 1898-1900...Market at its highest; rise of the average bank discount rate in Berlin to 5.33 per cent and of the private discount rate to 4.41 per cent (1900). Growth of money requirements through the predominance of cash transactions in bourse speculation instead of time bargains, as a result of the bourse law of January 1, 1897.
- 1898.....Outbreak of the Spanish-American war.
- 1899.....Transformations, new promotions, and issues show a new record.
- Outbreak of the Boer war.
- 1900.....Quotation of the 3 per cent German Imperial consols falls to 86.74 (as compared with quotations of 99.63 of the $2\frac{3}{4}$ per cent British consols, and of 100.60 of the 3 per cent French rente). The Deutsche Bank takes over 200,000,000 marks of German Imperial and Prussian consols.
- 1900-01....Crisis, fall in quotation of mining securities (end of March to beginning of July); failure of the Pomeranian Mortgage Bank, of the Mecklenburg-Strelitz Mortgage Bank, of the Prussian Joint-Stock Mortgage Bank, of the *Deutsche Grundschuldbank*, the *Dresdner Bank für Handel und Gewerbe*, the *Leipziger Bank*, and of many industrial

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- undertakings especially in the electro-technical branch. Energetic intervention of the great banks, strengthening of the concentration movement; disposal to an American syndicate of 80,000,000 marks 4 per cent state treasury bills repayable in 1904 and 1905; maintenance of the low bank discount rate ($3\frac{1}{2}$ per cent) until the end of September.
- 1901-1902... Continued large needs of money on the part of the Empire, the individual states, and municipalities; outbreak of the Chinese troubles; foundation of the United States Steel Corporation (1901).
- 1902-1906... Recovery; bank discount rate falls to 3 per cent (February, 1902), then increases to 4 per cent (October, 1902). February 9, 1904, outbreak of the Russian-Japanese war. 1904: Foundation of the *Stahlwerksverband* at Düsseldorf; impetuous movement of concentration. 1905: Foundation of the *Oberschlesischer Stahlwerksverband*.
- 1907..... American crisis; considerable rise of discount rates up to $7\frac{1}{2}$ per cent (average, 6.03 per cent).
- 1908..... Termination of acute crisis in America; recovery; money becoming available; fall of the bank rate from $7\frac{1}{2}$ per cent in January to 4 per cent in December; average 4.76 per cent.
- 1909..... Money circulates more freely; political troubles owing to conflict between Austria and Servia; bank-law amendment; in the last months of the year beginning of an improvement in some branches of industry, especially in the mining industry.

(2) SKETCH OF THE ECONOMIC DEVELOPMENT OF GERMANY FROM 1870 UNTIL THE PRESENT.

The result of the victory in the great Franco-German war was the creation of the German Empire in 1871.

Unity was established gradually also in economic life. Weights and measures, the coinage and monetary systems,¹ the constitution of law-courts, procedure, and law,² were unified by degrees, and the army and navy³ linked firmly together for the protection of the gains attained. A central note-bank (the Reichsbank)⁴ was founded for the purpose of regulating the money circulation and facilitating payments. Furthermore, a supreme court for the Empire⁵ was created.

The German Great Banks

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The right of free migration and free competition (recognized as early as the sixties in the independent industrial legislation of the various German States) was introduced everywhere, at first through confederate and then through Imperial legislation.

The epoch commencing in this manner represents one of the greatest economic revolutions that has probably ever taken place in any modern civilized state.

It does not lie within the scope of this work to attempt to describe these changes exhaustively. The extent and the development of the problems, however, which had to be solved by the German banks during the period under consideration, could hardly be comprehended without a brief description of at least those chief factors of the economic development which had particular influence on the growth of German banking. It is only within such limits that I have attempted to sketch them in the following outline.

I will attempt to summarize the numerous important factors in this development under the following two heads:

This development is characterized on the one hand by an enormous expansion in almost all directions of public and private activity, coupled with⁶ a further shifting of the center of gravity of the whole economic fabric from agriculture to industry; and on the other hand, by the most intense concentration of forces, undertakings, and capital. The following will give a detailed illustration:

The feverish rapidity of the economic development during the period in question must be attributed above all to the rapid growth of the population, for which sustenance and employment had to be found.

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The population in 1816 amounted to about 25,000,000; at the beginning of this period (1870), to over 40,000,000; and in 1907 to 62,100,000 souls. During the last few years it has increased on an average by about 855,000 souls annually, as compared with an annual increase during recent years of about 373,000 in England and of only about 58,000 souls in France.

It should be emphasized however that this enormous increase in the population of Germany is not due to an increase of births, which have decreased in proportion to the population during the last three decades. The increase is due principally to the very considerable decrease in mortality, i. e., owing to the fact that as a result of improved hygienic conditions the number of deaths in proportion to the population has decreased far more rapidly than the number of births.⁷ Should this proportion change, an eventuality bound to take place sooner or later, and should the birth figures remain stationary or decrease to a considerable extent, a continuation of the increase in population hitherto recorded is out of question. Added to this, the excess of immigration, which occurred for the first time in the years 1895 to 1900,⁸ (and which still continues) may change again into an excess of emigration which, from 1871 to 1895, amounted to about 2,500,000 souls. Finally, the increase in population may cease or the rate of increase may decline, if there should be a decline in the productivity of our national industry which has been both a result as well as a cause of the increase of population.

At the beginning of this period (1871) about 64 per cent of the inhabitants of Germany lived in the country, and

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about 36 per cent (as compared with only 28.04 per cent in Prussia in 1849) in the towns. In 1893, however, the percentage of country and town population was almost equal, and in 1905 the percentage of people living in the country amounted to 42.58 per cent only, whereas the percentage of those living in towns had risen to 57.42 per cent of the total population.⁹

According to the census of professions, trades, and occupations taken June 14, 1895, 26,000,000, or 42.7 per cent of the population, were engaged in various professions, trades, and occupations¹⁰ (either as a main or subsidiary means of gaining a livelihood) (*erwerbstätigt im Hauptund Nebenberuf.*) They were divided as follows:

Of the total number, 20,770,875, or 40.12 per cent of the entire population, were engaged in various professions, trades, and occupations as a main source of livelihood (*erwerbstätigt im Hauptberuf*), as compared with 17,632,008, or 38.99 per cent of the entire population, in 1882.

According to the occupation census taken on the 12th of June, 1907, the main results of which were published in the "Reichsanzeiger" of February 10, 1909, No. 35, the number of persons thus engaged was 26,827,362, or 43.46 per cent of the entire population. These figures show an increase of 6,056,487, or 29.16 per cent, as compared with 1895, whereas the increase in 1895, as compared with 1882, amounted only to 17.80 per cent.

The population of the chief industrial towns¹¹ had increased to an extraordinary extent up to the end of 1905, in comparison with the years 1843 or 1849. Thus, for instance: Aix-la-Chapelle to about 144,000, as compared with about 46,000; Chemnitz to about 241,000, as com-

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pared with about 26,000; Dortmund to about 175,000, as compared with about 7,600; Essen to about 229,000, as compared with about 7,000; Düsseldorf to about 253,000, as compared with about 26,000.¹²

At the beginning of the period under consideration there were 8 towns, in 1905 as many as 41 towns, with over 100,000 inhabitants. Berlin, which about the middle of the nineteenth century numbered less than 500,000 inhabitants, in 1870, 774,000, in 1880 not quite 1,250,000, and in 1890 about 1,500,000,¹³ has passed beyond the second million since December, 1904.

As stated by Ad. Wagner,¹⁴ it seems at the present time as difficult to make a scientifically incontestable estimate of German national wealth, as it is to estimate the amount of income of the German nation or its annual savings. A brief consideration of the facts will make this clear.

According to the most recent calculation made (1908) on the basis of what is relatively the most accurate method, taking as basis the Prussian supplementary tax (i. e., a direct property tax), the wealth of Prussia amounted to 130 billion marks. Taking into account¹⁵ the proportion of population (3/5) the German national wealth (given by Mulliall in 1895 in his "Dictionary of Statistics" as £7,500,000,000 = 150 billion marks) is estimated at 216 billion marks, or to avoid exaggeration at 200 billion marks.¹⁶ Two years earlier (1906) the German national wealth was estimated by Evert¹⁷ at 200 billion marks, by Ballod¹⁸ in 1908 at 251 to 266 billions, by Steinmann-Bucher (1908)¹⁹ at even 314 billions; and in a recent essay ("*350 Milliarden deutsches Volkvermögen*," Berlin 1909) at 350 to 360 billion marks. Thus there is a difference of no less than

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160 billion marks ²⁰ between the highest and lowest (200 billion to 360 billion marks) estimates recently made, although most of them were based upon careful and conservative calculations.

Again, the result of the Prussian income tax assessment for 1907, chosen as a basis for estimating the German national income, gives a total income for the Prussian population (1907) of 17,990,000,000 marks (11,747,000,000 marks for taxpayers; 6,243,000,000 marks for nontaxpayers). Calculated on the proportion of the population this would result in a German national income of 25 to 30 billion marks, and an annual income of 484 marks per head of the population. These figures, however, should be used with great reserve.²¹

As a matter of fact Steinmann-Bucher calculates the present German national income (in his book "*350 Milliarden deutsches Volksvermögen*," p. 102) as being much higher, namely, 35 billion marks, though the grounds on which he bases his estimate seem inadequate.

The same remarks apply to any estimate of the annual German savings, i. e., the amounts by which the German national wealth is annually increased from the German national income. This amount Schmoller ²² has placed at $2\frac{1}{2}$ to 3 billion marks, and it has been calculated by the author of the *Grenzboten* article already mentioned (p. 91) at 3.7 billion marks on the basis of an average annual increase of 1,700,000,000 ²³ marks in the value of property subject to the Prussian supplementary tax.

It is plain that the same objections, or other no less serious, may be urged against all estimates for foreign

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countries which have been made according to any of the above methods.²⁴

If, however, it be desired to give merely a general idea of the development of national prosperity in Germany during this second period, it may be pointed out among other things that the total income during 1907 of all physical persons in Prussia (including an allowance for non-taxpayers) amounted in round figures to 16 billion marks for a population of 38,421,000, while in 1896 the total income of these persons amounted to slightly over 10 billion marks, for a total population of 32,379,000. The increase of income was thus 56 per cent, while population increased during the same period only 17 per cent.

The amount of property assessed for property taxes in 1905 amounted to about 82,500,000,000 marks, showing an increase of 17 per cent, as compared with 1899, when it amounted to 70,000,000,000 marks. The figures for the other German Federated States show a similar development.²⁵

If an attempt be made to ascertain the amount of German national wealth invested in Bourse securities (which would be especially appropriate in the present volume), equally great difficulties will be experienced, despite the material collected in regard to this subject on the occasion of the German finance reform bills of 1908.²⁶

If the table compiled in the report of the *Aeltesten der Kaufmannschaft von Berlin*²⁷ be adopted, in which (according to the market report of June 30, 1906) the nominal and market values of the securities dealt in on the Berlin Bourse were estimated at about 92½ and 94¾ billion marks, respectively, it is evident that for our

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purpose the figures are too high in one regard and too low in another. Too high, because in the table the total of securities bearing fixed interest includes the amounts withdrawn from the market during 1906 by repayment; further, because it does not contain the total amount of foreign securities in German hands, but only the amount of foreign securities listed at the Berlin Bourse. By far the larger portion of these securities, however, were never in German hands, as, for instance, Russian and Argentine government bonds, as well as Russian and American railway securities.²⁸ Another part of these securities, such as the Italian, Austrian, and Hungarian state securities, had passed or returned by the 30th June, 1906, from German to foreign hands (especially to the countries of their origin) in consequence of conversions or of foreign demand.

On the other hand, the results obtained by accepting the table as a basis, are in part far too low, as many of the securities are not quoted on the Berlin Bourse, but on other German exchanges. Other securities, such as the debentures of small industrial undertakings, are not quoted on any German bourse.

The *Deutscher Oekonomist*²⁹ endeavors therefore to solve the problem in a different manner. It starts with the supposition that, according to the income-tax statistics in Prussia, the Prussian income derived from capital property has been valued (though far too low) at 1,610,000,000 marks, which, capitalized at 4 per cent, corresponds to 40,000,000,000 marks for Prussia, and assumes that of these 40,000,000,000 about 20,000,000,000 are invested in mortgages, thus leaving

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a balance of 20,000,000,000 for securities invested in Prussia, and accordingly about 30,000,000,000 for the whole of Germany.

This method of calculation does not yield indisputable results, the more so, because no statistics exist regarding the total mortgages outstanding in Germany, the amount of which for Prussia is estimated at 20,000,000,000 marks. Thus every estimate must be more or less inaccurate. Moreover, every purely schematic application of Prussian to German general conditions is improper.

As a matter of fact it is assumed in the above-mentioned supplementary volumes to the German finance reform bill of 1908³⁰ that in 1907 the German public held German public and quasi-public securities, as well as mortgage and municipal bonds of private mortgage banks, to the amount of about 35,500,000,000 marks; industrial bonds to the amount of 2,500,000,000 marks, and shares of an actual value of 6,750,000,000 marks, making a total of 44,750,000,000 marks of securities in German hands, or 14,750,000,000 marks more than the above-mentioned estimate of the whole amount of securities in German hands.

As statistical details are lacking (especially the yield of the stamp duties), it is impossible to obtain a reliable estimate³¹ of German investments held in the shape of securities of all kinds. On the whole, we may assume (on the strength of a number of data) that at least one-third of the national wealth is invested in securities.³² According to the different estimates of the German national wealth (200,000,000 to 360,000,000 marks: see above, pp. 91 and 92) it may be concluded that the

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amount is between 66,000,000,000 and 120,000,000,000 marks, figures which present a wide margin, indeed. A similar conclusion may be based on the issue statistics, which, though somewhat incomplete, tend to prove that 1,200,000,000 marks, or about one-third of the annual savings of the nation, is invested annually in securities.

Grave misgivings have been expressed, especially by Ad. Wagner, regarding the tendencies shown by the development of German incomes during the period under consideration. Wagner finds that it is in the main a development along plutocratic lines and favoring the interests of the money aristocracy, and he seems to think that the entire economic development of Germany is seriously menaced by "this constantly growing concentration of income, evidenced not only in the case of some particularly rich persons, but also by a constant growth in numbers of the classes occupying a high and even the highest place in the economic scale." ³³

In a study, breathing a high spirit of patriotism,³⁴ he has lately pointed out that about the middle of the nineteenth century there were only about 100 persons with incomes exceeding 100,000 marks in the territory corresponding to the confines of present-day Prussia, whereas in 1891 there were 1,400 to 1,500, in 1902, 2,800, in 1905, 2,900, and in 1907, 3,600 such persons. In another place he states that the national wealth and national income have increased out of all proportion in favor of the upper and of the highest classes, and not inconsiderably in favor of the lower classes (especially the working classes), whereas the large middle class maintains its position with great difficulty in the list of taxpayers, and (as far as its share

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of the national income is concerned) is falling into a less favorable position from day to day.³⁵

A consideration of the facts will show that none of these misgivings can be deemed justified in all or even in their main points.

In my opinion (see p. 113) the increase in the number of persons with incomes exceeding 100,000 marks in Prussia (of present extent), from 100 in the middle of the last century to 3,600 in 1907, is certainly a gratifying proof of our economic development. But if we consider the enormous growth of population in these 57 years, the increase of such incomes does not seem very considerable, but rather (relatively speaking) inconsiderable.

As a matter of fact, a smaller growth in the incomes exceeding 100,000 marks might have suggested serious misgivings regarding the development of national prosperity, in view of the fact that during these sixty years the entire standard of living, the entire consumption, and thus the household budget of the individual, has doubtless increased to a very great extent.

After all, we can see but little significance in the fact that it is just the uppermost grade of taxpayers (mentioned by Wagner) which has considerably increased compared with the other classes, since those of its members who become wealthier must of necessity remain in that grade, there being no higher grade to which they could be transferred.

Finally, it may be pointed out that during the period under discussion the number of those persons who have been moving upward from a lower to a higher tax grade³⁶ has been constantly increasing; further, that the relative

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number (in proportion to the population) of non-taxpayers (i. e., persons in Prussia with incomes below 900 marks) who have been moving upward into the taxpaying class during this period has also been constantly on the increase.³⁷ This can be proved in detail. According to Schmoller,³⁸ in old Prussia the number of persons paying taxes on incomes exceeding 3,000 marks was as follows:

	Persons.
1852.....	43, 489
1867.....	72, 983

In Prussia of to-day:

	Persons.
1873.....	123, 284
1894.....	319, 317
1902.....	449, 741

This shows, certainly, an absolute increase in the number of taxpayers in Prussia (present-day area)³⁹ with incomes above 3,000 marks whose total taxable income (after legal deductions) has risen from 2,792,345,342 marks in 1892 to 5,156,245,432 marks in 1907.

On the other hand, the income of persons subject to the income tax in Prussia (present area) belonging to the lowest grade (incomes between 900 marks and 3,000 marks) has risen from 2,911,981,421 marks in 1892 to 6,591,553,725 marks in 1907.⁴⁰

Between the years 1907 and 1908 the group paying no income tax (incomes below 900 marks) decreased in the proportion of 5,555 to 5,242; the number of taxpayers in Prussia (with incomes exceeding 900 marks) increased 19.5 per cent between 1892-93 and 1898-99, whereas the population increased during the same period only 8.2 per cent.⁴¹

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Furthermore, the returns of the Saxon income tax, under which until 1894 all persons receiving a minimum income of 360 marks were liable to taxation, give the following figures for every 100 persons assessed:

	1879.	1894.
	<i>Per cent.</i>	<i>Per cent.</i>
Less than 300 marks.....	7.1	5.6
300 to 800 marks.....	76.3	65.3
800 to 3,300 marks.....	20.9	31.1
3,300 to 9,600 marks.....	2.3	2.8
Over 9,600 marks.....	.5	.8

That is to say, the number of taxpayers in the lowest grades decreased, and the number belonging to the other groups increased considerably. Moreover, the largest increase during the period mentioned took place in the middle group of taxpayers (800 to 3,300 marks), supposed by Ad. Wagner to be particularly endangered. Finally, the total taxable income of physical persons in Prussia has increased from 10,147,578,035 marks in 1896 to 15,873,774,007 in 1907.

In the memorial of the Admiralty, dated December, 1905, entitled "*Die Entwicklung der deutschen Seeinteressen im letzten Jahrzehnt*," proof is furnished of the enormous upward movement of incomes in Prussia, in which not only the wealthy classes but also those with smaller incomes participated (900 to 3,000 marks) almost to the same extent. The increase of the national income by far exceeds the increase of population.

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The fact that the classes with small incomes, which, by the way, are not solely composed of workingmen, had a large share in this upward movement, can also ⁴³ be proved by the savings bank statistics.

Of the 9,000,000 savings bank books ⁴³ in existence in Prussia at the end of 1901, almost one-quarter were for amounts not exceeding 60 marks, about one-seventh for amounts from 60 to 80 marks, about one-eighth for amounts from 150 to 300 marks, and only one-thirtieth for amounts above 3,000 marks (at this stage depositors begin to invest their savings in securities.).

The number of savings bank books grew as follows: ⁴⁴

Location.	Year.	Books.	Per 100 inhabitants.
			<i>Per cent.</i>
Württemberg.....	1891	349,354	17.1
	1896	424,500	20.3
Prussia.....	1882	3,345,000	12.1
	1897	7,643,000	23.4
	1904	10,211,976	27.71
	1906	11,095,276	29.24

This number had doubled in Prussia during the time from 1882 to 1897 and trebled up to the end of 1906.

The savings bank deposits totaled as follows:

Location.	Year.	Amount.
		<i>Marks.</i>
Württemberg.....	1891	137,000,000
	1896	190,000,000
Prussia.....	1882	1,697,000,000
	1897	4,967,000,000
	1904	7,762,000,000
	1906	8,788,000,000
	1907	9,121,000,000

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These deposits had almost trebled in Prussia between 1882 and 1906, and were more than five-fold at the end of 1907. In 1882 every eighth inhabitant of Prussia possessed a savings bank book, and at the end of 1901 every fourth inhabitant. The amount of deposits increased in the German Empire from about 1,869,000,000 marks in 1875 to 13,889,000,000 marks in 1907, which denotes an increase during these thirty-three years of 643.05 per cent. From 1883 to 1907, or in twenty-five years, the deposits have increased from 3,187,000,000 marks to 13,889,000,000 marks, or four and a quarter times.

Between 1883 and 1908, the deposits in the German credit banks have also increased considerably; in credit banks particularly, with a minimum capital of 1,000,000 marks each (which are of greater importance for the deposit business⁴⁵), they rose from about 498,000,000 marks at the end of 1883 to about 2,746,000,000 marks at the end of 1908, an increase during these twenty-six years of more than four and a half times.

It may be assumed that the greater portion of these bank deposits, about two-thirds, consists of working reserves of manufacturers and traders (doubtless including also the smaller ones), and of funds of capitalists deposited temporarily, but destined for investment in securities, mortgages, etc., and that only the smaller part (about one-third) represents savings deposits proper.

The annual increase of the savings deposited with the 16,092 German cooperative credit societies (on January 1, 1908) was estimated at 225,000,000 marks.⁴⁶ The majority of the members belong most probably to the class of the smaller and smallest tradesmen.

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German foreign trade (i. e., special imports and exports) according to the memorial of the admiralty dated December, 1905, entitled *Die Entwicklung der deutschen Seeinteressen im letzten Jahrzehnt*, rose from 7,300,000,000 marks to 12,200,000,000 marks in the decade from 1894 to 1904; the increase in weight was 60 per cent, and in value 66 per cent.

During this period the special trade of England increased 38 per cent, that of the United States 59 per cent, that of France 28 per cent, and that of Russia 23 per cent. Within the last twenty-five years German trade has exactly doubled.⁴⁷

The total number of establishments in trade and industry amounted, according to the census taken in 1895, to over 3,000,000, in which about 10,225,000 persons were at work.

Of these 3,000,000 establishments, nine-tenths—with about 4,750,000 persons only—were small establishments, as against only 19,000 large establishments, with over 50 persons each; the latter, however, gave occupation to about 3,000,000 persons, or almost to 30 per cent of all persons engaged in trade and industry. As compared with the census of 1882, the proportion of large establishments to middle-sized and small establishments in 1895,⁴⁸ had increased 28.3 per cent in the mining and foundry industries, 3.6 per cent in the chemical industries, and 2.2 per cent in the industry of illuminants.

By far the majority of the 19,000 large establishments with about 3,000,000 persons belonged to industry proper.

The average number of workmen, clerks, and other employees belonging to the trade insurance associations

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(*Berufsgenossenschaften*) in commerce and industry was, in round figures, as follows:

1886.....	3,467,000
1895.....	5,341,000
1905.....	8,036,000

There were 124,074 steam engines (not including those used in agriculture and forestry) with 7,587,650 horsepower⁴⁹ at work in the German Empire in 1907, which, if the effective horsepower of a machine during a normal working day is computed as equivalent to the labor-power of 10 men, replaced the work of 75,000,000 men.

Of these 124,074 (7,587,650 HP) steam engines, 27,921 (3,065,223 HP) belonged to the mining and foundry industries; the textile industry employed 11,039 steam engines (934,763 HP) and the machine industry 8,066 (891,088 HP) steam engines.

According to the occupation census of 1895 the whole population of Germany was divided as follows: Agriculture, 35.74 per cent; industry and mining, 39.1 per cent; trade and transportation, 11.5 per cent. For Prussia alone the following comparative data may be given:⁵⁰

	1843.	1895.	1907.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Agriculture.....	60.84-61.34	36.12	28.59
Industry and mining.....	23.37	38.73	42.76
Trade and transportation.....	.97	11.39	13.17

The population of the Empire engaged in agriculture and forestry, which still numbered 19,250,000 persons in 1882 (19,225,455 souls, or 42.5 per cent of the population), decreased in the thirteen years following (1882-1895), to 18,500,000 (18,501,307 souls, or 35.8 per cent), the whole

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population increasing during the same period 14.48 per cent; that is to say, the decrease in agricultural population amounted to about 700,000 persons, or 3.77 per cent of the total population. Although the number of farms (*landwirtschaftliche Betriebe*) and the area utilised for agriculture increased constantly during the thirteen years in question, the number of agricultural laborers diminished by over 254,000 persons.

