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Volume Title: Business Finance and Banking

Volume Author/Editor: Neil H. Jacoby and Raymond J. Saulnier

Volume Publisher: NBER

Volume ISBN: 0-870-14137-6

Volume URL: <http://www.nber.org/books/jaco47-1>

Publication Date: 1947

Chapter Title: Changes in the Techniques of Supplying Business Credit During the Twentieth Century

Chapter Author: Neil H. Jacoby, Raymond J. Saulnier

Chapter URL: <http://www.nber.org/chapters/c4686>

Chapter pages in book: (p. 131 - 151)

Chapter 5

CHANGES IN THE TECHNIQUES OF SUPPLYING BUSINESS CREDIT DURING THE TWENTIETH CENTURY

THE FORTY YEARS PRECEDING World War II witnessed a number of noteworthy shifts in American business credit technology. These changes can best be understood by first gaining an understanding of the ways in which short-term and long-term credit operations were conducted around 1900.

SHORT-TERM BUSINESS CREDIT TECHNIQUE, 1900¹

At the opening of the present century commercial banks were the predominant financial institutions supplying short-term credit to American businesses. Note brokers and commercial paper houses performed the function of middlemen in distributing among the banks the promissory notes of a limited number of medium-sized concerns, but they were satellites of the banks rather than competitors in the extension of short-term credit. Trade credit procured from business suppliers was also an important medium of short-term business financing. Because the processes of transportation and communication were slower at that time than at present, the terms of trade credit were somewhat longer and the cost somewhat higher, measured by discounts from cash prices.²

Commercial banking relationships with business around 1900 generally conformed to what may be termed the "classical" theory, which had evolved from British banking experience during the

¹ This section is based both on a review of the literature relating to banking and business credit practices around 1900, and on interviews with a number of individuals whose personal experiences as loan officers extend back to that time.

² Detailed information on trade credit around 1900 is lacking, but a reasonable assumption is that its nature and uses at that time reflected gradual developments after 1860, a period described by Roy A. Foulke in *The Sinews of American Commerce* (Dun & Bradstreet, Inc., 1941) pp. 154-57.

nineteenth century. Briefly, this theory held that bank credit to business should take the form of short-term advances to finance the production, storage, or movement of goods, the ultimate sale of which would provide funds for liquidating the loans. The majority of loans of American banks ran for 30, 60, or 90 days, although many portfolios contained obligations maturing in nine months or one year; the average maturity of outstanding business loans has been put at 60 days. The notes were usually given under an agreed upon "line of credit," arranged each year between banker and businessman, and they were frequently renewed if the need continued.

The actual uses to which businesses put the advances were significantly different from those sanctioned by "classical" theory. Short-term bank credit was used to a large extent for meeting enduring needs for working capital or for financing the acquisition of fixed assets, as well as for meeting temporary bulges in current assets. It was customary for each borrower to "clean up" all outstanding indebtedness annually, as a test of ability to achieve independence of outside sources of funds. In many instances this condition was attained by temporarily borrowing from some other lender, which merely proved the ability of the borrower to obtain bank credit from more than one source. Commercial loans would never have become an important asset of the American banking system had they been limited to genuine self-liquidating advances.

American short-term banking credits around 1900 were ordinarily based upon single-name promissory notes. In contrast, British commercial banking usually involved the discounting of two-name trade bills, drawn by the seller upon the purchaser of goods, presented to the buyer (either directly or through his bank) for his acceptance, and then discounted by the seller at his bank in order to place himself in funds for further operations. Because it tied credit extension to a particular business transaction, the trade acceptance as the legal basis for bank credit was more likely to lead to results consistent with classical commercial banking than was the promissory note.

The primary reason for the use of single-name promissory notes in American banking was the vast size and rapid development of the country. Bankers could readily learn the facts necessary to appraise the credit standing of a limited number of large wholesalers and

manufacturers, but they found it difficult to do so for a vast number of small retailers. Consequently, the name of the vending business on the credit instrument was considered sufficient, while the name of the purchasing business was believed to add little, if any, security.

In addition, business operations were extremely profitable and vendors had alternative employments for their funds which were very remunerative. Hence they were willing to offer large cash discounts for prompt payment of accounts or, what amounts to the same thing, they were able to include in the prices of their goods relatively high charges for banking accommodation. To the extent that sales were financed by extensions of trade credit, sellers were likely to borrow from banks on their own single-name promissory notes. In cases where buyers paid cash and took trade discounts, the buyers often financed their purchases by borrowing on their own single-name notes. In either case, in contrast with the trade acceptance, bank credit was injected into the commercial process on the promise of one obligor to make repayment, and without tying the credit to a particular business transaction.

