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Income, Expenses and Profits

IN BRANCHING out into the field of consumer credit commercial banks have been motivated largely by the desire to secure "an outlet for idle funds," to share in "the success of other consumer credit agencies," or to enjoy "the high interest rates obtainable on small accommodation loans to customers."[1] An examination of the profit experience of banks which have engaged in this activity is therefore of particular interest. Data on the income, expenses and earnings of bank personal loan departments are scarce and difficult to obtain. Some information on the subject has been supplied to us directly by banks responding to our questionnaires, and additional data, furnished by the department of banking of the state of New York, cover personal loan departments of state banks under its supervision for the period 1937-38.

Conclusions based on data of such limited scope must necessarily be tentative, the more so because of the lack of uniform accounting standards for personal loan department records. The latter deficiency is pointedly illustrated by responses to our questions as to whether the personal loan department were charged with some percent of the bank's overhead and whether it paid interest on bank funds employed. Of 112 banks answering the first question, 63 replied that they did not allocate any overhead to their personal loan departments; and of 104 banks reporting on the second, 85 stated that they made no charge for interest on bank funds employed.[2] Supple-

[1] See Chapter 1.
[2] In this connection see the correspondence between Walter Meiss, Executive General Agent, The London Assurance, New York, and Lehman Plummer,

mentary information concerning the cost accounting practices of commercial banks operating personal loan departments was obtained from correspondence with a selected group of banks.[3] The replies received from 25 widely separated institutions have been used as the basis of the following discussion.

Any consideration of the cost accounting practices of personal loan departments must be prefaced by several general observations. First, there appears to be no broad agreement as to the items which should be classified under "general overhead expense." One bank considers the costs incidental to the maintenance of its general service departments—accounting, advertising, legal, etc.—as overhead expenses but excludes from these its expenses for executives' salaries. Another includes the latter item in general overhead, but treats the former almost entirely on a direct cost basis. In the second place, the problem of cost allocation becomes more complicated with increasing integration of the various departments of the bank. Thus banks which have established their personal loan departments in separate buildings can, and apparently do, allocate costs far more easily than the much larger number which handle part or all of their small personal loans in conjunction with some other bank operation, e.g., with the savings department. In the third place, a bank is not likely to make a careful analysis of personal loan department costs unless that department carries a substantial volume of business; there is a clearly observable tendency for banks to

Vice President, Central National Bank and Trust Company, Des Moines, Iowa, published in *Banking* (July 1939) pp. 22-23.

[3] These banks were asked the following questions: To what extent do you allocate general overhead expenses to your personal loan department? How do you determine the amount of such overhead? Have you undertaken to estimate the cost of making personal loans of various types? If so, what items have you included and what is your method of figuring these costs? In particular, have you estimated the per-payment cost of handling personal instalment loans? In accounting for the department's income, do you figure your unearned income on an equal monthly instalment basis or by some other method?

undertake a more precise allocation of costs as the volume of their personal loans increases. Since most consumer instalment lending departments are at present closely bound up with general banking operations and have not yet developed a large volume, few banks have made any exhaustive efforts to determine the costs of consumer lending, although many of them are showing increasing interest in this direction.

Despite the lack of uniformity in practice, a bank's method of determining the costs of its personal loans will conform to some one of several typical patterns. Each bank reporting on this topic stated that its department was charged with all the expenses that could be considered direct costs of its operation. These include the salaries of employees in the department, any special advertising expenses, and such outlays as would be required for insurance, stationery and supplies, credit agency reports, court proceedings, telephone and telegraph, and postage. The departments are commonly expected also to carry the expenses involved in the use of special machinery and equipment. Aside from these features, which are common to all methods of cost calculation, practice varies widely. Some banks require the personal loan department to support a share of general overhead expenses, and others do not. The latter generally have such small departments that they consider it unnecessary to make a complete adjustment of costs. If a bank does decide to allocate a share of its general overhead expenses to the personal loan department it must first fix a basis for pro-rating them. Of several methods of pro-rating, the one most frequently reported is as follows: all the expenses of the bank are classified into two groups, direct and indirect. The ratio of total indirect expense to total direct expense is then computed and a given department is charged with an indirect or overhead expense derived by application of this percentage to its direct expenses. Thus, if total indirect expenses are 25 percent of total direct expenses, each depart-

ment adds 25 percent to its direct expenses to cover general overhead.

Another method, less widely employed, requires a distribution of the burden of general overhead according to some rough estimate of the time devoted to the department by the various service departments and officers of the bank. A simpler method was reported by one bank, which charged the cost of operating various service departments on a direct basis, so far as possible, and pro-rated the remainder according to the proportion of the number of employees in the personal loan department to the total number of employees in the bank. Another bank stated that its personal loan department was charged with overhead on the basis of what these expenses might be if it were operating as a separate business. Still another charged the personal loan department with its own direct costs and with an additional 3 percent per annum for the money needed to cover "general overhead expense" and "executive supervision." The amount of money used by the department was calculated in proportion to average daily outstanding loan balances; in addition, the department was charged with its own losses.

In several instances banks reported that their personal loan department operations were closely integrated with those of some other department and that the expenses of both operations were combined. One bank stated that the costs of its personal loan and savings departments were handled in this way; another that its sales financing costs were combined with the expenses of the commercial department in which this operation was conducted.