During the same period (1882-1895), the industrial population increased 26.12 per cent, and the commercial population as much as 31.62 per cent.

Thus even the census of 1882 had made it evident that a reversal had taken place; the industrial minority of former times had become a majority, and the former agricultural majority had been turned into a minority. According to the census taken on June 12, 1907 ("Reichsanzeiger" of February 10, 1909, No. 35), this condition has become very much more pronounced.

The total number of persons engaged in agriculture (those making agriculture their main occupation, including house servants, and members of the family) has decreased still further, the number being 17,681,176 souls.

Of the entire population of the German Empire in 1882, 1895, and 1907 the distribution of the total population by occupations showed the following percentages:

	1882.	1895.	1907.
Agriculture (including gardening, stock breeding, forestry, and fisheries)	<i>Per cent.</i> 42.5	<i>Per cent.</i> 35.8	<i>Per cent.</i> 28.6
Industry (including mining and the building trades).	33.5	39.1	42.8
Trade and traffic (including innkeeping and tavern keeping)	10.0	11.5	13.4

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The distribution by occupations of the population engaged in gainful occupations in the German Empire in 1882, 1895, and 1907 is shown in the following table:

	1882.	1895.	1907.
Agriculture (including gardening, stock breeding, forestry, and fisheries)	<i>Per cent.</i> 43.4	<i>Per cent.</i> 36.2	<i>Per cent.</i> 32.7
Industry (including the mining and building trades)	33.7	36.1	37.2
Trade and traffic (including inn keeping and tavern keeping)	8.3	10.2	11.5

Thus on the basis of the statistics of occupations it may be stated with perfect assurance (with certain reservations to be set forth presently), that of the German population more than two-thirds are no longer employed in agriculture.⁵¹ It would, however, be entirely one-sided and incorrect (as has been pointed out by Oldenburg, Ballod, and especially by Traugott Müller, in a highly instructive article⁵²) to infer from these facts that German agriculture is on the decline, and that Germany's sole salvation lies in industry, especially in the export industry.

It has already been mentioned⁵³ that both the number of farms (*landwirtschaftliche Betriebe*) and the area devoted to agriculture,⁵⁴ have increased during this period; and the same applies on the whole to stock raising,⁵⁵ as well as to almost all agricultural productions, especially those of fodder and potatoes. This increase was due chiefly to the steady improvement in the systems of culture and methods of work, as well as to the constantly growing employment of machinery driven by steam and electric power. Between 1882 and 1895, for example, the number of steam plows in use increased from 836 to 1,696, and the number

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of steam thrashing-machines from 75,690 to 259,364. On the other hand, the number of large distilleries increased fivefold since 1870 in the districts east of the Elbe (according to K. Lamprecht, *op. cit.*, p. 187), in consequence of the introduction of the high-pressure boiler for steaming potatoes.

The intensity of agricultural cultivation has also grown considerably, and likewise almost without exception the average crop yields. Thus, if the period from 1879-1888 be compared with the year 1899, an increase will be found to have taken place in the case of rye from 980 to 1,490 kilograms per hectare, in the case of oats from 1,140 to 1,720, and of potatoes from 8,100 to 12,290 kilograms.

According to Ballod's essay on the economic development of Germany since 1870, the home production of all sorts of grains increased within the last two decades about 36 per cent, whereas the population increased only about 18 per cent.

The net proceeds, however—that is to say, the profitability of agricultural undertakings, fell considerably in many parts of Germany mainly because of the great increase in the domestic cost of production, and of foreign competition having the advantage of lower cost of production, and cheap transportation by land and sea. An improvement in this regard has been noted only during the last few years, due in part to the greatly increased duties on agricultural products put in force by the latest commercial treaties. Until then, much to the detriment of the general economic interests in large parts of Germany, the condition of agriculture, affected as it was by a heavy fall in the prices of its chief products,⁵⁶ and the

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growing encumbrances on landed property,⁵⁷ had become quite precarious. This condition, naturally, influenced the amount of agricultural production⁵⁸ and, considering the great influence of agriculturists on the politics and legislation of Germany, brought about—in some cases unnecessarily—results detrimental to other classes, without simultaneous advantages desired for and by agriculture.

Finally, certain improvements in the agricultural credit system were introduced, partly by state aid, as in Prussia by the foundation of the Prussian *Zentral-Genossenschaftskasse* (Central Bank for Cooperative Societies) (1895) and partly through the establishment of “Raiffeisen” loan societies, and the Schultze-Delitzsch loan and credit societies. In this direction, i. e., of cooperative effort, much remains to be done. The granting of credit by the Reichsbank, which in view of its own short-term obligations may grant short credit only, can be depended on by agriculturists only in exceptional cases in view of the greater length of time occupied by the process of agricultural production. Agriculture requires a system of credit adapted to its peculiar conditions of production. A permanent organisation for this purpose would benefit agriculture as much as the community at large, since the common good requires that not only the interests of the consumer but also those of the producer be guarded.

In other directions, too, the injudicious use of the above data (see pp. 104 to 106) may lead to false conclusions.

In the first place, we must not lose sight of the fact that a considerable amount of economic activity which in our statistics is classed under the head of industry is either largely of an agricultural nature, for instance, the

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manufacture of beet sugar and starch, distilling, brewing, milling, etc., or else closely connected with agriculture, such as baking, butchering, the manufacture of food and drinks, brickmaking, etc.⁵⁹ It must also be borne in mind that our statistics do not take into account those persons who, in addition to their main occupation were engaged in agriculture as a secondary occupation. According to Troeltsch (loc. cit. p. 121), the number of such persons in 1905 amounted to 3,700,000.

Further, it must be remembered that although between 1882 and 1895 the number of independent producers in agriculture increased by 2.9 per 1,000, the number of dependent workers (*abhängige Arbeiter*) decreased 16.1 per 1,000 during the same period, the agricultural labourers having turned to other occupations, mostly industrial, without returning and without being replaced.⁶⁰

Finally, the period under consideration witnessed the completion of a movement which set in during the earlier economic period (1848-1870), namely, the gradual development into independent branches of industry of a whole series of occupations, such as spinning and weaving, originally carried on as homework in the country, and therefore classified under the heading of agriculture. These occupations no longer center in the country.

In this manner the number of persons occupied in agriculture decreased statistically, without an actual decline of agriculture as such, and without a decrease of the number of persons actually employed in agricultural pursuits.⁶¹

Care should therefore be taken not to overstretch the conclusions drawn from the figures showing the per

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centage (see pages 104 and 105) of persons in Germany following agricultural, industrial, and trade pursuits, nor to pit against each other too sharply the two expressions "agrarian state" and "industrial state," which as the result of indiscriminate use are assuming more and more the character of dangerous catchwords, suggesting that the two economic stages thus designated are essentially antagonistic. It is only by avoiding these errors that a proper appreciation can be gained of the share of German agriculture in the national wealth and production, in fact in the entire economic life of Germany.

All these considerations, however, do not impair the correctness of the above statement (p. 88), namely, that the center of German economic life has been shifted more and more from agriculture to industry.⁶² The causes of this fact are of very varied nature.

The larger the growth and the rate of growth of the German population, the less German agriculture was able to employ and sustain it.

It is true that, until the beginning of the period under consideration, German agriculturists exported considerably more of their products (especially grain, with the exception of rye), mainly to England, France, Holland, and Switzerland, than was imported from foreign countries.⁶³ It is also an established fact that during the period in question the necessity of exchanging German manufactured products⁶⁴ for foreign products of the soil (more especially wheat and vegetal raw materials) became more and more pronounced. Furthermore, agriculture, despite great efforts and successes, was not able to increase in the same proportion and with the same rapidity as the popu-

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lation. The deficit in agricultural production thus entailed, which despite all protective duties amounted as far back as 1898 to over 2,000,000,000 marks per annum, had consequently to be met by importation from abroad.

Similarly, German manufacturers were quite unable to satisfy their requirements at home, especially of raw materials, as the required raw products are not to be had at all in Germany, or, if the colonies be taken into account, only in insignificant quantities. Consequently a large portion, in some cases the largest portion of the requirements of German industry, has to be procured by imports from abroad. The most striking instance of this is furnished by the textile industry occupying the first place in Germany's export trade, which has to obtain from abroad about nine-tenths of its raw materials (cotton, jute, silk).⁶⁵

The annual import requirements of foods and delicacies, cattle as well as raw materials, and half-manufactured goods necessary in German agriculture and industry for further manufacture, or for direct use, could not be paid out of German national capital (*Nationalvermögen*) unless the nation was to be gradually impoverished; payment had to be made in another way.

An inconsiderable part of this payment is made to foreign countries in such German home-grown raw materials as are not needed for home use. The greater part of the payment, however, is made in manufactured goods supplied to foreign countries which import into Germany food and raw materials, or, in other words, in exporting the results of German home labor in return for foreign products of the soil.⁶⁶ These manufactured goods consist

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principally of woollen and cotton manufactures, sugar, machines, silk goods, coarse iron manufactures, chemical products, etc.

In 1908 by far the larger part of our special exports consisted of manufactured goods, namely, 65 per cent. Raw material exported amounted to only 25 per cent, foods and delicacies to 10 per cent.

The "industrialisation" thus characterized caused in the first instance by an increased population that had to be fed and employed, in its turn became the cause of a further increase of the population. It was intensified by the circumstance that simultaneously the industrial demand for means of production was constantly growing through "the displacement of organic by inorganic matter," as Sombart has pregnantly characterized this recent technical development.

The tree of the forest has to make room for the iron girder for building purposes, and is replaced by coal for purposes of fuel. Animal manure and animal labor are being displaced by chemical fertilizers (ground Thomas slag, potash, Chile saltpeter, etc.), by steam engines, and electric motors; through the discovery of aniline dyes fields sown in madder became free for other cultures.

At the end of 1907 the special exports from the German Customs Union amounted to nearly 6.4 billion marks (6,389,860,000), and the special imports to about 8 billion marks (7,664,000,000)⁶⁷, whereas exports from the German Customs Union between 1842-1846 averaged, according to K. H. Rau, about 510,000,000 marks and imports about 630,000,000 marks.⁶⁸

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The excess of imports for home consumption into Germany at the end of 1907 (more than half of which came from Great Britain, the United States, Austria-Hungary, and Russia) over German domestic exports (almost half of which were sent to the above-mentioned countries), or our adverse trade balance (*Warenverkehrsbilanz*), amounted thus to almost 1,300,000,000 marks (1895: 800,000,000).

It will be found, however,⁶⁹ on comparing the import and export figures of 1907 with those of 1882, that on the whole the imports of 1907 have increased proportionately much more than the exports.⁷⁰ Of raw materials and half-manufactured goods the imports increased 200.1 per cent; and the exports only 77.5 per cent. Of manufactured goods the imports increased 222.1 per cent; and the exports only 183 per cent. The opposite tendency may be noted for the period before 1882, when the growth of imports was on the whole smaller than the growth of exports.

Further, commencing with 1882, it will be found that, on the whole, the quantities of manufactured goods exported have formed a constantly decreasing portion of the total German industrial production.

Finally, it will be found that the increase in German industrial production (in the most important branches) was greater after 1882 than the increase in the average number of persons employed; that since 1885 the increase in the number of gainfully employed persons has been greater than the increase of the general population, and on the whole ⁷¹ greater than the increase of production and of the quantity and value of the exports.

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All these factors warrant the conclusion that since about the beginning of the eighties the consuming power of the German nation, i. e., the home market, developed more speedily and vigorously than the foreign markets.⁷²

It can scarcely be doubted that this was due to the greater accumulation of capital during the same period—that is to say, to the growing development of national prosperity.

This growth raised the productive power of the industrial population on the one hand, and the purchasing power of the nation on the other, allowing at the same time a portion of the added available means to be utilized for the improvement of the German balance of payments.

This improvement of the German balance of payments has been caused during the last twenty-five years, especially through the acquisition of foreign securities, which rendered foreign countries “tributary” to Germany in so far as they had to pay her interest. Additional improvements have been brought about by the granting of long and short term credit to foreign countries, by the considerable growth of Germany’s shipping, and by her participation in foreign undertakings. The necessity and the benefit of these improvements, especially of the last named, will form the subject of a special chapter (Sec. VII of this part).

There can be no doubt, however, that an unfavorable trade balance (*Passivität der Wirtschaftsbilanz*) of a country is the less dangerous the more favorable its balance of payments, for it can then more easily afford to let other countries “work for it” and supply it with raw material and food.

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During the last few years there have been noticed certain though not absolutely indisputable indications that the German balance of payments, while not unfavorable throughout, yet evinces a certain tendency in that direction.⁷³ This should serve as a warning to utilize the increasing accumulation of capital primarily, and to a greater degree than hitherto, for the strengthening of the home market; or, in other words, to increase home production and purchasing power, particularly the agricultural production of foodstuffs and our colonial production of raw materials, and to employ our surplus funds only secondarily in the service of so-called "export capitalism."⁷⁴

Industrial, commercial, and banking circles must not forget that the strengthening of agriculture and its capacity for absorbing industrial products forms one of the most indispensable means of strengthening the entire home market; on the other hand, the agricultural interests should not overlook the fact that the most careful fostering of the export industry, within the limits essential for the strengthening of the home market, is in turn demanded in the interests of national economy.

In my opinion the inferences to be drawn from the above for the German credit banks are clear. As regards the past, they have rendered effective service in promoting the development of the national economic forces by participating to a considerable extent in the strengthening of the home market, by increasing the productiveness and purchasing power of the nation, and by sharing in the above-described (p. 113) improvements of the German balance of payments. The favorable effects of the activity of the credit banks should be

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admitted even by those persons who, in a spirit of exaggeration, hold the German credit banks responsible for everything unfavorable that has happened in the industrial and commercial development of Germany.

On the other hand, as regards the future, the German credit banks must aim at restraining "export capitalism" still further than has been the case hitherto, particularly during the last few years, more especially at times when the home market according to all indications stands in need of available home capital.

Furthermore, as far as it is practicable and in conformity with Germany's international economic and financial relations, they will have to shape the forms in which export capitalism is to operate, especially by fixing the dates of issue of foreign securities and the rates of interest with due regard to the interests of national economy, and of the domestic money and capital market.

We shall resume now our review of the economic conditions of the period under consideration.

As far as the formation of joint stock companies was concerned (vide, p. 38) only 102 companies, with a total capital of about 638,000,000 marks were founded during the twenty-four years between 1826-1850 as compared with 295 companies, with a total capital of about 2,404,760,000 marks, founded between 1851 and the first six months of 1870. At the end of 1908 the total number of companies founded in the German Empire since 1871 (including undertakings that had been transformed into joint stock companies) amounted to 6,249, with a share capital of 9,439,530,000 marks (vide, p. 119), or about 9½ billion marks. These figures do not include the large

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number of limited liability partnerships that had been established during the same period. During the years 1867-1873 no fewer than 1,005 German stock companies were licensed, and 682 were newly formed. From the second half of 1870 to 1874 there were founded 857 companies with a joint stock capital of 3,306,810,000 marks.

The sudden influx of the 5 billion francs of French war indemnity caused a great abundance of money which let loose a veritable rage of speculation and enterprise. This overproduction of new undertakings, just as in 1857, was one of the main causes of the crisis of 1873. By September, 1874, out of the above 857 companies, no fewer than 123 were in process of liquidation and 37 in the hands of receivers.⁷⁵

As compared with the capital stock of the companies founded between 1851 and 1870, the amount of capital of the stock companies founded in the principal trades and industries between 1870 and 1874 shows the following increases:⁷⁶

Building trades, about twenty-seven-fold (from 17,420,000 marks to 486,640,000); brewing, about twenty-four-fold; stones and earths, about nineteenfold; banking, about ninefold (from 94,650,000 marks to 838,270,000 marks); metal working and machine construction, about sevenfold; agriculture, about fivefold; chemicals, fuel materials and illuminants, about fourfold, and sugar manufacturing, about twofold.

In the mining industry, not mentioned in the above list, the number of companies founded between 1870 and 1874 was also quite considerable. In fact, as regards the absolute amount of capital newly invested during these years,

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394,950,000 marks, this industry takes front rank.⁷⁷ But inasmuch as the share capital newly invested in this industry between the years of 1851 and 1870 reached the large total of 275,310,000 marks, the increase during the following period does not appear so striking.

As the German railway system had already been constructed to a considerable extent by the end of the former period (1851-1870), the capital of newly created railway companies was considerably smaller in 1870-1874 (778,000,000 marks) than in 1851 to 1870 (1,722,000,000 marks).

In 1883, 1,311 joint-stock companies published their balance-sheets, showing a capital of about 3,918,000,000 marks. Among these, 128 companies (or about one-tenth of the total number) with a capital of 571,250,000 marks (or about one-seventh of the total capital) belonged to the mining industry.⁷⁸

During the subsequent period, the years 1889 and 1890, which were years of great industrial prosperity, are most notable for the large number of company flotations.

In 1896 there were 3,712 joint-stock companies with a paid-up capital of 6,845,760,000⁷⁹ marks.

Their distribution⁸⁰ was as follows: 235 mining and foundry companies with a capital of 1,022,330,000 marks (or, including loans and reserves, 1,381,860,000 marks); 235 machine-building companies,⁸¹ with a total capital of 324,720,000 marks; 259 textile-industry companies, with a capital of 414,910,000 marks; 378 brewing⁸² companies, with a capital of 367,200,000 marks; 164 building companies, with a capital of 172,760,000 marks; 98 banking companies, each with a capital of more than 1,000,000

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marks, and a total capital of 1,240,300,000 marks; 108 companies in the chemical industry, with a capital of 332,870,000 marks; 39 companies in the electrical industry with a capital of 195,610,000 marks.

From 1897 to the year 1900, when the crisis broke out, there was again a flood of flotations. In these four years no fewer than 1,208 joint-stock companies were floated⁸³ with a capital of 1,730,000,000 marks, among them 53 banks with a total capital of 124,776,000 marks.

In 1900 the total number of all German joint-stock companies amounted to about 5,400. It was ascertained that in the case of about 4,600 companies there was a paid-up capital of 6,800,000,000 marks, and together with loans and reserves, about 7,800,000,000 marks.⁸⁴

We have already proved in detail by the list of new companies founded between 1897 and 1900 what a superabundance of flotations preceded the crisis of 1900, just as was the case before the crisis of 1873. Of the 4,000 joint-stock companies the year of whose flotation we are able to ascertain, more than 1,600 are found to have been founded in the years 1890-1900.

Nearly nine-tenths of all joint-stock companies belong to industry; the rest to the banking business, with the exception of 150 insurance companies, which, however, claim nearly a third of the share and debenture capital.

The table⁸⁵ given below shows for each year the number and combined capital of the joint-stock companies floated since 1871. Their number amounted at the end of 1908 to 6,249 with a joint-stock capital of 9,439,530,000 marks, which, compared with 1900, represents an increase in joint-stock capital alone of nearly 2½ billion marks.

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Table of joint-stock company flotations, 1871-1908.

Year.	Companies founded.	Joint-stock capital.	
		Total.	Average for each company.
		<i>Marks.</i>	<i>Marks.</i>
1871.....	207	758,760,000	3,650,000
1872.....	479	1,477,730,000	3,850,000
1873.....	242	544,180,000	2,250,000
1874.....	90	105,920,000	1,180,000
1875.....	55	45,560,000	830,000
1876.....	42	18,180,000	430,000
1877.....	44	43,520,000	990,000
1878.....	42	13,250,000	320,000
1879.....	45	57,140,000	1,270,000
1880.....	97	91,590,000	940,000
1881.....	111	199,240,000	1,800,000
1882.....	94	56,100,000	600,000
1883.....	192	176,030,000	920,000
1884.....	153	111,240,000	720,000
1885.....	70	53,470,000	760,000
1886.....	113	103,340,000	920,000
1887.....	168	128,410,000	760,000
1888.....	184	193,680,000	1,020,000
1889.....	360	402,540,000	1,120,000
1890.....	236	270,990,000	1,160,000
1891.....	160	90,240,000	560,000
1892.....	127	79,820,000	630,000
1893.....	95	77,260,000	810,000
1894.....	92	88,260,000	960,000
1895.....	161	250,680,000	1,560,000
1896.....	182	268,580,000	1,480,000
1897.....	254	380,470,000	1,500,000
1898.....	329	463,620,000	1,400,000
1899.....	364	544,390,000	1,490,000
1900.....	261	340,460,000	1,300,000
1901.....	158	158,250,000	1,020,000
1902.....	87	118,430,000	1,360,000
1903.....	84	300,040,000	^a 3,570,000
1904.....	104	140,650,000	1,350,000
1905.....	192	386,000,000	^b 2,020,000
1906.....	212	474,510,000	1,220,000
1907 ⁸⁶	212	253,790,000	1,260,000
1908 ⁸⁷	151	162,500,000	1,080,000
Total.....	6,249	9,439,530,000

^a Transformation into a stock company of the Krupp firm.

^b Hohenlohe-Works Company (Limited) 40,000,000 marks.

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The average dividend income⁸⁸ for the years 1870-1900 of shareholders in companies whose shares were quoted on the Berlin exchange may be seen from the following table:

	Gross income.	Net ⁸⁹ income.
	<i>Per cent.</i>	<i>Per cent.</i>
Coal industry.....	7.65	^a 7.42
Iron industry.....	5.82	^a 5.34
Stone and earthen industry (building material, glass, china) ..	7.62	5.39
Metal industry ⁹⁰	8.86	7.75
Machine industry.....	7.05	4.18
Chemical industry.....	9.81	9.33
Electrical industry (1883-1900).....	8.38	8.38
Spinning and weaving industry.....	5.64	5.13
Brewing industry.....	7.34	6.44
Banking.....	6.74	^a 6.70
Life insurance.....	11.24	11.24

^a 1880-1900.

The above explains why during the periods under consideration (especially during the years of great industrial development, 1886 to 1889 and 1895 to 1899) there has always been such a great demand for shares in industrial companies. This of course increased the over-production of enterprises, especially as large amounts of inert capital continued to be stirred since 1879 by the nationalization of the railways and the great conversions of state loans.

As far as that branch of industry is concerned which played such an important part in the whole development of the first period, viz, the mining and smelting industry, the following details are noteworthy:

The German output of pig-iron in 1870 amounted to only 23 per cent of the English output, the English iron industry having occupied the first place in the world up to 1890, since when the American iron industry took the

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lead. In 1880 the German output rose to an amount equivalent to 35 per cent of the English output, in 1890 to 59 per cent, and in 1900 to 93 per cent; the English production in the same year (1900) only equalled 63 per cent of the American output.⁹¹ After the expiration of the fifties the German output of pig-iron exceeded the Belgian, and in 1880 the French output. (See p. 32.)

From the beginning of the period under consideration to the end of 1907 the production of pig-iron in the German Empire (including Luxemburg) rose from 1,346,000 tons (1870) to 12,875,000 tons (1907). In 1907 the total output of France amounted to 3,589,000 tons, that of Great Britain and Ireland to 10,083,000 tons, whereas that of the United States amounted to no less than 26,194,000 tons.⁹²

The importance of the last item can be gauged by the fact that in 1875 Germany and the United States produced about the same amount of pig-iron (in round numbers, each 2,000,000 tons), whereas at the end of 1907 the production of pig-iron in the United States was more than double that of Germany (including Luxemburg); and, further, that between July 1903 and July 1907 the pig-iron output of the United States increased by no less than 140,000 tons per week, or 7,000,000 tons annually.⁹³

Despite the very considerable growth in Germany's output of pig-iron during the period under consideration, she was not able in the long run to meet her home consumption. Imports, especially from England, had to be relied on to an increasing extent, and in 1907 they totaled 443,624 tons.

