

NEIL H. JACOBY and RAYMOND J. SAULNIER

Financing Inventory On Field Warehouse Receipts

Financial Research Program

Studies in Business Financing

NATIONAL BUREAU OF ECONOMIC RESEARCH

FINANCIAL RESEARCH PROGRAM OF THE
NATIONAL BUREAU OF ECONOMIC RESEARCH

Studies in Business Financing, 6

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NEIL H. JACOBY and RAYMOND J. SAULNIER

FINANCING INVENTORY ON
FIELD WAREHOUSE RECEIPTS

Financial Research Program

Studies in Business Financing, 6

NATIONAL BUREAU OF ECONOMIC RESEARCH

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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 made 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*, were published in 1942; a third, *Financing Equipment for Commercial and Industrial Enterprise*, was published in 1943. *Financing Inventory on Field Warehouse Receipts* is the last of these special monographs.

With a few exceptions dictated by the amount and character of the data available, each of the four studies of special lending

techniques has a common pattern of treatment: (a) development of the financial technique; (b) size and organization of the market; (c) characteristics of the credit services; (d) methods of credit extension; and (e) income, cost 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. The statistical basis of the studies 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 the officers of these institutions for their generous participation in interviews which were frequently lengthy, and for their cooperation in supplying special tabulations of statistical information. A major contribution to the completion of this study of business loans secured by field warehouse receipts was made by officers of several national and regional field warehouse companies. Each of these companies generously provided us with detailed information on individual field warehouses which they were currently operating. It would have been impossible to complete the present study without the factual basis provided by this unique collection of data and without the aid of these experienced warehousemen in matters of interpretation.

Between 1900 and the outbreak of the present war, the changing demands of business for short- and medium-term credit produced two major types of adaptation on the supply side of the business financing market. The first of these was the marked change that came about in the lending policies and techniques of commercial banks; the second was the growth of non-bank lending agencies especially organized to meet the newer credit needs of the period. The rapidity with which these adaptations were 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 inventories through the extension of credits secured by field warehouse receipts is one of the ways in which

banks have accommodated themselves to changes in the demand for business credit. In recent years, the field warehouse receipt has come into increasing use as a security device, with increasing numbers of commercial banks adapting their lending techniques to the use of this instrument. It is the purpose of this study to trace the development of field warehousing, to estimate the quantitative importance of loans secured by field warehouse receipts, to describe the characteristics of the business enterprises using this method of financing and to describe the techniques followed in establishing the warehouse and in extending credit on the receipt as a security device.

The investigations which resulted in this study were completed before the entry of the United States into the present World War. While it has not been possible to deal with the effects that our participation in war have had upon field warehouse receipt financing the study does describe the development of field warehouse receipt loans up to the outbreak of hostilities and states the position of this type of bank lending at that time. It is essentially, therefore, a study of business lending under peacetime conditions, a feature that should add to its usefulness as a guide to problems of business financing during the postwar period.

RALPH A. YOUNG

February, 1944

Director, Financial Research Program

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The officers of a large number of banks contributed to the investigation in two important ways; first, by providing special statistical tabulations and answering questionnaires concerning loans made by their institutions on the security of field warehouse receipts and, second, by giving the authors, through lengthy interviews, the benefit of their intimate knowledge of the problems and techniques of field warehouse receipt financing. Without their cooperation it would have been impossible to have completed the investigation satisfactorily. For this assistance the authors wish to express their sincere appreciation.

We wish also to extend our special thanks to the officers of the field warehouse companies who made a major contribution to the investigation by providing us with special tabulations concerning the characteristics of warehouses operated by them, and by discussing with us the problems and techniques of this type of warehousing. Members of the examining staffs of the Office of the Comptroller of the Currency, the Board of Governors of the

Federal Reserve System, the Federal Reserve Bank of New York, and the Federal Deposit Insurance Corporation have discussed certain aspects of field warehouse receipt financing with the authors and we are very grateful to them for their generous assistance.

Dr. Lorine Pruette carried the responsibility of editing the manuscript and has completed this task with great skill. The authors wish to take this opportunity to express to her their very sincere appreciation for the many contributions she has made to the organization of the study and to the readability of the text.

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*Financing Inventory on
Field Warehouse Receipts*

Summary of Findings

LOANS SECURED BY FIELD WAREHOUSE receipts represent a comparatively recent and developing method used by financial institutions to lend working capital to business enterprises. A field warehouse is simply a special warehouse leased from, and established on the premises of, the borrowing concern. The warehouseman takes custody of the raw materials, semi-finished or finished goods of that concern and issues warehouse receipts that are then pledged as collateral security for a loan. Under many circumstances such receipts possess definite advantages over chattel mortgages, pledges of goods, or trust receipts as security instruments. By making the inventories of a business "bankable," field warehousing operates as a credit facilitating device.

American commercial banks have long granted credit on the security of warehouse receipts covering staple agricultural and other commodities deposited in terminal warehouses. But the establishment on the borrowers' premises of field warehouses by concerns specializing in this activity is a comparatively recent development. It originated around the turn of the present century and appears to have undergone steady development. Causes of expansion in the demand for field warehouse receipt loans were: the weakened working capital positions of many business enterprises during and after the great depression of the early thirties, the increasing burden of corporate taxation which impeded the growth of working capital, difficulties in obtaining funds through public sale of securities, efforts to stabilize production rates throughout the year, the relative growth in the importance of cash discounts, and larger inventories held under defense and war conditions. The supply of credit collateralized by field warehouse receipts expanded in consequence of higher credit standards set by banks as a result of their depression experience with unse-

cured loans, wider adoption by the states and judicial clarification of the Uniform Warehouse Receipts Act, and vigorous educational programs conducted by the field warehousing companies.

At the end of 1941 field warehousing was conducted by a few large companies of regional or national scope, and by numerous small concerns many of which operated a few field warehouses as an adjunct to a terminal warehouse or financing business. The principal national concerns include William H. Banks Warehouses, Inc., Douglas-Guardian Warehouse Corporation, Haslett Warehouse Company, Lawrence Warehouse Company, New York Terminal Warehouse Company, St. Paul Terminal Warehouse Company and Terminal Warehouse Company of Baltimore.

The key to the establishment of a field warehouse is the creation of an effective bailment. This exists when the warehouseman has "continuous, exclusive and notorious" possession of the merchandise, and only his agent, servant or employee has access to the warehouse. Honesty and competence on the part of the warehouseman and his custodian are vital in giving value to the warehouse receipts. Field warehouse companies typically employ as custodian a person formerly employed by the depositor, because this procedure not only reduces costs but also makes available the services of individuals experienced in handling the particular goods to be stored. While this practice has sometimes been criticized on the ground that such custodians cannot be disinterested, yet Federal and state courts have upheld the validity of their warehouse receipts, provided that the bailment was effective. The bonds ordinarily furnished by field warehousemen indemnify the holders of their receipts against loss arising from failure of the warehouseman to perform his duties under warehousing laws, that is, against fraud or negligence. Insurance against loss from fire, water damage, windstorm or other causes arising outside the warehouse must be specially provided.

Warehouse receipts may be negotiable or non-negotiable in form; either type of receipt may cover fungible or non-fungible commodities; in some cases commodities may be held under an agreement of bailment, which operates to reduce the number of receipts to be issued and accounted for. Whatever their type, most warehouse receipts indicate merely that the warehouseman has received so many packages or containers of a specified descrip-

tion or a stated quantity or volume of commodities such as coal or oil; the receipt holder must perform the task of grading and valuing commodities, and of ascertaining the contents of containers.

The average life of field warehouses is three to five years, excepting in industries characterized by highly fluctuating seasonal working capital needs, wherein the average life is much longer. The depositing-borrowing concerns either perfect arrangements with new warehousemen, or frequently they use a field warehouse receipt arrangement temporarily until they are able to secure credit on other bases. In some cases field warehousing is discontinued because the particular circumstances that made advantageous the acquisition of an above-normal inventory have disappeared.

It is estimated on a basis of data secured from five principal field warehouse companies that there were at least 5,000 field warehouses in the United States at mid-1941, about 3,000 of which were operated by large regional or national companies, and about 2,000 of which were operated by small local concerns. The annual average amount of credit outstanding and secured by field warehouse receipts during this period is placed at about \$150 million. Forty-three percent of all field warehouses were located in the Central and Pacific states. Although hundreds of different types of merchandise are warehoused in the field, a considerable part of all deposits consists of products of agriculture. Canned goods, miscellaneous groceries, and lumber, timber and building supplies account for 40 percent of all field warehouses. Two-thirds of all the depositors in field warehouses are manufacturers, almost one-third are distributors.

While the value of deposits in a given warehouse is likely to vary greatly through each year, the typical field warehouse contains merchandise worth, on the average, between \$25,000 and \$100,000, and the typical loan against the warehouse receipts is approximately two-thirds of the value of the deposits. A questionnaire survey of commercial banks at mid-1941 revealed that the average outstanding field warehouse receipt loan balance was \$40,000.

Commercial banks appear as lenders upon the receipts of nine out of every ten field warehouses, although commercial finance

companies, trade suppliers and warehousing companies also accept such receipts as credit facilitating devices. Warehousemen hold receipts arising from their own custodianship of goods in about 2 percent of all cases, thus combining the functions of custodian and banker.

It appears that at mid-1941 about 13 percent of all the operating and insured commercial banks in the United States extended credit secured by field warehouse receipts, although the frequency of such lending was much greater than this in the Pacific and East North Central Regions and much less in the Eastern and New England Regions. Banks located in large cities tended to make such loans more than four times as frequently as did banks in centers under 10,000 population. Evidently, the largest markets for such credits centered in the metropolitan regions. Field warehouse receipt loans were not, however, significantly large elements in bank earning assets, comprising less than 1 percent of all loans and discounts and about 2 percent of "commercial and industrial" loans of all American banks. Considering only the banks that engaged in this type of credit transaction, nearly two-thirds of the total outstanding field warehouse receipt loans were held by institutions in which such credits formed between 1.5 and 4 percent of total loans and discounts. Moreover, the larger of these banks (measured in terms of deposits) tended to serve a larger number of business concerns on this basis, to make larger loans, and to place a larger fraction of their total loans and discounts in field warehouse receipt credits than did the smaller institutions. Thus, the average loan held by banks in the \$500,000 to \$1 million deposit class was \$11,650, whereas the average loan of banks with deposits over \$50 million was \$48,490.

As there is a close correlation between size of loan and asset size of borrower, it may be inferred from knowledge of the average amount of field warehouse receipt loans that the majority of business concerns financed on this basis had total assets of between \$25,000 and \$200,000. Many of these concerns experienced high degrees of seasonal fluctuation in their working capital requirements, and found field warehouse receipt financing to be advantageous because the amount of credit was thereby geared closely to working capital needs. Other concerns used this basis of financing because their operations were expanding

rapidly and they needed credit in amounts larger than could be obtained without collateral security. The fact that the typical field warehouse has a duration of three to five years suggests that many concerns make use of this financing device temporarily, until abnormally large inventories are reduced to normal proportions, or they are able to build up more adequate equities or to obtain capital or credit on another basis.

Nearly all commercial banks administer field warehouse receipt loans through the officers who deal with other loans against commodities. Few banks have set up separate departments for handling commodity loans; where found, these are generally supervised by a senior loan officer. The development of field warehouse receipt lending is, to an important degree, attributable to the vigorous promotional work of the field warehouse companies that has educated bankers in the uses of such financing. As a result four-fifths or more of all warehouses are installed by warehouse companies after references made by bank officers, only a few being set up at the direct instance of depositors or trade suppliers.

Lending against field warehouse receipts has posed unique problems of credit appraisal for commercial bankers, resulting in the evolution of special credit standards and procedures for limiting risks. The credit elements entering into each loan fall into four groups: (1) *the field warehouse company*—its financial responsibility, experience, the form of its warehouse receipts, and the amount, coverage and worth of its bond; (2) *the field warehouse*—the validity of the lease agreement, the adequacy of the physical conditions, and the competence and integrity of the custodian; (3) *the borrowing business concern*—the moral and financial responsibility of its principals, its financial strength, the calibre of its management, its past and prospective earning power; (4) *the warehoused merchandise*—its value, susceptibility to deterioration, breadth of market and price fluctuation. Bank officers usually give some attention to each of these elements before entering into a financing arrangement, although the emphasis placed on each element differs widely as between banks.

While credit standards differ widely, bankers insist that the borrower use the loan proceeds for conducting the normal opera-

tions of his business and not for the purpose of acquiring commodities against a speculative price rise. Consequently they seek to determine whether the loan fulfils a genuine economic function, such as enabling the borrower to take advantage of quantity discounts, to accumulate inventory in order better to plan production schedules, to purchase necessary supplies at low off-season prices, or to take advantage of low transportation costs. With respect to the character of the warehoused commodity, some banks limit their loans to raw materials for which a ready market exists; other banks will lend against deposits of finished or semi-finished goods provided the borrowing concern has non-cancellable orders for the merchandise; still others operate under neither requirement. Where loans are made against field warehoused stores of staples such as sugar, cotton or grain, a banker may occasionally require the borrowing concern to "hedge" its purchases of raw materials if there is a "futures" market for them or for products made from them.

After a banker has satisfied himself that his credit standards are met, he "sets up" a field warehouse receipt financing arrangement by (1) establishing a maximum line of credit on the basis of his analysis of the borrowing concern's financial statements, and (2) fixing the percentage that the amount of funds advanced at any time will bear to the value of the field warehouse receipt collateral.

The percentage advance is a risk-controlling factor of prime importance, because it determines the bank's "margin of safety" or excess of collateral value over outstanding loan balance. Other factors being held constant, the percentage advance will be larger, the broader the market for the warehoused commodity, the smaller the degree of its price fluctuation, the less the normal rate of its deterioration in value during storage, and the smaller the maximum credit line granted the borrowing concern in relation to its financial strength. The majority of field warehouse receipt loans involve percentage advances of between 65 and 85 percent. The percentage advance is usually expressed in terms of market price if there exists a broad market for the warehoused commodity; otherwise it may be expressed in terms of the cost of the commodity to the borrower.

The total cost of credit secured by field warehouse receipts

consists of the warehouseman's charge for installing and for operating the field warehouse plus the lender's charge for funds advanced. Field warehousing companies ordinarily charge a minimum annual amount of \$350 to \$600 for installing a warehouse, plus a specified percentage of the value of deposits or the amount of credit secured by the depositor. The field warehouseman's total fee, expressed as a percent per annum of the amount of credit procured by the borrower depends largely on the size of the operation. It will ordinarily run around $1\frac{1}{2}$ or 2 percent of the loan but on a very large loan may be as little as $\frac{3}{4}$ of 1 percent. Costs above 2 percent of the credit obtained would be involved where loans are relatively small. Because of the minimum charge, loans to business enterprises of under \$10,000 generally are not economical even though the cost of this credit may be lower than if the funds were procured on any other basis. Some field warehousing companies will not establish warehouses in locations where the average value of deposits is less than this amount, unless the costs of operating the warehouse are exceptionally low by virtue of location close to the warehouseman's headquarters or other factors. There is great variation in the effective annual interest rate charged by commercial banks on field warehouse receipt loans, depending upon the size of the loan, the financial strength of the borrower, the nature of the warehoused commodity, and other factors. The majority of loans appear to carry rates from $3\frac{1}{2}$ to 6 percent. The aggregate costs of field warehouse receipt credit to business concerns ranged in mid-1941 from as little as 4 percent to as much as 10 percent.

In the present study no effort has been made to collect data describing the impact of war upon the volume of field warehousing, or to predict the place of this financing technique in the post-war years. But a few observations of a general character may be made on these subjects.

During the years 1941 and 1942, expanding levels of production and rising prices were accompanied by larger physical inventory holdings on the part of business concerns. This factor, plus the enormously expanded production programs of thousands of small war contractors and subcontractors possessing slender working capital, definitely raised the demand for field warehousing service. Many concerns began financing themselves through

the use of warehouse receipts arising from the storage of goods within their premises, both because their inventories were larger than they were accustomed to carry and because their working capital requirements for payrolls, taxes and other purposes were swollen beyond traditional levels. On the other hand, new sources and methods of obtaining governmental and banking funds were opened to such producers, including advance payments and progress payments by the Federal government on war contracts and Regulation V loans. These developments prevented the demand for credit secured by field warehouse receipts from expanding to the limits it would otherwise have reached.

Apparently, the volume of field warehouse receipt financing began to decline around the end of 1942 and the beginning of 1943. This may probably be attributed to the declining inventories of materials in the hands of producers and distributors, as the war production program mounted toward its peak, and to the growing availability of credit on other terms and arrangements. No attempt has been made herein to assess the strength, or to predict the duration, of the forces shaping this trend.

It appears reasonable to postulate that in the period of postwar reconversion the factors which caused field warehouse receipt financing to expand during the prewar years will continue to operate. This hypothesis seems especially tenable if the postwar era is one of high levels of production and is characterized by the rejuvenation and growth of new and small business enterprises.

*Nature and Development
of Field Warehousing*

THE PAST DECADE HAS WITNESSED a signal growth of certain techniques for introducing working capital into business enterprises. Loans made on the security of field warehouse receipts represent one of these developing techniques which are being utilized by commercial banks, commercial finance companies, the Reconstruction Finance Corporation, the Federal Reserve banks and other grantors of business credit. Like term lending, accounts receivable financing and instalment financing of commercial and industrial equipment, loans secured by field warehouse receipts are a dynamic phase of commercial bank relationships with business enterprise.

Although these credit devices emerged prior to the depression of 1929-32 (some indeed having had a comparatively long history in American finance), it is clear that each of them expanded in both absolute and relative significance under the depression and recovery conditions of the 1930's. This strongly suggests that powerful influences have tended during the past ten years to alter the conditions of demand for working capital. Field warehouse receipt loans, like the other developing types of business credit, may be conceived as adaptations to changes in the character of the market for business credit, both on its demand and supply sides.