GROSS INCOME

Gross income of personal loan departments per $100 of loan account runs higher than gross income on other loans and investments of banks, but the expenses are higher as well. In

Table 49 we have employed this measure of gross income as the basis for the distribution of 39 banks reporting to our questionnaires and of two groups of New York state banks,

TABLE 49

Distribution of 39 Banks Replying to Questionnaires, and of Two Groups of New York State Banks, by Gross Income Earned in 1938 per $100 of Average Personal Loan Account

GROSS INCOME PER $100 OF AVERAGE LOAN ACCOUNT[a]	BANKS REPLYING TO QUESTIONNAIRES[b]	NEW YORK STATE BANKS[c]						
		Average Loan Account[d]			*Year of Organization of Personal Loan Department*[e]			
		$75,000 or under	Over $75,000	Total	1936	1937	1938	Total
Under $6	5	1	..	1	1	..	5	6
6–8	8	5	2	7	3	4	3	10
8–10	13	7	3	10	5	5	..	10
10–12	11	16	7	23	18	5	1	24
12 and over	2	9	5	14	13	1	1	15
TOTAL	39	38	17	55	40	15	10	65

[a] Each level includes the lower figure and excludes the upper.
[b] Reporting banks were situated in the following regions: New England, 2; Middle Atlantic, 10; East North Central, 5; West North Central, 5; South Atlantic, 5; East South Central, 1; West South Central, 4; Mountain and Plain, 3; Pacific, 4.
[c] Based on data furnished by the New York state department of banking.
[d] Refers only to personal loan departments organized before 1938; the average gross return for these 55 banks was 10.8 percent.
[e] The average gross return for these 65 banks was 10.6 percent.

one group of 55 divided according to size of average loan account and the other group, consisting of 65 banks, divided according to the year in which their personal loan departments were organized. Of the banks throughout the country replying to our questionnaires, one-third reported a gross income of $8-10 per $100 of average loan account, and another third $10 or more per $100. A larger proportion of the New York state banks showed the higher rate of gross earnings:

two-thirds of those whose personal loan departments were organized before 1938 earned $10 or more per $100 of average funds employed. In both groups 60 percent of the banks earned between $8 and $12 per $100 of average earning assets.

When the New York state banks are classified according to the year in which their personal loan departments were organized it is found that 31 of the 40 banks whose departments began operations in 1936 earned during 1938 $10 or more per $100 of average funds employed, but that only 6 of the 15 departments established in 1937 and only 2 of the 10 set up in 1938 reported gross income of this amount.

Since a large proportion of all the banks furnishing information on gross income in response to questionnaires, or reporting such information to the New York state department of banking, charged at least 6 percent discount on personal instalment loans in 1938—amounting on a 12-month loan to an interest rate of 11.8 percent per annum on the unpaid balance—it is surprising that any of these personal loan departments should have reported gross income of less than $10 per $100 of average personal loan balance. The finding may be explained, however, on either of two grounds: some banks may grant all or part of their loans at less than 6 percent discount, or they may use a method of accruing income which gives misleading results.

According to information submitted by 20 banks, the discount charged on personal loans is taken into an earned income account in three different ways. Under one method the whole discount is treated as earned income at the time the loan is made; this is called "taking income on a cash basis." By a second method, discount is taken into earnings in equal amounts (daily, weekly or monthly) over the period of the loan. According to the third method, discount is considered earned income by amounts (computed daily, weekly or monthly) that are in proportion to the amount of the

unpaid balance of the loan; for example, on a 12-month loan 12/78 of the discount is taken into earned income at the end of the first month, 11/78 at the end of the second month, etc. The first method operates to anticipate income entirely and the second understates earned income up to a point and overstates it during the remainder of the period. Thus if earned interest is taken in equal monthly instalments the resulting figure is an understatement in years of increasing volume and an overstatement in years of decreasing volume, as compared with the figure that would be obtained if earned income were proportioned to outstandings, a method whereby gross income approximates the per annum equivalent of the loan charge—interest plus investigation, service and other charges.[4] There was a strong upward trend in the volume of bank personal loan department business from 1937 to 1938; furthermore, many of the departments covered by our data were new enough to be experiencing initial expansion. It is only reasonable to conclude, therefore, that to some extent the cases in which gross income was under $10 per $100 of average loan account, presented in Table 49 above, represent understatements resulting from the use of an equal-monthly-payment method of accounting for earned interest.

The gross income of bank personal loan departments is derived, as was shown in Chapter 6, not only from interest or discount on customers' notes, but also from a variety of other charges, such as fees for credit investigation, service or collection fees, insurance charges and fines for delinquency. Interest or discount is the most important source, accounting

[4] See Otto C. Lorenz and Mott Smith, *Financial Problems of Instalment Selling* (1931) Chapter 13. An acceptable formula for computing earned income for any month so as to make such income proportional to outstandings is $2 \cdot \frac{n-t+1}{n(n+1)} \cdot F$, in which F is the amount of discount (interest plus other charge), n the total number of months the note runs, and t the given month. This formula can be applied immediately to the current loan account if the amount of loans of any given length made in any given month in the past is known.

for 80 to 100 percent of gross income. Of 57 banks replying to our questionnaire, 18 received 100 percent of their gross income from interest or discount charges, 21 received 95 to 100 percent, and 9 received 90 to 95 percent. The median for the entire group was above 95 percent; this may be compared with the median for New York state banks, which was between 90 and 95 percent.

Concerning other sources of income—investigation fees, service charges and delinquency fines—information obtained through questionnaires was far from adequate. Of 54 banks supplying such data, 43 reported no income from credit investigation fees; of the remaining 11 banks, 2 stated that such fees accounted for over 20 percent of their gross income, 2 derived 10 to 20 percent of their gross income in this way, 5 reported 5 to 10 percent, and 2 less than 5 percent.

Little can be said regarding service charges as a source of income. Although such charges are specifically permitted in some states, and are not expressly prohibited in others, they are imposed in a manner which makes it difficult to distinguish them from the credit investigation charge. Indeed, as we have indicated previously, no bank reporting to us stated that it levied both a credit investigation fee and a service charge.

Income from fines on delinquent accounts is a relatively unimportant source of gross earnings. Of 54 banks reporting on this item, 34 realized some income from delinquency penalties but 20 made no charges of this sort. In the former group, 2 banks derived more than 8 percent of their gross income from fines, 8 banks from 4 to 8 percent and 24 banks under 4 percent (19 of these less than 2 percent). For 65 New York state bank personal loan departments operating in 1938 the proportions were much the same: 19 reported no income from delinquency fines, 2 obtained such income in excess of 8 percent, 11 between 4 and 8 percent and 33 under 4 percent (19 of these under 2 percent). For the entire group of 65 New

York state banks the average proportion of gross earnings derived from delinquency fines in 1938 was 4.8 percent.