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The pig-iron consumption in the German iron industry increased considerably during the last few years of the period in question (considering also the imports and exports of pig-iron and the pig-iron contents of machinery and iron manufactures imported and exported), namely, from over 6,500,000 tons (or 111.50 kilograms per head of the population in 1904) to 9,250,000 tons, or 147.60 kilograms per head of the population.⁹⁴

As far as the proportion of exports and imports is concerned, the same remarks apply as those made above (pp. 112 and 113) regarding the development of industry in general. In consequence of the great increase in home consumption, the iron exports despite the greatly increased output, could not grow permanently, falling from the high level of 480,575 tons attained in 1906 to 275,170 tons in 1907.

The output of coal⁹⁵ increased in Germany during the second period from 26,398,000 tons in 1870 to 143,185,000 tons in 1907 (valued at 1,394,271,000 marks); the output in France amounted in 1907 to 36,168,000 tons; in Great Britain and Ireland (including lignite) to 272,114,000 tons, while that of the United States amounted to not less than 425,156,000 tons.

In 1907 the output of German coal amounted thus to one-half the English output and to about one-third the output of the United States.

The total value of all German mining products grew from 314,000,000 marks in 1871 to about one and three-quarters billion marks (1,844,920,000 marks) in 1907.⁹⁶

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The total production of the German electro-technical industry, the enormous growth of which, beginning with the middle of the nineties, exercised such a strong influence on the other industries, causing in the main the general over-production and the crisis of 1900, amounted as early as 1898 to 228,700,000 marks. Of this sum 211,100,000 marks, or 92.3 per cent, was represented by the value of articles belonging to the strong-current branch (which was hardly developed twenty years before), and only 17,600,000 marks by the value of articles belonging to the weak-current branch.

In 1883 Emil Rathenau, being convinced at the Paris Exposition of 1881 of the far-reaching importance of the new invention, formed together with Siemens & Halske the first joint-stock company in the electric industry, under the name of the *Deutsche Edisongesellschaft für angewandte Elektrizität*. This company became independent of Messrs. Siemens & Halske in 1884, and developed in 1887 into the existing concern of the *Allgemeine Elektrizitäts-Gesellschaft*. This firm was successful in improving the three-phased current to such a degree that in 1891 300 horsepower was transmitted, with very little loss of power, over a line of 175 kilometres to the exhibition at Frankfort-on-the-Main, a feat that made a great and permanent impression.

In 1896, as has been pointed out (p. 118), as many as 39 electrical joint-stock companies existed, with a total capital of 195,610,000 marks, whereas in 1900 there were quoted on the German exchanges the shares of 34 joint-stock companies in the electrical industry, with

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436,000,000 marks capital (22 in Berlin alone, with 396,700,000 marks capital).

The rate of dividend income of the shareholders of these 34 companies amounted, between 1883 and 1900, to 8.38 per cent.

During the nineties, up to the crisis of 1900, feverish activity, coupled with an almost chaotic and incalculable number of enterprises and forms of financing prevailed in the electrical industry, which in a very short time had gained, at home as well as abroad, a position of the highest importance. Eberstadt⁹⁷ quite truly remarks that at that time the great electrical companies "were simultaneously machine-construction factories, suppliers of energy, and financing institutions," and there was scarcely a form of management or financing which was not utilised in the nineties by the electrical industry. There were syndicates, subsidiary companies (*Tochtergesellschaften*), and trust companies,⁹⁸ the latter especially intended to relieve the banks of part of their enormous financial and other tasks connected with electrical undertakings,⁹⁹ operating companies proper,¹⁰⁰ and manufacturing companies, as well as financing institutions, increases and reductions of capital, silent participations, commandites, issues and sales in the open market, fusions, pooling of profits (*Gewinngemeinschaften*), buying of shares, separations and combinations, independent and syndicated enterprises abroad, conventions, syndicates and cartels at home and abroad. In short, a medley of undertakings which might well have led outside observers during those years to imagine that far more paper was

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produced in the electric branch of industry than power and light.

To-day, when a condition of relative quietness has set in and the early movement may be said in a sense to have terminated, it will be seen that the sphere of activity of the electro-technical industry, although only comprising a relatively small number of prominent companies (see Part V, sub. II, 1a), has extended very largely.

Trade and industry headed by the mining industry, as well as a considerable number of secondary electric railways, and more recently agriculture, absorb a constantly increasing amount of light and power. The change of standard railways from steam to electric railways, which is only a matter of time, will create new and profitable employment for the electro-technical industry.

In 1907 the German exports of products of the electrical industry amounted to about 153,000,000 marks and the imports to about 8,000,000 marks.¹⁰¹ In 1907 the electrical industry gave employment to 100,966 workmen, as compared with 54,417 in 1898.

According to a circular inquiry made by the German home office in 1899, the total value of the products of the German electrical industry amounted to 228,700,000 marks, as compared with 45,000,000 marks in 1891, a fivefold increase in eight years.

As regards the chemical industry,¹⁰² according to Hübner ("Jahrb. f. Volksw. u. Statistik," Vol. LIX, p. 146), 9 German chemical joint-stock companies, with a capital of 7,300,000 marks, existed during the period 1854 to 1859; in the seventies, however, their shares were no longer quoted on the stock exchange.

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The enormous growth of the chemical industry and its dominant position in the world market date really from the beginning of the seventies. Beginning with the summer of 1870 to the end of 1874, no less than 42 companies, with 42,000,000 marks capital, were formed.

In 1883, according to the *Deutscher Oekonomist* (1885, p. 75), no less than 51 companies, with a total capital of 127,220,000 marks, published their balance sheets.

In 1896 there were in existence 108 joint-stock companies, with a total capital of 332,890,000 marks, their number having thus doubled since 1883.

The number of establishments in which more than 100 persons were employed, increased, between 1888 and 1898, from 156 to 247, or about 60 per cent in ten years.

In 1902 there were 7,539 establishments in this industry employing 160,841 workmen with a total wage list of about 164,000,000 marks, as against 5,758 establishments with 110,348 workmen and a total wage list of 98,621,506 marks in 1894, and 4,464 establishments with 85,143 workmen and a total wage list of 67,300,000 marks in 1888. From 1882 to 1895, or in thirteen years, the number of workmen employed in the chemical industry increased 61 per cent. At the end of 1898 a total of 216,580 workmen and other employees in the German chemical industry were contributing to the obligatory insurance funds. The total wages and salaries of all workmen and employees, according to the *Bericht über die Verwaltung der Berufsgenossenschaften der chemischen Industrie* for 1908, page 3, amounted to 248,731,687 marks. The number of insured establishments was 8,699.

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According to the census of June 14, 1895, there were then in the chemical industry:

	Number.	Employees.
Small establishments (1 to 5 persons).....	8,228	18,122
Middle-sized establishments (6 to 50 persons).....	1,781	25,993
Large establishments (51 persons or more).....	376	71,116
Total.....	10,385	108,115,231

The results of the latest census have not yet been published. Large establishments, while forming only a very small part of the total number, gave employment to almost two-thirds of all the workmen employed in the chemical industry.

In 1907, 8,816 factories employing 207,704 hands figured in the lists of the state insurance authorities, i. e., belonged to the trade association of the chemical industry.¹⁰⁴

The total amount of wages and salaries paid to workmen and officials in the chemical industry amounted in 1907 to 230,223,733 marks.

The imports into Germany of raw materials for use in the chemical industry and partly and wholly manufactured chemical products amounted in 1907 to 43,586,417 metric quintals of 100 kilograms each, valued at 552,414,000 marks, and the exports to 31,539,353 metric quintals, valued at 640,418,000 marks.¹⁰⁵

In 1907 the import trade decreased somewhat while the exports fell off considerably; the only large increase being shown in the exports of artificial indigo.¹⁰⁶

A change in the English patent law directed against the predominance of the German chemical industry, and introduced on the 1st January, 1908, provides that every

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holder of a patent must manufacture his patented invention in England after four years' time from the date when the patent was taken out in that country. As this law was given retroactive force, and became applicable twelve months after it had been passed, many German chemical factories had to erect branch factories in England.

This naturally increases total expenses, but on the other hand allows the goods manufactured in English branches of German chemical factories to enjoy preferential duties granted by some English colonies to the mother country.¹⁰⁷

It may, however, become necessary to make a corresponding change in the German patent law, so far as Great Britain is concerned. The ultimate result of the latest unpleasant move on the part of our English competitors may thus cause more harm than good to British industry, as was the case with the act which provided for the compulsory marking "Made in Germany" of imported articles of German manufacture.

Further details regarding the concentration movement in the chemical industry are given below (Part V, sub. II, 1b).

The census of June 24, 1895, gives the following data regarding the number of establishments and average number of persons employed in the textile industry:

	Number.	Employees.
Small establishments (1 to 5 persons).....	193,358	258,181
Middle-sized establishments (6 to 50 persons).....	8,674	147,477
Large establishments (51 persons and over).....	3,260	587,599
Total.....	205,292	993,257

The very important position occupied by the textile branch in German industry is very evident from these

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figures, as according to the census of 1895 the total number of German establishments of all descriptions amounted to 3,144,977, employing on an average 10,299,269 persons.¹⁰⁸

Of the 450,000 to 490,000 home workers, counted in 1895, almost one-half belonged to the textile branch of industry, although the number of textile home workers had decreased by 90,000 persons between the years 1882 and 1895, and in various branches of the textile branch by one-fifth to three-fourths of the original number. Since, however, despite this great decrease of hand-loom industry in the textile branch (due principally to the growth of large-scale machine industry), there was in 1895 a falling off of only 18,000 persons employed in home work in German industry as a whole, as compared with the number in 1882, it is evident that home work has not declined in many German industries, but rather increased. Ludwig Pohle¹⁰⁹ is quite right in calling special attention to this very interesting fact and to the above figures.

The fact should also be emphasized that the number of home workers increased in the large towns from 31,000 to 71,000 between 1882 and 1895, having thus more than doubled during these thirteen years.¹¹⁰

In the 3,144,977 establishments mentioned above as existing in the German Empire in 1895, the 10,269,269 employees were distributed as follows: ¹¹¹

	Number.	Average number employees.
Small establishments (1 to 5 persons).....	2,934,723	4,770,669
Middle-sized establishments (6 to 50 persons).....	191,301	2,454,333
Large establishments (over 50 persons).....	18,953	3,044,267
Total.....	3,144,977	10,269,269

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The number of large establishments is relatively small, although between the years 1882, when they totaled 9,974, and 1895, their number had increased no less than 90 per cent. In view of this, the fact is particularly striking that almost one-third of all persons occupied in industry were employed in these large industrial establishments.

If we turn our attention to the enormous development of the means of communication during this period, taking the railways first, it will be seen (p. 35) that the network of German railways comprised 27,981 kilometers as long ago as 1875. As far as main lines are concerned, the German railway system was completed in the main during the eighties. In the second period (the one under consideration) the private German railways were acquired by the State, and the network of main and branch lines (standard gauge) in Germany ¹¹² at the end of 1907 totaled 56,196 kilometers, including 51,871 kilometers of railways owned by the Government or managed on Government account, and 4,320 kilometers of private railways.¹¹³ Of 53,822 kilometers in 1904, 33,734 kilometers belonged to the Prussian-Hessian Railway Union.¹¹⁴

The capital invested in these standard-gauge main and branch lines amounted at the end of 1902, in round figures, to 13½ billion marks, and at the end of 1907 to about 15½ billions, or at the end of 1902 to 258,000 marks per kilometer, and at the end of 1907 to 277,100 marks per kilometer of railway line.

At the end of 1906, 1,284,676,000 persons and 508,270,000 tons of goods,¹¹⁵ were conveyed by these railways. An average number of 20 railway journeys is

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thus shown for every inhabitant of Germany during the year.

The total traffic receipts of the standard gauge railways amounted in 1907 to 2,745,000,000 marks, and the total expenses of operation to 1,894,000,000 marks. The surplus of traffic receipts over expenses of operation was thus 851,000,000 marks; the rate of profit on the capital invested amounted to 5.60 per cent, and the percentage of expenses of operation to traffic receipts (coefficient of operation) amounted in 1907 to about 69 per cent.

The home requirements of the German railways for rolling stock alone amounted in 1907 to 288,000,000 marks. The requirements for operating material and superstructure of the German railways during the last fifty years, which were principally met by German mining, metallurgical, and machine construction industries, have been estimated at about 5 billion marks.¹¹⁶

In addition to the standard-gauge main and branch lines, on April 1, 1907, there were in operation 3,719.2 kilometers of public street railways (*Kleinbahnen*) and 8,991.9 kilometers of secondary railways (*nebenbahnähnliche Kleinbahnen*).¹¹⁷ To these must be added the narrow-gauge state and private railways (end of 1907, 2,100 kilometers),¹¹⁸ besides sidings, mining, agricultural, and forest railways not used by the general public.

As far as the postal service is concerned, it has been pointed out (p. 37) that in Prussia during 1851 only about three letters were received per head of population; in 1906, over 5 $\frac{1}{3}$ billion letters and post cards (5,393,300,000) were dispatched in the German Empire (including Bavaria and Württemberg), averaging 86 letters per head of

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population. Printed matter (newspapers), samples as well as parcels and articles of value are not included in the above total.¹¹⁹ In 1904 the number of mail matter dispatched averaged 115 per head of population, and in the same year there was one post-office to every 14 square kilometers of area and every 1,458 inhabitants.

At the end of 1907 there were 40,083 post-offices in Germany; at the end of 1906 there was one post-office to every 1,530 inhabitants and 13.60 square kilometers.

In 1882 one telegraph office did duty for every 133.7 square kilometers; in 1904 there was one for every 18 square kilometers, with a total of 35,100,000 telegrams, or an average of 0.65 telegram per head of population. At the end of 1907 the number of telegrams dispatched amounted to nearly 44,000,000, and the number received to 46,000,000. At the end of 1907 there was an average of 0.71 telegram sent per head of the population, and a like number received. On the same date there were 37,309 telegraph offices in Germany.¹²⁰

As to telephones,¹²¹ which were adopted during the period under discussion, there were in Germany, at the end of 1907, 30,901 towns and villages, etc., provided with long-distance telephone offices (1899, 13,175). At the end of 1907 87,521 (1899, 1,964) places could communicate with each other by telephone. Over 927,000,000 telephone conversations took place in 1903, and 1,466,000,000 in 1907. In 1907 there were 18.2 telephonic messages per head of the population. In Berlin alone there were in 1898 over 40,000 telephone call places, with 68,000 kilometers of line, over which 38,000 conversations were carried on daily. In 1904 there was one telephone

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office to every 23.5 square kilometers and 2,448 inhabitants.

The total value of all German merchant vessels amounted at the end of 1897 to about 300,000,000 marks, at the end of 1899 to about 500,000,000,¹²² and at the end of 1905 to about 810,000,000 marks (as compared with 290,000,000 marks in 1895 and 426,000,000 marks in 1898). On the 1st of January, 1908, Germany possessed 4,571 seagoing vessels (merchantmen), with a carrying capacity of 2,790,435 net registered tons, and a total crew of 71,853 men.

These 4,571 merchant vessels included 2,345 sailing vessels of 433,749 net registered tons, 304 tugs of 99,903 tons, and 1,922 steamships of 2,256,783 net tons registered.¹²³

The net registered tonnage of the German merchant marine (steam vessels) has increased from 375,000 tons in 1884, to 2,257,000 tons (in round numbers) in 1908.¹²⁴

According to the memorial of the admiralty, dated December, 1905, entitled "*Die Entwicklung der deutschen Seeinteressen im letzten Jahrzehnt*" (Introduction, p. VI), the shipping at German ports increased between 1893 and 1903 by over 52 per cent, or from 27,500,000 to almost 42,000,000 net registered tons. In 1907 it amounted to 56,129,000 net registered tons. In the same memorial it is stated that Germany has been progressing about four times more rapidly in international sea traffic than in population, while the increase of trans-marine traffic in German ports has been almost six times as great.

As far as sea-going steamships are concerned, the German merchant marine occupied in 1874 fourth place,

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whereas the British, American, and French mercantile fleets took the first three places in the order named.

In 1884, however, Germany caught up with the United States (the ocean fleet of which had decreased considerably by that time), and in 1889 France was outdistanced. In 1908 Germany, with a net tonnage of 2,328,000 tons, occupied the second position on the list, although possessing only 11.2 per cent of the steamships of the world's mercantile marine. On the other hand, England, whose progress naturally was relatively smaller during that period, possessed in 1908 no less than 10,350,000 net tons, or 50.2 per cent of the world's mercantile fleet of steamships, which latter amounted to 20,633,000 net registered tons.¹²⁵

As regards her sailing fleet, Germany between 1880 and 1901 occupied fourth place among the nations, owning in 1880 957,000 tons out of the world's sailing tonnage of 6,994,000 tons. In 1908 it occupied only sixth place, with 459,000 net tons register. The following are the figures for the other countries:¹²⁶

	Tons.
England.....	1,591,000
United States.....	1,419,000
Norway.....	667,000
Russia.....	569,000
France.....	510,000

The officers and crews of the German seagoing ships (sailing vessels, tugs, and steamships) numbered on January 1, 1909, 72,450 persons, distributed as follows: Seamen, 34,308; engineers, 23,201; and various, 14,941.¹²⁷

It is pleasing to note that subsidies were granted by Germany solely for the maintenance of regular lines of mail steamers of the North-German Lloyd and the Ger-

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man East Africa Line (the Hamburg-American Line does not receive any subsidy) to eastern Asia, Australia, Africa, and New Guinea beginning with the year 1894. The amount paid in 1909 did not exceed the very moderate total of 7,440,000 marks, equal to 1.85 marks per registered ton.¹²⁸ These amounts include also the payments for carrying the mails.

As against this small amount Great Britain has been paying since 1902 to the Cunard Line alone a yearly subsidy of £150,000, besides granting to that company a loan of £2,600,000, bearing only $2\frac{3}{4}$ per cent interest. The total subsidies granted by that country were not less than 34,000,000 marks (1.95 marks per registered ton). France spends 53,000,000 marks in subsidies (28.00 marks per registered ton), Austria-Hungary, 26,000,000 marks (26.70 marks per registered ton), and Japan, 28,500,000 marks (24.70 marks per registered ton).¹²⁹

The most prominent of the German shipping companies are the following:

1. The Hamburg-American Packet Joint Stock Company, at Hamburg, founded May 27, 1847, with a capital of 300,000 marks (Hamburg currency), which has undergone not less than sixteen increases from 1853 to the present day.¹³⁰ This company began operations in 1848 with 3 sailing vessels, steamers between Hamburg and New York being introduced only in 1856.

At the end of 1908 the company's share capital amounted to 125,000,000 marks, and its surplus amounted, on January 1, 1909, to 16,800,000 marks.

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The amount of bonds issued was originally 55½ million marks. At the end of 1908 the outstanding bonds amounted to 76.4 million marks.

The number of the company's ocean steamers amounted at the end of 1908 to 162, with a book value of 185,953,076 marks.

2. The Norddeutscher Lloyd, at Bremen, was founded in 1857, or ten years after the Hamburg Company, banks and banking firms participating to a considerable extent. Its original share capital amounted to 9,513,772 marks (28,643 shares, at 100 former Bremen gold thalers). In 1859 the company started a regular fortnightly service with four steamers between Bremen and New York.

The company's share capital totaled 125,000,000 marks at the end of 1908, while its surplus funds have been used up by losses.

Its bonded indebtedness originally amounted to 70 million marks. At the end of 1908 the bonds outstanding amounted to 76,034,700 marks.

The company's ocean-going fleet numbered at the end of 1908 127 vessels (besides 2 schoolships), with a book value of 189,114,000 marks.

Between 1902 and 1903 these two companies¹³¹ made essentially identical agreements¹³² with the International Mercantile Marine Company, which was founded January 1, 1903, by American bankers and shipowners, with a capital of \$120,000,000 (of which \$60,000,000 were common and \$60,000,000 preference shares), and which comprised nine American and English steamship lines. This company, which is named the "Morgan trust," after the originator of the association, is authorized to issue

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bonds to the extent of \$75,000,000, of which \$50,000,000 were issued at once. The contracts with the two German companies, which are almost identical in tenor, have been concluded for a term of twenty years, and contain a stipulation that either party has the right after the expiration of ten years to demand their revision; should a revision not be agreed to, a year's notice may be given for the termination of the agreement.

These international agreements contain the following points:

1. A demarcation of fields of operation: the right of traffic to and from all German ports is reserved to the German companies; the trust's ships may enter German ports only by their consent, whereas German ships, coming from New York, may enter English ports for the purpose of embarking passengers (each company 75 times yearly in any direction). The German companies' ships bound for South America, Mexico, and the West Indies, as well as those bound for such countries with which the trust maintains no service, may also touch at English ports.

On the other hand, the German companies abandon in the main all claims to the Anglo-American freight business.

Belgian ports (at which German ships had not called before) are not to be touched by the German companies' ships on their way to North America; the status quo forms the basis of the arrangement for calls by German or trust steamships at French ports. The German companies, however, are at liberty to increase their sailings from French ports at their own discretion. In case such

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an increase takes place, the trust is entitled to an equal increase.

Should any of the contracting parties desire to found a new line (permanent reservation is made expressly in favour of the newly instituted lines of the Hamburg-American Company between New York and the West Indies and between New York and eastern Asia), notice of the intention must be submitted to the common committee of supervision. This committee does not possess the right of veto, but the other contracting party has the right, in such a case, of participating to the extent of one-third in the proposed line (coasting lines excluded).

An agreement has been arrived at whereby the return tickets of cabin passengers on North Atlantic lines of the various companies are valid for all lines belonging to the combination. Negotiations were likewise pending for a common time-table for first-class steamships with alternating departures during the quiet season. These negotiations however, it seems, were not successful.

The agreements contain—

2. A reciprocal participation in profits whereby the German companies allow the trust annually a quarter of the amount of the dividends paid in excess of 6 per cent, whereas the trust pays to the German companies a quarter of the amount which they may lack in order to pay a dividend of 6 per cent.

3. An arrangement for mutual accommodation in certain cases; i. e., each party before applying to outside companies must charter ships from the other party in the event its own tonnage is found insufficient; also a provision

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to the effect that both parties under certain conditions are to support each other against outside competition.

Both contracting parties bind themselves not to acquire, directly or indirectly, shares in each other's concerns. The evasion of this prohibition has been made more difficult by the German companies in 1902 (after the conclusion of the agreement) by alterations in their by-laws to the effect that in certain questions of national importance resolutions may be passed only by a majority of three-fourths (in the Hamburg-American Company by four-fifths), and at two consecutive general meetings, and that the members of the executive and supervisory boards must be Germans domiciled in Germany.

The supervision of the proper execution of the agreement is placed in the hands of a committee consisting of an Englishman and an American belonging to the trust management and the directors-general of the two German companies.

The agreements become null and void in case of war between Germany and Great Britain or the United States, or in case of war between Great Britain and the United States.

In 1908 an agreement was arrived at between the Hamburg American Steam-packet Company (Hapag) and the Woermann Line on one side, and the North German Lloyd and the Hamburg Bremen Africa Line on the other side. (At first only till the end of 1912.) The agreement creates a limited community of interest between the companies involved and regulates the traffic to West Africa by excluding any independent action in connection with the West African traffic by any of the parties to the agreement.

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Shipbuilding, which was promoted by German banks to a great extent,¹³³ became prosperous again only in the eighties. It was only about that time that the British practice of substituting iron for wood as the main material in shipbuilding, which began about 1860, was first followed by German shipyards. The "Vulkan" at Stettin, the shipbuilding yards of Fr. Schichau at Elbing and Danzig, of Blohm & Voss at Hamburg, and of the "Weser" Joint Stock Company at Bremen stand at the head of German shipbuilding. In this industry the joint-stock companies showed in 1907 a total share capital of 54,000,000 marks and a debenture capital of about 25,000,000 marks.