Loans secured by field warehouse receipts have attained wide use as a means of introducing credit into two types of business enterprises: first, businesses whose financial strength is regarded as too limited to permit lending institutions to grant them adequate financing on an unsecured basis; second, business concerns whose operations are characterized by large seasonal variations, giving rise to working capital requirements that fluctuate widely through each year. An adequate explanation of field warehouse

receipt financing requires an initial understanding of the nature of the field warehouse, and of the techniques of installing and operating it.

Definition of Field Warehousing

As the term is ordinarily used, "field warehouse" simply means a public warehouse established by a bona fide public warehouseman on the premises of a business concern for the purpose of acquiring custodianship of commodities owned by that concern. Field warehouses are distinguished from "terminal" or other "public" warehouses in two respects: first, the field warehouse exists only for the purpose of receiving deposits of commodities belonging to a single depositor;¹ second, the warehouse is physically located on the premises of the depositor.² The field warehouse is "brought to" the commodities, in contrast to the terminal warehouse, to which commodities are transported for deposit.³

The purpose of establishing a field warehouse under the custody of a public warehouseman is invariably to enable the warehouseman to issue warehouse receipts, which may then be used by the concern depositing merchandise in the warehouse as collateral security for a loan. In effect, field warehousing enables the depositor to make "bankable" his inventories of raw materials, semi-processed, or finished goods. The warehouse receipt acquired by the lender as a result of the establishment of a field warehouse on the borrower's premises conveys to the lender legal title to the goods, providing the field warehouse has been properly established, and thus increases the assurance of the lender that the loan will be repaid.

The basic economic function of field warehousing can be more

¹ Because the field warehouse is at law a public warehouse, the contract between warehouseman and depositor cannot stipulate an exclusion of other depositors. But it would be very unusual for other depositors to utilize a field warehouse, as a matter of practice.

² On occasion, a field warehouse may be set up on premises other than those of the borrower; an illustration would be a warehouse set up for a trade supplier on the premises of the supplier's customer. Title still rests in the supplier's hands, but it is convenient to store the property, pending transfer of title, at the place of business of the buyer. Such instances are uncommon, however.

³ In the present work, "depositor" refers to a business concern borrowing on the security of field warehouse receipts, and "deposit" means merchandise placed within a field warehouse. The context in which these terms are used should prevent any confusion with depositors of money in banks, or bank deposits.

adequately appreciated by asking in what other ways a lender might limit his risk of loss in extending credit to a borrower possessing a stock of commodities. There are, in theory, several alternatives. In the first place, a lender might take a chattel mortgage on the commodities. This would require that the commodities be meticulously described in the mortgage instrument, that the mortgage be recorded according to the laws of the state wherein it was created, and that any substitution of new units of merchandise for old units be made with the express permission of the mortgagee. In the case of constantly changing stocks of merchandise the cost and inconvenience of this procedure makes it impractical.⁴ Another device would be for the borrower actually to pledge the commodities to the lender by physically placing them in the hands of the lender. However, the lender generally has no storage facilities and would be obliged to place the merchandise in a public warehouse. If the merchandise were placed in a terminal warehouse remote from the place of business of the borrower, the pledged commodities could not be quickly drawn upon for processing or sale, and important handling difficulties would arise in quickly disposing of or replenishing these goods.

Still another device is the trust receipt. The borrowing concern might convey to the lender a security interest in the merchandise, giving the lender a trust receipt acknowledging that the borrower takes possession of the property as trustee for the lender. While a trust receipt transaction conveys good title to the holder as against third parties without recording individual receipts, the practical problems facing a banker holding trust receipts in case of bankruptcy of his borrower are extremely difficult. Goods can only be recovered if they can be identified by the lender. Identification is extremely difficult, and sometimes impossible, in cases where the trust receipt goods are mixed with other goods in the products of the borrower, or in cases where other lenders also hold trust receipts of the borrower.⁵

⁴ See Anthony Kane, "The Theory of Field Warehousing," *Washington Law Review*, Vol. XII (January 1937) p. 20.

⁵ See Karl T. Frederick, "The Trust Receipt as Security," *Columbia Law Review*, Vol. XXII (1922) p. 395; *Concerning Trust Receipts* (American Acceptance Council, New York, 1930); and *Uniform Trust Receipts Act*, adopted by several states. The Uniform Trust Receipts Act provides that a notice of intention to do business through the medium of trust receipts shall be filed or recorded with the Secretary of State or other appropriate officials.

The field warehouse receipt overcomes these difficulties. Under the conditions in which it is used effectively, it gives the lender a security interest in goods superior to that afforded by the chattel mortgage or the trust receipt. From the standpoint of the lender, legal title in the goods is unquestioned if the field warehouse is properly established and maintained. From the standpoint of the borrower, facilities can be provided for the convenient deposit and withdrawal of goods for processing or sale, a condition which may be essential to the proper conduct of the business. Under many conditions, therefore, the establishment of a field warehouse may be the least costly method of enabling a business concern to obtain credit and to carry on productive operations that would otherwise be impossible. In addition, field warehouses may be set up to effect savings in storage rates or to avoid costs of transporting goods to a public terminal warehouse. It should be pointed out, however, that there are numerous practical problems of operating field warehouses that must be faced and solved before lenders can feel complete assurance in making advances against warehouse receipts.

Organization of Field Warehousing

American commercial banks have long extended credit to business enterprises on the security of inventories or stocks of commodities. Only within comparatively recent years, however, have loans been made extensively on the security of field warehouse receipts. The business of field warehousing appears to have developed in the United States after the turn of the twentieth century. During the nineteenth century, isolated loans were made against the collateral security of commodities warehoused at the borrower's place of business; but the evidence suggests that such transactions were quite rare, and that the field warehouses were not established by concerns *specializing* in this type of service. It is known that field warehouses were established thirty or more years ago by a number of national banks having charters considered to be broad enough to give them the right to do this business. The warehouses were established in order to give the banks possession of inventories securing their own loans.

At the present time, field warehousing is conducted in the United States by two broad classes of companies. First, there

are a few comparatively large independent field warehousing companies, whose operations extend over the entire nation or over broad regions. Second, there are many small local concerns, each operating a few field warehouses as an adjunct to a terminal warehousing business. For convenience the first group will be referred to as "national or regional" and the latter group as "local" field warehousing companies. The majority of field warehousing companies, national, regional and local, appear to have entered the field as an outgrowth of their occupations as operators of public terminal warehouses. Even today the majority of companies engaging in the installation of field warehouses also operate terminal warehouses through other divisions of the business, or through affiliated corporations.

William H. Banks Warehouses, Inc. was organized in 1891, and was among the first organizations in the United States to install field warehouses for the purpose of creating bankable collateral. It is said to have issued field warehouse receipts as early as 1892. All operations of the company are conducted from the headquarters in Chicago, although the concern is licensed as a warehouseman and operates in the Central, Southwest and Northwest regions.

Douglas-Guardian Warehouse Corporation was formed in 1932, when the Douglas Public Service Corporation of New Orleans purchased the warehousing business of the Guardian Warehousing Company. Guardian Warehousing Company, initially known as Warehouse Securities Corporation,⁶ had been organized in 1926, and operated metropolitan public warehouses as well as field warehouses. During 1932 it divested itself of interests in metropolitan public warehouses and thereafter specialized in field warehousing. Douglas-Guardian restricts its activities to independent custodianship or third-party bailment, and does not make loans against the merchandise deposited by its clients. It operates nationally through 15 regional offices.

The Haslett Warehouse Company was incorporated in 1898, consolidating the warehouse operations of three companies. It

⁶This company had been organized by a large number of warehousing companies for the purpose of lending money to their depositors. It was owned and controlled by the constituent companies, and was established for the purpose of keeping the lending of money separate from the warehousing function.

does a general warehousing business and operates field warehouses mainly in the State of California. The general office of the company is in San Francisco, with branch offices in five other California cities.

One of the oldest companies to develop the field warehousing branch of the warehousing business on a national scale is Lawrence Warehouse Company. This company is a wholly owned subsidiary of Lawrence Warehouse Corporation,⁷ other subsidiaries of which operate public warehouses in San Francisco and Oakland, California. Lawrence Warehouse Company originated its field warehousing operations in the food canning industry of California about 1910; thereafter its operations were gradually extended to the Central States, and later to the Atlantic Coast region. An office was established in Chicago during 1926, and one in New York during 1935. At the middle of 1941, Lawrence Warehouse Company maintained offices in 22 cities of the United States and in Honolulu, and was operating field warehouses in 44 states. Its warehouses were chiefly concentrated on the Pacific Coast, in the Great Lakes district and on the Eastern Seaboard.

New York Terminal Warehouse Company was organized in 1936 as a subsidiary of Terminal Warehouse Company. The parent company was primarily a terminal warehouse operator, but it had also functioned as a field warehouse company for a number of years. In 1939, New York Terminal Warehouse Company was purchased by St. Paul Terminal Warehouse Company, continuing to operate as a separate corporate enterprise. New York Terminal Warehouse Company's field warehousing business has been mainly in the territory east of the Mississippi River.

St. Paul Terminal Warehouse Company was founded in 1916 and is a large operator of terminal storage in the Twin Cities. Since 1926 it has been actively engaged in field warehousing, mainly through the north central and northwestern states. Its operations are conducted through regional offices in six principal cities of this area. In 1938 the company purchased the field warehousing business of the Hansen Storage Company of Milwaukee, which operated throughout Wisconsin. As indicated above, it acquired the New York Terminal Warehouse Company in 1939.

Terminal Warehouse Company of Baltimore began business in

⁷ See *Moody's Industrials* (1940) p. 1468.

1896 as a metropolitan terminal warehouse operator. Later it branched out into field warehousing in order to meet the demands of numerous small canning companies operating in the Atlantic Seaboard states. Terminal Warehouse Company of Baltimore has consistently made loans to its depositors. It is worth noting that while the Company serves small canners by establishing field warehouses for their inventories, it also creates bankable collateral for these concerns through storage of their canned goods in its terminal warehouses.

Factors Affecting Growth

Available data indicate that the number of field warehouses in operation in the United States has risen steadily during the past two decades, and that the annual increase in the magnitude of field warehousing operations has been greatest during the past decade.⁸ It is necessary to look both to the supply and demand sides of the market for field warehousing services to explain what is apparently a marked secular growth at an increasing rate. On the demand side of the market, the following factors appear to be salient.

First, the protracted depression following 1929 produced operating losses that diminished the working capital positions of many firms.⁹ As a result they were no longer able to obtain their requirements of credit on an unsecured basis, and they resorted to the pledge of inventories, as well as other assets, as a method of circumventing this difficulty.

Second, the growing weight of corporate taxation, especially since 1935, has impaired the ability of concerns to build up net working capital through the retention of earnings, and thus

⁸ In an article in *Burroughs Clearing House*, Vol. II, No. 20 (July 1936) entitled "A Better Look at Field Warehousing," Arthur Van Vlissingen, Jr. stated that there were about 300 field warehouses in use in the United States in 1926, whereas by 1936 there were perhaps as many as 3,000 warehouses. The author does not cite the source of this information. Professor John H. Frederick stated in an address made during 1938 that "The number of field warehouses has increased from about 250 in 1926 to more than 5,000 today, according to the latest estimates, and is steadily growing." Here again no source of information is cited. See *Proceedings of First Educational Conference of Texas Bankers Association* (Austin, Texas, 1938).

⁹ Evidence of this fact with respect to small corporations is contained in Charles L. Merwin's, *Financing Small Corporations in Five Manufacturing Industries, 1926-36* (National Bureau of Economic Research, Financial Research Program, 1942) pp. 5, 86.

increased their dependence upon financial institutions for funds wherewith to carry on business operations during a period of expansion.

Third, the national defense and war production programs after 1939 caused business concerns to seek funds wherewith to finance expanded holdings of inventories.¹⁰ The desire to hold larger inventories has been engendered in many cases by threatened shortages of raw material.

Fourth, the differentials between cash prices and time prices for a great variety of materials appear to have become *relatively* more important during recent years. Cash discounts have long been an important feature in the American economy. While there is no evidence that they have widened in absolute terms, they have become larger relative to the cost of borrowed money to business concerns, as a result of sharp reductions in the whole structure of interest rates during the past decade. Therefore, there have been widening opportunities for loans profitable to borrowers, because credit enables the debtor concern to save more through taking cash discounts on its purchases of inventories than the amount of the costs of the credit, including the costs of establishing and operating field warehouses. Closely allied to this is the use of field warehousing as a result of more general purchasing in carload lots to capture the advantage of lower freight rates.

Fifth, there is evidence that the relatively rising costs of labor as a factor of production, resulting partly from the vigorous growth of the trade union movement in the United States, have made it more profitable for business managements in some industries to stabilize production rates throughout the year. In this way they are able to reduce, or to minimize increases in labor costs by retaining valuable employees and building up a more competent and better-satisfied operating personnel. But since sales of the product continue to display seasonal fluctuations, this means that, during certain seasons, production goes to build inventories. Field warehousing of these inventories is a method whereby many concerns can secure credit to carry on productive activity during dull selling seasons.

Turning to the supply side of the market, the following factors

¹⁰ See *Federal Reserve Bulletins*, 1939-42, for indices reflecting an upward trend in business inventories.

appear to have increased the willingness of commercial banks and other lending institutions to make loans on the security of field warehouse receipts:

First, the banking crisis of 1931-33 caused bankers to set higher credit standards during the period of business expansion following 1933. This attitude was, in part, heightened by the policies and procedures of bank supervisory authorities. Consequently, in making loans to small or medium-sized enterprises, or enterprises with mediocre financial strength, bankers tended to request liens upon specific assets in order to increase the probability of repayment. The field warehouse receipt was a type of specific security that enabled many businesses to make their inventories of raw materials or finished goods "bankable."

Second, the successive adoption by many states of the Uniform Warehouse Receipts Act, taken in conjunction with several judicial decisions clarifying the legal character of the warehouse receipt as a security device, made lenders more certain of their position in extending credit collateralized by warehouse receipts, and augmented their willingness to engage in such credit transactions.

Third, the promotional program of the field warehousing companies resulted in acquainting many commercial bankers with the nature of, and the opportunities inhering in, this basis of lending. This factor must be credited with exerting a real influence on the expansion of the supply of such credit.

In a larger sense, the growth of field warehousing as a device for facilitating the introduction of credit into businesses of small and medium size may be viewed as a part of a significant transition in American banking. The essence of this transition is a movement toward lending against specific collateral, with the lender looking toward the value of the collateral as well as toward the earning power of the business to liquidate the loan. Other manifestations of this trend are the steady growth of accounts receivable financing and the growth in instalment financing of commercial and industrial equipment for small and medium-sized enterprises.

Collateral loans are not new in American banking, but the variety of collateral is increasing and the number of different kinds of business enterprises borrowing on a collateral basis appears to be rising. One factor that aids in explaining this ex-

pansion is the permission given to banks by the National Bank Act and the banking laws of many states to increase the amount of credit that may be granted to an individual borrower where warehouse receipts are taken as security. Under these laws, unsecured loans to individual borrowers are usually limited to specified percentages of the capital funds of the lending banks, but credit may be extended, either without limit or to the extent of much larger percentages of capital funds, if collateralized by warehouse receipts.

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Installing and Operating Field Warehouses

THE ESSENCE OF FIELD WAREHOUSE receipt financing is the issuance of warehouse receipts to the depositor, who pledges them to the creditor as collateral security for a loan. Among the principal factors considered by the creditor in evaluating such receipts are the reputation of the warehouseman and the technical conditions under which the field warehouse is installed and operated. Attention is therefore directed to the bearing of these conditions upon the legal position of the field warehouseman and his relations to depositor and banker.

Legal Position of the Field Warehouseman

In establishing a field warehouse, the company acts under the statutes governing public warehouses and public warehouse receipts in the state wherein the warehouse is established. Every state licenses public warehouses, prescribes certain requirements that warehousemen must meet, and specifies the liabilities that they must assume toward depositors. Every state, except New Hampshire and South Carolina, has adopted the Uniform Warehouse Receipts Act in substance. Under these statutes no distinction is drawn between field warehouses and other types of public warehouses. The liabilities of the warehouseman and the nature of warehouse receipts issued by him are the same, whether the warehouse is a field warehouse or a terminal warehouse.

At law, the warehouseman is the bailee of merchandise. The key to the establishment of a field warehouse is the creation of an effective bailment of the commodities deposited with the warehouseman. In general, it may be said that an effective bailment exists when the warehouseman has "continuous, exclusive and notorious" possession of the goods. These conditions must be fulfilled because the warehouse receipt issued by a warehouseman

is a document *conveying title* in the goods specified on its face to the holder of the receipt. The possessor of a warehouse receipt is *prima facie* the owner of the merchandise; acknowledgment by the transferor or recordation of the receipt is not necessary, as in the case of a chattel mortgage. Clearly, the establishment of an effective bailment presents a greater variety of problems when a special warehouse is set up on the premises of the depositor than when the merchandise is brought to a pre-established terminal warehouse.

Methods of Establishing Field Warehouses

In acquiring continuous, exclusive and notorious possession of the commodities received by him from a depositor, a warehouseman normally takes the following steps.

The initial step is for the warehouseman to enter into a lease agreement with the depositor, under which the depositor leases a portion of his property to the warehouseman for a rental payment, usually nominal in amount. The leased premises may comprise a warehouse or part thereof, a yard, dock, pool of water, or other suitable space in which the particular merchandise being deposited may be held separately.

Next, the warehouseman complies with the requirements of the law of the state wherein the warehouse is located, and, where this is required, obtains a license to operate as a public warehouseman in that state.

Upon taking over the leased premises as tenant, the field warehouseman establishes such physical conditions that only he or his employees may have access to these premises. This is done in order to acquire exclusive and continuous possession of the commodities. The method of accomplishing this necessarily varies with the nature of the commodities and the premises in which they are stored. If the premises consist of a closed building, the warehouseman must equip the building with locks, the keys to which are held only by himself or his employees, so as to preclude access by any other person. If the premises consist of a yard or dock, the warehouseman must construct a fence or other barrier such as will make the goods inaccessible to other persons. In cases where it is impossible by such methods to prevent the depositor from gaining access to the stored commodities (for example, log

boom stores in a river or pond), the warehouseman may establish "exclusive possession" of the goods by maintaining continuous custodianship service.

