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Findings

The primary data on which this study is based were obtained directly from life insurance companies. Schedules for reporting 1945 costs and other related information were mailed to all 369 legal reserve life insurance companies in June 1946, and in June 1947 and May 1948 somewhat simplified sets of schedules securing cost data for 1946 and 1947, respectively, were sent to all companies except those that had reported no mortgages in the returns of the previous year.[15] The coverage of the three surveys and the principal findings from analyses of these data are summarized in this section.

Coverage of the Cost Surveys

Schedules sufficiently complete to be used in most phases of the analysis were received from 43 companies in 1945, 45 in 1946, and 31 in 1947.[16] Only a small number of companies reported on these schedules, but the fact that many of them had large farm mortgage portfolios gives the survey a wide coverage. As shown in Table 1, the 43 companies reporting fully in 1945 represented 20 percent of the number and 58 percent of the admitted assets of all legal reserve life insurance companies having farm mortgage loan portfolios, as well as 61 percent of the farm mortgage holdings of all such companies. Coverage for companies with large total assets was especially good. Eight of the 10 companies with admitted assets of $1 billion and over, and a large percentage of those with total assets of $100 million and over, replied.

15 Copies of the 1945 and 1946 schedules and the instructions which accompanied the 1946 schedules are reproduced in Appendix A. The 1947 schedule has not been reproduced since it is identical with the 1946 schedule.

16 More than this number of companies returned schedules, but many stated that costs could not be determined according to our instructions. Others were eliminated because their mortgage holdings were too small to warrant accurate cost determination.

TABLE 1 – RELATIVE IMPORTANCE OF REPORTING COMPANIES AMONG ALL LIFE INSURANCE COMPANIES HAVING FARM MORTGAGE PORTFOLIOS, 1945-47 [a]

Size of Company (admitted assets in millions of dollars)	*Number of Reporting Companies*	*Relative Importance of Reporting Companies Among All Companies*			
		Number of Companies	Total Admitted Assets	Farm Mortgage Holdings [b] (1)	(2)
		1945			
Less than $1	1	6%	3%	20%	20%
1-99.9	22	13	17	15	13
100-499.9	9	47	52	75	66
500-999.9	3	75	75	75	73
1,000 and over	8	80	62	78	70
Total	43	20%	58%	68%	61%
		1946			
Less than $1	2	13%	11%	9%	
1-99.9	24	15	27	40	
100-499.9	8	42	46	79	
500-999.9	3	75	76	82	
1,000 and over	8	73	59	74	
Total	45	21%	56%	71%	
		1947			
Less than $1	0	0%	0%	0%	
1-99.9	12	7	11	8	
100-499.9	8	38	44	68	
500-999.9	3	75	76	87	
1,000 and over	8	73	65	80	
Total	31	13%	59%	68%	

[a] From *The Spectator Insurance Year Book* (1946, 1947, and 1948) and *Best's Life Reports* (1946).

[b] The farm mortgage holdings of reporting companies taken as a percent of the farm mortgage holdings of all insurance companies are overstated in column (1) since the figures for reporting companies include real estate sales contracts, while farm mortgages for all companies are used exclusive of real estate sales contracts. When the 1945 data are corrected for this discrepancy, as in column (2), the percents are somewhat lower: 61 percent for the total of all classes instead of 68 percent, etc. Since the 1946 and 1947 data were not broken down into mortgages and real estate sales contracts, it was impossible to compute a correct percentage for these years.

In the 1946 survey the number of companies reporting and their relative importance among all insurance companies with farm mortgage portfolios was about the same as in the 1945 survey. Twenty-nine of the 45 companies responding to the 1946 survey submitted schedules the previous year, although the completeness of the reports of a particular company varied to some extent in the two years.

Among companies with assets under $100 million, the response to the 1947 survey was about 50 percent smaller in number than in the previous years. Among companies with assets of $100 million and over, however, the coverage was about the same in all three years. One company with assets of $1 billion and over dropped out in the 1947 survey but was replaced by another company in this size class. Twenty-four of the 31 companies responding to the 1947 survey participated in the other two years.

Not all of the companies referred to above as reporting in 1945, 1946, and 1947 submitted complete reports, or reports that were usable in all sections of the analysis, with the result that the number of reporting companies found in the different tables and charts of this section varies considerably. The largest representation is in the charts on gross income; the analysis of certain components of cost is next in terms of the number of reports used, followed by the analysis of total cost. As would be expected, many reports usable in other respects had to be discarded when studying the entire structure of costs, since this required a complete return.[17]

Survey Findings

GROSS INCOME

As the first step in our analysis, the gross income of each reporting company (interest income on farm mortgage loans and real estate sales contracts, prepayment premiums, and all other income except that earned on owned real estate) was expressed as a percentage of the company's loan investment.[18] These percentages, henceforth referred to as gross income ratios, are presented first in Table 2 which shows that in each of the three years 1945, 1946, and 1947 over one-half of the companies reported gross incomes between 4.00 and 4.75 percent of their loan investments.[19] Income ratios of report-

17 Whenever it appeared that an otherwise acceptable schedule contained a reporting error, the company was requested to explain the questionable item. In this way a number of schedules for larger companies were made usable.

18 Loan investment is the average of farm mortgage loans outstanding at the beginning and end of the year. For more precise definitions of terms used in this section, see Appendix A.

19 The 1945 schedule called for a breakdown of income by source in order to determine whether the gross income ratios were unduly affected by receipts of income other than interest on loans. Returns showed that the 30 companies reporting a breakdown earned 89 percent of their gross income from interest on farm mortgage loans, 10 percent from interest on real estate sales contracts, and 1 percent from prepayment premiums. Furthermore, it was found in 1945 that the ratio of gross income

ing companies fell somewhat during this period. For a sample of 18 identical companies, the average gross income ratio, weighted by the size of loan investment, declined from 4.65 percent in 1945 to 4.46 percent in 1946 and to 4.26 percent in 1947. Eleven of the 18 companies reported a decline in their gross income ratio from 1945 to 1946, while 14 showed a decline from 1946 to 1947.

