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Volume Title: Urban Mortgage Lending: Comparative Markets and Experience

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Volume Publisher: UMI

Volume ISBN: 0-870-14144-9

Volume URL: <http://www.nber.org/books/mort56-1>

Publication Date: 1956

Chapter Title: APPENDIX A NATIONAL BUREAU SAMPLE OF URBAN MORTGAGES

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Chapter URL: <http://www.nber.org/chapters/c2852>

Chapter pages in book: (p. 123 - 155)

## APPENDIXES



## APPENDIX A

### NATIONAL BUREAU SAMPLE OF URBAN MORTGAGES

At the time the National Bureau's Urban Real Estate Project was being planned information on nonfarm mortgage investment was limited, for all practical purposes, to aggregative data, and little was known about the characteristics of individual mortgages.<sup>1</sup> Some of the major private lenders had made studies of their nonfarm mortgage portfolios, but only a few of these provided data on individual assets. Among the public agencies the Federal Housing Administration had given considerable attention to lending experience with individual mortgages, but its data were limited to insured loans. Thus information on the characteristics of current mortgage loans, as well as on the experience with paid-out loans, was limited to a few descriptions of the case study type,<sup>2</sup> whose analytical usefulness from the standpoint of developing a general account of the mortgage market was seriously restricted by their limited representativeness.

Accordingly it was decided to attempt a mortgage survey on a national basis with the hope that it would fill the principal gaps, at least in our information on mortgage loan characteristics. The primary objectives of the survey were a more detailed description of mortgage markets than was then available, and a description of completed loan transactions which would reveal relationships between loan characteristics and the outcome of particular transactions.

<sup>1</sup> Since the conclusion of the National Bureau's survey, however, the Bureau of the Census has completed and published its Survey of Residential Financing.

<sup>2</sup> For example, see the following:

American Bankers Association, *Owned Real Estate and Mortgage Amortization*.  
Roy J. Burroughs, *Study of Urban Real Estate Mortgage Delinquency* (unpublished Ph.D. thesis, Michigan State College, 1933).

Federal Housing Administration, *Technique for a Mortgage Experience Study* (November 1, 1937).

Richard W. Hill, Jr., *Lending Experience Studies as an Aid in Determining Credit Policy* (American Institute of Banking, 1940).

Mortimer Kaplan, *Foreclosure Experience with Insured Mortgages: A Report of the First Five Years of Operation of the Mutual Mortgage Insurance Program* (Federal Housing Administration, unpublished ms., 1941), and "A Method of Analyzing the Elements of Foreclosure Risk," *Journal of the American Statistical Association*, Vol. 37, No. 218 (June 1942), pp. 247-55.

Edgar A. Lodge, *A Mortgage Analysis: A Twenty-eight-Year Record of the Mortgages of Home Title Insurance Company, 1906-1934* (Home Title Guaranty Company, New York, 1935).

David Thomas Rowlands, *Two Decades of Building and Loan Associations in Pennsylvania* (unpublished Ph.D. thesis, University of Pennsylvania, 1940).

The problems of survey design would have been simplified if the survey had had but a single purpose, though such investigations are rare exceptions in economic studies. As it was, the present survey was addressed to two major complexes of questions: (1) What are the characteristics of the nonfarm mortgage loans currently held by major institutional lenders? (2) What has been the lenders' experience with such mortgages made since 1920? The first problem calls for cross-section analysis, whereas the second involves changes over time; the first could be approached on the basis of current materials, whereas the second required evidence which might have become unavailable as a particular lending institution went out of business, or for other reasons.

A spot check on a number of filing systems showed that access to paid-out loan dockets would be considerably more difficult and time-consuming than access to the files of current loans, and also that the amount and comparability of data diminish as one goes from present to past records. In particular it was found that although the large life insurance companies and the very large commercial banks were usually able to furnish experience data in addition to information on current loans, small and middle-sized commercial banks and savings and loan associations were much less able to do so.

Since the survey had to rely on voluntary cooperation, estimated dollar expense as well as the psychological cost of difficult-to-furnish answers had to be considered. Thus, three criteria offered themselves for the selection of an optimum design: a survey design best suited to the reconstruction of (i) experience data, (ii) current loan characteristics, or (iii) a combination of the two. The last possibility, though intuitively appealing, appeared on closer inspection the least desirable; it would have led to sacrificing good information on current loans for the sake of only a slight improvement in the evidence on past loan performance. Therefore, the immediate problem was one of choosing between alternatives (i) and (ii).

For life insurance companies the choice was relatively easy. In view of the heavy concentration of lending activity among the large institutions, and the comparative stability of this distribution since 1920, the large life insurance companies were a promising source of information on both paid-out and current loans. Commercial banks and savings and loan associations, on the other hand, presented a far more difficult problem. They are much more numerous and more diversified geographically than insurance companies, and their size distribution is much less concentrated. Furthermore, they

have been subject to marked changes since 1920 resulting in material shifts in their size distribution as mortgage holders; and they experienced a serious mortality wave in the early thirties. These two circumstances have produced a highly variable population of establishments. As for mutual savings banks—mostly located in the north-eastern part of the United States—a parallel study of Massachusetts mutual savings banks by Lintner<sup>3</sup> was counted upon to provide the essential information.

Consideration of the special problems involved in obtaining data from each of the three types of lender led to the decision to base the sampling plan primarily on the requirements of a canvass of current loan characteristics, but to use the same survey for gathering historical information. This decision, together with the need for estimates pertaining to each type of institution—life insurance companies, commercial banks, and savings and loan associations—suggested an “establishment” rather than a “population” type of sample,<sup>4</sup> designed to reveal the characteristics of current nonfarm mortgage portfolios separately for the three lenders and also to shed light on their past lending experience.

#### *Specification of the Population*

Correspondingly, the populations to be sampled were tentatively defined as all nonfarm mortgages made since 1920 by life insurance companies, by commercial banks, and by savings and loan associations. Since a complete enumeration of all lenders and of each lender's loan files was impractical, the sampling plan involved two stages: the population was imagined as consisting of loan clusters—one nonfarm mortgage portfolio for each lending establishment—and the clusters, in turn, as consisting of individual mortgages—nonfarm loans outstanding on the survey date in the portfolio of a particular lender.<sup>5</sup> Clearly, while this model was adequate to describe the population of active loans, it gave only a rough approximation of the population of loans made since 1920.

In accordance with the two-stage design, the loan sample was drawn in two steps: a sample of portfolios (primary sampling units) was selected from each of the three populations, and then a sub-

<sup>3</sup> John Lintner, *Mutual Savings Banks in the Savings and Mortgage Markets* (Harvard University, 1948).

<sup>4</sup> The Survey of Residential Financing undertaken by the Bureau of the Census in 1950 is a population type of sample.

<sup>5</sup> Branch bank systems, such as the Bank of America, were considered as forming one cluster.

sample of mortgages (sampling elements) was drawn from each of the primary sampling units. The unit of inquiry, or sampling element, was an urban mortgage loan. To define such a loan for the purposes of the survey meant to find a concept which would be meaningful in terms of both analytical and operational requirements. Thus, the definition had to consider how to relate the concept of a mortgage to the idea of such a financial transaction as held by lender, borrower, or lawyer. As a result of exploring the record-keeping systems used by institutional lenders through spot check and questionnaire, and because the primary goal of the study was the analysis of lender rather than borrower experience, the sampling element was identified as one loan, or a series of loans, made by a given lender upon the security of a particular nonfarm property and covering one complete mortgage cycle. In other words it was defined as a financial transaction that began with the making of a loan, lasted through subsequent modifications, recastings, and extensions, and terminated, if not still active at the survey date, either when the loan was repaid or when the underlying property acquired through foreclosure or voluntary transfer was sold.<sup>6</sup> A schedule was drafted so that one card could be completed by the respondent for each sampled mortgage transaction as just defined.<sup>7</sup>

#### *Selection of Primary Sampling Units*

The choice of a selection principle was based on the following considerations: nonsampling as well as sampling errors should be kept reasonably small, and administrative requirements should be given high priority. Both considerations suggested the selection of primary sampling units for the large and highly variable populations of commercial banks and savings and loan associations with probability of selection proportionate to size. It was expected that of the nonsampling errors the most serious would be nonresponse—an expectation that, unfortunately, was confirmed by experience—and a selection of respondents on the basis of size was expected to

<sup>6</sup> That the matter of definition is far from trivial can be seen if a hypothetical example is viewed under alternative definitions. A mortgage transaction may be defined in strictly contractual terms, in which case a particular transaction is terminated as soon as the original loan term expires; on the other hand, a mortgage transaction may be defined as continuing through successive recastings of the loan. Thus, a loan which was written for one year, renewed for another year nineteen times, and then foreclosed would produce a foreclosure rate of 0.05 under the first definition, and of 1.00 under the second.

