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Volume Title: Financing Equipment for Commercial and Industrial Enterprise

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Volume Publisher: NBER

Volume ISBN: 0-870-14133-3

Volume URL: <http://www.nber.org/books/saul44-1>

Publication Date: 1944

Chapter Title: Operating Methods, Charges and Credit Experience

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Chapter URL: <http://www.nber.org/chapters/c4912>

Chapter pages in book: (p. 72 - 84)

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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 $1\frac{1}{2}$ 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 $3\frac{1}{2}$ 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, draglines, 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-

¹The 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.