EXPENSES

The best available data on the costs or expenses of bank personal loan departments are those covering state banks reporting to the New York state department of banking. Table 50 gives the percentage distribution of total expenses (including reserves for charge-offs) and of operating expenses (excluding reserves for charge-offs) of these banks for the period 1937-38. Salaries constituted the major item, accounting for more than two-fifths of total expenses and for more than half of operat-

TABLE 50

Percentage Distribution of Total and Operating Expenses of Personal Loan Departments of Reporting New York State Banks, 1937–38,[a] by Item of Expense

ITEM	TOTAL EXPENSES[b]	OPERATING EXPENSES[c]
Salaries	43.2	52.3
Officers	*13.0*	*15.8*
Others	*30.2*	*36.5*
Reserve for charge-off accounts[d]	17.3	..
Insurance (net)[e]	7.3	8.9
Rent	6.5	7.9
Advertising	5.4	6.5
Legal	2.8	3.3
Other	17.5	21.2
TOTAL	100.0	100.0

[a] Based on data furnished by the New York state department of banking covering 55 banks in 1937 and 65 banks in 1938. The cost of money is excluded from expense items by the department of banking.
[b] Including reserves for charge-off accounts.
[c] Excluding reserves for charge-off accounts.
[d] Including actual net charge-off for banks not employing a charge-off reserve.
[e] Payments for group life insurance on borrowers, minus charges to borrowers for this service.

ing expenses—proportions that are not inconsistent with expense experience among personal finance companies.[5] Administrative and supervisory salaries came to as much as 13 percent of total expenses and 16 percent of operating expenses, while other salaries amounted to 30 and 37 percent respectively. Reserves for charge-offs, excluded from operating expenses, accounted for 17 percent of total expenses. Other expenses, ranked in order of importance, were insurance, rent, advertising and legal costs. Miscellaneous outlays, not readily classifiable, amounted to 18 percent of total expenses and to 21 percent of operating expenses.

Operating expenses per $100 of loan account for the personal loan departments of these New York state banks varied widely. Though observed differences may reflect real variations in costs, they may be attributed also to lack of uniformity in accounting practice, notably with respect to the allocation of bank overhead and, for small personal loan departments, to the allocation of cost factors which are tantamount to overhead from the standpoint of the department.[6] As Table 51 shows, 34 out of 55 banks whose departments were organized before 1938 reported operating costs of less than $5 per $100 of average loan account. Such costs were generally lower, furthermore, for banks with average loan accounts of $75,000 or less than for banks with loan accounts in excess of $75,000, and somewhat lower for departments organized in 1937 than for those set up in 1936.

UNIT COST OF PERSONAL LOANS

Seven of the 25 banks that reported on their methods of cost accounting for personal loan departments gave estimates of

[5] See National Bureau of Economic Research (Financial Research Program), *Personal Finance Companies and Their Credit Practices*, by R. A. Young and Associates (1940) Chapter 5.

[6] For a small personal loan department operated by a part-time employee, for example, almost all expenses consist of arbitrarily allocated overhead costs.

the expense involved in making individual personal loans. Two of these indicated that the determination of such costs had also shown up differences in the costs of making and handling various types of loans. In all other cases the bank had merely arrived at a figure which represented the total cost of making and collecting a loan, or the cost of making the loan and a per-payment cost of servicing instalment payments. Of two banks reporting a total cost per loan, one estimated the amount at just over $4.00 and the other at exactly $5.00. The difficulty of interpreting data of this kind is illustrated by the banks' statements concerning their cost estimates. From these statements it appears that the bank with the higher estimate of cost per loan took less account of overhead expenses than the bank with the lower estimate.

TABLE 51

Distribution of Two Classifications of Reporting New York State Banks, by Operating Cost in 1938 per $100 of Average Personal Loan Account[a]

OPERATING COST PER $100 OF AVERAGE LOAN ACCOUNT[b]	AVERAGE LOAN ACCOUNT[c]			YEAR OF ORGANIZATION OF PERSONAL LOAN DEPARTMENT			
	$75,000 or Under	Over $75,000	Total	1936	1937	1938	Total
Under $3	7	1	8	5	3	3	11
3– 4	11	2	13	6	7	1	14
4– 5	10	3	13	13	..	..	13
5– 6	4	5	9	9	..	1	10
6– 7	2	2	4	2	2	1	5
7– 8	1	2	3	1	2	2	5
8– 9	1	..	1	1	..	1	2
9–10	1	2	3	2	1	..	3
10 and over	1	..	1	1	..	1	2
TOTAL	38	17	55	40	15	10	65

[a] Based on data furnished by the New York state department of banking.
[b] Each level includes the lower figure and excludes the upper.
[c] Refers only to personal loan departments organized before 1938.

All 3 of the banks that estimated the cost of servicing loans, as distinct from the cost of making them, agreed that the per-payment expense of collection was from 25 to 30 cents. This same cost was reported also by a fourth bank, which calculated further that this personal loan transaction, conducted in its savings department, would cost as much as a savings account transaction. A fifth bank, making its estimate on the same assumption, nevertheless set the cost of collecting each instalment payment at 10 cents. It should be added that in one of the cases just mentioned the estimate of 25-30 cents excluded any charge for money used and made no provision for special collection difficulties.

There was more variation in reports on the separate cost of making a loan. One bank estimated this item at $1.50, another at $1.80, and a third at $3.00 to $3.25. In each case account was taken of overhead charges, although the details of the calculations, which would doubtless explain the wide discrepancy between the estimates, were not disclosed. If we consider, finally, both the cost of making and the cost of servicing loans, and compare the combined sum with the single per-loan cost estimates, we find that costs of individual loan transactions range from $4.00 to nearly $7.00 for this small group of banks.

RELATION OF COSTS TO SIZE OF LOAN ACCOUNT[7]

No extensive body of factual data is available for a study of variations in loan costs according to either the size of the personal loan account or the characteristics of the personal loans made. Nevertheless we shall attempt to treat these matters analytically, drawing upon such fragmentary data as have been made available to us to illustrate their more significant aspects.