<sup>7</sup> Appendix B shows the preliminary questionnaires sent to sampled institutions in advance of the survey, and the data transcription card and instructions.

minimize that risk. Also, administrative considerations made it appear advantageous to avail ourselves fully of the cooperation of the large lending institutions, since they held a considerable proportion of the entire outstanding nonfarm mortgage debt. Finally, a sample based on selection with probability proportionate to size suggested itself in a two-stage sample, such as the present one, for purely statistical reasons, as likely to yield more precise estimates than a sample based on alternative principles of selection.

The next problem, therefore, was to find a measure of size which could be statistically efficient and on which sufficient and valid information could be obtained for all lending institutions in the populations to be sampled. Of the two most obvious choices—number of loans in, or dollar amount of, a lender's nonfarm mortgage portfolio—only the latter was available. Since composition of portfolio as well as average loan balance varied from institution to institution, the choice of a measure of size was not an indifferent one, and perhaps for some of the estimates a measure other than the amount of a lender's portfolio would have resulted in smaller sampling variances. On the other hand, since no single allocation principle and no single measure of size can assure minimum variances for each and every estimate in a multivariable, multipurpose survey, the importance of any particular measure or criterion should not be exaggerated.<sup>8</sup>

After a complete listing and the necessary supporting information had been obtained for the three populations, the samples of primary units were drawn as follows.<sup>9</sup> For life insurance companies the extremely high concentration of outstanding balances among a relatively small number of large companies suggested the use of a simple cut-off procedure: the thirty largest institutions (by size of nonfarm mortgage portfolio), representing 85 percent of the nonfarm mortgage debt held by life insurance companies at the end of 1944, were selected.

<sup>8</sup> For example, no single and simple measure will properly weigh an institution's importance as a lender in both the past and the present.

<sup>9</sup> Data for insurance companies as of December 31, 1944 were taken from *The Spectator Insurance Year Book, 1945*. Data on commercial banks as of June 30, 1945 were secured for state member banks from the Board of Governors of the Federal Reserve System, for insured state nonmember banks from the Federal Deposit Insurance Corporation, and for national banks from the Comptroller of the Currency. Information on savings and loan associations as of December 31, 1945 was obtained from the Home Loan Bank Board for associations which were members of the Federal Home Loan Bank System. For the associations, data on total assets were used to measure size.



For commercial banks the picture was vastly more complex. There were over 13,000 commercial banks in 1945 as compared with less than 400 life insurance companies; the banks differed widely in size and other characteristics, and they were much less heavily concentrated than insurance companies with respect to nonfarm mortgage holdings. A similar situation prevailed with savings and loan associations. Therefore a simple cut-off seemed impractical and inefficient, and a sample of primary units (individual institutions) to be selected with probability proportionate to their 1945 nonfarm mortgage portfolio seemed appropriate. Administrative considerations pointed toward a sample of 500 commercial banks as an upper limit.<sup>10</sup> As soon as a complete listing was obtained, a sampling interval ( $S$ ) was determined by dividing the combined amount of the nonfarm mortgage portfolios of all commercial banks in 1945 ( $\Sigma P_i$ ) by the number of primary sampling units to be selected ( $m$ ). All institutions ( $m_i$ ) whose portfolios exceeded the sampling interval—that is, institutions for which

$$P_i > \frac{\Sigma P_i}{500}$$

were selected to form the first stratum.

Next, the combined amount of the portfolios of the remaining institutions was divided by the number of remaining primary sampling units yet to be selected ( $m - m_i$ ) in order to determine a new sampling interval ( $S'$ ); all institutions for which  $P_i > S'$  were selected and added to the first stratum. The procedure was repeated until none of the remaining institutions' measure of size exceeded the corresponding sampling interval. In the present sample, only two steps were needed to reach that point.

The remaining part of the population, from which a sample of primary sampling units with varying probabilities—all less than one—was to be drawn, was first stratified geographically by state of location of head office and ranked within the forty-eight geographic strata by asset size.<sup>11</sup>

For these lists of commercial banks, measure of size (that is, 1945 nonfarm mortgage portfolio) was cumulated within each of the forty-eight strata; a different random start—a random number smaller than the last sampling interval—was then chosen for each

<sup>10</sup> The final sample consisted of 496 banks, since 4 were later found to have been misclassified as commercial banks.

<sup>11</sup> In fact this was an additional stratification—by size of institution—to safeguard representativeness by type of bank as reflected by total assets.

of the forty-eight lists, to which the sampling interval was added in succession until the sum of the ranked portfolios in a particular stratum was reached. A list of the numbers obtained by successive addition was prepared for each of the forty-eight states and compared with the list of cumulated portfolios. As soon as the cumulated portfolios reached an entry on the list of numbers, the corresponding institution was selected.

With savings and loan associations the procedure was similar. For lack of information on size of mortgage loan portfolio, total assets were used as the measure of size. Three steps were required to complete the selection of the first stratum. The arrangement of the remaining primary sampling units was by FHLB district and type of association (that is, federal, insured state-chartered, and non-insured state-chartered); and within type, alphabetically by state and city.

#### *Selection of Subsampling Elements*

The main considerations in drawing subsamples from the selected primary sampling units were, again, administrative feasibility and avoidance of nonsampling as well as sampling errors. It was important to keep the processing simple and to a minimum, particularly in the case of the very large lenders. Since the purpose of the sample was a reconstruction of the universe of mortgages and not of the population of lenders (that is, portfolios), the subsampling plan that suggested itself because of its relative efficiency was a self-weighting design. Therefore, a subsampling procedure was used in which the product of the probability of selecting a primary sampling unit and the (conditional) probability of obtaining a mortgage from a selected primary sampling unit would be constant within a few broad layers of the population.<sup>12</sup> After obtaining subsampling intervals for each of the selected primary sampling units (portfolios), a random start was assigned to each selected institution and the sub-

<sup>12</sup> Thus, using a systematic random model for the subsampling of the selected primary sampling units (i.e. assuming equal probability of selection for any mortgage regardless of size or other characteristics), the design called for subsampling intervals that would satisfy the simple equality

$$\frac{n_i P_i}{N_i S} = t$$

where  $n_i$  refers to number of nonfarm mortgages in the subsample from the  $i^{\text{th}}$  portfolio and  $N_i$  to the size of the  $i^{\text{th}}$  portfolio in terms of number of nonfarm mortgages, and where  $t$  is the over-all sampling rate for the particular population layer (e.g.  $t$  equaled 0.01 for first stratum commercial banks and 0.005 for all other banks);  $P_i$  and  $S$  have the same meaning as before.

sample of mortgages was selected by drawing the mortgage corresponding to a random start, to the random start plus once, plus twice, . . . plus  $k$  times the subsampling interval until the entire file was exhausted.<sup>13</sup> Depending on the particular filing system, the subsamples were either systematic random or unrestricted random samples.<sup>14</sup>

In drawing the subsamples several pitfalls had to be avoided; for instance, in the spot checks preceding the survey it was found that in some filing systems more than one loan card had been used for a loan. Though that presented no problem where the selection of subsamples was by loan number, it proved to be a complication where cards had to be hand counted to arrive at the sample cases. Since the number of cards per loan was often inversely associated with the quality of a loan, disregard of the possible effect of multiple cards on the selection of the subsample would have introduced a not negligible systematic bias.<sup>15</sup> Therefore, actual cases (that is, loans), instead of cards, had to be counted. A similar problem arose in connection with the occasional practice of assigning a new case number and preparing a new docket for a recast loan. Thus two or more "cases" in the file may have referred to one and the same loan cycle; that is, to the same mortgage as defined for purposes of our study.