The narrow use of the trade acceptance in the United States at the turn of the century was due partly to the nation's marketing structure. Around 1850 the custom was for retail merchants in the interior to make one or two journeys annually to a wholesale distribution center to purchase in large lots their requirements of merchandise, for which they paid with one or a series of drafts drawn upon them by the vendor. By the beginning of the century wholesalers and jobbers had developed corps of traveling salesmen who called upon their retail customers and took orders for goods. The transactions were relatively small in amount, and buying for cash or on open book account was far more convenient than using the more cumbersome device of the trade acceptance. The trade acceptance was inconvenient since it required as a minimum that the vendor send the draft to the purchaser and wait for its return before taking it to his bank for discount. In many cases this process was complicated by the interposition of the respective banks of vendor and purchaser in the presentation of the draft for acceptance and in subsequent collection. In fact, these disadvantages were so acute that after 1900 they brought about a decline in the use of the trade bill in England and displacement by the bank overdraft, which is

the British counterpart of the American commercial loan on a promissory note.

The granting and renewal of short-term unsecured bank loans around 1900 was ordinarily a highly informal process. The banker relied heavily upon his personal knowledge of the principals of a borrowing concern, and there was an absence of elaborate credit information or analysis of financial statements. Business concerns tended to be smaller than at present, unincorporated enterprises were relatively more important, and ownership was more closely identified with management — all of which made for a more personal credit relationship. Credit departments and credit files were just beginning to appear in the larger metropolitan banks.

Commercial banks also injected credit into business enterprises through collateral loans and real estate mortgage loans, although to a minor extent. The principal forms of collateral security were stocks and bonds, bills of lading, warehouse receipts issued against the deposit of staple commodities in public warehouses, and accounts receivable. The loans were generally repayable either on demand or within thirty days to six months, and they differed from discounts of unsecured customers' notes in that the full face amount of the note was advanced to the borrower, interest being added to the principal at time of repayment. They were an important method of financing traders and speculators in the basic agricultural commodities. Loans secured by mortgages on real estate were not used widely as a normal and accepted basis for business credit; they were taken generally to strengthen the position of a loan otherwise secured or as a device for dealing with borrowers in distressed conditions. The National Bank Act severely restricted the volume of such loans, which were frowned upon by orthodox bankers on the ground that they did not rest upon a foundation of "saleable merchandise or collectible debt."

LONG-TERM BUSINESS CREDIT TECHNIQUE, 1900

The long-term business credit market in the United States at the turn of the present century was much more limited than the short-term market, both in size and in the range of businesses served. Electric utility, manufacturing, and trading corporations were only beginning to become important issuers of long-term bonds and notes.

Railroad, telegraph, and traction companies dominated the corporate bond market. Long-term loans secured by real estate mortgages were available from local capitalists, insurance companies, and savings institutions, but not to an important degree from commercial banks. Commercial banks extended long-term business credit through their purchases in the open market of corporate bonds, notes, and debentures, and through their participation in security underwriting. However, their outstanding short-term business credits around 1900 were probably five times greater than their long-term credits.⁸

As members of banking groups and syndicates, the larger commercial banks purchased new issues of debt securities directly from business corporations and distributed those issues to the public. Investment banks, insurance companies, and wealthy individuals also participated in the syndicates; and banks and insurance companies frequently took for their own investment accounts part or all of their respective participations in such groups. Britain and Western Europe still were important sources of investment funds.

Because of the concentration of domestic savings among a relatively small investing class, the distribution of new issues was much narrower than it became later. Since surpluses of individual savings tended to be largest in the New England and Atlantic Seaboard States, the eastern banks were the principal participants in long-term credit operations around 1900, although such centers as Cleveland, Chicago, and St. Louis were becoming important. Commercial banks participated in purchase groups and syndicates initially through their bond departments and later through the security affiliates which they organized. Frequently, they acted as the originating banker and syndicate manager.

The techniques of appraising long-term business credit were much less formal than they came to be in the twenties and after the advent of federal regulation under the Securities Act of 1933. The use of independent auditors, engineers, or other outside experts was seldom resorted to, and industrial surveys and analyses of balance

⁸ In 1900 the 10,382 reporting banks of the United States held \$1,963 million of bonds other than federal obligations, while their loan portfolios were valued at \$5,658 million. Because a considerable portion of bond holdings represented municipal and other nonbusiness credits, it is safe to say that the outstanding long-term business credits of banks were no more than one-fifth of the short-term loans. *Annual Report of the Comptroller of the Currency*, 1900, Vol. I, p. xxxix.

sheet, profit-and-loss, and other financial statements were less intensive than in later years. The prospectuses made available to potential purchasers of a new issue were amazingly brief, when judged by standards of the 1930's after the establishment of the Securities and Exchange Commission. The name and reputation of the banking house sponsoring or selling a new issue were regarded by the public as important evidence of the worth of the security.

