Volume Title: The Quality of Consumer Instalment Credit

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Volume Publisher: NBER

Volume ISBN: 0-870-14484-7

Volume URL: http://www.nber.org/books/moor67-1

Publication Date: 1967

Chapter Title: The Relations Among Credit Terms, Borrower Characteristics, and Collection Experience

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Chapter URL: http://www.nber.org/chapters/c1460

Chapter pages in book: (p. 95 - 101)

5. The Relations Among Credit Terms, Borrower Characteristics, and Collection Experience

In the three preceding chapters we have examined the relations between credit terms and borrower characteristics, between credit terms and collection experience, and between borrower characteristics and collection experience. In each case there is a measurably large area of association, but an as yet unanswered question concerns the independent impact of terms and borrower characteristics on collection experience. To what extent do credit terms and borrower characteristics reinforce each other in regard to variations in collection experience? Are credit terms associated with collection experience merely because easy terms go to low income borrowers? Do low income borrowers occasion greater risk simply because they get easy terms?

In this chapter we utilize the Federal Reserve's 1954–55 Survey of New-Car Purchases to cross-classify loans by borrower characteristics and by credit terms, computing repossession and delinquency rates for the resulting groups. Hence it is possible for the first time to approach directly the question whether loans with liberal terms tend to be riskier than other loans *to the same type of borrower.* A considerable controversy has revolved around this issue, with some observers contending that borrower characteristics are fundamental, and terms incidental to quality. The analysis in preceding chapters of these relationships considered separately does not settle the matter, but the evidence which we will now consider supports the view that both aspects of the lending situation have an independent bearing on ultimate collection experience.

DOWN PAYMENTS AND BORROWER CHARACTERISTICS

We begin by examining repossession and delinquency rates for loans cross-classified by effective down payment and age of borrower (Table 36). It will be recalled from the earlier analysis that collection experience tended to improve with the down payment percentage and with the age of the borrower, considered separately. Both of these conclusions are corroborated in this table, but in addition it shows to what extent each factor is related to collection experience when the other is held substantially constant.

Within each age group, there is a fairly regular tendency for the repossession and delinquency rate to decline as down payments increase. The result is that, in all but one age group, bad-loan rates (repossession and delinquency) are more than four times as high when the effective down payment is less than 30 per cent than when it is 40 per cent or more.

The relationship of the borrower's age to repayment experience, holding down payment constant, seems clear only for the lowest down payment class. That is, when down payments are less than 30 per cent, there is a fairly steady decline in the bad-loan rate as age increases. When down payments are higher, age seems to make little difference—a not unreasonable result.

The effect of both factors taken together is shown by comparing the bad-loan rates in the upper left cells of the table with those in the lower right cells. The incidence of repayment difficulty for the youngest age group making the smallest down payment was six times as high as that for the oldest group making the largest down payment. The simultaneous consideration of the relation of both down payments and age to collection experience confirms, therefore, what the previous analysis of each led us to expect.

It should be noted that the present analysis is based on effective down payment rather than on contract down payment. The former is generally smaller than the latter, because it adjusts for the practice of overallowing on autos traded-in. In general, delinquency and repossession rates are higher in the latter case for the same percentage down payment. For example, collection experience with a 30 per cent contract down payment could be expected to be worse than that with a 30 per cent effective down payment. However, since the analysis in

TABLE 36

Collection Experience on Loans Cross-Classified by Effective Down Payment and Borrower Characteristics, 1954-55