TABLE 2 – REPORTING COMPANIES CLASSIFIED ACCORDING TO GROSS INCOME RATIOS, 1945-47

Gross Income Ratios	*Number of Companies*		
	1945	1946	1947
Under 4.00%	0	0	4
4.00-4.24	5	8	4
4.25-4.49	8	7	8
4.50-4.74	7	10	8
4.75-4.99	4	3	2
5.00-5.24	5	5	1
5.25 and over	6	3	2
Total	35	36	29

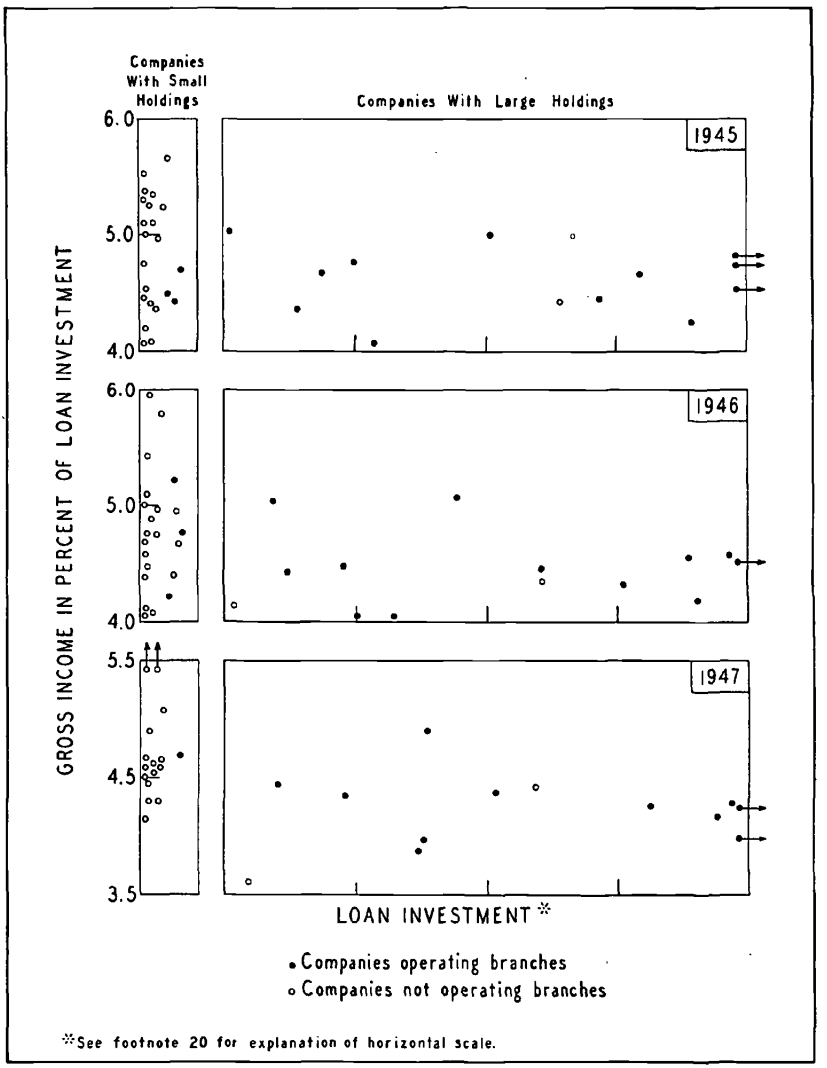
Do companies with large farm mortgage loan portfolios have higher or lower gross income ratios than companies with small portfolios? Answers to this and related questions are provided by the data in Chart 1 in which the three panels refer to 35 companies in 1945, 36 companies in 1946, and 29 companies in 1947.[20] The majority of companies with small portfolios reported gross income ratios between 4.00 and 5.00 percent in 1946 while, in all but two

from real estate sales contracts to the average amount of such contracts outstanding was 4.66 percent compared with 4.56 percent for interest income on loans. Sales contracts produced an abnormal level of income in only a few companies and in all of these cases it was much lower than average.

20 It will be noted that the scale has been omitted from the horizontal axis in all charts. Companies reported in each of the surveys on the assurance that the data would be presented so that individual companies could not be identified. The device of omitting the scale was adopted rather than the alternative of averaging individual company returns in order to preserve as much as possible of the primary information.

As an aid to the interpretation of the charts (other than Chart 5), each of the panels has been broken into two parts: the smaller left-hand section includes the companies with small portfolios; the larger right-hand section includes all other companies. The base is marked off in equal ranges of portfolio size and each observation has been plotted in its proper position. In this way relative positions of individual observations can be judged, although the amount of loans in any one portfolio cannot be determined. On Chart 5, the horizontal axis is divided into equal ranges representing amount of loan balances serviced by correspondents. Also, data on income, costs, and returns are given in Table 3 in the form of averages for companies grouped according to size of portfolio.

CHART 1 — GROSS INCOME IN PERCENT OF FARM MORTGAGE INVESTMENT RELATED TO AMOUNT OF LOAN INVESTMENT, 1945-47



Gross income ratios of companies with small holdings of farm mortgage loans varied more widely than gross income ratios of companies with large holdings. The former also had a somewhat higher average gross income.

of the reported cases, the ratios of companies with larger holdings were confined within the range of 4.00 to 4.60 percent. The pattern of distribution of gross income ratios in the other two years was similar, although the general level of the income ratios, as indicated in Chart 1, fell from year to year. The two outstanding characteristics of these distributions, therefore, are (1) the wider range of operating results for companies having small portfolios and (2) the tendency for the income ratios of companies with small farm loan holdings to average higher than those for companies with large farm loan holdings.

There is no conclusive evidence to explain these relationships, but the greater dispersion of gross income ratios for the small, as compared with the large, portfolio companies is probably due to the fact that there is less chance in small companies for individual interest rates to average out to a figure comparable with that of other companies and also to the possibility that their accounting practices may be less standardized than those of companies with large holdings. The tendency for the gross income ratios of small portfolio companies to average somewhat higher than those of larger lenders is probably due to lending by the former in less highly competitive areas and on farms of specialized type, possibly of relatively low quality. However, present information is insufficient to test these suppositions.