The warehouseman's possession of the deposited merchandise must also be "notorious." This requirement is usually fulfilled by posting an adequate number of signs in conspicuous places within and without the field warehouse. These signs put other persons, including creditors of the depositor, on notice that the merchandise in the warehouse is held by the warehouseman whose name is specified on the notices, and is the property of the person holding the warehouse receipts.

The next step is for the warehouseman to place one or more of his employees in charge of the warehouse, and to arrange that they alone have access to the merchandise contained therein. These officials are variously described as "custodians," "storekeepers," "warehouse managers," "bonded representatives" or by other terms. Herein they are called custodians, for convenience. Custodians receive deposits, issue warehouse receipts or certify that receipts may be issued, and deliver merchandise out of the warehouse upon surrender of warehouse receipts or orders of release executed by the properly accredited receipt holders. The majority of field warehousing companies do not permit their custodians to issue receipts. Under a typical procedure, commodities brought to the warehouse for deposit are checked in by the custodian or assistant custodian, and are listed on a receiving record. This record is signed by the custodian and assistant custodian to certify that the goods as described have actually been received in the warehouse. It is also signed by the depositor, who certifies that these goods have been deposited, that the values stated on the receiving record are correct, that the goods are to be stored in the name and for the account of a specified financing agency, and that a particular type of warehouse receipt is to be issued to that agency. Two copies of the receiving record are forwarded to the nearest office of the warehousing company for checking. Warehouse receipts covering the goods described in the record are then signed by an authorized representative of the warehousing company and sent to the financing agency.

Since the position of custodian is one of considerable trust and responsibility, the qualifications of the person holding this office

are important, both at law and in fact. These qualifications are discussed at a later point.

Forms of receipts differ as between warehousing companies and also as between the types of commodities contained in the warehouse. In the first place, receipts may be negotiable or non-negotiable in form. Negotiable warehouse receipts are usually issued in cases where a negotiable instrument is desired by the financing agency or where the commodities deposited in a field warehouse are of such nature that all withdrawals are made in units, and not in fractions of a unit.¹ Non-negotiable receipts are generally used in cases where the financing agency does not wish a negotiable instrument or where it is desired to withdraw at different times fractions of a unit itemized on a given warehouse receipt. Such fractional withdrawals can be made on a release signed by the receipt holder, without physical surrender of a non-negotiable receipt. In the case of a negotiable receipt, the warehouseman is legally bound to require physical surrender of the receipt before releasing any part of the merchandise covered by it. It appears that the great majority of receipts issued in respect of goods stored in field warehouses are of the non-negotiable type, both for reasons of convenience and because of a belief by some bankers that a non-negotiable receipt issued in the name of a bank evidences an actual physical transfer of the commodity to the bank, whereas the negotiable receipt issued in the name of a depositor and transferred to a bank by endorsement evidences merely a symbolic transfer. Typically, receipts are issued by the warehouseman to the financing agency and not to the depositor, as noted above.

Apart from the matter of negotiability, warehouse receipts may differ with respect to their content. The Uniform Warehouse Receipts Act requires that each receipt shall specify the following: the location of the warehouse; the date of issuance of the receipt; the consecutive number of the receipt; whether the commodities are deliverable to bearer, to a specified person, or to a specified person or his order; the rate of storage; the nature of ownership of the commodities by the warehouseman, if any; the advances made or liabilities incurred for which the warehouseman claims

¹ To illustrate, a warehouse receipt may be issued upon the deposit of, say, 10,000 square feet of lumber in a field warehouse. This is a "unit" for purposes of that receipt, but the depositor may wish to withdraw it in lots of 1,000 square feet on ten successive occasions.

a lien on the commodities; signature of the warehouseman; a "description of the commodities or of the packages containing them." In regard to the last-named requirement, it is the prevailing practice of warehousemen to issue receipts stating that so many boxes, bales, cartons were received "contents unknown" or "said to contain" certain commodities.

In short, the warehouse receipt usually gives merely a general description of the merchandise, and makes no representation concerning the quantity, quality, grade or condition of products unless this is readily ascertainable on sight. (All warehouse receipts must, however, describe the goods with sufficient definiteness so that they are readily recognizable.) Upon the request of receipt holders, some field warehousing companies, however, will have their own experts examine the contents of packages received, and grade the commodities contained therein. Often, and always in the case of packaged merchandise, this is done by sampling.² Warehouse receipts in such cases specifically state the quantity, quality, grade and condition of the product. It is clear that this may be an ancillary service of considerable importance to the financing agency, for if the warehouseman does not undertake to perform such service, the banker may have to procure these services from another source or perform them himself. The value of such service is in most cases less to lenders against receipts covering goods stored in field warehouses than to lenders on the security of receipts issued by public terminal warehouses. The nature of the bulk of merchandise received into field warehouses can be ascertained on sight, whereas commodities coming into terminal warehouses are for the most part received in closed bales, barrels, cases, cartons or other containers.

The Uniform Warehouse Receipts Act provides for the issuance of warehouse receipts covering fungible goods, if authorized by special agreement between warehouseman, depositor and a bank, or where such practice is customary in the trade. These are commodities, such as pieces of lumber or steel or tons of coal, any unit of which, from its nature or by mercantile custom, may be treated as the equivalent of any other unit. Warehouse receipts

² In some trades an accredited sampling method is recognized by custom. For commodities traded on organized exchanges, such as wheat, rice or corn, the method of sampling may be specified by the exchange. The United States Department of Agriculture also prescribes certain sampling methods.

covering fungible commodities merely specify the quantity and grade or specifications of the deposits covered by them. They permit the warehouseman to deliver any units of that grade or quality, and not necessarily the identical units that were deposited at the time a warehouse receipt was issued.

In warehousing miscellaneous merchandise that has a relatively high rate of turnover (inventories of wholesale grocers are an excellent example), the agreement of bailment provides a variation from the practices described previously. Such agreements make it possible to dispense with most or all of the burdensome task of issuing and cancelling numerous warehouse receipts that would otherwise be performed under the ordinary procedure. Briefly, an agreement of bailment is entered into between the borrowing business, the lending bank, and the field warehousing company. This agreement provides that all commodities within the specified field warehouse will be received and held for the account of the bank. When the warehouse is first installed, the lender obtains a complete physical inventory of the goods deposited in it, and an evaluation of these goods at cost plus freight in or at market, whichever is lower. The warehouseman may then issue to the bank a single warehouse receipt covering and describing the deposit, although it appears that this is not always done. In any case the lender then advances certain funds to the borrower against the deposited collateral security.

As new merchandise is deposited and old merchandise withdrawn from the warehouse, the warehouseman renders to the lender a daily or a weekly statement showing the net changes in the amount and value of collateral, and may issue a new warehouse receipt covering the net addition or reduction. Alternatively, he may by agreement reissue the original receipt in the properly adjusted amount. New advances are made by the bank, or repayments required, based upon these changes. The warehouseman is usually given a blanket release authorization by the bank, empowering him to release a specified maximum quantity or value of goods per day, per week, or per month. This is desirable in order to give the warehouseman power to satisfy the needs of the borrower for some flexibility in conducting his business. Periodically, a complete physical inventory is made either directly by the lender or by the warehouseman—at the request of the lender—in order

to check the actual quantities of merchandise in the warehouse with those calculated to be present.

This system has the advantage of greatly reducing the administrative costs of field warehouse lending, and of making it possible for the borrower to negotiate lower loan rates than would otherwise be required. The system is also said to possess the advantage to the lender of rendering all commodities in the warehouse exempt from attachment or execution by creditors. However, in order to overcome any question of preference in the event of bankruptcy, it is necessary for the warehouseman to maintain accurate records of the quantity or quality of goods deposited in or taken from the warehouse, and of the dates of receipt or delivery.³ It is also necessary that inventories be taken frequently by the warehouseman, and that such inventories be based upon actual counts made within the warehouse and not upon estimates.⁴ All of the necessary conditions of a valid bailment, including "continuous, exclusive and notorious" possession of the goods by the warehouseman must, of course, also be fulfilled in warehousing under an agreement of bailment.

The agreement of bailment is a relatively new departure in field warehousing and has been viewed with disapproval by many banks and field warehousing companies, which maintain that the identity of goods is lost under the arrangement. Although the courts have not spoken with finality on the basic validity of the agreement it is a device that cannot be ignored in a description of contemporary field warehousing.

The Warehouseman's Bond

Operators of field warehouses assume responsibilities to their depositors and to the holders of their warehouse receipts. The most important of these obligations is to deliver goods to the accredited receipt holder upon surrender of the receipts, and to indemnify owners for "any loss or injury to the goods caused by his (the warehouseman's) failure to exercise such care in regard to them as a reasonably careful owner of similar goods would exercise." Although the warehouseman is not responsible for such

³ See Wesley J. Schneider, *Field Warehousing* (New York, 1941) pp. 11-12.

⁴ See *First National Bank of Portland vs. Lakeview Pine Lumber Co.*, Circuit Court of Oregon for Lake County, Equity No. 3459 (September 12, 1939).

normal deterioration in the value of commodities in his custody as results from the passage of time, he is responsible for providing and maintaining storage facilities that are adequate when judged by warehousing practices customary in the trade.

With few exceptions, field warehousing companies provide the holders of their receipts with legal liability bonds, indemnifying the holders against loss arising from failure of the warehouseman to discharge his duties under the warehousing laws of the state governing his operations. Warehouseman's liability policies are written by several American bonding and insurance companies and by London Lloyd's. Since the value of merchandise in the custody of a field warehousing company at any given time is normally many times as large as the net worth of the company, the depositor or receipt holder necessarily must rely upon such insurance for protection against fraud or incompetence. The amount and coverage of warehouseman's liability insurance are therefore important factors in appraising the worth of warehouse receipts as collateral security for loans. It is important to observe that warehouseman's bonds do not insure the receipt holder against loss by fire, water damage, or other causes arising *outside* of the warehouse, unless the loss occurred by reason of the negligence of the warehouseman.⁵ Such risks must be specially provided for by the depositor or the financing agency.⁶

Qualifications of the Custodian

The prevailing practice of field warehousing companies is to employ as custodian of a field warehouse a person formerly employed by the depositor, rather than bring in an "outsider" to operate the warehouse. Some field warehousemen follow a policy of paying a full-time salary to the custodian, even though the operation of the warehouse may require only part-time service, leaving the custodian free to devote some of his time to work for the depositor. Other companies employ and compensate the cus-

⁵ To illustrate, the warehouseman's bond would cover losses resulting from a fire originating in some building adjacent to a field warehouse, if the warehouseman had negligently permitted inflammable debris to be scattered about the floor of the warehouse, and sparks from the fire had come through open windows into the warehouse and ignited this debris.

⁶ Some warehouse companies issue "insured" warehouse receipts upon request, which set forth the value of the commodities stored and cover a wide variety of risks.

todian on a part-time basis, permitting the custodian to remain on the payroll of, and to perform duties assigned by, the depositor during the remainder of his time.

Cost is the consideration determining this practice. Clearly, it is less expensive for the field warehouseman to utilize the services of a person who is already familiar with the business operations and warehousing routines of the depositor than to bring in and train new personnel. In practice, the installation of the field warehouse may involve little or no alteration in the duties of the custodian—merely a change of employer. If the custodian formerly worked only part-time on warehousing duties, he may continue to work part-time for the warehousing company, and also continue to perform regular part-time duties for the depositor. In this case, all that is involved from the point of view of the depositor-borrower is a shifting of an employee from direct payroll to indirect cost of obtaining credit. The salary paid this employee by the warehousing company becomes an item of cost in the operation of the warehouse, and ultimately becomes a part of the borrower's cost of obtaining credit on the security of field warehouse receipts. These costs of obtaining credit would in most cases be much larger if the warehousing company hired special "outside" personnel to run the warehouse, and especially so if the warehousing company paid a custodian for full-time service when only part of his time was required for custodianship. Under the latter arrangement the market for field warehouse receipt financing would be considerably curtailed.

It is uniform practice for warehousemen to procure a bond for each custodian, indemnifying the warehousing company against loss from infidelity, fraud or theft on the part of the custodian. The cost of such bonds is, of course, included in the charge made by the warehousing company to the depositor.

The Administrator of the United States Warehouse Act has strongly and consistently criticized the practices of field warehousing companies in employing custodians. He has refused to license warehouses following these practices under the United States Warehouse Act, thus preventing them from issuing Federal warehouse receipts. The basis of his criticism is that there must be an absolute transfer of possession of the commodities deposited in the warehouse in order for the bailment to be effec-

tive, and there is no such absolute change of possession when the custodian or assistant custodian of a warehouse is a former employee of the depositor and normally expects to be reemployed by the depositor at the termination of the field warehouse arrangement. Such custodians cannot be "disinterested" and have complete allegiance to the warehousing company.⁷ It is conceded by the Federal authorities that the hiring of full-time custodians who have no former connection, business or otherwise, with the depositor would greatly increase the cost of operating field warehouses. But it is urged that these costs are necessary and unavoidable in order to create "good" bankable collateral.

It may be observed that the Board of Governors of the Federal Reserve System has by implication concurred with the view of the Administrator. The Board has ruled that bankers' acceptances, when secured at time of acceptance by warehouse receipts issued by public warehousemen employing former or part-time employees of the depositor as custodian, are not eligible for rediscount at Federal Reserve Banks.⁸ Since commercial bankers have seldom needed to rediscount bankers' acceptances so secured during recent years, this opinion has not, in all probability, precluded any banks from making loans secured by field warehouse receipts.

The field warehouse companies argue that the views of the Administrator of the United States Warehouse Act regarding custodianship are not valid, because the holder of field warehouse receipts can look to an *independent warehousing company* for responsibility in conducting the warehouse. Therefore, they urge, it is immaterial whether or not the responsible warehouseman brings a former employee of the depositor into the situation as custodian of the warehouse. They point out further that the United States Warehousing Act was passed in order to make it possible for storers of agricultural products to operate their own warehouses, and this Act does not require that the *operator* of a warehouse licensed under it shall be a bona fide public warehouseman. Under these conditions there is reason for insisting that the custodian shall not be a former employee of the depositor,

⁷ See H. S. Yohe, "Field Warehouse Receipts—Collateral or No Collateral," *Agricultural Marketing Service* (United States Department of Agriculture, March 1941) p. 4.

⁸ See *Federal Reserve Bulletin* (June 1937) p. 518.

because no independent warehousing company is a party to the arrangement.

Whatever merits these opposing contentions may have, it remains true that Federal and state courts have upheld the validity of warehouse receipts issued by warehousemen utilizing former employees of the depositor as custodians, provided that the bailments were effective in all respects as a result of good warehouse management. It should be remembered that field warehousemen operate under the Uniform Warehouse Receipts Act and store commodities of different types than those customarily deposited in warehouses licensed under the United States Warehouse Act.

The major problems of the field warehouseman center upon the maintenance of the proper physical conditions of storage of the merchandise deposited with him, and upon the selection and supervision of custodians. Intimate knowledge is necessary regarding the physical attributes of the warehoused commodity, the hazards of deterioration to which it is subject, and the normal practices of the industry for minimizing loss resulting from deterioration of quality or effectiveness of merchandise through time. Illustrative of the scope of such problems are the regulations promulgated by the Secretary of Agriculture under the United States Warehouse Act of August 11, 1916, as amended. A separate booklet of regulations has been issued for each of the following commodities: cotton seed, cotton, grain, cherries in sulphur dioxide brine, nuts, broom corn, dry beans, dried fruit, cold-packed fruit, and seeds. Regulations pertaining to each of these comparatively few commodities run to twenty or more closely printed pages. The larger the number of commodities for which he becomes custodian, the broader and more precise must be the technical knowledge of the field warehouseman. In practice, all of the larger field warehousing companies install warehouses for a variety of commodities. None specializes in the products of one industry.

The records of field warehouse companies reveal that field warehousing arrangements between particular depositors and custodians are usually not of long duration, excepting in industries such as canning wherein there are characteristically large seasonal fluctuations in working capital needs. Warehouses have

been in continuous existence for as long as 15 years, but the average life of a field warehouse appears to lie between 3 and 5 years. The short-lived warehouses are established not for firms having wide seasonal variations in working capital requirements but for firms that are in process of "working out" of a straitened financial position or are experiencing secular expansion in business volume. In the latter cases, use of the field warehousing device enables such business concerns to tide over the period within which they accumulate additional equity and working capital, and subsequently to become able to borrow their requirements on an unsecured basis. Unfortunately, want of data precludes a more precise statement of the time-pattern of field warehousing as a business financing device.

3

Characteristics of Field Warehouse Operations

HAVING STATED THE NATURE of field warehousing, traced the sources of its development as a business financing technique, and indicated the method of installing and operating field warehouses, it is in order to describe the nature and magnitude of the market for field warehousing services. Specifically, how many field warehouses are in operation in the United States? What is the total amount of credit granted on the security of the warehouse receipts to which they give rise? Where are field warehouses located? What sorts of commodities are deposited in them? How large are field warehouses in terms of value of deposits? What kinds of business enterprises deposit commodities in field warehouses, and what kinds of financing institutions make loans against the warehouse receipts?

Number and Types of Field Warehouses¹

It is estimated that at mid-1941 national and regional field warehousing companies operated about 3,000 field warehouses. In addition, field warehouses operated by small local companies may have totaled as much as 2,000. This latter estimate is based upon the number of commercial banks believed to be engaged in lending against field warehouse receipts and the average number of such loans per bank. Consequently, the total number of field warehouses in the United States at the middle of 1941 may be put at around 5,000. The tentative nature of this estimate is emphasized by the fact that it falls far short of the 3,000 figure given by Van Vlissingen for 1936, but agrees with the 5,000 figure used by Frederick for 1938. Some of the local companies operated field warehouses ancillary to their local terminal warehousing busi-

¹ This section is based upon information obtained from a questionnaire circulated among a sample of commercial banks about the middle of 1941. See Appendix A.

nesses. As the amount of capital required to enter the field warehousing business is not large, the number of such local companies may be substantial, although information on this point is not precise. The known rapidity in the growth of the large independent regional or national field warehousing concerns during recent years suggests that an increasing fraction of all field warehousing is being done by these companies and a decreasing fraction by the local concerns.