As in other types of enterprise in which there are fixed cost

[7] Size of loan account refers to the volume of loan balances outstanding.

elements, the average loan costs of any personal loan department tend to vary inversely with the size of the account, at least up to the point where per dollar or per unit loan cost is lowest. That level we may designate as the point of optimum utilization of personal loan department facilities. Certain costs, such as officers' salaries and rent,[8] tend to be constant in dollar amount even with wide ranges of loan volume. By their very constancy they make possible a declining overhead cost per dollar or per unit loan as the loan account increases in size, at least until office space becomes overcrowded, administrative supervision inefficient, or further expansion virtually impossible with existing facilities. Other costs per dollar or per unit loan may, for any but a newly established department, increase or decrease with the size of the loan account, depending more or less on the degree to which they are fixed or overhead elements in personal loan department expense.

The behavior of per dollar personal loan department costs over the two-year period of expanding volume, 1937-38, may be observed from Table 52, which covers state banks reporting to the New York state department of banking. The total volume of loans made by these banks during 1938 was about 18 percent greater than in 1937, but the average amount of funds employed increased nearly 45 percent, indicating a balance of new loans over repayments and perhaps also a lengthening of the average span of loan contracts. From 1937 to 1938 there was an increase in all cost items per $100 of loans made, except in advertising;[9] thus operating costs (excluding charge-offs)[10] rose from $1.87 to $2.28, while total costs

[8] As was shown in Table 50, these items together averaged 24 percent of the operating expenses of personal loan departments of reporting New York state banks in 1937-38, and 19.5 percent of the total expenses, including reserves for charge-offs.

[9] Many of the personal loan departments of reporting banks were new in 1937 and relatively high advertising costs in that year may be ascribed in part to the initial publicity required.

[10] The New York state department of banking encourages the setting up of special personal loan department reserves for handling charge-offs, and

TABLE 52

Operating Costs and Total Costs of Personal Loan Departments of Reporting New York State Banks, 1937–38, per $100 of Loans Made and per $100 of Average Loan Account[a]

ITEM	COSTS PER $100 OF LOANS MADE		COSTS PER $100 OF AVERAGE LOAN ACCOUNT	
	1937	1938	1937	1938
Salaries				
Officers	$ .31	$ .35	$ .81	$ .75
Others	.65	.86	1.72	1.85
Insurance (net)	.17	.20	.45	.43
Rent	.14	.18	.38	.39
Advertising	.18	.10	.48	.21
Legal	.04	.10	.10	.21
Other	.38	.49	1.02	1.06
OPERATING COSTS	$1.87	$2.28	$4.96	$4.90
Reserve for charge-offs[b]	.38	.48	1.01	1.04
Other charge-offs, minus recoveries	.04	.09	.11	.20
TOTAL COSTS	$2.29	$2.85	$6.08	$6.14

[a] Based on reports submitted to the superintendent of banks of the state of New York; figures for 1937 cover 55 banks with average employed funds of $8,960,981; those for 1938 apply to 65 banks with average employed funds of $12,972,389. Total personal loans of these two groups were $23,812,310 and $27,868,817 respectively.

[b] Actual charge-offs minus recoveries against reserves amounted, per $100 of loans made, to $.07 in 1937, and to $.17 in 1938; per $100 of average loan account they came to $.18 in 1937 and $.37 in 1938.

most banks under its supervision treat charge-offs in this way, debiting net charge-offs (charge-offs minus recoveries) to such reserves. As a consequence it has not been feasible here to consider charge-offs of bad loans as an item in operating costs.

mounted from $2.29 to $2.85. Expressed in relation to average loan account rather than to volume of loans made, some cost items declined—officers' salaries, insurance and advertising—and some went up—other salaries, rent, legal expense and "miscellaneous." Operating costs per $100 of average loan account declined from $4.96 to $4.90, but total costs rose from $6.08 to $6.14.

These changes in loan costs do not accurately reflect the reaction of costs to increases in personal loan business, because some of the personal loan departments of these reporting banks were newly established in 1938. If, however, we consider only the personal loan departments that were operating in 1936 and 1937, and assume that these were well established by 1938, we may draw some general inferences from these data. Table 53 presents two distributions of such banks according to the additional cost per $100 of the increase in loan outstandings—in other words, the per dollar marginal cost of personal loan department operations.[11] The underlying figures are doubtless conditioned by wide variation in methods of allocating costs, and also by divergences in accounting practice; moreover, our assumption that they have been reported by well-established personal loan departments is admittedly arbitrary.[12] Nevertheless even results that are no more than very rough approximations are adequate for our purposes, since the object is merely to illustrate how per dollar marginal loan cost varies with changes in the loan account.

The table shows a wide diversity in per dollar marginal cost among the banks represented, but it shows also a significant central tendency. A total of 43 banks out of 55 had an additional cost of less than $4 for each $100 of additional outstandings, and of these 12 had less total expense when they

[11] This is exclusive of charge-off or bad-loan expense, as explained above.
[12] Of the personal loan departments under review 40 were established in 1936 and 15 in 1937.

TABLE 53

Two Distributions of Reporting New York State Banks, 1938, by Additional Cost per $100 of Increase in Loan Account of Personal Loan Departments[a]

ADDITIONAL COST PER $100 OF INCREASE IN LOAN ACCOUNT[b]	AVERAGE LOAN ACCOUNT			YEAR OF ORGANIZATION OF PERSONAL LOAN DEPARTMENT		
	$75,000 or Under	Over $75,000	Total	1936	1937	Total
Negative marginal cost	11	1	12	10	2	12
Under $1	3	3	6	4	2	6
1– 2	7	2	9	4	5	9
2– 3	6	3	9	7	2	9
3– 4	4	3	7	6	1	7
4– 5	1	1	2	1	1	2
5– 6	..	1	1	1	..	1
6– 7	1	..	1	1	..	1
7– 8	..	..	..	..	..	..
8– 9	1	..	1	1	..	1
9–10	..	..	..	..	..	..
10 and over	4	3	7	5	2	7
TOTAL	38	17	55	40	15	55

[a] Based on data furnished by the New York state department of banking, covering 55 banks whose personal loan departments were organized before 1938.