TOTAL COSTS

In order to compare costs among individual companies, and to arrive at a net income ratio, the several elements of total cost — branch office expenses, originating fees paid to correspondents, servicing fees, and home office expenses — have been aggregated and expressed as a percent of loan investment. This is referred to as the total cost ratio.[21] The elements comprising total cost are similarly expressed.

Eighteen companies reporting for the entire three-year period have been classified in Table 3 into three groups, according to the size of the company's portfolio, and average ratios have been computed for each group. The total cost ratios present a conflicting picture as regards the relationship between company size and the level of operating costs. Companies with small holdings had a higher

21 More correctly, we deal with ratios of total *operating* costs. Losses, credits to reserves, and other *nonoperating* expenses are excluded.

level of total costs in 1946 than did large companies and a lower level in 1947. The pattern in 1945 was still different, with the middle-sized group reporting the highest total cost ratios. Considerations having to do with company organization must be introduced to explain differences in the level of the various elements of total costs among the various-sized groups of companies. Since small companies generally do not operate branches, while large companies depend heavily on them, the branch office costs of the latter are rela-

TABLE 3 — INCOME AND COSTS IN PERCENT OF FARM MORTGAGE INVESTMENT FOR 18 INSURANCE COMPANIES, CLASSIFIED ACCORDING TO AMOUNT OF LOAN INVESTMENT, 1945-47 [a]

Income and Cost Items (in percent of loan investment)	*Year*	*Companies with Portfolios of:* Under $5 Million [b]	$5 to $20 Million [c]	$20 Million and Over [c]
Gross income	1947	5.05%	4.10%	4.28%
	1946	5.24	4.24	4.49
	1945	5.11	4.48	4.67
Total costs	1947	.93	1.14	1.51
	1946	1.27	1.22	1.17
	1945	.93	1.12	.88
Originating fees paid	1947	.23	.20	.35
	1946	.24	.22	.21
	1945	.16	.16	.11
Servicing fees paid	1947	.14	.12	.03
	1946	.11	.12	.03
	1945	.10	.11	.04
Branch office expenses	1947	.00	.53	.88
	1946	.00	.50	.71
	1945	.00	.47	.51
Home office expenses	1947	.56	.29	.25
	1946	.92	.38	.22
	1945	.67	.38	.22
Net income	1947	4.12	2.96	2.77
	1946	3.97	3.02	3.32
	1945	4.18	3.36	3.79
Number of reporting companies		7	5	6

[a] Averages of individual company ratios weighted by portfolio size. Ratios of individual companies are found in Appendix B; for example, the seven companies with portfolios under $5 million in 1945 are companies A through G in Appendix Table B1.

[b] Includes only companies not operating branch offices. Only three companies with portfolios under $5 million reported that they operated branch offices.

[c] Includes only companies operating branch offices. The one branch office company with a portfolio under $5 million that responded in all three years has been included in the $5 to $20 million class, while the one large company not having a branch office system, but reporting in all three years, has been excluded from this table.

tively high. On the other hand, small companies depend more heavily on home office operations, giving them a higher cost ratio in this respect.

To show the range of intercompany differences, total cost ratios are presented in Chart 2 as a scatter diagram. It will be observed, first, that costs vary less widely among companies with large portfolios than among those with small holdings. Total cost ratios of large portfolio companies tended to concentrate within fairly narrow limits in 1945 and 1946, ranging in general between 0.70 and 1.15 percent of their respective loan investments in 1945, and between 0.95 and 1.20 percent in 1946. The cost ratios of large portfolio companies were considerably less concentrated in 1947, falling between 0.95 and 1.65 percent of loan investment.

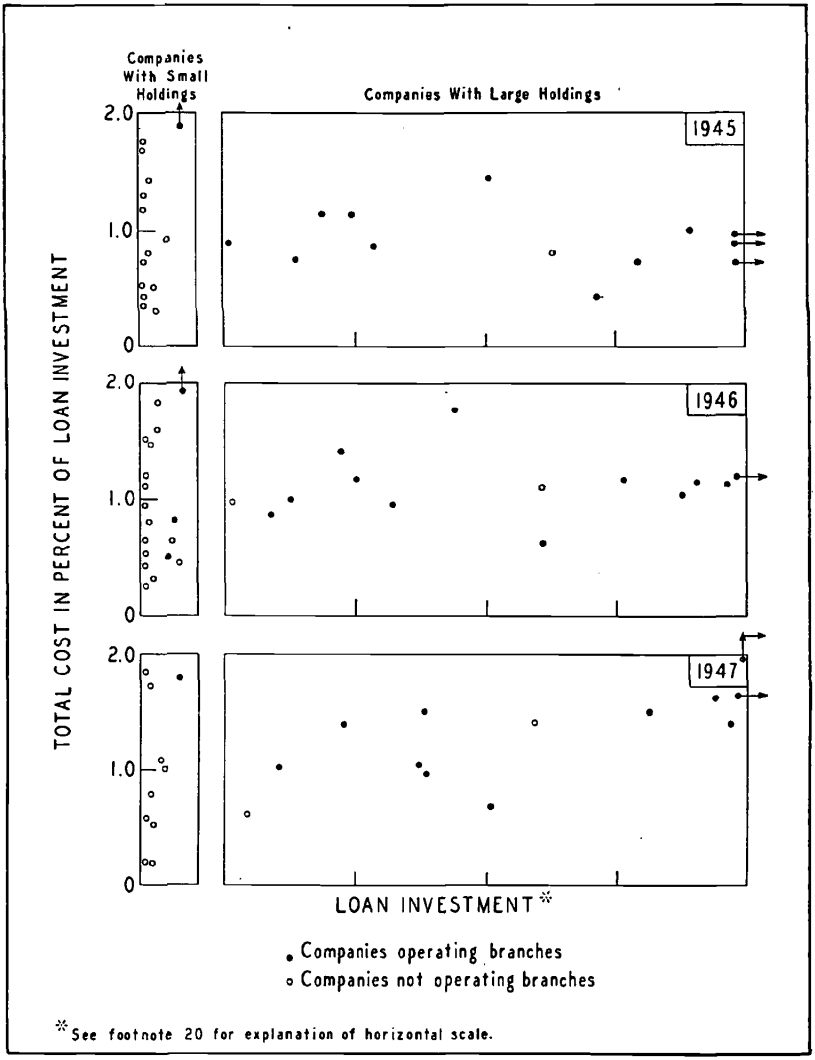
Companies with small portfolios reported both the highest and the lowest total cost ratios. This suggests that there is greater similarity among large portfolio companies than among those with small holdings in respect to organization, type of farming area served, and type and average size of loans made. In addition, it might be expected that special conditions resulting in relatively low or relatively high costs on a few loans would considerably influence the cost ratios of companies with small portfolios, whereas in companies with large or very large portfolios the chances are greater that costs would average out to a ratio close to the average for the whole group.

