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ULNIER and NEIL H. JACOBY

Financing Equipment For Commercial and Industrial Enterprise

Financial Research Program
Studies in Business Financing

NATIONAL BUREAU OF ECONOMIC RESEARCH

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**FINANCING EQUIPMENT FOR COM-
MERCIAL AND INDUSTRIAL
ENTERPRISE**

Mechanization of industry and competitive pressure on business to modernize equipment has led to important changes in financing techniques. One of the most striking examples of these is the growth of instalment financing of equipment purchases, described in this report.

Before the United States entered the war, instalment equipment financing had reached substantial proportions and was growing markedly. Instalment equipment receivables held at the end of 1941 are estimated at around a billion dollars.

Enterprises in the service, retail trade and manufacturing industries are extensive users of equipment financing. A wide variety of equipment is acquired on this basis. Examples are hotel, restaurant and store fixtures, equipment for barber shops, beauty shops, medical and dental offices, farm, factory and transportation equipment.

Commercial finance companies pioneered this financing method but commercial banks are now increasingly active in the field. A special survey conducted by the National Bureau of Economic Research in June 1941 indicates the extent of commercial bank participation in this type of lending.

The authors provide a detailed analysis of credit standards, characteristics of contracts, down payments, repossession practices, credit losses, etc. They find that equipment financing incorporates

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FINANCING EQUIPMENT
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Preface

THE BUSINESS FINANCING PROJECT, of which this study is a part, is the second major investigation to be initiated under the National Bureau's Financial Research Program, with the support of grants from the Association of Reserve City Bankers and the Rockefeller Foundation. Work on the project began early in 1940, with three major objectives: first, to trace from business accounting records the structural and cyclical changes that have occurred in the financial organization of business enterprise since the turn of the present century; second, to determine the cross-sectional pattern for recent years of business credit demands; and third, to describe the adaptations that financing institutions providing short- and medium-term credit have made over the past decade in response to changing demands for their services.

Research activities have been carried on under two main divisions: one, entitled "Changes in the Financial Structure of Business Enterprise, 1900-1940," is concerned primarily with the first objective; the other, "Contemporary Relations between Business Enterprise and Financial Institutions," is devoted specifically to the second and third objectives. Under each division a number of technical studies have been developed from special primary materials, the findings of which are to be the basis of broader interpretive studies. Under the second division of the project, two of the technical studies, *Term Lending to Business*, and *Accounts Receivable Financing*, have already been published. The present volume, *Financing Equipment for Commercial and Industrial Enterprise*, will be followed by a study covering business loans made on the security of field warehouse receipts.

Each of the four investigations of special lending techniques has a common pattern of treatment: (a) development of the financing technique; (b) size and organization of the market; (c) charac-

teristics of the credit services; (d) methods of credit extensions; and (e) income, costs and profitability. Their preparation has required extensive interviews with officers of specialized financing agencies and commercial banks in the main lending centers east of the Mississippi; their statistical basis has been provided by special tabulations and questionnaire replies prepared by financial institutions representative of all regions of the country. We wish to acknowledge our obligation to these officers for their generous help, as well as to the financial agencies that cooperated in supplying special statistical information. The present study has gained much, also, from the cooperation of some 150 manufacturers of commercial and industrial equipment who responded to a detailed questionnaire concerning their instalment selling activities.

The changing demands of business for short- and medium-term credit have produced two major types of adaptations on the supply side of the business financing market. The first of these is the marked change that has come about in the lending policies and techniques of commercial banks; the second is the growth of non-bank lending agencies specially organized to meet these newer credit needs. The rapidity with which these adaptations have been made is perhaps responsible for the fact that little is known of their character and extent; whatever the reason, it seems clear that there is inadequate understanding of recent changes in the functioning of commercial banks as business financing agencies, and still less understanding of the part played by non-bank agencies in the business credit market.

The financing of instalment purchases of income-producing equipment is one of the most interesting of these developments in lending practices, both because it represents a new activity for commercial banks and because it is an area in which non-bank agencies have played a major role. The purpose of this study is to trace the development of the financing technique; to discuss its practice by both banks and commercial finance companies, to show the characteristics of the business enterprises using this method of financing, and to describe its procedures and operating results.

RALPH A. YOUNG

December, 1943

Director, Financial Research Program

Authors' Acknowledgments

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The officers of a large number of banks and commercial finance companies contributed to the investigation in two important ways; first, by providing special statistical tabulations and answering questionnaires concerning their equipment financing activities and, second, by giving the authors, through lengthy interviews, the benefit of their intimate knowledge of the problems and techniques of this special financing procedure. Without their cooperation it would have been impossible satisfactorily to complete the investigation. The authors wish to take this opportunity to express their sincere appreciation.

We wish also to express our thanks to the staffs of the National Credit Office, Inc., and Dun & Bradstreet, Inc., for assistance in assembling information at various points in the study. Members

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Editorial responsibility for the manuscript has been carried with great skill by Lorine Pruette, assisted by Renée S. Courtney. The authors wish to express to both their very sincere appreciation for the many contributions they have made to the organization of the study and the readability of the text.

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*Financing Equipment for Commercial
and Industrial Enterprise*

Summary of Findings

THE GROWTH OF INSTALMENT equipment financing has been one of the most striking and most immediate effects on financial institutions of the increasing mechanization of industry. By this type of financing definition we mean extensions of credit where (1) the specific purpose of the financing is to make possible the acquisition of income-producing machinery or equipment; (2) the financing agency has title to, or a lien on, the equipment as a means of securing the credit extended; and (3) the debt is amortized in prescheduled, regular instalment payments. Since the focus of our attention has been on financing techniques of relatively recent development this definition has been qualified to exclude certain conventional types of financing, such as that conducted under equipment trust certificates.

In many respects the development of instalment equipment financing, or equipment financing as it is referred to in this study for sake of brevity, follows that of other new types of financing. Its earliest development was promoted by non-bank agencies sufficiently specialized to cope with its unique credit problems, and more ready and able, by virtue of their lack of deposit functions, to pioneer in new credit areas. These agencies were commercial finance companies and manufacturers and distributors who, offering instalment payment terms to their customers, carry their own receivables either along with other assets or through some special financing subsidiary. Subsequently, the field was entered by commercial banks, as they came under pressure to find profitable uses for their lending capacities and as they grew better acquainted with the techniques of equipment financing. At the present time the market consists of operations by all these agencies and to a lesser extent by insurance companies, industrial banking companies and public lending agencies. There are several types of financing

arrangements: (1) instalment sales of equipment by manufacturers and distributors without the involvement of any separate financing agency, (2) the discounting by commercial finance companies and commercial banks of instalment receivables arising out of equipment sales, and (3) the extension, primarily by commercial banks, of cash loans secured by the equipment acquired with the proceeds of the loan.

Equipment financing along the lines indicated has been promoted primarily by the steadily increasing mechanization of manufacturing, mining and construction industries and by the pressure that competitive conditions have placed upon concerns to modernize their production processes. Of more recent development has been the wider use of mechanical equipment and fixtures in trade and service establishments. Although the great majority of business units in the latter lines are relatively small in size and have limited capital resources, equipment financing has certain features that have made it adaptable to the financing needs of such concerns. First, the instalment payment procedure makes it possible for the machinery or equipment to be paid for out of income, while the machine is in use, with a relatively small capital outlay. Second, the title retention, down payment and other features of an equipment financing contract minimize the risks assumed by the financing agency.

Equipment financing by financial institutions is possible only because many manufacturers and distributors do not desire to carry their own instalment receivables. A decision of this kind is influenced by a number of factors. In the case of most distributors a strong factor is the lack of adequate owned capital and an inability to borrow on a straight note basis. For manufacturers a primary reason may be the desire to stay out of financing operations. If the practical alternative to discounting receivables is to carry them and not only to assume financing functions but also to borrow funds in order to replenish working capital, the manufacturer or distributor may prefer to discount the contracts. This procedure makes it possible for the vendor to gear his use of outside funds directly to the amount of receivables outstanding and, what is often very important, to do this automatically. It is also important that the manufacturer receives certain ancillary services in equipment financing which would not be obtained on a conven-

tional borrowing basis and which he might not be able to supply as economically through his own organization. There are, of course, certain other factors that have tended to act oppositely, that is, to cause sellers to carry their own receivables. Among these are the advantages of earning the full finance charge and the desire to avoid the intervention of any outside agency between manufacturer or distributor and ultimate purchaser.

Because of the close similarity of equipment financing to other types of business financing, it is extremely difficult to estimate its quantitative importance. On the basis of our definition it has been estimated that at the end of 1940 equipment financing agencies held receivables of about \$400 million: commercial banks \$200 million, commercial finance companies \$175 million, and life insurance companies \$25 million. This total is estimated to have increased to \$470 million by the end of 1941. In addition, at the end of 1940 manufacturers carried \$125 to \$200 million of instalment receivables originating in their own sales. It has been further estimated that the total amount of equipment financing conducted during the year 1940 was about equal to the amount outstanding at the end of the year.

A special questionnaire survey conducted by the National Bureau in June 1941 provided additional information concerning the types of banks participating in equipment financing and the extent of their participation. It was found that only 2 percent of the total loans and investments of the banks participating in equipment financing originate in this type of business. Of this 2 percent, about one-third were discounted instalment equipment paper or contracts and about two-thirds were cash instalment loans secured by equipment. Equipment credits were a larger part of the total loans and discounts of banks of smaller size and of those located in smaller places than of the larger banks and those located in larger places; the bulk of the financing, however, is done by the larger banks. In general, the discounting of instalment paper seems to be more important in smaller banks than the making of direct equipment loans while just the opposite seems to be true of the larger banks.

Since the security of the creditor rests in large part on the practicability of repossession, equipment sold on an instalment payment basis generally does not become affixed to the purchaser's

real estate; exceptions occur where affixed installations can be made unusable by the removal of certain strategic parts. Within the broad limits set by this condition there are obviously many types of equipment that become the subjects of instalment financing. In terms of cost, units may vary from a \$30 typewriter to a Diesel engine installation costing \$500,000. Equipment so financed is of continuing use and value, although the value may be subject to considerable reduction where the unit has a very specific use and limited resale possibilities, or is subject to a high rate of depreciation. Substantial amounts of business are involved in sales of hotel, restaurant, bar, and store fixtures, equipment for barber and beauty shops and medical and dental offices, commercial refrigeration and air conditioning units, construction, road building, farm and transportation equipment, equipment for such service businesses as cleaners, laundries, bowling and billiard establishments, garages, etc.

A special study based on credit reports prepared by Dun & Bradstreet, Inc. reveals that equipment credit was most frequently extended to concerns in the service industries. Retail trade was next in importance by this measure, with manufacturing third. Further, the proportion of concerns with a low credit rating that have received equipment financing credit proved to be higher than the proportion of concerns having a high credit rating. Finally, small firms are, in general, more likely to obtain income-producing equipment on this basis than are large concerns.

Very little information is available on the manufacturers and distributors that discount the instalment receivables arising out of their sales with equipment financing agencies. These concerns vary in size from small dealers and manufacturers of limited credit standing to the prime credit risks among the very largest manufacturing companies. Their industrial characteristics can be inferred from the types of equipment financed on this basis.

The terms of equipment financing credits are determined mainly by the type of equipment financed and the credit standing of the purchaser. Where contracts are discounted and liability for them assumed by the vendor of equipment, the terms of credits may be affected also by the financial responsibility of the vendor and the type of recourse arrangement which is entered into. Reports were received from 169 different manufacturers and distributors

with regard to the face amounts of the contracts which they originate. Of these, 141 indicated that the majority of their contracts amounted to \$5,000 or less: 47 reported contract amounts concentrated between \$100 and \$500, 39 between \$500 and \$1,000, and 55 between \$1,000 and \$5,000. No company reported purchasing the bulk of its contracts at face amounts of less than \$100.

Information assembled during 1941 suggested a tendency for down payment percentages to group around 33 $\frac{1}{3}$ percent. Some installations were reported as carrying down payments of 50 percent, some 10 or 20 percent. Down payments on heavy machinery were frequently lower than those on more easily repossessible machinery of low unit value, indicating that the buyer's credit standing is a primary consideration in determining contract terms. The repayment period is clearly related to the cost and expected service life of the equipment and thus varies widely among different types. Equipment and fixtures sold to service industry concerns most often required repayment in 24 or 36 months; longer terms of 48 or 60 months were frequently reported on sales to manufacturers of heavy equipment of large unit value.

Equipment financing contracts are usually repayable in regular monthly instalments but exceptions are found in sales of farm equipment and in equipment sales to entertainment and service businesses of a seasonal nature. In such cases the repayment schedule conforms to the buyer's flow of income. As another variation from equal monthly payments, repayment schedules may be framed with particular regard to the added income or savings resulting from the use of the equipment. Thus, one year's repayment may be set at either a fraction, say one-third, of the annual savings accruing from the use of the equipment or a certain specified amount, whichever is greater. Automatic coin-dispensing equipment may be sold on a plan whereby the contract holder takes all or a certain stipulated percentage of the machine's receipts.

The above discussion relates to what may be termed indirect financing, where the financing agency acquires a contract not directly from the ultimate equipment purchaser, but indirectly from a manufacturer or distributor. Additional information was received from a number of commercial banks on direct equipment financing, that is, instalment cash loans that were made to finance

equipment purchases and that were secured by a chattel mortgage on the equipment acquired; such loans vary in average amount from \$2,000 in the smallest banks to nearly \$175,000 in the largest banks. On the other hand, bank loans that are made on the basis of assignments of groups of individual instalment receivables reach much larger amounts in some cases; these are usually revolving credits with their balance determined by the rate at which new contracts are discounted and old contracts paid off.

It would be inadequate to describe equipment financing credits merely in terms of the size and maturity of individual credits. This type of financing is properly understood only when account is taken also of services provided by the financing agency other than the extension of credit itself. The most important of these ancillary services are credit appraisal and collection, legal advice and assistance in the preparation of documents, engineering counsel, and general management advice.

Credit analysis in equipment financing has three principal elements: (1) the equipment, in which the vendor retains title, or which serves as collateral security; (2) the general credit standing and financial responsibility of the purchaser; (3) the financial responsibility of the seller. With regard to the equipment, the financing agency estimates its repossession value, its expected service life, its usefulness and acceptability to the purchaser and the validity of the available title or lien. The vendor of the equipment is important, first, because he must accept responsibility for the satisfactory installation and performance of the equipment; second, because he may accept a contingent liability on the contract. Finally, the credit appraisal must evaluate the credit strength of the purchaser of the equipment. This is especially important and, indeed, crucial if the recourse arrangement with the manufacturer or dealer is limited, if the equipment is wholly or partly non-repossessible or if the equipment is likely to be repossessionable only at substantial cost.

A process of continuing credit supervision begins when a financing agency has made an arrangement to purchase or take assignments of instalment contracts. Primary emphasis is placed on a periodic aging of the contracts held, calculation of delinquency and charge-off ratios, observation of trends in types of equipment sold, contract terms and customer quality. Changes are made in

the terms of the arrangement between financing agency and vendor and in the terms of customer contracts on the basis of this continuing supervision of the loan account. As part of its recourse arrangement, the financing agency usually advances only 80 or 90 percent of the face amount of contracts required. A customer's reserve is thereby accumulated from which deductions can be made if contracts prove to be excessively delinquent or uncollectible. One company specializing in equipment financing had such customers' reserves of between 17 and 24 percent of outstandings from 1934 to 1940.

The basic interest rate charged on direct instalment equipment loans, as well as the rate at which contracts are discounted, is usually 6 percent per annum on original face amount of contract, is rarely in excess of this and, in some cases of installations of heavy machinery for prime credit risks, has been reported to be as low as $3\frac{1}{2}$ percent per annum. In addition to this basic rate special fees may be charged for legal documentation and recordation and for insurance coverage. On very small installations a minimum finance charge may be levied; one company reported a finance charge of 7 percent per annum or a minimum charge of \$7.50. The effective rate on the amount of funds actually in use will usually be higher than the quoted rate, of course, because the debt is paid off in instalments.

Turning to credit experience in instalment equipment financing it will be clear that where arrangements involve complete recourse on the manufacturer or distributor, or both, the financing agency may continue for some time with no losses at all, the incidence of all losses being on the manufacturer. Therefore, in order to measure credit experience in this field it is necessary to examine the net credit losses incurred by the manufacturer. Of 54 large manufacturers reporting collection experience 19 stated they had no credit losses at all during 1940, 9 that their credit losses were $\frac{1}{4}$ of 1 percent of instalment sales or less, 4 that their losses were between $\frac{1}{4}$ of 1 percent and 1 percent, 5 reported losses of between 1 and 2 percent, another 5, losses between 2 and 5 percent. Only 2 companies reported losses of over 5 percent. That is, of all companies combined, over one-half sustained net credit losses during 1940 of less than 1 percent of instalment sales volume. Credit experience on equipment that becomes partly affixed to the

real estate was not found to be noticeably worse than on equipment of a wholly and readily repossessible variety.

Equipment financing represents only a small portion of the medium-term business credit market, and a very minor segment of the total loans and discounts of commercial banks. Yet it has considerable significance as an example of how the demand for business credit is influenced in character and in amount by underlying economic and technological trends and how these demands in turn elicit adaptations in the functional basis and practices of financial institutions. In this and other respects equipment financing has close parallels in term lending, accounts receivable financing and consumer instalment lending. As in these fields the pioneering was not done by commercial banks; equipment financing methods were developed by commercial finance companies and by the financing subsidiaries of manufacturers. Paralleling consumer financing and term lending, equipment financing incorporates one of the now well-established principles of medium-term credit, namely, repayment of debt on a prescheduled basis out of a flow of income as earned. Also, in modified degree, equipment financing illustrates the mass financing procedures clearly seen in consumer instalment financing and open accounts receivable financing. The importance of this last feature of equipment financing is that credit standards and credit appraisal methods must be made to conform to the necessity of rapid appraisals of individually small credits. Furthermore, this same feature makes it necessary to judge equipment financing ultimately by reference to credit experience on a mass of accounts rather than on specific contracts. The problem of establishing appropriate reserves and maintaining proper supervision over balances is obviously quite different in a mass financing operation of this type than in the extension of individual credits such as characterize conventional short-term lending.

Experience acquired in financing acquisitions of income-producing equipment on an instalment payment basis should prove useful in connection with postwar developments. Industrial concerns of all sizes will be faced with problems of conversion and expansion for civilian production; commercial establishments will also need to modernize or replace equipment. In both cases, these problems suggest a wide use of equipment financing techniques and immediate application of methods developed in the prewar period.

Summary of Findings

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Furthermore, the present study shows that equipment financing is used chiefly by small and medium-sized manufacturing companies and by the service trades, where business units are typically small and frequently undercapitalized. Since many concerns needing credit during the postwar period will be in these groups and will find it difficult to obtain funds on an unsecured basis, it is reasonable to anticipate increased resort to equipment financing as a technique for extending intermediate-term credits to business enterprises after the war.

1

Definition of Equipment Financing

IN THE DECADE PRECEDING the present war a number of important innovations were made in methods of financing industry and trade. In some cases these changes consisted of variations upon older procedures of financing while others were applications of well-established techniques to new and wider fields of use. Occurring in many parts of the American financial system, these changes represent attempts to make the functioning of financing agencies conform to new conditions underlying the demand for credit services. It is the purpose of this study to examine in detail the development of one of these adaptations, namely, instalment equipment financing or, more briefly, equipment financing. As an emerging type of credit extension equipment financing is an example of a technique, well established in more limited fields, enjoying a rapidly widening application in other areas.

Its rapid development in recent years would alone recommend equipment financing as a subject for special study but, at this time, an equally important reason is its potential role in postwar reconversion. In the ten years preceding the war instalment equipment financing served as a convenient and flexible method for making possible acquisitions of fixed assets by business concerns. That this was especially true of smaller concerns augurs significantly for the use of the instalment credit technique in the reconstruction period.