Therefore, in drawing the subsamples, loans which turned out to be successor loans were rejected without replacement.<sup>16</sup> On the other hand, where a loan was selected which was later recast, and for which a new loan record was set up at that time, it was necessary to trace the particular transaction forward, often through several loan "cases." Where loan chains occurred frequently, as for some savings and loan associations, it was important to see that the entire

<sup>13</sup> See sampling instructions in Appendix B for greater detail.

<sup>14</sup> Samples were systematic random in the many instances in which the loans were numbered in sequence, usually by date of origination, or unrestricted random where the dockets were filed in alphabetical order and the sampling intervals had to be counted off. In a few instances both selection principles were combined, the first being used for the active and the second for the inactive file. In general, the first procedure was chosen wherever possible because it provided an easier means of checking the selection process and because it assured a better representation in terms of age of loan and therefore in terms of the many other variables which had been changing systematically with time, such as interest rates.

<sup>15</sup> For example, there were more cards in the file for frequently delinquent or modified loans than for good loans.

<sup>16</sup> Assuming randomness of the distribution over the entire file for loan chains involving more than one docket or card, this method produces no bias.

subsample was assembled before engaging in forward tracing of the cases; the opposite method—immediate tracing of successor loans currently with the selection of the “first” loans and their removal from the file—would have introduced a systematic bias, since it would have resulted in a cumulative shortening of the subsampling interval as more and more successor loans had to be removed from the file.

### *The Biases of the Sample*

Ideally, the results from a sample should be such that any discrepancy between the sample estimates and the true but unknown population values is due to the vagaries of sampling fluctuations only. In actual practice, however, there is hardly ever a sample that is entirely free from bias, despite the amount of care expended.

The following are four major types of bias which may have invaded the present sample.

#### I. BIAS RESULTING FROM THE WAY IN WHICH PRIMARY SAMPLING UNITS WERE SELECTED

The actually sampled universe of institutional lenders differed from the ideal one, as defined for the purposes of the study, because:

(a) Some institutions operating in the urban real estate market after 1920, especially commercial banks and savings and loan associations, became extinct before 1945, the benchmark year.

(b) The estimates for both commercial banks and savings and loan associations were affected by the fact that some institutions, although still in existence, had no urban real estate loans in their portfolios in 1945.

(c) Some institutions formed mergers after 1920 but before 1945, and since the probability weights are derived from the portfolios of the merged institutions, which were probably heavier than those of their earlier components, a bias is introduced in favor of selecting merged institutions. This bias, which primarily affects savings and loan associations, is disturbing to the extent that the mortgage experience of merged institutions might have differed from that of unmerged ones.

#### II. BIAS RESULTING FROM THE METHOD OF SELECTING INDIVIDUAL MORTGAGES

(a) It was not always possible to trace the history of a transaction through a complete mortgage cycle. Where the forward tracing of

a loan through its successor loans was incomplete, a downward bias resulted in the estimated average length of loan and in the related foreclosure rates. Where backward tracing was unsuccessful—that is, where a selected loan was not recognized as a successor loan, hence not rejected—a downward bias in the estimate of average loan length may have occurred.

By and large, these biases were negligible for large commercial banks and life insurance companies but they may have been substantial in the sample from small commercial banks and from savings and loan associations. Although great care was taken to advise the respondent on handling the tracing problem, instances were found where forward tracing was physically impossible.

(b) Subsampling intervals were not always counted off properly. Since the respondents furnished an estimate of the number of loans made since 1920 it was possible to check for the presence of systematic over- or undercounting. Most respondents used numerical files, so that subsampling was based on predetermined lists of loan numbers, which eliminated the possibility of error in the counting of sampling elements.

(c) The suspicion was voiced that a lender might suppress part of his unfavorable lending experience by substituting a successful for a foreclosed loan. Little could be done to check on this kind of bias; but with the exception of the sample from the small commercial banks there is no reason to believe that it has crept into the selection process. Foreclosure rates for small banks appear to be surprisingly low, but it was impossible to ascertain whether this was so because surviving institutions perhaps had better than average experience, or because commercial banks as a group had a more favorable experience than, say, insurance companies, or because there was underreporting of foreclosures by small and middle-sized commercial banks.

### III. BIAS RESULTING FROM ERRORS IN ANSWERS TO QUESTIONS ON THE NATIONAL BUREAU'S LOAN CARD

Errors in the report of a particular transaction should be expected on two levels: those that crept into the original mortgage document, and those that occurred in filling out the National Bureau's loan card. Here the limited validity of appraised value figures, loan-to-value ratios, and similar quantities should be kept in mind. Although no corrections can be offered to the user of the data, he can readily make assumptions necessary to gauge the direction of the bias. It

was apparent from the first pretests that the accounting data required for completing the information on the financial outcome of the lending operation might not always be readily available to the respondent or strictly comparable from company to company.<sup>17</sup> In an effort to avoid bias on that account, respondents were advised on how to build up the final loss or profit figures step by step in a way best adapted to their accounting practices.<sup>18</sup> To minimize errors due to misunderstanding a question or to clerical mistakes, all cards were checked for internal consistency.

#### IV. BIAS DUE TO NONRESPONSE

The most annoying bias, and by far the most troublesome in the outcome of the survey, is that resulting from nonresponse to the National Bureau's inquiry. Such bias was expected on four levels, from:

- (a) noncooperation in the survey by institutions selected in the sample of primary sampling units,
- (b) failure to supply information on inactive loans,
- (c) exclusion of a particular loan (sampling element) drawn in the subsample of loans from a selected institution, and
- (d) failure to answer a particular question on a loan card returned by the respondent.

With respect to (c), the difficulty of determining how carefully respondents followed the subsampling instructions has already been mentioned. For several large lenders spot checks on the basis of loan numbers revealed that sampling instructions were closely followed; however, for small lenders—especially for commercial banks and some savings and loan associations—there was indirect indication of an occasional substitution.

Nonresponse of type (d) occurred infrequently, generally among the smaller institutions. Approximately 3 percent of the current-loan cards returned by all commercial banks and about 4 percent of the returns from banks sampling both current and paid-out loans were affected by item nonresponse. Among the larger institutions, inadequate reporting was present in slightly over 1 percent of the returns

<sup>17</sup> For example, foreclosure costs may not be allocated to an individual asset in the same way by a large institution with its own legal department as by a small lender using the services of a law firm; recoveries from deficiency judgments may be credited to a profit and loss account or they may be deducted from the loan balance; the cost of recovery judgments may be frequently but not always excluded from "proceeds from deficiency judgments"; and so on.

<sup>18</sup> See the loan card and transcription instructions in Appendix B.

from the large (first stratum) banks and only in a very small number of loans from life insurance companies. Thus, bias resulting from item nonresponse may have been negligible for all but the older loans made by small lenders.

The most serious form of nonresponse bias occurred in connection with (a) and stemmed from the reluctance or inability of a respondent to participate in the survey. Among the thirty sampled life insurance companies, which held about 85 percent of the outstanding nonfarm mortgage debt, six failed to cooperate (Table A-1). The resulting nonresponse accounted for about 25 percent of the sample in terms of nonfarm mortgage balances outstanding, and for about 15 percent in terms of expected sample take in number of loans. One of the six nonrespondents was among the largest lenders; the other five represented only about 5 percent of the sample.