Finally, the upward movement of lending costs from 1945 to 1947 is mainly evident in the ratios of those companies with very large portfolios of farm mortgages. As indicated in Table 3, increased branch office expenses and originating fees, attributable to the increased volume of new loans made in 1946 and 1947, were largely responsible for this increase.[22]

Two additional factors were examined in an attempt to explain intercompany differences in total cost ratios: the average size of a company's individual loan balances and its activity in extending new credits (measured by the ratio of loans closed in 1946, exclu-

22 While it would be interesting to utilize these data to answer the question whether companies operating on a branch system have a higher or lower ratio of total costs to their loan investment than nonbranch companies with the same loan investment, comparison is impossible because all the reporting companies with large holdings of farm mortgage loans are in the branch company class and there are only a few branch companies among those with small portfolios.

CHART 2 – TOTAL COST IN PERCENT OF FARM MORTGAGE INVESTMENT RELATED TO AMOUNT OF LOAN INVESTMENT, 1945-47



*See footnote 20 for explanation of horizontal scale.

Companies with small holdings had more widely dispersed total cost ratios than companies with large holdings. The increase in total cost ratios from 1945 to 1947 was most pronounced among the companies with the largest portfolios.

sive of loans refinanced, to the amount of loan balances outstanding at the beginning of the year).[23] No systematic relationship was found between the total cost ratio and the average size of individual loan balances. Doubtless, this is because small balances are mainly held by small portfolio companies, and these companies are almost equally divided between those with high, and those with low, total cost ratios.

While a definite relationship would be expected between the level of a company's lending activity and its lending costs, this is not apparent in the evidence for companies with portfolios of $5 million and over. There are only a few such reporting companies, in any case, and they do not differ greatly with respect to lending activity; consequently, no significant cost differentials were apparent in the experimental analysis. Among companies with portfolios of less than $5 million there was some evidence that high levels of lending activity were associated, in general, with high cost ratios, but even here there were a number of striking exceptions to this generalization.

Components of total cost

That companies are differently organized for the conduct of mortgage lending, and follow different practices in compensating their correspondents and other outside agents, such as brokers, means that intercompany differences are far greater with respect to the ratios of these cost components to the investment base than for the ratios of total cost to loan investment. Nonetheless, certain aspects of the cost structure of farm mortgage lenders are clarified by this breakdown of expenses. In particular, information is provided on the level of home office loan department costs relative to loan investment and on the relation of this cost factor to the size of a company's portfolio.

A. BRANCH OFFICE EXPENSES

Naturally, branch office cost ratios vary widely from company to company, since not all companies handle the same proportion of their business through a branch system. Ratios of branch office ex-

[23] The analysis was not made for 1947 owing to the smaller number of reports available in that year. Charts are not included for the analysis of cost relationships with average loan balance and with lending activity.

penses to average loan investment tended to cluster fairly closely for the few companies with the very largest portfolios; ratios for companies outside this group are very widely dispersed. The five companies reporting the largest portfolios in 1945 had ratios of branch office expense to total loan investment that ranged between 0.40 and 0.55 percent, and the five largest concerns reporting in 1946 had ratios that fell between 0.50 and 0.75 percent. The same concentration of ratios occurred in 1947, although the general level of branch office expense ratios in that year was over 0.70 percent.

B. ORIGINATING FEES, COMMISSIONS, AND PREMIUMS

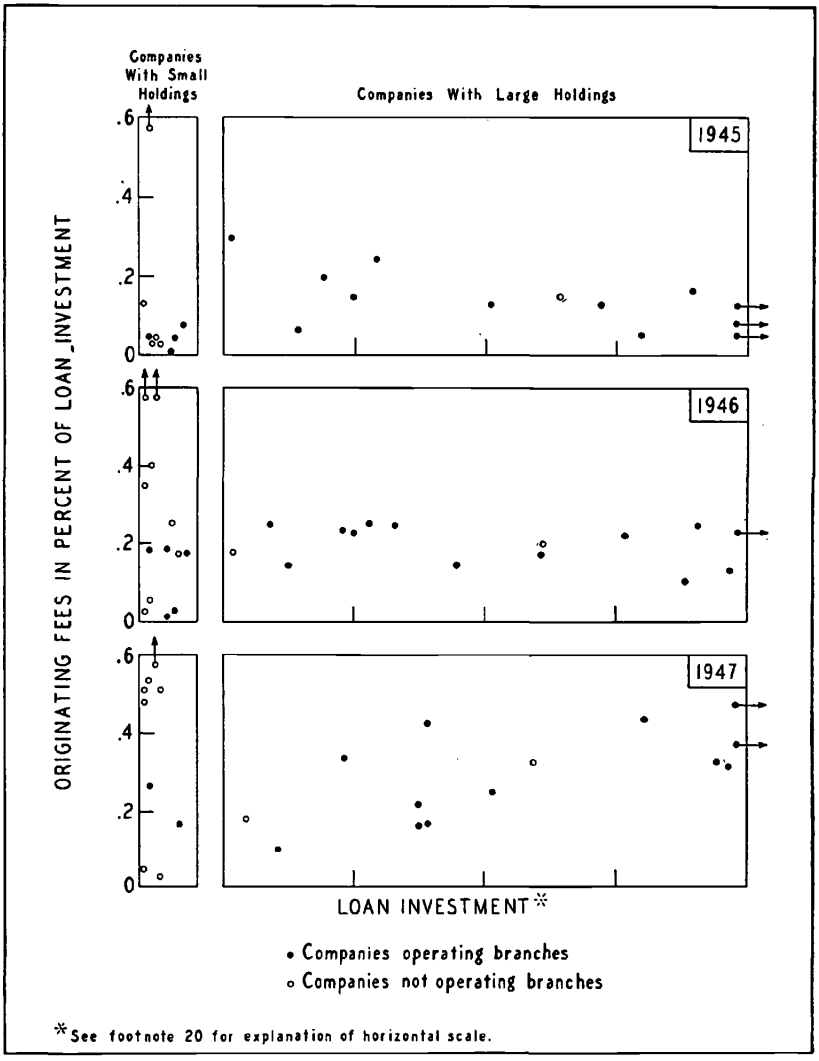
Fees and commissions paid to correspondents and other outside agents during the year may be expressed as a percentage of loan investment, as in Chart 3, or as a percentage of the amount of loans acquired during the year through correspondents. Chart 3 shows that for the majority of companies originating fees were less than 0.15 percent of loan investment in 1945 and over 0.25 percent in 1947. The marked rise in this category of costs from 1945 to 1947 was to a large extent due to the increased volume of new loans acquired and in part to an increase in the rate of commission paid to correspondents for originating loans. The ratio of fees paid to the volume of loans acquired through correspondents ranged between 1.30 and 1.60 percent for half of the companies reporting in 1946 but the number of companies reporting this item in 1945 and 1947 was too small to permit comparison of this range with commission rates paid in these years.