According to the occupation census of 1895, 22,731 persons were employed in German shipbuilding, a number which must have considerably increased during the last fourteen years.

According to the data of the *Germanischer Lloyd* a total of 368,440 gross registered tons of shipping (seagoing steamships and sailing ships, river boats, other vessels, and war ships) were built during 1907, the figures for 1908 being 279,137 gross registered tons; a large part of German sea-going merchant vessels (up to 1905 about one-third) is still being built abroad.

Germany's share in the shipbuilding of the world (merchant vessels exceeding 100 tons) as compared with Great Britain's has been as follows:

	Germany.	Great Britain.
	<i>Per cent.</i>	<i>Per cent.</i>
1892-1897	7.3	77.4
1898-1905	9.0	67.4
1906-1907	13.8	60.3

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American shipbuilding (iron and steel vessels) in 1907-8 increased about sixfold as compared with 1892-1897.

If we turn from sea navigation, with its enormous dimensions, to inland navigation, which has developed considerably since the forties of the last century, it will be found that 14 new joint-stock companies were founded in this field during the eighties and six additional companies in the nineties.¹³⁴ The economic value of the German waterways was estimated in 1895 at over 1,500,000,000 marks.

On December 31, 1907, there were 26,235 vessels, with a carrying capacity of 5,914,020 tons, occupied in inland navigation, including 22,923 without power of their own and 3,312 ships with power of their own (steamships and motor boats).¹³⁵ The total length of navigable waterways was 13,748.6 kilometers.¹³⁶

In 1895, 22 per cent of the total traffic fell to the share of waterways and 78 per cent to that of the railways. The amount of traffic carried on each kilometer of waterway was 750,000 tons, and on each kilometer of railway 590,000 tons.

I take it for granted that the large increase of the German navy during the period in question, which in its turn resulted in important orders to and great activity of various branches of German industry, is generally known.¹³⁷

We shall now take up the subject of currency (*Zahlungsverkehr*).

Before the foundation of the German Empire there existed in Germany 31 banks authorised to issue bank notes; to-day there are only 4 private note banks (in

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Bavaria, Saxony, Württemberg, and Baden) in addition to the Reichsbank inaugurated on January 1, 1876, in accordance with the law passed on March 14, 1875.

The Reichsbank,¹³⁸ which took the place of the old *Preussische Bank*, is a bank under the supervision and management of the Empire, established with private means and constituting a corporate body (*juristische Person*) though not a joint-stock company. According to section 12 of the bank law it is allotted the task "of regulating the money circulation of the whole Empire, of facilitating payments, and of utilising available capital."

The original capital, divided into shares (each bearing the name of the owner), amounted at the time of foundation to 120,000,000 marks, and since the supplementary law of June 7, 1899, has reached the amount of 180,000,000 marks; the surplus funds amount to 64,814,000 marks.

The management of the Reichsbank rests in the hands of the Imperial chancellor, and, subject to his authority, in those of the president and of the Reichsbank directors, who are appointed for life; supervision is carried on by a board of bank curators (*curatorium*), consisting of the Imperial chancellor as chairman and four members.

The cooperation in the management by the share owners (chiefly in an advisory capacity) is exercised through the general meeting, and through the central committee elected from its midst, which consists of 15 members and 15 alternates. The committee, which meets at least once a month, under the chairmanship of the president of the board of directors, receives monthly reports of the general business situation as well as proposals for measures that may be deemed necessary. (Sec. 32.) Its expert opinion is

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also to be heard on a number of questions, such as the discount rates and the maximum amount to which the funds of the bank are to be applied to loans on collateral (see sec. 32 a-f); it elects 3 deputies, whose duty it is to exercise supervision over the management of the Reichsbank, and who are authorized to inspect the books of the bank, and to participate in the meetings of the board of directors (with advisory powers). No business with the Empire, or the German Federated States for which unusual terms are to be made, is to be transacted unless approved by a majority of the central committee.

At the chief branches of the Reichsbank, established in large towns outside Berlin (*Reichsbankhauptstellen*), district committees are formed from among the shareholders, invested with the same functions as the central committee. The local committees in turn elect 3 deputies for the constant control of the business management of the local office. Over 500 various branches are in existence at the present day.

The Reichsbank has the right to issue bank notes without direct limitation according to the requirements of its business.¹³⁹ Its right is only limited indirectly by section 17 of the bank law, which enacts that the bank must possess in bullion and Imperial treasury notes a minimum of one-third of the amount for which notes are issued, and for the remainder—discounted bills fulfilling the requirements of the Bank Act (*bankmässige Wechsel*); furthermore, that a tax of 5 per cent must be paid on the notes issued in excess of the cash reserve, i. e., bullion, treasury notes, and notes of other banks, and of its so-called tax-free contingent. (Sec. 9.) The latter

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amounted, according to the Bank Act, to 250,000,000 marks, and since the liquidation of various private note issuing banks to 472,829,000 marks. The bank is bound to redeem its notes at all times "in German gold coin,"¹⁴⁰ at the main office in Berlin on presentation, and at its branch offices in so far as the available cash and money requirements permit." (Sec. 18.)

In view of its power of issuing notes, i. e., obligations that may fall due at any moment, the Reichsbank is allowed to engage only in certain classes of transactions. It is confined to transactions in precious metals; to the discounting of bills running for not more than three months and for which 3 or at least 2 persons of known solvency are liable; the purchase and sale of imperial government bonds, of the bonds of Federated States, or of domestic municipal corporations payable at their face value at the latest in three months; the granting of interest-bearing loans on collateral for a period not exceeding three months on movable pledges exactly defined by law (sec. 13, clause 3 a-c); the purchase and sale of German debentures, exactly defined by the Bank Act (sec. 13, clause 4 and 3b) (even if not due after three months); the collection of commercial bills, the purchase and sale of precious metals or of securities of all kinds on account of third parties (security being given in advance); the receiving of interest—and noninterest-bearing moneys on deposit and on giro account, with the proviso that the amount of the interest-bearing deposits must not exceed the limits of the combined capital and the surplus funds of the bank; finally, the custody and management of articles of value.

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The Reichsbank is required to publish from time to time the rate at which it discounts or advances money on collateral (sec. 15); like all other note banks (sec. 8), it must publish the state of its assets and liabilities under date of the 7th, 15th, and 23d, and the last day of every month (at the latest five days after the above-mentioned dates). It must also publish within three months after the end of the financial year an exact balance sheet of its assets and liabilities, as well as a statement of its profit and loss for the year. All these statements must be published in the "Reichsanzeiger."

From its foundation to the present day the Reichsbank has fulfilled all the tasks devolving on it under section 12 of the bank law in an almost exemplary manner. The details are well known and can only be summarized here.

The Reichsbank has rendered service in the first instance in facilitating payments through the introduction on April 10, 1876, of "giro" transactions, the principle of which is that in lieu of payment in cash between the "giro" customers of the banks, book transfers may be made by writing off the amount to be paid from the account of the payor and transferring it to that of the payee. "Giro" transactions form the most simple method of settling claims and counterclaims at one and the same bank, namely, by transfer from one account to another.

Since 1883 so-called compulsory clearance ("*Verrechnungs-Zwang*") has been introduced for "giro" customers, according to which all claims of a "giro" customer arising out of bill or collateral credit granted by the Reichsbank are not paid in cash, but placed to the credit of his "giro" account.

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Since 1896 most of the imperial treasuries, as well as the state treasuries of Prussia and Baden, have opened "giro" accounts with the Reichsbank.

The number of "giro" accounts increased from 3,245 in 1876 to 24,821 in 1908; aside from the governmental treasuries these accounts stand mostly in the name of large commercial and industrial concerns,¹⁴¹ so that up to the present the "giro" transactions of the Reichsbank have partaken of a somewhat plutocratic character. Therefore, in the interest of the more economical use of cash as means of payment, the introduction of the postal transfer and check system on January 1, 1909, must be welcomed, as largely extending the circle of firms and persons who settle their claims and counterclaims by means of transfer. As the Reichsbank has also joined this postal transfer and check system, transfers can be made by firms possessing postal-check accounts to Reichsbank "giro" accounts of other firms by means of the Reichsbank postal-check account. In the same manner the possessor of a postal-check account, who likewise has a "giro" account at the Reichsbank, may have the amounts standing to his credit in his postal-check account transferred to his "giro" account at the Reichsbank.

Through this interlocking of postal check and Reichsbank "giro" systems (which latter might be considerably extended), and through a still greater fostering of the use of checks, whose ultimate liquidation, however, should be effected by transfer and clearance, rather than by cash payment, the present antiquated and unsatisfactory methods of payment in Germany will be considerably improved.

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A great and necessary improvement would be brought about by suitable agreements with foreign postal savings banks, central note banks, and credit banks, whereby their transfer systems might be made to cooperate with the transfer systems of the German post-office and Reichsbank. A first step in this direction is the arrangement of February 1, 1910, for the clearing of postal checks and transfers between the German postal administration and the postal savings bank administrations in Vienna and Budapest as well as the Swiss postal-check bureau.

The "giro" transactions of the Reichsbank with private persons, private firms, and public treasuries in 1907 were as follows:

	Marks.
Average amount of each account.....	24, 116
Average volume of transactions per account.....	10, 876, 564

whereas the total volume of "giro" transactions during 1907 amounted to 260,656,851,081 marks.¹⁴²

The number of postal-check accounts amounted at the end of November, 1909, to 23,847, with a total balance of 70,955,349 marks to the credit of persons and firms having such accounts.

The means at the disposal of the "giro" department strengthen the operating resources of the Reichsbank or its power to serve the whole economic community by way of bill and loan transactions, and enable it to make the most rational use of its bank-note issue. At the same time the currency set free through the "giro" method of payments can be utilised for credit business.

The "giro" business of the Reichsbank, which is restricted to its customers, should be supplemented by the

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clearance system, which aims at discharging claims and debts (especially checks, bills, etc.) among a number of institutions and their clientele by means of balancing their accounts—i. e., with the least possible use of cash.

A clearance system [*Skontrationsverkehr*] of this description, which has long been organized on a much larger scale abroad in the form of clearing houses, (especially in England and the United States), was instituted in Germany as late as 1883, in which year the Reichsbank founded clearing branches [*Abrechnungsstellen*]. At the close of 1908, when there was a total of 17 clearing houses with 198 members, the amount of paper presented for clearing had increased to 10,531,271 from 1,979,012 in 1884, and the total sum cleared from 12,130,196,000 marks in 1884 to 45,960,854,400 marks in 1908.

In the three foreign financial centers, the total value of clearances was as follows:

	1884.	1907.
	<i>Marks.</i>	<i>Marks.</i>
France (Chambre de Compensation des Banquiers de Paris).....	3,355,475,000	21,289,210,000
England (London Bankers' Clearing house comprising City, Country, and Metropolitan Clearing).....	118,464,479,000	260,081,929,000
United States (Associated New York Clearing-house banks).....	143,186,557,000	143,366,165,106,000

The small amount cleared at the German clearing houses at the present time as compared with the clearing houses of the two last-mentioned countries is due on the one hand to the gratifying circumstance that large payments in Germany are effected with outside places by means of "giro" accounts, or transfers on the books of

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the Reichsbank or post-office, and on the other hand to the less gratifying fact that payments in Germany are much less effected by means of checks which in turn would pass through the clearing houses.

It should be stated, though, that the check law of March 11, 1908, passed after protracted opposition, has removed a series of obstacles that have hitherto stood in the way of the development of the check system in Germany.

The total turnover of the Reichsbank¹⁴⁴ amounted in 1908 to 305,244,504,000 marks, or, in round figures, 305¼ billion marks, as compared with about 47½ billion marks in 1877 and about 142 billion marks in 1897; in these total turnovers, cash payments are superseded by "giro" transfers to a constantly growing extent. Thus the volume of giro transactions increased from 41 billion marks in 1886 to 188 billions in 1905, and it is due mainly to this circumstance that the Reichsbank has been able to operate with a relatively small amount of bank notes even in periods of increased business activity.

The doubling of German bank-note circulation in 1907, as compared with the average for 1881-1885—despite the great increase in gold coinage and in the extent of the giro transactions, is a clear proof of the enormous growth of the requirements for means of payment on the part of the greatly increased population during the period under consideration.

The average circulation of bank notes amounted to—

	Reichsbank.		Bank of France.		Bank of England.	
	Amount.	Per head of population.	Amount.	Per head of population.	Amount.	Per head of population.
	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>
1876-1880.....	681,000,000	15.4	1,912,700,000	51.5	571,300,000	16.8
1881-1885.....	736,800,000	16.0	2,268,900,000	59.9	522,600,000	14.7
1886-1890.....	913,400,000	19.0	2,285,100,000	59.6	499,500,000	13.5
1891-1895.....	1,007,400,000	19.8	2,702,100,000	70.4	523,400,000	13.5
1896-1900.....	1,114,800,000	20.5	3,052,800,000	78.8	565,600,000	14.0
1901-1905.....	1,258,600,000	21.5	3,447,400,000	88.2	592,300,000	13.9
1907.....	1,478,800,000	23.9	3,897,400,000	99.1	591,300,000	13.4

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The reserves of the Reichsbank for the issue of bank notes amounted to—

	Cash.			Metal.			Gold.		
	Average.	High-est.	Low-est.	Average.	High-est.	Low-est.	Average.	High-est.	Low-est.
	<i>Per cent.</i>								
1876-1880.....	85.0	104.3	66.1	77.1	96.3	62.4	34.0	54.4	22.5
1896-1900.....	79.5	102.9	51.9	76.4	99.4	49.7	52.4	71.7	32.6
1908.....	72.8	89.4	49.9	66.9	82.6	44.2	51.5	65.6	32.0

As compared with this, the note issue reserves held by the banks of France and England were as follows:

	Bank of France.		Bank of England.	
	Metal.	Gold.	Metal.	Gold.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
1876-1888.....	87.8	-----	99.0	98.3
1886-1900.....	84.1	52.0	129.9	129.1
1907.....	76.3	56.2	120.5	117.7

The proportion of reserves of the Reichsbank to bank notes and other moneys falling due daily (the giro assets in the first instance) was:

	Cash.			Metal.			Gold.		
	Average.	High-est.	Low-est.	Average.	High-est.	Low-est.	Average.	High-est.	Low-est.
1876-1880.....	66.2	73.0	53.2	60.0	69.3	52.1	26.5	42.1	19.0
1896-1900.....	55.1	68.1	38.5	52.9	65.7	36.8	36.3	47.1	24.1
1908.....	51.0	58.2	38.2	46.9	53.7	33.8	36.1	42.6	24.5

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This proportion in the case of the other two banks was as follows:

	Bank of France.		Bank of England.	
	Metal.	Gold.	Metal.	Gold.
1876-1880.....	69.8	-----	46.5	46.1
1896-1900.....	69.7	43.1	44.9	44.8
1907.....	65.8	48.5	42.1	41.2

The average amount of gold in hand at the Reichsbank (current gold-coin of the Empire, bars, foreign coin, etc.) during the period in question was:

	Amount.	Per cent of the total stock of bullion.
	<i>Marks.</i>	
1876-1880.....	231,593,000	44.1
1881-1885.....	251,092,000	43.5
1886-1890.....	513,574,000	63.6
1891-1895.....	611,296,000	66.1
1896-1900.....	584,091,000	68.6
1901-1905.....	693,561,000	73.8
1908.....	785,195,000	77.1

The amount of Reichsbank notes in circulation unsecured¹⁴⁵ by cash¹⁴⁶ or metal¹⁴⁷ is rightly regarded as the real "elastic" part of the whole note issue, as it adapts itself very closely to the varying state of the market, and the requirements of the business community, the varying amounts forming a very reliable gauge of the state of and fluctuations in the demand for means of payment.

The following tables may serve as illustration.

(a) Amount of bank notes in circulation unsecured or exceeded by cash.^a

Year.	Average stage.		Highest stage.		Lowest stage.		Difference between highest and lowest stages in thousands of marks.
	Amount in thousands of marks.	Percentage of the figures for 1876, or for the period 1876-1880, respectively.	Date.	Amount in thousands of marks.	Date.	Amount in thousands of marks.	
1876-1880.....	102,263	100.0	Jan. 7, 1876	242,201	Mar. 23, 1879	- 25,350	267,551
1881-1885.....	117,113	114.5	Dec. 31, 1884	306,551	Mar. 15, 1883	4,082	302,469
1886-1890.....	73,943	72.3	Dec. 31, 1889	396,058	June 7, 1888	-170,630	566,688
1891-1895.....	48,879	47.8	Dec. 31, 1895	441,683	Feb. 23, 1895	-177,764	619,447
1896-1900.....	228,623	223.7	Sept. 30, 1899	664,633	Feb. 23, 1898	- 28,103	692,736
1901-1905.....	278,736	272.4	Sept. 30, 1905	920,285	Feb. 23, 1902	- 41,388	961,673
1906.....	438,461	365.4	Dec. 31	1,045,476	Feb. 23	126,136	919,340
1907.....	531,056	442.5	Dec. 31	1,098,805	Feb. 23	248,242	850,563
1908.....	415,319	346.1	Dec. 31	927,625	Aug. 22	148,890	778,735

^a The amounts of bank notes exceeded by cash are preceded by a minus sign.

(b) Amount of bank notes in circulation unsecured or exceeded by bullion and specie.^a

Year.	Average stage.		Highest stage.		Lowest stage.		Difference between highest and lowest stages.
	Amount.	Percentage of the figures for 1876, respectively, for the period 1876-1880.	Date.	Amount.	Date.	Amount.	
1876-1880.....	156,206	100.0	Dec. 31, 1880	283,701	Mar. 23, 1879	21,511	262,190
1881-1885.....	159,777	102.3	Dec. 31, 1881	344,948	Mar. 15, 1883	41,743	303,205
1886-1890.....	105,110	67.3	Dec. 31, 1889	425,957	June 7, 1888	-137,113	563,070
1891-1895.....	82,706	52.9	Dec. 31, 1895	467,012	Feb. 23, 1895	-142,470	609,482
1896-1900.....	263,423	168.6	Sept. 30, 1899	696,040	Feb. 23, 1898	6,388	689,652
1901-1905.....	318,933	204.2	Sept. 30, 1905	950,431	Feb. 23, 1902	-4,944	955,375
1906.....	496,271	284.7	Dec. 31	1,110,881	Feb. 23	181,859	929,022
1907.....	635,443	364.6	Dec. 31	1,181,743	Feb. 23	350,760	830,983
1908.....	505,077	289.8	Dec. 31	995,243	Aug. 22	245,387	749,856

^a The amounts of bank notes exceeded by bullion and specie are preceded by a minus sign.

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In 1907 the greatest amount of gold in hand was 759,181,000 marks (on May 23), and the lowest amount 471,848,000 marks (on November 30).

The average metallic reserve was:

	Marks.
1876.....	510,593,000
1880.....	562,091,000
1881.....	556,749,000
1885.....	586,131,000
1886.....	693,105,000
1890.....	801,019,000
1895.....	1,011,763,000
1896.....	891,988,000
1900.....	817,137,000
1901.....	911,411,000
1905.....	972,959,000
1908.....	1,019,065,000

The differences (*Spannung*) between the official rate of discount and the private rate (market discount) averaged by four-year periods as follows:

	Berlin.	Paris.	London.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
1876-1880.....	1.19	0.51	0.51
1881-1885.....	0.98	0.43	0.64
1886-1890.....	1.04	0.50	0.93
1891-1895.....	1.11	0.55	1.03
1896-1900.....	0.71	0.09	0.60
1901-1905.....	1.01	0.60	0.43
1905.....	0.97	0.90	0.35
1906.....	1.11	0.28	0.22
1907.....	0.91	0.06	0.40
1908.....	1.23	0.79	0.70

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The average rates of discount of the central Banks in Germany, France, and England since the institution of the Reichsbank was as follows—

	Reichs- bank.	Bank of France.	Bank of England.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
1876	4.16	3.40	2.61
1877	4.42	2.28	2.90
1878	4.34	2.21	3.78
1879	3.70	2.58	2.51
1880	4.24	2.81	2.76
1881	4.42	3.84	3.48
1882	4.54	3.80	4.15
1883	4.05	3.08	3.57
1884	4.00	3.00	2.96
1885	4.12	3.00	2.93
1886	3.28	3.00	3.05
1887	3.41	3.00	3.38
1888	3.32	3.10	3.30
1889	3.68	3.09	3.55
1890	4.52	3.00	4.54
1891	3.78	3.00	3.32
1892	3.20	2.70	2.52
1893	4.07	2.50	3.05
1894	3.12	2.50	2.11
1895	3.14	2.10	2.00
1896	3.66	2.00	2.48
1897	3.81	2.00	2.63
1898	4.27	2.20	3.25
1899	5.04	3.06	3.75
1900	5.33	3.25	3.96
1901	4.10	3.00	3.72
1902	3.32	3.00	3.33
1903	3.84	3.00	3.75
1904	4.22	3.00	3.30
1905	3.82	3.00	3.00
1906	5.15	3.00	4.27
1907	6.03	3.46	4.93
1908	4.75	3.04	3.01

In 1906 the rate of the Bank of France was 3.00, and that of the Bank of England 4.27; the rate in 1907 of the Bank of France was 3.46, and that of the Bank of England

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was 4.93; and in 1908 the rate of the Bank of France was 3.04, and the rate of the Bank of England was 3.01 per cent.

The private rate of discount (market discount) averaged as follows:

	Berlin.	Paris.	London.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
1876	3.04	2.25	2.25
1877	3.17	1.75	2.25
1878	3.07	2.00	3.50
1879	2.60	2.25	1.75
1880	3.04	2.50	2.25
1881	3.50	3.75	2.88
1882	3.89	3.38	2.38
1883	3.08	2.56	3.00
1884	2.90	2.42	2.60
1885	2.85	2.46	2.04
1886	2.16	2.23	2.05
1887	2.30	2.42	2.36
1888	2.11	2.75	2.38
1889	2.63	2.65	2.70
1890	3.78	2.64	3.68
1891	3.02	2.58	2.50
1892	1.80	1.83	1.47
1893	3.17	2.22	2.10
1894	1.74	1.77	0.97
1895	2.01	1.63	0.81
1896	3.04	1.83	1.52
1897	3.09	1.96	1.87
1898	3.55	2.12	2.65
1899	4.45	2.96	3.29
1900	4.41	3.17	3.70
1901	3.06	2.48	3.20
1902	2.19	2.43	2.99
1903	3.01	2.78	3.40
1904	3.14	2.19	2.70
1905	2.85	2.10	2.66
1906	4.04	2.72	4.05
1907	5.12	3.40	4.53
1908	3.52	2.25	2.31

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The average bill investments of the Reichsbank amounted to—

	Marks.
1876-1880.....	356, 518, 000
1881-1885.....	366, 955, 000
1886-1890.....	463, 214, 000
1891-1895.....	554, 142, 000
1896-1900.....	724, 438, 000
1901-1905.....	839, 752, 000
1906.....	989, 445, 000
1907.....	1, 104, 537, 000
1908.....	967, 729, 000

Since a central note bank always has to be in a position to redeem its notes (covered according to law in a special manner) on presentation, and to meet its other daily obligations (for which the mode of covering is not prescribed by law), the general principle ought to be observed that, in so far as the law does not permit exceptions, its credit business must be strictly in keeping with its debit business, a principle which need not be so strictly maintained by the credit banks.

Accordingly a central note bank should grant short-time credit only, either by discounting short-term bills or by making short-time loans on collateral.

The discounting of short-term bills ought to occupy the first place in the credit business of the Reichsbank, as the latter is bound under section 17 of the bank law to secure, by short-term bills, two-thirds of the notes it issues. The Reichsbank in the course of time has acquired a constantly growing percentage of the entire number of outstanding bills. It is thus able to extend its note circulation, as the short-term bills falling due provide it continually with the means of redeeming its bank notes.