There are such close similarities between instalment equipment financing and other financing methods that we must begin with a careful definition of the field of credit to be covered. As a first approximation we may say that this will include all arrangements in which (a) the purpose of the financing is to make possible the acquisition by business enterprises, including farms, of income-producing equipment, (b) the financing agency retains title to, or

holds a lien on, the equipment acquired, and (c) the purchaser contracts to pay off the obligation on an instalment basis. Since this definition marks off a field of financing arrangements which, in the actual market, merge into others of closely similar features, certain exclusions must be made. In order further to clarify the area of the study, therefore, the remainder of this chapter is devoted to a definition of income-producing equipment and to brief descriptions of the types of arrangements included in, and excluded from, the field of equipment financing.

Distinguishing Features of Equipment Financing

The first and principal distinguishing characteristic of equipment financing is that it makes possible the acquisition of *income-producing* machinery or equipment, which we may define as machinery and equipment used by business enterprises for business purposes. There are two principal qualifications, however, that must be made. First, although the definition obviously is meant to exclude consumer goods, some commodities serve both business and personal needs and cannot be readily classified in one group or the other. For example, heating equipment of the very same kind may be used for both homes and business places. In all such cases it is the predominant use of the equipment financed that must serve to distinguish between business and consumer credits.

Second, while real estate financing is also excluded from the study (because a separate set of credit standards, credit appraisal methods and financing institutions are involved) it will be necessary to include the financing of certain installations that become, at least in part, permanent and immovable fixtures and thus real estate. Some of these installations (for example, air conditioning and sprinkler systems) may become so permanently a part of the real estate that they cannot be removed for purposes of repossession without damaging other property; only the fact that they can be rendered unproductive by the removal of certain parts (for example, the removal of nozzles from a sprinkler system) has made them the subjects of equipment financing. Thus, so far as our study deals with such equipment as installations and fixtures, it covers only those that are partly movable, though it must be admitted that this point of difference is not always clear.

It will be seen, then, that our definition of income-producing

equipment embraces both the use to which the property is put, and the character of the property itself. The principal purpose of these limitations is to reduce the financing area covered to one in which credit standards and credit appraisal techniques are roughly homogeneous.

The two other distinguishing features of equipment financing are the use of the specific equipment acquired as security for the credits extended,¹ and the repayment of obligations in instalments. Again, in limiting our study to such credits, we exclude certain other financing arrangements, as follows: (1) sales of equipment on open-book account, (2) unsecured cash loans, even where the proceeds are used to acquire equipment, (3) cash loans secured by equipment already owned by the debtor, and (4) cash loans secured by the purchased equipment but not repayable in instalments. Again, these further restrictions on the scope of the study are made for the purpose of limiting the discussion, as nearly as possible, to a homogeneous set of financial arrangements.² Finally, in order to limit ourselves to financial techniques of relatively recent development as contrasted with more conventional methods, we shall exclude equipment trust certificate financing, even though in many cases this may be closely akin to instalment equipment financing.

Types of Equipment Financing Arrangements

Within the equipment financing field there are three main types of financing arrangements; each of these will be dealt with in our study. First, equipment may be sold by a manufacturer or distributor on an instalment payment basis without any separate outside financing agency being involved in the transaction. This constitutes an extension of trade credit by the vendor but is distinguishable from open-book credit in two main respects: the buyer contracts to make instalment payments rather than a single deferred payment and title to the goods sold is retained by the vendor, whereas title goes to the buyer on an open-book credit

¹This does not preclude the taking of additional security.

²While this definition sets off a kind of financing in which credit appraisal problems are substantially alike, no limitations can produce a *completely* distinct area. The financial system is such that types of credit extension grade into one another and thus the isolation of any particular field is necessarily somewhat arbitrary.

purchase. Since the manufacturer does not discount the instalment obligation which arises out of this transaction we may say that in such cases the seller "carries his own paper." The vendor may borrow, of course, in order to provide sufficient working capital for his needs but this debt is often contracted without any formal relation to the instalment receivables held. Where the volume of business is sufficiently large, a special subsidiary may be set up to handle the credit transactions but this does not alter fundamentally the distinctive character of this type of arrangement.

The second type of equipment financing consists of the discounting by the vendor of instalment receivables with some outside financing agency or the borrowing of funds on the assignment of the instalment receivables. In these cases a commercial finance company or commercial bank is brought into direct relationship with the instalment sales transaction.

The third type of arrangement involves the making of cash loans by financial agencies, usually commercial banks, where the proceeds are used to purchase equipment, where the loans are secured by liens on such equipment and are repayable in instalments. In this case the vendor of the equipment is in the position of having made a cash sale and has no immediate relation to the financing transaction.

These three main types of financing arrangements exclude certain others that are closely related to equipment financing and that have been subjects of special study by the National Bureau of Economic Research: namely, consumer instalment financing, open accounts receivable financing and term lending. The grounds on which consumer instalment financing and open accounts receivable financing can be distinguished from equipment financing are quite clear; the distinction between equipment financing and term lending is necessarily less clear.

The difference between equipment financing and term lending turns on the character of the relationship between borrower and lender. Where instalment receivables are discounted by the vendor with a financing agency, or are used by the vendor as collateral security for a loan, only an *indirect relationship* is established between the financing agency and the purchaser of the equipment; since the term loan involves a *direct relationship* between borrower and lender we have here a clear distinction between equipment

financing and term lending. However, there is a question of overlapping where we have cases of term loans which are made by purchasers of equipment for the purpose of financing these acquisitions and where the loans are secured by the purchased equipment and are repayable in instalments. Such credits may be classified either as equipment financing or as term lending. Satisfying all the criteria of equipment financing, the arrangement may also have all the distinguishing marks of a term loan,³ that is, it is a *business* loan, involves a *direct* relation between borrower and lender and is repayable, at least in part, after the passage of one year. In this study, however, we shall treat such credits under equipment financing, understanding that they may be classified, with equal accuracy, as term loans.

³ See National Bureau of Economic Research (Financial Research Program), *Term Lending to Business*, by Neil H. Jacoby and R. J. Saulnier (1942) pp. 10-12.

2

Development of Equipment Financing

TECHNOLOGICAL PROGRESS and business competition have been the basic conditions promoting the growth of instalment equipment credit. Rapid advances in technology made possible the mechanization of industry, while competitive conditions gave strong encouragement to the actual introduction of cost-reducing and product-improving machinery and equipment. By widening the market for income-producing equipment, these persistent factors in the economic system have provided a broad foundation for the growth of equipment financing. Technological change has been operative over an increasingly wide area, greatly increasing the market for both equipment and the financing services frequently required for its acquisition. In the retailing and service trades as well as in manufacturing industries, machinery and equipment has become more and more essential to the successful operation of business.

The modern automobile service station, beauty parlor, barber shop, medical or dental office, to cite but a few examples, all utilize many units of equipment, much of which is quite expensive. Retail outlets such as restaurants, drug stores, bars and taverns, and food stores also use substantial amounts of equipment, without which their competitive position would be very adversely affected. These same outlets dispense an ever-widening variety of goods and services through the automatic coin machine, which is peculiarly suitable for instalment equipment financing.

While large as well as small companies in all industries are affected by the trend towards mechanization of production facilities it is notable that concerns in the retailing and service trades, where equipment financing facilities are widely used, are typically *small*. This must be taken into account in explaining the wide use of the instalment purchase method in acquiring equipment in these

trades. Data for 1939 from the Dun & Bradstreet *Retail Credit Survey*, which includes unincorporated as well as incorporated business units in retail trade but excludes chain companies, show that the typical (medium) annual net sales per store in various lines were as follows: dairy and poultry products stores, \$37,500; drinking places, taverns and bars, \$17,700; combined grocery and meat stores, \$31,400; meat markets, \$29,800; restaurants and eating places, \$20,500; garages (with repairing), \$16,800; drug stores (with fountains), \$23,200.¹

Retailers in all of these lines use machinery and equipment commonly sold on an instalment payment basis. While their relatively small size does not necessarily require that they seek instalment credit for the acquisition of equipment, their small size is doubtless a factor contributing to this practice. Full cash payments for modern equipment would make such a drain on the capital resources of many small concerns as to substantially retard its introduction. It was reported by Jerome in 1934² that one of the primary reasons restricting the use of machinery in industry was the heavy initial cost of acquisition; instalment selling is essentially a means of overcoming this restriction and thus of widening the market for equipment.

The problem of appraising the credit standing of small retail and service units seeking instalment credit is further complicated by their purely local character and wide geographical dispersion. This does not, however, preclude the use of the instalment payment plan by such companies. The reason for this is the special protection provided by the conditional sales contract, bailment lease or chattel mortgage under which the instalment sale or financing transaction is made. These contracts provide the vendor with title to the equipment, or a lien on it, and rights of repossession. In contrast, under an open-book sale title passes to the buyer and the vendor enjoys only the rights of a general creditor. Since the equipment is of continuing usefulness and value, these vendor repossession rights permit the spread of equipment financing, even among concerns of limited credit standing and to buyers on whom readily available credit information is necessarily scant.

¹ From *Standard Ratios for Retailing*, by W. L. Mitchell, Jr. (Dun & Bradstreet, Inc., New York, 1940).

² National Bureau of Economic Research, *Mechanization of Industry*, by Harry Jerome (New York, 1934).

A second important reason for the growth of equipment financing is that the instalment payment plan makes it possible for the machine to pay for itself over a part of its service life without requiring a substantial depletion of the buyer's capital funds. This is, as indicated above, of special importance for smaller concerns but it has relevance even to the case of enterprises of greater financial strength. If the machine, say a self-feeding loader used in coal mining, reduces operating costs by an amount sufficient to cover the instalment payments, the machine may be acquired and paid for without tying up any more funds than the amount required for the down payment.

A third reason, and one of great importance, is to be found in the fact that manufacturers and distributors have sought to increase sales by the offer of instalment payment arrangements. It was only by offering goods on this basis that a broad market could be found for them. Also, liberal instalment terms provide a method of stimulating demand in times of reduced economic activity. Equipment financing was a natural development of this pressure to increase sales by offering longer credit terms to buyers, especially where the sales market was chiefly composed of small concerns of limited credit standing. The use of title retention documents made it possible to extend credit to such companies with a maximum of protection to the seller.

The conditions that have been discussed above appear to account for the growth of instalment purchasing of equipment but quite different considerations have to be raised to explain the emergence of the special financing agencies that extend credit in this field. If manufacturers and distributors selling equipment on an instalment basis carried the resulting receivables among their own assets, there would be no scope for the operations of special instalment financial agencies. It is important, therefore, to consider the reasons why many vendors do not carry their own instalment receivables.

1. An important reason is that by discounting receivables the sellers of equipment are able to gear their use of financing facilities to the exact amount of their financing needs and possibly to obtain the use of a larger amount of outside funds than would be possible under other arrangements.

The nature of these advantages can be illustrated best by

reference to the type of equipment financing procedure in which the vending company assigns its receivables as security for a bank loan. In this case the loan balance for which the vending company is indebted and on which it pays interest is automatically increased and decreased in accordance with changes in the amount of its receivables outstanding. On the other hand, if the company were to carry its receivables and borrow on a separate unsecured basis the loan balance on which it would pay interest might at certain times be greater than the amount of its outstanding receivables; at least the current running balance on which interest is paid would not be automatically adjusted to its financing needs. This may produce substantial economies in interest cost.

Aside from this element of flexibility and possible economy, there is a certain convenience attached to the assignment procedure in that it is not necessary to negotiate a succession of loans. All that is required is that a credit line be established and an agreement reached as to the amount that is to be loaned against the assigned receivables, an arrangement exactly similar to that followed in the accounts receivable financing arrangements whereby open-accounts receivable are used as collateral for short-term loans. Once the financing arrangements have been drawn up, the procedure is on a nearly automatic basis; the amount of the vendor's debit or loan balance increases if new credits on instalment purchases exceed repayments of outstanding receivables and declines if new credits fall below repayments. The amount of the debit balance arises not from any particular loan negotiation but rather from the ebb and flow of outstanding receivables. If other credit elements are equal, the interest rate which will be paid on a secured loan of this type may be in certain circumstances lower than the rate required on an unsecured loan. But even where the secured loan rate is not lower (for example, where there are differences in the credit elements involved and in the costs incurred by a bank lending on a secured revolving credit basis) the vendor may prefer it because of his ability to get more credit on a secured than on an unsecured basis.

These elements of flexibility, economy and greater borrowing potential are important also where the procedure involves the actual sale of the instalment receivable to a financing agency as contrasted with its assignment as security for a bank loan. But in

this case there are additional elements, as will be indicated below, that are of importance in determining whether or not an outside financing agency will be used.

2. Concerns seeking to sell their instalment receivables to an equipment financing agency may be influenced primarily by a desire to avoid an increase in indebtedness. With insufficient working capital they have the choice of borrowing the necessary funds or selling the receivables in question. The latter may be preferred because by selling instalment receivables assets these are transferred into cash without any change in the debt position. Furthermore, any increase in the short-term debt element of the financial statement is avoided although there may be a contingent liability on the receivables growing out of a recourse or repurchase agreement.

3. By offering customers a financing plan which involves the use of a finance company or bank, the seller of the equipment is able to make a clear separation between manufacturing and financing functions, and especially to avoid having a credit department dominated by sales considerations, to the possible detriment of the collection record. Under an external financing arrangement the manufacturer or distributor achieves a more complete degree of specialization and avoids the assumption of functions with which the company's officers may be unfamiliar. Furthermore, though it would be possible for the company's officers to acquire sufficient experience to undertake these financing functions, it may be a settled matter of corporate policy for the company to maintain as simple a functional organization as possible. If the manufacturing or distributing company decides to carry its own instalment receivables it also assumes the problems and expenses of credit appraisal, collection, and accounting that are performed in connection with instalment contracts. Beyond the fact that this involves special costs and calls for an organization staffed by specialists in the credit field, it has the effect in practice of putting the manufacturer into the financing business, an activity that the manufacturer may want to avoid. The specialization of function achieved by the interposition of a financing agency between the manufacturer and the user of the equipment may produce economies that could not be realized in other arrangements. Some of the larger manufacturing companies have attempted to obtain

these economies by the organization of separate financing subsidiaries, the largest of which is General Motors Acceptance Corporation.

4. Especially where sales are made through dealers, the services of outside financial agencies may be necessary because of the limited working capital of vendors and their inability to carry their own instalment paper. This is almost certain to be true of small distributors with a substantial sales volume but it was important also, especially in the early years of equipment manufacturing, for the manufacturing concerns selling on instalment terms. Competition required terms of up to, say, three years and these could be offered without outside financing only if the manufacturer had a strong working capital position. Lacking this financial strength the manufacturer sought out finance company funds when bank loans were unavailable to supplement working capital.

5. A manufacturer, dealer or distributor may prefer to discount instalment receivables rather than carry them himself because of certain ancillary financial services available through the finance company arrangement. It was mentioned above that the financing agency performs the important functions of credit appraisal, collection and accounting; in addition the vendor may dispense with legal counsel on instalment sales problems and depend on his financing agency to supply this special service. Since the financing agency specializes in handling instalment repayment contracts, and since it frequently operates on a regional (if not on a national) basis, its legal department is well equipped to handle efficiently questions growing out of the diversity of state laws on conditional sales contracts and other security devices used in instalment selling. Also, general financial and management counsel may be available from the financing agency.

There are other factors, however, that operate to encourage the seller of merchandise to carry receivables rather than to discount them with some financing agency. The manufacturer or dealer having adequate working capital may feel that he can add to his net income by incurring the cost of operating a credit department and taking the full amount of the finance charge. Some firms have reported this as an important source of income. This could be true, of course, only of those firms having adequate working capital and well-organized and efficient credit and collection depart-

ments. Moreover, such calculations require that the individual seller know the direct costs of operating his credit department, and that other costs be allocated properly. It is quite possible that faulty cost accounting practices may lead a concern to believe that it is (or is not) economical for it to carry its own paper when the opposite is the case.

The vendor of income-producing equipment may desire to carry his own instalment receivables in order to eliminate the possibility of any intermediary financing institution utilizing collection procedures that might injure customer relationships. Also, by holding the paper, or at least by making collections on the instalment receivables, the manufacturer or dealer establishes and maintains a continuing relationship with the purchaser of equipment. This may be very important, particularly if the seller of the equipment expects to obtain additional income through the servicing of the equipment or the sale of accessory commodities.

The fact that a manufacturing or distributing concern carries its own paper may, of course, be due primarily to the inferior quality of the paper and to the unwillingness of any financing agency to purchase it, rather than to the manufacturer's or dealer's desire to carry it. It seems unlikely, however, that this could be an important consideration in very many cases, since the inferior paper can in most cases be made acceptable for financing if a reasonably large volume is available. That is, the financing arrangement may provide for full recourse on the manufacturer or dealer and a smaller percentage advance on each instalment receivable than would be offered if the receivables were of higher quality.

The general question of whether the manufacturer or distributor of income-producing equipment will seek the services of some financing agency is decided by reference to the preceding considerations. There is, however, another set of questions that require attention. These have to do with the type of equipment financing service that will be selected by the equipment buyer. Even if a buyer of equipment has decided to make the purchase on an instalment payment basis, it is not necessary to follow a finance plan offered by the manufacturer directly or through some cooperating financial agency. On the contrary, the purchaser may borrow from a commercial bank and use the funds so acquired to make a cash purchase, possibly giving a lien on the equipment purchased.

This set of alternatives is exactly the same as that faced by a consumer in deciding, for example, whether to buy a car by borrowing directly from a bank, paying cash for the car and repaying the loan in instalments, or to make the purchase on a conditional sales contract basis, in which case the instalment paper reaches a financing agency indirectly, through the vendor. In general, the main considerations that are important in determining which of these alternatives will be selected are (1) the relative costs and convenience of the two arrangements, (2) whether the purchaser has, or can acquire, banking relationships which can be turned to this purpose.

The widening demand for machinery and equipment and the consequent increase in the demand for special financing services have produced significant institutional adaptations on the supply side of the credit market. These take two forms: the development of new specialized financing institutions, and changes in the functional basis of established financial agencies. In each case the changes represent both an accommodation of the financial organization to demands for new types of credit services and an encouragement to the further growth of equipment financing, in that the ready availability of a specialized financing service can contribute greatly to this result.

In the next chapter we shall deal with the volume of equipment financing conducted by these agencies; at this point it may be useful to identify them in a general way and discuss the more important factors contributing to their growth. The three main equipment financing institutions are the commercial finance company, the commercial bank and the manufacturer's financing subsidiary. Some equipment financing is also conducted by insurance companies, through purchases of notes secured by equipment, and by industrial banking companies in connection with their general financing activities.

The term commercial finance company will be used to refer to those non-banking agencies, active in the field of equipment financing, that have no corporate affiliation with manufacturers or distributors of equipment. These companies generally engage in a variety of financing activities and are commonly referred to as sales finance companies or as finance companies.

A combination of circumstances accounts for the development

of commercial finance companies as specialized agencies in the field of instalment equipment financing. Of fundamental importance was the need for a specialized agency, equipped to handle a large volume of individually small credits secured by a wide variety of commodities with only limited resale markets. The credit appraisal techniques, credit standards and collection procedures appropriate to this type of financing were quite unconventional when judged by the usual practices of established lending agencies. Insofar as the financing procedures had a parallel in the market, it was in the financing of instalment sales of consumer durable goods, although these lacked the income-producing characteristics of equipment. It was quite natural therefore that companies experienced in consumer instalment financing should have turned to the financing of income-producing equipment.