As would be expected, the ratios of originating fees to loan investment for small portfolio companies vary over a much wider range than do the ratios for companies with large holdings. Differences in the proportions of new loans which companies acquire through outside agents, branches, and home office staffs are so great that intercompany comparisons of these ratios are of little value.

C. SERVICING FEES

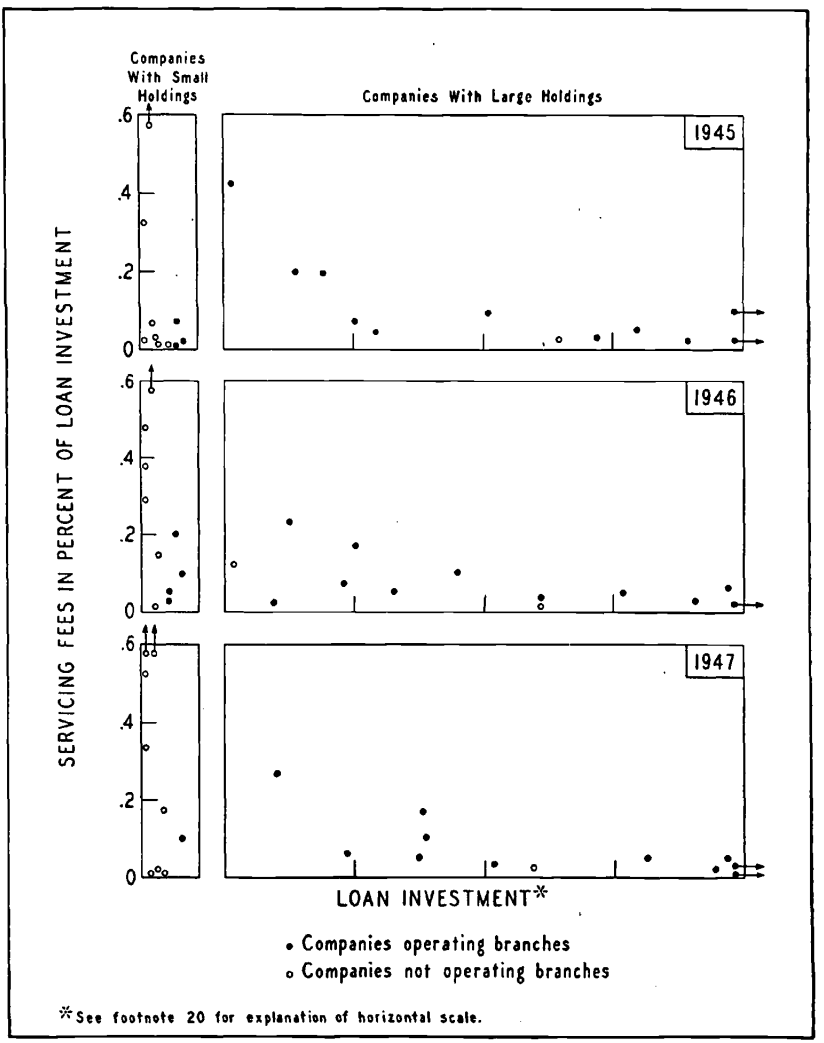
Measures similar to those discussed in the previous section can also be used to show the level of servicing fees. Chart 4 reveals that these fees amounted in the three years 1945-47 to less than 0.10 percent of loan investment for the majority of companies. The highest ratios were reported by the small portfolio companies, probably because

CHART 3 — ORIGINATING FEES PAID TO CORRESPONDENTS IN PERCENT OF FARM MORTGAGE INVESTMENT RELATED TO AMOUNT OF LOAN INVESTMENT, 1945-47



For most companies, originating fees paid were under 0.15 percent of loan investment in 1945, between 0.15 and 0.25 percent in 1946, and above 0.25 percent in 1947. The increase in originating fees from 1945 to 1947 doubtless reflects both the growth in loan activity and the increase in commission rates.

CHART 4 – SERVICING FEES PAID IN PERCENT OF FARM MORTGAGE INVESTMENT RELATED TO AMOUNT OF LOAN INVESTMENT, 1945-47



Servicing fees paid in 1945-47 were less than 0.10 percent of loan investment for most companies. Companies with the largest portfolios paid out the smallest amounts relative to their loan investment, reflecting their greater independence of outside loan servicing agencies.

they frequently make the most extensive use of outside agents to service loans.

Ratios of greater significance are given in Chart 5 which shows, for individual companies, the ratios of servicing fees paid during the year to the amount of the balances so serviced, arranged according to the amount of the loan balances being serviced. The chart indicates, first, that the majority of companies were paying fees for loan servicing between 0.20 and 0.60 percent of the amount of the loan balances being serviced and, second, that the cost ratios did not vary with the amount of loan balances being serviced.