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Collateral credit business at the Reichsbank is relegated to a secondary position, since collateral claims, for obvious reasons,¹⁴⁸ can not be used as reserve for notes. Nevertheless, collateral credit (which is likewise granted for three months only) is normally less expensive to the debtor, although since 1896 the rate of interest on collateral loans has been 1 per cent higher than bank discount, for the reason that interest on loans on collateral is computed only for the actual duration of such loans, and that the debtor may repay at any time part or the whole of the loan. Lending money on merchandise has been discarded more and more in favor of lending money on securities. Thus at the end of 1908 only 5,390,100 marks were loans on merchandise, whereas 170,533,650 marks were loans on securities. The amount of loans on collateral, as a whole, rose almost constantly, as follows:

	Amount of loans on collateral made.	Annual aver- age out- standing.
	<i>Marks.</i>	<i>Marks.</i>
1904.....	1,957,411,820	74,180,000
1905.....	2,093,427,625	72,033,000
1906.....	2,773,191,475	83,631,000
1907.....	3,293,301,200	98,140,000
1908 (decrease of the total and of the annual average).....	2,812,171,450	91,397,000

Apart from the possible difficulties of realisation, it involves greater risk for the bank to grant credit on collateral than bill credit, as the nature of the credit required cannot be recognised so easily as in the case of bills.

In granting short-term credit it is incumbent on the Reichsbank administration to aim at regulating, through the interest or discount rate, the domestic demand for

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short-term credit which concentrates at the Reichsbank and which is expressed to a great extent in its bill investments.

When credit is rendered more expensive by a high discount rate, which latter naturally influences immediately the rate on loans on collateral and, gradually, general interest rates throughout the country, excessive demands for credit at home, as well as excessive speculation, overproduction, and overvaluation of goods and securities are restricted to a certain extent. Provided that the private rate of discount is high, and that exceptional circumstances (similar to those in 1907) do not intervene, a high Reichsbank rate of discount can also check, diminish, or retard the outflow of gold to foreign countries.¹⁴⁹ As a rule, however, it will not cause gold to be imported from abroad, unless domestic discount rates are raised far higher than those abroad, and private rates of discount are raised correspondingly and kept at a corresponding height. In all other cases "screwing up the discount rate" will not cause gold to flow in from abroad, but merely prevent temporarily a further increase in the foreign exchange rate, thus preventing or postponing the advent of the moment when the export of gold might become profitable.¹⁵⁰

Complaints have been made against the Reichsbank for having raised the bank rate (especially in 1907) without necessity, at all events for having maintained it at an exorbitant height, thus severely injuring the interests of trade, industry, and agriculture.

It was also stated that the Reichsbank was too obliging as far as credit demands were concerned, particularly

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toward the credit banks, and the average amount of its bill investments in 1907 (1,104,537,000 marks) and of its investments in collateral¹⁵¹ (98,140,000 marks) were pointed to as a proof of the complaint. In particular at the so-called "heavy terms" (*schwere Termine*) (the first day of the quarters; also the fortnights from September 15 to 30 and December 15 to 30) it was said to have weakened its position unnecessarily by granting bill and collateral credit of too comprehensive a nature, and that it discounted a great number of financial, credit, and nominal bills (*Leerwechsel*)—i. e., such bills as were not based upon real, bona fide commercial transactions.

Finally it was urged that, because of its limited holdings of foreign bills, the Reichsbank was unable to exercise any appreciable, even if only temporary, pressure upon the rate of exchange, whenever this rate had gone beyond the "upper gold point," or tended in that direction; that it was therefore not in a position to pursue an independent foreign bill policy (*Devisenpolitik*), which was demanded by the circumstances, or at least to support and supplement its discount policy by means of a corresponding foreign bill policy, even though subject to the same limitations as its discount policy.

I consider that the proceedings of the bank inquiry commission instituted by the Government in 1908 at the instigation of the Reichstag, and the statements of the experts examined at that time, go to show that only the last mentioned objection can be sustained, and that only to a limited extent.

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The amounts of foreign bills held by the Reichsbank since 1876 were as follows:

	Marks.
1876.....	1,672,000
1877.....	1,873,000
1878.....	5,351,000
1879.....	3,560,000
1880.....	9,584,000
1881.....	7,481,000
1882.....	5,590,000
1883.....	4,004,000
1884.....	4,631,000
1885.....	7,951,000
1886.....	16,961,000
1887.....	7,864,000
1888.....	3,316,000
1889.....	3,798,000
1890.....	5,420,000
1891.....	5,306,000
1892.....	4,715,000
1893.....	4,113,000
1894.....	2,540,000
1895.....	2,569,000
1896.....	2,753,000
1897.....	2,411,000
1898.....	4,934,000
1899.....	19,045,000
1900.....	26,753,000
1901.....	26,946,000
1902.....	22,733,000
1903.....	24,068,000
1904.....	22,212,000
1905.....	33,093,000
1906.....	43,244,000
1907.....	44,461,000
1908.....	70,881,000

On the other hand, as a result of the deliberations of the bank inquiry commission, it has been firmly established that, on the whole, the Reichsbank has not gone too far in the amount of credit granted, although it was considered advisable that in the future stricter principles should be observed in discounting bills, and that the discounting of

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long-term bills and the granting of any kind of permanent credit should, at least on principle, be abandoned.

Neither could it be proved that the Reichsbank during 1907 had raised the discount rate arbitrarily. On the contrary, the majority of the members of the bank inquiry commission, and of the experts examined, were of the opinion that the raise of discount rates was in the main only the natural and necessary consequence of industrial credit requirements, which in turn were not arbitrary, but for the greater part legitimate and necessary, and that had the discount rate not been raised, the situation of the Reichsbank would have been much worse, and the drain of gold much larger. As a matter of fact, the fixing of the discount rate by the Reichsbank has solely a "declaratory," and not a "normative" (*konstitutive*) significance.

The majority referred to were decidedly of the opinion that, for the same reasons, the continued high rate of discount, although much to be regretted, was a necessity. In the course of the deliberations it became necessary even for the most outspoken advocates to abandon the view that the Reichsbank ought not to comply fully with the sudden and abnormally large demands for credit that arise at the so-called "heavy terms" (*schwere Termine*), and which come principally from the credit banks.

It will hardly be denied that the credit requirements at the so-called "heavy terms" are particularly legitimate and such as can not be deferred, and that these requirements are met at the time by the Reichsbank in the shape of short-term discount and collateral credit. These requirements are: the credit demands on the first day of each quarter, when, in accordance with German

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custom, rents, mortgage interest, salaries, wages, interest payments, coupons, and frequently bills, etc., fall due, and between the 15th and 30th of September and December, the periods characterized by a similar natural increase of credit demands on the part of all business interests.

The fact that the credit banks fall back to a very considerable extent on the Reichsbank just at those periods is a necessary consequence of their being the agents of the credit requirements of trade and industry, and that, accordingly, the assistance sought is mostly for the satisfaction of the above requirements—i. e., the needs of third parties—and only to a relatively small extent for their own uses.

This does not prevent, however, the recognition of the fact that the credit banks (as may, however, happen under every system of banking) have frequently been too liberal in satisfying the credit requirements of trade and industry, and this not only in cases where operating credit was granted in the shape of short-term credit, but also in cases where investment credit was concerned, which in the early stages may have worn the garb of operating credit and developed only little by little into permanent investment credit.

Nor is there any doubt that the demands made on the money market, and above all, on the Reichsbank, were frequently increased by a superabundance of issues, promotions and transformations that were not always justified.

As far as the resources of the Reichsbank were concerned, the majority of the commission proposed that these should be increased, though it was deemed advis-

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able to effect this increase by a gradual increase of the surplus instead of an increase of capital.

In addition, it was considered advisable that section 2 of the bank law should be changed, and that, following the example of England and France, the bank notes issued by the Reichsbank should equally be declared legal tender. Naturally, the obligation of the Reichsbank to redeem its bank notes in gold was to remain and, if possible, be even more sharply emphasised.

The necessary proposals in these two directions are contained in the draft of a bill (art. 1, par. 2; arts. 3 and 4) laid before the Reichstag in February, 1908, and since made law, containing amendments to the bank act. (*Entwurf eines Gesetzes betreffend Aenderung des Bankgesetzes.*—Reichstag document, No. 1178.) The provision, however, in force in England—which I consider both necessary for and practicable in Germany, notwithstanding the argument to the contrary found on page 12 of the report of the bill—according to which bank notes are not to be legal tender for payments made in its giro and bank-note transactions by the Reichsbank itself, has been unjustifiably omitted. Further, the draft authorises the Reichsbank to buy checks, provided that two persons of known solvency are responsible for the same, an authority which the bank did not possess until then. This latter measure is also in accordance with the views of the majority of the members of the bank commission. On the other hand, the permission granted by article 5, Section III, of the act of June, 1909, to use checks (which in distinction to bills can not be accepted) as part of the note reserve seems to be of doubtful wisdom. Finally,

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article 2 of the act provides for an increase of the tax-free "contingent" of uncovered bank notes of the Reichsbank from the present amount (472,829,000 marks) to 550,000,000 marks, so that the bank will have to pay the 5 per cent tax merely on the amount by which its note circulation exceeds its cash reserve (see note 145) plus this note contingent of 550,000,000 marks. The system of a tax-free note contingent has thus been upheld, it having been proved that this factor has had no influence upon the discount policy of the bank. The Government and the majority of the commission were of the opinion that the passing of the bounds of the tax-free contingent was serving as a danger signal to the commercial public, although, as a matter of fact, from 1891 (before which date the bounds were never exceeded) till 1907 inclusive, this limit has been exceeded not less than 164 times.¹⁵² The last-named fact may therefore be said to have brought about merely an increase of the tax-free note contingent.

In concluding this review of the activity of the Reichsbank during the period under consideration, it must be acknowledged that the regulation of our money circulation, and of our systems of payments, credit and currency, with which that institution had been intrusted, has been in good hands. In particular it may be said that by means of a circumspect discount policy, by opportune and energetic intervention in 1900 as well as in 1907, i. e., during the most critical periods, the bank has been of the greatest aid in preserving the German money market and the entire economic organisation from lasting disturbances of the gravest character.

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The above review of the most important factors which influenced the development of industry and banking in Germany during the period in question, would be quite incomplete without a brief reference to the cartels formed¹⁵³ during this era,¹⁵⁴ and especially to those formed beginning with the period 1873-1875.¹⁵⁵ These combinations developed to an enormous extent in German industry, and their growth was due in a great measure to the direct influence of the German credit banks.

Cartels in the great majority of cases are either "necessity's offspring" or at least due to its influence or after-effects.¹⁵⁶

They are associations, founded by contract for certain periods of time, of independent enterprises belonging to kindred branches of industry or of branches of industry with nearly identical interests,¹⁵⁷ the individual members of the association retaining their independence but joining for the purpose of regulating production and sales according to common points of view and in the common interest.

A sharp distinction must be drawn (at least outwardly and legally) between cartels and trusts, for the latter although following the same aims¹⁵⁸ represent permanent and organic combinations of undertakings which have sacrificed their independence, and do not always belong to the same branches of industry, but possess common interests.

Cartels are formed principally in branches of industry which, like the mining and chemical industries, produce staple articles (*vertretbare Artikel*), and in large quantities (*Massengüter*). Their formation is rarest and most

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difficult in branches of industry producing special articles, or which work up half-manufactured articles.

Furthermore, cartels are formed most rapidly and easily in those industries engaged in the production of staple articles, which show an organic, local, or capitalist concentration into a limited number of large or "giant" concerns (*Riesenbetriebe*); this has been the case for some time in the mining industry, and more recently in the chemical industry.

The formation of cartels is slowest and most difficult in cases where both conditions—i. e., the production of staple goods, and a limited number of large works—are lacking. It is more difficult and unwieldy where a considerable number of middle-sized, and small (and moreover scattered) works exist side by side with large concerns (*Grossbetriebe*).

The "necessity" for the formation of cartels in Germany was clearly recognized, especially during the crisis of 1873, as a result of the economic situation; by this means overproduction at home and ruinously cheap prices were to be terminated; this "necessity" likewise was the origin of the protective-tariff movement of the seventies, which was intended to ward off, or decrease foreign competition. The simultaneous introduction of a protective system of duties is by no means indispensable for the formation of cartels, at least not in the case of strongly developed industries, as may be seen in the case of England. It seems to be only an attendant feature, easily accounted for, in case of feeble industries, and which, in some degree certainly, is likely to promote the formation of cartels.

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It is quite correct, and has been conclusively proved by Sering, that at certain times, and under certain suppositions the iron industry in particular can not dispense with protective duties, and that well-organized cartels enable protective duties to become effective in favor of producers. More than this, however, can not be said; consequently the assertion that the organized iron or steel industries can attain their aims only "under the system of protective duties" ¹⁵⁹ is in my opinion incorrect.

No official statistics existed up to the end of 1905 regarding the total number of cartels established in the German industry, consequently the figures found scattered here and there for earlier years must be accepted with reserve.

In 1896 there are said to have been 250 cartels in the whole German industry, ¹⁶⁰ one-fourth of which belonged to the iron and chemical industries, one-sixth to the earthen and stone industries, and one-ninth to the textile industries.

According to investigations made in the iron industry, which, however, can not be regarded as exhaustive, 44 cartels (conventions, syndicates) existed in that industry in 1903.

In the statistics contained in the *Denkschrift über das Kartellwesen* (p. 24), laid before the Reichstag during December, 1905, the number of domestic cartels is stated to be 385, divided as follows:

Coal industry, 19; iron industry, 62; metal industry (excluding iron), 11; chemical industry, 46; textile industry, 31; leather and india-rubber industries, 6; wood industry, 5; paper industry, 6; glass industry, 10; brick-making industry, 132; earths and stone industry, 27;

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earthenware industry, 4; food and delicacies, 17; electrical industry, 2; miscellaneous, 7. About 12,000 works participated directly in these cartels (p. 25).

Numerous complaints before, during, and after the serious crisis of 1900 among nonorganized branches of industry, as well as in wider circles, against the price policy pursued by the cartels,¹⁶¹ led to serious charges against the cartel system, and ultimately, as usual, to its absolute condemnation as being positively detrimental to the public welfare. These complaints gave rise to an official investigation by the imperial home office, which lasted from November 14, 1902, to June 21, 1905. The memorial (Part I) elaborated in the same governmental department, and laid before the Reichstag on November 28, 1905, simply gives a review of the existing cartels in Germany.¹⁶²

In continuation of these investigations, it was proposed to bring out a compilation of the legal provisions and regulations applying to cartels at home and abroad, including also the most important decisions of the supreme tribunals. Further, the results of the official inquiry were to be tested in the light of specially prepared price statistics. The material was to be brought down to date "in all cases where the conditions determined in the investigation had changed," and, if necessary, the material gathered was to be supplemented "through the extension of the investigation to other cartels." (See p. 18 of the memorial of 1905.)

The first part of the memorial is accompanied by reprints "of all available by-laws (Statuten), company and delivery agreements, etc., and business regulations"

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pertaining to cartels "in order to afford an insight into the forms of organisation of the combinations" (pp. 18-19).

In addition to the associations of producers, the memorial treats also of the associations of consumers and dealers.

In conformance with the outlined program, Part II¹⁶³ of the memorial, laid before the Reichstag on March 25, 1906, contains the provisions of the German civil and penal laws, including the decisions of the supreme court of the Empire. Part III, submitted to the Reichstag on March 21, 1907,¹⁶⁴ is devoted solely to a review of the cartels in the coal industry.

Finally, Part IV, laid before the Reichstag on November 3, 1908,¹⁶⁵ deals with the foreign cartel laws, including those of the European countries, the United States, and the British Colonies (Australia, New Zealand, Canada, and Cape Colony).

This is not the place to discuss in detail the results of the official inquiries preceding the publication of the memorial, nor the inquiries themselves, which by no means exhausted all aspects of the subject, especially the important question of export bounties. It seems advisable, however, as the conclusions drawn from this inquiry are likely to occupy the attention of the legislative authorities, to examine some of the questions more closely. It should be stated at the very outset that in Germany, as opposed to the United States, all the railways are state property, and that any domination over the railway tariffs by the cartels is out of the question.

According to my conviction, the official inquiry has established the following preliminary conclusions.

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The charge brought against the Rhenish Westphalian Coal Syndicate of having raised prices too high and too rapidly during the years of greatest trade prosperity (*Hochkunjunktur*) viz, 1898-1900 was proved unfounded; as to the complaint that it did not reduce prices sufficiently and speedily enough after the crisis, no common ground for the conciliation of the divergent views could be found.¹⁶⁶

The opinion that it is bad policy, unpatriotic, and incompatible with the public welfare to sell goods abroad at lower prices than at home can be regarded as refuted. In the event of overproduction at home, sales to foreign countries are generally¹⁶⁷ necessary in order to dispose of the surplus home production and to relieve the home market as far as possible, whereas the determination of price in such cases is governed chiefly by foreign competition and prices prevailing in the international market. The aim of the seller being always to obtain the highest sale price possible, it may therefore be assumed as a general fact that the regrettable occurrence of foreign sales being effected frequently below home prices and even below cost is solely due to the causes just named.

On the other hand, I am of opinion that the following charges have been proved: The cartels in general, and especially those in the mining industry, frequently lacked all close touch and proper connection with each other, so that a common business policy was out of question, even if for these reasons only. A proper policy should at least have set itself the task of establishing a proper relation of prices for the products of the various industrial branches, especially a ratio of prices for raw materials, half-manu-

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factured wares, and finished commodities. Instead, the coal syndicate pursued its own price policy (which was certainly moderate throughout) without reference to the coke syndicate; the latter in turn pursued its less moderate price policy without reference to the pig-iron syndicate,¹⁶⁸ etc. Such a common business policy, moreover, was out of question, because (a) the cartel system (*Kartellierung*) never comprised the whole process of production, i. e., the production of the raw material, of the partially manufactured goods, and the finished article, but only a single part; or parts, of the process of production, and because, furthermore, (b) the syndicate contract frequently excluded a whole series of articles, as well as all foreign business, from the cartel's sphere of influence.

It is clear, therefore, that the increase of prices fixed for Germany by the cartels of the raw-material industries benefited at first those cartels only, and that they were able to dispose of their home surplus in foreign markets at prices below those prevailing in these markets, and sometimes even below cost.

In the iron industry these facts caused considerable injury, in the first instance, to the cartels formed in industries following in the process of production, namely, the production of partially manufactured goods. These cartels in their turn endeavoured as much as possible to shift the injury to their consumers, the industries following in the process of production, i. e., the industries engaged in the further working up or finishing of the partial manufactures. Hence, it followed that the further an industrial branch was removed from the beginning of the productive process the more intensely it was injured ¹⁶⁹

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by the otherwise consistent (*an sich naturgemässe*) business policy of the raw-material cartels mentioned.

The unorganised industry of the more highly finished products, therefore, was weakened and injured to a high degree, and to a twofold extent; by unrestrained domestic competition as well as foreign competition on the one hand, and by the enforced raising of home prices for raw materials and partially manufactured materials on the other.

A considerable number of these evils which were calculated to counteract the essentially true purposes aimed at by the formation of cartels, and which would have led eventually to the disruption of the cartels,¹⁷⁰ have been removed at least for a certain number of industries by the formation, on March 30, 1904 (retroactive to March 1), of the Steel Works' Union (*Stahlwerksverband, Düsseldorf*), which united the Semi-Manufactures Producers' Association (the so-called *Halbzeugverband*), the Girder Manufacturers' Association (*Trägerverband*), and the Rail and Sleeper Combine, the total production of which, at the time of its foundation, amounted to 7,900,000 tons (of 1,000 kilograms). The advantage of this union,¹⁷¹ which was extended on April 30, 1907, for a further term of five years, consists principally in uniting within its sphere of activity the whole German output of partially manufactured articles, and a very considerable portion of the rolling mills' output. Further advantages of the combination were the fact that all the works belonging to the union were so-called "mixed" works and that it comprised at least some of the mutually dependent cartels. The new combination has also taken in hand the export trade, and

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is endeavouring, in conjunction with the Rhenish Westphalian Coal and Iron Syndicates (by means of contractual arrangements), to regulate it in the common interest by fixing export premiums and establishing a special clearing house for exports. The export premiums, which amounted to 2.50 marks per ton, were abolished, beginning with July 1, 1907.

The union also has the avowed intention, carried into effect since by a series of measures, to harmonise as far as possible its own business policy, and more especially its price policy, with that of the cartels following or preceding it in the process of production. In particular its aim is to fix the prices of all syndicate products in accordance with the prices of the raw materials in such a manner as to partake of the benefit of the customs duty while showing the utmost regard for the interests of the industries of the more highly finished products.¹⁷²

However, according to the memorials of February, 1908,¹⁷³ and June the 5th, 1908, presented by the "pure" Martin Steel Works (engaged in the production of crude steel only) and the "pure" rolling mills (which only roll steel and iron, but do not produce the iron and steel material), to the Secretary of State for Home Affairs and to the Reichstag, the Steel Works' Union had shown no consideration for the interests of the finishing industry as evidenced in many instances. It was stated that the Steel Works' Union, with the object of suppressing the "pure" rolling mills, had systematically kept the home prices of half-finished material (the so-called "A" products of the syndicate) so high that the "pure" rolling mills not only had no profit, but at times a clear loss in the sale of

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the products manufactured from this half-finished material. For, simultaneously with the rise of prices for the products "A"—which they on their part could not manufacture (as most of the members of the Steel Works' Union could), but had to purchase—there had been a fall in the selling prices of the products "B" of the Steel Works' Union, comprising iron plates and bar iron, the sole product of the "pure" rolling mills.

The entire advantage of the Steel Works' Union depended on the duty-free importation of such raw materials as coal and ore. As it imported the latter free of duty in those exceptional cases where it did not possess ore of its own, the mixed works (Thomas Steel Works) were able to keep the cost of their products below that of the other works.

The superiority of the "mixed" works belonging to the Steel Works' Union, it was claimed, was therefore not based exclusively on the natural advantages of concentration, but chiefly or exclusively on the fact that these works, being able to obtain their material without duty, made a selfish and wrong use of the duty on imported pig iron, half-finished, and scrap iron for the benefit of the syndicate products and to the detriment of the "pure" works. In the opinion of the "pure" works, these duties were unnecessary, in view of the equally high cost of production abroad, especially in England.

This superiority of the mixed works, the argument went on, rested on the further fact that although the cost of material to the pure works was enhanced by the amount of the import duty, the former made it impossible for the pure works to realize the benefit of the customs duty

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in the prices of their products by refusing to sanction the organization in a syndicate of the producers of finished iron, especially of rolled plates and bar iron.

Under these conditions the "pure" Martin Steel Works and the "pure" rolling mills demanded at one time a suspension and early removal of the import duties on pig iron, half-finished iron, and scrap iron (cfr. memorial of 5th June, 1908), and at another (cfr. memorial of February, 1908)—the introduction of import certificates for pig iron and exported articles (i. e., for half-finished articles—bar iron, plates, and wire), by which means they could at least secure to themselves the unhampered supply of material for articles to be exported.

The Steel Works' Union pointed out in its answer to the above-mentioned memorials that the mixed works were at a considerable disadvantage as compared with foreign countries, both as to general conditions of production, especially cost, and as to the far smaller social burdens imposed abroad, particularly in England. A compensation could be found only in better technical arrangements, in savings in the cost of production and in a decrease of the cost of transportation.

There could be no question of a systematic suppression of the "pure" works. This might be seen from the fact that the total sales of half-finished material amounted in 1907, to 1,200,000 tons, whereas the firms who had complained purchased only 340,000 tons, the production of which required the services of only 5,000 workmen of the Steel Works' Union's total labor force of 360,000 men. Added to this were the export premiums continually paid by the Steel Works' Union also to the above-mentioned

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works, which helped them to tide over bad times, to say nothing of the ever-increasing deliveries of half-finished material to these works which were a matter of record.