[b] Ratio, in dollar terms, of additional expense from 1937 to 1938 to additional funds employed. Each level includes the lower figure and excludes the upper.

employed additional funds, that is, they had a negative per dollar marginal cost. The median marginal cost for all 55 banks was $2 per $100 of additional loan account. Of the 38 banks whose average loan account was $75,000 or under, 31 had a marginal cost under $4, with the median at about $1.50, and 11 had a negative marginal cost. Of 17 banks with average loan outstandings in excess of $75,000, there were 12 which had a marginal cost under $4, with the median at about $3, but in this group only 1 showed a negative marginal cost. Marginal costs under $4 were reported by about the same

proportion of personal loan departments organized in 1937 as of those organized in 1936, but fewer of the more recently established departments had a negative marginal cost.

A comparison of the per dollar marginal cost figures in Table 53 with the average cost figures in Table 51 is particularly rewarding. It reveals, for example, that only 21 of the 55 banks had operating costs of less than $4 per $100 of average loan account, but that for 43 of these 55 banks the increase in operating costs per $100 of additional account came to less than $4. Among the 38 banks having average personal loan accounts of $75,000 or less, 18 had operating costs of less than $4 per $100 of average loan account and 31 had operating costs of less than $4 per $100 of additional loan account. A similar relationship is characteristic of the 17 banks with average loan accounts of more than $75,000. For all 55 banks the median average cost was a little over $4, as compared with a median marginal cost of $2.

If these banks are distributed, as in Table 54, by the ratio of per dollar marginal cost to average cost—a ratio which may be designated as the index of cost elasticity for increases in loan account—another interesting comparison may be drawn. An index of more than 1 means that cost in handling a larger loan account increases more than proportionately to the loan account; an index number between 1 and 0 means that cost increases less than proportionately to the loan account; and if the index is negative, cost and loan account move in opposite directions, the former falling as the latter rises. Of the 55 banks, 18 had elasticity indexes of more than 1, and 26 had indexes between 1 and 0; for 11 banks the indexes were negative. In other words, for nearly half of the New York state banks in 1938, the cost of handling a larger loan account increased less than proportionately to the loan account; for about a third it increased more than proportionately; and for one-fifth cost and amount of loan account moved in opposite directions, the former declining and the

TABLE 54

Two Distributions of Reporting New York State Banks, 1938, by Index of Cost Elasticity for Increases in Loan Account[a]

INDEX OF COST ELASTICITY FOR INCREASES IN LOAN ACCOUNT[b]	AVERAGE LOAN ACCOUNT			YEAR OF ORGANIZATION OF PERSONAL LOAN DEPARTMENT		
	$75,000 or Under	Over $75,000	Total	1936	1937	Total
Under 0	10	1	11	10	1	11
0– .25	3	4	7	5	2	7
.25– .50	6	1	7	4	3	7
.50– .75	6	3	9	7	2	9
.75–1.00	1	2	3	2	1	3
1.00–1.25	5	3	8	4	4	8
1.25–1.50	1	..	1	1	..	1
1.50–1.75	2	1	3	2	1	3
1.75–2.00	1	..	1	1	..	1
2.00–3.00	1	..	1	1	..	1
3.00 and over	2	2	4	3	1	4
TOTAL	38	17	55	40	15	55

[a] Based on data furnished by the New York state department of banking, covering personal loan departments organized before 1938.
[b] Ratio of per dollar marginal cost to average cost for 1938. Each level includes the lower figure and excludes the upper.

latter rising. Variations in the size of loan departments had little effect upon this distribution except that among the larger loan departments only 1 showed decreasing cost with increasing loan account. Of the 15 departments organized in 1937 a slightly greater proportion—two-fifths, as compared with the average one-third—showed disproportionately large costs for the handling of larger loan accounts. On the whole it seems reasonable to conclude that additional business entailed a less than proportionate addition to expenses, for regardless of department size and degree of development, well over half of the reporting banks showed either decreasing

costs with additional employment of funds, or costs that increased less markedly than the loan business itself.[13]

RELATION OF UNIT LOAN COST TO LOAN CHARACTERISTICS

If costs are analyzed according to the size of the loans which make up the volume, the costs per dollar of loans made, or per dollar of average loan account, will obviously be lower on loans of larger size. The costs per unit loan are quite another matter, however; while they cannot be estimated with any exactitude according to loan size, they are if anything slightly higher on larger loans. A brief consideration of the principal components of loan cost will indicate how differences in loan size tend to affect unit loan costs.[14]

Costs of credit investigation are likely to be no greater for larger loans; although it is true that applicants for such loans are generally investigated exhaustively, they are more likely to have well-established connections, and to provide references which simplify the credit investigation. The per-payment cost of collection, or loan service per payment, is necessarily the same for larger as for smaller loans. Special delinquency expense and bad debt loss may be distributed

[13] The additional expense involved in an expansion of the average loan account will depend to a considerable degree on the type of loan from which the volume is derived.

[14] For purposes of cost analysis, the expenses of bank personal loan departments may be broken down according to two equally logical systems of classification: one arranged according to the *source* of expense, such as personal service, rent, outlays for supplies, legal fees, payment for use of capital or credit; the other according to the *function* for which expense is incurred, such as credit investigation cost, handling or service cost, collection cost arising from delinquency and loss, credit and life insurance cost, administrative cost, advertising and other costs of obtaining business, and money cost, including actual cost of borrowed funds plus a "normal" return on other funds, as reckoned by returns that would be obtainable from alternative uses (opportunity cost). Either classification may have much in its favor for an estimate of per dollar or per unit loan cost, but convenience ultimately requires that costs be combined into as few categories as possible. In the following discussion a functional cost classification is employed.

unequally by size of loan, although data previously presented suggest that such variation is not marked.[15] On the other hand, the cost to the personal loan department of money used is greater for larger loans[16] and fixed expenses or overhead (administrative supervision and rent) may be distributed in such a way as to place an additional burden upon these loans. Higher money costs and possibly a greater proportion of overhead may therefore counterbalance the other items and result in slightly greater costs for larger than for smaller loans, but the difference can scarcely be substantial.