One would not expect servicing fees to vary with the total amount of the loan balances being serviced for a given company since this total is an aggregate of amounts serviced by a number of correspondents. Doubtless there is a tendency for fees to be lower where the amount of loans serviced by a single correspondent is large and where the average size of the balances is large, but available data are not adequate to determine the character of these relationships.

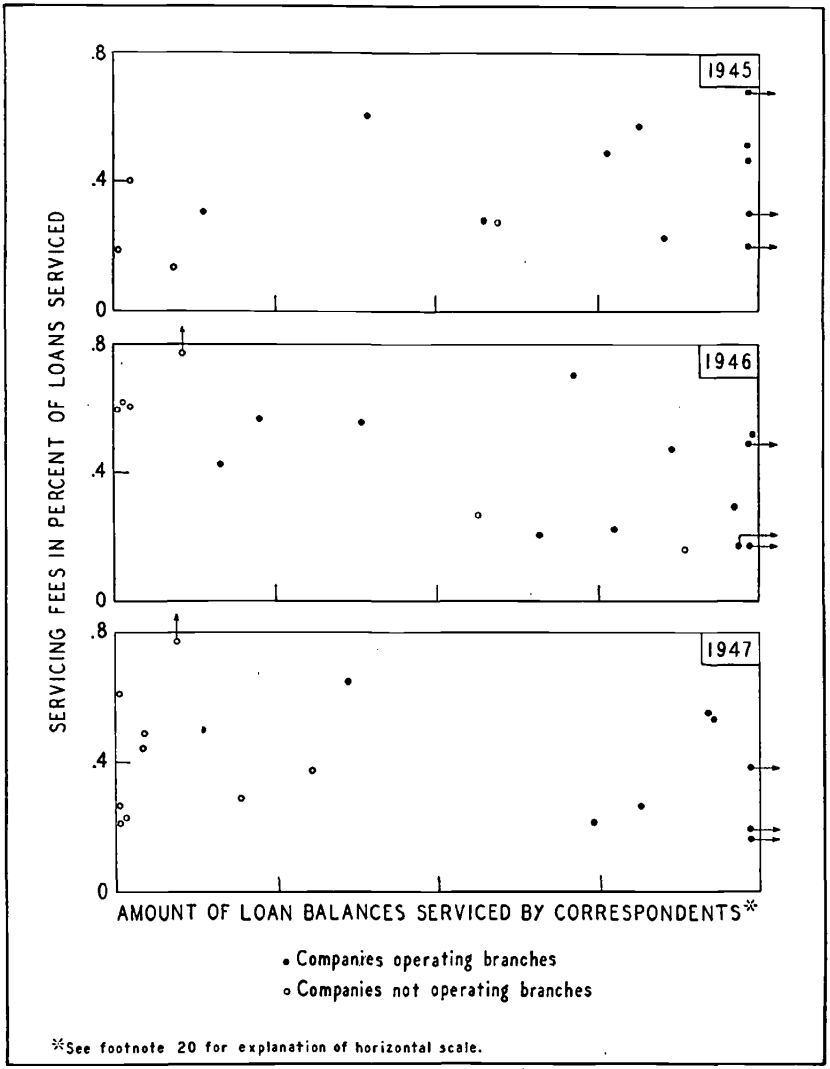
D. HOME OFFICE EXPENSES

The only meaningful measure of this final cost component is the percent of home office expenses to loan investment. For the 11 large portfolio companies reporting for the whole 1945-47 period, the weighted average home office expense ratio was 0.25 percent in each year. For half of these large portfolio companies the cost of operating a home office farm mortgage loan department ranged, in 1946, between 0.20 and 0.30 percent of loan investment, while in 1947, as shown in Chart 6, the scatter was greater than in the previous year. Conforming with the results presented in Table 3, Chart 6 indicates that home office expenses, for companies operating branch office systems, average somewhat lower for companies with very large portfolios than for those with small holdings.

NET INCOME ON LOAN INVESTMENT

The ratios of net income after costs to loan investment for individual companies are shown in Table 4; weighted averages for all companies included in the table for 1945, 1946, and 1947 are 3.71, 3.34, and 2.68 percent, respectively. It will be noted that net income ratios were concentrated between 3.50 and 3.99 percent of loan

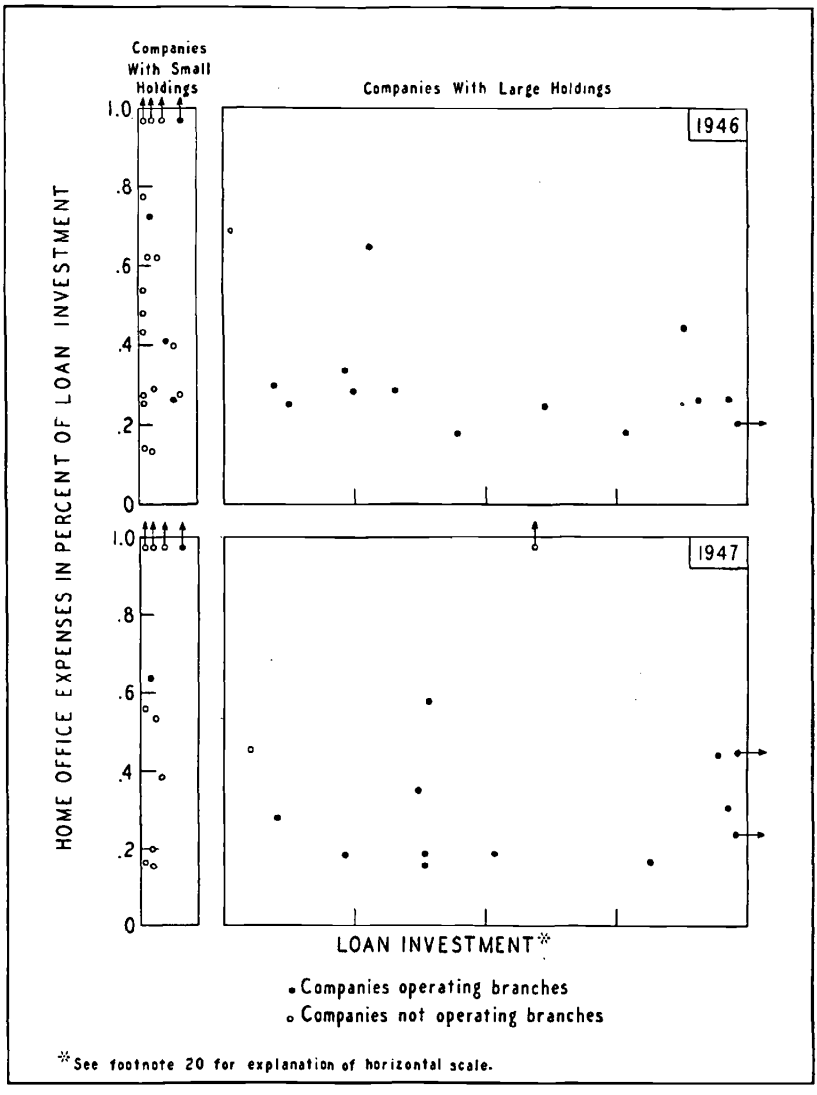
CHART 5 — SERVICING FEES PAID IN PERCENT OF LOANS SERVICED RELATED TO AMOUNT OF LOANS SO SERVICED, 1945-47