Perhaps of equal importance was the reluctance of established banking institutions either to enter into this specialized and relatively high-cost credit area on a direct basis or to finance equipment manufacturers and dealers to the point where they could extend long instalment credit terms to their customers. The volume of instalment paper available to the smaller banks was scant at best and the larger banks were better satisfied by wholesaling credit to the specialized financing agencies than by lending to equipment manufacturers on an unsecured basis or by discounting their instalment receivables directly. Commercial banks were generally unreceptive to instalment equipment financing in its early stages, as they had been to consumer instalment financing. Commercial finance companies operating with equity funds, and also with substantial bank borrowings, began to supply the credit for which the market showed a strong demand. It was not until the credit problems of the field had become better known and credit standards better established that, under the impetus of declining income on other assets, commercial banks undertook to engage actively in equipment financing.

A second factor that served to encourage the growth of commercial finance companies and to favor their early entrance into the field of instalment equipment financing was the fact that, unlike commercial banks, these companies were able to operate branches on a national or regional scale. While it is true that the actual equipment financing operations tend to be conducted from a few

central offices, the existence of a network of branches or field agencies has been a strong selling argument for the commercial finance company seeking to discount and collect the receivables of manufacturers selling nationally. This advantage doubtless increased the volume of business that could be acquired by the commercial finance company as contrasted with that available to the local commercial bank. In this type of financing profitability depends so much on volume of operations that this advantage was a significant element in the combination of circumstances that produced the present structure of market facilities. Furthermore, the nation-wide operations of the commercial finance company also facilitated the appraising of credits and, especially, the work of credit collection.

The commercial finance companies active in equipment financing are almost all engaged in diversified financing activities. In some cases equipment financing is the main division and in others it assumes a subordinate position. This suggests that to some extent activities in equipment financing have been undertaken mainly as a result of the intensification of competition in other sales financing lines and in an effort to find new and possibly more profitable uses for funds. However, the executives of commercial finance companies are at variance on this point. One executive stated that his company had gradually liquidated its equipment financing business because it felt this was less stable than open accounts receivable financing. An executive of another concern reported that his company had decided to withdraw from accounts receivable financing, and to increase its activity in equipment financing because the latter offered a higher quality of risks and was more profitable. An executive of a third company pointed out that equipment financing was an essential part of a plan of diversification set up to protect the company from a sudden decline in demand for other types of financing.

The activities of commercial banks in financing acquisitions of commercial and industrial equipment have not been extensive enough to exert any considerable effect on the development of equipment financing. However, to the extent that commercial banks are entering this business, there is a broadening of the financial facilities available and a further stimulation given to the whole industry. The principal factors accounting for the interest of com-

mercial banks in this type of financing are first, the experience obtained in financing consumer instalment purchases of durable goods, second, the example of profitable operations of commercial finance companies and, third, the pressure that banks have felt during the thirties to find new uses for their funds, as their lending capacity increased and the gross income earned on assets declined sharply.

The primary factor accounting for the development of manufacturers' subsidiaries has been the advantage that manufacturers saw in instalment selling as a means of increasing sales. A number of companies entered the field at an early date, particularly concerns selling relatively expensive units of equipment. Notable examples are found in printing machinery, tractors and farm equipment, office machinery, mining machinery, shoe, textile and bottling machinery, laundry equipment, transportation equipment and dental equipment. This is by no means a complete list but it illustrates types of equipment that have been sold on an instalment payment basis for from twenty to fifty or more years. In some cases the sellers conduct their time-sales activities through the medium of a subsidiary finance company but more frequently the seller functions directly as the financing agency. In any event, it was the pressure to promote sales of equipment and to meet competition that produced manufacturer financing facilities.

Summarizing, the primary factors promoting the growth of equipment financing have been the wider use, by small as well as by large concerns, of machinery and equipment, and the demand for some kind of financing facilities to make equipment acquisitions feasible for companies of limited financial strength. Given this essential basis, the development of financial agencies equipped to extend the credit services needed has grown mainly out of the unwillingness, or inability, of the manufacturers and distributors to extend instalment credit on their own resources. Thus, financial agencies active in this field can be viewed as responding to an underlying demand for a particular kind of financial service, although their existence and their effort to expand business has in turn served to stimulate the growth of equipment financing. Finally, the particular institutional pattern that has been assumed by the supply side of the market is to be explained mainly in terms of the gradual attainment of experience in other lines that has proved

relevant to equipment financing, the legal conditions under which the various types of institutions have operated, competition in other financing fields that has served to encourage the wider use of funds in the equipment financing market, and, for manufacturers, the prospect of increasing sales through instalment financing facilities.

3

Quantitative Measures

THE QUANTITATIVE IMPORTANCE of equipment financing is indicated in this chapter by means of separate estimates of the instalment receivables held by the principal agencies active in this field, namely, commercial finance companies, commercial banks, insurance companies and vendors carrying their own receivables. In making these estimates, two special difficulties have been encountered. First, there is very little information on some agencies of equipment financing, particularly on the local and smaller regional finance companies and on those selling companies that act as distributors of equipment. Second, the similarity between equipment financing and other types of lending and sales financing arrangements is so close that allocations of reported outstanding receivables by some agencies have to be made on a quite arbitrary basis. This is particularly true of commercial finance companies and of the receivables reported by manufacturers and distributors.

Where it has been necessary to make allocations of reported receivables, as between those that fall within our definition as equipment financing contracts and those that do not, we have proceeded on a conservative basis. Also, in making our estimates of receivables carried by concerns on which information is sketchy at best we have attempted to stay on the conservative side. It is likely, therefore, that our final results underestimate the amount of instalment equipment financing conducted.

At this point it might be well to point out that the importance of instalment equipment financing is by no means adequately represented by its quantitative proportions. More important than its present size is its rapid growth as a relatively new type of financing procedure; the fact that it provides a means whereby new equipment is obtained by small and medium-sized concerns that might

otherwise be unable to make such purchases raises its importance to the enterprise system.

Commercial Finance Companies

The commercial finance companies most active in equipment financing are also the leading companies in the field of consumer instalment financing. Thus, the bulk of equipment financing by commercial finance companies is done by General Motors Acceptance Corporation, Commercial Investment Trust Corporation, Commercial Credit Company, Bankers Commercial Corporation, Walter E. Heller & Company, Credit Utility Company, Inc., American Business Credit Corporation and the Finance Company of America at Baltimore. With the single exception of Credit Utility Company, Inc., which *specializes* in equipment financing, all of these listed are diversified finance companies. General Motors Acceptance Corporation divides its activities between automobile and industrial equipment financing; at the time of our estimates the other companies were engaged, either directly or through affiliated companies, in a variety of activities including factoring, non-notification financing of open accounts receivable, rediscounting of consumer instalment paper for other finance companies, purchasing of retail consumer instalment paper, and the financing of inventories for dealers.

It is possible, for most of the companies mentioned above, to determine the amount of their automobile financing, but in almost all cases the public reports of these companies do not distinguish between holdings of instalment paper arising out of sales of commercial and industrial equipment and receivables which represent sales of household appliances. However, there are supplementary data that make it possible to estimate roughly the amount of commercial and industrial equipment financing which they conduct.

At the end of 1940 and 1941, 7 of the 8 companies listed above reported certain types of paper as follows:¹

	1940	1941
<i>Commercial Investment Trust Corporation</i>		
Industrial instalment obligations secured by liens or guarantees	\$122,480,028	\$137,069,526
<i>Commercial Credit Company</i>		
Industrial lien, retail time sales notes	63,783,596	79,679,979

¹ Data from reports to stockholders.

	1940	1941
<i>Bankers Commercial Corporation</i>		
Industrial instalment lien notes and contracts	\$14,193,000	\$12,247,079
<i>American Business Credit Corporation</i>		
Industrial lien instalment notes and instalment accounts receivable	7,114,239 ^a	9,858,207 ^b
<i>Credit Utility Company, Inc.</i>		
Notes and accounts receivable	4,998,984	6,756,000
<i>Walter E. Heller & Company</i>		
Commercial instalment notes other than auto	6,286,079	5,404,981
<i>Finance Company of America at Baltimore</i>		
Industrial liens	1,862,587	1,825,913

^a As of June 30, 1941.

^b As of June 30, 1942.

The principal difficulty in estimating the amount of income-producing equipment contracts held by commercial finance companies is, of course, to determine what part of their industrial lien contracts represents paper arising out of the sale of income-producing equipment. It was necessary to make this estimate on a different basis for practically every company. Since the procedure followed varied considerably from company to company, it is not given here in detail.² The final estimates were that, for all 8 leading companies, commercial and industrial equipment financing outstandings at the end of 1940 were about \$150 million and, at the end of 1941, about \$180 million. Outstandings decreased during 1942 but scanty year-end data make it impossible to estimate the change with confidence. At the time of writing it appears that instalment equipment outstandings may have fallen to \$140 million by December 31, 1942 for the companies included in our group.

² The general procedure used in obtaining the 1940 estimate may be stated briefly. All of the industrial lien outstandings reported above for American Business Credit, Credit Utility Company and Finance Company of America at Baltimore were considered to represent commercial and industrial equipment financing for reasons derived from a careful study of their annual reports or from supplementary information acquired directly. One-half of the industrial instalment obligations reported by C.I.T. and by Bankers Commercial Corporation were taken to represent contracts arising out of instalment sales of income-producing equipment, and 25 percent of the "industrial lien retail time sales notes" reported by Commercial Credit Company. The estimate of income-producing equipment financing conducted by General Motors Acceptance Corporation was made by deducting from its total retail financing volume the amounts originating in the financing of automobiles and household appliances. The estimates for 1941 and 1942 were made in the same manner except that industrial lien outstandings for General Motors Acceptance Corporation were estimated by applying to its 1940 outstandings the percentage changes from 1940 to 1941 and 1942 of outstandings of the seven companies for which data were available.

To these estimates must be added the outstandings held by other sales finance companies operating on a regional or local basis. During 1939 a census of sales finance company holdings of retail instalment paper, conducted by the United States Bureau of the Census, revealed that there were 1,086 single-city and multi-unit companies in this field, and that these companies operated 2,548 offices. While the commercial and industrial equipment financing done by sales finance companies appears to be dominated by large national concerns, a certain amount is conducted by regional and local companies. There is no direct basis for making an estimate of equipment financing outstandings held by these smaller companies; what information is available relates exclusively to their holdings of retail consumer instalment paper. However, on the basis of inquiries made in the trade it is estimated that the total instalment equipment outstandings of these companies at the end of 1940 was \$25 million and at the end of 1941 was \$30 million, or approximately 15 percent of the amount held by the 8 leading companies. Added to our figure for the principal companies this makes an estimate of total instalment equipment paper held by commercial finance companies at the end of 1940 of \$179 million, and of \$210 million at the end of 1941.

Commercial Banks

The National Bureau of Economic Research conducted a sample questionnaire survey in the summer of 1941 in order: (a) to determine the frequency with which commercial banks of different sizes, in places of different population size and in different parts of the country, are participating in the financing of instalment purchases of commercial and industrial equipment, and (b) to make an estimate of the present quantitative importance of this type of financing as a commercial bank activity. The sample of commercial banks surveyed was selected from the list of 13,492 institutions with deposits insured by the Federal Deposit Insurance Corporation as of August 1, 1941. The procedures followed in selecting the sample and the coverage of the sample are discussed in Appendix A, which also reproduces the questionnaire distributed to the surveyed banks.

The frequency with which banks of different deposit size are engaged in equipment financing, whether by discounting paper

	Total Banks Reporting	Number Not Participating	Number Participating	Banks Engaged in Equipment Financing		
				Discounting Paper and Making Loans	Discounting Paper Only	Making Loans Only
<i>Deposit Size of Bank^b</i>						
\$1,000 or less	63	49	14	5	5	4
1,000-5,000	102	77	25	6	11	8
5,000-10,000	32	24	8	2	3	3
10,000-50,000	47	23	24	10	7	7
Over 50,000	30	10	20	11	2	7
<i>Size of Center of Population^c</i>						
Under 10,000	76	55	21	6	8	7
10,000-50,000	47	39	8	3	5	..
50,000-100,000	42	29	13	3	5	5
100,000-500,000	64	35	29	14	8	7
500,000 and over	45	25	20	8	2	10
<i>Region</i>						
New England	19	15	4	1	1	2
Middle Atlantic	67	45	22	10	8	4
East North Central	62	42	20	6	5	9
West North Central	46	30	16	6	4	6
South Atlantic	27	17	10	2	4	4
East South Central	14	10	4	1	2	1
West South Central	11	8	3	2	1	..
Mountain	11	7	4	2	2	..
Pacific	17	9	8	4	1	3
ALL REPORTING BANKS	274	183	91	34	28	29

Initiative Measures

- ^a Based on results of a questionnaire survey. See Appendix A for coverage of survey and questionnaire used.
- ^b Total deposits in thousands of dollars. Each size class is exclusive of the lower limit and inclusive of the upper.
- ^c Each size class is inclusive of the lower limit and exclusive of the upper.

originated by manufacturers and distributors or by making installment cash loans direct to the purchasers of the equipment and secured by the equipment acquired, is summarized in Table 1. As an over-all figure it may be said that about one out of every three banks was engaged in equipment financing in some one of the forms indicated. However, banks of larger size entered this field more frequently than banks of smaller deposit size. Thus, of the reporting banks that had deposits of \$1 million or less, about one out of every five banks was engaged in equipment financing, while every other bank of those having deposits of over \$10 million reported equipment financing.

Table 1 also compares the number of reporting banks engaged in equipment financing with the number of reporting banks not engaged in this type of financing, according to the size of the center of population in which the institution is located. It shows that, in general, a larger proportion of banks in the larger centers of population are engaged in equipment financing than of banks in the smaller centers of population. Thus, of the banks in places of under 10,000 population, only every fourth bank reported activity in this field, while of the banks in places of 100,000 population or over, every other bank reported doing some equipment financing.

Finally, an analysis was made of the extent of bank activity in equipment financing in different regions. This showed very little difference between regions in the percentage of banks doing equipment financing. It is interesting to note that the frequency of bank activity, as revealed by this sample, is lowest in New England and next lowest in the West South Central states. The West South Central result may be explained by reference to the economic character of the region but not that for the New England states. It is probable that here the results merely reflect a slower development of equipment financing than in other regions of comparable business activity. (See also Chart 1.)

The foregoing has dealt exclusively with the frequency with which commercial banks of different sizes and locations are engaged in equipment financing, either through discounting installment paper or making installment equipment loans. Tables 2 and 3, on the other hand, show the relative importance of equipment financing for banks of different types and sizes. Several conclusions

APPROXIMATE PERCENTAGE OF BANKS ENGAGED IN EQUIPMENT FINANCING, BY CLASS OF BANK[Ⓞ]

DEPOSIT SIZE OF BANK (IN THOUSANDS)

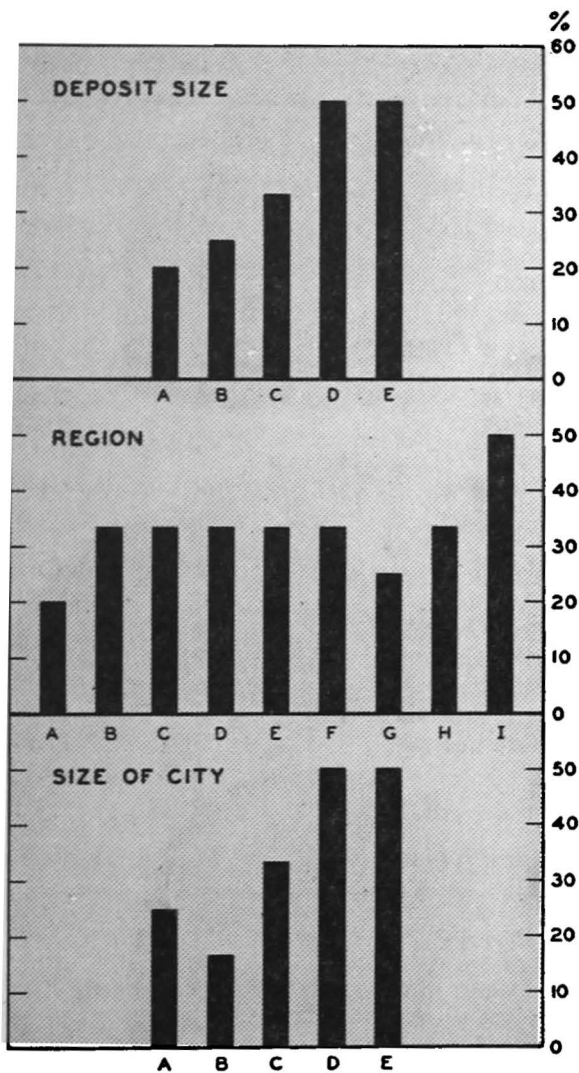
- A = \$1000 OR LESS
- B = 1000 - 5000
- C = 5000 - 10,000
- D = 10,000 - 50,000
- E = OVER 50,000

REGION

- A = NEW ENGLAND
- B = MIDDLE ATLANTIC
- C = EAST NORTH CENTRAL
- D = WEST NORTH CENTRAL
- E = SOUTH ATLANTIC
- F = EAST SOUTH CENTRAL
- G = WEST SOUTH CENTRAL
- H = MOUNTAIN
- I = PACIFIC

SIZE OF CITY

- A = UNDER 10,000
- B = 10,000 - 50,000
- C = 50,000 - 100,000
- D = 100,000 - 500,000
- E = 500,000 AND OVER



[Ⓞ] BASED ON A SAMPLE STUDY. SEE TABLE I.

Table 2—INSTALMENT EQUIPMENT PAPER IN AMOUNT, AND AS A PERCENT OF TOTAL LOANS, AS OF MID-1941, BY DEPOSIT SIZE OF BANK, SIZE OF POPULATION CENTER AND REGION IN WHICH BANK IS LOCATED*

	Number of Banks	Total Loans (000)	Instalment Equipment Paper Outstanding	
			Amount (000)	As a Percent of Total Loans
<i>Deposit Size of Bank^b</i>				
\$1,000 or less	10	\$3,256	\$244	7.5%
1,000-5,000	17	21,837	461	2.1
5,000-10,000	5	10,689	310	2.9
10,000-50,000	16	150,900	1,830	1.2
Over 50,000	13	1,323,520	8,259	.6
<i>Size of Center of Population*</i>				
Under 10,000	14	8,195	369	4.5
10,000-50,000	8	18,633	194	1.0
50,000-100,000	7	20,332	223	1.1
100,000-500,000	22	307,782	2,933	1.0
500,000 and over	10	1,155,260	7,384	.6
<i>Region</i>				
New England	2	5,519	35	.6
Middle Atlantic	18	420,535	4,363	1.0
East North Central	10	80,411	2,861	3.6
West North Central	10	87,717	551	.6
South Atlantic	6	37,981	535	1.4
East South Central	3	12,884	192	1.5
West South Central	3	21,159	284	1.3
Mountain	4	8,497	87	1.0
Pacific	5	835,499	2,196	.3
ALL REPORTING BANKS	61	\$1,510,202	\$11,104	.7%

* Based on a questionnaire survey. See Appendix A for coverage of survey and questionnaire used.

^b Total deposits in thousands of dollars. Each size class is exclusive of the lower limit and inclusive of the upper.

* Each size class is inclusive of the lower limit and exclusive of the upper.

regarding equipment financing by banks can be drawn from these tables.