The cutting of prices of iron bars and plates very often emanated from the "pure" rolling mills, in fact it often exceeded the amount of the export bounties.

It was a matter of regret that owing to objections of several members of the Steel Works' Union, and to other obstacles, the desired formation of bar iron and plate iron syndicates had not become possible. The removal of duties on half-finished material, pig iron, and scrap iron desired by the "pure" works would result merely in a dissolution of the Steel Works' Union. These duties were indispensable as a protection against the enormous power of the American steel combination against the advancing Russian iron industry, and, lastly, against the constantly growing British protectionist tendencies. The abolition of the duties mentioned would prove at the same time of general disadvantage to the whole home industry, and especially to the rolling mills, as it would entail the removal of the duties on iron bars and plates. For these duties acted chiefly as prohibitive duties, a fact disputed, however, by the "pure" rolling mills.

Finally, in the opinion of the Steel Works' Union, the import certificates (for the export of articles worked up from imported pig iron or half-manufactures), demanded by the "pure" works, were too rigid in character and could not be adjusted to varying market conditions. This pliability, however, was essential to their successful application. If the demand of their substitution for the export payments made by the syndicate were to be granted, they

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might easily assume the character of true export bounties, especially at times when home and foreign prices were equally high.

As a sequence to this at times quite acrimonious controversy, the Steel Works' Union decided upon the reduction of the domestic price of half-finished material by 5 marks per ton (this came into force on the 1st of July, 1908). But this did not help the "pure" works, since this reduction of the price for half-finished material had been anticipated, and accordingly the selling price of sheet and bar iron had fallen 10 to 15 marks per ton; that is, below the cost to the "pure" rolling mills. Since November 27, 1908, the prices on fashioned bar iron (*Formeisen*) have likewise been reduced for the first half of 1909 by 5 to 10 marks by a resolution of the Steel Works' Union.

As no important improvement has taken place in the condition of the "pure" rolling mills, a condition which resembles in a striking manner the present condition of the private banking business with relation to the great banks, it will be necessary to consider the demands of these works. It may be noted in this connection that some of the great banks are found in their camp, at least with part of their interests, though the large majority of the great banks and by far the greater part of their interests are doubtless identified with the Steel Works' Union.

The carrying out of the plan to create bar iron and sheet iron syndicates (which it would appear has been recently supported even by the Government) would seem to be the most radical, and perhaps the only way of improving the doubtless precarious condition of the "pure" rolling mills. Such a plan should certainly be supported

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by all means in the interests of German trade and industry.

We must not forget, however, that the scheme to form a general sheet-iron syndicate was wrecked not only by the opposition of three South German members of the Steel Works' Union (de Wendel, Maxhütte, and Dillingen), but also by the opposition of a great number of Siegerland works. The formation of the wrought iron syndicate on the other hand seems to have come to grief owing to the opposition of various works, as well as to the demands of wholesalers who insisted upon being guaranteed a minimum profit for handling the products.

Another plan would be the extension of the number of "pure" rolling mills by the erection of Martin works, which would make them independent of the supply of half-finished material from the Steel Works' Union. It was on these grounds that the plan was strongly advocated in a memorial of the "Association of crude iron and half-finished material consumers," which in the main sided with the "pure" rolling mills against the contentions of the Steel Works' Union.

The construction and successful working of new Martin works presumes, however, the removal of the import duties (as desired by the "pure" rolling mills) on pig iron, half-finished products, and scrap iron. It is, however, very doubtful if the removal of duties would be in the interest of national industry, and even more so whether the change would prove of permanent benefit to the rolling mills themselves.

In the first place I am not convinced that these import duties have been used in a selfish and wrongful manner

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by the Steel Works' Union in order to crush the "pure" rolling mills. On the contrary, it seems to me that even the strongest combination is hardly able in the long run to realize through its domestic selling prices the full protective duties on the half-finished material, because in the main we export half-finished material. Certainly in periods of booms the influence of prices in the world markets will largely equalise the influence of duties and freights on inland prices. Even the average inland price for grain (the imports of which largely exceed the exports) has not always equaled the average foreign prices plus freight and duty.

In the foreign markets the determining price factor as a rule and in the long run is mainly the condition of the international market as affected by supply and demand. Prices in the world market are quite independent of domestic prices and are the result of altogether different factors. There is no reason, therefore, why they should correspond to the domestic prices plus protective duties and the freight difference.

I also share the opinion of the Steel Works' Union that once a breach has been made in the customs wall for iron such as the pure works desire by the removal of the duties from half-products and by the introduction of import certificates, the abolition of the remaining iron duties would necessarily follow. For it will be difficult in the long run to maintain free trade for the export business and to continue to make use of protective tariffs for other branches of the iron industry, such as pig iron, bar iron, sheet iron, and wire.

It seems to me that much as the removal of protective duties may be desirable on principle the removal of the

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duties on pig iron and half-products which, like the cartels, are the means not only of raising but maintaining the prices of domestic products, would be premature, for the reasons stated in the memorial of the Steel Works' Union and in view of present conditions. Nor can we be quite sure that at no distant date the raw material (*Einsatzmaterial*) of the Steel Works' Union now entering duty free (at least the ores) may not become subject to foreign export duties.

Added to this is the fact that as long as the agrarian protective duties continue, the one-sided removal of the industrial protective duties would mean an unfair burdening of the industrial population, which would moreover be left unprotected against foreign competition.

To return to the other purposes of the Steel Works' Union (*Stahlwerksverband*):

The union endeavors, by a series of measures intended to insure regular work for syndicate undertakings, to reduce the cost of production, a matter which hitherto has not been influenced in the slightest degree by the syndicates. Finally, it has promoted the formation of dealers' associations, limited to certain districts, especially the Rhenish-Westphalian, the Middle-German, and the South German girder dealers' associations, the existence of which was at one time endangered through dissension, but which is now assured for another five years, dating from the summer of 1907 to June 30, 1912.

The Steel Works' Union, by reason of its organisation and of its freer attitude toward the export trade, is in a position to pave the way for international agreements with the chief exporting countries. In fact it has suc-

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ceeded in bringing about such agreements, although only for a short period each. On November 28, 1904 (retroactive from October 11, 1904), an agreement concerning the export of rails was arrived at between England, Germany, France, and Belgium, to begin with, for a period of three years (till March 31, 1908), and on November 24, 1904, an agreement was concluded between Germany, France, and Belgium with reference to the export of girders for the period of two and one-half years (until June 30, 1907).¹⁷⁴

Both agreements have been extended indefinitely and barring unforeseen incidents are likely to remain in force until June 30, 1912, the date of the expiration of the Steel Cartel agreement.

The United States Steel Corporation (acting also for the Lackawanna and Pennsylvania Companies), founded February 23, 1901, with a capital of \$1,400,000,000, joined the International Rail Cartel later on. The Steel Corporation does not comprise, as is frequently stated, the whole steel production of the United States, but so far "only" two-thirds of the American steel output, and controls about 1,500 miles of railway, or rather less than 1 per cent of the whole railway mileage of the United States.¹⁷⁵

We shall close the review of the period with this mention of the international agreements, which were initiated in Germany and in which up to the present German industry has been able to secure an eminently satisfactory position in accordance with its industrial achievements. This period is characterized not only by expansion and concentration in the fields of trade, industry, and particularly banking, but also by the greatest revolutions in the economic field; it marks the era of international trade, the

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precursor, and in part also the cause of the new era of "world" and colonial politics. It was a period of vast inventions and discoveries, which created perfectly new industries, and fundamentally transformed existing ones, and which imposed on the industries (often protected by high customs duties) great tasks in the international market, which were achieved to a considerable extent. The revolutionary character of this epoch, however, expressed itself in two tremendous crises—in the crisis of 1873 and that of 1900.

This period marks the complete transformation of the character of German industrial organization, begun in the last decade of the preceding epoch. The new order, despite the partly sound, partly inadequate, arguments urged against it, possesses no doubt the great merit of having provided—principally by increased export trade—food and occupation for the enormously increased population, which, it was stated as early as the middle of last century, agriculture was no longer able to sustain. Moreover, the view seems fairly justified, at least to a certain extent, that the recent growth of imports, which, as was pointed out above (pp. 112 and 121), in certain branches largely exceeded the simultaneous growth of exports, is a fair indication that the large increase of production during late years is due primarily to increased home demand.

The following question, however, should not be suppressed in this recapitulation of the past and forecast of the future: What will happen if imports into Germany continue to increase greatly, and exports fall off considerably? This danger must be borne in mind as a serious eventuality, at least for some industries, a danger which may result from high protective duties likely to be

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introduced abroad, especially in America and the British Empire, as well as from existing German commercial treaties.

As far as the latest commercial treaties are concerned they offer one gratifying advantage benefiting the whole community, namely, the assistance and support against foreign countries demanded by agriculturists and absolutely necessary in many directions and parts of the country. As a result of this support agriculture was able to recover its former vigor and prosperity by internal means, especially by a more vigorous and concentrated development of agricultural credit and cooperation. This development is highly desirable from the point of view of national interests, as it tends to reduce the necessity of foreign grain imports to the smallest extent possible.

But inasmuch as only such governmental measures can be of general or permanent benefit in which consideration for the interests of one class of the community goes hand in hand with due regard for the interests of the community as a whole, it is our earnest hope that the protection of our home agriculture may not have been accorded at the expense of commercial and industrial development, or even of important branches of industry or industrial export branches.

Much depends on the vigor of commerce, especially the vigor of industry, which must continue to advance and must not rest for a moment. Its further progress will depend, first and foremost, on the powerful and judicious support of those institutions but for whose constant and energetic cooperation the great economic achievements of the period could not have been attained, to wit, the German banks.¹⁷⁰

CHAPTER III.—*The German Great Banks during the second period (1870 until the present).*

SECTION I.—(1).

INTRODUCTION.

The activity of the banks in the economic life of society has often been likened to that of the heart in the human body.

This comparison is quite proper. For just as it is the function of the heart to regulate by means of certain organs the circulation of the blood, which through countless arteries and veins flows through the human body and returns to the heart, so, as was shown above, it is the function of the banks to regulate by certain economic measures the circulation of capital, which flows from them and returns to them, and which may properly be regarded as the life blood of the modern economic organism.

The multiplicity and importance of the functions of the human heart can best be seen from a study of the functions of each part of the human body in the entire organism. In a like manner some idea of the tasks fulfilled by the German banks during the more recent period can be had from a discussion of those leading factors in the general economic development of the period, which were furthered by the banks, particularly through their activity in the credit field, by floating enterprises and issuing securities.

Inasmuch as important phases of this activity have been described in the introduction and in the chapters devoted

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to the early period of German banking, and as this activity has proceeded on the whole along the same lines, though on a larger scale, during the more recent period, it will be sufficient to point out merely the special tasks undertaken by the banks during this period.

For only in this manner will it be possible to achieve our main purpose of presenting a complete picture of the influence and activity of the banks in the general economic development during the two periods.

But in contrast with former editions of this book I shall endeavor in each of the subsequent chapters to describe, at least in outline, the share of each of the large banks in the common task. It will then be seen that, notwithstanding the similarity of the purposes and of the general development, each large bank has shown a peculiar character and development, has pursued a peculiar business policy (cf. Sect. 6, below) and that this policy, even within the same bank, has shown numerous and at times radical changes depending on the change of management, times, and purposes.

Before proceeding with our inquiry let us recall what amounts of capital were at the disposal of the German credit banks for the achievement of their tasks at the beginning of the present period. As stated before, of the total amount of about 2,405,000,000 marks which represented the share capital of the stock companies founded in Prussia during the nineteen years' period of 1851-1870, the share of banking capital was 94,650,000 marks, that is to say, less than 100,000,000 marks, or about 5,000,000 for each year (cf. p. 48, supra).

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In 1870 the capital of the large banks founded during the earlier period showed the following amounts:

Bank für Handel and Industry, 25,046,000 florins (42,936,000 marks).

Disconto-Gesellschaft, 10,000,000 thalers (30,000,000 marks).¹⁷⁷

Berliner Handelsgesellschaft, 5,625,000 thalers (16,875,000 marks).

A. Schaaffhausen'scher Bankverein, 5,200,000 thalers, (15,600,000 marks).

Mitteldeutsche Kreditbank,¹⁷⁸ 5,000,000 thalers (15,000,000 marks).

In 1870 a *Konzession* was granted to the Deutsche Bank¹⁷⁹ with a capital of 5,000,000 thalers (15,000,000 marks).

During the same year the Commerz- und Disconto- Bank at Hamburg was founded with a nominal capital of 30,000,000 marks, of which 15,000,000 marks were paid in.

In 1872 the Dresdner Bank at Dresden was founded with a nominal capital of 8,000,000 thalers, equal to 24,000,000 marks, of which 40 per cent were paid in, i. e., 3,200,000 thalers (9,600,000 marks).

In 1881 under totally changed conditions the Nationalbank für Deutschland was founded with a nominal capital of 45,000,000 marks, of which 20,000,000 marks were paid in.

Further substantial increases of both the number and capital of the German credit banks followed in rapid succession during this period. As early as 1872 the combined capital of the then existing German credit banks (enumerated in Appendix III, at the end of the volume) exceeded 1,000,000,000 marks (1,122,113,000 marks). Of the total number, however, not less than 73 banks, with a capital of 432,500,000 marks, were compelled to wind up their affairs during the six years of business depression which followed the crisis of 1873.¹⁸⁰

Here again I shall depart from the method followed in former editions. Following the usual classification of banking business into credit and debit transactions, I shall, as stated in the preface, take up the discussion of the principal credit and debit transactions (*Aktiv- und*

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Passiv-Geschäfte) of the German banks with particular reference to the great banks.

At the outset the following general considerations should be emphasized. It is regarded as a fundamental rule both for banks of issue and for credit banks, which are not permitted to issue notes, that the character of their debit transactions shall determine the character of their credit transactions,¹⁸¹ or, in other words, that a credit bank must not *grant* credit different in character from that which it *receives*. This proposition must indeed be recognized also as the fundamental principle of credit banks, but it is to be understood in the sense that a credit bank, in proportion as it has procured moneys repayable on demand or within short or longer terms, or has contracted credit obligations which become due on demand or within short or longer terms, must invest the funds at its disposal in such a manner that it shall be in a position to meet its obligations at all times when they become due.

At the same time, however, a bank may assume that, at least in normal times, not all the moneys due will be claimed simultaneously, just as a fire insurance company is justified in assuming that not all the insured houses will be destroyed by fire at the same time.

No general and fixed rules can be laid down as to the percentage of the claims likely to be presented for payment. Such a percentage can be estimated only on the basis of the experience gathered during a long time by the individual bank, with due regard to the experience of other banks and to its own peculiar character; in other

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words, by using the care and precaution customary in business, and more especially in the banking field.

The general practice of the German large banks is even more cautious,¹⁸² since they dispose of their funds in such a manner as to be prepared at any moment to repay one-third of all outsiders' funds (*fremde Gelder*), irrespective of whether they are payable on demand or after longer or shorter terms, by the aid of resources which may be regarded as being of first-class liquidity, i. e., cash, including bank notes, sight drafts, and checks, contango (*Reports*), bills, also the so-called "Nostro" credits, i. e., credits held with first-class domestic and foreign banks and banking firms.

"Outsiders' funds" (*fremde Gelder*) include the deposits (*Depositen*), the credit balances on current account, and other balances not on current account, resulting from loan operations and other issue business, or from the coupon service, or from interest-bearing funds held until settlement day to the credit of domestic and foreign states, provinces, districts, communes, commercial and industrial concerns, of land banks, note banks, and other banks, insurance companies, administrations, corporations, institutions, foundations, and private capitalists.

The liquid assets stated above include the so-called reports, which as a rule, or at least primarily, comprise only such as can be realized in the international market, as for instance those concluded in London and which become payable on an average within a fortnight (instead of the usual term of four weeks). Similarly bills mentioned among this class of assets must be such as can be used for international transactions. They may be in terms

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of German currency, since there is normally a large demand abroad for German prime discounts. Only in the second place do the banks resort for this purpose to short-term or shortly-due bills which may be rediscounted at the Reichsbank.¹⁸³

Such a constant readiness for the repayment of a third of *all* "outsiders' funds" (not only of deposits), must be regarded as more than sufficient, since never yet in the history of the German great banks has there been a case when payment of one-third of all the liabilities has been demanded suddenly without notice. Were the Reichsbank to reckon with the possibility of a sudden presentation of one-third even of its notes only, it could not maintain its present mode of calculating its liquid assets. As a matter of fact, there is no legal provision whatever for cash security, so far as the giro-claims of the Reichsbank are concerned.

SECTION 2.—THE CURRENT (REGULAR) BANKING BUSINESS.

I. THE DEBIT OPERATIONS OF THE GERMAN CREDIT BANKS (TAKING OF CREDIT).

(A) THE DEPOSIT BUSINESS.

(1) *General observations.*

As stated before (see pp. 73 and 74), the German banks, during the first period, proceeded mainly on the principle of carrying on their business, as far as possible, with their own means. In the interest of their own security they did not deem it advisable "to bring about an increase in the amounts of deposits by granting more liberal terms." Their customary practice, therefore, was to accept deposits

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repayable only after three, six, or twelve months' notice, on which, moreover, only a small interest was paid.

The systematic fostering of the deposit business by the German banks, which in England is regarded as an essential element of banking,¹⁸⁴ is due to the initiative of the Deutsche Bank, which almost immediately after its foundation in 1870 began to devote itself energetically to this class of business.

Already during the Franco-Prussian war, toward the end of 1870, the Deutsche Bank opened special deposit offices, at first in Berlin, then in a number of suburbs, also in Wiesbaden, Hamburg, Leipzig, and Dresden. In this manner manufacturers and capitalists were enabled to invest productively even the smallest available amounts (of not less than 10 thalers), while the Bank was in a position to use these deposits—which became its property with the restrictions mentioned above¹⁸⁵—for certain business purposes, having been the first to reach the conviction that, in view of the large demands and tasks presented to the banks their credit business could no longer be transacted with their own means. Since, however, even the use of only a portion of the deposits for its own business, even with the observance of the required restrictions, can be permitted only in case the remaining portion is adequately secured by most liquid assets (*stets greifbare Mittel*), the Bank at the same time took exemplary precautions to provide for this form of securities and adopted a special organization of the deposit business, so arranged that the special division created for the purpose might, when necessary, be separated at any time and made independent.

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The opening of these deposit branches¹⁸⁶ on the one hand made it easier for manufacturers and capitalists to obtain bank credit; on the other hand it brought the Bank in contact with a constantly growing number of customers, whose financial standing was known and who formed a regular and steadily increasing circle of subscribers to the stocks and bonds issued by the Bank.

Conditions in Germany, unlike those in England, presented a number of serious obstacles to a vigorous growth of the deposit business.

In the first place, the general custom in Germany among manufacturing and other circles is to keep on hand much larger amounts in cash than actually necessary. In the case of the smaller traders and manufacturers this is caused partly by the fact that often they have no regular bank connections. For this reason they keep idle at home the money needed to meet maturing obligations, and even much more, from sheer timidity, merely using so much of it as is required for their current business. The same and similar remarks apply to many capitalists, who, following old-time tradition, are often given to hoarding their cash resources in the most primitive fashion.

To the extent, however, that the patent advantages of interest-bearing investment helped to overcome this traditional inertia, it was the deeply rooted custom among large classes of the German population to turn over small savings to the savings banks. The latter, in many cases, were older than the credit banks, and owed their origin to, and were identified with, local conditions. They were convenient for the deposit and withdrawal of money, even

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in the smaller towns, besides being either public institutions or, at least, under state control.

Finally, at the beginning of the seventies, the amount of available national wealth was relatively small. Since the deposit business presupposes large amounts of surplus funds, the establishment of special deposit banks would have proved unprofitable and was therefore out of the question, at least for a good while.

Under these circumstances all that the German credit banks could do at first was to use their utmost care and efforts to prepare the ground for a gradually developing deposit business. It was utterly out of the question, in view of the then existing conditions and habits of the people, that the latter would take their savings to the credit banks in the same manner as to the savings banks. In fact, the deposit offices had to create their own depositors. Their mode of procedure in this matter, allowing for certain differences of conditions, was not much unlike that of the English deposit banks during the early period. As pointed out before the Bank Inquiry Commission, the deposit offices extended credit to manufacturers and traders, thus enabling them to pay their creditors through their intervention. The creditors quite often were induced not to draw the money due or to re-deposit it, receiving for it a higher than the customary rate of interest.

After the connection had been made in this or similar manner, it followed, as a matter of course, that the persons to whom credit was extended, as well as those who shared in it, gradually came to deposit at the branch their cash funds and reserves and to transact there all their banking business.

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The new customer began to draw checks upon the deposit office, to discount there his commercial bills, to have the office attend to most of his payments, and lessen the risk in his import and export business. The office granted him acceptance credit, undertook the investment of his funds and the management of his property in securities, gave him information and advice and procured for him advantages of all sorts. In this manner the deposit offices, which from the mere profits of the deposit business would never have been able even to defray their operating expenses,¹⁸⁷ and which therefore were equally interested in enlarging the scope of their business operations, gradually assumed the character of so-called *Wechselstuben* (exchange offices), engaging in all classes of banking business, like the central parent bank, or its ordinary branches, except dealing in securities on own account and undertaking syndicate business (*Konsortialgeschäfte*). This was carried so far that the new competition caused loud complaints among the private bankers affected thereby. It is thus seen that the origin of commercial deposits at the German banks is altogether different from that of the savings deposits at the savings banks. Statistically this may be proved by the observation that the amounts of deposits increase or decrease in accordance with the general increase or decrease of credit operations. Equally different are the purposes for which deposits are made at the two classes of banks.

The client of a savings bank, belonging almost exclusively to the middle and lower classes, has in mind an institution which shall permanently and securely keep and administer his savings deposits, and pay him the highest

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possible rate of interest. The client of a commercial bank, belonging mainly to the middle and higher classes and particularly to the commercial and industrial groups, as a rule has in mind the temporary deposit and utilization of his surplus funds, being therefore in most cases satisfied with a low rate of interest until such time as he can invest them permanently in securities, mortgages, or industrial enterprises; moreover, he is particularly interested in turning over the administration and use of these funds to the bank which attends to his other banking business.

With few exceptions the former has but one character.¹⁸⁸ He is a depositor of savings and nothing else. The latter has a Protean character; one day, in virtue of his deposit, he may be a creditor, some other day, in virtue of his current account—or other connections with the bank, he may be a debtor. He may become creditor as well as debtor, for a thousand and one reasons. Thus, unlike the savings bank depositor, he is not presumed to exclude the right of hypothecation or detention of the deposit on the part of the bank.

For this reason it is very difficult to give a definition of the German term "*bankmäßige Depositen*", since in Germany the term comprises not only what are known in England as current accounts, but likewise what are known there as "deposit accounts." As these various designations are far from uniform and on the other hand are coterminous, it is almost impossible to obtain, for the various German banks, uniform and comparable data of "deposits" on a scientifically unobjectionable basis. For these and other reasons some banks have heretofore either failed altogether to give any separate account of their

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deposits, or have shown the latter combined with the so-called "creditors" accounts. This is true of the *Darmstädter Bank* (which, however, has of late been giving separate data for deposits), of the *Berliner Handelsgesellschaft*, the *Commerz- und Disconto-Bank*, the *Mitteldeutsche Kreditbank*, and the *Nationalbank für Deutschland*. Other institutions, such as the *Deutsche Bank* and the *Dresdner Bank* comprise among deposits on the one hand all "creditors" of their deposit offices and exchange offices—a proceeding which can be explained only in view of the peculiar development of the German deposit business just described—and on the other all those "creditors" who may have intrusted moneys to other offices of these banks upon receipt of so-called "*Depositenquittungsbücher*" (deposit receipt books) or else without such books but expressly designating them as "deposits."¹⁸⁹

The Disconto-Gesellschaft, while stating separately the "deposits" in its regular reports, as well as in its jubilee report of 1901 (p. 260), seems, however, to include under that head the current accounts of larger domestic and foreign firms and corporations, since the amounts of these deposits show oscillations which can not be explained exclusively by contemporary business conditions or the state of the money market.¹⁹⁰ On the other hand, its reports up to the year 1908 invariably grouped under the head of "creditors" instead of "debtors," the balances daily due (*die täglich fälligen Guthaben*), held at its deposit offices.