Costs per unit loan appear to vary also with length of note. For present purposes such components of cost as credit investigation expense, delinquency or bad debt loss[17] and money costs may be regarded as constant, irrespective of note duration. But cost of collection, which is probably constant per payment, is proportionate to number of payments; and it is possible that a relatively larger portion of the fixed or overhead costs might appropriately be charged against longer loans.

LOAN PROFITABILITY BY SIZE AND LENGTH OF NOTE

From the point of view of profitability, any personal loan application is worthy of acceptance if the additional cost of acquiring and handling it is less than the additional revenue it will yield. The additional cost will vary, of course, with

[15] See Chapter 5, Table 37.

[16] From very limited data there appears to be wide variation in the cost of money charged to personal loan departments by banks making such a charge. Of 18 banks reporting cost of money charged to personal loan departments, 3 charged 2 percent or less, 6 from 2 to 3 percent, 6 from 3 to 4 percent, and 3 banks 5 percent or over.

[17] It is possible that loans of longer duration may have a higher rate of loss, but such an assumption is not borne out by the sample data discussed in Chapter 5. See also A. L. Kilgus, "Spreading Loans over 18 Months," *American Industrial Banker* (December 1937).

the extent to which personal loan department facilities are utilized. The more closely utilization of facilities approaches the point of lowest direct cost per unit loan,[18] the more nearly is the additional (i.e., marginal) cost per unit loan equal to average direct cost. The following discussion of loan profitability is based on the assumption that this equality is in fact approximated.

Because of the lack of appropriate cost data it is not possible to illustrate the relations between loan profitability and sizes and lengths of notes except by the use of hypothetical cost schedules. Accordingly, Tables 55 and 56 have been constructed to show net prime earnings on loans of various sizes and durations. The net prime earnings on each amount and length of note are calculated by subtraction of the estimated direct cost of making a loan, that is, all costs exclusive of overhead charges, from the income anticipated from the loan. Table 55 presents such figures, computed in such a way as to conform to average cost data reported by 65 state banks to the New York state department of banking for 1938.[19] This table shows the profitability of different sizes and lengths of note according to two cost schedules—one (Schedule A) a medium cost level and the other (Schedule B) a relatively low cost level. In each schedule the direct costs taken into account are: (a) the per-loan cost of investigation and acquisition, (b) the per-payment service cost, (c) a special delinquency collection cost expressed on a per-loan, per-year basis and

[18] This is the point of full utilization of existing operating personnel and equipment, not the point of full utilization of complete personal loan department facilities, including housing space, administrative supervision and other general overhead items. The latter is measured by the lowest *total* cost per unit loan, that is, direct costs plus overhead costs.

[19] Although Table 55 has been constructed to accord with reported figures, this conformity might have been achieved with many other sets of hypothetical figures. The reporting departments were relatively small; three-quarters of them had outstandings of $75,000 or less. They had been operating, in 1938, for varying lengths of time; 40 were organized in 1936, 15 in 1937 and 10 in 1938.

TABLE 55

Hypothetical Net Prime Earnings on Personal Loans of Different Sizes and Durations under Direct Cost Schedules Consistent with Expenses Reported by 65 New York State Banks for 1938[a]

AMOUNT OF NOTE	6-MONTH NOTE			12-MONTH NOTE			18-MONTH NOTE[b]		
	Schedule A		*Schedule B*	*Schedule A*		*Schedule B*	*Schedule A*		*Schedule B*
	6 Percent Charge	Combination Charge	6 Percent Charge	6 Percent Charge	Combination Charge	6 Percent Charge	6 Percent Charge	Combination Charge	6 Percent Charge
$ 25	$−3.38	[c]	$−2.98	$−4.83	[c]	$−4.03	$−6.28	[c]	$−5.08
50	−2.75	[c]	−2.35	−3.45	[c]	−2.65	−4.15	[c]	−2.95
75	−2.13	[c]	−1.73	−2.08	[c]	−1.28	−2.03	[c]	− .83
100	−1.50	[c]	−1.10	− .70	[c]	.10	.10	[c]	1.30
125	− .88	[c]	− .48	.68	[c]	1.48	2.23	[c]	3.43
150	− .25	[c]	.15	2.05	[c]	2.85	4.35	[c]	5.55
175	.38	[c]	.78	3.43	[c]	4.23	6.48	[c]	7.68
200	1.00	[c]	1.40	4.80	$5.00	5.60	8.60	$8.00	9.80
225	1.63	$2.25	2.03	6.18	5.63	6.98	10.73	9.00	11.93
250	2.25	2.50	2.65	7.55	6.25	8.35	12.85	10.00	14.05
275	2.88	2.75	3.28	8.93	6.88	9.73	14.98	11.00	16.18
300	3.50	3.00	3.90	10.30	7.50	11.10	17.10	12.00	18.30
350	4.75	3.50	5.15	13.05	8.75	13.85	21.35	14.00	22.55
400	6.00	4.00	6.40	15.80	10.00	16.60	25.60	16.00	26.80
450	7.25	4.50	7.65	18.55	11.25	19.35	29.85	18.00	31.05
500	8.50	5.00	8.90	21.30	12.50	22.10	34.10	20.00	35.30

Footnotes for Table 55 are to be found on opposite page.

(d) the cost of establishing a bad-loan reserve. Table 55 treats also two types of charges—a straight charge of 6 percent per annum on the amount of the note and a combination charge made up of a 3 percent per annum discount, a $1.80 credit investigation fee and a service charge of $2.40 per annum.

Table 56, constructed from more fragmentary cost information furnished to us by individual banks, presents similar figures; these are appropriate to a medium-sized city bank whose personal loan department has an average account of $150,000 to $200,000 and operates close to the point of lowest direct cost per unit loan. The tabulation is based on one cost schedule and on three types of customer charges.

It should be emphasized that in both tables fixed or overhead costs are excluded from the cost schedules and that the classifications given are functional and somewhat crude. They are based, furthermore, on certain assumptions concerning the relations between the direct per-loan cost and the size and length of notes. For example, the cost calculations proceed from the assumption that the credit investigation expense and other costs of acquiring a loan are the same for all

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Footnotes for Table 55.