Whereas the survey of life insurance companies resembled an interview survey, since contacts were established by personal visit, the survey of commercial banks and savings and loan associations relied almost entirely on contacts by mail. Consequently the response by these two lenders was small, and remained so despite the fact that considerable effort was expended by the National Bureau, with the support of trade organizations and others, to effect better cooperation (Tables A-2 and A-8).<sup>19</sup>

A tabulation of commercial bank returns according to the date the loan cards were received would seem to indicate that responsiveness to the survey varied with size of institution. Large banks answered quickly; the very small banks, rather slowly (Table A-3).<sup>20</sup> In terms of number of respondents the ratio of follow-up to original response, which might be suggestive of the degree of initial reluctance on the part of respondents, was higher for the smaller (third and fourth stratum) banks than for the larger ones, and in that sense follow-up was more successful with the smaller respondents (Table

<sup>19</sup> For example, commercial banks that had not responded to the National Bureau's inquiry were approached a second time by letter. The remaining nonresponse was then divided into two groups by size of bank. The large member banks and a 25 percent subsample of all small member banks (with nonfarm mortgage portfolios of less than \$2 million) were approached by their respective Federal Reserve banks. Nonmember banks were grouped similarly and contacted by the National Bureau.

<sup>20</sup> Although each commercial bank was selected with its own probability (proportionate to the size of its nonfarm mortgage portfolio), the sampled banks were later grouped into four strata in order to present the results for more nearly homogeneous subgroups, since the high rate of nonresponse made it impossible to prepare probability estimates proper.

A-4).<sup>21</sup> Even after follow-up efforts were exhausted, there remained a final nonresponse which increased sharply as size of lender decreased: in terms of nonfarm mortgage holdings, from 20 percent for the large (first stratum) banks to 70 percent for the smallest (fourth stratum) banks. Concerning the type of bank, response by nonmember banks of all sizes was generally poorer than response by national and state member banks (Tables A-4 and A-5).

In view of the heavy remaining nonresponse it seemed inappropriate to prepare probability estimates. However, certain adjustments of the data on current loans did seem advisable to assist the reader in combining the estimates for the various strata of commercial banks. Adjusted totals were derived as ratio estimates in terms of the aggregate nonfarm mortgage portfolios of the various population strata; appropriate inflators were applied to the combined original and follow-up responses to arrive at frequency distributions of outstanding loans.<sup>22</sup>

With savings and loan associations the survey experience was similar to that with commercial banks (Tables A-6 through A-8). Here, too, the nonresponse was unusually heavy: 60 percent in terms of number of associations, and 50 percent in terms of measure of size (total assets).

In the historical part of the inquiry, coverage for life insurance companies was the same as for current loans, and the results for the 24 companies responding closely approximated a one percent sample of loans made during 1920-46. Nonresponse of type (b) was heavy for the other lenders. Only 116 commercial banks (68 percent of all those participating in the survey) and 92 savings and loan associations (46 percent of those participating) were able to report on inactive as well as active loans. With the historical data no attempt was made to adjust for institutional nonresponse or to estimate totals (as was done with current loans of commercial banks); instead, summaries of the composition of the historical part of the sample are presented in Tables A-9 through A-14.

<sup>21</sup> Nearly 50 percent of the recontacted banks in the fourth stratum responded to the follow-up request.

<sup>22</sup> For the fourth stratum, where the largest inflation factors were applied, a comparison was made between data obtained from banks in the original response group and data obtained from banks in the follow-up group with respect to two variables—original loan size and size of outstanding balance. No significant difference was found, which probably reflects the facts, shown elsewhere, that small commercial banks had relatively few loans on income-producing properties and that mortgages on single family homes were more or less uniform with respect to many of their characteristics.



The details of the response composition and its relation to the original population from which the sample was drawn which have been presented in Tables A-1 through A-8 reveal differences in the response pattern that should be useful both for the interpretation of the sample results and for the planning of other canvasses similar to the National Bureau's mortgage survey. In summary, it should be admitted that the very substantial amount of nonresponse—substantial in a sampling sense—has introduced a bias of an unknown though possibly serious nature, affecting especially the information pertaining to the small institutions, both commercial banks and savings and loan associations. On the other hand, it would appear that other sources of bias did not contribute a large amount of error and that the quality of the information furnished was generally satisfactory and reliable. Hence, it seems entirely feasible to produce reasonably good and complete documentation on mortgage characteristics from an establishment sample (that is, a sample of lending institutions), provided the reluctance to answer such an inquiry can be overcome. Considering both the remarkable effort made by the many institutions that responded to the survey at the outset, and the very substantial proportion of lenders, varied as to type and size, that answered follow-up requests, there is every indication that the survey method is by no means impractical in obtaining the kind of data essential for the improvement of our knowledge of mortgage markets and lending experience.

TABLE A-1  
Composition of NBER Sample of Life Insurance Companies  
by Size of Nonfarm Mortgage Loan Portfolio  
(Dollar figures in millions)

NONFARM MORTGAGE LOAN PORTFOLIO	ALL COMPANIES			COMPANIES IN NBER SAMPLE			SAMPLE RESPONSE				
	No.	Amt. Held		No.	Amt. Held		Cover- age <sup>a</sup>	Cover- age <sup>a</sup>	Response Ratio <sup>b</sup>		Sample Takes
									No.	Amt.	
Less than \$100,000	52	\$	1	..	..	..	..	..	..	..	..
\$100,000 - 499,999	49		11	..	..	..	..	..	..	..	..
500,000 - 0.9 million	28		15	..	..	..	..	..	..	..	..
1 - 9.9 million	104		331	..	..	..	..	..	..	..	..
10 - 99.9 million	48	\$	1,367	15	\$	940	69%	48%	73%	70%	94%
100 million and over	17		4,151	15		3,975	96	73	76	77	70
Total	298	\$5,876		30	\$4,915		84%	63%	80%	75%	73%

Data on nonfarm mortgage holdings of life insurance companies as of December 31, 1944 were compiled from *The Spectator Insurance Yearbook, 1945*. Of the 305 legal reserve companies then existing, 7 are excluded for which data were not available.

<sup>a</sup> Nonfarm mortgage holdings of sampled companies as a percentage of nonfarm mortgage holdings of all companies.

<sup>b</sup> Number and nonfarm mortgage holdings of responding

companies as a percentage of the number and nonfarm mortgage holdings of sampled companies.

<sup>c</sup> Number of loan schedules returned by responding companies as a percentage of the number of returns expected from them. A total of 8,931 loans made during 1920-46 were reported on, of which 3,390 were still outstanding at the beginning of 1947.

TABLE A-2  
Composition of NBER Sample of Commercial Banks by Size of  
Nonfarm Mortgage Loan Portfolio and Region  
(dollar figures in millions)

CENSUS DIVISION <sup>a</sup>	UNDER \$2 MILLION		2 - 3.9 MILLION		4 - 7.8 MILLION		\$7.9 MILLION AND OVER		TOTAL	
	No. of Banks	Amt. Held	No. of Banks	Amt. Held	No. of Banks	Amt. Held	No. of Banks	Amt. Held	No. of Banks	Amt. Held
New England	456	\$ 161.2	18	\$ 47.8	7	\$ 36.5	2	\$ 37.7	483	\$ 283.3
Middle Atlantic	1,967	605.4	45	124.5	22	122.2	6	77.7	2,040	929.7
East North Central	2,859	476.2	43	110.5	12	63.3	10	199.1	2,924	849.0
West North Central	2,885	192.1	11	28.8	7	37.1	3	43.0	2,906	301.0
South Atlantic	1,485	238.8	14	40.4	6	34.4	1	7.9	1,506	321.4
East South Central	1,052	73.5	4	10.2	1	5.7	..	..	1,057	89.4
West South Central	1,520	81.2	1	2.4	2	10.0	..	..	1,523	93.7
Mountain	448	45.7	9	24.3	4	23.2	..	..	461	93.3
Pacific	348	65.0	11	32.0	8	42.2	12	814.3	379	953.5
United States	13,020	\$1,939.1	156	\$420.9	69	\$374.6	34	\$1,179.6	13,279	\$3,914.2
					<i>All Commercial Banks</i>					
					<i>NBER Sample</i>					
New England	26	\$ 23.6	8	\$ 22.0	7	\$ 36.5	2	\$ 37.7	43	\$ 119.8
Middle Atlantic	108	86.6	16	47.1	19	107.2	6	77.7	149	318.6
East North Central	78	50.8	22	60.0	11	57.8	10	199.1	121	367.7
West North Central	34	16.5	3	8.7	6	32.6	3	43.0	46	100.8
South Atlantic	42	28.4	8	23.1	4	25.3	1	7.9	55	84.7
East South Central	12	7.0	2	5.8	1	5.7	..	..	15	18.5
West South Central	14	9.0	..	..	2	10.0	..	..	16	19.1
Mountain	9	3.4	3	8.3	4	23.2	..	..	16	34.9
Pacific	9	6.4	6	17.8	8	42.2	12	814.3	35	880.7
United States	332	\$231.8	68	\$192.8	62	\$340.6	34	\$1,179.6	496	\$1,944.8