FORCES SHAPING CHANGES IN TECHNIQUES, 1900-1940

Broadly speaking, the underlying forces that shaped the demand for business credit during the period 1900-1940, and which called forth the alterations in the institutional structure of credit supply noted in Chapter 4, also explain the changes in the techniques of business lending. These underlying forces, which will be treated in detail in Chapter 6, were rapid growth in the dimensions and complexity of the American economy, rising importance of fixed capital instruments in the productive process, enlarged use of consumer durable goods, instability in business activity, expansion of government as an agency of capital formation, and a tendency toward lower interest rates after 1930. While these factors were of basic importance, certain other forces influenced more directly the credit decisions of the loan officer of a commercial financing institution — such forces as growth in the corporate form of business organization, development of business accounting, lengthening of the average term of business credit, and emergence of “mass financing” methods in consumer lending.

The increase in the relative importance of the corporation as a form of business organization is indicated by a sample drawn from annual issues of the *Reference Book of Dun & Bradstreet, Inc.* Five percent of the total number of enterprises in 1900 were corporations, 11 percent in 1920, and 12 percent in 1940, with corporations being especially frequent in manufacturing, wholesaling, and mining industries. Among manufacturing industries, corporations accounted for 65 percent of all business transactions conducted in 1899 and for 93 percent in 1939. In trade, 16 percent of the net worth of all concerns with net worth under \$1 million was owned by corporations in 1900, whereas 40 percent was so owned in 1940.

The significance to the business credit market of the increased im-

portance of the corporation lay in the fact that incorporation limited the risks of ownership and increased those of creditorship, and that it facilitated the separation of ownership from management in business enterprise. Moreover, the growth of the corporate holding company and tangled corporate interrelationships complicated the task of credit appraisal. More elaborate appraisals of creditworthiness were called for. Banks were virtually compelled to formalize their methods of collecting and filing credit information, and to adopt standard procedures of credit analysis. In many cases these functions became so important that separate credit departments were created within bank organizations. A few such departments, mainly in the case of large banks, came into existence after the turn of the twentieth century, but they did not become numerous until after the establishment of the Federal Reserve System in 1913. By 1940 most medium-sized and large banks had specialized credit departments.

The enlargement and elaboration of business accounting records during the present century made more readily accessible to lending institutions, at relatively short intervals of time, detailed information about the operations and financial positions of businesses, and thus made it possible for lenders to advance credit by methods impracticable in earlier times. The increase in volume and quality of business records occurred for a number of reasons. One was the growth in size and breadth of ownership of business concerns and in the separation of ownership from management, which made necessary more precise information, both as an aid to management and as a method of appraising the effectiveness of management. Another cause was the passage of the Federal Reserve Act in 1913, which prescribed that banks had to maintain credit files on customers whose acceptances were presented to Federal Reserve banks for rediscount. Even more important was the stimulus of heavier taxation and more comprehensive governmental regulation of businesses; in this connection the emergence of the federal tax on corporate net income in 1913 was especially significant.

The increase in long-term business credit during the twentieth century also influenced credit technology. Commercial banks expanded their open market purchases of corporate bonds and notes, particularly after World War I, and the larger banks intensified their underwritings and distributions of corporate securities through

affiliated corporations. One of the reasons why banks desired growing portfolios of marketable corporate securities, particularly during the 1920's, was that they were making an effort to maintain or increase earnings in the face of increased deposits and relatively declining commercial loans. This adaptation was encouraged by the theory that bond portfolios provided commercial banks with "secondary reserves" — that is, with liquidity additional to that afforded by the "primary reserves" of cash maintained in a bank's own vault or in the central bank.

Closely related to these developments was the expansion during the 1920's of bank lending on stock and bond collateral and on real estate mortgages, which gave impetus to the formulation of long-term credit standards and methods. As a result, personnel skilled in the extension of long-term credit became essential in commercial banking. The organization of securities or investment departments of the larger banks dates from this period. In many cases the personnel of these departments later were used in the extension of term loans and in the purchase of private placements of corporate securities.

The emergence of consumer instalment sales financing during the 1920's and its adoption by commercial banks in the 1930's caused banks to learn those special techniques of loan extension and collection which may aptly be termed "mass financing." Banks tended to emulate the credit methods previously worked out by the cash loan and sales financing agencies, whose success in the consumer sales financing field unquestionably led banks to enter the producer equipment financing field and the accounts receivable business, both of which involved use of a similar technique. In fact, many banks assigned the administration of these new types of business loans to the instalment financing departments which they had previously established.