Amount of Field Warehouse Receipt Loans

The average amount of loans outstanding over the year 1941 that were secured by field warehouse receipts issued by all types of field warehousing companies is estimated at about \$150 million.² This estimate is founded on data furnished by field warehouse companies, giving the average annual value of merchandise contained in a large sample of field warehouses, and is roughly confirmed by an independent investigation of outstanding loans of commercial banks secured by field warehouse receipts. It rests on the assumptions that (1) the average loan for the estimated 3,000 warehouses operated by national and regional field warehouse companies was about \$40,000, and (2) the average loan for the estimated 2,000 warehouses operated by local companies was about \$15,000. A questionnaire survey of a sample of commercial banks indicated the probable existence of an average of \$130 million of such loans during 1941.³ Since commercial banks appear as the lenders against the receipts of about nine out of every ten field warehouses, the bank data warrant an inference that around \$145 million of loans of this type were held by all kinds of lending institutions. The estimate given herein of the outstanding loans secured by field warehouse receipts, as well as of the number of field warehouses, should be viewed as rough observations on the dimensions of the field warehousing business around the middle of 1941. It will be recalled that at this time the industry was undergoing a very rapid expansion.

Loans secured by field warehouse receipts are evidently a minor, although not insignificant, item in the total volume of business

² It appears that the outstanding field warehouse receipt loans increased greatly during the two years succeeding this date.

³ See Appendix A for description of this survey, and Table 7 in Chapter 4 for complete data.

credit. At the end of 1941 such loans comprised about .8 percent of the \$17 billion of loans and discounts held by operating, insured commercial banks in the United States.⁴ They formed about 2 percent of the \$6.7 billion of "commercial and industrial" loans of these banks. Their outstanding amount was therefore slightly less than commercial bank loans secured by accounts receivable, and far less than the amount of outstanding business term loans.⁵

Geographical Location of Field Warehouses⁶

Field warehousing of commodities is most frequent in the Central and Pacific regions of the United States. No less than 43 percent of all field warehouses are found in the East North Central states of Ohio, Indiana, Illinois, Michigan and Wisconsin, and in the Pacific states of Washington, Oregon and California. California and Wisconsin, together with New York, lead all other states by wide margins in the number of warehouses they contain. The populous and highly-industrialized Middle Atlantic states have not utilized this device as extensively, probably because of the comparative recency of its introduction there, only 18 percent of all field warehouses being located in this region. Yet it is known that in the autumn of 1941 there were some field warehouses in every state, except Utah.

The concentration of field warehousing in the Pacific region has an historical as well as an economic explanation. One of the largest and oldest warehousing companies commenced its operations in this area, expanding eastward only after developing an extensive business on the west coast. A more fundamental explanation is the existence of an extensive food canning industry in the Pacific states. Concerns in this industry have from the beginning been depositors in field warehouses, in order to make "bankable" their highly seasonal inventories of canned fish, fruits or vegetables. The importance of canning in the East North Central states also serves to explain the frequent use of field warehousing

⁴ Federal Deposit Insurance Corporation, *Annual Report for 1940*, p. 171.

⁵ See National Bureau of Economic Research (Financial Research Program), *Accounts Receivable Financing*, by R. J. Saulnier and Neil H. Jacoby (1943) p. 56 and *Term Lending to Business*, by Neil H. Jacoby and R. J. Saulnier (1942) p. 30.

⁶ This section and those which follow are based upon a body of information, collected by questionnaire, concerning each field warehouse operated around September 30, 1941 by several of the principal field warehousing companies in the United States, and concerning part of the warehouses operated by a fifth company.

in this region. In the Middle Western as in the Pacific states, deposits of miscellaneous groceries and of lumber, timber and building supplies are also important contributors to the volume of field warehousing. In general, the geographical location of field warehousing is determined by the underlying industrial character of different regions of the nation. The regions that have a relatively large number of businesses with highly fluctuating working

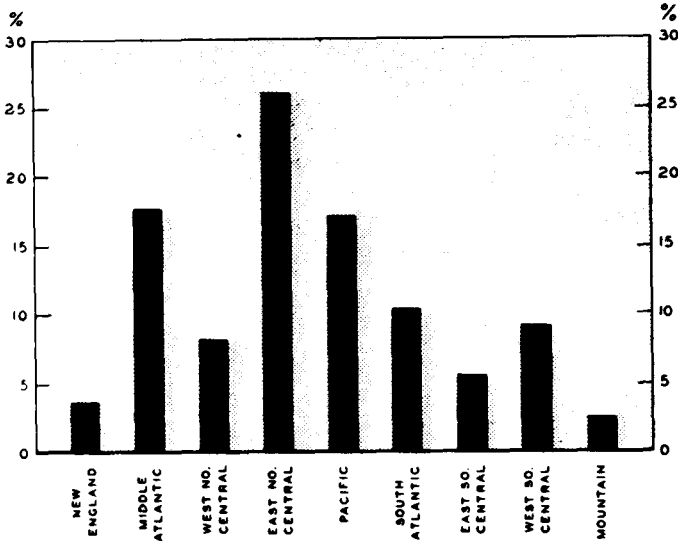
Table 1—FIELD WAREHOUSES OPERATED BY SIX LEADING COMPANIES, AT MID-1941, BY REGION AND STATE ^a

<i>Region and State</i>	<i>Number</i>	<i>Percent of Total</i>	<i>Region and State</i>	<i>Number</i>	<i>Percent of Total</i>
<i>East North Central</i>	764	26.0	<i>West North Central</i>	242	8.2
Ohio	87	3.0	Minnesota	94	3.2
Indiana	98	3.3	Iowa	50	1.7
Illinois	179	6.1	Missouri	48	1.6
Michigan	166	5.6	North Dakota	2	.1
Wisconsin	234	8.0	South Dakota	1	^b
			Nebraska	18	.6
			Kansas	29	1.0
<i>Middle Atlantic</i>	516	17.6	<i>East South Central</i>	165	5.6
New York	252	8.6	Kentucky	18	.6
New Jersey	118	4.0	Tennessee	39	1.3
Pennsylvania	146	5.0	Alabama	34	1.2
			Mississippi	69	2.3
<i>Pacific</i>	503	17.1	West Virginia	5	.2
Washington	98	3.3	<i>New England</i>	107	3.6
California	294	10.0	Maine	10	.3
Oregon	111	3.8	New Hampshire	2	.1
			Vermont	10	.3
<i>South Atlantic</i>	302	10.3	Massachusetts	49	1.7
Delaware	22	.8	Rhode Island	6	.2
Maryland	77	2.6	Connecticut	30	1.0
District of Columbia	2	.1	<i>Mountain</i>	74	2.5
Virginia	19	.6	Montana	8	.3
North Carolina	38	1.3	Idaho	16	.6
South Carolina	24	.8	Wyoming	7	.2
Georgia	76	2.6	Colorado	20	.7
Florida	44	1.5	New Mexico	10	.3
			Arizona	10	.3
<i>West South Central</i>	266	9.1	Utah
Arkansas	34	1.2	Nevada	3	.1
Louisiana	79	2.7			
Oklahoma	22	.7			
Texas	131	4.5	TOTAL	2,939	100.0

^a Based on data furnished to the National Bureau by six leading warehousing companies.

^b Less than .05 percent.

PERCENTAGE DISTRIBUTION OF FIELD WAREHOUSES OF SIX LEADING WAREHOUSE COMPANIES, BY REGION, MID-1941 ©



© FOR DATA, SEE TABLE I.

capital needs are also those that make comparatively wide use of the field warehousing device. Field warehouses are classified by state and region of location in Table 1. (See also Chart 1.)

Commodities Deposited in Field Warehouses

Field warehousing is not confined to a few commodities. Literally hundreds of different types of merchandise, including raw materials, semi-finished goods and finished goods are deposited in warehouses, at place of production or holding for sale, in order to form collateral security for credit. Even goods-in-process may be field warehoused, when the process is aging or curing, as in the case of wines, pickles, sauerkraut or tobacco. In cases where processing requires physical manipulation of the materials, goods-in-process obviously must be removed from a warehouse, but they may be returned to the warehouse in a finished or semi-finished state. Christmas cards, hog cholera serum, gold concentrates and books illustrate the wide range of items that may be placed in

special warehouses. Although goods produced by every major industry are found on the list, three types of products—canned goods, miscellaneous groceries, and lumber, timber and building supplies—account for over 40 percent of all field warehouses in the United States. If coal and coke, petroleum products, seeds, feed, grain and flour, and wines, liquor and beer are added, nearly 55 percent of all field warehouses are accounted for.

Table 2—FIELD WAREHOUSES OPERATED BY FIVE LEADING COMPANIES, AT MID-1941, BY PRINCIPAL TYPE OF PRODUCT WAREHOUSED ^a

<i>Principal Type of Product Warehoused</i>	<i>Number</i>	<i>Percent of Total</i>
Canned food products	304	17.1%
Miscellaneous groceries	236	13.2
Lumber, timber, building supplies	180	10.1
Coal, coke	117	6.6
Seeds, feed, grain, flour	113	6.3
Fuel oil, gasoline, petroleum products	91	5.1
Wines, liquors, beers	80	4.5
Textile products, wearing apparel	76	4.3
Iron, steel and products	66	3.7
Household machinery and equipment	54	3.0
Miscellaneous agricultural products	51	2.9
Paints, chemicals, drugs	45	2.5
Paper, wood pulp	38	2.1
Industrial and commercial machinery and equipment	37	2.1
Cotton, wool	37	2.1
Miscellaneous hardware	34	1.9
Furniture, finished wood products	31	1.7
Cheese, milk powders	20	1.1
Non-ferrous metals and products	19	1.1
Rubber tires, rubber products	16	.9
Stone, clay, glass and products	15	.8
Sugar, syrups	12	.7
Bags, bagging	11	.6
Shoes, slippers	11	.6
Books, paper products	11	.6
Meat and meat packing	10	.6
Non-ferrous ores	10	.6
Tobacco	8	.4
Hides, leather, leather products	8	.4
Iron ore	4	.2
Not classified ^b	39	2.2
TOTAL	1,784	100.0%

^a Based on data furnished to the National Bureau by five leading field warehousing companies.

^b Includes musical instruments, toys, cameras, dolls, and "not specified."

A considerable fraction of all deposits in field warehouses consists of the products of agriculture. There is a dual explanation for this. First, there is large seasonal variation in the productive operations of agriculture, giving rise to needs for working capital varying widely through each year. In the second place, the existence of standardized grades, qualities and organized markets for many of the products of the soil makes agricultural commodities particularly attractive forms of collateral security for loans, since their market values can be determined with relative ease. Table 2 presents a classification of field warehouses by principal type of product deposited.

Businesses Using Field Warehouse Facilities

Two-thirds of all depositors in field warehouses are manufacturers of the commodities placed in custody of the warehouseman, and almost one-third are distributors of these commodities. Concerns in the mining or extractive industries (other than agriculture) seldom place their inventories in special warehouses. The few mining and extractive concerns depositing their inventories in field warehouses include producers of crude oil, coal, iron ore and clay. As might be expected from an analysis of commodities that are field warehoused, manufacturers using this service consist in large part of food canners, operators of lumber and timber mills, manufacturers of miscellaneous grocery products, millers of flour and feed, and fabricators of iron and steel. Wholesale grocers, wholesale and retail distributors of coal, coke, petroleum products, seeds, grain, flour, and alcoholic beverages make up a major part of those depositors that fall into the "distributor" classification. Distributors make up more of the depositors in the New England and Middle Atlantic regions and manufacturers more in the South Atlantic, East North Central and Pacific regions.

The comparative frequency with which manufacturers of canned goods, lumber and timber products and iron and steel products use field warehouses as a credit-creating device finds an explanation in the typical seasonality of their operations. Distributors of beer, coal and coke, and seeds also experience large seasonal fluctuations in sales. On the other hand, wholesale grocers have a relatively stable demand throughout the year.

Their use of field warehouses is apparently due to the comparatively small equity they possess in relation to the volume of business transacted. In Table 3 appears a classification of field warehouses according to type of business of the depositor.

Table 3—FIELD WAREHOUSES OPERATED BY FOUR LEADING COMPANIES, AT MID-1941, BY PRINCIPAL BUSINESS OF DEPOSITOR^a

<i>Principal Business of Depositor</i>	<i>Number</i>	<i>Percent of Total</i>
Manufacturing	834	66.6%
Distributing	400	31.9
Mining and extraction	8	.6
Not classified	11	.9
TOTAL	1,253	100.0%

^a Based on data furnished to the National Bureau by four leading field warehousing companies.

Value of Warehoused Goods and Size of Loan

Table 4 shows that the typical field warehouse contains merchandise worth between \$25,000 and \$100,000. No less than 53

Table 4—FIELD WAREHOUSES OPERATED BY FOUR LEADING COMPANIES, AT MID-1941, BY AVERAGE ANNUAL VALUE OF MERCHANDISE IN WAREHOUSE^a

<i>Average Annual Value of Merchandise in Warehouse^b</i>	<i>Number</i>	<i>Percent of Total</i>
Under \$25,000	206	16.4%
25,000-50,000	322	25.7
50,000-100,000	342	27.3
100,000-200,000	227	18.1
200,000 and over	156	12.5
TOTAL	1,253	100.0%

^a Based on data furnished to the National Bureau by four leading field warehousing companies.

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

percent of all warehouses fall within this class. About a sixth of all warehouses contain goods whose annual average value is less

than \$25,000; nearly a third have an annual average deposit valued at more than \$100,000. For only 13 percent of the warehouses was the figure over \$200,000.

It appears that field warehousing is not a method for extension of large credits. It is a device used to facilitate the making of loans of relatively small amount, to business concerns of comparatively modest size. Since the financing agency acquiring the warehouse receipts as security for loans usually advances about two-thirds of the current market value of the commodities warehoused, the average annual outstanding loan balance of more than half of the loans is between \$15,000 and \$50,000. Comparatively few loans could have an average loan balance over \$100,000. The accuracy of these rough calculations is confirmed by information furnished by a sample of commercial banks. These banks reported an average outstanding field warehousing loan balance of \$40,000 around mid-1941.⁷ When compared with the average outstanding commercial bank term loan of \$568,000, it is evident that field warehousing loans and term loans serve entirely different sizes of business concerns.⁸

There are no marked geographical differences in the size of field warehouses, although fewer large warehouses are found in southern states than in other regions, and the Pacific states contain more-than-average proportions of both very large and very small warehouses. Field warehouses containing canned foods, wines, beers and spirits, and petroleum products tend to run somewhat larger than average in terms of the average annual value of merchandise on deposit.

It must be borne in mind that *annual average* loan balances conceal a great deal of fluctuation in the amounts of credit in the hands of borrowers at different points of time. At their seasonal peaks in inventory-holding and working capital requirements, depositors in field warehouses may well have short-term debts secured by warehouse receipts amounting to four or five or more times their *annual average* loan balance. In fact, it is precisely this flexibility in the volume of credit available to the borrower that makes the warehousing technique so useful. By divorcing the amount of the loan from the borrower's equity or financial

⁷ See Table 12 in Chapter 4.

⁸ See Jacoby and Saulnier, *Term Lending to Business*, p. 135.

strength, and relating it to his inventory holdings at any moment of time, the amount of outstanding credit is geared closely to working capital requirements.

Lenders on Field Warehouse Receipts

To an overwhelming extent, field warehouse receipts serve as collateral for loans from commercial banks. The receipts from more than 85 percent of all field warehouses are taken by commercial banks only, and from another 6 percent of the warehouses the receipts are taken by banks in combination with commercial finance companies, trade suppliers, warehousing companies, or other types of lenders. Thus a commercial bank appears as a lender to depositors in more than nine out of every ten field warehouses. Next in importance to commercial banks come trade suppliers, warehouses, and commercial finance companies, in turn. There are no important differences in the size of warehouses whose receipts are held by the several lending institutions.

Warehousemen hold the receipts arising from their own custodianship of the goods in about 2 percent of the cases, thus combining the functions of custodian and banker. An interesting parallel to this arrangement may be found in the functions of the factoring company in the textile industry. Factors not only finance their clients through purchasing their receivables, but may also lend on the client's merchandise. If the goods are kept on the client's premises within New York State, the factor acquires a lien upon them under the Factor's Lien law of New York State, securing the repayment of any debt owed by the client. Outside New York State the factor may hold the merchandise under a field warehouse receipt. In cases where a field warehouseman extends credit against his own warehouse receipts, the transaction has a legal nature similar to that of a pledge of goods to the lender, as is the case in pawnshop lending. Field warehouses are classified by type of institution lending on the warehouse receipts in Table 5.

It is significant that nearly 93 percent of all field warehousing arrangements create collateral security for *one* type of lending institution, and only 7 percent involve lending by more than one type. This indicates that when a company deposits goods in a field warehouse in order to obtain credit, it almost always does

Table 5—FIELD WAREHOUSES OPERATED BY FOUR LEADING COMPANIES, AT MID-1941, BY TYPE OF INSTITUTION LENDING ON WAREHOUSE RECEIPTS*

<i>Type of Institution Lending on Warehouse Receipt</i>	<i>Number of Warehouses</i>	<i>Percent of Total</i>
<i>Single Institution</i>	1,162	92.7%
Banks only	1,071	85.4
Trade suppliers only	32	2.6
Warehouse companies only	22	1.8
Finance companies only	18	1.4
Other institutions	19	1.5
<i>Combinations of Institutions</i>	80	6.4
Banks and trade suppliers	47	3.7
Banks and other institutions	27	2.2
Banks and finance companies	1	.1
Other combinations	5	.4
<i>No Information</i>	11	.9
TOTAL	1,253	100.0%

* Based on data furnished to the National Bureau by four leading field warehousing companies.

so pursuant to a credit relationship established with a particular institution (or institutions of the same type), rather than as a means of obtaining funds from several sources. It may be inferred that field warehousing is not typically a device resorted to by business concerns in financial difficulty, seeking to meet the requirements of many kinds of creditors. It is a credit facilitating arrangement deliberately utilized in the normal course of business for financing mainly through one type of lending agency.