(continued on next page)

## APPENDIX A

TABLE A-2 (continued)  
(dollar figures in millions)

CENSUS DIVISION <sup>a</sup>	UNDER \$2 MILLION		2 - 3.9 MILLION		4 - 7.8 MILLION		\$7.9 MILLION AND OVER <sup>b</sup>		TOTAL	
	No. of Banks	Amt. Held	No. of Banks	Amt. Held	No. of Banks	Amt. Held	No. of Banks	Amt. Held	No. of Banks	Amt. Held
New England	3	\$ 3.3	3	\$ 8.8	2	\$ 10.2	2	\$ 37.7	10	\$ 60.0
Middle Atlantic	31	28.5	8	23.7	14	80.4	5	57.0	58	189.6
East North Central	15	12.7	6	18.0	5	26.5	8	163.3	34	220.5
West North Central	10	6.3	2	6.3	5	26.7	2	26.2	19	65.5
South Atlantic	10	10.2	8	23.1	2	11.2	1	7.9	21	52.4
East South Central	2	2.2	1	2.4	..	..	..	..	3	4.6
West South Central	3	4.1	..	..	2	10.0	..	..	5	14.1
Mountain	..	..	..	..	3	17.7	..	..	3	17.7
Pacific	3	2.8	5	15.3	2	10.7	7	662.5	17	691.3
United States	77	\$70.1	33	\$97.6	35	\$193.4	25	\$954.6	170	\$1,315.7

Sample Responses<sup>c</sup>

Compiled from data supplied by the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation. Amounts will not always add to totals because of rounding. Classification by size of nonfarm mortgage loan portfolio is as of June 30, 1945.

<sup>a</sup> Refers to location of bank.

<sup>b</sup> The exact range is \$7,860,000 and over.

<sup>c</sup> Refers to banks reporting on loans current at the survey date (1947). Amounts refer to nonfarm mortgage holdings as of June 30, 1945.

TABLE A-3  
 Response of Commercial Banks by Date of Return and  
 Size of Nonfarm Mortgage Loan Portfolio  
 (cumulative percentage of number of responding banks)

<i>Date of Return</i>	<i>Under \$2 Million</i>	<i>2 - 3.9 Million</i>	<i>4 - 7.8 Million</i>	<i>\$7.9 Million and Over<sup>a</sup></i>	<i>Total</i>
<i>Original Response</i>					
1947—February	..	..	..	15%	3%
March	..	..	..	35	6
April	..	..	..	70	13
May	49%	44%	40%	80	52
June	83	89	76	90	84
July	85	94	88	..	88
August	91	100%	96	..	94
September	96	..	100%	..	96
October	..	..	..	..	..
November	..	..	..	..	..
December	..	..	..	..	..
1948—January	98	..	..	95	98
February	..	..	..	..	..
March	..	..	..	..	..
April	100%	..	..	100%	100%
Banks responding	47	18	25	20	110
<i>Follow-up Response</i>					
1947—September	3%	..	..	20%	3%
October	23	..	..	..	13
November	47	..	10%	40	28
December	73	73%	60	80	72
1948—January	83	80	80	..	82
February	90	87	90	100%	90
March	100%	100%	100%	..	100%
Banks responding	30	15	10	5	60
<i>Total Response</i>					
1947—February	..	..	..	12%	2%
March	..	..	..	28	4
April	..	..	..	56	8
May	30%	24%	29%	64	34
June	51	48	54	72	54
July	52	52	63	..	57
August	56	55	69	..	61
September	60	..	71	76	64
October	68	..	..	..	67
November	77	..	74	80	72
December	87	88	89	88	88
1948—January	92	91	94	92	92
February	95	94	97	96	95
March	99	100%	100%	..	99
April	100%	..	..	100%	100%
Banks responding	77	33	35	25	170

Classification by size of nonfarm mortgage loan portfolio is as of June 30, 1945.

<sup>a</sup> The exact range is \$7,860,000 and over.

TABLE A-4  
Original and Follow-up Response of Commercial Banks by Size  
of Nonfarm Mortgage Loan Portfolio and Type of Bank  
(dollar figures in millions)

NONFARM MORTGAGE LOAN PORTFOLIO AND TYPE OF BANK	ORIGINAL RESPONSE			FOLLOW-UP RESPONSE			TOTAL RESPONSE		
	No. of Banks	Amt. Held	As % of Original Response	No. of Banks	Amt. Held	As % of Original Response	No. of Banks	Amt. Held	As % of Total Sample
		\$			\$			\$	
<i>Under \$2 Million</i>	47	40.6	64%	30	29.5	73%	77	70.1	30%
National	28	24.1	43	12	11.1	46	40	35.2	35
State member	10	10.1	130	13	15.1	151	23	25.2	40
State nonmember	9	6.4	56	5	3.3	52	14	9.7	14
<i>2 - 3.9 Million</i>	18	53.1	83	15	44.5	84	33	97.6	51
National	8	24.6	113	9	25.9	105	17	50.5	65
State member	6	17.7	100	6	18.6	105	12	36.3	45
State nonmember	4	10.8	0	..	..	0	4	10.8	31
<i>4 - 7.8 Million</i>	25	140.8	40	10	52.6	37	35	193.4	57
National	11	59.8	36	4	23.1	38	15	82.9	56
State member	12	69.0	50	6	29.5	43	18	98.5	65
State nonmember	2	12.0	0	..	..	0	2	12.0	29
<i>7.9 Million &amp; Over<sup>a</sup></i>	20	888.4	25	5	66.2	7	25	954.6	81
National	10	627.4	30	3	39.3	6	13	666.7	92
State member	9	249.8	22	2	26.9	11	11	276.7	100
State nonmember	1	11.2	0	..	..	0	1	11.2	6
<i>All Portfolio Sizes</i>	110	1,122.9	55	60	192.8	17	170	1,315.7	68
National	57	735.9	49	28	99.4	13	85	835.3	79
State member	37	346.6	73	27	90.1	26	64	436.7	76
State nonmember	16	40.4	31	5	3.3	8	21	43.7	14

Data on amounts of nonfarm mortgage debt held as of June 30, 1945 were compiled from records of the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation.

<sup>a</sup> The exact range is \$7,860,000 and over.