At the beginning of the present century an obvious schism between theory and practice existed in bank credit relationships with business enterprises. Short-term credit forms were used in connection with the advance of funds performing long-term functions in borrowing concerns. But while orthodox theory held that only the trade acceptance was an appropriate commercial banking asset, banks did, in fact, hold somewhat less than one-half of their earning assets in 1900 in the form of business loans (excluding agricultural

and real estate loans) and business securities. After 1900 sanction was increasingly given to the use of bank funds in other kinds of assets. This transition in viewpoint was due in part to the greater prominence given to "secondary reserves." The expansion, after 1914, of savings and time deposits also accentuated the development.

While commercial banking theory was being liberalized, new techniques of financing business were being developed. After the 1920's, it was gradually discovered that extension of credit is a technology which, like other technologies, is subject to adaptation, innovation, invention, and research. It is not an overstatement to say that in the two decades from 1920 to 1940 debt financing went through a technical revolution as far-reaching in its significance as technical advances in industrial production, transportation, or agriculture. The roots of this change may be traced back many years, but the great deflation of the 1930's, the subsequent reconstruction and revitalization of the financial system, and the drastic fall in interest rates all accelerated its progress. The essence of this technical revolution in debt financing consisted of the development of more effective methods of meeting the needs of business for short- and medium-term credit, particularly the needs of small and medium-sized enterprises. Among these methods were four of special significance, namely, the term loan, the accounts receivable loan, the loan secured by field warehouse receipts, and the loan financing the sale of commercial and industrial equipment. Each emerged as a commercial bank activity in the early thirties, and each represented an adaptation of commercial banking to changed economic conditions.

TERM LOANS AND PRIVATE PLACEMENTS OF SECURITIES⁴

A term loan is a credit extended directly by a lending agency to a business concern, and part of it is legally repayable after one year. A private placement of debt securities is a term loan, except that the transaction takes the technical form of sale and purchase of

⁴ This section is based principally upon the materials in Neil H. Jacoby and Raymond J. Saulnier, *Term Lending to Business* (National Bureau of Economic Research, Financial Research Program, 1942), which traces the historical development of the term loan.

negotiable securities. Both credit forms by-pass the public money markets and are not readily shiftable by the lending institution through sale.

Banks gradually have developed specialized credit standards and methods of appraising and limiting the risks in term lending. Because the appropriate credit appraisal methods are closely akin to those used in investment banking, term lending has caused many banks to consolidate the functions of their investment and credit departments. The comparatively large size of term loans and their lack of marketability have meant that lenders cannot rely to any considerable extent upon diversification to limit risks, nor can they usually look to a public market for a continuing appraisal of the borrowers' credit. Banks therefore have attempted to compensate for this by the care with which they scrutinize each loan application, the foresight with which they frame the loan agreement, and the diligence with which they "police" the loan.

The preliminary investigation of the applicant for a term loan of substantial size is necessarily quite thorough. The prospective borrower is required to furnish audited balance sheets, operating statements, budgets when available, and other financial information running over a number of years preceding the loan application, and the physical condition of the applicant's properties often is surveyed by engineers. All data are analyzed to determine whether the bank's financial standards can be met, and to estimate the prospective annual earning power of the enterprise, especially the amount of cash that can be "thrown off" each year to amortize the loan. Repayment provisions — even the maximum term of the loan itself — are generally geared to the cash "throw-off" ability. The secular trend of the industry of which the applicant for a loan is a member, the competitive strength of the applicant in that industry, and the competence of its management are all carefully reviewed.⁵

Many term loans are extended under so-called "revolving credit" arrangements, whereby the borrowing business acquires the right to borrow a specified maximum amount for a stated term of years, but the actual indebtedness at any time is represented by notes

⁵ See *Airline Finance*, a brochure prepared by Bankers Trust Company, Mutual Life Insurance Company of New York, The Chase National Bank of the City of New York, and New York Trust Company (New York, 1945) and dealing with the commercial air transportation industry, for an example of the technique of industrial and company analysis utilized by term lending institutions.

of shorter term which may or may not represent that maximum. As these notes mature, they may be replaced by other short-term obligations, so that the credit "revolves" in the sense of being represented by a series of legal instruments. At the same time, the commercial bank is committed to advance the maximum amount, and the borrower ordinarily pays a commitment fee in return for this "call" on the lending capacity of the bank.

Nearly every bank term loan is accompanied by an agreement under which the debtor covenants to conduct his business in prescribed ways during the term of the loan.⁶ While "tailor made" to fit the circumstances of the borrower, the agreement commonly contains restrictions on the borrower's total indebtedness, requires the borrower to maintain certain financial ratios and to furnish financial statements periodically to the lender, provides for acceleration of the entire debt under certain circumstances, specifies any collateral security that is required, and may subject capital expenditures to the review and approval of the lender. Term loan agreements are premised on conditions obtaining when the loans are made, but provision may be made for alterations when necessary in response to unforeseen changes in these underlying conditions.