4

Bank Lending on Field Warehouse Receipts

IT HAS ALREADY BEEN OBSERVED that field warehouse receipts are chiefly used as collateral for loans made by commercial banks; banks lend against the receipts of nine out of every ten field warehouses.¹

How many of the 13,500 American commercial banks regularly make loans on this basis? How important are field warehouse receipt loans among all the loans of commercial banks? What kinds of banks—in terms of deposit size, geographical location and population of the center in which they are located—extend credit against the collateral security of field warehouse receipts? What are the financial characteristics of business enterprises borrowing from commercial banks on this basis?

Frequency of Bank Lending on Field Warehouse Receipts

About 13 percent of the 13,500 operating insured commercial banks in the United States regularly finance business concerns through loans secured by field warehouse receipts. At the middle of 1941 approximately 1,700 banks appear to have extended such credits. Field warehouse receipt financing is therefore not uncommon as a banking operation, but it is not employed as frequently as term lending to business, in which about 22 percent of all commercial banks are engaged. Neither is it used as frequently as accounts receivable financing, which is estimated to be a regular practice of about 25 percent of all commercial banks.² Yet it is probable that considerably more than 13 percent of all American

¹ This section is based upon an analysis of data collected through a questionnaire circulated about June 30, 1941 among a random sample of commercial banks. See Appendix A.

² See National Bureau of Economic Research (Financial Research Program), *Term Lending to Business*, by Neil H. Jacoby and R. J. Saulnier (1942) p. 33, and *Accounts Receivable Financing*, by R. J. Saulnier and Neil H. Jacoby (1943) p. 54.

commercial banks make *occasional* loans collaterally secured by field warehouse receipts.

Table 6 indicates that the relative frequency with which banks engage in field warehouse receipt financing increases steadily with the population of the center in which the bank is located. Only 10

Table 6—ESTIMATED NUMBER OF COMMERCIAL BANKS REGULARLY ENGAGING IN FIELD WAREHOUSE RECEIPT FINANCING, AT MID-1941, BY SIZE OF POPULATION CENTER^a

Size of Center of Population ^b	Banks in Sample		Total Number of Commer- cial Banks ^c	Estimated Num- ber of Banks Engaged in Re- ceipt Financing
	Number	Regularly Engaged in Receipt Financing		
Less than 10,000	130	10.0%	10,991	1,099
10,000-50,000	80	16.3	1,520	248
50,000-100,000	41	29.3	292	86
100,000-500,000	85	42.4	479	203
500,000 and over	51	43.1	210	91
TOTAL	387	24.8%	13,492	1,727

^a Based upon data obtained from a sample of commercial banks. See Appendix A for a description of the sample.

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

^c Operating insured commercial banks listed by Federal Deposit Insurance Corporation as of June 29, 1940.

percent of banks in centers containing less than 10,000 population do such financing, while more than 43 percent of the banks in the largest cities (populations of 500,000 or more) make such loans.

Relative Importance of Field Warehouse Receipt Financing

It appears that at the middle of 1941 field warehouse receipt loans may have comprised about .8 percent of all loans and discounts held by American commercial banks. (See Table 7.) The aggregate outstanding amount of such loans is estimated at about \$130 million at mid-1941, based upon returns received from a sample of commercial banks of all deposit sizes, located in all geographical regions and in cities of different sizes.

Large banks tend to hold slightly larger amounts of field warehouse receipt loans in relation to their total loans than do smaller banks although there is a striking similarity in the relative impor-

Table 7—ESTIMATED FIELD WAREHOUSE RECEIPT LOANS HELD BY ALL INSURED COMMERCIAL BANKS, AT MID-1941, BY DEPOSIT SIZE OF BANK ^a (dollar figures in thousands)

Deposit Size of Bank ^b	Banks in Sample			All Insured Commercial Banks	
	Field Warehouse Receipt Loans Held	Total Loans and Discounts ^c	Warehouse Loans as a % of Total Loans and Discounts	Total Loans and Discounts ^d	Estimated Field Warehouse Receipt Loans
\$5,000 or less	\$1,274	\$37,320	.71%	\$4,827,719	\$34,277
5,000-10,000	677	35,068	.69	1,266,521	8,739
10,000-50,000	3,392	251,026	.77	2,661,226	20,491
Over 50,000	15,502	1,306,295	.80	8,281,876	66,255
TOTAL	\$20,845	\$1,629,709	.79%	\$17,037,342	\$129,762

^a Based upon data obtained from a sample of commercial banks. For a description of the sample, see Appendix A.

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

^c Reported to Federal Deposit Insurance Corporation as of December 31, 1940.

^d Book value of total loans and discounts reported to Federal Deposit Insurance Corporation as of end of 1940. From Federal Deposit Insurance Corporation, *Annual Report for 1940*, p. 171.

tance of such loans in banks of all sizes. For banks with total deposits of more than \$50 million, such loans composed .8 percent of total loans and discounts. The proportion between field warehouse receipt loans and total loans was somewhat smaller for banks of smaller size, down to very small institutions with deposits of under \$5 million. Field warehouse receipt loans were about $\frac{3}{4}$ of 1 percent of the loans of these smaller institutions.

It should be noted that while field warehouse receipt loans were estimated to comprise only .8 percent of total loans and discounts, they formed no less than 2 percent of "commercial and industrial" loans of all commercial banks. The latter classification of bank credit measures credit extended to business enterprises more closely than does "total loans and discounts" because it excludes real estate loans, personal loans, loans against securities, and other non-business credits. Field warehouse receipt loans thus ranked far below term loans in their importance among all bank loans to business, being only about one-fifteenth as large as the 12 percent recorded for term loans at mid-1941.³ It has previously been observed that these loans were also less important quantitatively than loans against the security of accounts receivable⁴ and that they were likewise less important than instalment equipment credits.⁵

Further light is shed on the place of field warehouse receipt loans in all commercial bank assets by the figures in Table 8. In this table the total number and amount of such loans reported have been distributed according to the percentage of field warehouse receipt loans to total loans and discounts. The data indicate that nearly two-thirds of the total amount of such loans were made by institutions in whose loan and discount portfolios they comprised from 1.5 to 4 percent. Only in a very small percentage of banks did field warehouse receipt credits amount to over 10 percent of loans and discounts, and in only about 15 percent of commercial banks did they comprise more than 5 percent. There is no evidence of any normal or maximum ratio that field warehouse receipt loans tend to bear to the total loans and discounts

³ See Jacoby and Saulnier, *Term Lending to Business*, p. 96.

⁴ See Saulnier and Jacoby, *Accounts Receivable Financing*, p. 56.

⁵ See National Bureau of Economic Research (Financial Research Program), *Financing Equipment for Commercial and Industrial Enterprise*, by R. J. Saulnier and Neil H. Jacoby (1943).

Table 8—FIELD WAREHOUSE RECEIPT LOANS HELD BY A SAMPLE OF COMMERCIAL BANKS, AT MID-1941, BY PERCENTAGE OF FIELD WAREHOUSE RECEIPT LOANS TO TOTAL LOANS AND DISCOUNTS ^a

Classification of Banks by Ratio of FWR Loans to Total Loans & Discounts ^b	Banks Making FWR Loans		Field Warehouse Receipt Loans Held		Total Loans and Discounts of Reporting Banks	
	Number	Percent	Amount (000)	Percent	Amount (000)	Percent
Under .5%	17	18.1%	\$1,948	9.3%	\$771,822	47.5%
.5-1.0	16	17.0	951	4.6	136,875	8.4
1.0-1.5	8	8.5	820	3.9	71,419	4.4
1.5-2.0	10	10.7	3,170	15.3	204,040	12.5
2.0-2.5	6	6.4	2,529	12.1	113,019	6.9
2.5-3.0	8	8.5	3,218	15.5	121,134	7.4
3.0-4.0	11	11.7	4,883	23.4	148,935	9.1
4.0-5.0	5	5.3	1,594	7.6	35,879	2.2
5.0-10.0	10	10.6	1,377	6.6	23,962	1.5
10.0 and over	3	3.2	355	1.7	2,624	.1
TOTAL	94	100.0%	\$20,845	100.0%	\$1,629,709	100.0%

^a For a description of the sample, see Appendix A.

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

of commercial banks. It appears probable that a sufficiently large market for this type of business credit has not presented itself to commercial banks to cause them to set up, as a matter of policy, any limits on the aggregate amount of credit to be extended on this basis.

It should be observed that more than half of all loans and discounts in the sample under study were held by banks in which field warehousing credits were less than 1 percent of total loans and discounts.

Geographical Differences in Bank Lending on Field Warehouse Receipts

Data presented in Table 9 indicate that field warehouse receipt financing is done with specially high frequency by banks in the East South Central and Pacific regions, with average frequency in the New England, East North Central, West South Central and Mountain states, and with less than the average frequency in the Middle Atlantic, West North Central and South Atlantic states. These conclusions may be inferred from the percentages of all banks in these respective regions that reported regular making of business loans secured by field warehouse receipts. While these observations are based upon comparatively few banks, they find confirmation in the information previously presented on the geographical distribution of field warehouses, in the economic and industrial character of the major geographical divisions of the nation, and in the historical facts concerning the geographical development of field warehousing from west to east. The importance of the lumbering and canning industries in the Pacific states—both prolific sources of field warehouses—adequately explains the fact that over one-half of the commercial banks in this area indicated that they made loans collateralized by field warehouse receipts. The cotton and distilling industries are important sources of field warehousing in the East South Central region.

Banks in the Pacific states also lead in the number of business concerns financed per bank through the field warehouse device.⁶ Nevertheless, banks engaging in this business in the East North

⁶ Since there is state-wide branch banking in California and the schedules submitted covered all units of each institution, comparisons of banks in this state with unit banking states are not possible without qualification.

Table 9—FIELD WAREHOUSE RECEIPT LOANS HELD BY A SAMPLE OF COMMERCIAL BANKS, AT MID-1941, BY REGION ^a

Region	Banks Not Engaged in Receipt Financing	Banks Engaged in Receipt Financing		Number of Concerns Financed	Field Warehouse Receipt Loans Outstanding		Percentage Distribution of Total Loans and Discounts of All Insured Commercial Banks ^b
		Number	Percent		Amount (000)	Percent	
New England	16	7	30.4%	14	\$803	3.8%	7.0%
Middle Atlantic	70	12	14.6	54	1,539	7.4	36.4
East North Central	70	29	29.3	185	7,605	36.5	16.8
West North Central	50	12	19.3	73	2,171	10.4	8.7
South Atlantic	40	10	20.0	65	2,626	12.6	8.0
East South Central	9	7	43.7	24	663	3.2	3.8
West South Central	20	6	23.1	26	810	3.9	5.2
Mountain	11	4	26.7	7	170	.8	1.9
Pacific	5	7	58.3	74	4,458	21.4	12.2
TOTAL	291	94	24.4%	522	\$20,845	100.0%	100.0%

^a For a description of the sample, see Appendix A.

^b Based on Federal Deposit Insurance Corporation, *Annual Report for 1940*, pp. 178-79.

Central region also tended to serve comparatively large numbers of customers per institution.

Table 9 indicates the importance of regional differences in field warehouse receipt lending. While possessing only 12 percent of the nation's total loans and discounts, reporting banks in the Pacific region accounted for over 21 percent of field warehouse receipt loans. Similarly, banks in the East North Central region possessed less than 17 percent of all loans and discounts in the United States, but reporting banks in that area accounted for more than 36 percent of field warehouse receipt loans. Banks in the New England and Middle Atlantic regions held far smaller total amounts of field warehouse receipt loans than the volume of their loans and discounts of all kinds would lead one to expect. It may be concluded that the ability of a commercial bank to develop field warehouse receipt financing depends to an important degree on the economic character of its territory.

Field Warehouse Receipt Financing by Banks of Different Sizes

Although great unevenness in the amount of deposits or assets held by individual institutions is a well-known characteristic of American commercial banking, there is an even greater degree of concentration of field warehouse receipt financing. The figures appearing in Table 10 confirm the inference to be drawn from Table 7 by indicating clearly that loans collateralized by field warehouse receipts are held predominantly by large banks. Moreover, large institutions tend much more frequently to engage in this type of financing than do small ones, and they possess, on the average, a much larger number of clients per bank receiving credit on this basis. (See also Chart 2.)

While something less than one out of each four commercial banks in the sample lent against field warehouse receipts, less than one out of every twenty institutions with deposits under \$500,000 did so. Nearly three out of each four banks with deposits of \$50 million or over were engaged in this type of financing. There is evident a steady increase in the frequency with which banks engaged in this business financing operation, from the smaller to the larger agencies. The banks that engage in such lending with average frequency fall in the \$2 million to \$10 million deposit size class. It may be said with some confidence that there is a

Table 10—FIELD WAREHOUSE RECEIPT LOANS HELD BY A SAMPLE OF COMMERCIAL BANKS, AT MID-1941, BY DEPOSIT SIZE OF BANK ^a

Deposit Size of Bank ^b (000)	Banks Not Engaged in Receipt Financing	Banks Engaged in Receipt Financing		Number of Concerns Financed	Field Warehouse Receipt Loans Outstanding		Percentage Distribution of Total Loans and Dis- counts of All Insured Commercial Banks ^c
		Number	Percent		Amount (000)	Percent	
\$500 or less	65	3	4.4%	3	\$43	.2%	4.8%
500-1,000	43	4	8.5	5	58	.3	5.9
1,000-2,000	50	9	15.3	21	334	1.6	7.5
2,000-5,000	61	18	22.8	52	839	4.0	10.1
5,000-10,000	30	11	26.8	25	677	3.2	7.4
10,000-50,000	33	25	43.1	96	3,392	16.3	15.6
Over \$50,000	9	24	72.7	320	15,502	74.4	48.7
TOTAL	291	94	24.4%	522	\$20,845	100.0%	100.0%

^a For a description of the sample, see Appendix A.

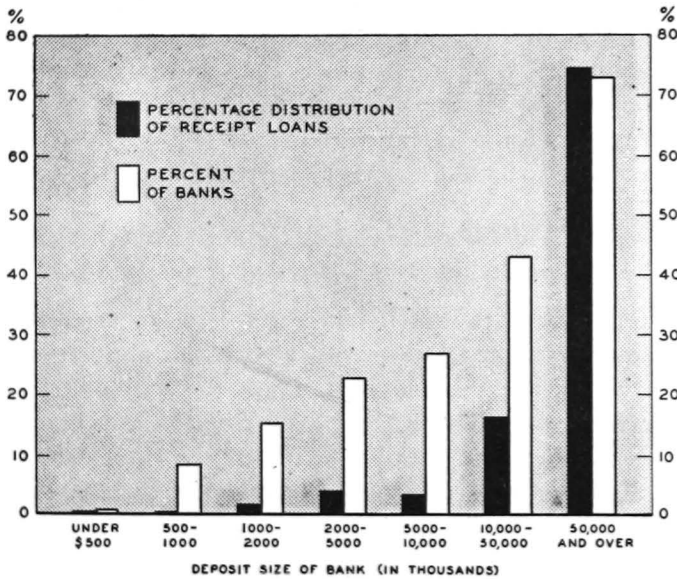
^b Each size class is inclusive of the lower limit and exclusive of the upper.

^c Based on Federal Deposit Insurance Corporation, *Annual Report for 1940*, pp. 170-71.

small probability that a bank with less than \$1 million deposits does this business, while there is a large probability that a bank with deposits of more than \$50 million engages in it.

2

PERCENTAGE DISTRIBUTION OF FIELD WAREHOUSE RECEIPT LOANS BY SIZE OF BANK AND PERCENT OF BANKS IN EACH SIZE CLASS MAKING SUCH LOANS ©



© BASED ON A SAMPLE STUDY. FOR DATA, SEE TABLE 10.

Another observation of interest is that the larger institutions possess, on the average, a much larger number of clients being financed by field warehouse receipt loans than do smaller banks. Banks in the \$50 million-and-over size class had on the average more than 13 clients each, those in the \$2-5 million class had an average of three clients, while those with deposits under \$500,000 had on the average only one business borrower financing inventories through field warehousing. These data serve to explain the general lack of separate departments in banks for the making of such loans. It is clear that even as many as thirteen business borrowers ordinarily constitute too small a number to warrant a

separate departmental organization for purposes of administration. It may well be, however, that separate departmental organization aids in the development of a larger volume of field warehouse receipt loans.

Great concentration of field warehouse receipt loans among the larger banks was evident from examination of the sample. Nearly three-quarters of the \$21 million of field warehouse receipt loans held by the sample of 385 banks were accounted for by banks in the \$50 million-or-over deposit class. Only a little more than 2 percent of receipt loans were accounted for by all banks with deposits under \$2 million. In contrast, banks in the largest size class accounted for 48.6 percent of total loans and discounts in the American banking system, while those with deposits under \$2 million accounted for more than 17 percent.

Field Warehouse Receipt Financing
By Banks Located in Centers of Different Sizes

The frequency with which commercial banks engage in field warehouse receipt financing increases with the population of the center in which they are located. Data presented in Table 11 reveal that the probability that a bank situated in a city of 500,000 or over will engage in this type of lending is almost five times as great as that a bank in a center having less than 10,000 population will do so. Superficially, it might appear that this observation is unnecessary, on the ground that large banks tend to be located in large centers, and it has already been pointed out that field warehouse receipt loans are preeminently a large bank activity. While there is a strong positive correlation between size of bank and size of city, taking the United States as a whole, there are also numerous small banks to be found in every large city. The fact that field warehouse receipt financing is more frequent in large cities—among small banks as well as large ones⁷—indicates the existence of broader markets for such credit service in the larger centers. Small institutions, in country or suburban centers, even though they are equal in size to many city banks, simply are not able to draw upon as large markets for field warehouse receipt

⁷ A distribution of banks engaged in field warehouse receipt financing by size of city and by size of bank reveals this fact, although such a tabulation is not presented herein.