First, equipment financing is relatively unimportant as a component of the total loans and discounts of commercial banks. For all reporting banks combined, only .7 percent of total loans and discounts was made up of discounted instalment equipment paper, and 1.3 percent of instalment loans secured by equipment;

Table 3—INSTALMENT EQUIPMENT LOANS IN AMOUNT, AND AS A PERCENT OF TOTAL LOANS, AS OF MID-1941, BY DEPOSIT SIZE OF BANK, SIZE OF POPULATION CENTER AND REGION IN WHICH BANK IS LOCATED^a

	Number of Banks	Total Loans (000)	Instalment Equipment Loans Outstanding	
			Amount (000)	As a Percent of Total Loans
<i>Deposit Size of Bank^b</i>				
\$1,000 or less	9	\$2,844	\$46	1.6%
1,000-5,000	14	13,514	476	3.5
5,000-10,000	5	15,772	445	2.8
10,000-50,000	17	150,333	2,702	1.8
Over 50,000	17	882,965	10,618	1.2
<i>Size of Center of Population^c</i>				
Under 10,000	13	8,104	550	6.8
10,000-50,000	3	11,845	233	2.0
50,000-100,000	8	18,957	232	1.2
100,000-500,000	21	350,166	1,969	.6
500,000 and over	17	676,356	11,302	1.7
<i>Region</i>				
New England	3	12,975	120	.9
Middle Atlantic	14	426,516	5,908	1.4
East North Central	15	334,281	3,741	1.1
West North Central	12	167,121	2,876	1.7
South Atlantic	6	45,201	464	1.0
East South Central	2	29,201	549	1.9
West South Central	2	6,794	9	.1
Mountain	2	479	22	4.6
Pacific	6	42,860	596	1.4
ALL REPORTING BANKS	62	\$1,065,428	\$14,286	1.3%

^a Based on results of a questionnaire survey. See Appendix A for coverage of survey and questionnaire used.

^b Total deposits in thousands of dollars. Each size class is exclusive of the lower limit and inclusive of the upper.

^c Each size class is inclusive of the lower limit and exclusive of the upper.

thus, only 2 percent of the total loans and discounts of participating banks were in these two categories.³

Second, equipment credit generally comprises a larger part of the total loans and discounts of banks of smaller size and of those located in smaller places than of the larger banks and those in larger places.

³ It should be noted, moreover, that this statement refers only to the banks actually engaged in equipment financing.

Third, among the reporting banks actively engaged in equipment financing, there were no very substantial differences between the relative quantitative importance of instalment equipment loans and instalment equipment paper as bank assets. Perhaps the one exception to this is that equipment paper is relatively more important in the smallest banks and equipment loans in the largest banks.

An estimate of the total amount of assets originating in instalment equipment financing that was held by all commercial banks at the end of 1940 was made on the basis of these questionnaire returns. Table 4 shows approximately \$200 million of equipment financing paper and loans as outstanding in all operating insured commercial banks at the end of 1940.⁴

Since total loans and discounts of commercial banks were about 15 percent higher at the end of 1941 than at the end of 1940, it can be further estimated that equipment loans and paper held by banks at the end of 1941 were around \$230 million.

Life Insurance Companies

The activity of life insurance companies in the equipment financing market is largely restricted to holdings of equipment trust certificates, although there is some tendency for insurance companies to undertake equipment financing transactions in which their security interest is established by means of a chattel mortgage or, to a lesser extent, by a conditional sales contract without the use of the equipment trust certificate. Equipment trust certificate financing has not been described in the present study because it represents a relatively conventional procedure. Nonetheless, its importance for insurance companies is such that it must be taken account of in any description of their equipment financing activities.

Unfortunately, the information available on assets held by life insurance companies is not sufficiently detailed to support definite quantitative estimates of the amounts of equipment financing conducted on the trust certificate and straight conditional sales or chattel mortgage bases. It is possible, however, to indicate the

⁴This estimate was made by first computing the ratios of instalment equipment loans and of discounted instalment equipment paper to the total loans and discounts of all reporting banks, in different size classes. These ratios are given in Table 4. The ratios were then applied to the total loans and discounts of all operating insured banks as of December 31, 1940, and separate estimates made for each group of banks.

Table 4—INSTALMENT EQUIPMENT FINANCING BY REPORTING COMMERCIAL BANKS AND ESTIMATES FOR ALL COMMERCIAL BANKS, AT END OF 1940

Deposit Size of Bank ^a	BANKS REPORTING ON EQUIPMENT FINANCING ^b				Total Loans and Discounts of All In- sured banks ^c (000)	Estimated Instalment Equipment Financing Outstanding			Total Loans of Reporting Banks as a % of Loans of All Insured Banks
	Paper		Loans			Paper	Loans	Total	
	Amount	% of Total Loans	Amount	% of Total Loans					
\$1,000 or less	\$244,023	1.37%	\$46,341	.26%	\$1,820,596	\$24,942,165	\$4,733,550	\$29,675,715	1.0%
1,000-5,000	460,724	.45	475,544	.46	3,007,123	13,532,054	13,832,766	27,364,820	3.4
5,000-10,000	310,250	.39	444,803	.56	1,266,521	4,939,432	7,092,518	12,031,950	6.3
10,000-50,000	1,829,929	.49	2,704,547	.71	2,661,226	13,040,007	18,894,705	31,934,712	14.3
Over 50,000	8,258,742	.40	10,617,564	.81	8,281,876	33,127,504	67,083,196	100,210,700	25.2
TOTAL	\$11,103,668		\$14,288,799		\$17,037,342	\$89,581,162	\$111,636,735	\$201,217,897	15.7%

^a Total deposits in thousands of dollars. Each size class is exclusive of the lower limit and inclusive of the upper.

^b Reporting banks include both those engaged in equipment financing and those not so engaged. Percentages to total loans are different, therefore, from those shown in Tables 2 and 3 which refer only to participating banks.

^c Federal Deposit Insurance Corporation, *Annual Report, 1940*, p. 171.

importance of liens on equipment as a security device used by life insurance companies in their medium-term private placements without specifying the particular types of liens concerned. The five largest life insurance companies reported to the National Bureau the amount of privately purchased securities, with terms at time of issuance of 15 years or less, that they held at the end of 1940. In all, 217 issues with an outstanding value of \$824 million were listed. Of these issues, 23 (11 percent of the number) amounting to \$80 million (almost 10 percent of the total amount of reported issues) were specifically indicated as being secured by liens on equipment. The liens included were equipment trust certificates, first mortgages and first liens on equipment. An additional 1.4 percent of the number and 3.5 percent of the amount of issues were secured otherwise—for example, by combinations of security, preferred ship mortgages, and collateral trust notes.⁵

Most of the equipment financing holdings of the five life insurance companies were in the form of equipment trust certificates. In three instances, however, the issue in question was described simply as secured by a first lien on equipment (in contrast to a mortgage or an equipment trust certificate), which is understood to refer to the lien established by a conditional sales contract. In two cases the issue was described as secured by a combination of first mortgage and first lien on equipment. Concerns obtaining credit from life insurance companies on the basis of a first lien on equipment include railroads, a company leasing tank cars, a department store and a natural gas producer.

The use of the conditional sales contract rather than the equipment trust certificate in the financing of heavy equipment sales seems to be associated with a change in marketing conditions during the thirties. Pressure on manufacturers to increase sales led to the use of the instalment sales device and thus to the conditional sales contract or chattel mortgage as a means of retaining title to, or lien on, the goods sold. The existence of a "buyers' market" tended to place the responsibility for establishing credit facilities

⁵ The wide coverage of this sample is indicated by the fact that in 1938 the bonds and notes purchased privately by the five companies included in the National Bureau sample constituted 87 percent of all bonds purchased privately by the 26 largest life insurance companies. For a further discussion of the life insurance company sample see National Bureau of Economic Research (Financial Research Program), *Term Lending to Business*, by Neil H. Jacoby and R. J. Saulnier (1942) Appendix B.

on the seller rather than on the buyer. While the equipment trust certificate establishes a relation between buyer and lender, conditional sales financing involves a relationship between seller and lender. Chattel mortgages and conditional sales have an additional advantage: if the seller does not wish to finance the sale himself over its whole period, the quality of the paper he sells or assigns to a financial institution is greatly improved by carrying his endorsement along with the right to repossess the equipment. This was an important advantage during the depression when the financial conditions of so many customers had deteriorated to the point where it might have been difficult for them to acquire credit without the supplementary endorsement of the equipment manufacturer.

In addition to the greater protection that the conditional sales contract or assigned chattel mortgage financing may give the holder, by means of special recourse provisions, they also provide the same conveniences as the equipment trust certificate with regard to maturity, security interest, repayment provisions, and possession and use of the equipment financed. Considerations of this kind are doubtless responsible for the increasing use of the conditional sales contract and chattel mortgage. No information is available on the relative importance of the use of these documents in the marketing of different types of equipment but it is known that they have been used widely in financing acquisitions of busses, singly and in fleets, and of commercial aircraft.

It has been estimated⁶ that the total amount of medium-term bonds and notes and business mortgage loans acquired privately by life insurance companies and outstanding at the end of 1940 was \$900 million. Since 10 percent of the amount reported on was secured by liens on equipment, it is estimated that life insurance companies held approximately \$90 million in equipment financing at the end of 1940 and that probably not more than \$25 million of this was originated on some other than the conventional equipment trust receipt basis. On the assumption of an increase comparable to that shown by commercial finance companies, the 1941 year-end holding of instalment equipment receivables by insurance companies may be estimated at \$30 million. Again it should be

⁶ See Neil H. Jacoby and R. J. Saulnier, *op. cit.*, p. 30.

emphasized that this is exclusive of equipment trust receipt holdings.

Manufacturers and Distributors

In order to obtain some indication of the activities of manufacturers of commercial and industrial equipment in the instalment financing field, a special questionnaire was distributed by the National Bureau in the summer of 1941 to 365 manufacturing concerns. These concerns were engaged in manufacturing income-producing machinery and equipment and were selected to secure the widest possible coverage of products in this field. Of the companies receiving questionnaires 153 replied; of these, 54 or about 35 percent stated that their product was sold on an instalment payment basis. Table 5 presents the results of this questionnaire, classifying the replies according to the principal product of the respondent. The data refer to sales made by the manufacturer. Since these sales are frequently to distributors the fact that a manufacturer reports no instalment sales does not mean that the product is not sold by a distributor on an instalment basis.

Of the groups of manufacturers containing a reasonably large representation of companies and having a majority *not* selling on an instalment plan, the following are the most outstanding: air conditioning equipment, automotive equipment and accessories, building materials and equipment, electrical equipment, machine tools, oil well equipment, and steel mill equipment. As stated immediately above, it must not be inferred from these results that products of these companies are not available to ultimate purchasers on an instalment payment basis because the questionnaire applied only to financing by the manufacturer and in many cases it is known that the products are sold to distributors who merchandise them, in part at least, on a time-sales basis. This is certainly true of agricultural equipment, automotive equipment and accessories, much electrical equipment (particularly smaller appliances) and oil well equipment. In some cases, manufacturers have reported that the instalment sales method was seldom used, and have attributed this mainly to the highly specialized character of the equipment and to the fact that buyers have ample cash or other sources of readily available credit.

Table 5—NUMBER OF MANUFACTURING COMPANIES REPORTING INSTALMENT SALES AND NON-INSTALMENT SALES, BY TYPE OF PRODUCT

<i>Product</i>	<i>Number of Concerns</i>		
	Instalment	Non-Instalment	Total
Agricultural equipment	2	2	4
Air conditioning equipment	2	7	9
Amusement equipment	2	2	4
Automotive equipment and accessories	..	7	7
Aviation equipment and accessories	..	1	1
Barber and beauty parlor equipment	1	..	1
Bottling machinery	1	..	1
Building materials and equipment	1	12	13
Diesel engines	1	1	2
Electrical equipment	1	12	13
Excavating machinery	2	1	3
Food, tobacco, dairy and bakery equipment	3	2	5
Gasoline dispensing pumps and garage equipment	4	1	5
Hardware	..	3	3
Heavy construction machinery and equipment	2	1	3
Laundry machinery	3	..	3
Machine tools	1	12	13
Machinery (heavy)	3	2	5
Machinery (mining)	1	3	4
Machinery (miscellaneous)	5	9	14
Medical, dental and hospital equipment	1	3	4
Office equipment and machinery	4	3	7
Oil well equipment	2	5	7
Power plant equipment	..	2	2
Printing machinery	3	..	3
Road building machinery	1	..	1
Shoemaking and shoe repairing machinery	1	..	1
Steel mill equipment	..	3	3
Store fixtures and equipment	4	2	6
Textile machinery	2	2	4
Tractors	2	..	2
TOTAL	55	98	153

The classes showing a majority of manufacturers selling on the instalment plan are food, tobacco, dairy and bakery equipment, laundry and printing machinery, gasoline dispensing pumps, garage equipment, and store fixtures and equipment. Representation in other classes is either too small to permit of even tentative conclusions on the prevalence of instalment selling, or else there are nearly equal divisions between companies selling on the instalment plan and companies not using that sales device.

Manufacturers reporting instalment sales were asked whether

they (a) carried their own receivables, (b) pledged them with some financial institution as security for a loan, or (c) utilized the services of some separate financial agency. Information on this point was received from 47 manufacturing concerns; of these, 32 reported that they carried their own receivables, utilizing their own capital funds to this end or borrowing on an unsecured basis from commercial banks to meet the capital requirements involved. Five companies reported that their receivables were pledged with banks in order to obtain working funds; 3 reported that the receivables were sold to an independent finance company; 7 companies reported that they utilized more than one method of financing.

The total 1940 instalment sales of these 47 companies, as reported in the questionnaire returns, amounted to approximately \$96 million. While it may be objected that the size of this sample of companies is too small to permit general conclusions, the economic importance of the reporting companies far transcends their numerical significance; respondents did an aggregate sales volume in 1940 of approximately \$1.3 billion, amounting to about 25 percent of the sales of all commercial and industrial equipment likely to be sold on an instalment payment basis. While this evidence does show that instalment selling is an important merchandising method for many machine and equipment manufacturing companies and that, to a very large extent, the receivables thus originated are carried by the manufacturing companies on their own resources, it is not possible from this evidence alone to reach any definite estimate of the amount of instalment selling financed by manufacturers. As a very rough approximation, based on a study of these questionnaire returns and the position of the respondents in the whole industry, we may place the total 1940 volume of instalment selling of commercial and industrial equipment that was financed by manufacturers themselves at between \$200 and \$300 million, and the instalment receivables held by these companies at the end of 1940 at between \$125 and \$200 million.

There are no data available on machinery and equipment distributors on which to estimate the amount of instalment equipment financing conducted by these companies on their own or borrowed funds. Recent information does show, however, that a very substantial amount of sales of equipment, machinery and fixtures is made through non-manufacturing enterprises. According

to the Census of Business for 1939, wholesale merchants and industrial distributors dealing in machinery, equipment and supplies, trucks and tractors, and office furniture numbered about 10,000 establishments and had gross sales in that year of about \$1.1 billion. Similar outlets dealing in plumbing and heating equipment and supplies numbered 2,200 and had gross sales of \$375 million. No information is available on the proportion of these sales made on an instalment basis. It is probable that this was a substantial amount, perhaps as much as one half, and that it provides the primary source for instalment equipment sales paper discounted by commercial finance companies and banks.

This would, of course, enter into our estimates of instalment equipment receivables held by financial institutions; in order to round out our estimates it would be desirable to know the amount of instalment equipment receivables held by the distributors themselves. Unfortunately there are no direct data on this point and no special survey was made in order to obtain data for an estimate because of the large number and small average size of establishments and because our main interest was in the procedures followed by the financial institutions active in this credit area. It is unlikely, however, that the amount of instalment receivables held by distributors on their own account is as large as the amount held by manufacturers because, first, the sales of distributors in the machinery and equipment lines are much less, about 25 percent of the sales of manufacturers, and second, the capital resources of distributors are, in general, so much less adequate than those of manufacturing companies that we would expect distributors to discount instalment receivables with some financial institution rather than carry them on their own capital.

Summarizing, these estimates indicate that at the end of 1940 financing institutions held about \$400 million in instalment receivables originating in sales of commercial and industrial equipment. Of this amount it has been estimated that \$200 million was held by commercial banks, \$175 million by commercial finance companies and \$25 million (excluding equipment trust certificates) by life insurance companies. At the end of 1941 the total of outstandings for financial institutions has been estimated at \$470 million, of which \$210 million was held by commercial finance companies, \$230 million by commercial banks, \$30 million by insurance com-

panies. In addition, manufacturers held instalment receivables estimated for the end of 1940 at between \$125 and \$200 million; distributors probably held an amount of instalment receivables on their own capital not in excess of the figures for manufacturers and more likely a smaller amount. It should be emphasized, however, that the estimates for manufacturers and distributors are very rough and are based on quite inadequate statistical data; these estimates should be used only as broad indications of the participation of manufacturers and distributors in equipment financing.

Equipment Financing Market

THE MARKET SERVED by equipment financing agencies can be described in two ways, in terms of the types of equipment financed and of the size and industrial characteristics of the concerns acquiring equipment on an instalment payment basis. Since the financing agencies often have only indirect dealings with the ultimate purchasers of equipment, it will be necessary also to describe the sources from which these agencies acquire instalment sales contracts.

The task of formulating a factual description of the characteristics of this market is particularly difficult because only a limited amount of information can be obtained directly from financial institutions; available data provide only a general picture of the types of equipment financed on this basis. It is even more difficult to obtain data describing the chief characteristics of businesses purchasing equipment on an instalment basis. However, some inferences can be made as to the kinds of concerns that make up the demand side of the market; these inferences are drawn from information made available by several financing agencies, from a special study based on the mercantile credit reports of Dun & Bradstreet, Inc., and from the nature of the equipment itself.

Types of Equipment Financed

The great diversity of types of equipment financed by instalment financing agencies is indicated by the following data, based upon detailed reports submitted by seven commercial banks and one large commercial finance company as of the middle of 1941. The data are best described as a classification of "deals," where a deal is a continuing arrangement between a financing agency and a vendor of income-producing equipment whereby the former purchases instalment contracts arising out of instalment sales by the

*Equipment Financing**Source of Instalment Paper*

	Manufac- turers' Deals	Distrib- utors' Deals
Hotel, restaurant, bar, fountain and store fixtures *	12	13
Commercial refrigeration and air conditioning	5	16
Barber and beauty parlor equipment	2	18
Road building, construction, excavation and farm machinery	3	9
Transportation equipment (busses, trailers, trucks, barges)	7*	2
Cleaning, laundry, and pressing machinery	1	7
Diesel engines	4	2
Medical, dental and surgical equipment	1	4
Baking machinery	0	3
Dairy and poultry farm equipment	3	1
Diners	3	0
Garage and service station equipment	0	2
Machine tools	0	3
Bowling and billiard equipment	1	1
Printing machinery	0	2
Other machinery and equipment	8	2
TOTAL	50	85

* Includes 4 deals unspecified as to source.

latter. The largest number of deals for the reporting agencies was in equipment sold to various kinds of service enterprises; of 135 separate deals, equipment and fixtures for stores, hotels, restaurants, bars and soda fountains provided 25 accounts, while 20 accounts arose out of sales of equipment for barber shops and beauty parlors. Another important type of financing is that arising out of installations of commercial refrigeration and air conditioning equipment. Unfortunately it is not possible to discuss the relative importance of these several types of business since there are no data on the dollar volume of paper arising from sales of the different types of equipment.

Information provided by two commercial finance companies does make it possible to rank the various types of equipment according to dollar volume of outstandings. It should be cautioned at this point, however, that generalizations as to the kinds of equipment paper held by equipment finance companies cannot be drawn from the experience of any two companies; a substantial volume of outstandings can be built up by one company out of a special contract with some one manufacturer, covering a type of equipment paper not available in any great volume to other financing

concerns. It is the diversity of equipment paper held even by individual financing agencies, and the change in distribution that occurs over short periods that are of principal interest in the following materials.

