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Introduction

When the National Bureau's Agricultural Finance Project was started in 1946, it was evident at once that special provision should be made for a study of the financing of farmers' purchases of equipment on instalment payment terms. The credit employed in these sales has unique and interesting characteristics, differing sharply from the conventional forms of short-term, essentially seasonal, credit used for farm production purposes and from the long-term mortgage credit employed in land purchases and in making major farm improvements. It is of interest, also, because it involves distinctive policies and procedures and because it calls into play sources of credit that are employed in no other major phase of the farm financing process.

Nor has equipment credit been an inconsiderable item in the farm financial picture, whether looked at from the viewpoint of the proportion of implement sales that are made on a credit basis or of the amount of credit outstanding as a result of such sales. Dr. Diesslin estimates that approximately one-half of the 1935 farm implement sales of all manufacturers were made on a credit basis and that manufacturers alone held nearly $120 million of credit arising from these transactions, though it must be conceded that at that time this represented just about all the equipment credit extant. In 1947 estimated sales of new farm equipment, exclusive of trucks, automobiles, small attachments, and repair parts, stood at $1,400 million, and in this connection farmers received $280 million of credit; used-equipment sales in that year have been estimated at $460 million, and credit advanced in connection with them at $120 million. No estimates are available as to the amount of credit extended on sales after 1947, but it is known that sales expanded spectacularly—they have been estimated

for 1951[1] at $3 billion—though apparently the expansion was accomplished with only a limited use of credit.

The obvious connection of this type of credit with the mechanization of American farms provided additional grounds for a study of its development. The rapid sweep of mechanization in agriculture is suggested by the fact that American farms, which in 1920 were using 25.7 million horses and mules and only 246,000 tractors, by 1953 had reduced the number of horses and mules to 5.6 million and increased the number of tractors in use to 4.4 million —four tractors for every five farms in the country.[2] In the process the farm labor force had fallen from 13.4 million to 8.6 million, but output had increased over 50 percent and output per man-hour had more than doubled. The availability of appropriately designed credit arrangements played a role in the mechanization of agriculture not unlike that played by consumer instalment credit facilities in promoting widespread use of the automobile, of radio and television, and of the whole range of durable goods that have made today's American home so different from that even of twenty years ago. No one can say decisively, of course, that the mechanical aspect of agriculture's technological revolution would not have occurred in the absence of facilities enabling the farmer to purchase equipment on a time payment basis, but there can be little doubt that the pace of this momentous change was quickened by their availability.

Despite all of this, Dr. Diesslin's study is the first exhaustive investigation of the field. He discusses the economic basis of farm equipment credit, including that extended to dealers for inventory-carrying purposes as well as that going to farmer-users, and sketches its historical development. The major focus of the study, however, is on policies and practices in recent years: the work was undertaken in 1947 and most of the data which it employs refer to that general period. Events have moved so rapidly that there is some need to bring the account, so far as possible, more nearly up to date. Accordingly, supplementary investigations were made by

[1] *Balance Sheet of Agriculture, 1952* (U.S. Department of Agriculture, Bureau of Agricultural Economics, Agr. Inf. Bul. No. 90, July 1952), p. 19.
[2] *Agricultural Outlook Charts—1953* (Bureau of Agricultural Economics, October 1952), p. 22, and *Agricultural Outlook Charts—1954* (October 1953), pp. 29, 32, and 35.

the author in the spring of 1954 and will be reported on in this introduction. In order, however, to see present arrangements in their proper perspective one must recall the principal phases through which this form of credit extension has passed.

Records that are fragmentary at best leave the early history of farm implement credit rather dim, but it is known at least that it is as old as the implement industry itself. Ever since the invention of the reaper and the steel plow in the early 1800's, it has been more or less customary to sell farm implements on instalment payment terms, especially the larger and more costly items. The technique may be rated, therefore, as one of the oldest examples of instalment selling, vying with credit sales of pianos, furniture, sewing machines, and other such items for this historical distinction. Its history has a unique aspect, however, in that even by 1950 there were no fully settled arrangements for extending equipment credit to farmers, at least no arrangements that could be described as conventionalized and accepted by all segments of the market—manufacturers, distributors, credit agencies, and farmer-buyers themselves. This was not the case in the automobile industry, nor in the more recent development of instalment credit sales of industrial and commercial equipment, nor in other specialized credit fields that will readily come to mind. What explains the unique experience of farm equipment credit?