Table 11—FIELD WAREHOUSE RECEIPT LOANS HELD BY A SAMPLE OF COMMERCIAL BANKS, AT MID-1941, BY SIZE OF CENTER OF POPULATION ^a

Size of Center of Population ^b	Banks Not Engaged in Receipt Financing	Banks Engaged in Receipt Financing		Number of Concerns Financed	Average Number of Concerns Financed per Bank	Field Warehouse Receipt Loans Outstanding	
		Number	Percent			Amount (000)	Percent
Under 10,000	117	12	9.3%	17	1.4	\$218	1.0%
10,000-50,000	67	13	16.3	34	2.6	782	3.7
50,000-100,000	29	12	29.3	14	1.2	328	1.6
100,000-500,000	49	36	42.4	239	6.6	9,355	44.9
500,000 and over	29	21	42.0	218	10.4	10,162	48.8
TOTAL	291	94	24.4%	522	5.6	\$20,845	100.0%

^a For a description of the sample, see Appendix A.

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

loans. The explanation is clearly that business enterprises making use of field warehouses in their operations tend to be located in fairly large communities, or at least tend to form banking connections there. A contributing factor may be the presence of more active promotional activities by the field warehousing companies in the larger centers.

There appears to be a fairly sharp break between cities under, and cities over 100,000 population in regard to the frequency with which banks located within them lend on field warehouse receipts. The percentages of reporting banks that engage in the business do not increase after the 100,000 population level has been passed; but they are materially lower and decreasing as population of center falls below 100,000. This observation is likewise true of the percentages of all field warehouse receipt loans found in banks located in centers of different sizes. Nearly 88 percent of the number and 94 percent of the amount of field warehouse receipt loans held by banks in the sample represented credits granted by institutions located in cities of 100,000 and over. While comparable data covering the number and amount of all loans and discounts held by banks in centers of this size are unfortunately not readily available, it is almost certain that the concentration of *total* loans and discounts is of a much lesser degree in the larger cities.

*Average Bank Holdings of Field Warehouse
Loans and Average Loan per Client*

A number of additional facts concerning commercial bank lending on field warehouse receipts are provided by Table 12. Therein the average amount of field warehouse receipt loans held per bank engaging in this type of credit operation, and the average amount of such loans outstanding per business concern financed on this basis, are given by size of bank, by geographical region, and by population of center in which banks are located.

When the figures for banks of different sizes are examined, it is clear that the larger banks hold much larger amounts of field warehouse receipt loans, on the average, than do the small banks, and that the average amount of outstanding loans per business concern is also much larger. These facts confirm observations previously recorded. (See also Chart 3.)

It is significant that the smallest average loan (\$11,650) was held by banks possessing deposits of from \$500,000 to \$1 million, while the largest average loan (\$48,490) was held by banks with deposits of \$50 million or over, and was only about four times as

Table 12—AVERAGE AMOUNT OF FIELD WAREHOUSE RECEIPT LOANS HELD PER BANK AND PER BUSINESS CONCERN, BY A SAMPLE OF COMMERCIAL BANKS, AT MID-1941, BY DEPOSIT SIZE OF BANK, REGION, AND SIZE OF POPULATION CENTER ^a

	<i>Average Amount of Field Warehouse Receipt Loans</i>	
	Per Bank	Per Business
<i>Deposit Size of Bank^b</i>		
Under \$500,000	\$14,233	\$14,233
500,000-1,000,000	14,575	11,650
1,000,000-2,000,000	37,117	15,907
2,000,000-5,000,000	46,592	16,128
5,000,000-10,000,000	61,590	27,100
10,000,000-50,000,000	135,670	35,331
50,000,000 and over	645,911	48,443
<i>Region</i>		
New England	114,648	57,324
Middle Atlantic	128,246	28,499
East North Central	262,233	41,107
West North Central	180,935	29,743
South Atlantic	262,607	40,401
East South Central	94,732	27,630
West South Central	135,058	31,167
Mountain	42,611	24,349
Pacific	636,764	60,234
<i>Size of Center of Population^b</i>		
Under 10,000	18,183	12,835
10,000-50,000	60,124	22,989
50,000-100,000	27,302	23,402
100,000-500,000	259,870	39,144
500,000 and over	483,906	46,615
TOTAL	\$221,753	\$39,933

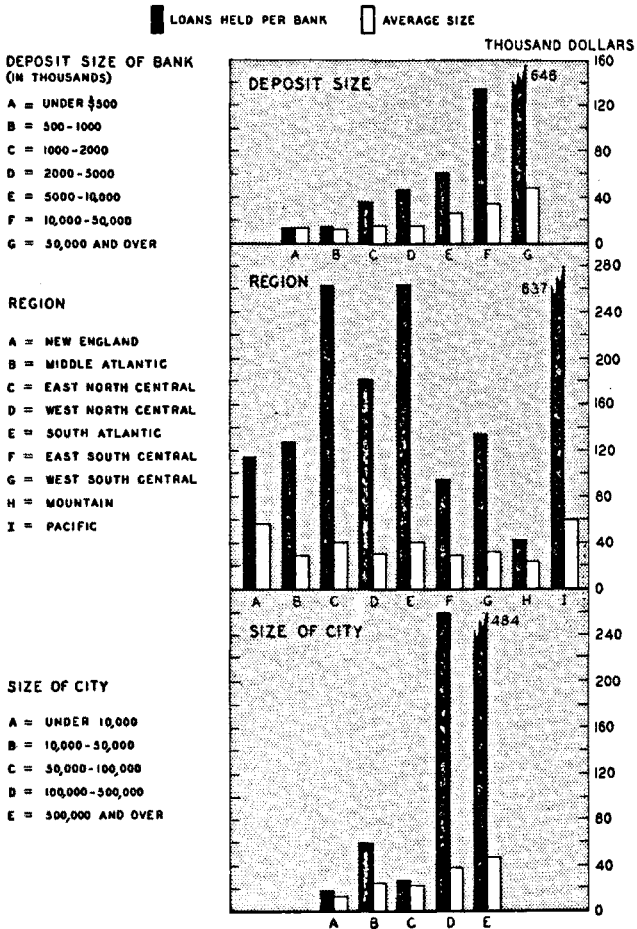
^a For a description of the sample, see Appendix A.

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

great. The differences in average amount of loans held by banks in the several geographical regions or by banks in centers of population of different sizes were even less. These facts suggest the existence of a "normal range" of amounts of field warehouse

3

FIELD WAREHOUSE RECEIPT LOANS HELD PER BANK AND AVERAGE SIZE OF SUCH LOANS, BY CLASS OF BANK[ⓐ]



[ⓐ] BASED ON A SAMPLE STUDY. FOR DATA, SEE TABLE 12.

receipt loans, within which any particular loan is very likely to fall. The minimum point in this normal range is reached with a loan of something over \$10,000, and is probably determined by the fixed costs of administering credits of this kind. Because of these fixed costs, the charge to a business concern for smaller amounts of money on this basis would be prohibitively high. The maximum point on the normal range probably lies somewhere around \$75,000, and is likely to be determined by the maximum size of business concerns that find it necessary or desirable to obtain bank credit through the establishment of field warehouses. A certain number of loans will of course lie outside the normal range.

Because there is a high degree of positive correlation between size of borrowing business and size of loans, it is possible to infer from the normal range of amounts of field warehouse receipt loans something concerning the typical size of enterprises using this basis of credit—a point on which little direct evidence is available. Assuming that the ratio between the maximum amount of a field warehouse receipt loan and the total assets of a borrowing concern will not usually be more than 1 to 2, the conclusion may be drawn that the majority of concerns financing through commercial banks on a field warehouse receipt basis have total assets of roughly between \$25,000 and \$200,000. This is merely a crude measure, to which there are many exceptions. Yet it indicates the size of concerns that are most likely to find field warehousing a useful technique. It is known that neither extremely small concerns nor the very large business enterprises make use of the field warehousing device.

There were surprising differences in the average amounts of loans held per bank and per business concern among the different geographical regions in which the lending institutions comprised by the sample were located. Apparently banks in the Pacific region, on the average, hold many times the amount of such loans held by banks in the Mountain or East South Central region, and the average amount of loan per business financed is more than twice as large. Banks in the New England region do not, on the average, hold especially large amounts of field warehouse receipt loans, but their average advance per business is comparatively large. All of these differences may be interpreted to reflect vari-

ations in the sizes of concerns using field warehouses as between the several major areas of the country, as well as variations in basic industrial characteristics.

There was a steady increase in the average advance per business against field warehouse receipts as the size of the center in which the banks were located increased. Average advances by banks in centers under 10,000 population were little more than one-fourth as large as average advances by banks in cities of 500,000 and over. This merely reflects a factor already observed, that the larger business concerns tend to be located in larger centers, or to negotiate their loans in the more important cities.

Characteristics of Borrowers

Unfortunately, little direct quantitative evidence is available on the characteristics of business concerns making use of field warehouse receipt financing. Their industrial character has already been described in detail and rough estimates of their size in terms of total assets have been presented. But precise measures of their financial structure, their credit strength, their balance sheet and profit-and-loss characteristics are lacking. Scattered information collected through personal interviews with a large number of loan officers of commercial banks, finance companies and field warehousing companies nevertheless provides a basis for some observations on these subjects.

It may be pointed out initially that no evidence has been found to support the view that business concerns making use of field warehouse receipt financing present, as a group, credit risks different from those of other concerns of like size and in similar industries that do not use field warehouses. It is by no means generally true that business concerns resort to field warehousing only when they are too weak financially to obtain unsecured bank credit.

Another erroneous view is that field warehouses are most frequently established in cases where concerns have become involved in difficulties in repaying previous unsecured loans, and are part of a "workout" arrangement made by an embarrassed concern with its bank. Unquestionably many field warehouse receipt financing arrangements do fall within this classification. But they are not the typical circumstances giving rise to the establishment of field warehouses.

The typical concern obtaining field warehouse receipt credit is one that has a high degree of seasonal fluctuation in its working capital requirements, and that finds it profitable to expand its working capital beyond the amount provided by the owners or borrowed on an unsecured basis by making "bankable" its inventories of raw materials, semi-processed, or finished products.⁸ Somewhat less frequent is the concern undergoing rapid expansion in the volume of its business operations. Such a business may possess a comparatively small equity in relation to the volume of business it is able to transact profitably. Although it is realizing a very satisfactory return on its invested capital, is growing vigorously, and possesses a superior management, its financial position, when gauged by traditional banking credit standards, may not permit it to procure the required funds without giving security. If its real property and equipment is highly specialized, financing agencies may not consider them desirable security. Moreover, the management itself may be averse to putting liens on these assets. Inventories, therefore, may well form the most acceptable class of security to both borrower and lender; they have the advantage, not present in loans made on other bases, that the amount of credit is automatically geared to the working capital need. As inventories are built up, working capital needs expand, and the loan balance is increased. As inventories are sold down, working capital requirements diminish, and the loan balance shrinks.

Still another factor may be given consideration in some instances in establishing a field warehouse—the desire of a business concern to obtain professional advice in improving its warehousing practices or to install more effective systems of recording inventory changes. These ancillary services are probably never the primary considerations in field warehouse receipt financing. The evidence indicates that such services do not play an important role in field warehousing, and are certainly less important than in accounts receivable and instalment equipment financing where credit rating, legal, accounting and collection services are often of primary importance.

The majority of business concerns that establish field ware-

⁸ The test of seasonality in working capital requirements is the ability of the borrowing business to make a seasonal "clean-up" of the loan and thus to demonstrate that credit is not required at all times, and the banker can withdraw without forcing a liquidation of the enterprise.

houses do so only or mainly in order to obtain credit. And it is generally true that they would prefer to negotiate unsecured loans, if they could do so, because the costs of field warehousing would then be eliminated. (Instances are rare where concerns, able to borrow on an unsecured basis, in fact borrow against field warehouse receipts because they can thus obtain credit at less total cost.) It is their lack of adequate equity capital in proportion to their total requirements that moves them to finance through the creation of warehouse receipts. This want of equity capital may be traced to great seasonality in operations, rapid expansion, mediocre earning power or want of easy access to equity capital markets.

Some banks have, as a matter of policy, refused to engage in field warehouse receipt financing on the ground that any business concern whose financial position is inadequate to warrant the receipt of unsecured credit is not a good credit risk on any basis. There are enough exceptions to this rule to make such a point of view appear questionable. While a bank may with consistency limit its risks of loss to any desired level, it may well occur that there is *less* risk in lending to a rapidly expanding concern that has not had time to build up its equity than to a concern with a much stronger balance sheet that has only mediocre management and earning power. Notwithstanding, some bank loan officers state that they regard the establishment of a field warehouse by a business concern as a "distress signal." Other loan officers concede that there are many instances where a bank might properly lend on the security of field warehouse receipts, but argue that in some cases business concerns using field warehouses would be better off if they introduced more equity funds into the business. Still a third group of loan officers regard field warehousing loans as interim methods of financing, which may be used by concerns until they can build up larger working capital and later procure unsecured credit. Because there is evidence that the average life of a field warehouse lies between two and three years, it would appear that many concerns do make use of field warehousing as a temporary credit device. However, there are many other companies that, because of highly seasonal fluctuations in working capital needs, apparently use the technique permanently, even though the business is stable, profitable, and well managed.

5

Credit Standards and Operating Techniques

WHEN COMMERCIAL BANKS or other financing institutions grant credit to a business enterprise, taking field warehouse receipts as collateral security, the credit transaction contains a number of factors not present in an unsecured business loan.¹ The lender has the task of ensuring that the collateral security is actually present and contains the value it is represented to have, of evaluating the collateral in the event it must be liquidated by him, and of ascertaining that it continues to be kept safely during the term of the loan. It is true that a similar situation arises on the occasion of making any secured business loan. But field warehouse receipt loans give rise to peculiar problems.

Many business term loans, for example, are secured by real estate, plant, equipment, securities, and sometimes inventories of goods. In the majority of instances institutions making business term loans look for repayment primarily to a rather elaborate set of restrictive clauses in the term loan agreement and to the rate of earnings of the business rather than to the collateral security.² Pledge of the borrower's property is very frequently required only to ensure that these assets will not be pledged to other lenders during the term of the loan. This is not true in warehouse receipt financing, where the collateral plays a decisive role in the transaction.

Field warehouse receipt financing also entails different credit problems from those confronted in accounts receivable financing. While lenders against the assigned accounts receivable of a business concern do, in effect, obtain a lien on a particular class of

¹ This chapter is based mainly upon information obtained through personal interviews with officers of a large number of commercial banks in leading cities.

² See National Bureau of Economic Research (Financial Research Program), *Term Lending to Business*, by Neil H. Jacoby and R. J. Saulnier (1942) p. 76.

that concern's assets, one of their major credit problems is to evaluate the financial and moral worth of the many *customers* of the concern being financed, and of their ability and willingness to pay their trade debts. This element is not present in field warehouse receipt financing.

Instalment financing of commercial and industrial equipment presents the closest analogy to field warehouse receipt financing from the point of view of credit analysis. In both cases the lending agency appraises the earning power and moral responsibility of the borrowing enterprise, and perfects its right to take possession of particular property of the borrower. Yet even here distinctions between equipment loans and loans against commodities deposited in field warehouses are apparent. The collateral security in an equipment loan is a machine or fixture, such as a Diesel engine, a refrigerating unit, a dentist's chair or a road grader. Such property is usually rather highly specialized and the resale market for each kind of used equipment is generally imperfect and not easy to locate. The lender must possess personal knowledge of these markets and of the useful life, rate of obsolescence and rate of physical deterioration of the equipment in order to know what down payment to require, how long the loan should extend, and what should be the rate of amortization.³

In field warehouse receipt lending, by contrast, the collateral consists of stocks of merchandise, raw materials, finished, or semi-finished goods. With certain exceptions, there are readier markets for this property, in the event it must be sold to liquidate a loan. But these markets have their own peculiar features, including characteristic seasonal fluctuations in prices, characteristic differentials in prices of different grades and qualities of a given kind of commodity, characteristic price differentials of the same grade and quality in different marketing centers, and characteristic hazards of deterioration in value during storage. Commodity credit officers must possess a wide knowledge of the different industries and markets served, as well as of the technical problems involved in field warehousing.

At the present point, the inquiry is directed toward the man-

³ See National Bureau of Economic Research (Financial Research Program), *Financing Equipment for Commercial and Industrial Enterprise*, by R. J. Saulnier and Neil H. Jacoby (1943).

ner in which commercial banks organize themselves to engage in lending on the security of field warehouse receipts; how they recruit or train personnel to engage in this field of credit; the methods and standards of credit granting they employ; the rates or charges made for credit of this type; the operating procedures they employ; and the profitability of field warehouse receipt financing to them.

Organization for Commodity Lending

Loans to business enterprises secured by warehouse receipts arising from the deposit of staple commodities have been an integral part of American commercial banking operations for many years. It is not improbable that commodity loans were made almost from the beginning of bank history in the United States. Inventories of raw materials or finished or semi-finished goods have for many decades been the most salable and desirable assets that, from the point of view of the lender, could be offered as security for credit. The early importance of commodity loans in commercial banking is indicated by frequent reference to such loans in the National Bank Act of 1863-64 and is further evidenced by that provision of the Federal Reserve Act of 1913 authorizing Federal Reserve banks to discount "notes, drafts and bills of exchange, secured by staple agricultural products, or other goods, wares or merchandise," and by the large number of regulations and interpretations of this provision subsequently issued by the Board of Governors of the Federal Reserve System.⁴

It is, therefore, not strange that the special problems of appraising collateral, perfecting the lender's lien on collateral, maintaining the desired relationship between the value of collateral and the amount of outstanding credit, and providing for the deposit and withdrawal of commodity collateral have been recognized by many banks, and that special commodity loan departments have been created in some banks for the purpose of administering such loans. Loans secured by warehouse receipts issued against goods deposited in public terminal warehouses are ordinarily considered to fall within the same classification for

⁴ See *Digest of Rulings* to October 1, 1937 (compiled in the office of the general counsel, Board of Governors of the Federal Reserve System, Washington, 1938) pp. 137-43, 568.

administrative purposes as loans secured by field warehouse receipts.