It is plain both from the account of the development of the German deposit business and from the purposes for which these deposits are made and received, that, as was pointed out also at the third general convention of German bankers at Hamburg¹⁹¹ (Sept. 5 and 6, 1907), only

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an exceedingly small portion of the deposits of the German credit banks—in my opinion less than one-third—is made up of what may properly be called savings deposits. By far the larger portion—not less than two-thirds if not three-fourths—of these deposits represent “operating reserves” of traders¹⁹² (cash on hand, reserve, etc.) or of funds of traders or capitalists temporarily deposited but destined for investment in securities, mortgages, industrial enterprises, etc. This opinion is shared unanimously by other students of the question, including the experts heard in 1908 before the Bank Inquiry Commission.¹⁹³

Between 1870, when the systematic fostering of the deposit business on the part of the German banks may be said to have commenced, and 1891, that is to say, during twenty-one years of the most intensive fostering of this branch of business, those banks which hold by far the larger part of the total deposits, namely, the 143 German credit banks having a capital stock of at least 1,000,000 marks each, had accumulated total deposits amounting to 386,000,000 marks.

Nine years later, according to a compilation of the *Deutscher Ökonomist*, 118 of the largest German credit banks had accumulated 997,000,000 marks of deposits; i. e., after thirty years of fostering of this branch of business, these banks had succeeded in attracting not quite 1,000,000,000 marks of deposits.

After another nine years, on December 31, 1908, the total deposits of all German credit banks reached about 2,750,000,000 marks, of which about 2,250,000,000 were the share of the 143 German credit banks having a capital of at least 1,000,000 marks each.

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The large increase within the last nine years is due not merely to the growth in the volume of credit operations—the prime cause of growing deposits—and of the general prosperity, but above all to the large increase in the number of the deposit offices of the great Berlin and provincial banks, especially notable during those years. It is also due to the fact that owing to improvements of the bank statements and the more thorough work of the private statisticians, the statistics comprise now the operations of nearly all German credit banks, 413 in number, with all their branches, silent partnerships (*Kommanditen*), agencies, and deposit offices.

In view of this circumstance and the fact that this total represents the result of nearly forty years of concentrated and consistent effort, even this result can not be regarded, either absolutely or relatively, as a great success. Hence the statement ¹⁰⁴ made as early as 1904 that there was “an unhealthy growth of deposits,” seems entirely unfounded. This becomes especially apparent when the above total is compared with the total volume of the savings deposits held by the German public and private savings banks, which, on December 31, 1906, had reached a total of 13,250,000,000 marks, and by December 31, 1908, amounted probably to between 14,000,000,000 and 15,000,000,000 marks.

To this should be added the savings and other deposits (*fremde Gelder*, less credit balances on current account) held by the 16,000 cooperative credit associations (*Kreditgenossenschaften*) in city and country, which on December 31, 1906, amounted to about 2,000,000,000 marks, also the amounts accumulated in the note banks, people's

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banks, and, since January 1, 1909, in the check departments of the post-offices¹⁹⁵ (which latter amount is likely to continue increasing but can not be considered in this connection).

It is perfectly improper either to calculate a percentage of growth for arbitrarily chosen periods or for unequal numbers of banks, or by comparing percentages to make the growth of deposits in the German credit banks appear considerably larger than in the savings banks or in the English joint-stock banks.

Thus, for instance, the total deposits of 92 credit banks at the end of 1892, 408,000,000 marks, were taken as 100, and, compared with the total deposits of 118 credit banks at the end of 1907, 997,000,000 marks, an increase of 144 per cent was found. As against this increase the much smaller percentual growth of the same business at the English joint-stock banks between the years 1890 and 1900 was pointed out, the number of which had decreased during that period from 99 to 82 while their deposits had grown from 335,000,000 to 572,000,000 pounds sterling, or only 71 per cent.

It is always easy to afford both to friends and opponents a small satisfaction¹⁹⁶ of this sort by calculating percentages and proceeding in the one case—i. e., of the German deposits—from a low level, and in the other—i. e., of the English deposits—from the high level of £335,000,000 or 7,000,000,000 marks, since the per cent increase in the case of the English joint-stock banks, in view of the high level of their deposits from which the start is made, can, in the nature of things, be but small. It follows that the extent and gravity of the fallacies and

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blunders will differ merely according to the year which is chosen as the base of comparison. An even larger blunder is committed by those who calculate first the aggregate deposits of the savings institutions, credit banks, note banks, and cooperative credit societies, and then arrive at the "conclusion" that the percentual share held by the credit banks in the aggregate is constantly increasing, while that of the remaining institutions is constantly decreasing. This is a graver blunder for the reason that in this case figures of entirely different nature—namely, of deposits in savings banks and those in credit banks and similar institutions—are thrown together and the calculations of percentages are then based on the totals thus obtained.

It is, therefore, not surprising that with such methods, which, however, often lead to important economic and legislative conclusions, startling though arithmetically correct results are obtained, showing a considerable percentual decrease of deposits in savings institutions, while the absolute figures for these deposits show a continuous and almost regular increase to between 14,000,000,000 and 15,000,000,000 marks on December 31, 1908, for the country as a whole, as compared with 2,750,000,000 marks of bank deposits.

By using equally fallacious methods it is quite easy to make the following totally different calculations:

In 1891—i. e., sixteen years ago—the German savings banks had about 5,250,000,000 marks of savings deposits.¹⁹⁷ On December 31, 1906, they held 13,250,000,000 marks. The increase was, therefore, almost threefold. In the same year, 1891, the 143 German credit banks,

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with a capital stock of at least 1,000,000 marks each, had 386,000,000 marks of deposits. On December 31, 1906, these deposits were 2,250,000,000; there was therefore a much larger, almost sixfold, increase.

If, however, instead of 1891 the year 1900 is chosen as a starting point, it is seen that the deposits of the German savings banks amounted then¹⁹⁸ to approximately 9,000,000,000 marks, as against only 997,000,000,¹⁹⁹ that is, less than 1,000,000,000 marks deposited in the German credit banks. As compared with the above given figures for the end of 1906, the savings deposits are seen to have increased by about 4,000,000,000 marks, the deposits in the credit banks by much less—i. e., only by about 1,500,000,000 marks. In other words, different results will be obtained by percentual calculations according as the level used as base of comparison is higher or lower.

(2) *Deposits in foreign countries.*

As compared with the aggregate absolute figures of deposits in the German credit banks of 2,750,000,000 marks on December 31, 1908, and approximately 2,500,000,000 on December 31, 1906, the corresponding aggregate for the English deposit banks (including the Scotch and Irish banks as well as the Bank of England) may be estimated at about 6,250,000,000 marks at the end of 1905. According to Edgar Jaffé²⁰⁰ their current and deposit accounts (*gesamte fremde Gelder*) on that date aggregated 19,000,000,000 marks, while according to the London Economist of May 19, 1906, whose lower data we shall use as a matter of caution, they aggregated only 16,750,000,000 marks. If of this total²⁰¹ two-thirds is allowed for current accounts and only one-third—which

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is too low rather than too high an estimate—for deposit accounts (held against deposit receipts with seven, fourteen, and more days' notice), we arrive at approximately the above total of 6,250,000,000 marks—i. e., an amount equal to the aggregate outsiders' funds (*gesamte fremde Gelder*) held at the end of 1906 by the larger German credit banks (with share capital of at least 1,000,000 marks each).

To these 6,250,000,000 marks of savings accounts should be added for Great Britain (exclusive of Ireland) deposits in the post-office savings banks and in the trustees' savings banks of about £216,500,000,²⁰² equivalent to about 4,500,000,000 marks—making thus a grand total of 10,750,000,000 marks. These latter banks have to invest their available funds in British consols and pay a fixed rate of interest of $2\frac{1}{2}$ per cent.

In the United States²⁰³ the total amount of visible deposits of all kinds, including savings deposits, held by banks and private bankers on or about June 30, 1909, was about \$14,100,000,000, or slightly in excess of 59,000,000,000 marks. Of the total, the note-issuing national banks held \$4,898,500,000 (about 20,500,000,000 marks) while other banks and firms held 9,209,000,000 dollars (about 38,678,000,000 marks). Of this latter total, \$3,713,000,000 (about 15,595,000,000 marks) represented the deposits held by savings banks, \$2,467,000,000 (or about $10\frac{1}{3}$ billion marks) deposits in the state banks, about \$2,836,000,000 (or 11,911,000,000 marks) deposits in the loan and trust companies, and about \$193,000,000 (or 810,600,000 marks) deposits held by private bankers. The national banks are banks of issue; there is, however,

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no central institution to rediscount their bills. A series of obligations²⁰⁴) has been imposed upon the national banks by twelve acts, especially those of April 3, 1864, and of March 3, 1869, viz:

(a) To hold a cash reserve of 25 per cent of their deposits in the reserve cities and of 15 per cent in the other cities.

(b) To publish quarterly statements and balance sheets.

(c) Not to assume obligations in excess of their total liabilities, less bank notes and deposits.

(d) Not to loan to any single person a total amount in excess of one-tenth of their capital stock (a provision which, according to an inquiry made in 1900, about 40 per cent of all national banks circumvented by subdividing accounts, etc.).

(e) To transfer 10 per cent of the dividends to a surplus fund, so long as the latter is below 10 per cent of the capital.

(f) To make five reports each year to the federal comptroller of the currency. The latter, moreover, may examine the banks at any time and enforce the observance of his orders and of the legal provisions under penalty of closing the bank.

The above comparison shows plainly that the volume of the German bank deposits even now is relatively small as compared with that found in England and in the United States. It also seems to be considerably below that held by the French banks.²⁰⁵

(3) *Deposits held by individual Berlin great banks.*

The following figures show the growth of deposits in some of the Berlin great banks which devoted themselves first and most energetically to the deposit business.

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(a) DEUTSCHE BANK.

The amount of deposits (expressed in millions of marks) held by this bank were:

1871.....	8	1881.....	14	1891.....	58	1901.....	214
1872.....	9	1882.....	18	1892.....	62	1902.....	213
1873.....	7	1883.....	22	1893.....	69	1903.....	237
1874.....	11	1884.....	27	1894.....	75	1904.....	286
1875.....	12	1885.....	32	1895.....	85	1905.....	341
1876.....	14	1886.....	30	1896.....	93	1906.....	381
1877.....	10	1887.....	38	1897.....	102	1907.....	476
1878.....	9	1888.....	47	1898.....	122	1908.....	489
1879.....	12	1889.....	47	1899.....	155		
1880.....	13	1890.....	52	1900.....	191		

The number of deposit accounts at the Deutsche Bank rose from 3,867 in 1883 to 21,771 in 1895, the latest year for which the respective figures are available.

It may be seen from the foregoing table, that the deposits of the Deutsche Bank amounted to 8,000,000 marks at the end of the first year after its organization and equaled the amount of its capital in 1894, reaching the total of 489,000,000 marks on December 31, 1908, as against a capital on that date of 200,000,000 marks. The most remarkable feature about the above figures (especially in view of the above mentioned wide extension of the term "deposits") is the almost uninterrupted growth, both absolute and relative, of the deposits as compared with that of the capital.

The number of deposit accounts increased relatively much more than that of other accounts (including the current accounts, which numbered 230,203 at the end of 1908).

The average size of the deposits at the Deutsche Bank has steadily decreased from 4,138 marks in 1883 to 2,570 marks in 1893 (no later data have been published). This goes to prove that the aim of attracting even the smallest

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available funds is being more and more thoroughly attained.

About two-thirds of the total deposits throughout the period have been held by the central office at Berlin.

The number of deposit offices was 74 at the end of 1908, compared with 12 in 1895 and 44 in 1905. The rules regarding the deposit business at the Deutsche Bank are reprinted by Joh. Fr. Schaer.²⁰⁶ The principal points, which in the main are typical for all the large banks, are as follows:

(1) The minimum deposit must be 100 marks.

(2) Each depositor, who does not stipulate a fixed term of repayment, receives an account book in his name, in which are entered all deposits. Each deposit must be accompanied by a deposit blank, filled out by the depositor and handed to the cashier together with the amount deposited.

(3) The account books, which, however, do not contain the amounts withdrawn by the depositor, must be presented each quarter for balancing.

(4) Deposits repayable at a fixed date are made against bank receipts.

In case the amount to be withdrawn is 30,000 marks or over, written notice must be given before 12 o'clock of the preceding business day.

The rates of interest paid on deposit are published by notices at the tellers' windows of the deposit branches and may be changed at any time; this change, however, does not affect rates on amounts deposited for a longer term if the change of the general rate is made prior to the stipulated date of repayment.

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(b) DRESDNER BANK.

The deposits of this bank show the following growth (in millions of marks:)

1875.....	2.8	1884.....	6.4	1893.....	15.7	1901.....	77.5
1876.....	3.2	1885.....	6.6	1894.....	20.6	1902.....	93.2
1877.....	3.0	1886.....	11.4	1895.....	31.1	1903.....	108.2
1878.....	2.9	1887.....	10.4	1896.....	39.18	1904.....	136.7
1879.....	3.6	1888.....	13.8	1897.....	37.4	1905.....	163.5
1880.....	4.0	1889.....	13.1	1898.....	55.2	1906.....	199.0
1881.....	5.7	1890.....	11.5	1899.....	62.9	1907.....	224.8
1882.....	4.8	1891.....	13.7	1900.....	94.5	1908.....	224.5
1883.....	5.1	1892.....	15.3				

(c) DISCONTO-GESELLSCHAFT.

The deposits of this bank show the following growth (in millions of marks):

1871.....	14.8	1881.....	19.8	1891.....	17.2	1900.....	48.0
1872.....	16.8	1882.....	21.0	1892.....	16.17	1901.....	75.0
1873.....	64.8	1883.....	13.2	1893.....	19.7	1902.....	78.8
1874.....	36.5	1884.....	15.2	1894.....	29.8	1903.....	91.0
1875.....	9.2	1885.....	35.2	1895.....	34.1	1904.....	100.0
1876.....	11.3	1886.....	18.13	1896.....	38.3	1905.....	110.0
1877.....	7.5	1887.....	7.8	1897.....	34.0	1906.....	153.4
1878.....	7.2	1888.....	20.2	1898.....	43.8	1907.....	144.3
1879.....	8.0	1889.....	14.7	1899.....	49.3	1908.....	218.5
1880.....	9.7	1890.....	36.5				

It should be noted, however, that in the case of the Disconto-Gesellschaft prior to 1908 deposits included both "creditors on current account" and "deposits repayable upon notice." The above figures, as was pointed out before (p. 70 and note 94), show great variations, inexplicable by the mere change from prosperity to business depression during the respective years. Thus, deposits in 1872 show a total of 16,800,000 marks (exact figures 16,726,163 marks), in the following year the total reaches 64,800,000 (exact figures 64,788,366 marks). In 1874 the total drops to 36,500,000 marks (36,502,613 marks) and in 1875 even to 9,202,000 marks. During the years of business recovery, 1878 to 1880, deposits did not rise above 7,000,000,

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8,000,000, and 9,000,000 marks; in the following years, 1881 to 1888, they are considerably larger, though varying a great deal. The exact figures for the latter period were as follows:

	Marks.		Marks.
1881.....	19,784,613	1885.....	35,256,915
1882.....	20,952,001	1886.....	18,276,965
1883.....	13,216,197	1887.....	7,761,959
1884.....	15,215,781	1888.....	20,295,660

But inasmuch as up to the 1908 report the "daily due credits" were grouped not with "deposits" but with "creditors," it would be correct to include with "deposits" the respective amounts, if these were known for the earlier years.

The growth of deposits during the decade 1901-1908 on the whole shows but little oscillation.

The deposit offices of the Disconto-Gesellschaft in 1908 numbered 11, as compared with 1 in 1895 and 8 in 1905.

(d) DARMSTÄDTER BANK.

The growth of deposits in this bank (in millions of marks) proceeded as follows:

1870.....	16.1	1880.....	6.1	1890.....	10.9	1900.....	43.2
1871.....	22.4	1881.....	18.5	1891.....	11.8	1901.....	46.8
1872.....	12.0	1882.....	20.0	1892.....	4.4	1902.....	67.0
1873.....	27.3	1883.....	21.2	1893.....	10.6	1903.....	72.3
1874.....	16.4	1884.....	20.7	1894 ²⁰⁷	30.2	1904.....	174.5
1875.....	12.8	1885.....	16.5	1895.....	36.2	1905.....	147.8
1876.....	9.1	1886.....	15.2	1896.....	39.7	1906.....	148.1
1877.....	1.9	1887.....	14.1	1897.....	31.4	1907.....	161.5
1878.....	5.6	1888.....	19.1	1898.....	37.1	1908.....	108.8
1879.....	5.7	1889.....	19.7	1899.....	34.9		

(4) *Comparative growth of deposits in all German credit banks and in the Berlin banks.*

The growth of deposits during the last 20 years in all German credit banks with a capital of at least one million

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marks each, numbering at present 158, is shown by the following figures (in millions of marks):

1889... 370.98	1894... 486.39	1899.. 812.96	1904.. 1,565.96
1890... 408.01	1895... 493.26	1900.. 997.32	1905.. 1,839.92
1891... 385.96	1896... 546.42	1901.. 1,035.11	1906.. 2,141.12
1892... 389.86	1897... 604.39	1902.. 1,104.13	1907.. 2,423.69
1893... 377.19	1898... 712.53	1903.. 1,261.25	1908.. 2,745.81

The corresponding aggregate figures (in million marks) for all Berlin banks were:²⁰⁸

1889... 130.99	1894... 163.69	1899... 338.17	1904... 783.42
1890... 138.14	1895... 196.13	1900... 414.64	1905... 883.82
1891... 105.34	1896... 219.44	1901... 447.23	1906... 1,029.62
1892... 103.25	1897... 228.25	1902... 501.22	1907... 1,158.71
1893... 119.90	1898... 330.39	1903... 578.24	1908... 1,246.97

Of the total deposits in the German credit banks about two-thirds constitute deposits in the Berlin great banks. This is due, on the one hand to the lack of zeal in fostering the deposit business shown by the other credit banks as compared with the Berlin banks (which have by far the larger number of deposit offices), and, on the other hand, to the general fact of the concentration of capital in Berlin. The five greatest Berlin banks on December 31, 1908, held the following deposits:

	Marks.
Deutsche Bank.....	489,238,000
Dresdner Bank.....	224,575,875
Disconto-Gesellschaft.....	218,544,301
Darmstädter, Bank.....	108,814,032
Schaffhausen'scher Bankverein.....	72,335,365
Total.....	1,113,507,573

Of these, the Dresdner Bank and next to it the Disconto-Gesellschaft, both of which opened their first deposit offices as late as 1896, come nearest to the Deutsche Bank in the successful cultivation of the deposit business.

Of the total outsiders' funds (*gesamte fremde Kapitalien*) held by the 158 credit banks with a capital of at

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least 1,000,000 marks each, the following percentages are represented by deposits proper:

At the end of—	Per cent.
1905	34.7
1906	33.9
1907	36.5
1908	37.0

The corresponding percentages for the Berlin banks were:

At the end of—	Per cent.
1905	27.5
1906	27.5
1907	31.5
1908	33.7

It should be noted, however, that during this period, in addition to the above mentioned banks, only the Darmstädter Bank was carrying deposit accounts, while the Berliner Handelsgesellschaft, the Mitteldeutsche Kreditbank, the Commerz- und Disconto-Bank, and the Nationalbank für Deutschland had no such accounts.

Of the total deposits reported at the end of 1907 for all banks with a capital of at least 1,000,000 marks each, 47 per cent (as against 39 per cent in 1895) fell to the share of the Berlin banks, and 41 per cent to the share of the Deutsche Bank, the Dresdner Bank, the Disconto Gesellschaft, and the Darmstädter Bank.

Between the years 1895 and 1908 deposits increased relatively much more in the Berlin banks than in the provincial banks, though deposits in the latter constitute a larger per cent share of their total "outsiders' funds" (*fremde Kapitalien*) than in the Berlin banks.²⁰⁹

On the whole it may be said that—

(1) The distribution of dividends by the banks is becoming steadier in proportion as their deposit business develops.

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(2) The floating and issue business is relegated to the rear in proportion as the deposit business comes to the front.

(3) To a large extent it is the credit accorded to commerce and industry by the German credit banks from their own means and their deposits that has caused the development of the productive powers of the commercial and industrial classes. It is this factor, combined with the increased productive power of agriculture, which made possible the remarkable growth of the purchasing power of all classes and callings of the nation.²¹⁰

This fact alone should suffice to keep us from adopting ill-considered "reform" propositions, equally hazy at times both as regards their underlying principles and their future effects.

B. THE OTHER DEBIT-OPERATIONS OF THE CREDIT BANKS.

Of the other debit-operations of the banks the greater part need not be considered in this connection, since the German credit banks do not issue bank notes, nor do they (with the exception of the so-called mixed mortgage banks) issue mortgage bonds, or other bonds (*Schuldverschreibungen*), such as were intended to be issued by the *Crédit Mobilier*.

To some extent, however, the credit operations of the credit banks in the shape of bill rediscounts, bill acceptances, of sales of drafts or in the line of current accounts, or in the form of mortgage and lombard credit, must be treated in the same manner in which these forms of credit are treated when taken by other institutions.

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The details of these operations will be discussed in subsequent parts of the volume. It is, however, proper to state at this place that the Berlin great banks in order to raise cash offer private long-term bills for rediscount at most, and even this rather unwillingly, in foreign markets or to their own clients, but never at the bourse. Ordinarily, however, as will be seen below, money is obtained at the *Seehandlung* (Prussian State Bank) by means of the less conspicuous hypothecation of bills. The paper offered for rediscount to the Reichsbank either consists of short-term private bills, or else of such long-term bills as may shortly fall due.

A very considerable portion of the bill holdings of the Reichsbank is probably made up of the rediscounted bills of the credit banks, particularly about the time of the monthly and quarterly settlements, when the demands upon the banks on the part of the business community are especially heavy.

It is also asserted—though it would be difficult to prove it—that in Germany just as in England, the credit banks resort to large-scale rediscounting operations at the Reichsbank and at other credit banks and banking institutions shortly before the dates when their balance statements are issued, in order to be able to show the largest practicable figures under the heads of cash on hand, giro, and bank credits. It goes without saying that such assets are counterbalanced by corresponding liabilities of the banks in the shape of bill obligations of the rediscounting banks.

There is also but little doubt that in times of money scarcity when German private discount rates went up

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considerably, while money rates in foreign markets were comparatively low, some foreign capital, possibly even in considerable amounts, may have been obtained by the discounting of German bank acceptances. This seems to have taken place on a particularly large scale in 1899 at London and to have occasioned caustic remarks directed against this practice of boarding-out of finance bills²¹¹ "made in Germany," a criticism which was repeated with little or no reason in 1908 regarding the then numerous American bills of like character, a subject which is discussed later on, on page 278.

The practice of credit banks of "boarding out" bills—i. e., buying at home private bills and depositing them for short terms in London or Paris whenever money rates are low abroad and high at home—has nothing in common²¹² with the cases above cited. This practice as a rule partakes of the character of bona fide arbitrage transactions, based upon the differences of interest in the domestic and foreign markets. This is not infrequently done by the great banks, which in that case assume the risk of loss involved in an unfavorable turn of exchange rates, that may occur in the meantime.