One of the finance companies reported a percentage distribution of outstanding instalment equipment paper as follows:¹

	1940	1937
Furniture	19.8%	7.2%
Automatic refrigeration	13.7	6.2
Airplanes	10.0	2.3
Automatic phonographs	7.1	9.5
Theater and sound equipment	6.3	8.3
Coin operated dispensers	5.8	..
Automatic coal stokers	5.8	26.6
Beauty parlor equipment	3.5	9.8
Traffic controls	3.3	2.8
Laundry and dry cleaning machinery	2.9	.6
Busses	2.5	1.3
Printing machinery	2.5	1.9
Bakery equipment	1.7	.5
Store fixtures	1.7	5.6
Air conditioning equipment	1.0	1.3
Office appliances	.9	..
Miscellaneous machinery and equipment*	6.2	8.2
Consumer goods and unclassified equipment	5.3	7.9
TOTAL	100.0%	100.0%
	\$5,923,000	\$6,565,000

* Includes the following in approximately equal proportions: industrial trailers, miscellaneous machinery, vulcanizing and garage equipment, road building machinery, packing house equipment, industrial cutting and sewing machinery, textile machinery, medical equipment, elevators.

The holdings of instalment industrial lien notes of the other finance company, classified by the type of product on which a lien was held, are shown in Table 6.

That this wide diversity of types of equipment financed under the instalment plan has been characteristic of the business for over a decade is evidenced in an address by H. B. Lewis, Vice-President of Commercial Credit Company, before the American Management Association in November 1931.² Mr. Lewis listed the follow-

¹ Based on reports to the Securities and Exchange Commission. Data are for year ends.

² H. B. Lewis, *Installment Selling of Industrial Equipment* (American Management Association, Industrial Marketing Series, I. M. 17), p. 4.

Table 6—PERCENTAGE DISTRIBUTION OF NOTE HOLDINGS OF A COMMERCIAL FINANCE COMPANY, 1936, 1938-40, BY TYPE OF EQUIPMENT FINANCED*

Equipment	1940	1939	1938	1936
Printing machinery	28.0%	20.9%	27.5%	20.5%
Hotel furnishings	25.1	11.6	..	..
Dry cleaning equipment	13.7	17.4	15.5	6.1
Laundry machinery	12.9	14.9	22.2	21.1
Bottling machinery	4.5	5.7	3.9	..
Vending machinery	4.1	..	..	..
Textile and knitting machinery	3.7	7.1	6.0	12.6
Store and fountain equipment	2.6	..	..	..
Lithographing equipment	..	10.6	10.7	6.7
Bakery equipment	..	3.4	3.3	..
Box-making equipment	..	2.0	..	..
Metal stamping machinery	..	..	2.2	..
Folding machinery	..	..	..	12.8
Brewery equipment	..	..	..	11.8
Miscellaneous	5.4	6.4	8.7	8.4
TOTAL	100.0%	100.0%	100.0%	100.0%
	\$1,863,000	\$1,345,000	\$1,271,000	\$1,220,000

* Year-end data from reports to the Securities and Exchange Commission.

ing as types of industrial equipment which were being sold at that time on an instalment payment basis and being financed by Commercial Credit Company:

automotive equipment, amusement equipment, bakers' and confectionery equipment, barber and beauty parlor equipment, boilers and tanks, book-binding machinery, bottling and glass machinery, butchers' equipment, canning machinery, cigar and cigarette machinery, combustion equipment, concrete mixing machinery, contractors' equipment, dairy equipment, Diesel engines, dental equipment, electrical appliances, electric furnaces, electric motors, floor waxing machinery, gas and oil engines, filing machinery, foundry and steel machinery, hotel equipment, hat blocking machinery, hoists, cranes and conveyors, excavating machinery, flour mill equipment, heating systems, ice machinery, irrigating equipment, laundry machinery, machine tools, marine equipment, mill supplies, mining equipment, oil burners, oil well equipment, package wrapping equipment, paper mill machinery, musicians' equipment, printing machinery, projecting and sound reproducing equipment, pumps and compressors, refrigerators, road machinery, rubber specialty machinery, sewing machinery, shoe manufacturing and repairing machinery, soda fountains, fumigating and spraying equipment, store fixtures, stoves and ranges, textile machinery and wood working machinery.

From this evidence one generalization can be made as to types of products entering into equipment financing, namely that they are usually movable and do not become part of the purchaser's real estate. This is an important consideration because it affects the security interest of the financing agency. There are exceptions, of course, in which the equipment, or major parts of it, become a part of the real property of the plant or store in which it is installed, for example, heating and air conditioning installations and automatic power piping and sprinkler systems. While installations of this type may not be readily removable, their acquisition on an instalment payment basis becomes feasible if they are a critical part of the plant's operating process and can be easily rendered unworkable by the financing agency in the event of default. This can be done with even the heaviest Diesel electric-generating plants; as another example, the nozzles can be taken from an automatic sprinkler system and, since the insurance rate payable on the property increases immediately, this exerts considerable pressure on the debtor to correct the default. The possibility of making partial repossessions of this sort is clearly important in widening the range of installations that can be financed on an instalment payment basis.

Finally, it should be indicated that equipment purchased on an instalment payment basis is sometimes acquired not as a single unit but as a collection of items. This is frequently the case with sales of garage and service station equipment; a number of items of equipment are incorporated into a single conditional sales contract and a single instalment note or series of notes. This has the advantage, for the buyer, of identical terms on all items and, for the financing agency, of greater economy in collection. However, in the great majority of cases the instalment equipment paper represents the purchase of a single piece of equipment.

Types of Concerns Acquiring Equipment on an Instalment Payment Basis

Credit officers experienced in equipment financing contend that all types of concerns from the smallest to the very largest are actual or potential instalment buyers of income-producing equipment. While this is no doubt true, most instalment sales are confined to a limited variety of types of concerns. At any rate, the

frequency with which this credit device is utilized is much higher in some lines of business than in others.

Our principal source of information on the types of concerns acquiring equipment on an instalment basis was a study of the financial statements of a large sample of business enterprises. The study was based on 6,181 credit reports prepared by Dun & Bradstreet, Inc., referring to December 31, 1939, or to a date within six months earlier or later, and covering five major industrial divisions: manufacturing, wholesale trade, retail trade, construction and service.³

In this analysis the most direct information that could be obtained on equipment financing consisted of statements in the credit reports showing whether the individual concerns were indebted on a chattel mortgage or conditional sales contract basis, or were using equipment under a bailment lease arrangement.

The principal defect of these data is that they may include certain debts not incurred for the purpose of acquiring income-producing equipment on an instalment payment basis and thus not within the scope of our definition. It is quite possible that some of the chattel mortgages reported accompany debts entered into for the purpose of general financing. However, that this is not a major source of error has been indicated by a supplementary investigation which showed that of the 444 cases in the Dun & Bradstreet reports only 17 were chattel mortgages covering assets other than equipment or automobiles and trucks. Thus the data can be used for a rough indication of the market for equipment financing.

Three main conclusions may be drawn from Table 7 concerning the types of concerns most likely to acquire commercial and industrial equipment on an instalment payment basis. First, this type of credit is extended most frequently to concerns in service industries; retail trade is the industrial group showing the next highest frequency of use, and manufacturing next. Second, a larger percentage of concerns with a low credit rating than of concerns with a high rating have been extended credit of this sort. Third, in general, a larger proportion of small concerns than of large concerns obtained income-producing equipment on this basis. The

³ The procedures followed in selecting the sample and analyzing the balance-sheet data are discussed in an unpublished study of the National Bureau of Economic Research (Financial Research Program), *Industrial and Commercial Debt—A Balance Sheet Analysis, 1939*, by Carl Kaysen (ms. 1942) pp. 3-10.

FACILITIES, BY MAIN INDUSTRY GROUPS, SIZE OF CONCERN AND CREDIT RATING^a

Credit Rating— by Industry	ASSET SIZE OF CONCERN ^b									
	Less than \$25,000		\$25,000— 250,000		\$250,000— 5,000,000		\$5,000,000 and Over		All Concerns	
	No.	%	No.	%	No.	%	No.	%	No.	%
<i>Manufacturing</i>										
High	254	5.5%	907	5.3%	731	2.3%	207	.0%	2,099	3.8%
Low	108	25.0	232	13.4	118	5.1	12	.0	470	13.6
Total	362	11.3	1,139	6.9	849	2.7	219	.0	2,569	5.6
<i>Retail Trade</i>										
High	595	8.7	423	2.4	11	.0	0	.0	1,029	6.0
Low	386	24.1	160	12.5	1	.0	0	.0	547	20.7
Total	981	14.8	583	5.1	12	.0	0	.0	1,576	11.1
<i>Wholesale Trade</i>										
High	177	5.1	585	3.1	149	1.3	6	.0	917	3.2
Low	26	11.5	151	9.9	20	.0	0	.0	197	9.1
Total	203	5.9	736	4.5	169	1.2	6	.0	1,114	4.2
<i>Service</i>										
High	126	13.5	118	7.6	11	.0	0	.0	255	10.2
Low	115	34.8	60	23.3	7	28.6	3	.0	185	30.3
Total	241	23.7	178	12.9	18	11.1	3	.0	440	18.6
<i>Construction</i>										
High	109	5.5	124	.8	11	.0	2	.0	246	2.8
Low	52	13.5	23	4.3	1	.0	0	.0	76	10.5
Total	161	8.1	147	1.4	12	.0	2	.0	322	4.7

^a Based upon analysis of Dun & Bradstreet credit reports relating to dates within the 12-month period July 1939 to June 1940; the bulk of reports were for December 31, 1939. Concerns were counted as using equipment financing facilities if they were indebted on a conditional sales contract, bailment lease or chattel mortgage basis.

^b Each size class is inclusive of the lower limit and exclusive of the upper.

last conclusion applies to each of the major industrial groups, but it should be pointed out that even the relatively large concerns in the service industries are quite frequently users of equipment financing facilities. There are, of course, certain relationships between these characteristics. For example, concerns in the service industries are mostly small and groups of small concerns tend to have a higher proportion of low credit ratings than groups of large concerns. (See also Chart 2.)

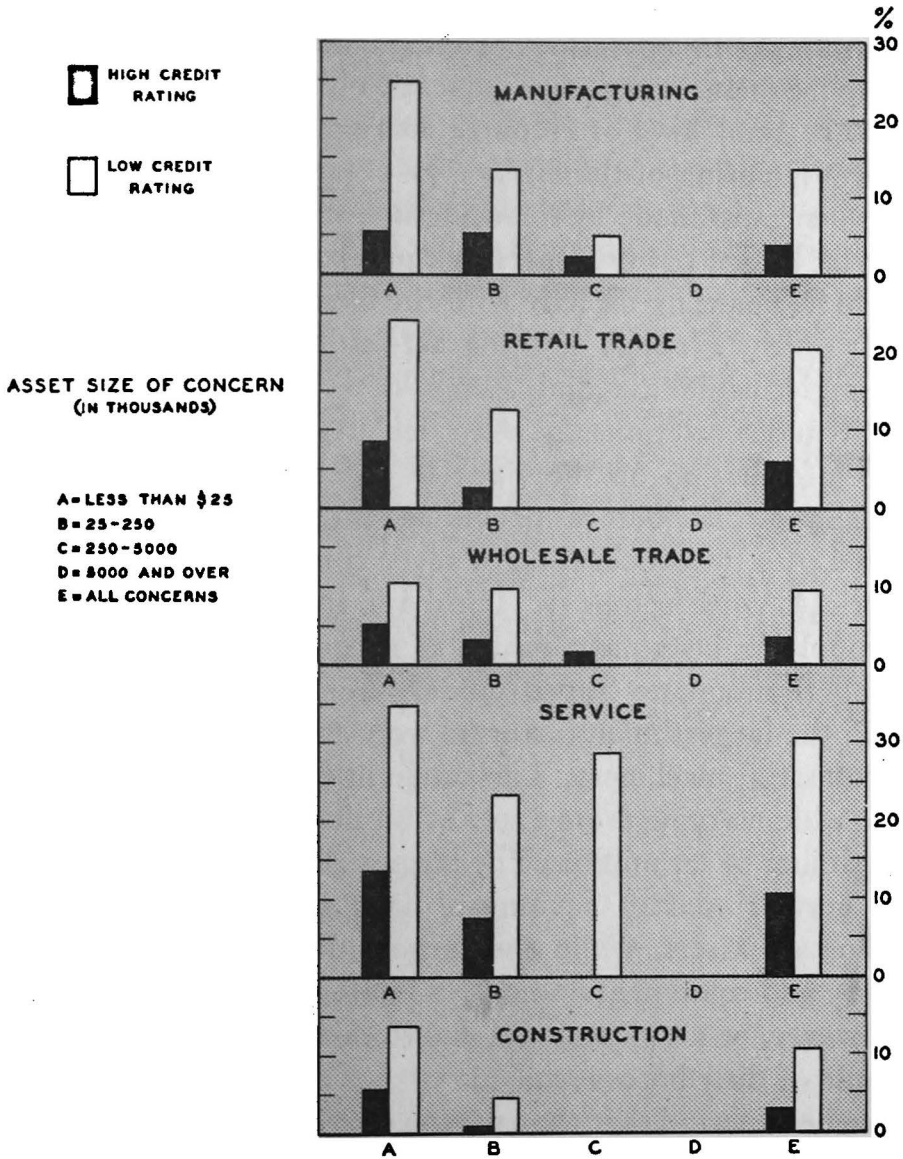
The information assembled in connection with the Dun & Bradstreet study was examined by minor industrial groupings as a supplement to the analysis presented in Table 7. When the subdivisions of the manufacturing group are studied with respect to the use of chattel mortgage credit, it is found that in only six of the minor industrial groups were 8 percent or more of the concerns indebted on a chattel mortgage basis. These subdivisions were as follows: printing and publishing (28 percent); paper boxes, etc. (14 percent); baking (11 percent); beer and alcoholic beverages (9 percent); stone (9 percent); saw and planing mills (8 percent). Among the minor subdivisions of the retail trade group, the following were the most frequent users of chattel mortgage credit: restaurants (45 percent); grocery and meat (27 percent); drug stores (23 percent); grocers (21 percent); filling stations (12 percent).

The manufacturing and retail trade samples assembled in connection with this study were sufficiently diversified to cover all principal phases of these major industrial groupings, but only five branches of the service industry were analyzed. These subdivisions and the percentages of concerns within them using equipment financing credit were as follows: cleaners and dyers (33 percent); laundries (25 percent); funeral directors (13 percent); year-round hotels (12 percent); garages (10 percent). In no one of the subdivisions of wholesale trade or of the construction industry were more than 10 percent of the concerns using equipment financing.

Sources of Instalment Equipment Receivables

In equipment financing the instalment receivables are customarily acquired by the financing agency directly, that is, through a relationship established with the manufacturer or distributor rather than

PERCENT OF CONCERNS IN SPECIFIED INDUSTRY,
 SIZE AND CREDIT-RATING CLASSES
 USING EQUIPMENT FINANCING FACILITIES[ⓐ]



[ⓐ] BASED ON SAMPLE STUDY OF DUN AND BRADSTREET CREDIT REPORTS. FOR DATA SEE TABLE 7.

directly with the buyer. Earlier in this chapter we saw that in some lines both manufacturers and distributors are important as sources of contracts, while in other lines contracts are purchased almost exclusively from one or the other. Considerable importance is attached to the relationship between the vendor of equipment and the financing agency. First, it is through this relationship that the financing agency hopes to acquire a sufficiently steady and sizable volume of business to make its operations profitable. Second, through this relationship the financing agency frequently obtains additional security by means of some kind of recourse arrangement with the vendor. Equipment financing of the direct type occurs where loans, secured by equipment, are made by financing agencies, in this case usually commercial banks, to purchasers of equipment. Where a bank prefers to do its financing directly with the buyer of equipment, this is generally on the grounds of being able to select credits more discriminatingly while avoiding being dependent for business on possibly tenuous relationships with dealers or manufacturers.

Some information on the size (in total assets) of the manufacturers and distributors providing instalment contracts was assembled with the cooperation of seven commercial banks and one commercial finance company. The data show that the manufacturers supplying instalment contracts range in size of total assets from \$30 thousand to approximately \$75 million. As would be expected, the largest manufacturers were found to be those selling heavy industrial machinery. The range in the sizes of distributors was also wide, varying from a low of \$8 thousand (in total assets) to a maximum of \$4 million. The largest distributor reported was in the service industry equipment line, a concern with around \$4 million of assets, while the largest distributor of industrial machinery and equipment had only \$2 million of assets. This result may, however, be accidental and due to the relatively small size of the sample of distributors studied.

It is to be expected that the average size of distributors originating instalment equipment receivables would be substantially smaller than the average size of manufacturers. Thus, the reporting commercial banks and commercial finance companies indicated purchases of contracts from 39 manufacturers, of which almost half had total assets of between \$100 thousand and \$500 thousand. In

contrast, approximately 50 percent of the distributors had assets of between \$50 thousand and \$250 thousand.

This information on the size of manufacturers and distributors discounting their instalment contracts with financing agencies should not be taken, of course, as setting a maximum limit on the size of concerns utilizing this type of credit service. Available statistical information does not cover the whole field but it is known that the very largest manufacturing companies discount their instalment sales contracts, sometimes under established financing plans which are arranged with commercial finance companies or commercial banks. Furthermore, there are other types of financing, essentially similar to the commercial and industrial equipment type of credit arrangement discussed above, through which relationships are established between commercial banks and distributors or manufacturers of machinery and equipment. An example of this is the arrangement by which vendors pledge instalment liens as collateral on which to borrow. Some of the very largest corporations are borrowers on this basis. Finally, it is important to note that while it is through these equipment financing arrangements that relatively *small* concerns obtain the credit necessary to acquire income-producing equipment, this end is accomplished through an arrangement which relates the financing agency to a relatively large or medium-sized corporation.

5

Characteristics of Credits

IN THIS DISCUSSION of the characteristics of instalment equipment financing we shall limit ourselves almost wholly to obligations owed by the ultimate users of equipment in the form of conditional sales contracts supported by notes or of instalment notes secured by chattel mortgages. It will not be possible, owing to the very fragmentary character of available information, to discuss fully the third type of instalment equipment financing, namely, loans to sellers of equipment secured by the assigned instalment obligations of buyers. Treating the instalment sales contracts and instalment loans separately, we shall discuss the size, down payment and maturity characteristics of the credits and the usual features of their repayment schedules.

A number of conditions combine to shape the features of equipment financing contracts. Important among these are the characteristics of the equipment being acquired; in most cases this means the characteristics of a single piece of equipment. Thus, the original amount of the contract depends in large part on the purchase price of the equipment, its maturity depends chiefly on the equipment's anticipated service life and the down payment is set with reference, among other things, to the expected repossession value of the equipment. There are other conditions, of course, that are important in determining the characteristics of equipment financing contracts, namely, the credit standing of the obligor, the type of recourse arrangement, if any, that the financing agency establishes with the manufacturer or distributor and, lastly, the competitive conditions under which contracts are acquired. Each of these conditions will be taken account of in the following discussion but, since they act jointly to determine the characteristics of equipment credits, it is generally impossible to indicate more than qualitatively the specific effect of any one.