As occurred many years later in the first phases of the automobile industry's growth, it was recognized from the outset that the mass market on which depended the possibilities of achieving economical production of farm implements could not be reached except through instalment sales. Although the automobile industry experienced many difficulties in establishing adequate credit facilities, and was compelled to adopt rather unusual expedients to accomplish this, finance companies that were either independent or factory-owned early assumed the retail and dealer financing functions and have continued to discharge them to this time, supplemented in more recent years by the participation of commercial banks, in a substantially unchanged form. Much earlier, farm implement manufacturers were similarly confronted by a lack of financial facilities; but in this instance they themselves assumed the financing task, carrying farmers' retail paper and dealers' inventory notes, reluctantly in most cases, on funds bor-

rowed in turn from the larger banks in money market centers.

There are many reasons why events took that turn. Local commercial banks, through which most of the short-term financing requirements of farmers were met, showed only a limited interest in the paper. Along with many others, they appear to have entertained doubts as to the economic soundness and future of many items of farm equipment. Furthermore, the required credit involved maturities that did not conform with banks' requirements for assets of relatively liquid character. The market for used equipment must have been an unsatisfactory one, raising doubts as to the value of the collateral, and the economic fortunes of the farmer were notoriously unstable.

It was not until nearly a half century after the emergence of a mass market for large farm equipment that the sales finance company was invented as a specialized credit agency. Perhaps the principal reasons why the instalment financing of equipment never attracted their participation—even on the subsidized basis which was common in the early history of the automobile industry—were that the market was too widely dispersed for economical operations and that it was impractical to place instalment payment contracts for farm equipment on the same standard and routine basis that was successfully followed in the field of consumer durable goods. Finance companies must also have been influenced by the specialized nature of the collateral and the uncertain credit standing of the majority of farmers.

Information on the early loss experience of the farm implement manufacturing companies is fragmentary in the extreme, but it is clear from what is available—reviewed by Dr. Diesslin in Chapter 6—that the record offered little encouragement to the handling of farm equipment paper by external credit facilities. The severe decline in agricultural income in 1920–23 left all of the manufacturing companies with large losses on the dealer and farmer paper which they were then carrying, forced some companies into liquidation, and stimulated the merging of a number of others. It also put the more seriously affected companies under considerable pressure to find some other means of financing farm equipment purchases than carrying the paper themselves with bank funds borrowed often on relatively short term. The economic reversal of the early thirties exerted a comparable effect. As Dr.

Diesslin's data show, there were wide differences among companies in the extent of the credit losses suffered in the thirties, but losses were sufficiently general, and in a number of instances sufficiently severe, to give renewed and heightened emphasis to the pressure for reducing the direct involvement of the manufacturing companies in the financing of time payment sales.

The severe banking crisis that affected farming communities in the early thirties eliminated direct bank financing of equipment paper, for the moment at least, as a practical possibility. As Dr. Diesslin points out, it was not until the farm prosperity induced by World War II, and its accompanying shortage of farm equipment, sharply increased the proportion of cash sales to total sales that the financing of instalment equipment purchases by agencies other than the manufacturer became feasible. At that time the notes of farmers and dealers had been virtually eliminated from the books of manufacturers, and external agencies were, at long last, more favorably disposed toward credit of this type.

A number of factors contributed to the rising interest of commercial banks. For one thing, it became clear that the tractor-powered farm, with related equipment, outproduced the horse- or mule-powered farm on a net income basis. Second, the improved financial position of farmers and the better-organized distribution facilities for used equipment greatly improved the quality of the credit. Finally, lending institutions, by then quite accustomed to the instalment financing of durable goods, were anxious to obtain assets that would increase their earnings. As a result, commercial banks so far increased their equipment lending to farmers during the forties that they obtained a predominant share of the market. Production credit associations, founded in the thirties as cooperative, short-term credit units in the federal farm credit system, began increasingly to extend equipment credits while meeting other production credit needs of their farmer members. In the forties, local finance companies became suppliers, here and there, of farm equipment credit. The manufacturers varied in their reactions to this development. Some took an active role in promoting bank financing; others professed still to be prepared to carry the credit themselves and even to prefer that method. In a few important cases manufacturing companies set up subsidiaries specially for the purpose of carrying equipment paper.