[a] Net prime earnings equal loan income minus average direct costs. The cost schedules underlying these figures are purely hypothetical, but they have been constructed to conform to expense data reported to the New York state department of banking by 65 New York state banks whose personal loan departments operate at various levels of direct cost. Schedule A represents a medium level of direct cost, Schedule B a low level, as follows:

Direct Costs	*Schedule A*	*Schedule B*
Cost of investigation and acquisition, per loan...	$1.80	$1.80
Service cost (collection), per payment............	.20	.15
Special delinquency collection, per loan per year	2.00	1.80
Bad-loan reserve, per $100 of loans made.......	.50	.50

The combination charge includes $1.80 credit investigation fee, $2.40 per annum service charge, 3 percent per annum discount charge. The maximum per annum personal loan charge permitted by the New York banking law is equivalent to 12 percent simple interest on the average unpaid balance.

[b] Personal loans made by New York state banks may not run for more than 15 months; moreover, a 6 percent per annum charge on an 18-month note exceeds the legal limit of 12 percent simple interest on average unpaid balance.

[c] On notes of this amount and length the combination charge would exceed the legal limit of 12 percent simple interest on the average unpaid balance.

TABLE 56

Hypothetical Net Prime Earnings on Personal Loans of Different Sizes and Durations When Personal Loan Department Facilities Are Utilized to Point of Lowest Average Direct Cost[a]

AMOUNT OF NOTE	6-MONTH NOTE			12-MONTH NOTE			18-MONTH NOTE		
	6 Percent Charge	8 Percent Charge	Combination Charge[b]	6 Percent Charge	8 Percent Charge	Combination Charge[b]	6 Percent Charge	8 Percent Charge	Combination Charge[b]
$ 25	$−1.81	$−1.56	$ .32	$−2.32	$−1.82	$ .93	$−2.84	$−2.09	$ 1.54
50	−1.27	− .77	.73	−1.03	− .03	1.97	− .80	.70	3.20
75	− .73	.02	1.15	.26	1.76	3.01	1.24	3.49	4.87
100	− .19	.81	1.56	1.55	3.55	4.05	3.28	6.28	6.53
125	.35	1.60	1.98	2.84	5.34	5.09	5.32	9.07	8.20
150	.89	2.39	2.39	4.13	7.13	6.13	7.36	11.86	9.86
200	1.97	3.97	3.22	6.71	10.71	8.21	11.44	17.44	13.19
250	3.05	5.55	4.05	9.29	14.29	10.29	15.52	23.02	16.52
300	4.13	7.13	4.88	11.87	17.87	12.37	19.60	28.60	19.85
350	5.21	8.71	5.71	14.45	21.45	14.45	23.68	34.18	23.18
400	6.29	10.29	6.54	17.03	25.03	16.53	27.76	39.76	26.51
450	7.37	11.87	7.37	19.61	28.61	18.61	31.84	45.34	29.84
500	8.45	13.45	8.20	22.19	32.19	20.69	35.92	50.92	33.17

[a] Net prime earnings equal loan income minus average direct costs. The cost schedule underlying these figures is purely hypothetical, but it has been constructed to conform to direct cost data applicable to a loan department which has an average account of $150,000-200,000, and which operates at approximately its highest efficiency level in terms of direct cost (personnel and equipment, not including overhead). The direct cost schedule is based on the following items:

Cost of investigation and acquisition, per loan	$1.08
Service cost (collection) per payment	.103
Special delinquency collection, per loan per year	1.30
Bad-loan reserve, per $100 loaned	.84

[b] The combination charge includes $2 credit investigation fee, $1.50 per annum service charge and 5 percent per annum discount charge.

sizes of notes[20] and that the routine collection costs are constant per payment. Again, the special costs incurred in collecting delinquent accounts are spread uniformly over all loans and treated as a flat amount per year regardless of size and maturity; and the reserve for bad-loan charge-offs is charged on a percentage basis, so that it varies with the amount but not with the length of the notes. Finally, the cost schedules do not take account of the cost of money.[21]

Despite these qualifications some broad generalizations can nevertheless be drawn with reference to the profitability (net prime earnings) of personal loans of various sizes and lengths. Tables 55 and 56 show that larger loans are more profitable (or less unprofitable) than smaller loans, and that, with the exception of the very small loans, profitability is greater on the longer than on the shorter maturities. Table 55 indicates that on loans made at a 6 percent charge and according to Schedule A costs, the break-even point for a 6-month loan falls between the $150 and $175 sizes, for a 12-month loan between $100 and $125, and for an 18-month loan between $75 and $100. Break-even points for loans made according to the lower-cost Schedule B occur, of course, at lower amounts. On the basis of the 8 percent charge shown in Table 56, and of the cost schedule assumed in that table, the break-even point is reached between $50 and $75 for 6- and 12-month loans and between $25 and $50 for 18-month notes. Under the higher combination charge profitability increases also with both size

[20] It is assumed also that the cost is the same for all borrowers, although costs of investigation and acquisition are probably lower on loans made to former and repeat borrowers than on loans to new borrowers.

[21] Cost of money can be allowed for on any acceptable percentage basis since it will vary with both the amount and the length of the note. It is possible to obtain net prime earnings, inclusive of money cost, by deducting the cost of money on the average amount outstanding for any size of loan. The latter may be derived for a loan repayable in equal instalments by multiplication of the amount of note by $\frac{n+1}{2n}$, where n is the number of equal payments.

and length of note: this rate is found to yield a profit for all sizes and maturities of loans for which it has been computed.

In a state where a maximum inclusive personal loan charge is set by statute, say at 12 percent simple interest per annum on the average unpaid balance, the combination charge cited would result in an illegal rate for the smaller-sized loans. A combination charge set to conform to the legal maximum may be consistent with the latter only for loans of certain sizes and lengths. In Table 55, for example, the combination rate is consistent with the New York state maximum at $225 for 6-month loans and at $200 for 12-month and 18-month loans,[22] but it is not consistent with that maximum for loans of smaller size.