The special virtue of the term loan as a legal basis for business credit, when contrasted with the traditional short-term note, is that it embodies the idea of "planned credit." The process of making a term loan requires borrower and lender to consider the problem of repayment beforehand, and to adopt a realistic schedule of debt amortization that is consistent with the operations of a business. The factors that bear upon the continued use of the term loan as a device for financing business are treated at length in Chapter 8.

From the time of its inception, the term loan has been a method of injecting long-term bank credit directly into medium-sized and large businesses that were nevertheless smaller than those whose bonds and notes were sold publicly. At the outbreak of World War II, the bulk of term-loan credit had been extended to large concerns, although commercial banks had shown a definite shift between 1936 and 1941 toward the making of term loans to medium-sized and small businesses. By mid-1941 more than 55.3 percent of

⁶ See Association of Reserve City Bankers, *Term Lending by Commercial Banks* (Chicago, 1945) pp. 11-15, for a draft of a term loan agreement containing typical terms and conditions.

the number of term loans by commercial banks were to concerns with assets of less than \$5 million. In meeting the long-term credit demands of promising small businesses, term loans can be a most useful device, because alternative financing methods have not been readily available to such concerns.

ACCOUNTS RECEIVABLE FINANCING⁷

Receivables financing falls into two well-defined categories, factoring and non-notification financing. Factoring involves purchase by the factor (lender) of a concern's accounts receivable, generally *without recourse* on the vendor for any credit loss on the accounts, and *with notice* given to the trade customers that their accounts have been purchased.⁸ "Non-notification financing" is conducted mainly by commercial finance companies and commercial banks. It entails the purchase of receivables, or their assignment as collateral security for loans, *without notice* to the trade customer and *with recourse* by the lender on the borrowing business for payment of any of its assigned accounts that become overdue. Because banks do not generally engage in factoring operations, the following discussion is confined to financing of the "non-notification" type.

Accounts receivable financing presupposes a continuing arrangement with a rapid turnover of trade receivables, and a formal contract is usually drawn between banker and business borrower. Under the contract, the banker agrees to advance cash to the borrower upon the security of an assignment of acceptable accounts receivable, whose value as collateral usually ranges from 70 percent to 90 percent of their face value, depending upon their quality. The bank has recourse to the borrower if the borrower's trade customers fail to pay their accounts. The statutes of certain states require that a debtor whose account is assigned must be notified before the assignment can become valid. As this is a condition which is often not satisfactory to the borrower, accounts receivable financing is not of large proportions in these states. In states where notification is not a legal

⁷ See Raymond J. Saulnier and Neil H. Jacoby, *Accounts Receivable Financing* (National Bureau of Economic Research, Financial Research Program, 1943), for a more complete discussion of this type of financing.

⁸ For a brief discussion of the historical development of factoring companies, see Chapter 4, pp. 120-21.

requirement, the bank usually reserves the right to notify if it becomes necessary to do so in order to protect the loan.⁹

Because the average invoice handled by the lending institution is small, operations are routinized in the interests of economy. While the procedure is by no means uniform, the mechanics necessarily involve much detail. Standard practice requires the borrower to indicate on each ledger sheet whether the account has been pledged as security for a loan. The bank customarily receives copies of all invoices representing assigned accounts, and the borrower stamps on each copy retained by him an assignment of the account. Copies of bills of lading or other documents evidencing shipment of the merchandise covered by assigned invoices are sometimes required by the banker. A usual requirement is that the borrower turn over to the bank daily the original checks received by him in payment of assigned accounts. Occasional audits of the borrower's records are made or arranged for by the lending agency. Because the outstanding loan balance fluctuates constantly, as advances are made against new assigned accounts and collections are received from matured accounts, the loans require constant supervision. Although many commercial banks have followed less formal methods of lending against assigned accounts receivable than are indicated here, in some instances eliminating certain of the precautionary measures, these banks have attempted to limit their clientele to borrowers for whom the usual precautions may be less necessary.

