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8. Findings of the Study: A Conspectus and a Program

Anyone seeking to describe the transformation and growth of the United States economy during the past fifty years could not fail to stress the spectacular increase in the use of consumer credit. From its modest beginnings in aiding the purchase of pianos and sewing machines, credit has spread to automobiles, the many appliances which loom so large in modern living, and more recently to services such as travel and education. From a $3-billion level in 1920, consumer debt (exclusive of mortgage debt) had grown to $88 billion by 1965. Of this total, instalment debt accounted for $69 billion in 1965, compared with only $1 billion forty-five years earlier.

As total instalment debt has grown, the terms on which it has been extended and the kind of borrowers to whom it has been offered have changed, too. In the 1920's more than 80 per cent of all instalment contracts issued for the purchase of new automobiles matured in twelve months or less. By 1965, 86 per cent of all new-car loans were extended for periods of more than two and a half years. Almost 80 per cent of loans on used cars had maturities of more than two years.

Moreover, as the maturities on instalment loans lengthened secularly, the down payments tended to become smaller. While more than 80 per cent of all instalment contracts for automobiles provided for down payments of one-third or more of the purchase price in 1925, by the late 1950's only about 40 per cent of such contracts provided for down payments of as much as one-third. The evidence suggests that down payments have continued to ease since then.

As the terms have become less restrictive, the characteristics of the borrowers who enter into instalment credit contracts have changed as well. Debt holding has increased throughout the population, but it has

increased disproportionately among younger people and among those with higher real incomes. The stability of the incomes of the population as a whole, and no doubt of the borrowing population, has improved markedly.

In short, extensive changes in lending and borrowing standards or requirements–i.e., credit quality–have accompanied the growth in the volume of instalment credit. Thus far there has been, at most, only a moderate increase in the incidence of collection difficulties, but there remains the important question whether it is reasonable to expect this record to continue. We have attempted to investigate the possibilities in several ways. First, we have endeavored to establish whether loans extended on terms involving either lower down payments or longer maturities increase the risk of subsequent repayment difficulties. We have, similarly, sought to determine whether loans to certain types of borrowers are more likely to encounter trouble. Second, we have considered the question whether easing in one dimension is typically offset or reinforced by the lending standards imposed on loans in some other dimension. Thus we have investigated whether loans with low down payments generally have short maturities, or the reverse. We have, moreover, tried to find out whether loans with easy terms tend to be offered to borrowers with characteristics associated with poorer or better-than-average collection experience.

In considering the problem of predicting the degree of risk which attaches to loans of given characteristics at the time they are extended, it is necessary to take into account the effect of subsequent economic conditions on actual collection experience. We have examined the evidence on this point. Finally, we have attempted to compare the collection experience estimated in advance on the basis of various kinds of lending standards with that actually experienced later.

Our purpose in thus marshaling the evidence on the quality of consumer credit is a broad one. Lenders, of course, are continually evaluating credit quality in deciding whether to make individual loans and in setting up guidelines for the conduct of their business. Heretofore, however, the results of all these individual evaluations and decisions have not been widely known or generally considered on a broad scale. Yet shifts in the risk position of consumers and their creditors have become of great potential importance to the economic

prosperity of the nation. It was in order to contribute to a better understanding of this subject that this study was undertaken.

CONCLUSIONS

Our conclusions, which pertain almost exclusively to automobile credit, may be summarized as follows:

1. While there are many exceptions, for the most part loans granted with low down payments are generally loans with long maturities. This is true not only nationally but at regional and local levels also. Those parts of the country which have the lowest average down payment requirements are usually those with the longest average maturities.

2. Terms tend to vary systematically with certain borrower characteristics. Specifically, younger borrowers, wage and salary earners, and lower-income groups generally obtain longer maturities and make smaller down payments. Shorter maturities and larger down payments prevail among borrowers over 40; farmers, proprietors, and professional people; and higher-income groups.

3. Credit terms are significantly related to subsequent collection or repayment experience. Utilizing various kinds of data from the 1920's to the 1950's, we find that higher down payment requirements were quite consistently associated with lower delinquency, repossession, and loss rates. Shorter maturities were associated with smaller risk of credit difficulty in the case of new-auto loans, though less strongly than was the case with high down payments. In the case of used cars, short maturities typically have been associated with poorer performance. All these tendencies appear in national data, but are corroborated by regional and local analysis showing that those areas with the highest average down payments had the fewest credit difficulties.

4. Similarly, we find that certain borrower characteristics have been quite closely associated with credit risk, while others seem to have little or no bearing on the prospective risk. Characteristics which are closely related to subsequent experience include income, liquid-asset holdings, and life-cycle status.

5. By considering variations in the terms of loans obtained by the same type of borrower (i.e., those with similar characteristics), we

find that credit risk is not associated with one factor alone. Typically, the degree of risk is affected by both terms and some borrower characteristics, notably age, income, and liquid-asset holdings. The combined effect, on the average, for example, of low down payments granted to borrowers with characteristics associated with poor repayment experience makes the subsequent experience worse than either factor alone. On the other hand, restrictive terms can largely compensate for borrower characteristics associated with high risk, although this does not, in fact, appear to be typical practice.