Certain differences in the problems presented by these two types of credit will be pointed out later, but these are not vital enough to call for the application of greatly different lending techniques. The majority of commercial banks possessing a substantial volume of commodity loans have not erected separate commodity loan departments. The more usual practice is simply to assign the task of making and supervising all credits based upon warehouse receipt collateral to one of the senior loan officers who possesses special knowledge and competence in this field. Even this specialization by individuals occurs only in the larger institutions. Because the total volume of commercial and industrial credit extended by most banks is not large enough to warrant division of functions, business loan officers of small and medium-sized banks necessarily must be prepared to grant credits under many different kinds of arrangements, as regards maturity, collateral security or provisions for repayment.

Notwithstanding the fact that separate commodity lending organizations are exceptional in American banking, there appears to have been a tendency during recent years for banks to create such departments. Those banks that have done so have generally been institutions that were desirous of building up a larger volume of such credits, and believed that the advertising and other values of departmentalization were worth their costs.

Personnel engaged in commodity lending has almost invariably been recruited from the ranks of the lending institution's staff. There is no evidence of an introduction of personnel from other lending institutions, as has been true with term lending, accounts receivable financing and instalment equipment financing, where banks have frequently employed persons with previous experience in investment banking houses or sales finance companies. One explanation is that commodity lending has long been an intrinsic part of commercial banking operations, while these other types of business credits have been grafted on to commercial banking operations at comparatively recent dates. Another factor is that lending agencies specializing in field warehouse receipt financing have never existed outside the banking system.

It is interesting that in some banks commodity loans are made

by the same officers or departments that engage in factoring or in lending against accounts receivable. This is explained by the complementary nature of the two forms of business financing on the part of concerns that require additional working capital or that have highly fluctuating needs for working capital. For example, a business concern possessing good management and reasonable prospects of profitable operation suddenly experiences a large increase in orders for its products. While it is processing the goods for sale it may have few receivables to pledge as security for a loan made to finance the increased level of operations, but it is likely to possess substantial inventories of raw materials or semi-finished goods. Hence a field warehouse receipt loan provides a convenient basis for credit. As sales are made, the same concern acquires large amounts of receivables, particularly if it is the practice in that industry to sell on long terms, and its inventories concurrently may be greatly reduced. At this point an accounts receivable loan may replace or supplement the field warehouse receipt loan. Hence a bank loan officer often finds it advantageous to be schooled in both accounts receivable and field warehouse receipt financing.

Promotional Activities

The field warehousing companies have been the most aggressive agencies in developing field warehouse receipt loans for commercial banks. They have actively explored the market for this credit device, while commercial banks and business concerns have been much less aggressive in the initiation of loans. This situation is a natural one, since banks and business concerns generally have had alternative credit arrangements open to them, while the field warehousing companies have depended wholly for their continuance on the use of the field warehousing technique. They have had an especially urgent interest in "selling" field warehousing to bankers and businessmen. Banks have generally not taken the lead in finding enterprises whose financial problems could be solved acceptably on this basis. During recent years, as bankers have become more familiar with field warehouse receipt financing, an expanding part of the promotional activities of the field warehousing companies has been concerned with intra-industry competition for business.

In developing new business, the field warehousing companies have worked primarily with commercial banks and only secondarily with prospective borrowers. Recognizing that banks were already in close contact with the largest number of business concerns, and that business managements were generally guided by the credit arrangements suggested or imposed by their bankers, the field warehousemen have informed bankers of their facilities and encouraged them to make loans against field warehouse receipt collateral.

Consequently, the majority of field warehouses have been originated as a result of suggestions made to depositors by commercial banks. One large field warehousing company reported that about 80 percent of its field warehouses were installed as a result of references made by commercial bankers, and about 20 percent were established at the direct request of business concerns. Another warehousing company placed these percentages respectively at 95 and 5 percent. Still a third company stated that the great majority of its field warehouses came into existence through the suggestions of bankers, that others were put into operation at the suggestion of trade suppliers of the depositing concerns, and still others at the suggestion of depositors who had already made or expected to make arrangements for credit secured by the warehouse receipts.

Trade suppliers frequently have field warehouses installed for purposes other than obtaining receipts as security for cash advances. For example, the large can manufacturing companies follow the practice of depositing cans at the plants of food canning companies prior to the period in which they will be used, for the purpose of leveling out their own production schedules and conserving storage space at their factories. The can manufacturer holds the field warehouse receipts, and gives the custodian of the warehouse a general release authority permitting him to make periodical releases of cans to the canner up to a specified maximum value. As the cans are released, payables are created to the credit of the can manufacturer. The custodian prepares a daily report of releases, and when the total amount reaches the agreed maximum, further releases can only be made through further extensions of trade credit by the manufacturer to the canner.

Within the past few years, the impetus to the development of

field warehouse receipt financing through commercial banks has shifted. With growing knowledge of, and experience with, these loans, an ever larger number of banks has become interested in making more of them. Therefore a large fraction of the field warehousing companies' selling effort has tended to be diverted from finding banks willing to make such loans to finding business concerns standing in need of them. Furthermore, there is evidence that commercial banks themselves have recently become a more active force in the initiation of field warehouse receipt loans.

Credit Standards and Credit Appraisal Methods

An approach to the complex topic of credit standards and credit appraisal methods in field warehouse receipt lending may be made by noting the major elements in such transactions:

1. *The field warehouseman*—his moral and financial responsibility, the amount, coverage and worth of his bond, the thoroughness with which he and his employees establish "continuous, exclusive and notorious" possession of the goods, and the form and validity of his warehouse receipts.

2. *The field warehouse*—the suitability of the space, and the validity of the agreement under which it is leased.

3. *The borrowing business concern*—moral and financial responsibility of its principals, its financial strength, the calibre of its management, its past and prospective earning power.

4. *The warehoused merchandise*—its value, quality, susceptibility to deterioration, breadth of market, and price fluctuation.

Upon obtaining and analyzing information pertaining to these four categories of elements, and reaching a conclusion that the circumstances warrant the extension of credit, the lender then sets up certain risk-limiting procedures and policies that will govern the original amount of the loan and its subsequent variation until repayment.

The Warehouse Company and the Warehouse

As field warehouse receipt lending occurs under a great variety of arrangements, no simple description can be given of the credit standards and credit appraisal methods in use. Normal or typical

standards and procedures will instead be described, as these have been delineated to the authors by bank credit officers.

There are many considerations with respect to the field warehouse company and the warehouse on which the lender seeks to satisfy himself before granting a loan on the collateral security of field warehouse receipts. He normally seeks to determine the extent of the company's experience, the competence of its organization, whether the premises for the contemplated warehouse are suitable for storing the goods, whether the lease of these premises by depositor to custodian is in correct legal form, whether the warehoused goods are completely segregated from non-warehoused assets of the borrower, whether signs and markers are clearly displayed inside and outside the warehouse, whether the goods are accurately described as to quantity and nature in the receipt, whether the receipt meets the requirements of the law of the state in which it is issued, whether the custodian is properly informed of his duties and is performing them so that no question will arise as to his continued dominion over the goods, and whether proper insurance covers the receipt holder as an independent guarantee of the performance of the field warehouseman and against losses arising from the infidelity of his employees. As one banker has well put it: "In effect, the field warehouseman stands in the place of the vaults of the bank, and . . . should be selected with the same care as are employees of a bank who have access to the securities contained in collateral envelopes."⁵

It is necessary first of all for the banker to make certain that the field warehouseman is "a (legal) person lawfully engaged in the business of storing goods for profit," because warehouse receipts issued by corporations that are mere warehousing subsidiaries of the borrowing businesses may be declared invalid by the courts, thus destroying the value of the bank's collateral. The courts have definitely condemned warehouse receipts issued by the borrower himself or by his subsidiary as valueless. Ordinarily, however, the lending institution will not have difficulty in distinguishing warehousemen who are *bona fide* third parties to the credit transaction.

⁵ See *Field Warehousing*, by William H. Miller, an address given before the Southwestern Regional Conference of the American Bankers Association, Fort Worth, Texas, December 6, 1940.

Next, the lender satisfies himself as to the financial responsibility of the warehousing company. This is especially necessary, because the loan is predicated upon receipts issued by the warehouseman. Unless there is assurance that there will be, at any time, goods in the warehouse of nature and total amount equal to the sum total of warehouse receipts outstanding, the primary basis for credit does not exist. Inasmuch as a large field warehousing company may, at a given time, be operating warehouses at hundreds of locations, each containing many thousands of dollars worth of goods, its aggregate liabilities may be many times its total equity. For this reason, prospective lenders against its warehouse receipts are often particularly careful to obtain knowledge of the aggregate amount and precise provisions of the warehouseman's bond. Normally, field warehousing companies protect their receipt holders against the negligence of their employees in the storing or handling of goods by taking out warehouseman's legal liability insurance. Usually, they also protect receipt holders against infidelity or breach of trust on the part of their employees by carrying fidelity insurance. Beyond this, a bank often probes the financial responsibility of the bonding company, ascertains with whom the bond is on deposit, and determines the conditions under which the bond may be realized upon by the receipt holder. Banks almost universally require that the borrowers insure against risks of loss by fire, as defined in standard fire insurance policies. Insurance against additional risks, such as those of burglary, water damage, windstorm, cyclone, tornado, war damage or other causes arising outside the warehouse may also be required, depending upon the credit policy of the lender, the location of the warehouse, and the kind of commodities contained in the warehouse. None of these risks are carried by the warehouseman.⁶ The lending agency is ordinarily recognized as the insured under each such policy, by endorsement of the borrower, by a rider attached to the policy, or otherwise.

The suitability of the storage space for the amount and kind of

⁶ A few of the major warehousing companies have facilities for issuing insured warehouse receipts. Under this arrangement each warehouse receipt is in itself a certificate of insurance which states the amount and nature of protection afforded by the contract or master policy entered into between the warehouseman and the insurance company. Such an arrangement may have obvious advantages to lending institutions. See Wesley J. Schneider, *Field Warehousing* (1941) pp. 51-53.

merchandise to be stored may also be given attention by the lending institution, and the lease agreement between the field warehouseman and the business concern is scrutinized to determine that it is *bona fide* and legally binding. Depending upon the law of the state in which the field warehouse is located, it may be desirable for a bank to determine that the lease has been publicly recorded by the warehouseman. Unless the lending bank possesses personnel trained in the problems and methods of warehousing, it usually relies upon the field warehouseman for judgment as to the suitability of the storage space. This provides, of course, an additional reason for the selection of a competent and reputable warehouseman. The warehouseman definitely has an interest in these matters as well as the banker, and in addition usually makes sure that under the lease the business concern pays for all services necessary to operate the warehouse efficiently, such as electricity, gas, heat, water and repairs. The lease further requires that the depositor shall comply with all laws pertaining to the property and shall hold the warehouseman harmless from fines, suits or claims. It frequently requires the bailor to keep in force public liability insurance to protect the warehouseman.

A bank's interest in a field warehouse is not, of course, confined to the period preceding its installation, but covers the duration of the loan secured by warehouse receipts. In order to protect their interest, some banks conduct examinations several times each year, on a surprise basis, of each field warehouse. The examination comprises an audit of merchandise in the warehouse against receipts outstanding, and a review of the effectiveness of the bailment. The bankers may even arrange to be furnished with photographs of each field warehouse, showing such features as signs, locks or other devices to make the bailment effective. In addition, the principal field warehousing companies employ travelling auditors to examine, on a surprise basis, the same factors that are of concern to the lending agency.

The Borrower

Bank credit standards pertaining to a business concern borrowing on the security of field warehouse receipts are generally as follows:

1. That the principals in the borrowing business have a "clean record" with regard to their respective business careers. This is

conceived to be necessary because a dishonest person can often find some way to defraud the bank, even though he borrows only on an apparently adequate collateral basis.

2. That the applicant concern is "in business to stay" in the sense that his financial records indicate a prospect of satisfactory earnings. This does not mean that a commodity loan will be declined because the past earnings record is unfavorable, provided a change in management or in production and marketing conditions has since made for an improvement. There does not appear to be any standard relation between the value of the applicant's assets and the maximum amount of a field warehouse receipt loan. In fact, there are many occasions when a business concern with highly fluctuating seasonal operations may at the peak have an outstanding warehouse receipt-secured indebtedness many times the amount of its own net working capital or even its net worth. This is frequently true of small canning concerns, for illustration. The major test applied by the banker is whether the concern appears likely to carry through its business operations profitably.

3. That the applicant is borrowing in order to secure funds for use in conducting the *normal* operations of his business, and not in order to acquire commodities for speculation. The rule against making warehouse receipt loans to finance speculative holdings of commodities is also applied by many banks against business concerns that do have uses for the commodities they desire to hold. Thus one institution reported that it would not advance funds to a business against warehoused commodities, if such funds enabled the concern to build up inventories of either finished goods or raw materials in excess of six months' requirements. Normal requirements were calculated by an examination of past operating statements. Clearly, such a rule could not be applied to all concerns rigorously, but it forms a policy guide line.

Bankers generally seek to determine whether a loan will fulfil a genuine economic function, such as enabling the borrower to take advantage of quantity discounts, to accumulate enough inventory in order better to plan production schedules, to purchase necessary supplies at lower off-season prices, or to take advantage of lower transportation costs.

An illustration of field warehouse financing motivated by the

last-mentioned cause is a loan to a manufacturer of disposable tissue papers. The principal raw material required by this concern was bleached sulphite pulp obtained from Canadian sources. Originally, pulp was imported by rail at all seasons of the year, and the concern never maintained a large inventory on hand. Later, it was found that the costs of water shipment were so much lower that it was profitable to lay up a large inventory during the summer months before the Great Lakes froze over. This inventory was financed by establishing a field warehouse at the plant and borrowing against the warehouse receipts.

An example of the use of field warehouse receipt financing to stabilize production rates is afforded by a small manufacturing concern, the bulk of whose output is sold to a large mail order house. During a great part of each year this concern produces for inventory, places the finished products in a field warehouse, and borrows on the security of the resulting warehouse receipts to finance further production. Credit is extended to this concern by a local bank against the warehouse receipts and the purchase contracts of the mail order house.

The Warehoused Commodity

The greatest variation is found in bank credit standards pertaining to the nature of the warehoused commodity. A good number of banks have a policy of not lending against finished goods or goods-in-process, and limiting their field warehouse receipt loans to raw materials. Although the policy may be waived on occasion, the rationale underlying it is that raw materials are generally more standardized in nature and possess broader and better-organized markets, making possible a quick sale at an accurately predictable price in the event of necessary liquidation.

Some banks go further and stand willing to lend against inventories of finished goods or goods-in-process, provided the borrowing concern has good non-cancellable orders on hand for such merchandise. Still other institutions impose no general restrictions on the types of merchandise that may form the basis for field warehouse receipt credit, but take account of the greater risks inhering in loans against specialized merchandise lacking a broad market by reducing the maximum percentage of the amount of the loan to the value of the collateral. For illustration, a bank may advance

70 or 75 percent of the value of staple grades and sizes of underwear stored in a field warehouse at the plant of the manufacturer, while advancing only 30 or 40 percent of the value of custom-made underwear.

While it would appear theoretically practicable to compensate for *any* degree of narrowness in the character of the market for the warehoused commodity by adjusting the ratio of maximum credit to value of the collateral, it is nevertheless true that many banks avoid lending against particular commodities or classes of commodities. This is tantamount to requiring that a commodity must possess a certain minimum degree of liquidity before becoming the basis for a field warehouse receipt loan. No doubt the application of such broad rules of credit policy simplifies the task of the loan officer, and reduces the need for detailed scrutiny of many loan applications.

In this connection an interesting relation between field warehouse receipt financing and accounts receivable financing may be observed. On first thought it would appear that loans collateralized by accounts receivable would necessarily carry less hazard for the lending agency than loans collateralized by warehouse receipts, for in the former case the lender may rely not merely upon the promise of the borrower for repayment but also upon the fact that the purchasers of merchandise from the borrower have taken delivery of goods and agreed to pay for them. This may often be true, but there are also many instances where a field warehouse receipt loan is less risky. For example, a loan to a furniture manufacturer against lumber stored in a field warehouse for which there is a fairly broad market may be inherently less hazardous than a loan collateralized by the accounts receivable of the same manufacturer arising from the sale of custom-built furniture to numerous retailing concerns of mediocre credit-rating. In this case, the comparatively broad and stable market for the warehoused commodity may endow the collateral with more certain value than is possessed by the batch of receivables pledged by the borrowing concern.

Another credit standard frequently applied by banks when lending against field warehoused stores of staples such as sugar, cotton, or grain, is that the borrowing concern must hedge the purchases of raw materials, if there is a "futures" market for the

materials or for the products made from them. Thus, milling concerns may borrow against receipts covering wheat stored in field warehouses at their plants. The lending bank is likely to require that the miller hedge by contracting to sell for future delivery flour equivalent in amount to the stored grain, as a condition of extending credit. It may even require that such "hedges" be assigned to it, as an additional measure of protection against loss. The purpose of this stricture is obviously to prevent the borrower from laying up a larger inventory of raw material than he can convert into finished product within a reasonable time, and to protect the borrower from financial difficulty in the event of an unexpected and large decline in the cash price of his finished product.

After a bank has satisfied itself that the field warehouseman, the borrowing business and the warehoused merchandise satisfy its broad credit standards, it then "sets up" the loan by putting into operation a number of procedures designed to limit its risks. The several steps in a typical procedure include the following:

1. The banker first requires the borrowing concern to submit balance sheets, profit and loss statements, budgets and other financial information, covering the most recent years of business operation. These will usually be set up on sheets in such a way as to facilitate year-to-year comparisons and to enable the credit department of the bank to determine the normal earning power of the business, its equity, its peak working capital requirement, and its operating plans for the future. Because field warehouse receipt financing may involve the advance of large sums compared to the borrower's equity, it is necessary for the lender to have a considerable amount of precise information concerning the "norms" of operation of the business. Usually, these financial statements together with the relevant analyses are placed in a credit file along with other information secured from mercantile agencies, trade suppliers, customers, and trade associations in the industry to which the borrowing concern belongs. Special attention is paid to the budget of proposed operations during the ensuing season or fiscal year, since this is the period for which financing is required and at the end of which the borrower must display an ability to "clean up" the loan. Here the lender attempts to satisfy himself of the ability of the concern to produce at the intended rate, of the existence of markets for its products at remunerative prices,

and of the capacity of the management to keep down costs to the proposed level. Bankers often establish contacts with brokers and dealers that have had business dealings with the borrower in order to verify the reasonableness of the borrower's proposed sales volume and the reputation of his product. The banker also obtains a letter of hypothecation, a general loan and collateral agreement, or some similar contract from the borrower, setting forth the rights of the lender to realize on the collateral under specified conditions.