As might be expected, the cost to borrowers of accounts receivable credit is higher than that for unsecured loans or for most types of secured loans. The range of charges is wide, depending upon the financial strength of the borrowing business and of its customers

⁹ A 1943 decision of the United States Supreme Court held that reference to state laws determines whether an assignment of receivables taken without notice to the trade debtors is a voidable preference if bankruptcy occurs within four months of assignment. This decision has led to a re-examination of state statutes on notification, as a result of which it may be expected that both state laws and the status of the business will be clarified. See United States Supreme Court decision, March 8, 1943, in case of *Corn Exchange National Bank and Trust Company, Philadelphia, and Edward C. Deardon, Sr., Petitioners, vs. Norman Klauder, Trustee of Quaker City Sheet Metal Co., Bankrupt*. State laws differ with respect to their requirements for notification. Some require that the books of the debtor be marked to show the fact of assignment of the account; some require the assignee to file notice of assignment with a state officer; some require that the assignee notify the trade debtors of the assignment; and some states are silent on the subject.

whose accounts are assigned, and upon the extent to which the lender must utilize elaborate procedures for controlling risks.¹⁰

Accounts receivable loans finance mainly businesses of small and medium size. The proportion of equity to debt among those businesses using accounts receivable loans is smaller than in other businesses of similar size. A low ratio of equity to debt in a manufacturing or trading business usually signifies either rapid growth — causing inventory and other working capital needs to outstrip the ability of the business to finance them from accumulated earnings — or past losses that have cut away part of the owners' equity.

Two factors are crucial in determining the use of accounts receivable loans in the financing of American business: the volume of business operations and the availability of short-term unsecured credit, long-term credit, and equity funds. If the volume of business is contracting or is at a low level, and business profits are unfavorable, outside short-term funds may be unavailable on an unsecured basis. When business operations are expanding and the earnings retained are insufficient to finance the resulting growth of assets, external funds will be sought, and it may be necessary to obtain some portion of these through the assignment of accounts receivable. Unsecured short-term loans, regular term loans, or equity funds, which are less costly, if readily available will tend to be substituted for those obtained from accounts receivable loans. Nevertheless, there appears to be a basis for accounts receivable financing, whatever the state of business activity and of the financial markets, since there are always some solvent businesses desiring to obtain — and able to put to work profitably — more credit than they can get on an unsecured basis. These businesses are prepared to pledge their accounts receivable as collateral security in order to obtain this added margin of credit.

FINANCING INVENTORY ON FIELD WAREHOUSE RECEIPTS¹¹

The establishment of a field warehouse on the premises of a business, which pledges the resulting warehouse receipts to a bank as

¹⁰ Interest charges in 1941 are discussed in Chapter 2, pp. 49-50.

¹¹ Based on Neil H. Jacoby and Raymond J. Saulnier, *Financing Inventory on Field Warehouse Receipts* (National Bureau of Economic Research, Financial Research Program, 1944).

security for a loan, is a comparatively recent credit technique whose economic function in many ways parallels that of accounts receivable financing. By this method banks are able to limit the risks of lending money to concerns with highly seasonal working capital needs or with slender equities. American banks have long granted credit on the security of warehouse receipts covering agricultural and other staple commodities deposited in terminal warehouses. But the establishment of a field warehouse on the premises of a borrowing business by a concern specializing in this activity is a modern development. The practice originated around the turn of the present century and expanded steadily, especially after 1930. Like accounts receivable loans, field warehouse receipt credit goes primarily to small and medium-sized enterprises.

Lending against field warehouse receipts has posed unique problems of credit appraisal for bankers, and has resulted in the evolution of special credit standards and methods of limiting risks. The credit elements embodied in such loans are of four classes: the field warehouse company (its financial responsibility, its experience, the form of its warehouse receipts, and the amount, coverage, and worth of its bond); the field warehouse (the validity of the lease agreement, the adequacy of the physical conditions, and the competence and integrity of the custodian); the borrowing business (the moral and financial responsibility of its principals, its financial strength, the caliber of its management, and its past and prospective earning power); and the warehoused merchandise (its value, susceptibility to deterioration, breadth of market, and price fluctuation). All banks give some attention to each of these elements, although the emphasis placed on each factor differs among banks, and for a given financial agency as between industries and borrowing concerns.

A risk-controlling factor of prime importance to the banker is the percentage that the amount of credit outstanding at any time bears to the value of the warehouse receipt collateral. This "percentage advance" determines the bank's margin of safety, or excess of collateral value that protects it in case it has to liquidate the commodities to recover its money. Other factors being held constant, the percentage advance is larger, the broader the market for the warehoused commodity, the smaller the degree of its price fluctuation, the less the normal rate of its deterioration in value during storage,

and the smaller the maximum credit line granted the borrowing concern in relation to its financial strength. Most field warehouse receipt loans involve percentage advances of between 65 percent and 85 percent.