The extent to which the institutional distribution of farm equipment credit had changed by 1947 over the earlier situation in which credit was extended almost wholly by the manufacturing companies is revealed by Dr. Diesslin's estimates for that year. Of the $280 million of new, and $120 million of used, equipment credit extended in 1947, commercial banks extended nearly $200 million, retail dealers over $50 million, production credit associations about $35 million, finance companies, the Farmers Home Administration, and combinations of the various sources about $20 million, each. The manufacturers' share was less than $3 million —to all intents and purposes they were out of the farm credit market; the amount lent by individuals—more than $50 million—was abnormally high, reflecting heavy sales of used equipment at scarcity prices.

There are no data on which these estimates can be carried past 1947, but inquiries made at the leading implement manufacturing companies in the spring of 1954 make it possible to throw some light on the matter. Experience seems to have differed from one company to another, possibly because different companies have placed varying degrees of emphasis on their drive to have retail sales financed by external agencies, but it would appear that in 1949–53 no one of the major companies had to absorb retail instalment receivables in amounts exceeding 10 percent of their sales, and in some cases their retail financing has been negligible. They have had somewhat less success, which was to be expected, in shifting wholesale paper to outside agencies, though an increasing amount of this is being handled through banking channels. Especially as a result of the sharp decline in retail instalment sales in 1953, and the consequent increase in dealer inventories, some manufacturers have found themselves holding large amounts of wholesale paper.

The relatively modest demand for manufacturer financing has made certain issues which were prominent in the field immediately after World War II a good deal less important and has raised new ones. The question whether manufacturers would do their wholesale and retail financing through a specialized financing subsidiary or directly through the books of the manufacturing company has naturally become less urgent than it would have been had manufacturer holdings risen to substantial amounts. One of the major

companies has formed a special financing subsidiary, others continue on the older pattern. The merits of the subsidiary form were vitally affected, however, when it became evident that a company's position with respect to liability for excess profits taxes was automatically improved when it incorporated into its own books the equipment notes and receivables and, what was of critical importance, the debt incurred to finance these holdings. The company referred to above continued its financing subsidiary in existence while the excess profits tax was in effect but carried most of its financing operations directly on the present company's books. With the end of the excess profits tax the financing function was transferred in entirety to the subsidiary company. The desirability of having a financing subsidiary is unlikely to be a major issue, however, so long as the volume of financing to be done is limited in amount.

Events have made the problem of used-equipment financing, on the other hand, of greater importance than formerly. As Dr. Diesslin's materials show, credit has been used in the past somewhat more extensively in the sale of used than of new equipment, for items from the lowest to the highest prices. As of 1947 such credit as was extended in connection with used-equipment sales was supplied one-half by commercial banks, one-quarter by individuals, and the remainder by miscellaneous sources. However, with the onset of the buyers' market in equipment in the early fifties, the pressure on the dealers to take used equipment in partial payment for new equipment was increased, and the need for financing dealers' holdings of these items and their ultimate resale naturally was greater. Manufacturers still refrain from financing used-equipment sales, certainly on any general scale, but demands for improved credit facilities for such transactions have increased to the extent that at least one manufacturer has given consideration to providing national wholesale and retail financing plans for used equipment. This is one more point at which similarities between the problems of providing adequate instalment financing facilities for farm equipment and for automobiles come vividly to mind.

A third issue, namely the offer of cash discounts to dealers on sales not requiring manufacturer financing, has been given an unexpected twist by the reduced demand for manufacturer par-

ticipation in retail financing. The traditional arrangement has been for the manufacturer to give the dealers a 5 percent discount on cash sales, ordinarily defined as shipments paid for in cash not later than November 1 of the year of shipment, but to require full payment where some other settlement was made, for example where the manufacturer undertook to finance the retail sale. Discount practices were brought into sharp focus by the use of the financing subsidiary, since it raised the question whether the dealer should lose the 5 percent discount when sales were financed through this medium, when it would not be lost if the financing were done through an independent agency. With such questions in mind, some companies in early 1954 were studying the possibility of rearranging their financing plans so as to set up the 5 percent as a loss reserve against a dealer's outstanding paper, holding these amounts until the accumulated reserve reached 10 percent of outstandings and at that point paying the excess to the dealer.