Face Amount of Contracts

Income-producing equipment is far from a standardized product but items of equipment can be grouped into broad classes to discuss the characteristics of the instalment credits that arise out of their

*Table 8—CONTRACT AMOUNTS IN EQUIPMENT FINANCING, BY TYPE OF EQUIPMENT**

<i>Type of Equipment</i>	<i>Number of Companies Reporting</i>	<i>Range of Face Amount of Contracts</i>	
Dental, medical and surgical equipment	6	\$100-4,000	
Beauty parlor and barber equipment	19	\$40-6,000	(A few contracts at \$10,000)
Store, restaurant, hotel and bar equipment (inc. food machinery)	26	\$50-6,700	(A few contracts from \$10,000 to \$12,000)
Typewriters, cash registers, calculators and accounting machines	4	\$30-10,000	
Textile machinery	5	\$200-75,000	
Heating and plumbing	4	\$50-15,000	
Bottling equipment	2	\$50-20,000	
Printing machinery	4	\$500-150,000	
Commercial laundry, dry cleaning and pressing machinery	10	\$100-156,000	
Power shovels, cranes, draglines, scrapers, crushers and rollers	6	\$1,000-50,000	(A few contracts as high as \$500,000)
Tractors and construction, road building and farm machinery	16	\$250-85,000	(One contract at \$140,000)
Garage and service station equipment	4	\$75-3,000	
Diesel engines	7	\$800-100,000	
Compressors, mining and oil field equipment	4	\$1,000-25,000	
Paving equipment	2	\$2,000-30,000	
Commercial refrigeration and air conditioning	20	\$225-20,000	
Soda fountains, ice cream cabinets, freezers, carbonators and soda coolers	3	\$160-5,000	
Dairy equipment	2	\$175-2,300	
Baking equipment	3	\$200-5,600	
Diners	3	\$1,700-19,000	
Trucks, trailers and barges	9	\$1,000-60,000	
Bowling and billiard equipment	2	\$130-15,000	
Commercial musical instruments	2	\$1,200-10,000	
Machine tools	3	\$500-4,000	

* Based on questionnaire returns from 166 manufacturers and financing agencies received around mid-1941.

sale.¹ This has been done in Table 8, which presents 24 classes of commercial and industrial equipment and gives the range of original contract amounts for each class. The largest contracts reported were for \$500,000, representing obligations growing out of the purchase of what must have been several units of heavy excavation equipment; the smallest were for \$30, representing typewriter sales. Contracts of largest amount seem to arise out of the purchase of manufacturing and construction machinery and equipment (for example, textile, printing, and commercial laundry machinery, Diesel engines, power shovels, trailers and barges). In general, contracts of small minimum amount arise out of equipment sales to service industry concerns, where maximum instalment credits rarely exceed \$4,000 or \$5,000.

The fact that the range of contract amounts is wide in almost every one of the 24 product classes given in Table 8 is due to the broad nature of the classes of equipment used. For example, consider even a specific type of equipment such as theater or church seating. It is quite possible that such contracts might vary in amount over a wide range; the contract might amount to only a few hundred dollars while the installation of seating in a large theater might involve an obligation of \$20,000. Likewise, in the installation of an automatic sprinkler system the contract amount might be anywhere between \$1,000 and \$75,000. Particularly striking is the wide range of contract amounts for purchases of Diesel engines, commercial laundry equipment, printing machinery, and office equipment.

Despite this wide disparity in contract amounts, in any particular line of financing there tends to be a concentration at one contract size. Manufacturers, distributors and the financing agencies cooperating in the present study were asked to state the amount at which most of their contracts were originated or acquired. In almost every case it was possible to give such a figure, although it was, of course, a rough approximation. Out of a total of 169 replies, 141 stated that the bulk of their contracts were originated

¹ Information on the characteristics of individual credits was assembled by means of a questionnaire sent around mid-1941 to 365 manufacturers of machinery and equipment and from reports submitted to the National Bureau by 50 instalment financing agencies. In each case the seller or financing agency was asked to state the type of equipment financed, the size of credits involved and the typical terms carried by contracts.

or purchased at \$5,000, or at a smaller figure. Of these 141 financing arrangements, 47 reported a concentration of contracts at amounts between \$100 and \$500, 39 between \$500 and \$1,000, and 55 between \$1,000 and \$5,000. None of the companies reported a figure of less than \$100 each; for 12 concerns the bulk of contracts were for amounts between \$5,000 and \$10,000 and, for 16 concerns, for amounts in excess of \$10,000. Owing to the heterogeneous nature of the equipment financed, no detailed analysis has been made of the relation between type of equipment and the most frequent contract amount. It is broadly true, however, that contracts of smaller amounts, that is, where the bulk of contracts are \$1,000 or less, originate primarily in sales of equipment to the service industries; while contracts of larger amounts, where the bulk are over \$5,000, generally arise out of sales of heavy machine installations to manufacturing concerns.

Down Payment Provisions

Minimum down payments in equipment financing are governed by two main considerations, the creditworthiness of the individual or concern making the purchase and the nature of the equipment. Other things being equal, the required down payment reflects principally the financing agency's judgment of the credit strength of the purchaser, but in all classes of equipment it is necessary to take account also of the repossession value of the equipment and any provisions there may be for recourse by the financing agency on the vendor in the event of default by the purchaser. There is no rule, of course, for determining the appropriate minimum down payment. But the following has been suggested as a rough guide: at least *twice* the amount that must be deducted from the original value of the equipment in order to find its resale value immediately after installation. In a particular case the amount of this deduction might equal the sum of freight and insurance charges and depreciation of equipment immediately upon installation. This measure for determining minimum down payment is defended on the ground that considerable expense must generally be incurred in order to repossess, recondition and resell equipment in the event of debtor default.² Clearly, the most difficult factor to assess is that of

² H. B. Lewis, *Installment Selling of Industrial Equipment* (American Management Association, Industrial Marketing Series, I. M. 17) p. 6.

obsolescence, which varies considerably on different types of equipment and is always largely an unknown quantity. Installation costs, if included in the original contract, and the dealer's mark-up will also affect the amount of the minimum down payment.

Information assembled from manufacturers, distributors and financing agencies shows that, while there is considerable variation in the percentage down payment required on different types of equipment, it tends to vary between 20 and $33\frac{1}{3}$ percent of the time price of the equipment sold. It should be mentioned at this point that the actual down payment is frequently considerably in excess of the minimum required down payment.

Taking the broad classifications of equipment and fixtures sold to such concerns as stores, hotels, bars, barber and beauty shops, garages, service stations and amusement places, the most frequently reported minimum down payment was 20 percent, although in some instances contracts were accepted with a minimum down payment of as little as 10 percent. Higher down payments were reported in a few instances for equipment sold to beauty and barber shops. The down payment required on the installation of bowling and billiard equipment was as high as $33\frac{1}{3}$ percent, reflecting both the relatively low credit standing of many concerns operating in these fields, and the repossession costs on equipment of this type.

Installations of commercial refrigeration and air conditioning were reported from all sources as most frequently requiring a minimum down payment of 20 percent. In a few instances the minimum down payment was reported as 10 percent and in some cases as high as $33\frac{1}{3}$ or 50 percent. There is some evidence that the highest minimum requirements were attached to sales of beverage cooling equipment to relatively small concerns.

In general, the minimum down payment required on installations of industrial and farm equipment is somewhat lower than in the trade and service industries. A fairly large proportion of the minimum down payments reported on factory and farm machinery was 10 percent. In some cases contracts were reported as originating with either no down payment at all, or with a provision calling for only 5 percent (for example, in sales of office machinery such as cash registers, calculating and accounting machines). It is interesting to note that even the heaviest machinery, and that involving the

highest cash selling price, was frequently reported as being sold on an instalment basis with a 10 percent down payment. This applies to sales of power shovels, heavy road machinery, conveying machinery, and Diesel engines. It seems probable that this situation is explained by the fact that in the case of office equipment the machinery is readily repossessible and has a wide and easily accessible resale market, while installations of heavy machinery are made mainly for concerns having a high credit rating and thus warranting relatively liberal credit terms. However, some installations of heavy printing machinery were reported with minimum down payments of 50 percent.

Only a few of the reported contracts could be classified under the general heading of transportation equipment; these were trailers, trucks and barges, and in all cases bore minimum down payment provisions of either 20 or 25 percent.

Term of Contract

In establishing the maximum period over which the purchaser of equipment is permitted to make payment, consideration is given to the following main factors: (1) the expected service life of the equipment or machinery being installed and its expected rate of depreciation; (2) the savings in cost anticipated from the installation of new machinery or equipment, or the increased profitability of the concern if the installation represents an expansion of facilities; and (3) the financial ability of the buyer to make repayments out of available incoming cash. Obviously there are no general rules to be followed in determining the maximum term of contract, but as a point of departure credit officers frequently take one-quarter of the estimated productive life of the equipment. Alternatively, the term of the contract may be set by determining the period of time necessary to pay out the full amount of the contract where instalment payments are assumed to equal one-third of the annual savings or increase in earnings expected to result from the uses of the equipment.

It should be emphasized again that equipment financing, particularly where it involves the acquisition of expensive units of special purpose machinery, is not a standardized procedure. Contract length must be set in the light of the special circumstances of each particular case. Evidence assembled on the financing of equipment

and fixtures sold to hotels, stores, bars, restaurants and such other service establishments as garages, service stations, and amusement places indicates that contracts are most frequently written on this type of business with a maximum term of either 24 or 36 months. Some contracts were reported carrying shorter maximum repayment periods, but these were distinctly in the minority, and in no case did they cover a period of less than 12 months. Contracts for commercial refrigeration and air conditioning installations also carried maximum terms of from 24 to 36 months. In one instance, namely, the installation of oil burning furnaces, contracts were extended for periods as long as five years.

The more liberal down payment terms on equipment sold to manufacturing companies, as contrasted with equipment sold to concerns in service and trade industries, are paralleled in the case of maximum contract periods. Machinery and equipment sold on an instalment basis to manufacturing companies is paid for, in general, over periods of 24 to 36 months but there were a substantial number of cases reported by manufacturers, distributors and financing agencies of such equipment being sold on 4 or 5 year terms. One company stated that it had sold printing machinery on contracts permitting instalment payments over a period of six years. Other cases of manufacturing equipment sold on relatively long terms, that is for periods of four or five years, included automatic sprinkler and commercial laundry equipment, Diesel engines, and bottling equipment. Finally, transportation equipment such as trailers, trucks and barges is sold with shorter maximum contract periods, namely, 12, 18, or 24 months.

Repayment Provisions

In the majority of cases, contracts arising out of the instalment sale of income-producing equipment are payable in equal monthly instalments. There are, however, certain exceptions. Instalment sales to farmers of equipment such as tractors, harvesting machinery, pumping and spraying equipment are generally payable in one or two instalments which fall due at the end of crop harvesting seasons. For example, one company selling agricultural machinery reports that it requires one-quarter payment down, one-quarter payment on delivery, one-quarter payment in the first fall after delivery, and one-quarter in the second fall after delivery. The

principal exception to this characteristic of farm machinery paper is found in sales of equipment to dairy farmers, in which case payments are made on the usual equal monthly payment basis.

Other exceptions to the equal monthly payment plan occur on sales of equipment to taverns, summer hotels, and ice cream producing plants. These contracts frequently call for higher payments in the summer months than in the winter months, possibly no payments at all during winter months. An adaptation of the repayment schedule to the seasonal character of the business utilizing the equipment is found also in the financing of bowling alley equipment. These contracts may cover not only the bowling alley itself, but also the miscellaneous equipment utilized in connection with the alley, such as bars, soda fountains, etc. On contracts of this kind it is usual for the obligor to be relieved of payment during the summer months of June, July and August. Thus a contract calling for amortization over a period of 36 months will require only 27 payments.

The character of the repayment schedule is affected also by the credit standing of the obligor and by the obligor's cash collection schedule. On sales of equipment to contractors the contract may call for monthly payments of equal amount, while if this same equipment is purchased by a public body the contract may permit either quarterly or annual payments. Another example of the adaptation of repayment provisions to the credit standing of the obligor is found in the plan of converting monthly into weekly payments if the repayment record of the obligor shows signs of deteriorating. Of course, all conditional sales contracts provide for an acceleration of the total amount of the debt at the discretion of the financing agency, if the debtor defaults on any one of the conditions of the contract.

Repayment schedules are sometimes established by reference to the savings that are anticipated from the use of the equipment or to the anticipated increase in earnings where the equipment constitutes an expansion of facilities. In such cases a year's payment may equal one-third of the total amount of the annual savings. This may be paid on an equal monthly basis, although in some instances, for example in installations of sprinkler systems and power piping projects, payments are made on a quarterly or annual basis. While it is possible to use the savings argument as a sales

promotion device in connection with almost any type of commercial and industrial equipment, it is only in rare instances that it is possible to make definitive calculations of the amount saved. The most obvious examples are those involving savings in insurance premiums; another is power plant installations, where it is possible to estimate the savings per unit of product manufactured by comparing the cost of purchased power with the cost of power generated in the plant.

Discussions with financing agencies reveal that even though it is possible to demonstrate that savings of fairly certain amount will be effected through the installation of machinery, it is customary to require a minimum monthly or other periodic payment on the contract, with the proviso that an additional amount will be paid if the savings are actually in excess of the stipulated minimum. In some instances (doubtless rare) equipment is sold for \$1, although it has a market value of as much as \$60 or \$70 thousand, on the condition that the vendor will receive the savings effected through the installation of the equipment over a certain period of time. Such an arrangement clearly calls for a very definite calculation of anticipated savings.

Another type of repayment plan is used in financing vending machines and coin-operated equipment. In the case of vending machines the finance company arranges to take either a minimum monthly payment or a certain proportion of the total monthly receipts, whichever is larger. This equipment generally accumulates receipts at a rate sufficiently rapid to amortize the contract in a period of from one year to 15 months. Coin-operated equipment is that which is serviceable only upon the deposit, in a coin-receiving attachment, of a sum of money which permits the equipment to operate over a certain time period. On equipment of this type the financing plan generally calls for either a minimum monthly payment or a fixed proportion of the total receipts, whichever is larger.

Instalment Equipment Credit Extended by Commercial Banks

One type of equipment credit extended by commercial banks is the direct loan made to the purchaser of equipment for the specific purpose of such acquisition, the loan being repayable in regular prescheduled instalments and secured by a lien on the equipment.

This may be referred to as direct financing and is comparable to direct consumer financing where instalment loans are made to consumers to enable them to purchase, say, an automobile. Data will be presented below on the size characteristics of these loans. The other type of equipment financing is the indirect sort, occurring where a bank discounts instalment paper for the seller of equipment. This, in turn, is comparable to consumer instalment financing where the paper held by the bank is acquired through dealers or other retail outlets. Since the indirect type of financing involves the discount of notes supported by conditional sales contracts, the features of which have been described above, the characteristics of such credits need not be discussed here. Information is given below, however, on the amounts of the loan balances created to the account of manufacturers and distributors of machinery and equipment when banks discount their instalment sales contracts.

Information on direct equipment financing by commercial banks was acquired through a questionnaire survey made during the summer of 1941. Reporting banks were distributed widely as to their deposit size, and according to the size of the city and region in which located. The banks were asked to indicate whether they made direct loans for the purpose of acquiring equipment, securing these loans by liens on the equipment acquired, and if so, what amount and number of such loans they had on their books. Loans of this kind were reported by 62 banks.

The results of the study are tabulated in Table 9 and show that the loan balances averaged about \$35,000 per customer. They were substantially higher in the larger reporting banks than in the smaller banks, and banks in larger cities made larger loans than banks in smaller centers of population. Finally, the largest loan balances were reported by banks located in industrial regions. It should be noted that the average loan balance shown is misleading as a representation of the lending of all banks covered; very small loan balances (substantially below the average for all banks) were reported by banks with deposits of \$1 million or less, by banks located in cities of less than 500,000 population and by banks in less industrialized regions. (See Chart 3.)

No statistical information is available on down payment or length of contract provisions on these loans, although it is generally

AVERAGE AMOUNT OF COMMERCIAL BANK EQUIPMENT LOAN BALANCES OF BUYERS AND OF MANUFACTURERS AND DISTRIBUTORS, BY CLASS OF BANK[ⓐ]

■ AVERAGE BALANCE
OF EQUIPMENT USER

□ AVERAGE BALANCE
OF MANUFACTURER
OR DISTRIBUTOR

DEPOSIT SIZE OF BANK
(IN THOUSANDS)

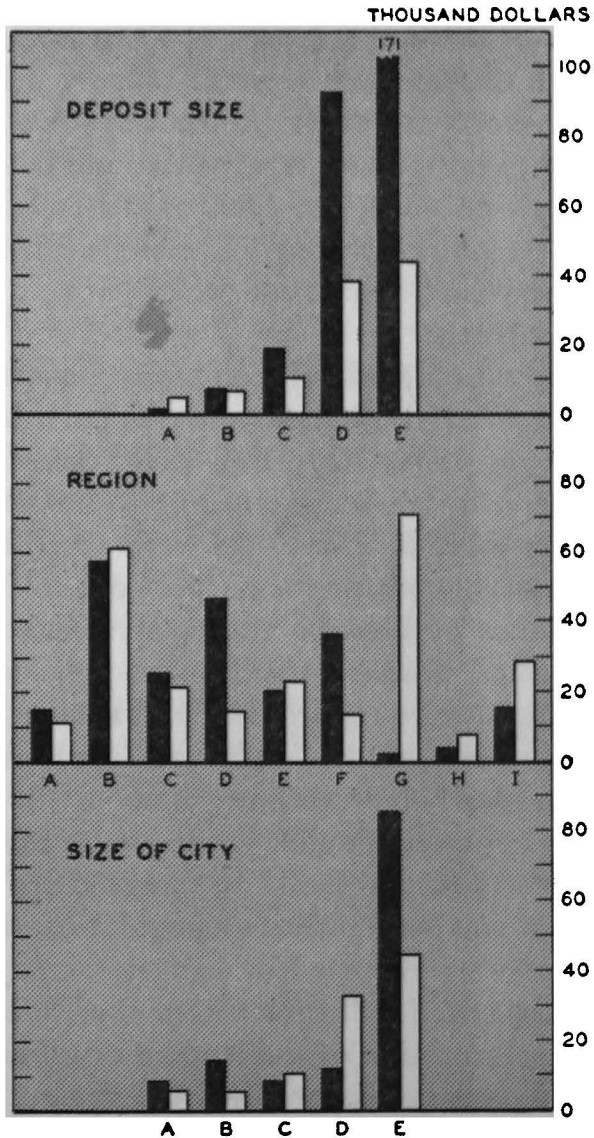
- A = \$1000 OR LESS
- B = 1000 - 5000
- C = 5000 - 10,000
- D = 10,000 - 50,000
- E = OVER 50,000

REGION

- A = NEW ENGLAND
- B = MIDDLE ATLANTIC
- C = EAST NORTH CENTRAL
- D = WEST NORTH CENTRAL
- E = SOUTH ATLANTIC
- F = EAST SOUTH CENTRAL
- G = WEST SOUTH CENTRAL
- H = MOUNTAIN
- I = PACIFIC

SIZE OF CITY

- A = UNDER 10,000
- B = 10,000 - 50,000
- C = 50,000 - 100,000
- D = 100,000 - 500,000
- E = 500,000 AND OVER



[ⓐ] BASED ON A SAMPLE STUDY. FOR DATA SEE TABLES 9 AND 10.

Table 9—AVERAGE AMOUNT OF DIRECT EQUIPMENT LOANS MADE BY COMMERCIAL BANKS, BY DEPOSIT SIZE OF BANK, SIZE OF POPULATION CENTER AND REGION IN WHICH BANK IS LOCATED^a

	Number of Banks	Reported Loan Balances		
		Number	Amount ^b	Average Amount
<i>Deposit Size of Bank^c</i>				
\$1,000 or less	9	27	\$46,361	\$1,717
1,000-5,000	14	62	475,545	7,670
5,000-10,000	5	23	444,803	19,339
10,000-50,000	17	29	2,701,547	93,157
Over 50,000	17	62	10,617,564	171,251
<i>Size of Center of Population^d</i>				
Under 10,000	13	64	550,324	8,599
10,000-50,000	3	16	232,500	14,531
50,000-100,000	8	27	231,819	8,586
100,000-500,000	21	164	1,969,079	12,007
500,000 and over	17	132	11,302,098	85,622
<i>Region</i>				
New England	3	8	120,200	15,025
Middle Atlantic	14	102	5,908,376	57,925
East North Central	15	145	3,741,070	25,800
West North Central	12	61	2,876,296	47,152
South Atlantic	6	23	464,205	20,183
East South Central	2	15	549,000	36,600
West South Central	2	4	8,910	2,228
Mountain	2	7	22,000	3,667
Pacific	6	38	595,763	15,768
ALL REPORTING BANKS	62	403	\$14,285,820	\$35,449

^a Based on a questionnaire survey. See Appendix A for coverage of survey and questionnaire used.