The foregoing discussion of the combination charge takes account only of loan profitability. It disregards the fact that a charge of this sort bears most heavily upon borrowers of small loans, who as a rule are least able to support the cost. Such a rate, furthermore, is not easily understood by the borrower, who for this reason cannot readily compare it with loan rates charged by other credit agencies.[23]

PERSONAL LOAN DEPARTMENT NET PROFITS

The personal loan departments of New York state banks reporting for 1938 showed a net profit of 5.7 percent on the average loan account before setting up reserves for losses and allowance for charge-offs, and a profit of 4.5 percent after provision for such reserves and charge-offs. If accounting accuracy is assumed, both profit rates appear to have been substantially in excess of rates earned by most banks on total

[22] Personal instalment loans running 18 months are not legal in New York state.

[23] See T. O. Yntema, "The Market for Consumer Credit: A Case of 'Imperfect Competition,'" *Annals of American Academy of Political and Social Science* (March 1938). See also R. A. Young and Associates, *op. cit.*, Chapter 7.

earning assets. Data covering profits on the entire banking activities of these banks are not available for comparison, but it is known that for 7,231 non-member insured commercial banks in the United States the profit rates on average earning assets were 2.6 and 0.7 percent, before and after charge-offs.[24]

Table 57 shows that of 55 New York state banks, 2 reported net profits amounting to 8 percent or over on average personal loan account, 30 between 4 and 8 percent, and 18 under 4 percent; 5 had net losses ranging up to 6 percent.

TABLE 57

Distribution of Two Classifications of Reporting New York State Banks, by Net Profits in 1938 per $100 of Average Loan Account[a]

NET PROFITS PER $100 OF AVERAGE LOAN ACCOUNT[b]	AVERAGE LOAN ACCOUNT			YEAR OF ORGANIZATION OF PERSONAL LOAN DEPARTMENT		
	$75,000 or Under	Over $75,000	Total	1936	1937	Total
Under 0 (net loss 0–$6)	4	1	5	4	1	5
$0–2	4	2	6	4	2	6
2–4	5	7	12	8	4	12
4–6	14	5	19	15	4	19
6–8	10	1	11	7	4	11
8 and over	1	1	2	2	..	2
TOTAL	38	17	55	40	15	55

[a] Based on data furnished by the New York state department of banking.
[b] Each level includes the lower figure and excludes the upper.

Banks with loan accounts of $75,000 or under had, in general, higher profit rates than banks with loan accounts in excess of this figure, a fact which may indicate that banks with smaller personal loan departments do not allocate overhead to these divisions as precisely as do those with larger volume.

[24] Computed from data on non-member insured bank earnings and expenses in Federal Deposit Insurance Corporation, *Annual Report, 1938,* pp. 216-17.

Only 1 bank with a loan account over $75,000 reported a net loss, and this loss was less than 1 percent.

Of the banks whose departments were organized in 1937, none had profit rates of 8 percent or more, and only 1 reported a loss (less than 1 percent). Four-fifths of these banks were distributed evenly in the three profit levels between 2 and 8 percent. On the basis of personal loan department net profits, the banks whose departments were organized in 1936 were more widely distributed, but in this group too the majority showed profit rates between 2 and 8 percent on average loan account and there was a marked concentration at 4-6 percent.

There is considerable interest in determining how large a loan account a personal loan department should have if it is to yield a profit. Available data do not serve to answer this question satisfactorily although some useful indications are to be found among questionnaire responses. A number of banks operating personal loan departments made estimates of the minimum annual volume of business necessary to render their departments profitable, taking into account existing personnel, prevailing charges and other relevant considerations. A wide variety of opinion was expressed in these replies, but they may be summarized within the following ranges based on number of employees: one full-time employee, $75,000-100,000; 2 to 4 full-time employees, $100,000-200,000; 5 to 10 full-time employees, $400,000-500,000; 11 to 25 full-time employees, $500,000-2,000,000. Such estimates, of course, are highly impressionistic; a closer inspection of costs by reporting banks might have produced different responses. As we have stated frequently, there is no agreement among banks as to accounting standards for allocating bank overhead to personal loan departments; nor is there any accord on the equally important question of whether the personal loan department should be charged with interest on the funds it employs.

COST OF SALES FINANCE PAPER

The cost characteristics of sales finance paper acquired by banks from dealers or from individual customers may be described broadly in terms similar to those applied in the preceding discussion to cash instalment loans. Costs per dollar of average sales finance outstandings, or costs per unit of paper handled, are likely, however, to differ in magnitude from similar costs for personal loans. If paper is acquired mainly from dealers or manufacturers, the cost of obtaining and maintaining dealer contacts must be considered. On the other hand, since it is the dealer who originally grants the credit, and since the customer establishes an equity in the article financed by his down payment, the credit investigation is usually less costly than that required for personal loans. The dealer's endorsement under a full recourse or repurchase agreement in effect shifts bad-debt loss to him, although it also necessitates special costs for credit investigation of the dealer by the bank.

Automobile paper probably carries lower per-dollar and per-unit costs than the typical personal loan contract. Frequently it is acquired through dealers or with their collaboration; for the most part the dealer assumes liability in the event of default by the purchaser, and he is therefore responsible for a prior credit investigation. Even when the bank assumes full risk of repayment the cost per dollar and per unit of paper acquired is probably lower than on personal loan paper, for the average size of automobile sales finance contracts runs higher than the average size of notes handled by personal loan departments. Then, too, the purchaser's equity, which is a strong deterrent to delinquency or permanent default, is relatively large in automobile contracts.

Routine collection or service costs probably do not differ appreciably as between personal loans and sales finance paper, but special delinquency costs may be much greater in sales

financing. In addition failure or dishonesty on the part of the dealer may create special costs not encountered in the personal loan business; such costs may arise in connection with both retail and wholesale paper. Again, the low interest rates which banks charge dealers for wholesale paper in order to obtain a share of the retail paper may result in wholesale loans that prove unprofitable. Dealer reserves in sales financing, set up to provide the dealer with a cushion against prospective losses, create an additional cost element; indeed competition with other sales finance agencies may cause banks to establish reserves above anticipated loss levels and thus to decrease their participation in the charge to the customer. Insurance is another special cost in retail sales financing, particularly of automobiles, although it may in practice yield a small income in excess of the expense.