*See footnote 20 for explanation of horizontal scale.

When expressed as a percent of the amount of loan balances serviced by outside agents, servicing fees ranged from 0.20 to 0.60 percent for most companies in 1945-47.

CHART 6 — HOME OFFICE EXPENSES IN PERCENT OF FARM MORTGAGE INVESTMENT RELATED TO AMOUNT OF LOAN INVESTMENT, 1946 AND 1947



Home office expenses varied widely for companies with small portfolios. For most large portfolio companies in 1946 these expenses were from 0.20 to 0.30 percent of loan investment.

investment in 1945, between 3.00 and 3.49 percent in 1946, and between 2.50 and 2.99 percent in 1947.

TABLE 4 — REPORTING COMPANIES CLASSIFIED ACCORDING TO NET INCOME RATIOS, 1945-47

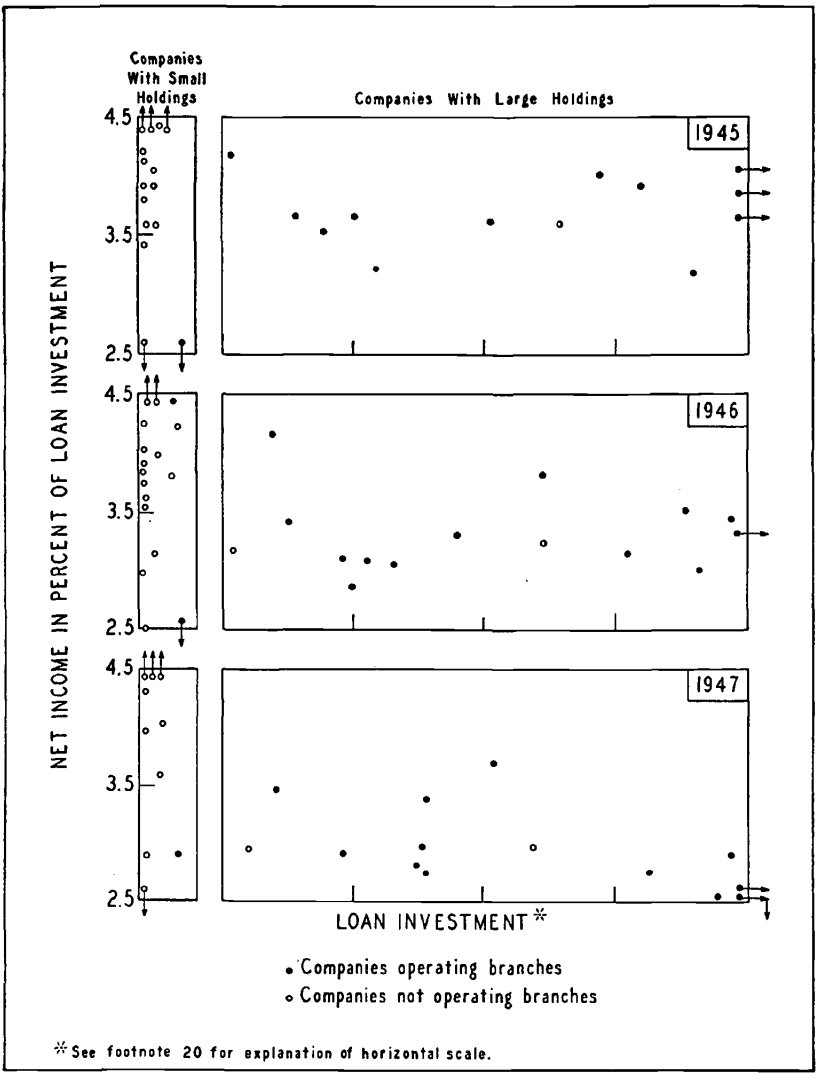
Net Income Ratios	*Number of Companies*		
	1945	1946	1947
Under 2.50%	2	1	2
2.50-2.99	0	3	12
3.00-3.49	3	12	2
3.50-3.99	13	9	3
4.00-4.49	7	5	2
4.50 and over	3	2	3
Total	28	32	24

We may now turn to the question: How is net income after costs related to the size of the companies' portfolios of farm mortgages? It is clear in Chart 7 that in all three years the greatest variability in net income ratios was among small portfolio companies. As with our measures of gross income and all elements of operating cost, the large portfolio companies conformed closest to a standard pattern of performance. This chart also makes it plain that the level of net income ratios for companies with large holdings of farm mortgages did not vary with the size of the portfolio held. Further, it is apparent that the downward movement of net income ratios from 1945 to 1947 was more characteristic of companies with large portfolios than of those with small holdings.