TABLE A-5  
 Number of Loans Reported on by Responding Commercial Banks, by Region,  
 Size of Nonfarm Mortgage Portfolio, and Type of Bank

Nonfarm Mortgage Loan Portfolio and Type of Bank	New England		Middle Atlantic		East North Central		West North Central		South Atlantic		East South Central		West South Central		Mountain Pacific	Total
	Engl	Atl	Mid	Atl	East	North	West	North	South	Atl	East	South	West	South		
<i>Under \$2 Million</i>	55	723	428	267	160	48	78	1,822							63	1,822
National	24	326	158	180	60	31	817								38	817
State member	..	274	120	61	100	25	47	652							25	652
State nonmember	31	123	150	26	..	23	..	353							..	353
<i>2 - 7.8 Million</i>	80	403	207	124	237	11	56	1,380							167	1,380
National	9	147	67	72	97	..	56	614							71	614
State member	51	226	130	52	35	11	..	601							96	601
State nonmember	20	30	10	..	105	..	..	165							..	165
<i>7.9 Million &amp; Over<sup>a</sup></i>	90	115	1,989	108	24	..	..	5,369							3,043	5,369
National	41	..	587	58	24	..	..	3,109							2,399	3,109
State member	49	67	1,402	50	..	..	..	2,212							644	2,212
State nonmember	..	48	..	..	..	..	..	48							..	48
<i>All Portfolio Sizes</i>	225	1,241	2,624	499	421	59	134	8,571							3,273	8,571
National	74	473	812	310	181	..	87	4,540							2,508	4,540
State member	100	567	1,652	163	135	36	47	3,465							765	3,465
State nonmember	51	201	160	26	105	23	..	566							..	566

Loans sampled are those made during 1920-47; both loans still outstanding at the survey date and inactive loans are included. Classification by size of portfolio is as of June 30, 1945. Regional breakdown refers to location of bank.

<sup>a</sup> The exact range is \$7,860,000 and over.

TABLE A-6  
Response of Savings and Loan Associations  
by Date of Return and Size of Assets  
(cumulative percentage of responding associations)

<i>Date of Return</i>	<i>\$14 Million and Over<sup>a</sup></i>	<i>Under \$14 Million</i>	<i>Total</i>
1947—July	3%	..	1%
August	21	30%	28
September	47	52	51
October	76	74	75
November	85	86	86
December	88	89	89
1948—January	94	..	90
February	97	100%	99
March	100%	..	100%
Associations responding	34	168	202

Based on NBER survey of 500 associations, among which were included all Federal Home Loan Bank member associations whose assets were larger than the sampling interval.

<sup>a</sup> The exact range is \$14,044,328 and over.

TABLE A-7  
Number of Loans Reported on by Responding Savings and Loan Associations,  
by Size of Assets and Federal Home Loan Bank District

<i>FHLB District</i>	<i>\$14 Million and Over<sup>a</sup></i>	<i>Under \$14 Million</i>	<i>Total</i>
Boston	186	355	541
New York	164	480	644
Pittsburgh	..	186	186
Winston-Salem	86	173	259
Cincinnati	310	693	1,003
Indianapolis	204	456	660
Chicago	91	332	423
Des Moines	70	439	509
Little Rock	..	84	84
Topeka	148	351	499
San Francisco	74	807	881
Total	1,333	4,356	5,689

Loans sampled are those made during 1920-47; both loans still outstanding at the survey date and inactive loans are included. Classification by size of assets is as of December 31, 1945, from data supplied by the Federal Home Loan Bank System. Classification by district refers to location of institution.

<sup>a</sup> The exact range is \$14,044,328 and over.



TABLE A-8  
Composition of NBER Sample of Savings and Loan Associations  
by Size of Assets and Federal Home Loan Bank District  
(dollar figures in millions)

TOTAL ASSET SIZE & FHLB DISTRICT	ALL MEMBER ASSOCIATIONS <sup>a</sup>			ASSOCIATIONS IN NBER SAMPLE			SAMPLE RESPONSE <sup>c</sup>		
	No.	Total Assets	No.	Total Assets	Cover- age <sup>b</sup>	No.	Total Assets	Cover- age <sup>b</sup>	Response Ratio <sup>d</sup> No. Assets
<b>ASSET SIZE</b>									
<i>Stratum One</i>	63	\$1,542	63	\$1,542	100%	34	\$902	58%	54%
\$25 million and over	24	861	24	861	100	18	621	72	75
14 - 24.9 million <sup>e</sup>	39	681	39	681	100	16	281	41	41
<i>Stratum Two</i>	3,596	6,137	437	1,981	32	168	874	14	38
5 - 14 million	273	2,125	151	1,281	60	72	610	29	48
1 - 4.9 million	1,410	3,212	229	667	21	86	258	8	38
\$250,000 - 999,999	1,267	701	52	32	5	9	6	1	17
Less than \$250,000	646	99	5	1	1	1	f	g	20
<b>FEDERAL HOME LOAN BANK DISTRICT</b>									
Boston	220	766	47	413	54	20	252	33	43
New York	359	845	55	412	49	31	252	30	56
Pittsburgh	433	469	35	93	20	8	29	6	23
Winston-Salem	406	894	54	433	48	14	151	17	26
Cincinnati	562	1,439	96	716	50	29	256	18	30
Indianapolis	217	491	32	231	47	14	128	26	44
Chicago	458	763	50	304	40	18	175	23	36
Des Moines	236	419	25	202	48	21	165	39	84
Little Rock	269	327	24	86	26	2	8	2	8
Topeka	207	270	18	95	35	12	74	27	67
San Francisco	292	996	64	539	54	33	286	29	52
Total	3,659	\$7,679	500	\$3,523	46%	202	\$1,776	23%	40%

<sup>a</sup> Data supplied by the Federal Home Loan Bank System for all member associations as of December 31, 1945.

<sup>b</sup> Total assets of sampled associations as a percentage of total assets of all member associations.

<sup>c</sup> Refers to associations reporting on loans current at the survey date (1947). Total assets are given as of December 31, 1945.

<sup>d</sup> Number and total assets of responding associations as percentages of the number and total assets of sampled associations.

<sup>e</sup> The exact lower limit is \$14,044,328.

<sup>f</sup> Less than \$1 million.

<sup>g</sup> Less than 0.5 percent.

TABLE A-9  
 Number and Original Amount of Sampled Nonfarm Home Mortgage  
 Loans, 1920-47, by Year Loan Made  
 (dollar figures in thousands)

YEAR MADE	COMMERCIAL BANKS BY NONFARM MORTGAGE LOAN PORTFOLIO SIZE <sup>a</sup>												SAVINGS & LOAN ASSOCIATIONS	
	LIFE INSURANCE COMPANIES		\$7.9 Million and Overb		2-7.8 Million		\$2 Million		Total		No.		Amt.	
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
1920-24	851	\$ 3,781	479	\$1,869	70	\$ 314	165	\$ 599	714	\$2,781	551	\$1,495		
1920	73	382	62	191	7	28	24	70	93	289	103	242		
1921	119	451	55	173	3	11	21	74	79	258	83	198		
1922	170	656	103	385	12	43	26	70	141	498	106	275		
1923	209	1,001	125	535	16	56	45	159	186	750	127	394		
1924	280	1,291	134	585	32	176	49	226	215	987	132	386		
1925-29	2,061	11,069	569	2,442	185	1,114	343	1,505	1,097	5,060	859	2,614		
1925	359	1,832	138	582	26	113	87	374	251	1,068	174	538		
1926	479	2,510	116	537	40	419	60	262	216	1,218	156	448		
1927	414	2,445	118	503	42	205	73	303	233	1,010	164	505		
1928	411	2,165	114	481	42	198	67	251	223	929	189	578		
1929	398	2,117	83	340	35	179	56	316	174	835	176	545		
1930-34	809	4,447	249	876	59	461	100	412	408	1,749	386	1,094		
1930	348	1,884	80	304	21	109	34	141	135	555	157	477		
1931	301	1,792	81	257	20	287	40	179	141	723	71	195		
1932	103	512	31	118	6	29	8	33	45	180	49	167		
1933	24	105	25	88	6	10	9	40	40	139	42	91		
1934	33	154	32	109	6	26	9	19	47	153	67	164		

(continued on next page)

TABLE A-9 (continued)  
(dollar figures in thousands)