The volume of lending against field warehouse receipts is determined by the amount of inventory in the economy and by factors similar to those determining the market for accounts receivable loans. Field warehouse receipt loans serve as a device for providing businesses with working capital, in some cases to meet peak needs of a seasonal character, in other cases to meet enduring requirements for liquid funds. The decline in inventories of civilian goods after 1942 produced a shrinkage in field warehouse receipt credit. In an economy characterized by high and expanding levels of production, accompanied by large inventory holdings by business concerns, rapid growth of new businesses, and lack of readily accessible sources of equity capital and long-term credit for small and medium-sized enterprises, conditions are favorable to the development of a large volume of loans collateralized by field warehouse receipts.

FINANCING MACHINERY AND EQUIPMENT ON INSTALMENT TERMS¹²

The financing of the acquisition of machinery and equipment by commercial and industrial business *via* instalment loans is a fourth significant development in American business credit technology. Equipment trust certificate financing of railroad equipment was, perhaps, the earliest manifestation of this type of credit operation.

Instalment equipment financing is marked by three characteristics: specific use of the credit by the borrower to acquire income-producing machinery or equipment; retention by the financing agency of title to, or a lien on, the equipment by means of a conditional sales contract or bailment lease for the purpose of securing the debt; and amortization of the debt in instalments. Commercial banks extend this kind of credit in two ways. They purchase or "discount" the instalment sales contracts held by manufacturers or dis-

¹² This section is based on Raymond J. Saulnier and Neil H. Jacoby, *Financing Equipment for Commercial and Industrial Enterprise* (National Bureau of Economic Research, Financial Research Program, 1944).

tributors who sell the equipment (indirect financing); and they make direct instalment loans to the business concerns buying the equipment, enabling them to pay cash to the manufacturers or distributors (direct financing). In indirect financing the equipment manufacturers and distributors are the direct grantors of credit, and the banks, in effect, are credit wholesalers. The banks' function is analogous to that which they perform in acquiring assigned accounts receivable. In direct financing the average instalment cash loan made to finance equipment purchased is much larger than in indirect financing, but the down-payment and repayment provisions are similar to those found in indirect financing.

Credit analysis in equipment financing has three focal points: the character of the equipment, the credit standing and financial responsibility of the purchaser of the equipment, and the financial responsibility of the seller. In regard to the equipment, the banker estimates its expected service life, its usefulness and value to the purchaser, its probable repossession value, and the validity of the available title or lien. The last factor requires detailed knowledge of the particular market in which the used chattel might have to be sold. The purchaser of the equipment requires evaluation because he has the primary obligation of paying the debt. This evaluation is crucial whenever recourse of the bank upon the manufacturer (seller) is limited, when the equipment is wholly or partly nonrepossessible, or whenever repossession is likely to involve substantial costs. Attention is given to the vendor of the equipment because he accepts responsibility for its satisfactory installation, and because he usually has a contingent liability on the financing contract.

Equipment financing is often a mass financing operation. A process of continuing credit supervision begins when a bank makes an arrangement to purchase or take assignments of the numerous instalment contracts originated by a particular manufacturer or distributor. As the arrangement proceeds, the banker periodically "ages" the contracts he holds, calculates the delinquency and charge-off ratios, and observes trends in the types of equipment sold, the terms of the contracts, and the credit ratings of the buyers. On the basis of these observations, the financing arrangement may be altered, terminated, or extended. The bank usually advances 80 to 90 percent of the face amount of contracts that it acquires, thereby accumulating a customer's "reserve," from which deductions

can be made if certain contracts prove to be excessively delinquent or uncollectible.

In the typical financing arrangement, the vendor of equipment acquires more than credit from the financing agency. He obtains such services as credit appraisal and collection, legal advice and assistance in the preparation of documents, engineering counsel, and even general management advice. In some cases these ancillary services appear to count for more than the credit itself in the estimation of the borrower.

The market for instalment equipment loans is proximately determined by the quantity of equipment passing into the hands of businesses unable to finance its purchase with available equity or open-line credit, and also by the propensity of manufacturers and distributors of equipment to carry their own paper instead of utilizing their working capital for other purposes. Underlying determinants of these variables are the rate of technological progress, the amount of working capital possessed by enterprises selling and purchasing equipment, and the terms on which additional working capital can be obtained by alternative methods. In an expanding economy, marked by increased mechanization of productive processes and a rapid rate of obsolescence of old equipment, the value of new income-producing equipment annually passing into the hands of business concerns is large. If such an economy is also one that offers opportunities for new and small enterprises, many of them may find it expedient to acquire equipment on instalment terms. If, in addition, manufacturers and distributors of equipment have ample alternative opportunities for employing their working capital, and if they desire the specialized credit, collection, and other services that equipment financing agencies can render, a large volume of instalment equipment loans might be made.