6. The above conclusions suggest that one can, by careful consideration of the terms on which loans are offered and the characteristics of the borrowers to whom they are offered, determine broadly, at the time a given volume of loans is made, the degree of credit risk associated with this group of loans. Actual collection or repayment experience, however, is importantly affected by the business cycle as well—that is, by the changing fortunes of the economy in the period after the loans are granted. Viewed in the aggregate, delinquency, repossession, and loss rates rise during recessions and fall during business expansions. Moreover, we find that a pattern in the cyclical turning point of these rates appears quite consistently not alone in the national data but also in regional and local series. As the peak in the business cycle approaches, delinquency rates begin to rise first (often before the business downturn itself), while repossession and loss rates turn up later. A similar sequence appears at business cycle troughs, although the downturn in delinquencies has led the upturn in business less frequently.

7. Finally, we have attempted to discover how much of the variation in credit experience in recent years could be accounted for by the changes in lending standards considered earlier in our study. By taking into consideration what was found concerning the degree of potential risk attaching to groups of loans with different terms, an index of credit risk was constructed. The long-term trend in the index turns out to be similar to that in actual credit experience, but the wide fluctuations in the latter, largely attributable to the effects of prosperity and recession, are not reflected. The results suggest, therefore, that one can explain a considerable part of the change in credit experience by careful consideration and evaluation of the

average terms and borrower characteristics of a given volume of loans.

8. Our findings and their limitations point up sharply the need for better continuing statistical information concerning consumer credit terms and borrower characteristics, as well as the related credit risks. With more adequate information the relationships we have found could not only be tested periodically but more fully elaborated. Our ability to understand contemporaneous changes in the quality of consumer credit and their implications for borrowers, lenders, and the public generally hinges on the provision of such information.

A NEEDED STATISTICAL PROGRAM

From time to time in this report we have observed that the limitations of the data, both in translating characteristics of the credit transaction into estimates of risk and in comparing such risk estimates with actual credit experience, constitute a severe handicap. The risk indexes in Chapter 7 are limited especially by the fact that they do not take into account changes in borrower characteristics. Indexes of credit quality in whose validity one could place a higher degree of confidence, therefore, await the provision of data explicitly designed and developed for the purpose. Hence it is fitting to conclude this exploration of the problem with a brief list of the chief data requirements in this field.

1. *Periodic surveys, perhaps every three or four years, designed to relate (a) specific characteristics of credit contracts and the borrower's income and liquid asset position to (b) credit experience in terms of delinquency, repossession, or loss.* Such surveys can be most effective for the purpose if they sample "bad loans" at a high rate and "good loans" at a much lower rate, since the latter far outnumber the former. The results should be compiled in the form of cross-tabulations of several variables against credit experience rather than one variable at a time. Such a survey program would prevent the kind of situation that presently exists in which the most recent comprehensive information of this type is ten years old, and at least one important credit indicator (the dealer cost ratio) has been in existence for nearly ten years with no comprehensive test of its efficacy.

2. *Continuing monthly or quarterly surveys of new credit contracts which would report the terms of the contract and the borrower's*

income, liquid asset position, and other characteristics. It is important that the basic data obtained from these surveys and the tabulations made from them match precisely in concept and coverage those obtained from the periodic surveys mentioned in point (1) above. Otherwise the latter cannot be used effectively to interpret the current surveys.

3. *Continuing statistical analyses that would translate the results of (2) into quarterly estimates of credit risk on new credit contracts using the results of the most recent periodic survey described in (1).* This can be done from cross-tabulations in the manner described earlier in Chapter 7. In addition, experiments should be undertaken to utilize, by means of multiple regression techniques and computer programs, information on each individual credit contract in the continuing survey sample in order to translate that information into estimates of credit risk.[1] These techniques might eventually supplant the estimates based on cross-tabulations, since they are potentially more efficient in their use of the available information.

4. *Regular monthly or quarterly surveys of actual delinquency, repossession, and loss rates.* The number and dollar volume of contracts delinquent, repossessed, or charged off should be tabulated both by date when the delinquency, etc., occurred and by date when the contract originated. The coverage and other aspects of this survey should be such that the results are comparable with the estimate of credit risk obtained in (3). In this way a continuing evaluation of risk and credit experience can be carried out in the manner developed in Chapter 7.

5. *In all of the above, separate analyses for each of the major credit sources (sales finance companies, banks, consumer finance companies, credit unions) and for each of the several types of credit (automobile, appliance, personal loans).* Consideration should be given as well to the provision of regional as well as national information.

This is a large program. It can, however, be attacked in stages, if carefully planned. Moreover, a considerable effort is already being made, by individual companies, trade associations, and government

[1] Note Paul Smith's recent proposal along these lines utilizing lending terms and borrower characteristics for instalment loans made by a commercial bank ("Measuring Risk on Instalment Credit," *Management Science*, November 1964).

agencies, to obtain information of this type. But these efforts are largely uncoordinated and produce data that are difficult to compare and analyze.

Consumer credit has come of age. It involves the lending and repayment of enormous sums on a national scale. We hope that this volume has demonstrated both the need for and the potential value of dependable, up-to-date, and coordinated information on its quality.