YEAR MADE	COMMERCIAL BANKS BY NONFARM MORTGAGE LOAN PORTFOLIO SIZE <sup>a</sup>												SAVINGS & LOAN ASSOCIATIONS	
	LIFE INSURANCE COMPANIES		\$7.9 Million and Over <sup>b</sup>		2-7.8 Million		Under \$2 Million		Total		No.	Amt.	No.	Amt.
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.				
1935-39	1,177	\$ 6,525	553	\$ 2,119	152	\$ 621	307	\$1,054	1,012	\$ 3,794	755	\$ 1,989		
1935	88	468	65	236	21	65	42	119	128	419	100	248		
1936	202	1,080	85	341	24	82	42	149	151	572	129	316		
1937	252	1,432	111	437	29	145	60	174	200	756	164	463		
1938	298	1,730	130	469	25	87	58	239	213	795	159	417		
1939	337	1,815	162	637	53	243	105	374	320	1,253	203	545		
1940-47	3,243	16,492	1,125	5,067	425	2,424	838	3,308	2,388	10,799	1,937	7,125		
1940	447	2,246	175	690	64	281	104	347	343	1,319	201	592		
1941	647	3,338	158	656	53	220	100	390	311	1,266	232	677		
1942	670	3,228	131	537	56	239	84	293	271	1,069	167	536		
1943	508	2,342	119	448	34	139	68	238	221	825	185	564		
1944	325	1,651	108	481	34	177	83	328	225	985	246	826		
1945	254	1,349	131	588	39	226	93	370	263	1,184	274	975		
1946	320	1,965	254	1,380	114	959	247	1,007	615	3,345	379	1,718		
1947	72	373	49	287	31	184	59	336	139	806	253 <sup>c</sup>	1,237 <sup>c</sup>		
1920-47 <sup>a</sup>	8,157	\$42,388	2,980	\$12,389	892	\$4,944	1,754	\$6,880	5,626	\$24,213	4,492	\$14,329		

Based on NBER survey of urban mortgage lending; refers to loans secured by one- to four-family homes. For number of companies reporting, see note under Table A-11. Amounts do not always add to totals because of rounding.

<sup>a</sup> Based on original sample returns without adjustment for nonresponse.

<sup>b</sup> The exact range is \$7,860,000 and over.

<sup>c</sup> Includes one loan made in 1948.

<sup>d</sup> Includes 27 loans for which year made was not available; 16 insurance company loans, 7 bank loans, and 4 association loans.

TABLE A-10  
 Number and Original Amount of Sampled Mortgage Loans on Nonfarm  
 Income-Producing Properties, 1920-47, by Period Loan Made  
 (dollar figures in thousands)

PERIOD MADE	COMMERCIAL BANKS BY NONFARM MORTGAGE LOAN PORTFOLIO SIZE <sup>a</sup>											SAVINGS & LOAN ASSOCIATIONS		
	LIFE INSURANCE COMPANIES		\$7.9 Million and Over <sup>b</sup>		2-7.8 Million		Under \$2 Million		Total		No.	Amt.	No.	Amt.
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.				
1920-24	118	\$ 5,602	59	\$2,576	16	\$ 231	11	\$ 88	86	\$ 2,896	67	\$ 298		
1925-29	239	16,760	96	1,303	38	1,512	26	450	160	3,265	86	424		
1930-34	54	2,689	43	694	14	1,773	12	176	69	2,643	25	110		
1935-39	139	8,968	58	640	37	1,878	29	248	124	2,766	26	146		
1940-47	224	15,734	155	3,676	61	5,078	88	1,144	304	9,898	51	536		
1920-47 <sup>c</sup>	774	\$49,753	412	\$8,924	166	\$10,472	166	\$2,106	744	\$21,502	255	\$1,514		

Based on NBER survey of urban mortgage lending; refers to loans secured by properties other than one- to four-family homes. For number of companies reporting, see note under Table A-11. Amounts do not always add to totals because of rounding.

<sup>a</sup> Based on original sample returns without adjustment for nonresponse.

<sup>b</sup> The exact range is \$7,860,000 and over.

<sup>c</sup> Includes one commercial bank loan for which period made was not available.

TABLE A-11  
 Number and Original Amount of Sampled Nonfarm Mortgage Loans, 1920-47,  
 by Period Loan Made and by Amortization or Insurance Provision  
*(dollar figures in thousands)*

PERIOD MADE AND TYPE OF LOAN	1- TO 4-FAMILY HOMES						ALL OTHER PROPERTY					
	Life Insurance Companies		Commercial Banks <sup>a</sup>		Savings and Loan Associations <sup>b</sup>		Life Insurance Companies		Commercial Banks <sup>a</sup>			
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
<b>1920-24</b>	851	\$ 3,781	714	\$2,781	..	..	..	\$ 5,602	86	\$2,896	..	..
Fully amortized	234	807	110	407	..	..	33	5	68	..	..	
Partially amortized	478	2,222	300	1,210	..	..	4,198	35	267	..	..	
Nonamortized	138	745	298	1,127	..	..	1,350	46	2,560	..	..	
Not available	1	7	6	37	..	..	20	..	..	..	..	
<b>1925-29</b>	2,061	11,069	1,097	5,060	1,563	\$4,830	239	16,760	160	3,265	..	..
Fully amortized	390	1,587	176	515	1,471 <sup>c</sup>	4,570 <sup>c</sup>	15	1,043	17	244	..	..
Partially amortized	1,212	6,808	412	1,938	..	..	158	10,737	69	1,268	..	..
Nonamortized	457	2,667	500	2,549	88	248	66	4,980	73	1,747	..	..
Not available	2	7	9	59	4	12	..	..	1	6	..	..
<b>1930-34</b>	809	4,447	408	1,749	411	1,204	54	2,689	69	2,643	..	..
Fully amortized	270	1,176	69	235	386 <sup>c</sup>	1,121 <sup>c</sup>	2	22	7	126	..	..
Partially amortized	407	2,347	154	617	..	..	37	1,433	27	1,192	..	..
Nonamortized	131	894	181	878	24	81	14	1,229	34	1,260	..	..
FHA	..	..	1	3	1	2	..	..	..	..	..	..
Not available	1	30	3	18	..	..	1	6	1	65	..	..

(continued on next page)

TABLE A-11 (continued)  
(dollar figures in thousands)

PERIOD MADE AND TYPE OF LOAN	1- TO 4-FAMILY HOMES						ALL OTHER PROPERTY			
	Life Insurance Companies		Commercial Banks <sup>a</sup>		Savings and Loan Associations <sup>b</sup>		Life Insurance Companies		Commercial Banks <sup>a</sup>	
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
1935-39	1,177	\$ 6,525	1,012	\$ 3,794	1,221	\$ 3,442	139	\$ 8,968	124	\$ 2,766
Fully amortized	529	3,080	250	769	1,140 <sup>c</sup>	3,129 <sup>c</sup>	31	819	44	382
Partially amortized	244	1,371	209	786	..	..	95	6,609	45	869
Nonamortized	20	141	128	391	3	10	7	218	27	1,431
FHA	383	1,927	423	1,842	60	247	5	1,072	5	21
Not available	1	6	2	6	18	57	1	250	3	63
1940-47	3,243	16,492	2,388	10,800	1,548 <sup>d</sup>	6,355 <sup>d</sup>	224	15,734	304	9,898
Fully amortized	1,028	6,103	676	2,674	1,267 <sup>c</sup>	4,755 <sup>c</sup>	112	6,049	149	2,509
Partially amortized	95	572	572	2,721	..	..	93	8,144	107	5,843
Nonamortized	12	141	136	404	3	29	6	395	31	1,358
FHA	1,984	8,906	740	3,447	45	233	7	1,095	4	97
VA	116	733	259	1,515	222	1,286	2	13	9	67
Not available	8	37	5	39	11	53	4	39	4	25
1920-47 <sup>e</sup>	8,157	\$42,388	5,626	\$24,213	4,747	\$15,843	774	\$49,753	744	\$21,502

Based on NBER survey of urban mortgage lending. Respondents reporting on inactive as well as active loans included 24 leading life insurance companies, 116 commercial banks, and 92 savings and loan associations. Amounts do not always add to totals because of rounding.