^b Outstandings as of approximately August 31, 1941.

^c Total deposits in thousands of dollars. Each size class is exclusive of the lower limit and inclusive of the upper.

^d Each size class is inclusive of the lower limit and exclusive of the upper.

understood that these are similar to the down payment and length of contract provisions carried by conditional sales contracts as discussed above.

Information on the amount of the loan balances held by banks in connection with their activities in discounting instalment paper for manufacturers or distributors, that is, in indirect equipment financing, was also assembled through this questionnaire. Table 10

Table 10—AVERAGE AMOUNT OF COMMERCIAL BANK EQUIPMENT LOAN BALANCES OF MANUFACTURERS AND DISTRIBUTORS, BY DEPOSIT SIZE OF BANK, SIZE OF POPULATION CENTER AND REGION IN WHICH BANK IS LOCATED^a

	Number of Banks	Reported Loan Balances		
		Number	Amount ^b	Average Amount
<i>Deposit Size of Bank^c</i>				
\$1,000 or less	10	50	\$244,023	\$4,880
1,000-5,000	17	64	460,724	7,199
5,000-10,000	5	29	310,250	10,698
10,000-50,000	16	47	1,829,929	38,935
Over 50,000	13	186	8,258,742	44,402
<i>Size of Center of Population^d</i>				
Under 10,000	14	63	368,884	5,855
10,000-50,000	8	38	194,000	5,105
50,000-100,000	7	22	223,263	10,148
100,000-500,000	22	88	2,933,097	33,331
500,000 and over	10	165	7,384,424	44,754
<i>Region</i>				
New England	2	3	35,000	11,667
Middle Atlantic	18	71	4,362,891	61,449
East North Central	10	136	2,860,915	21,036
West North Central	10	38	550,873	14,497
South Atlantic	6	23	534,697	23,248
East South Central	3	14	192,000	13,714
West South Central	3	4	284,160	71,040
Mountain	4	12	86,667	7,222
Pacific	5	75	2,196,465	29,286
ALL REPORTING BANKS	61	376	\$11,103,668	\$29,531

^a Based on a questionnaire survey. See Appendix A for coverage of survey and questionnaire used.

^b Outstandings as of approximately August 31, 1941.

^c Total deposits in thousands of dollars. Each size class is exclusive of the lower limit and inclusive of the upper.

^d Each size class is inclusive of the lower limit and exclusive of the upper.

shows that, in general, the sizes of loan balances created for manufacturers and distributors are substantially the same as the sizes of balances growing out of direct loans made to purchasers of equipment. Loan balances are highest in the largest banks, in those located in larger cities, and in industrialized regions, while small banks, banks located in small centers of population and in less industrialized regions report relatively small loan balances.

There is no direct information on the average amounts of contracts held by commercial finance companies for individual manufacturers and distributors in connection with their equipment financing, but it is generally understood that these balances are far in excess of the \$30,000 average reported by the commercial banks (Table 10). This might be expected in view of the fact that the commercial finance company can act as a national financing agency whereas the commercial bank operates under laws which permit no more, in any case, than state-wide branch banking. This gives the commercial finance company an advantage in financing sales of manufacturers having a national market. Of the manufacturers reporting that their contracts were discounted with an independent sales finance company, several indicated that their total instalment sales were as much as \$500,000 annually and there were a fair number of cases of manufacturers discounting over \$100,000 worth of sales annually with a single commercial finance company.

Additional Services Offered by Financing Agencies

In addition to supplying funds to manufacturers and distributors through discounting instalment contracts, the financing agencies engaged in equipment financing, and particularly the commercial finance companies, offer accessory or supplementary services. Of these the most important are credit appraisal and credit collection. Even if the manufacturer or dealer originating the instalment contracts has a credit department, and even if the contracts are purchased by the finance company under a full or limited recourse arrangement, the commercial finance company always maintains a specialized credit department the function of which is to examine and accept, or reject, the instalment contracts offered by the vendor. Obviously, this is an essential service where the vendor does not operate a credit department, but even where such a department is operated the judgment of the finance company serves as a constant check on the manufacturer's or dealer's credit department. Under a recourse arrangement, the careful selection of credits by the financing agency reduces the credit losses that the seller may be required to assume.

In almost all cases the commercial finance company or the commercial bank financing instalment sales makes collections directly from purchasers. One of the most important problems raised

in this connection is the possibility that the collection methods used may alienate the client of the manufacturer or distributor. Financing agencies, therefore, make considerable point of the tact with which they conduct this phase of their operations. They also point out in their sales literature that collections by them rather than by the vendor will often permit a firmer collection policy. In order that they may be fully advised and given an opportunity to forestall such collection difficulties, the sellers are often supplied with records of delinquency on contracts originated by them and copies of the more important "dunning" letters sent to their customers.

Another supplementary service in equipment financing is that frequently referred to as legal documentation. Where a financing agency does a considerable amount of equipment financing it is in a position to give advice regarding the most effective formulation of title retention contracts, mortgages, notes and leases, whichever may be the type of instrument most appropriate to the financing operations at hand. The diversity of state laws and the variation in local filing requirements place a considerable premium upon such specialized legal advice.

Because of the diversity of types of equipment financed under these arrangements, it is often necessary for the financing agency to formulate special "plans" in connection with the sales of a particular manufacturer or distributor. Its experience in the financing of income-producing equipment often enables the financing agency to formulate these plans more easily than could the manufacturer or dealer. Furthermore, the plans may be formulated on a "group" basis, enabling the purchaser to acquire several equipment items at the same time, even though the individual items are manufactured by different companies. Plans of this kind have been used in the financing of beauty parlor, service station, medical and dental equipment.

Problems having to do with the engineering aspects of equipment and machinery installations are generally taken care of by the manufacturer or distributor, but in some instances commercial finance companies maintain specialized engineering staffs to give advice to their clients. Cases of this kind are known to exist in the financing of automatic fire extinguisher equipment, where the financing agency makes engineering surveys and estimates the sav-

ings to be made on insurance premiums through the installation of the sprinkler systems.

In many respects these supplementary services are similar to those offered to dealers and other retail distributors in connection with instalment sales to consumers. But one supplementary service frequently associated with the financing of consumer goods, namely, inventory loans to dealers on the so-called "floor plan," *is not generally associated with the financing of income-producing equipment.*

6

Operating Methods, Charges and Credit Experience

SO MANY DIFFERENT TYPES of equipment are purchased on an instalment basis that only a basic uniformity can be expected in the operating methods of equipment financing. While the financing agency inevitably focuses its credit appraisal activities on the repossession value of the equipment and on the creditworthiness of both buyer and seller, the details of specific procedures vary widely as between types of equipment. It will be possible, therefore, to describe only the general outline of equipment financing procedures and operating results; specialized techniques in equipment financing will be illustrated by a few examples.

Credit Analysis and Standards

In equipment financing the credit analysis deals with three main elements: (1) the equipment in which the vendor retains title or which serves as collateral security; (2) the seller, whose credit position and engineering responsibility may be of strategic importance since he frequently accepts a contingent liability on both the product and the instalment paper; and (3) the purchaser, whose general credit standing is to be investigated. In different deals these three elements are assigned different degrees of importance. Actually, in some cases one of them may be of negligible importance. Furthermore, the credit judgment on any one of these elements is conditioned in part by the credit judgment arrived at in connection with the other elements. These qualifications should be kept in mind in the following discussion.

Equipment as Collateral Security

The extent to which the financing agency depends on the repossession value of equipment as a security device in extending credit

is determined by the nature of the equipment and the credit standing of buyer and seller. The equipment is customarily considered important as collateral security and considerable attention is therefore given to its repossession value. On the other hand, the recourse arrangement may be so strong that relatively little reliance is placed on the resale value of the equipment. In any case the financing agency must establish, before the conditional sales contract is purchased, that the buyer is satisfied with the installation. To this end it may require a "certificate of completion," or require the seller to provide a "performance bond" along with a guarantee to repurchase any equipment or machinery that proves unsatisfactory to the buyer on grounds of technical inefficiency. In other words, the vendor ordinarily guarantees the product and its installation, even though he may not guarantee the instalment paper.

When a relatively heavy and expensive unit of machinery is involved, the financing agency may retain the service of an engineer to determine the suitability of the equipment for the purposes in hand and to estimate the savings to be expected from its use. This is only indirectly connected with the credit value of equipment as collateral security, but it is a significant part of the investigation because of the light it throws on the ability of the buyer to make repayments.

Another principal problem in equipment financing is that of determining the resale value of equipment. Where the equipment is in relatively heavy units, such as Diesel electric power generating plants, repossession may be very costly, perhaps technically impossible, and the resale market may be "thin" or difficult to find. This means relatively heavy repossession, reconditioning and reselling costs and thus a lower net resale value. On the other hand, lighter equipment, such as barber chairs, may be easy to repossess and may have a very active resale market. The fact that commercial and industrial equipment is less homogeneous than consumer durable goods and is sold in much smaller volume makes the problem of determining resale value extremely difficult. Furthermore, the rate of depreciation is relatively high in commercial and industrial equipment, and obsolescence is generally a source of value reduction that cannot be estimated at all accurately. Where the machinery is for a special purpose and is difficult or impossible to

repossess, and, beyond that, is subject to a high rate of depreciation, it is obviously necessary for the financing agency to depend more on the credit standings of the buyer and seller and to compensate in some way for the special hazards of that specific type of financing. It is possible to compensate in part for the extra hazard of specialized machine financing by recourse arrangements with the seller, by advancing a smaller percentage on the face amount of contracts purchased, by requiring the buyer to make a larger down payment, to repay the debt over a shorter contract period, to give additional security in the form of chattel mortgages on other items of equipment, or to supply personal endorsements of third parties.

The Vendor of Equipment

From the point of view of credit analysis the vendor, whether manufacturer or dealer, is important in two principal ways. First, as indicated above, the vendor is responsible for the satisfactory performance of the equipment. Thus, if the purchaser has valid reasons for dissatisfaction with the equipment and defaults on his conditional sales contract for that reason, the financing agency is assured that the vendor will promptly discharge his liability to make a satisfactory settlement.

Second, the vendor may assume a contingent liability on the instalment paper arising out of the conditional sale. The financial responsibility of sellers varies a great deal. In some instances the vendor of the merchandise is a prime credit risk easily able to obtain ample amounts of unsecured credit and discounts contracts chiefly in order to obtain the corollary services provided by the financing agency. A recourse arrangement with such a company is, of course, sufficient in itself to ensure freedom from credit loss. Where such a guarantee is available, the financing agency may have little or no interest in either the collateral security provided by the equipment or in the creditworthiness of the buyer. On the other hand, the seller's credit standing may be very low (a condition frequently encountered where equipment is distributed through dealers), in which case the appraisal of equipment is held to be of primary importance. On occasion, the financing agency may support its position by recourse on both the manufacturer *and* the equipment dealer.

In ascertaining the credit standing of a client desiring to discount contracts with the financing agency a credit investigation is made similar to that which would be made if the seller were applying for a regular commercial loan. A credit file including balance sheets and income statements covering a period of time is assembled; the applicant's position in the industry, and his present and prospective competitive standing and earnings are investigated. His instalment accounts receivable are studied carefully with respect to down payment, term of contract, delinquency and loss experience over the past years.

Following upon this investigation a credit line may be established which limits the maximum amount of instalment paper to be held at any time. Since the vendor is liable, under a full recourse arrangement, for only that part of the instalment paper proving to be unacceptable, it is sometimes stated that this credit line may be set at a point in excess of what would be acceptable for the usual credit line. Thus, if \$100,000 were an appropriate maximum credit line on a commercial loan basis, and if a 10 percent loss is a conservative estimate of the maximum expected defaults, the financing agency might be willing to hold very much more than \$100,000 worth of paper on which the manufacturer maintains a contingent liability.

The Buyer of Equipment

The final element in the credit appraisal problem is the credit-worthiness and financial responsibility of the purchaser. Here again credit standing may vary all the way from the lowest to the very highest ratings. The extent to which the financing agency concerns itself with the purchaser's credit standing depends on the type of recourse arrangement that can be made with the seller of the equipment and on the equipment's repossession value. Nonetheless, it is stated by some of the commercial finance companies that, even though they have full manufacturer recourse, a separate credit investigation is made for each contract in order to minimize the exercise of recourse privileges. If the buyer of the equipment is a large concern the necessary credit information can be readily obtained. However, since much equipment financing is done for the service industries where companies are relatively small and

little known, buyers are frequently of low credit standing and may be unlisted and unrated concerns.

An additional credit complication is the fact that much of the equipment is sold to professional men, such as doctors and dentists. Under such circumstances it is necessary to make a judgment regarding credit on grounds quite different from those relevant to investigations of manufacturing or trading concerns. For a young dentist setting up an office the credit investigator attempts to make a judgment concerning the neighborhood in which the office is to be established and an appraisal of the dentist's technical and personal qualifications as well as of his financial responsibility.

Supervision of Accounts

Once an arrangement for the purchase of instalment contracts has been made with a vendor of equipment there begins a credit relationship which may last for a considerable period of time. Over this period the financing agency holds varying amounts of its clients' receivables, either collecting on these receivables directly or receiving collections from the manufacturer or dealer. Under this revolving credit arrangement there is a constant turnover of receivables. As in all banking arrangements of this type, the balance under such a plan is subject to continuing supervision or policing. This means that a running record will be kept of the amount of outstandings held, contracts purchased and collections received, and that frequent inventories will be taken to provide distributions of receivables by maturity, down payment and type of equipment represented. Beyond this, information is assembled, at least every 30 days, covering the percentages of contracts delinquent for different periods, and data are prepared on losses and recoveries for receivables acquired from different sources.

This continuing supervision of equipment financing accounts is exercised to detect changes that may be developing as regards down payment, term to maturity of contract, delinquency, repossessions and charge-offs. If material changes occur in any one of these factors, a liberalization or a tightening of the arrangement may be negotiated between the financing agency and the manufacturer or dealer originating the contracts.

In addition to the general supervision of the client's total account, the financing agency also maintains a detailed record of

each individual contract held. This is a universal practice where the financing agency buys contracts and makes collections on them. Under other arrangements, it is most frequently the function of the vendor. Whatever agency is responsible, the records involve a separate ledger card for each purchaser with appropriate identification and credit information, the amount and term of the contract, the schedule of payments to be made, etc. Instalment payments are entered on this ledger card as received; information concerning delinquency or default is entered when necessary. Ledger cards are designed so that it is readily possible to construct from them the information necessary for general control figures.

Establishment of Lien

One of the advantages of the instalment financing device over the open account sale is that the purchaser of equipment, while obtaining possession, does not obtain title. Title remains with the seller of the merchandise and is assigned (or sold through the discounting procedure) to the financing agency taking over the contract. In equipment financing there are two principal types of lien instruments in use, the conditional sales contract and the chattel mortgage. Which of these instruments is used depends on the laws of the state in which the transaction occurs. In either case the purchaser executes a note indicating his obligation to the seller, and also executes either the conditional sales contract (a title retention document) or the chattel mortgage (lien) instrument.

In general, the conditional sales contract is a valid form of title retention instrument in a state that has adopted the Uniform Conditional Sales Act, or some variation thereof. Provided that recordation is made and that the contract takes a written form, the conditional sales contract provides protection against the sale of the equipment by the purchaser to another party even with valuable consideration, and against landlords' rent liens, mortgages and judgment creditors. The regulations covering recordation vary considerably from state to state, and it is one of the primary functions of the financing agency to advise and instruct the seller of the equipment with regard to these differences.

Where the conditional sales contract is not recognized as a valid title retention document, the instalment sale may be effected through the chattel mortgage device. This means, in effect, that

the buyer of the equipment signs a note for the amount of the unpaid balance plus the financing charge and executes a chattel mortgage giving the financing agency the right to repossess the equipment in the event of default on the note.

In other cases, the purchaser may obtain possession of the equipment on a bailment lease arrangement, which provides for possession and use of the equipment in return for periodical lease payments. Title to the equipment passes to the lessee when the rental payments have been completed according to contract.

The notes or evidences of indebtedness arising out of equipment sales are generally single instalment notes requiring a number of prescheduled payments. In some instances, however, the purchaser signs a series of notes with staggered maturities. For a considerable period of time, the latter practice has been the conventional form of note-making on instalment sales of printing machinery. If a staggered note is used it is possible for the financing agency to discount only a portion of the notes involved; in exercising this option they usually select the earlier maturities.

Recourse Arrangements

The widespread use of recourse provisions in equipment financing is indicated by the fact that all the commercial banks and commercial finance companies reporting to the National Bureau on equipment financing practices indicated that in no case did they purchase instalment contracts without recourse on the vendor. In most instances this meant full recourse on the manufacturer or dealer, or on both. Doubtless, however, there are exceptions to this practice.

In order to provide itself with a margin of safety in such financing and to give support to any recourse arrangement that may be arrived at, the financing agency generally advances only a certain percentage of the face amount of contracts purchased, thus maintaining a margin of collateral over balances outstanding. This percentage advance varies with different types of equipment and with different contracts, as well as with the credit standing and financial responsibility of the various parties involved. Out of 117 separate deals reported, only 4 were for a $66\frac{2}{3}$ percent advance or less; 32 deals called for an 80 percent advance, and 43 for a 90 percent advance. Other reported arrangements were as follows:

100 percent advance, 15 deals; 85 percent, 11 deals; 75 percent, 8 deals; 95 percent, 4 deals. In certain cases involving very heavy equipment, such as Diesel engine installations, tractors and road building equipment, the percentage advance was over 90 percent, while in some cases involving sales of light equipment to service industries the advance was substantially less than 80 percent. Differences of this kind are doubtless due to the fact that the greater risks involved in financing machinery having a long service life are in some cases outweighed by the superior credit standing of the buyer.

Considerable variety is found in the procedures set up to implement a given policy with regard to recourse. One method frequently encountered is that of requiring the seller to take up accounts if three payments have been missed, that is, if the paper is 61 or more days overdue. In some cases the recourse arrangement was limited, with the seller assuming no further contingent liability on the account after three full payments had been made. Another arrangement was for the seller to assume a fractional (say 25 percent) contingent liability on the notes of the buyer. The latter arrangement appears to be fairly characteristic of the financing of instalment purchases of busses for transit companies.

There is a close relationship between the repurchase or recourse arrangement and the percentage amount advanced on each account. Where the finance company advances less than 100 percent of the face amount of the contract, and where the seller's equity in the contract is not paid until the contract has been completely extinguished, a reserve is built up. This reserve bears a definite relationship to total outstandings, depending upon the amount of the percentage advance, the maturity of the contracts purchased and the collection experience. Empirical evidence as to the amount of these reserves is not easily assembled because commercial finance company balance sheets do not generally show reserves by type of financing. In one case, however, it was found that a company specializing in equipment financing held a "customer's reserve" during 1934-40 varying between 17 and 24 percent of outstandings at year ends. This reserve provides a continuing margin or cushion for the absorption of losses on outstanding contracts; the customer's equity in it is paid out as contracts mature provided this does not reduce the ratio of reserves to outstandings below what

is considered prudent by the financing agency. If it should build up to too large a ratio to outstandings this can be remedied by a liberalization of the percentage advance. While it is possible for the seller's contingent liability on delinquent or defaulted paper to be satisfied by a debit to this reserve account, for reasons of discipline the financing agency may require the seller to take up the paper with his own check. Also, the holding back of a certain percentage of the face amount of the contract, leaving the seller with an equity in collections, produces a mutual interest in vigorous collection that might otherwise be lacking.