Related to this are the recourse arrangements of retail equipment financing. Manufacturers commonly required recourse on the dealer before the twenties, but in the twenties and in the thirties and forties the trend was toward nonrecourse financing and recently the recourse arrangements have been largely abandoned by manufacturers. Commercial banks, on the other hand, are less prepared than are the manufacturers to take equipment paper from dealers on a nonrecourse basis. It has been estimated that as much as 50 percent of the paper absorbed by commercial banks requires dealer endorsement. In a sense, therefore, the loss by the dealer of the 5 percent cash discount on equipment shipments requiring manufacturer financing may be regarded as a premium (or penalty) which is paid for the nonrecourse feature of the deal. The adoption by manufacturers of the dealer-reserve plan of the type mentioned above would place their financing arrangements on substantially the same basis as that available through banking channels, except where the latter may be had on a nonrecourse basis.

Finally, there is the question of credit terms and the changes in them that have been brought about by the advent of a buyers' market and an increase in the readiness of local banking institutions to provide retail equipment financing. These forces have been reflected in several aspects of equipment financing deals. For one

thing, there has been some reduction of interest costs on retail financing. As of 1947 the effective interest rates available from banking institutions and other outside financing agencies ranged from 5 to 7 percent per annum on unpaid balances, whereas manufacturers' charges were slightly higher, ranging from 6 to 9.5 percent per annum on unpaid balances. Recently charges have been reduced somewhat by certain manufacturers, with the result that in many cases this differential between manufacturer financing and financing obtained from outside sources has been narrowed. Concurrently there has been some tendency for the cost of inventory financing to be reduced.

Also, some companies have moved in the direction of more liberal financing arrangements by extending the maximum maturity on the highest priced items to three crop seasons from the traditional two-season requirement. Another company allows up to thirty months for repayment, but with the proviso that not more than 20 percent of the contract is to be outstanding after the lapse of twenty-four months. An interesting development related to this liberalization movement is that in which one company, in order to increase off-season buying, extended to all equipment the practice, long applicable to tractors, of waiving interest on contracts until the beginning of the first crop season after purchase. Still another company reports that while it made no change in its financing terms until November 1953, at that time it reduced its financing charges and offered the equipment buyer a wider range of repayment options.

In all of the above respects the increased interest of local financial institutions in farm equipment credits has produced a more favorable situation from the viewpoint of the equipment buyer. Presumably, it has exerted a similar effect on the design of repayment schedules. Manufacturers traditionally have offered their financing on a basis that provided for instalment repayments geared to the seasonal flow of income which characterizes farm operations. Production credit associations, similarly, seem to have been financing equipment primarily on an instalment payment basis. Commercial banks, however, have made extensive use of single payment contracts and it is known that as of 1947 a large proportion, probably almost one-half, of the equipment credit extended by retail dealers was in open book form. The pressure to

increase equipment sales and the eased credit situation has doubtless tended to encourage the writing of contracts on an instalment basis, though there are no reliable data presently available on this point.

It is interesting to observe that the liberalization of financing terms by manufacturers has not tended to increase the demands on them for financing, nor has it had any appreciable effect on their credit experience. The farm recession experienced in 1948–49 was quickly reflected in a higher level of delinquencies on contracts held by the manufacturers, the only agencies on which experience data are available, but this did not carry through to a substantial increase in losses. No information is as yet available on the impact of the 1952 decline in farm income on credit experience.

Whether the recent shift of the financing function from the farm implement manufacturer to outside financing agencies will be sustained—in which case it could be said that the industry has at long last found an agreeable solution to its sales financing problem—is difficult to say. The events to date, however, are generally reassuring on this point. The one likely cause of a reversal would be a sharp rise in credit losses. This might cause the commercial banks and the production credit associations to withdraw from the field, or at least substantially to restrict their operations, and once again the burden of financing would rest mainly on the manufacturers. The most that can be said at this time is that the farm recession of recent months has produced no more than spotty evidences of such a trend.

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