2. The lender next fixes the maximum percentage that the amount of credit advanced at any time will bear to the value of the warehouse receipt collateral. (For brevity, this is referred to hereafter simply as the "percentage advance.") This is a risk-controlling measure of prime importance because it determines the amount of the bank's margin of safety, that is, the excess of collateral value over outstanding loan balance. This margin is required to cover price declines, deterioration, and expenses of liquidating merchandise in case the creditor must sell it to recover the amount owing by the debtor.

The percentage advance varies over a wide range and it is not possible to name an average or typical figure that is representative of banking practice. However, it is probably accurate to say that the majority of field warehouse receipt loans involve percentage advances of between 65 and 85 percent. The general principle is that, other factors being held constant, the percentage advance will be larger—(a) the broader the market for the warehoused commodity, (b) the smaller the degree of price fluctuation of the commodity, (c) the less the normal rate of deterioration in value of the commodity during storage, and (d) the smaller the maximum amount of credit extended to the borrower in relation to his net worth and net working capital. For example, one bank reported that it loaned up to 90 percent of the current market value of hedged sugar, because of its high liquidity and the price stabilizing operations of the Federal government. At the other extreme, another bank advanced only 30 percent of the borrower's cost of finished furniture in a field warehouse, realizing that a forced sale of this merchandise would realize a relatively small amount and that the costs of finding buyers might be large. The majority of loans against canned foods involve percentage ad-

vances of between 60 and 70 percent of market value. The degree of price stability of the commodity is often measured by finding the range of prices during each of the past five or more years.

In a majority of instances, if there is a broad market with available price quotations, the percentage advance is expressed in terms of the current selling price of the commodity in the market. Where current market quotations are not available, it is also frequent practice for the advance to be expressed as a percentage of the *cost* of the product to the borrowing concern. In the case of heavy and bulky commodities like coal or fuel oil, whose selling prices contain a large element of transportation cost, the bank may lend a specified maximum percentage of the borrower's cost at point of production *plus* the *full* amount (or a large fraction) of transportation costs to point of storage for distribution. The underlying reasoning seems to be that 100 percent (or slightly less) of transportation costs can be safely advanced because these expenses are outside the control of the business and must be incurred by anyone desiring to sell the commodity in a metropolitan market. Consequently, this element in price can always be recovered, so long as the fuel is sold in that market, whereas the full amount of other elements of cost cannot always be recovered. Such differences in the manner of expressing the percentage advanced usually appear to be of nominal importance. There is generally a fairly stable relationship between unit cost and unit selling price, or between cost at mine or other point of production and cost at point of marketing. Hence it is not a matter of moment which formula a bank uses.

3. The lender next institutes mechanical arrangements for determining that the proper relationship is maintained between collateral value and amount of loan during the term of its life. The first step is to appraise the inventory of commodities in the field warehouse. If the commodity is a staple such as sugar, grain, or cotton, the appraisal consists merely of looking up price quotations. If the commodity is not a staple, it may be physically viewed by the lender or his agents, its quality tested or graded, and its full value determined. While the appraisal of independent experts may be required for some commodities that are difficult to evaluate, such as tobacco, lenders may accept the word of the borrower as to the grade of more standardized commodities, such as cotton.

An agreement is reached between banker and borrower concerning the basis of valuing the collateral deposited or withdrawn from the warehouse. If the merchandise is not one for which frequent price quotations are available, some more or less arbitrary value per unit may be selected. Next, the lending institution may arrange to check the signatures on warehouse receipts. Some banks require every person authorized to issue receipts at each warehouse to execute a signature identification card. The signature on each incoming warehouse receipt is then systematically verified by comparison with the signature on the identification card, to minimize the possibility of fraudulent issuance of warehouse receipts.

The lending bank also generally maintains for each client borrowing against field warehouse receipts a running record showing daily or weekly changes in the value of collateral held in comparison with the amount of the outstanding loan balance. This is vital in order that the agreed margin of safety shall be maintained at all times. In the case of a client, such as a sugar broker, whose warehoused stocks may turn over very rapidly and involve comparatively large financial commitments, these records may require entries several times per day, and must be kept current.

An Example of Lending Operations

The preceding rather formal description of bank credit standards and credit appraisal methods in field warehouse receipt financing can be rendered clearer by considering a specific example of such operations. Only a specific example fully displays the breadth of knowledge of the business of the borrowing concern that the lender must possess. A typical loan to a tomato canning concern by an Indiana bank may be considered.

During the late winter or early spring months the canner comes to the bank and outlines his proposed plan of operations for the ensuing season. This plan includes a decision as to the number of acres of tomatoes that he will contract to purchase from farmers or will himself plant. From knowledge of the average yield per acre the approximate number of cases of canned goods requiring financing can then be estimated. Because the selling price of the canned product is variable the banker usually commits himself to advance from 60 to 80 percent of the canner's *cost* of the

product against field warehouse receipts. This is equivalent to an advance of from 50 to 65 percent of the *selling price* of the product. As the tomatoes mature during the mid-summer months they are delivered to the canner who cans them and places the cases of unlabeled cans in a field warehouse. Meanwhile, a broker, who acts as agent for the canner, and who receives a 2 to 4 percent commission on the selling price for his services, will probably have found a buyer for the product. The buyers are mainly wholesale grocers or large chain retail grocers, who will design labels bearing their own brand names.

The amount of the canner's outstanding bank credit usually starts rising about the beginning of August, when the canning season gets under way, and reaches its peak about mid-October, after which sales of canned products enable the canner to withdraw goods from the warehouse and to reduce his loan balance. The bank normally expects the canner to "clean up" his loan by the following March 1st, although it may carry him over into the next canning season if it believes that a distressed market condition exists temporarily.

The percentage advance made to the canner is not small in consideration of the large number of charges the bank would have to incur in case it repossessed and sold out the warehoused merchandise. Among such charges would be warehousing costs, normal spoilage allowances, brokerage fees, allowance for discount below market price at which the stock can be liquidated, costs of labels, costs of labor for affixing labels, and local property taxes payable on the warehoused stock.

It is evident that the bank loan officer engaged in lending to firms in the fruit or vegetable canning industry must possess a considerable knowledge of the organization and normal methods of operation in the industry before he is in a position to know all the risks and the methods of guarding against them. This is equally true of the many other industries that make use of field warehouse receipt financing.

Costs of Credit to Borrowers

The costs of credit secured from commercial banks by business concerns on a field warehouse receipt basis consist of two major parts: warehouseman's charges for installing and operating the

warehouse, and the interest or other charges made by the bank for the funds advanced. It is not possible to cite comprehensive quantitative information with respect to either classification of charges, as the data are regarded as confidential by both bankers and warehousemen. However, the range of costs of credit to business concerns on a field warehouse receipt basis can be established approximately, and the different bases used by field warehousing companies in determining charges for their clients can be described.

It appears that field warehousing companies usually make an annual minimum charge of \$350 to \$600 for installing a warehouse. One warehousing company is known to make a minimum charge of \$200 for installing and operating a warehouse for a half year. The minimum charge is intended to cover certain fixed out-of-pocket expenses such as bonding, auditing, and travel expense incident to setting up and operating a warehouse, irrespective of its size. Above this flat minimum, the charge of the field warehouseman generally consists either of a certain percentage of the value of merchandise passing through the warehouse or a certain percentage of the amount of funds advanced by the financing agency against the warehouse receipts created by deposits in the warehouse. In either case, these percentages are such that the total cost of the warehouse to the depositor ordinarily runs around $1\frac{1}{2}$ or 2 percent of the loan subsequently procured, although on very large loans it may be as little as $\frac{3}{4}$ of 1 percent. In some instances, warehousemen make a single lump sum annual charge for their services. Obviously, the larger the warehouse the smaller the ratio of charges to quantity of credit secured, other factors being the same, because of the presence of substantial amounts of fixed costs in field warehousing operations.

In consequence of the fixed cost elements in field warehousing operations, reflected in the minimum flat charges made by most warehousing companies, there is a minimum amount of loan that a business concern can economically obtain on this basis. This minimum naturally varies with the location of the warehouse, and is affected by local differences in costs of warehouse operation, but it appears to lie around \$10,000. One field warehousing company, in fact, will not set up a warehouse in any location where the value of the average deposit is under \$10,000, believing that

the cost of credit obtained by collateralizing smaller deposits would be inordinately high. Thus even where the average amount of the loan is \$10,000, a minimum annual charge of \$350 by the warehouseman would add 3.5 percent to the cost of the credit. Nevertheless, there appears to be a tendency to establish warehouses smaller than this minimum, especially where the premises of the borrower are conveniently accessible to the headquarters of the warehouseman, thus bringing about special economies of operation.

An important result is that field warehousing is not a credit facilitating device than can be used economically by the smallest business enterprises. It is preeminently a method of facilitating the introduction of funds into enterprises of intermediate size—a fact previously observed in connection with the average size of deposits. It should also be noted that in this respect field warehousing differs from terminal warehousing. In the case of the field warehouse, which is an *ad hoc* credit device for a particular concern, that concern necessarily must bear the entire cost of the warehouse. In contrast, many concerns make deposits in public terminal warehouses. By spreading the fixed cost elements among many depositors, the terminal warehouse can set its minimum charges much lower, and the minimum amount of loans that can be made economically against terminal warehouse receipts can also be much smaller. One bank, for example, has a policy of making loans against terminal warehouse receipts as low as \$5,000 in amount, but fixes a minimum of \$20,000 for its field warehouse receipt credits.

There appears to be considerable variation in the effective annual interest rate charged by commercial banks for credit collateralized by field warehouse receipts, depending upon the total size of the loan, the nature of the warehoused commodity, the financial strength of the borrower, and the amount of mechanical work required to service the credit. As of mid-1941, the majority of loans appear to have carried rates between 3½ percent and 6 percent, judging from scattered information obtained from many sources. Lower rates are normally charged on loans of larger amount, made to borrowers having relatively strong financial positions, secured by staple commodities having wide markets and comparatively stable prices, and involving comparatively little

paper work on the part of the lending agency. Higher rates are charged when the reverse elements enter the situation. The intensity of competition between commercial banks, or between banks, finance companies, or other financing agencies, also has a bearing upon the loan rate charged any given borrower. In general, it may be said that *any given business concern* can usually secure bank credit at a lower effective rate (apart from field warehousing costs) on a field warehouse receipt basis than on an unsecured basis, because of the lesser risk assumed by the bank. But the average rate charged by a *given bank* for its field warehouse receipt loans is likely to be higher than the average rate charged for its unsecured business loans, because of the higher costs of loan administration and the greater risks it assumes in lending to that class of business concerns that utilizes field warehousing as a credit facilitating device.

Many banks write their field warehousing credits in the form of demand loans, and charge interest on the actual outstanding loan balances. This is in contrast to their usual practice in making short-term unsecured business loans of taking the borrower's notes for given amounts, running for definite periods of time, and of discounting them at particular rates. The reason for the demand loan in field warehouse receipt financing is clearly that credit needs vary closely with the value of merchandise in the warehouse, and these needs are not accurately predictable in advance. The demand note with the interest charged on actual funds in use results in the borrower paying only for the actual amount of credit he uses.

The aggregate costs to business concerns of field warehouse receipt credit may therefore range from as little as 4 percent of the weighted average annual credit secured to 10 percent or more, in terms of the effective annual interest rate. The bulk of such loans probably cost the borrower between 5 and 8 percent, after he has added together the charges made by the bank and the field warehouseman.

It may be concluded that, weighed against the overall average cost of bank credit to business concerns, field warehouse receipt loans represent comparatively high-cost credit. This is so because of the comparatively large amount of administrative work they entail. However, there are occasional instances where the total

costs of field warehouse receipt credit (including both warehouseman's and banker's charges) are less than the costs of securing credit on any other basis. In fact, some field warehousing companies have sought to expand their businesses by inducing individual concerns, already paying relatively high rates for unsecured credit, to establish field warehouses and obtain loans from other banks at so much lower rates on the security of the warehouse receipts as to realize a net saving. For example, a concern might be paying 6 percent for unsecured credit from a local institution. By establishing a field warehouse at a cost of about 1 percent of the amount of credit made available, it might secure funds from another bank at a 3 percent or 4 percent interest rate. The second institution would feel warranted in lending at a much lower rate than 6 percent if it held what was believed to be good collateral. These instances are not, however, to be considered typical, and are comparatively rare in occurrence.

Losses or charge-offs of field warehouse receipt loans by commercial banks appear to have been comparatively infrequent. Available data suggest that the most frequent cause of loss is inaccurate valuation of the warehouse receipt collateral by the bank rather than failure of the warehouseman to maintain a valid bailment, with the result that the bank is unable to recover the amount of the debt owed by the borrower, after taking possession of the merchandise and liquidating it. Such losses are, of course, in no sense the fault of the warehouseman. Bank losses resulting from the careless or fraudulent issuance of warehouse receipts or from negligence of the warehouseman in maintaining a valid bailment of commodities deposited with him are comparatively rare, because the bank is protected by the legal liability bond furnished by the warehouseman. Provided the warehouse is so conducted that there is a valid bailment, provided warehouse receipts are issued in proper form and amount, provided the warehouseman furnishes a legal liability bond of adequate worth and amount, and provided the relation of the bank's cash advance to the value of the collateral is not excessive, the hazards of lending against field warehouse receipts are minimal. In most cases where banks have been compelled to take possession of merchandise in a warehouse and to liquidate it, they have been able to recover the amount of the debt and the costs of liquidation.

A

Survey of Field Warehouse Receipt Financing

BASIC DATA WERE COLLECTED about mid-1941 regarding the role played by commercial banks in field warehouse receipt financing through the medium of a schedule submitted to a sample of banks. Specifically, it was sought to measure the frequency with which banks of different sizes, in different geographical regions and in centers of population of differing importance engaged in field warehouse receipt financing; the importance of field warehouse receipt loans in their portfolios; and the number of business concerns to whom they extended credit by this method. Because of the limitations imposed by available time and resources, a random sample of commercial banks in the United States was selected by the following method:

1. Through the courtesy of the Federal Deposit Insurance Corporation a list was made available of the names and addresses of all of the 13,500 operating insured commercial banks in the United States. This list was arranged alphabetically by states; size of center of population in which each bank was located was indicated in code.

2. From the "population" of banks provided by the Federal Deposit Insurance Corporation mailing list, there was selected the following sample:

- (a) Every 36th bank located in a center of population of less than 10,000. (A total of 10,991 banks were in this class.)
- (b) Every 9th bank located in a center of population of 10,000 and up to 50,000. (A total of 1,520 banks were in this class.)
- (c) Every 3rd bank located in a center of population of more than 50,000. (A total of 981 banks were in this class.)

The hypothesis underlying this sampling procedure was that the relative frequency with which commercial banks engaged in field warehouse receipt financing steadily increased with the size of the city in which the bank was located, and that sampling errors would be reduced by making the sample consist of a larger fraction of the large-center than of the small-center institutions. This hypothesis, confirmed by the results of the survey, was based on independent evidence that the market for field warehouse receipt financing was greater for banks in large than in small cities, and that

the specialized knowledge necessary to apply this technique of financing was more likely to be present in banks located in larger centers.

3. A serially numbered schedule was sent to each of the 800 banks selected, requesting answers to the following three questions:

(a) Do you at the present time make loans to business concerns secured by warehouse receipts issued by field warehousing companies? "Yes" or "No"_____

(b) If your answer to question (a) is "Yes," state the number of business concerns that you are now financing in this way_____.

(c) If your answer to question (a) is "Yes," state the approximate total amount of your outstanding advances against field warehouse receipts. \$_____ as of _____ (a recent date)

4. Some 385 banks, or nearly 50 percent of these circularized, returned complete and usable schedules. This group was regarded as a satisfactory sample, although it was smaller than was desired. As the schedules were returned, deposit class, loan-and-discount class, city-size class and region class were noted on each schedule, since the schedule number enabled the name and address of the bank to be identified. Data contained in the schedules were then hand tabulated, and summarized in the tables presented in Chapter 4.

A question may be raised as to the validity of using only those schedules that were completed and returned as representative of the field warehouse receipt financing experience of all commercial banks. It might be argued that those banks engaging in this phase of commercial banking would tend to complete and return schedules, while those that did not engage in such financing would fail to return them. This argument is believed not to be valid. In the first place, a large majority of the returns emanated from banks that did *not* engage in field warehouse receipt financing. More important, experience in sampling commercial banks in other connections clearly indicates that the fact of engaging or not engaging in particular types of operations does not significantly influence responses to questionnaires. Commercial bankers are called upon to make many reports to public agencies on a variety of subjects. Bankers understand the necessity for accuracy in reporting. It is believed that the results of the survey can be accepted as typical of the experience of American commercial banks with field warehouse receipt loans at the middle of 1941.

Of the 385 banks that responded with a usable schedule, 291 or 76 percent reported that they had no loans against field warehouse receipts, and 94 banks or 24 percent did have such loans. The banks doing the business were extending credit to 522 business concerns, or between five and six concerns per bank on the average. Collectively, these banks had \$20.9 million of such loans outstanding, with an average loan balance per customer of \$39,809. They accounted for between 7 and 8 percent of the total number and amount of field warehousing loans estimated, by independent means, to be held by American commercial banks. While the

385 banks in the sample comprised only 2.9 percent of the 13,500 insured commercial banks in the United States, they held \$1.6 billion or nearly 10 percent of the \$17 billion of "total loans and discounts" held by all American insured commercial banks. Consequently, the sample is believed to be fairly representative of commercial banks as a whole.

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housing companies also accept such receipts as credit facilitating devices.

Lending against field warehouse receipts poses unique problems of credit appraisal for the lending agency. The authors discuss the credit standards and practices developed in extending such credit.

89 pp. 12 Tables 3 Charts

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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.

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