SIMILARITIES IN THE NEWER TYPES OF BUSINESS LOANS

Twentieth century developments in the technique of supplying credit to business have been based on a number of discoveries about the relation of credit to business enterprise. In one form or another, the four types of business loans just described involve applications of these discoveries. They all conform to a common basic pattern.

First, credit arrangements need to be fashioned according to the special character of the production and merchandising processes of the business being financed. Loan agreements so fashioned are not only more satisfactory to the borrower but sounder from the point of view of the lender. The formulation of such agreements requires detailed knowledge of the industry to which the borrower belongs, the position in that industry of the borrowing concern, and the general underlying economic situation.

Second, much of the credit used by business is needed for more than one year, and the amortization of such credit depends more on a flow of income over time than on the conversion of short-term trading assets into cash.

Third, the need of individual companies for short-term credit is typically continuous. Demand is in part responsive to the seasonal features of the industry involved, but it is not, as is sometimes supposed, discontinuous in the sense that the need for short-term credit is eliminated, or nearly so, for extended intervals.

Fourth, the credit needs of business are most nearly met by an arrangement under which the amount of credit in use is automatically adjusted to these changing needs.

Fifth, if credit extension is subjected to careful study and research, a gradual reduction in costs may be achieved.

All the new types of loans explicitly recognize a fact which the older forms ignored, i.e., that much of the credit used in business is needed for more than one year. This recognition is explicit in the term loan and in instalment equipment financing, but it also is present in inventory or receivables financing, where both debtor and creditor enter into an arrangement that contemplates a long-term loan of fluctuating amount. The four types of loans do explicitly what the traditional short-term loan did impliedly through the practice of successive renewals. These types of lending necessarily call for a more elaborate credit appraisal and forecast of the earning power of the debtor business than was considered necessary under the old forms.

Another thread in the new business credit pattern is the gearing of loan amortization requirements closely to the power of the business to make repayment. Term loans to oil producing businesses, for example, have carried repayment schedules determined by the net revenue from the probable flow of oil from producing proper-

ties after deducting out-of-pocket expenses. Instalment loans made to finance the sale of Diesel-electric generating equipment have frequently been repayable in a series of instalments, the amounts of which have been equal to the periodic savings to the borrower resulting from the installation.

A third bond between these newer types of loans is the close adjustment of outstanding credit to the actual requirements of the borrower for funds, and the basing of interest charges on the amount of funds actually in use. These characteristics are quite apparent in accounts receivable financing and in field warehouse receipt lending, where the loan balance fluctuates from day to day, reflecting the changing balance of either outgoing credit sales of the borrower over incoming payments, or of inventory receipts over inventory withdrawals, respectively. They are also present to a considerable degree in term loans that permit the borrowing business to "take down" only the amount of credit it requires, and to repay the loan in instalments. The trade acceptance has this same virtue. In contrast, in the traditional loan a business borrows a definite amount from its bank for a specified period of time and maintains a fluctuating deposit balance at the bank without automatic adjustment of the outstanding loan balance and of interest charges.

Cooperation between banks in assuming and carrying loan risks is another feature of modern business lending technique. Several banks take participations in a loan for various reasons; for example, the total amount of the loan may exceed the legal loan limit or the self-imposed limit set by the policy of a bank, or the banks with which the borrowing concern has continuing relationships may participate at the instance of the borrower. Cooperation is most frequent in term lending where the amounts of individual transactions are large, but it also occurs in instalment equipment and field warehouse receipt lending. The bank originating the loan is usually assigned the task of supervising it, and may be paid a special fee for its service. Extensive cooperation among American banks in business lending emerged during the 1930's, and this cooperation may have provided a partial substitute for the economic functions which commercial paper houses formerly performed in spreading risks on large "open market" business loans and adding to the mobility of unused bank lending power.¹⁸

¹⁸ See Albert O. Greef, *The Commercial Paper House in the United States* (Cambridge, Mass., 1938) Ch. XIV, for an appraisal of the economic function performed by

"Mass financing" also is a common characteristic of the modern business credit forms. It requires that bank examiners weigh the competence of a bank for engaging in such credit operations as lending against accounts receivable, field warehouse receipts, and installment equipment paper, all of which may involve the handling according to routine procedures of many relatively small items of collateral, and for formulating new methods and standards of appraising such collateral. Sampling methods are substituted for the evaluation of every piece of collateral; and certain standards are applied to the average performance of a large number of individual small accounts rather than to the performance of every item of paper.

Perhaps the most significant development of all is the fact that modern types of business loans are applicable to the credit needs of small and medium-sized business — that is, the segment of the business population which is widely believed to have suffered from inadequate credit facilities — and several of them are specially designed to serve these needs.

commercial paper houses. It seems plausible that cooperative lending provided a means whereby banks could discharge these functions by themselves, at least to a limited extent.