<sup>a</sup> Based on original sample returns without adjustment for nonresponse.

<sup>b</sup> Includes 81 loans on income-producing properties, 43 on farm properties, and 131 for which type of property was not

available. Loans are classified by the following periods: 1920-29, 1930-34, 1935-41, and 1942-47.

<sup>c</sup> Includes the following types of loan: direct reduction, cancel and endorse, and share accumulation plan.

<sup>d</sup> Includes one loan made in 1948.

<sup>e</sup> Includes 28 loans for which period made was not available: 16 insurance company loans, 8 bank loans, and 4 association loans.

TABLE A-12  
 Number and Original Amount of Sampled Nonfarm Home  
 Mortgage Loans Made 1920-29, by Contract Terms  
 (dollar figures in thousands)

LOAN CHARACTERISTICS	LIFE INSURANCE COMPANIES		COMMERCIAL BANKS <sup>a</sup>		SAVINGS & LOAN ASSOCIATIONS <sup>b</sup>	
	No.	Amt.	No.	Amt.	No.	Amt.
<b>CONTRACT INTEREST RATE</b>						
5.0 - 5.9%	578	\$ 3,698	61	\$ 578	43	\$ 188
6.0 - 6.9	2,253	10,811	1,452	6,405	628	2,372
7.0 - 7.9	} 77	323	284	833	548	1,525
8.0 - 8.9			14	26	119	253
9.0 and over			..	..	170	307
Not available	4	17	c	c	55	184
<b>CONTRACT LENGTH</b>						
0 - 4 years	580	3,247	1,232	5,029	54	159
5 - 9	1,486	7,767	424	2,192	249	464
10 - 14	754	3,316	127	481	1,064	3,432
15 - 19	83	458	8	45	13	47
20 and over	6	47	20	95	2	20
Share accumulation plan, demand, etc.	} 3	15	c	c	170	673
Not available			c	c	11	35
<b>LOAN-TO-VALUE RATIO</b>						
0 - 39%	242	1,170	292	781	168	220
40 - 79	2,255	12,219	1,437	6,741	851	2,877
80 and over	3	22	8	39	30	127
Not available	412	1,438	74	281	514	1,605
Total	2,912	\$14,849	1,811	\$7,842	1,563	\$4,830
<b>ORIGINAL LOAN AMOUNT</b>						
Less than \$5,000	1,825	5,877	d	d	1,297	2,881
\$5,000 - 9,999	863	5,624	d	d	241	1,502
10,000 - 19,999	201	2,420	d	d	21	251
20,000 - 49,999	17	408	d	d	3	85
50,000 - 99,999	4	270	d	d	..	..
100,000 and over	2	250	d	d	1	111

Based on NBER survey of urban mortgage lending; refers to loans secured by one- to four-family homes, except as noted below. For number of companies reporting, see Table A-11. Amounts do not always add to totals because of rounding.

<sup>a</sup> Based on original sample returns without adjustment for nonresponse.

<sup>b</sup> Includes 33 loans secured by income-producing properties, 12 by farm properties, and 108 for which type of property was not available.

<sup>c</sup> Excluded from tabulations.

<sup>d</sup> Not available.

TABLE A-13  
 Number and Original Amount of Sampled Nonfarm Mortgage Loans  
 Made and Extinguished 1920-47, by Type of Property  
 (dollar figures in thousands)

TYPE OF PROPERTY	LIFE INSURANCE COMPANIES		COMMERCIAL BANKS <sup>a</sup>	
	No.	Amt.	No.	Amt.
<i>1- to 4-Family Homes</i>	5,035	\$25,753	3,860	\$15,324
1-family	4,627	22,243	3,198	12,182
2- to 4-family	371	2,783	555	2,452
1- to 4-family with business use	37	727	107	690
<i>All Other Property</i>	481	29,066	515	12,001
Apartments	250	12,998	108	1,904
Stores	145	8,310	82	2,558
Other	86	7,758	325	7,539
Total	5,516	\$54,819	4,375	\$27,325

Based on NBER survey of urban mortgage lending. Excludes loans for which data necessary for the calculation of yields were inadequate. For number of companies reporting, see Table A-11.

<sup>a</sup> Based on original sample returns without adjustment for nonresponse.



TABLE A-14  
 Number and Original Amount of Sampled Nonfarm Mortgage Loans Made 1920-29 and  
 Extinguished by 1947, by Loan-to-Value Ratio and Contract Length  
 (dollar figures in thousands)

		COMMERCIAL BANKS BY NONFARM MORTGAGE LOAN PORTFOLIO SIZE <sup>a</sup>													
		\$7.9 Million and Over <sup>b</sup>			2 - 7.8 Million			Under \$2 Million							
		No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.		
CONTRACT TERMS		LIFE INSURANCE COMPANIES													
		No.	Amt.												
		One- to Four-Family Homes													
LOAN-TO-VALUE RATIO															
		No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.		
0 - 39%	234	\$ 1,112	183	\$ 480	22	\$ 42	80	\$ 220	285	\$ 741	80	\$ 220	285	\$ 741	
40 - 79	2,064	11,022	792	3,458	149	1,009	404	1,795	1,345	6,262	404	1,795	1,345	6,262	
80 and over	3	22	5	27	2	9	..	..	7	37	..	..	7	37	
Not available	410	1,429	20	87	31	94	21	82	72	263	21	82	72	263	
CONTRACT LENGTH															
		No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
0 - 4 years	492	2,711	832	3,367	136	658	167	485	1,135	4,509	167	485	1,135	4,509	
5 - 9	1,413	7,314	56	245	38	390	329	1,542	423	2,177	329	1,542	423	2,177	
10 - 14	724	3,127	93	353	22	62	8	35	123	449	8	35	123	449	
15 - 19	78	409	..	..	8	45	..	..	8	45	..	..	8	45	
20 and over	2	12	19	88	..	..	..	..	19	88	..	..	19	88	
Not available	2	12	..	..	..	..	1	35	1	35	1	35	1	35	
Total	2,711	\$13,585	1,000	\$4,052	204	\$1,154	505	\$2,097	1,709	\$7,303	505	\$2,097	1,709	\$7,303	

(continued on next page)

TABLE A-14 (continued)  
(dollar figures in thousands)

CONTRACT TERMS	COMMERCIAL BANKS BY NONFARM MORTGAGE LOAN PORTFOLIO SIZE <sup>a</sup>										
	LIFE INSURANCE COMPANIES		\$7.9 Million and Over <sup>b</sup>		2 - 7.8 Million		Under \$2 Million		Total		
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	
All Other Property											
LOAN-TO-VALUE RATIO											
0 - 39%	62	\$ 3,421	42	\$ 281	7	\$ 730	6	\$ 40	55	\$1,050	
40 - 79	240	15,115	96	3,423	29	658	25	444	150	4,525	
80 and over	4	154	1	15	1	8	..	..	2	23	
Not available	..	..	7	76	9	53	2	10	18	139	
CONTRACT LENGTH											
0 - 4 years	42	3,181	123	1,251	28	1,006	13	145	164	2,402	
5 - 9	188	9,947	12	319	14	262	16	232	42	813	
10 - 14	64	4,950	4	2,113	4	181	4	117	12	2,411	
15 - 19	9	260	..	..	..	..	..	..	..	..	
20 and over	1	330	7	111	..	..	..	..	7	111	
Not available	2	22	..	..	..	..	..	..	..	..	
Total	306	\$18,690	146	\$3,794	46	\$1,449	33	\$494	225	\$5,737	

Based on NBER survey of urban mortgage lending. Excludes loans for which data necessary for the calculation of yields were inadequate. Amounts do not always add to totals because of rounding.

<sup>a</sup> Based on original sample returns without adjustment for nonresponse.

<sup>b</sup> The exact range is \$7,860,000 and over.