A rather different practice is presented by other recorded cases,²¹³ involving efforts of obtaining abroad the lacking operating capital by means of a somewhat hidden and complicated hypothecation of bills, which do not seem to have been always of prime quality. Foreign banking houses, according to preceding agreements, are said to have taken from the German credit banks the "discounted bills indorsed by the latter and permitted themselves to be drawn on or else to have given their checks on Paris

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or London. The foreign house was not expected to dispose of the bills, which were redeemed shortly before maturity, either by means of fresh bills or of short-term bills on Paris or London. The bills were returned bodily, the giro of the German bank was canceled, and the same bills were discounted at the Reichsbank five or ten days before maturity."

It is patent that in such cases the German credit bank runs heavy risks if, during the interval, a financial crisis develops and as a result the renewal of the operation is refused.

Another practice is reported by Ad. Weber.²¹⁴ According to him, credit banks at first, when granting credit to their clients, drew in turn upon the latter to their own order, disposed of the bills accepted by their debtors, and thus procured fresh money for themselves. According to Weber, this practice was quite common in eastern Germany as late as 1901. A similar procedure (in the shape of so-called solo bills—*Solarwechsel*) is reported by von Lumm²¹⁵ to have been quite common in Alsace-Lorraine. It is also stated²¹⁶ by Schär that larger and smaller banking institutions will at times "take from their clients fictitious, i. e., indorsable lombard bills and have them rediscounted upon the additional strength of their indorsement"—a statement which I am not in a position to verify. I judge, however, that none of the great banks were ever guilty of any of the above practices.

Generally speaking, the practice of the mutual drawing of accommodation bills between credit banks may be regarded as very uncommon in Germany, although there has been no lack of assertions that the case of the City of

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Glasgow Bank, in England, was not without its German counterparts. That bank "attempted to hide its enormous deficit, the result of excessive credits granted to a number of export firms, by accepting in increasing amounts drafts of these firms, also by taking over mere accommodation bills drawn by these firms and passing them on for discounting."²¹⁷ Although not exactly in accord with our systematic arrangement, it may not be quite out of place to mention, in connection with the deposit business just discussed, that the credit banks often undertake the management of the financial transactions (*Kassenführung*) of their depositors, by attending to their collections and paying their obligations on their current and check accounts and by representing them in giro, postal-transfer and clearance operations.

Regarding the giro system used by the large industrial and commercial firms, which in Germany is at present concentrated in the Reichsbank, some data were given above (p. 147), where mention was made also of the postal-transfer business, instituted on January 1, 1909. The latter institution fills a serious gap so far as the class of middle-sized and small traders is concerned, but is likely to be used in time to an increasing extent also by private capitalists and public treasuries.

The current-account business of the credit banks with their customers is found discussed in detail below (see Section 2, II, B).

We have but a few remarks to make on the subject of the bank-check business, as the latter does not come properly under the head of credit, but under that of methods of payment (*Zahlungsverkehr*.) Accordingly, it is treated here

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only in so far as, like the "cash keeping" for depositors, it is one of the means by which the banks attract available funds for productive uses, thus bringing about an increasingly large concentration of credit at the banks by dispensing with cash for payment and making it available for the purposes of credit.

This concentration of credit brought about by the check system, and in particular the agitation in its favor carried on during recent years in various ways with the consent and cooperation of the Government, including the passing of the check act, has been vehemently attacked by a recent writer, who takes the view that, by the "artificial fostering of the check and deposit system,"²¹⁸ funds which in his opinion without such fostering would "possibly" (p. 20) or, "surely" (p. 21) have found their way into other channels (on this point see II, A, 2a) are directed to the banks, where they are turned into credit for large-scale industry (p. 19).

Now, in point of fact the agitation for the adoption of the check system had been started long before the passage of the check act, and the recent considerable increase of deposits, on the basis of which alone checks may be issued, likewise antedates the passage of the check act.

The above agitation was fully justified, in view of our downright naïve methods of payment,²¹⁹ and of the crying need of reform in this field, tending to dispense with the use of currency which might thus become available for the purposes of credit. Since this purpose could be attained only very incompletely without the apex of the structure—i. e., the transfer and clearing system—the check act provided for tax-free checks (now again abolished) only in

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case these checks were drawn upon such public or private institutions or concerns which, like banks and banking firms, as a rule participate in the transfer and clearing system, and therefore presented the best guarantee that the real purpose of the check system—the redemption without the use of currency—would actually be attained. As a matter of fact, not only private banks and banking firms, but, as is admitted by Lansburgh (pp. 13-14), likewise public banks, credit associations, and even savings institutions (under certain conditions), were authorized by the check act to honor tax-free checks drawn on them,²²⁰ and surely it can not be said of the savings banks that they, like the cooperative societies, “deal, in the main, only with a definite narrow circle of persons.”

Despite the agitation, the use of checks in Germany is still insignificant,²²¹ even if the estimate of the Statistical Journal of the year 1902 may have been somewhat exaggerated, according to which the liquidation of commercial transactions in Germany required from nine to fifteen times the amount of currency and bank notes that was required in Great Britain.

Notwithstanding the large increase in the use of checks since that year, the general fact noted by the English publication is only too true. It is difficult to give statistical data regarding the extent to which the check system is used in Germany. According to the 1907 report of the Deutsche Bank, the number of checks paid during that year by the Berlin central office and by all its German branches, amounted to over 10,000 per day, while the total amount of these checks was about 5,000,000,000 marks for the year. The material obtained at the beginning of 1909, in answer

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to an inquiry sent out at my request to all the German credit banks by the Central Association of German Banks and Bankers, can be used only in so far as the banks in their replies were able to give comparative data for the years 1900, 1903, and 1907, as well as to indicate separately their check business, and to present distinct figures of their giro business with the Reichsbank, which in the case of most banks is lumped with their cash business. Full information along these lines was furnished by 59 banks only, and the data furnished by even these institutions permit only of the general conclusion that their check business has grown to a considerable extent since 1900, both absolutely and relatively, when compared with the simultaneous growth of their cash business. This conclusion is confirmed by the following three tables, though it would not be quite safe to draw general conclusions from these data, since conditions in Oldenburg and Mecklenburg are somewhat peculiar (see below Part IV, Chapter III, Sec. 3, II B 3).

Mecklenburgische Hypotheken- und Wechselbank (Mecklenburg Mortgage and Note Bank).

	Number of check ac- counts.	Amount to the credit of check depositors.
		<i>Marks.</i>
1900.....	10,792	16,923,718
1901.....	11,801	17,567,432
1902.....	12,400	19,473,030
1903.....	12,826	19,424,624
1904.....	13,445	23,781,097
1905.....	13,943	24,679,997
1906.....	14,519	23,471,032
1907.....	15,189	22,843,721
1908.....	16,571	26,667,365

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Oldenburgische Landesbank (Oldenburg State Bank).

	Amount to the credit of check depositors.	Number of check books issued.	Number of checks paid.
	<i>Marks.</i>		
1900.....	1,242,861	455
1901.....	1,179,101	647	8,939
1902.....	1,785,319	831	15,511
1903.....	2,405,878	1,096	21,016
1904.....	2,390,000	1,325	25,970
1905.....	2,915,098	1,671	36,458
1906.....	3,243,347	1,955	43,066
1907.....	3,954,464	2,326	51,191
1908.....	4,172,598	2,721	71,290

Oldenburgische Spar- und Leihbank (Oldenburg Savings- and Loan Bank).

	Amount of deposits.	Turnover.	Number of checks paid.
	<i>Marks.</i>		
1900.....	1,276,843	19,752,327	17,270
1901.....	1,767,490	24,583,977	18,659
1902.....	1,958,398	31,242,725	22,255
1903.....	2,033,279	35,429,217	26,077
1904.....	1,930,392	36,079,704	27,686
1905.....	2,348,635	45,870,731	27,918
1906.....	2,232,684	46,254,761	29,747
1907.....	2,352,811	48,850,513	32,299
1908.....	2,972,897	²²² 51,097,674	47,319

II. THE CREDIT OPERATIONS OF THE GERMAN CREDIT BANKS (LENDING OF CREDIT).

(A) INTRODUCTION.

(1) Observations on the granting of general bank credit.

In view of the rapid increase of population and the correspondingly rapid development of credit in Germany both during the first and second periods, it is not surprising that, except in a few directions, German banking

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practice has not yet developed definite principles in the granting of bank credit. Generally speaking, the disposition shown toward the banks has been that of captious criticism rather than of friendly appreciation of what has been actually achieved. The critics should not, however, forget that even the oldest German credit banks date back no more than about sixty years, and that the greater part of these banks are not even 40 years old. And yet in this relatively short period of four to six decades our German credit banks have been obliged to occupy in the national economy the place held by the "maid of all work" in the private household. They were called upon to discharge almost simultaneously nearly all the tasks outlined in the introduction to this book, and which devolved upon them as the champions of the energetic and progressive classes in industrial life. Except such tasks as came within the sphere of special banks, such as the note banks, the provincial cooperative land mortgage associations (*Landschaften*), the mortgage banks, or the cooperative societies, the credit banks had to take upon themselves all or nearly all the tasks which in England are apportioned as a rule under a strict division of labor among deposit banks (with a further subdivision between city, west end, and suburban banks), merchant bankers, colonial banks, and even bill and stock brokers. In the internal trade of the nation and in its commercial relations with foreign countries it was incumbent upon them not only to be at their posts, but ever to occupy the outposts, to ward off sudden hostile attacks upon the industrial forces of the nation, and to ensure their safe and uninterrupted progress.

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The failure of the banks, therefore, to develop clear, consistent, and organic principles for the regulation of credit transactions and the lending of bank credit can occasion no surprise, if we bear in mind the breathless, nerve-racking activity of the period and the competition among the numerous credit banks. It has been asserted that the banks are the "directing force of the spirit of industrial enterprise" of the nation. This claim, however, whether made by the friends of the German banks or by its secret or open enemies, is greatly exaggerated. The banks can indeed exert an influence on the extent and the rate of speed of production, though not directly, but only indirectly. They can do so only to the extent that they assist with their credit in the development of production on a large scale, with its greater division of labor, its concentration and decentralization of establishments. In the midst of industrial progress even the banks may not realize that production is too much accelerated. Excessive production does indeed lead to exaggerated demands for and in turn to excessive lending of credit by the banks. But even if the mutual competition of the banks could be disregarded, it would be naïve to suppose that the banks might suddenly decide to refuse credit to their great industrial customers, because they had come to the conclusion that production was excessive and overdone. When evidences of this are present, together with other symptoms that suggest an impending crisis, the banks in the first instance can do no more than communicate these fears and issue warnings to their clientele as a whole. Except under special conditions, the general restriction of credit is not to be expected,

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unless the general industrial situation, or the general condition of the banks, makes this step inevitable, for the sudden restriction of credit would prove ruinous not only to individual establishments, but might under given circumstances bring about a general panic.

In a just appreciation of all the factors at work in our economic development we must not forget that while the banks are the pioneers and the greatest promoters in the accumulation of capital, the growth of capital has in turn been influenced and accelerated by the wonderful inventions made along technical and other lines during recent times.

These considerations are in no way intended to deny the justice of the criticisms repeatedly and emphatically made with reference to the indiscriminate granting of credit. On the contrary, such criticism is beneficial so long as it is not too sweeping and does not reject the whole system on the ground that errors have been made in single cases, or makes the most serious charges against the administration of the "nation's wealth" by the banks.

Nothing would be further from the truth or better calculated to call forth contradiction than to deny that many grave mistakes have been made, not only in the flotation of securities—a branch of banking that has absorbed so much time and energy—but also in those branches which are concerned with the facilitating of payments (*Zahlungsverkehr*) and the granting of credit. I have deemed it my duty to call attention conscientiously to these mistakes in every section of this book. On the other hand, nothing would be more one-sided than the

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failure to recognize the natural causes of these errors. So long as mere human beings are at the head of such enterprises, errors, though sometimes different in character and direction, are bound to be made under any banking system. These can be avoided in part or lessened only gradually, as a result of the experience acquired under the system itself, as affected by local conditions.

I do not regard it, however, as an error in the just-named sense that the German banks, as has been repeatedly charged, have used their resources and their organization in a one-sided and excessive manner in the interests of trade and industry, and too little in the interest of agriculture, a charge that in former times was often brought against the Reichsbank⁽²²³⁾. In an able address on the "Problems of the Money Market"⁽²²⁴⁾ the president of the Prussian Central Bank for Cooperative Societies, Heiligenstadt, has pointed out that "agriculture in Germany was the last great branch of industry to adopt the modern methods of money and credit economy. In consequence it found the instrumentalities and institutions of the money market already firmly shaped. Agriculture, therefore, can not well expect that, even if it were possible, trade and industry, or, in other words, all other business interests, should be subordinated to the special needs of agriculture." In fact, however, such subordination is possible only to a slight degree, and its scope is particularly limited in the case of the Reichsbank. As a note bank, the latter must see to it that its notes, or one large part of its short-time liabilities, and likewise its other short-time liabilities arising from its giro business, should be offset by corresponding credit business (*Activgeschäfte*)—i. e., short-term credit, granted by way of

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discounting paper or making loans on collateral. Now the situation is essentially the same in the case of the credit banks. Agriculture requires long-term credit to conform to the extended period of production involved. Moreover the credit needed is such that the bank can not reimburse itself for it through the subsequent issue of stocks or bonds. On principle, therefore, the credit banks can make agricultural loans only to a limited extent. Not having an adequate knowledge of the basic conditions of agriculture, of the profitableness of such undertakings, or of the trustworthiness of the managers of such enterprises, the banks would find it almost impossible to allow them blank credit.

In agriculture mortgage credit (*Realkredit*) must naturally play the leading part. Here, however, special organizations based on landownership must step in. For a number of years this has been done in an adequate measure by the mortgage associations (*Landschaften*) and similar public institutions, also by the banking institutions and loan banks established by the mortgage associations, the mutual credit societies (numbering about 16,000²²⁵), and the mortgage banks for urban real estate on the one hand, and in Prussia the State Central Bank for Cooperative Societies on the other. The credit based on mortgages and other real estate security which has been extended to German landowners must be estimated at present at least at 40,000,000,000 marks (\$10,000,000,000).

The German credit banks have participated, both directly²²⁶ and indirectly, in extending such credit by taking part in the establishment of mortgage banks, making temporary loans on personal security to agriculturists for

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a more or less limited period, to be repaid in fall or winter,²²⁷ thus providing for the needs of planting and harvesting, or for the purchase of lean cattle and the acquisition of equipment and raw material for industries subsidiary to farming. This is particularly true of the provincial banks and notably of the very small banks, which thus seriously impaired the liquidity of their assets. It may be said that these operations fall essentially within the scope of the local banks, as these are in a better position to judge of the trustworthiness of borrowers on personal security, and to determine the probability of repayment of such loans. Nevertheless it has been demonstrated that "every year, during the season when young and lean cattle are purchased, many millions of marks are placed at the disposal of the trade by the Berlin banks, through the intervention of the local banks."²²⁸

German credit banks have hitherto done little for the craftsmen and the small manufacturers and tradesmen, except when the banks have been closely connected with the cooperative credit societies as in the case of the Dresdner Bank. The reason for this lies in the fact that on the one hand unsecured credit (*Blankocredit*) is naturally out of the question in most of these instances, and on the other hand no proper security can be furnished for personal credit (*Personalcredit*) which would moreover have to be in most cases long-time credit. Moreover German craftsmen, small business men, and petty traders have been reluctant to open bank accounts. Unable to maintain adequate balances, these classes are unwilling to subject themselves to what they presume would be burdensome conditions. Moreover as checks have hitherto

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been used but to a small extent and long book credit is customary in their business, the aid of the banks in making and receiving payments was not thought indispensable.

As things stand, there is still much to be done through cooperative credit organizations in which the banks can help a good deal. The postal transfer and check system inaugurated January 1, 1909, will prove particularly beneficial in this connection, as it will provide the craftsmen and small business men with a substitute for bank accounts, which few of them now have. It will induce them to accumulate with the post-office for use in making payments not only cash immediately needed for this purpose, but also such sums as may be required for that purpose in the more distant future. This will, however, come about only gradually owing to the absence of any provision for paying interest on balances kept on deposit with the post-office department. This is unfortunate, for it will retard the adoption of the new system. There is, however, one good feature in the nonpayment of interest, in that it will serve as an inducement to the depositor to use his deposits in excess of the irreducible minimum of 100 marks required, in paying off his debts at the earliest possible date. This would be a good beginning in the direction of shortening among craftsmen and small business men the period for making payments, a highly desirable reform, heretofore often attempted in vain.

The Reichsbank has now joined in the postal transfer system, and under treaties to be concluded both foreign private institutions and postal savings banks (see p. 147) are expected gradually to join in the system. This would lead to the happy result of bringing about the organic

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union which has heretofore been almost completely wanting between the giro (transfer) business of the Reichsbank, ministering chiefly to the needs of the large industrial and commercial interests, and the postal transfer system, which, it is hoped, will meet in a large measure the needs of the craftsman and small business man.

In concluding these general introductory remarks I wish to call attention to the following: I have repeatedly emphasized the fact that the mighty rush in the development of our entire industrial life and of our system of bank credit was the absolutely inevitable consequence of the rapid increase of population. We must not, however, forget the point on which Adolph Wagner has often insisted, namely, that this growth of population was not only a cause but also an effect of the excessively rapid growth of our general industrial and credit systems, and that for this as well as other reasons, a less rapid progress would be highly desirable. On account of the natural causes pointed out above (p. 89) I have no doubt that this rate of growth in population will not prove continuous. In the same way, and from equally natural economic causes, there will undoubtedly come about a slackening in the pace of general industrial development, and with it in the expansion of our credit system, and the concentration of industry and banking. We are already beginning to feel this. Here, too, flood tide will of necessity be followed by ebb.

This, however, absolves no one from the duty of helping to build up and maintain strong dams while the flood is rising, so far as it is possible and practicable to do so, in order to keep the turbulent waters from going beyond all bounds and inflicting irreparable damage. However,

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these dams must be erected at the proper points, and built by experts possessed of the requisite theoretical knowledge and adequate practical experience. These dams should do no more than keep the river in its natural bed and unless the conditions are exceptional and the reasons for a different procedure compelling, the dams should not be so constructed as to force the river to seek a new channel and in so doing destroy flourishing fields.

I also wish to refute another view which has found frequent expression of late, and which was presented also before the Bank Inquiry Commission. It is claimed that as a result of their connections with the banks and the system of bank credit, private concerns have to an increasing extent abandoned the policy of investing their reserves, as formerly, in German Government securities. These reserves, it is contended, have been pressed by the banks into the service of German trade and industry²²⁹—that is to say, have been put into channels which these funds “would not have chosen of their own accord.” The official appendices to the report on the Imperial financial reform bill of 1908²³⁰ have effectually removed every ground for such assertion, particularly as regards recent years. They demonstrate on the one hand that the German investing public have displayed an extraordinary and increasing willingness and power to purchase domestic securities offering safe investment and a steady, though relatively low, rate of interest, and on the other hand that both public and private institutions have absorbed but a “relatively small” part of public issues, at least as compared with similar institutions abroad.

It is true that among these “domestic securities” there are included municipal loans and mortgage bonds, issued

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by German public and private institutions. Bearing in mind the considerable issues of securities by the Empire and the federal states, and the fact that comparatively little of this is in the possession of state or private institutions in Germany and foreign countries,²³¹ there can be no doubt that by far the greater part of the Imperial loans, and of the securities issued by the federated states is in the hands of the German public. The proportion so held, it appears, has not declined in the past decade; on the contrary, it has increased, and the increase has more than kept pace with the growth of wealth in the country.

(2) Observations on the granting of industrial credit in particular.

In the foregoing it has been pointed out that one reason for the failure of the credit banks to develop in this period firm and consistent principles to govern industrial credit lay in the fact that even now part of these banks date back only six decades, the rest only four decades, and that in this period they were called upon to discharge simultaneously a multiplicity of tasks. Another reason lies in the fact that the German credit banks have developed very differently, each in its own way and along special lines.²³² In this there are advantages as well as disadvantages. A further reason is, that German industry, though much older, did not begin its great expansion before the second period.

German industry had still to learn slowly and gradually the fundamental principles governing the taking of credit—as to kind, amount, and the right time—in the same way as the banks had to evolve the fundamental principles

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applying to the granting of credit. It can not be doubted, therefore, that through ignorance of correct principles, or an overestimate of the duration of a period of prosperity or as the result of a certain amount of megalomania or of competition, sins were committed on both sides, in borrowing as well as in lending. It can be demonstrated without much difficulty that in many instances industrial ventures took too much long-term credit from the banks, or took it at the wrong time, to put into improvements, extensions, or new construction, sometimes without stating these to be the purpose of the loans, and that the banks often accorded such credit to industrial ventures in too large amounts and at inopportune times, sometimes even after symptoms of an impending crisis were apparent. In a number of instances, and particularly before the panic of 1901, it can be demonstrated that some banks had offered their credit unsolicited to industrial undertakings, or "thrust" it upon them,²³³ or at least made it so easy to obtain that the existing mania, great as it was, for new construction and reconstruction, was further intensified. It should not, however, be forgotten that on the other hand at certain times the opposite charge has been made against the German credit banks that they were tying up their resources in stock-market speculation. "One of the worst results of the present situation," says Eberstadt (*Der Deutsche Kapitalmarkt*, Berlin, 1901, p. 115), "is that industry finds 'the tables all taken' and that the banks are positively in no position to furnish adequate credit for industrial needs."

Finally it has undoubtedly often happened, as we shall explain more fully later, that German credit banks have

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lent their credit to industrial concerns according to the usual principles—i. e., by granting short-term credit to industry in the same way as to commerce, a kind of credit well enough suited to commerce but as a rule entirely unsuited and too costly for industrial needs. Lastly, in consequence of the excessive decentralization of German banking, the banks in granting their credit have at times disregarded the principle of distributing the risk, giving too much credit to one industry, or one branch of industry, or even a single establishment. The Leipziger Bank went under because, with a capital of 48,000,000 marks, it had allowed loans to the extent of 93,000,000 marks to the *Trebertrocknungsgesellschaft* (company for the utilization of desiccated lees).

The Dresdener Kreditanstalt für Handel und Industrie failed because it had extended too much credit to the *Kummerngesellschaft*. Aside from these mistakes, however, the truth is that the capital available for commercial and industrial enterprises in Germany was not equal to the demand and capacity for industrial expansion existing for the most part independently of any stimulation by the banks. To this fact more than any other are to be attributed all the crises that have taken place. Had not the banks accumulated the available capital by accepting deposits, and made it serviceable for productive purposes, it is a question whether this maladjustment would not have been far greater, the results much worse, and the crises far more severe.

If the reproaches cast on German banks would restrict themselves to the formulation of the charges just mentioned, every objective critic of the German banking

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system might readily admit their justice, the more so as it is scarcely imaginable that these or similar mistakes could have been avoided in any other banking system, where banks have had an equally short existence.²³⁴ The injustice lies in the exaggeration which has unfortunately gone to great extremes and taken peculiar forms. This is particularly unfortunate for the reason that the criticism is rarely accompanied by any proposals for reform, and still more rarely with any practicable proposals. In both directions the climax is reached in a work bearing the somewhat sensational title "The management of the nation's wealth."²³⁵ I can not ignore this work, because the author's views have been highly appreciated by those who are opposed on principle to the German banking system and who have used the author's arguments as grist for their own mills. It may be stated that the author was himself a bank official, though not indeed one of the bank directors who are treated with such scant indulgence in the above work and in his other work, entitled "The German Banking System."²³⁶ That which is correct or partially correct in the book had been said before in a more thorough and better way by Heiligenstadt and Bernhardt in the "Plutus" and elsewhere—thus, for example, the statement that the banks have been too ready or too generous in granting credit to industry and that thereby they have increased the speed and extent of the process of Germany's "industrialization"—a point that obviously can not easily be proven.²³⁷

This is moreover expounded with endless repetition, and of course with the usual embellishments that the control of the "nation's wealth," the utilization of the