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Summary of Findings

In any credit transaction, an element of uncertainty necessarily enters; the creditor can never be sure whether the debtor will fulfill his obligations. Most prospective credit transactions therefore receive critical analysis designed to enable the creditor to reject the most unsound deals, which might entail ruinous losses. Even so, some uncertainty of repayment remains, and the creditor must impose a charge high enough to provide a reserve to cover losses.

In consumer instalment financing, which includes cash lending on the instalment basis as well as the instalment financing of automobile and other retail sales, the risk problem is affected by the peculiar nature of the business. Transactions are small and numerous, for instalment credit is primarily designed to serve the masses of employed consumers with low incomes. As in all types of credit transactions, consumer loans are carefully investigated; but owing to the small size of the typical loan, the investigation is usually a rather simple, inexpensive, and routine affair; furthermore, the standards of the business are liberal so that the rejection of an applicant is the exception rather than the rule. Nevertheless, collection difficulties are not sufficient to make the business unprofitable. Charges are high enough to permit generous loss reserves and to cover the costs of handling small accounts; and the large number of cases handled makes diversification of risk an easy matter.

We began this study of instalment risk by asking a number of commercial bankers and retail merchants engaged in consumer financing what credit factors they considered indicative of good risk. From the large number of replies a fairly simple and consistent pattern was finally pieced together. By consensus of opinion the two most important credit considerations are the applicant's moral character, which is judged by his past payment record as well as by his general reputation, and the stability of his employment, which is a criterion of the permanence of his earning power. Of secondary importance are the applicant's current obligation to other creditors, his assets, the amount of the down payment in sales finance transactions, the length of the loan contract, and so on. The adjustment of the borrower's income to the amount of his monthly payments was also given secondary consideration—a fact that requires some interpretation. Creditors certainly insist, we believe, that an applicant's income shall be sufficient to permit him to repay his loan; in the course of the investigation, the amount of the income is almost invariably ascertained, usually from the applicant's employer, and then analyzed with a view to its sufficiency or insufficiency. Although lack of sufficient income would be a prime cause for rejection, the possession of a more-than-ample income does not seem to be regarded as a sign of particular merit.

After learning what credit factors are thought important by credit executives, we proceeded to test the factors statistically. The choice of an appropriate method for making the test was largely dictated by considerations of economy, since the difficulties of obtaining and tabulating data were serious. The method that offered the most promise was a sample analysis of two types of loans, those with satisfactory repayment experience and those entailing serious collection difficulties; and the samples were to consist of approximately equal numbers of each type of loan. The method has the advantage of great efficiency, probably assuring maximum efficiency with a minimum expenditure of labor; it has the disadvantage of not stating the risk problem in terms of costs.

A number of consumer financing institutions contributed samples of loans representing their good and their bad experience. For each loan pertinent information was provided covering duration of borrower's employment, nature of occupation, borrower's income, and other items commonly found on loan applications; no information relating to moral character or past payment record was provided, however, because of the difficulty of acquiring significant statistics.

The process of analyzing these samples and these data is best illustrated concretely. A sample of good loans and a corresponding sample of bad loans are both broken down according to the factor to be analyzed—say number of years applicant had been employed in his present occupation when he applied for his loan. The result is almost always the same: the good loans contain a larger percentage of borrowers with long periods of employment than do the bad loans, and the average number of years of tenure of occupation among the good loans is longer than that among the bad. This fact implies that in the past there has been a causal relation between stability of employment and good-loan experience, and that in the future, applicants with stable employment records are more likely to turn out well than those with unstable records. Stability of occupation, it will be remembered, is one of the factors considered extremely important by lenders.

In addition to stability of occupation, a number of other pertinent relationships were uncovered. Stability of residence, measured by the number of years applicant had lived at his present address, is more frequently associated with good loans, but the relation is less pronounced than for stability of employment. Borrowers with bank accounts are much commoner among good loans than among bad, and the same is true, though to a lesser extent, of borrowers possessing life insurance and owning real estate. Type of occupation is definitely related to credit risk, but there are so many difficulties in making a satisfactory study of risk experience by occupation that some reservation is necessary;

in general, professional persons and clerical employees appear to be good risks, whereas traveling salesmen and unskilled or semiskilled laborers appear to be poor risks. Women appear to be better risks than men, a fact that seems puzzling to a number of credit executives.

In the field of sales finance, the down payment is very important; measured either in dollars and cents or as a percent of the cash selling price, large down payments are generally associated with the better risks. In used-car financing, the purchasers of high-priced cars are the better risks, apparently because it is customary to demand a larger down payment, in dollars and cents, from the purchaser of a high-priced car. In new-car financing, the length of the loan contract appears to be important; samples of repossessions contain much higher percentages of long-term contracts than do samples of paid out accounts. But in used-car financing, contract length does not seem to have special significance.

In respect to a number of factors, the available evidence gives little or no indication of any relation to risk. Age of borrower, for example, seems to be related to risk experience, but the relationship is not very marked; older applicants are only slightly better risks than younger ones. The industry in which the borrower is employed is probably related to risk, but the samples on hand are too inconsistent to permit any reliable judgment; the same is true of the use to which the borrower intends to put the proceeds of his loan, which is relevant only to the cash lending business. The evidence on the asset items of ownership of automobiles or household goods, and on the liability items of charge accounts or other instalment accounts, is extremely inconsistent and generally unreliable. No significant evidence was found to indicate that the number of a borrower's dependents is related to risk. The same is true of marital status.