	Number of Contracts				Bad Loan Rate				
	Effective Down Payment (per cent)				Effective Down Payment (per cent)			Average	
	Under 30	30-39	40 & over	Total	Under 30	30-39	40 & over	Un-wtd.	Wtd.
Age (years)									
Under 30	537	179	246	962	3.8	1.1	0.8	1.9	2.5
30–39	879	331	420	1,630	3.1	3.0	0.5	2.2	2.4
40–49	678	325	386	1,389	2.4	2.2	1.8	2.1	2.2
50 & over	518	190	326	1,034	2.7	1.1	0.6	1.5	1.8
Total	2,612	1,025	1,378	5,015					
Average, unwtd.					3.0	1.9	0.9	1.9	—
wtd.					3.0	2.1	1.0	—	2.2
Income in Year of Purchase ($)									
Under 3,000	192	55	76	323	3.7	3.6	2.6	3.3	3.4
3,000–4,999	717	250	340	1,307	4.1	2.4	0	2.2	2.7
5,000–7,499	977	417	457	1,851	2.6	2.4	1.3	2.1	2.2
7,500 & over	658	272	443	1,373	1.4	0.4	0.7	0.9	1.0
Total	2,544	994	1,316	4,854					
Average, unwtd.					2.9	2.2	1.2	2.1	—
wtd.					2.9	1.9	0.8	—	2.1
Liquid-Asset Holdings ($)									
None	441	118	118	677	8.6	5.1	1.7	5.1	6.8
1–499	904	323	284	1,511	2.6	1.8	0.7	1.7	2.2
500–1,999	587	244	377	1,208	0.5	2.0	0.8	1.1	0.9
2,000 or more	256	177	308	741	0.8	1.1	0.6	0.8	0.8
Total	2,188	862	1,087	4,137					
Average, unwtd.					3.2	2.5	1.0	2.1	—
wtd.					3.0	2.2	0.9	—	2.3

Source: Unpublished data from the National Analysts New Automobile Purchase Survey for the Federal Reserve Board.

Note: Contracts that could not be classified because information was lacking are excluded. The bad loan rate is the total number of delinquencies and repossessions expressed as a percentage of the number of contracts in the group. The unweighted averages are based on the rates in each row (or column) without taking into account the number of contracts in the respective row (or column).

Chapter 3 indicated that both methods of measuring down payments clearly distinguished the poorer from the better credit risks, the analysis here is limited to the effective down payment.

In the middle section of Table 36 we have the relevant information for assessing the effect of down payment percentages and the borrowers' income in the year of purchase on subsequent repossession and delinquency rates. Repayment experience tends to be more favorable the higher the income, within a given down payment class. Similarly, within a given income class, repossession and delinquency rates are generally lower when the effective down payment is large than when it is small.

The combined effect of low income and small down payment is strong indeed. The percentage of borrowers experiencing repayment difficulty (delinquency or repossession) is more than five times as high for those earning low incomes (under $3,000) and making small down payments (under 30 per cent) as for those earning high incomes ($7,500 and over) and making large down payments (40 per cent and over). The bad-loan rate for the former group is 3.7 per cent; for the latter, 0.7 per cent.

The bottom section of the table attests to the importance of liquid assets held by the borrower, independently of the down payment percentage, and vice versa. The decline in repossession and delinquency rates for borrowers without liquid assets in successively higher down payment groups is most striking. The decline is sharpest in the under 30 per cent down payment class, though still present in the higher classes. This is not unlike what was found in assessing the importance of age, and suggests that borrower characteristics may be more important in determining collection experience when down payments are low than when they are high, although down payments affect subsequent collection experience most when borrowers are in a less secure financial position.

Once again, the combined effect of both factors considered simultaneously can be seen by comparing the delinquency and repossession rates in the upper left cells with those in the lower right cells. The combined effect is such as to make the bad-loan rates on contracts with low down payments to borrowers with no liquid assets more than fourteen times as high as those to borrowers with large liquid-asset holdings who made substantial down payments.

It is important to recall that the Federal Reserve survey determined the borrower's liquid asset position as of the time of the interview, rather than as of the time the automobile was purchased. While there is undoubtedly some correlation between borrower's liquid asset positions at these two dates, we have no way of knowing how high it may be.[1] Hence, we have no way of knowing how frequently the circumstances which led to repayment difficulty also led to depletion of liquid assets.