Customer Charges

It is exceedingly difficult to give a clear factual statement of the levels of customer charges in equipment financing because of the fragmentary character of available information; furthermore, the wide diversity of financing arrangements results in an equally wide diversity of rates and forms of rate quotation. It is possible, therefore, to indicate only in very general form the levels of customer charges in this area of financing.

When the instalment purchase of equipment is made under a conditional sales contract the buyer obligates himself to repay an amount equal to the cash price of the equipment less the down payment and plus the finance charge and other fees, such as insurance and recordation costs, that may be added to the contract. In these transactions the finance charge, considered apart from fees, is generally set at 5 or 6 percent per annum of the time price of the equipment. There are, of course, exceptions to this general rule. For example, some contracts running for periods of less than one year may carry a finance charge calculated as 6 percent of the unpaid balance of the equipment's cash price. Or, there may be a minimum charge if purchases give rise to contract amounts of less than \$100; one company reported a finance charge of 7 percent per annum or \$7.50, whichever is larger. Since the contracts are most generally paid off in roughly equal monthly instalments the effective per annum rate is roughly twice the rate at which the finance charge is quoted.

In addition to the finance charge, there are usually charges to cover insurance costs. The amount of these varies, obviously, with the character of the equipment purchased. In some instances there

is no insurance charge, in others it may amount to as much as 1½ percent per annum on the unpaid balance of the purchaser's obligation. In many cases the insurance is taken out independently by the purchaser, although the larger financing agencies provide insurance facilities and all can make arrangements for the necessary coverage.

Where an instalment loan is made, as in direct financing, the interest-bearing note form is used. Customer charges are then quoted as a certain percent per annum on the unpaid balance of the note, or the note is discounted for its contract period. Here also the rate of interest or discount is usually 5 or 6 percent per annum. However, the rate may be greater than this, especially on sales of relatively small amounts, and frequently it is less. Lower rates were reported by a number of manufacturers of the heavier types of producers' goods. Thus, Diesel engine installations may be made for prime credit risks at interest rates as low as 3½ percent per annum. In some instances these notes, originated by the sellers of the equipment, are shopped around among a number of banks, the notes going to the lowest bidder. One rate of 3 percent per annum was reported in 1941 by a large bus line operator, where funds were borrowed from banks in order to pay cash to manufacturers and where the bank held a note secured by a chattel mortgage on the equipment. The low rate was due to keen competition for the obligations of a prime credit risk secured by highly desirable equipment. Since equipment of this kind is frequently bought in groups of units, a given note may be of substantial size, which contributes further to the setting of a favorable interest rate.

The following striking variation in the form of rate quotation was reported by one company: customers sign notes which may vary in term from 6 to 36 months, and interest is charged at 6 percent for the first year, 7 percent for the second year, and 8 percent for the third year. This upward scaling of interest rates is adopted to discourage the longer maturities. On the other hand, several large manufacturers of heavy producers' equipment reported that the buyer of the equipment signed a note bearing *no* interest charge; in such cases the cost to the instalment buyer arises solely out of the fact that he does not enjoy the discount of a cash pur-

chaser. In still another variation, the discount allowed cash purchasers was larger than that granted to instalment buyers.

In the direct type of financing, as well as on instalment sales made under conditional sales contracts, the obligor is generally required to pay additional fees for insurance and recordation and the like, thus raising the total cost of the transaction.

One difference should be noted between the indirect and direct types of equipment financing. In the latter the buyer may give not one but a series of notes; consequently the effective per annum rate of interest would be the same as the quoted rate. Ordinarily the annual effective rate is nearly twice the quoted rate, since the quoted rates refer to the initial unpaid balance and since this balance is reduced by regular monthly instalments, the average amount of funds in use over the period of the contract is approximately one-half the initial balance. Of course it is not essential that this must also be the case without exception in indirect financing but it is generally true in such cases that rates are quoted on original contract amounts and that this rate has to be doubled to get the approximate annual effective interest rate.

Where contracts are assigned to commercial banks by manufacturers selling equipment on an instalment basis as security for a revolving credit, the interest rate is charged as a certain per annum rate on the current outstanding debit balance under the loan. The level of the rate depends primarily on competition and the credit standing of the company originating the obligations. In some instances a service charge is added to compensate the financing agency for extra handling costs.

Credit Experience

If equipment financing is conducted with full recourse on manufacturers or other sellers, the financing agency may continue for some time without sustaining any credit losses at all. Those that do occur are passed on to the manufacturer. It is therefore essential in studying credit losses in this field to take account of those sustained by vendors. As part of a questionnaire survey conducted by the National Bureau, manufacturers of commercial and industrial equipment were asked to state their net credit losses sustained during 1940 on instalment sales as a percentage of their total

instalment sales during that year.¹ Usable information was provided by only 54 manufacturers, but these were large concerns and it seems reasonable to interpret their results as reflecting general credit experience in this type of financing. Of these, 19 companies reported that they had sustained no credit losses at all in 1940; 9 stated that their net credit losses were either $\frac{1}{4}$ of 1 percent or less of instalment sales; 4 stated that their losses ranged from $\frac{1}{4}$ of 1 percent to 1 percent; 5 had losses of between 1 percent and 2 percent; another 5 companies reported losses of between 2 percent and 5 percent of their instalment sales. Only 2 companies reported losses of over 5 percent. That is, of the 54 manufacturing concerns, over one-half sustained net credit losses during 1940 of less than 1 percent of their total instalment sales during that year.

Among the companies reporting no losses were several selling heavy or fixed equipment such as printing machinery, paving equipment, automatic sprinkler and power piping equipment, theater and church seating, textile machinery, power shovels, cranes, drag-lines, scrapers and general construction machinery. Only one service industry account was included in this category, namely, a company selling garage and service station equipment. It is hardly possible on the basis of this information to rate the various products according to the net credit losses sustained on their instalment financing, but it seems clear from an examination of the results that there is no reason for believing that credit losses are necessarily higher on the more expensive equipment units, on those having the longest service life, or on equipment of a relatively high degree of technical specialization.

Another point of considerable interest is that credit experience was not found to be noticeably worse on equipment that becomes, in part at least, affixed to the real estate of the buyer as contrasted with equipment that is of a chattel variety and readily and wholly repossessible. Thus credit losses were relatively low on air conditioning equipment and automatic sprinkler equipment, whereas they were relatively high on cash registers. This clearly shows that it is some *combination* of credit factors, including the buyer as well as the collateral security, that influences credit experience in equipment financing. In this connection it might be pointed out that over the ten-year period 1931-41 one company selling general con-

¹ The questionnaire asked for losses *net* of recoveries during 1940.

struction and roofing materials (through contractors who take notes for the same from home owners) has sustained on its financing a loss of only 1.36 percent of the total volume of such notes purchased. Annual rates of loss varied from something over 5 percent of volume in the worst depression year to net recoveries in the best years. This example is given not as an illustration of equipment sales financing but for the light it might throw on the practicability of financing equipment not easily repossessible. In our illustration, losses over a ten-year period spanning a deep depression were kept within limits considered satisfactory by the manufacturer despite the fact that the feasibility of repossession was virtually nil, and the sole recourse of the financing agency was necessarily to press vigorous collection efforts against the home owner.

7

Equipment Financing: An Adaptation in Lending Practice

THE FINANCING OF INSTALMENT PURCHASES of commercial and industrial equipment constitutes but a small portion of the business credit market. Nonetheless this type of financing has considerable significance as one of the recent adaptations of the lending practices of financial institutions to changes in the demand for business credit. Other adaptations, some of which have been discussed in other publications of the National Bureau of Economic Research, are of greater quantitative amount but instalment equipment financing has certain features that merit special examination.

First, instalment equipment financing represents an adaptation of lending policy and practice in which the pioneering work was done by non-bank agencies. In this sense it is like consumer instalment financing, non-notification accounts receivable financing and lending on life insurance policies. Each of these types of lending operations constitutes a relatively new departure in commercial banking; in developing business within these categories the commercial banks, far from entering new and untried fields of finance, have come sharply into competition with well-established and specialized financing agencies. An additional parallel between the participation of commercial banks in instalment equipment financing and their interest in the financing fields listed, as well as in such newer types of credit as term loans and inventory loans made under field warehouse receipts, is that this participation represents a response of bank lending practice and policy to the pressure of unused lending capacity and declining rates of return on other bank assets. In this, as in other instances, commercial banks have entered a highly specialized credit field but only after its special credit problems had been thoroughly explored by non-bank agencies and the practicability of the operation well established.

Second, it is interesting to note a special parallel between equipment financing and accounts receivable financing. From the point of view of the trade purchaser, both provide trade credit; one of a medium-term instalment payment variety, the other of a short-term single payment type. In accounts receivable financing the buyer usually obtains a current asset while in equipment financing a fixed asset is acquired. From the point of view of the seller, both arrangements make it possible to convert the trade obligations of customers into cash or to use them as collateral security for purposes of current financing, and the nature of the receivables is such that in both cases the financing is amortized relatively quickly out of collections. Finally, in both cases there are companies that use the special financing arrangement, rather than borrow on an unsecured basis and carry the receivables themselves, mainly in order to obtain certain ancillary services that are otherwise not conveniently or economically available.

Third, equipment financing is based on one of the now well-established principles of medium-term credit, namely, repayment of debt on a prescheduled, regular, instalment basis. It is similar in this sense to credits extended in the instalment financing of consumer durable goods, to the term loans made to business enterprises, and to mortgage loans. This feature of equipment financing is an adaptation in credit extension methods calculated to make possible the repayment of loans out of income as earned. Whereas the traditional unsecured commercial loan was intended, at least in theory, to finance short-period investments in current assets and to be liquidated (over one year or less) out of the proceeds flowing from the sale of these assets, equipment financing contemplates investment in an asset having an expected service or income-generating life considerably in excess of one year and is repayable, over a period determined in large part by this service life, out of the income produced by the use of the asset itself. As in term lending, the focus of credit appraisal is mainly on the income-generating capacity of the debtor, and only to a lesser extent on the debtor's balance-sheet position.

Beyond this feature, the fact that payments are definitely prescheduled under the regular amortization principle permits and encourages budgeting of the debtor's business affairs; further, the breaking up of the full cost of the equipment into a number of

small payments separated by intervals brings the purchase of expensive equipment within reach of a number of companies that would otherwise be unable to afford it. The parallel between these characteristics of equipment financing and certain features of consumer instalment credit will readily come to mind.

Fourth, equipment financing has one feature that distinguishes it rather sharply from many other forms of business credit, both new and old. This is the fact that the financing transaction is entered into for a very specific purpose, namely, the acquisition of a particular unit, or group of units, of equipment. Furthermore, the credit is secured by a lien of some description on the equipment in question. Thus, equipment financing is special purpose lending in a much more definite sense than conventional commercial lending. In this respect its closest parallel is that type of financing long available under equipment trust receipt procedures. It should be noted also that the salient features of equipment financing, including the maturity of the note, the character of the repayment schedule, the nature of the lien established in order to secure the credit, and other features, are all determined in large part by reference to the characteristics of the specific equipment purchased.

Fifth, equipment financing is an example of a well developed trend in lending practices, namely, mass financing on a relatively routine basis. In this respect it can be interpreted as more than a parallel to consumer instalment financing; equipment financing, in fact, grew out of the latter type of lending. The individual contracts are frequently of relatively small size and the financing agency must acquire a large number of them in order to develop sufficient volume to make the operation profitable. Under these circumstances it is essential that the unit transactions be handled through established routines, and that credit appraisal procedures be standardized. Credit standards must be such that they can be applied to individual contracts without incurring considerable expense in individual investigations. It is necessary, of course, to make a very careful investigation of the source from which the contracts are being acquired, and to arrive at an over-all appraisal of the individual credits that are to be offered for discount, but once this has been done individual contracts must be passed upon promptly as originated, with only routine appraisal.

There is an element of insurance against loss in equipment

financing resulting from this mass basis of operations, but this aspect is not as prominent as in the instalment financing of consumer durable goods where both debtors and goods are more standardized and contracts are smaller and more numerous. Nevertheless, it is substantially true that the success of equipment financing must be judged not by reference to individual contracts but by credit experience over a period of time with a large number of contracts. This characteristic of equipment financing is important both for credit administration and bank supervision. For example, the problem of establishing appropriate reserves and maintaining proper control over balances is obviously different in a mass financing operation of this type than it is in the extension of single credits such as are encountered in conventional short-term business lending and also in term lending.

Sixth, many of the features of equipment financing discussed above combine to make this form of credit extension adaptable to the needs of business enterprises of relatively small size and limited financial resources. The fact that credits are repayable over relatively long periods of time and out of the income generated by the use of the acquired asset increases the likelihood that less substantial companies can afford to make the acquisition. On the other hand, the fact that the lending agency either retains title to the equipment, or has a first lien on it, affords greater security for the lender and makes it possible for credit to be extended to such buyers. In this way the borrowing potential of smaller companies may be raised substantially and the market for business credit thereby expanded. The importance of this fact is that, like receivables financing and loans secured by specific items of inventory, commercial and industrial equipment financing represents at least a partial solution to the problem of the availability of credit to small business. This is not to deny, of course, that other features, described at an earlier point, recommend this type of financing to larger and better-established companies.

It is important also that the presence of agencies in the financial system ready to discount the instalment notes of equipment buyers and to provide thereby the credit necessary to carry these buyers over the deferred payment period minimizes the amount of capital resources that are needed by equipment distributing agencies. This fact has greatly facilitated the distribution of income-producing

equipment just as sales finance companies and banks, by discounting consumer instalment receivables, have provided a large part of the capital resources necessary to operate dealer outlets and in that way facilitated the distribution of automobiles and other consumer goods. By supplying a credit service which equipment dealers would in many cases be unable to provide independently, the equipment financing agencies make financial support available not only to buyers but also to a large group of dealers constituting an important segment of small and medium-sized business concerns.

Finally, the growth of instalment equipment financing and the way this type of credit extension has spread through different types of financing institutions exemplifies a general tendency in our financial system for agencies that at one time were relatively specialized in character to diversify their operations. Many examples of this tendency can be cited. Companies that have been primarily interested in making personal cash loans now may concern themselves, either directly or through subsidiaries, with extending credit for financing purchases of consumer durable goods. Conversely, sales finance companies tend to move into the field of personal cash lending. In receivables financing we find factoring companies engaging in non-notification financing and non-notification companies acquiring direct or indirect interests in factoring. The manner in which term lending has brought commercial banks competitively closer to investment banking houses and insurance companies has been discussed elsewhere. Through their activities in consumer instalment financing, accounts receivable financing, term lending and equipment financing, the commercial banks have managed in recent years to inject themselves into fields of financing that had previously been largely the sphere of specialized agencies. Equipment financing offers another example of how a declining demand for credit on the part of business enterprises, combined with widening credit facilities and easy credit conditions, has forced financial institutions of all types to diversify their activities and to broaden their competitive spheres of operation.

A

Questionnaire Survey

IN AN EFFORT TO DETERMINE the frequency with which commercial banks of different sizes and locations participated in instalment equipment financing, and to determine the quantitative importance of this type of financing, the National Bureau of Economic Research conducted a questionnaire survey of a sample of about 800 insured commercial banks in the late summer of 1941. The banks included in the sample were selected in the following manner from the list of 13,492 banks with deposits insured by the Federal Deposit Insurance Corporation as of August 1, 1941. All banks were grouped and coded according to the size of the center of population in which the bank's main office was located, as follows: banks in centers of population of less than 10,000; 10,000 to 50,000; 50,000 to 100,000; 100,000 to 500,000; 500,000 and over. A questionnaire was sent to every 36th bank of those located in centers of population of less than 10,000, to every 9th bank in cities of from 10,000 to 50,000 population and to every 3rd bank of those remaining. This produced a total sample of approximately 800 banks; of these, 274 returned questionnaires that proved usable for tabulation. Banks were grouped and sampled in this fashion because there was reason to believe, as was borne out by the results of the survey, that equipment financing is conducted more frequently in the larger cities than in smaller places. Since costs prohibited sampling all banks with equal intensity it was decided to strengthen the survey for those banks believed to be most active in this type of financing.

Of the 274 banks that returned usable questionnaires 183 were not engaged in equipment financing. This fact itself suggests that the survey results are not biased by any significant tendency for only those banks engaging in this type of financing to return questionnaires. Furthermore, the 274 returns represent rather substantial proportions of all banks in the more important groups. Thus, while we had returns from only 1 out of every 143 banks in centers of population of less than 10,000 we had returns from 1 out of every 32 banks in cities of from 10,000 to 50,000 population and from 1 out of every 6 banks in all cities with population of 50,000 and over. The approximate percentages of the number of banks of different deposit sizes covered was as follows: .7 percent of banks with deposits of \$1 million or less; 3 percent of banks with deposits of \$1 million to \$5 million; 15 percent of banks with deposits of \$5 million to \$50 million; 66 percent of all banks with deposits of over \$50 million. Finally, the regional coverage of the survey varied from 1 out of every 23 banks in the Pacific states to 1 out of every 138 banks in

the West South Central states. Data on all banks which were used in taking these ratios of responding banks to all banks are from the *Annual Report* of the Federal Deposit Insurance Corporation for the year ending December 31, 1940, pp. 116-17 and 164-65.

While there are certain types of banks which were represented in the sample only in very small proportions, the total sample represents the replies of banks doing a substantial part of the total commercial lending business of the country. As is shown in Table 4 of the text, the total loans and discounts of the banks responding to our questionnaire amounted to approximately 16 percent of the total loans and discounts of all insured commercial banks. In this same table it is shown that banks with deposits of over \$50 million accounted for 50 percent of all instalment equipment financing conducted by commercial banks and that our sample covered 25 percent of the total loans and discounts of banks in this size class.

The questionnaire which was distributed to banks consisted of the following questions:

1. Do you at the present time engage in *financing manufacturers or distributors selling* industrial or commercial equipment by acquiring from them instalment paper arising from the sale of such equipment?
 - (a) ("Yes" or "No") _____
 - (b) If "Yes," state the *number of sellers of such equipment* which you are now financing in this way. _____
 - (c) If "Yes," state the *approximate total amount of your outstanding advances* secured by such commercial or industrial equipment.
\$ _____ as of _____ (a recent date)
2. Do you at the present time engage in *financing business concerns purchasing* industrial or commercial equipment by making instalment loans to these purchasers, secured by such equipment?
 - (a) ("Yes" or "No") _____
 - (b) If "Yes," state the *number of business concerns* which you are now financing in this way. _____
 - (c) If "Yes," state the *approximate total amount of your outstanding advances* secured by such equipment.
\$ _____ as of _____ (a recent date)

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Raymond J. Saulnier is Assistant Professor of Economics at Barnard College, Columbia University. He is the author of "Contemporary Monetary Theory" and "Industrial Banking Companies and Their Credit Practices," the latter one of the studies in *Consumer Instalment Financing* published by the National Bureau of Economic Research. Dr. Saulnier has been a member of the Financial Research Staff of the National Bureau since 1938.

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STUDIES in BUSINESS FINANCING

Early in 1940 the National Bureau of Economic Research, as part of its Financial Research Program, began the study of changes in the financial structure and behavior of American business since the beginning of the century. This study, known as the Business Financing Project, has been conducted under grants from the Association of Reserve City Bankers and the Rockefeller Foundation.

FINANCING EQUIPMENT FOR COMMERCIAL AND INDUSTRIAL ENTERPRISE is the third of four volumes prepared by Dr. Raymond J. Saulnier and Dr. Neil H. Jacoby, as part of the National Bureau's series, *Studies in Business Financing*. Two of these studies, TERM LENDING TO BUSINESS and ACCOUNTS RECEIVABLE FINANCING have been released. The fourth volume, FINANCING INVENTORY ON FIELD WAREHOUSE RECEIPTS, is to follow. Other studies include The Financing of Large Corporations, by Dr. Albert R. Koch, and Financing Small Corporations, by Dr. Charles L. Merwin.