One of the most noteworthy findings of the entire study concerns borrower's income. A genuine, though not very pronounced relation between income and risk was found in the sales finance samples, but no relation whatsoever was found in most of the cash loan samples. This fact raises two questions: why is the relation not more pronounced—even in the sales finance samples; and why is there a difference in experience between sales finance and personal finance? A number of cogent explanations are possible, though none of them are verifiable by available statistics. The lack of an income-risk relation is partly explainable by the fact that samples of carefully selected loans do not contain paupers, unemployed persons, or cases of extreme overborrowing on a small income, so that the samples cannot reflect the influence of seriously inadequate income on loan experience; and partly by the supposition that the actual amount of the total income is much less significant than the stability of that income, the margin between income and expenses available to retire the indebtedness, and the probity and financial acumen of the applicant. The difference in experience between sales finance and personal finance companies may be due to two reasons: sales finance transactions are initiated by a merchant who expects his profit from the sale of the merchandise rather than from an interest charge; and the sales finance company usually has for security not only a chattel mortgage on the goods sold, but also the endorsement of the merchant who makes the sale.

In the course of the study, we introduce the "efficiency index," whose purpose is to show which of the credit factors studied are the most important, in view of the available evidence. This index permits comparison of the effectiveness of the different factors as indicators of risk; it does not measure the intrinsic importance of the factors, but rather their potential importance in the future selection of risks. A discussion of this index and its computation is presented at length in Chapter 2; in brief, a high index for a particular factor suggests that the factor is an effective measure for differentiating good risks from bad among loan applicants; a low index suggests that the factor is an ineffective measure for this particular purpose. Table 17 (Chapter 3, page 80) presents the more important factors investigated, with their efficiency indices as determined from the various institutional samples analyzed. The factor having on the whole the highest index is down payment in the sales finance samples; the most notable single instance is an index of 46 for percent down payment in the new-car sample. Length of loan contract has a high index of 36 in the new-car sample, but is otherwise unimpressive. Both bank account and tenure of occupation have indices that average over 20 for the four sample groups for which indices could be determined.

A review of the above findings is particularly interesting in comparison with the general opinions of the instalment financing business expressed by the commercial bankers and retail dealers whose views were obtained; a number of points of agreement and a number of points of divergence will be apparent. First, it is worth pointing out that our samples shed no light on the important questions of past payment record or character and reputation because of the difficulty of obtaining data. Agreement in the case of stability of occupation is almost complete: the consensus of opinion in the business is that this factor is of first-rate importance, and all our samples bear this out. There is disagreement, however, in the matter of down payment in sales finance transactions; according to our findings, down payment is a factor of primary importance, but the retail dealers whom we interrogated gave it only secondary emphasis. There is also disagreement in regard to assets and liabilities: our samples suggest that a borrower's assets, particularly a bank account, are more important than his liabilities, but the financing business lays more stress on liabilities than on assets. Finally, two factors, which were almost completely disregarded by the bankers questioned, stand out as fairly important in our analysis. These are sex and stability of residence. Several credit executives have expressed surprise that the loan samples show women to be considerably better risks than men, and they suggest that this result may be due to the indirect effect of other factors rather than to a simple, direct relationship.

Several credit-rating formulae were developed by means of a specialized statistical procedure; they will certainly be of more interest to students of statistical theory, however, than to practical credit executives. These formulae are presented primarily for purposes of illustration, to show that the findings on the individual factors can be consolidated, and that the resulting composite is more effective as an indicator than any of its components. In the matter of practical risk selection, the formulae are subject to a number of shortcomings that seriously impair their usefulness: (1) they fail to include important factors like moral character and past payment record, for which no data are available; (2) since they are based on samples of loans from which undesirable risks have been culled out by a suitable selection process, they will be useful only for culling out additional undesirables after the first selection has been made; (3) the theoretical considerations upon which the formulae rest, as well as the methods by which they are determined, are too complex to be understandable to any but trained mathematicians.

The findings of this study indicate that more careful selection of risks, with greater emphasis on possession of a bank account, stability of employment, a large down payment, and other factors, is almost certain to improve the quality of borrowers; but they do not indicate how far the improvement can be carried advantageously. Successful credit policy must be nicely adjusted to perform two almost contradictory functions: it must keep credit losses and collection costs within reasonable limits, and yet it must be liberal enough to encourage business. Since the function of the consumer credit business is to make credit available to the masses, the business is more inclined toward liberality for the sake of volume than it is toward restrictiveness for the sake of quality. If applicants were too carefully selected—if they were required to have bank accounts and stable employment records, and to make large down payments—a large share of the present borrowers would be excluded. There is practically no evidence to indicate that additional care in the selection of applicants would bring greater benefits to the business. For several decades the consumer credit business has been pursuing a liberal policy of serving the masses of consumers, and it has succeeded in avoiding undue losses.

The ultimate problem of credit analysis is not one of determining which classes of risks are good and which classes are poor, but rather of determining which of the poorer classes are so poor that they are unprofitable at the prevailing rates charged for credit. The method of analysis outlined in this study is not an entirely satisfactory approach to the question of profitability. In cases where precision is required, the only satisfactory method is a detailed and laborious analysis of the actual costs involved, but in many other cases the simplicity and inexpensiveness of our method will compensate for its lack of precision.

While it is not our purpose to discuss the social implications of credit policy, it is necessary to point out that the problem exists. The consumer credit business fills a real need by extending credit facilities to a large number of worthy borrowers who could not otherwise enjoy such facilities; but by extending credit to borrowers who are unable to repay the financial obligations thus assumed, the business provides an undesirable social influence. Although the social benefits of consumer credit cannot be enjoyed without some of the attendant ills, risk policy can be directed toward maximizing the benefits and minimizing the ills.