MATURITIES AND BORROWER CHARACTERISTICS

The information on maturities available from the Federal Reserve's 1954–1955 Survey of New Car Purchases can be cross-classified with the borrower's age, income, and liquid-asset holdings in the same way that down payments were treated in the previous section (Table 37). The difficulties described in Chapter 3 in interpreting the survey data on the relationship of maturities to loan experience need to be kept in mind. In particular, the low incidence of collection difficulty on the longest-maturity loans, which shows up throughout, may be spurious, and our discussion of this problem in Chapter 3 is relevant. This problem is especially important in the personal interview sample, which we must rely on here since information on borrower characteristics was not available from the lender reports. The results *within* maturity groups are not affected by the difficulties mentioned and are therefore more firmly established.

Since, in general, the maturity tables reveal the same pattern as those pertaining to experience within down payment groups, we can be brief. The relationship of repayment difficulty to age of borrower is plain only for the longer maturities, a result consistent with that observed for down payments, where the effect of age appeared clearly only in the lowest down payment class. In the case of income and liquid assets, however, a strong relationship appears within each maturity class, as indeed it did within each down payment class. The

[1] Some evidence of the correlation is provided by the fact that among those who made large down payments the proportion who had substantial liquid assets was much larger than among those who made small down payments, which is what one would expect if the liquid assets were reported as of the time the loans were made.

TABLE 37

Collection Experience on Loans Cross-Classified by Original Maturity and Borrower Characteristics, 1954-55

	Number Of Contracts				Bad Loan Rate				
	Original Maturity (mos.)				Original Maturity (mos.)			Average	
	Under 30	30-35	36 & over	Total	Under 30	30-35	36 & over	Un-wtd.	Wtd.
Age (years)									
Under 30	467	359	136	962	1.9	3.6	1.5	2.3	2.5
30–39	842	540	260	1,642	2.1	3.9	1.9	2.6	2.7
40–49	807	412	173	1,392	2.3	2.4	0.6	1.7	2.2
50 & over	600	277	155	1,032	1.8	1.8	1.3	1.6	1.8
Total	2,716	1,588	724	5,028					
Average, unwtd.					2.1	2.9	1.3	2.1	—
wtd.					2.1	3.1	1.4	—	2.3
Income in Year of Purchase ($)									
Under 3,000	166	120	39	325	3.0	4.2	2.6	3.2	3.3
3,000–4,999	614	488	210	1,312	2.3	4.5	2.0	3.0	3.0
5,000–7,499	969	594	291	1,854	2.1	2.6	1.7	2.1	2.2
7,500 & over	864	349	162	1,375	1.2	0.6	0	0.6	1.0
Total	2,613	1,551	702	4,866					
Average, unwtd.					2.1	3.0	1.6	2.3	—
wtd.					1.9	2.9	1.5	—	2.2
Liquid Asset Holdings ($)									
None	278	300	107	685	7.9	7.7	4.7	6.7	7.3
1–499	669	567	273	1,509	2.2	2.1	1.8	2.0	2.2
500–1,999	679	375	158	1,212	0.9	1.3	0	0.7	0.9
2,000 or more	545	123	75	743	1.1	0	0	0.3	0.8
Total	2,171	1,365	613	4,149					
Average, unwtd.					3.0	2.8	1.6	2.5	—
wtd.					2.2	2.9	1.7	—	2.3

Source: Unpublished data from the National Analysts New Automobile Purchase Survey for the Federal Reserve Board.

Note: Contracts that could not be classified because information was lacking are excluded. The bad-loan rate is the total number of delinquencies and repossessions expressed as a percentage of the number of contracts in the group. The unweighted averages are based on the rates in each row (or column) without taking into account the number of contracts in the respective row (or column).

influence of maturity itself, however, is much less apparent, partly because of the peculiarities of this survey which were discussed in Chapter 3.

SUMMARY

The evidence points to the conclusion that both loan terms and borrower characteristics are independently related to ultimate collection experience, and that both should be considered in estimating the prospective quality of consumer instalment credit. When loan terms are sufficiently restrictive, they can largely compensate for borrower characteristics that are associated with less favorable credit experience. On the other hand, the granting of easier terms to borrowers with less satisfactory characteristics can produce less favorable collection experience than either factor alone. This is particularly true of the combined effects of borrower characteristics and down payment ratios. The effect of lengthening maturities is apparently less significant, but a firm conclusion on this point is impossible because of deficiencies in the data available for analysis.