NET INCOME ON LOAN PLUS REAL ESTATE INVESTMENT

The foregoing discussion has dealt only with costs incurred, and income earned, on portfolios of loans and real estate sales contracts, but to describe adequately farm mortgage investment experience it is essential to consider the income earned, and the expense incurred, on owned real estate. The latter is clearly only a transformation of the mortgage loan account, except where the real estate was acquired for investment. The data for computing this over-all ratio were provided for in the 1945 schedule by separate reports of income earned on the real estate account and costs incurred — either at branches or at the home office — in the management of owned real

CHART 7 — NET INCOME IN PERCENT OF FARM MORTGAGE INVESTMENT RELATED TO AMOUNT OF LOAN INVESTMENT, 1945-47



Net operating income ratios, like gross income ratios, were generally higher, as well as more dispersed, for companies with small holdings than for those with large holdings.

estate.[24] Such data were not asked for, however, in the 1946 and 1947 surveys mainly to simplify reporting.

Ratios of net income after costs on the combined mortgage, real estate sales contract, and owned real estate accounts are given in Appendix Tables B1 and B2 for the companies that reported the necessary data. These ratios vary much more widely from company to company than do the ratios of net income on the loan account. In general, the over-all ratios are higher in 1945 than the ratios of net income on the loan account taken by itself, but of course this would not be true if the data referred to a year in which real estate properties were in surplus supply.

NET INCOME AFTER OPERATING AND NONOPERATING INCOME AND COSTS

A final calculation of the portfolio yield on a mortgage loan investment requires that items of nonoperating income and expense, arising mainly out of profits or losses on the sale of owned farm real estate, be taken into account. Findings on this measure of investment experience are also given in Appendix Tables B1 and B2. The resulting ratios vary widely from company to company and, due to the extremely favorable real estate market conditions of 1945, they are, in the main, considerably higher than the ratios of net income which take account only of operating income and cost.

NET INCOME ON MORTGAGE LOANS AFTER ALLOWANCE FOR POTENTIAL LOSS

No allowance for potential loss on the mortgage loan account has been incorporated in the foregoing analysis, but, clearly, provision must be made for this cost element at some point in the calculation of net yields. Mortgage loan losses were negligible in 1945-47, but they have been high in some past years and may be so again. It was not clear what allowance should be made for potential loss and, accordingly, reporting companies were asked in the 1945 schedule to estimate the "risk factor" which they believed inherent in their portfolios of farm mortgage loans. Estimates varied so widely, however, that they provided no basis on which to adjust the net income ratio. In the absence of a reliable factual basis for correcting net income

[24] The item reported on our schedule as income on owned farm real estate is, of course, farm income net of farm operating costs.

it is perhaps admissible to use a loss or risk factor of 0.25 percent, the rate at which home mortgages are insured by the Federal Housing Administration. When the net income ratios of large portfolio companies, among whose holdings the risk element is likely to vary only moderately, are adjusted by 0.25 percent in 1946, the net income for the largest concentration of companies shown in Chart 7 would range from 2.75 to 3.24 percent. The data for 1947 indicate that the majority of reporting companies had net incomes after costs, and after an allowance for potential loss of 0.25 percent, ranging from 2.25 to 3.24 percent, with the largest lenders at the lower limit of this range of net returns. It should be indicated, however, that the heavy volume of acquisition costs incurred in these years, being fully charged in this analysis to current operating income, produces a net income, after costs and allowance for potential loss, which is lower than that which would result if the costs were amortized over the expected life of the loan balances. However, this correction would not greatly alter the results, owing, as will be seen in the following section, to the high rate at which loans were being repaid in these years.

LOAN ACCOUNT TURNOVER AND NET RETURN ON INVESTMENT

The findings of this study indicate a return on farm mortgage loans which is low relative to what might be expected from a type of investment which has in the past experienced much delinquency and loss. However, in the years 1945-47 the low net income ratios were due in large part, as indicated above, to the rapid rate of loan repayment, a condition subject to change as farm economic conditions alter. Accordingly, what the surveys indicate about the period of turnover on farm mortgage loan accounts is of interest.

Periods of turnover were calculated for individual reporting companies by dividing loan repayments during the year into the amount of their average loan investment for the year. This gives the number of years that it would take, at the rate loans were being repaid in the years in question, for the whole portfolio to be retired. Turnover periods are given in Table 5. Thirty-three out of 43 companies in 1946 and 24 out of 31 companies in 1947 reported repayments at a rate that would have retired their entire portfolios in two to five years.

TABLE 5 — REPORTING COMPANIES CLASSIFIED ACCORDING TO TURNOVER PERIODS OF FARM MORTGAGE LOAN PORTFOLIOS, 1945-47

Turnover Periods (years)	*Number of Companies*		
	1945	1946	1947
Under 2	1	2	0
2 to 3	4	7	5
3 to 4	10	14	7
4 to 5	11	12	12
5 to 6	8	2	2
6 and over	6	6	5
Total	40	43	31

EXPECTED YIELD

Having measured the components of cost and the turnover period of loan portfolios, it is now possible to estimate the expected yield on mortgage loan investments. It will simplify the making of this estimate to assume that loans are made on a nonamortized basis and are acquired and serviced by outside correspondents. Specifically, it may be assumed that (a) the mortgages are acquired at the rate current in 1945-47 — 4.00 percent, (b) correspondents are paid an originating fee of 1.50 percent of the original amount of the loan, (c) the company pays correspondents an annual service fee of 0.25 percent of the amount of the loan balance, (d) home office loan department expenses are 0.25 percent, and (e) the loans are expected to remain on the books for five years. The interest rate and the correspondent's fee and servicing charge are unlikely to change over the life of the loan, although the cost of operating the home office loan department may change and the actual life of a loan may not be according to original expectations. However, if it is expected that the conditions stated above will be maintained, the "expected yield" on the company's investment in loans of this type will be 3.20 percent before any allowance for the risk factor.[25] If we were to take 0.25 percent as an allowance for potential loss we would have an expected yield of 2.95 percent.

25 Expected yield equals the contract interest rate less the originating fee divided by the number of years the balance is expected to continue, less the servicing fee, and less the home office expense ratio. Thus, 3.20 percent = 4.00 percent − (1.50 percent ÷ 5) − 0.25 percent − 0.25 percent.