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Chapter Title: Credit Terms and Subsequent Collection Experience

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3. Credit Terms and Subsequent Collection Experience

The question treated in this and the next chapter is whether the ultimate collection experience with a particular group of instalment credit contracts (though not the ultimate experience on any single contract) can be approximately determined at the time the credit is advanced. If a favorable answer can be given, it should be possible to establish whether, for many lenders or for the country as a whole, loan quality is deteriorating or improving to a significant extent at any given time. It should also be possible to establish whether loan quality is related to changes in loan volume, as well as to other objective factors in the consumer credit situation.

The existence and significance of such relationships, of course, remain to be established. At this point we wish merely to inquire whether the lender is able to predict to some degree the ultimate experience with a group of loans meeting certain standards with respect to loan terms or borrower characteristics.

We must state at once, however, that an affirmative answer to this question does not necessarily imply that the actual experience with a given group of loans is closely predictable. This actual experience may depend importantly on the character of the business situation that develops while the loans are outstanding, as well as on other developments affecting the borrowers' ability to repay. What we are seeking to answer is whether, *given* the character of the future situation, the experience with one group of loans is likely to be better than with another and by how much. If the future situation is prosperous, experience may be favorable with all groups, though relatively less with some than others; if a depression comes along, experience may be unfavorable with all groups, but again relatively less so with some than

others. Can this *relative* experience be determined approximately in advance?

It is not intended here to discuss at length the process whereby credit standards are determined by individual lenders and loans are actually made. Nevertheless, it is important to touch upon the thinking involved in lending and fixing loan standards in order to explain the empirical evidence that follows. To begin with, it is self-evident that loans are screened in some fashion to assure the lender that the loan is being sought in good faith with every intention of repayment. Thus, a substantial proportion of every credit investigation is devoted to verifying the honesty of would-be borrowers with respect to their business dealings. Beyond these minimum requirements for the prevention of fraud, however, lenders must satisfy themselves as to the present and future ability of the borrower to repay the loan, the likelihood that the borrower will remain willing to repay, and the adequacy of collateral or legal remedies in the event that the borrower does not repay. Lenders have for years summarized this by saying that lending standards are based upon the "character, capacity, and collateral" of the borrower. The borrower's income, his previous commitments, the stability of his occupation, and whether he is at a station in life in which the desire and social pressure to repay the debt are paramount—all these factors may be considered. Often, however, judgments must be based on rather sketchy evidence and analysis.

The fixing of credit standards rests in part on certain general lines of reasoning. Obviously the risk of default is greater the smaller the borrower's equity and the longer the time for repayment, since a longer period may encompass more drastic changes in ability to repay. Obviously, persons in occupations with regular and predictable income tend to be better risks than those in occupations with variable and unpredictable incomes. Less obvious but still amenable to logical analysis is the tendency for the lender's risk on a loan for a durable good to increase as maturities are lengthened and down payments reduced, because the market value of a consumer durable depreciates more rapidly in the earlier than in the later part of its life. Out of such considerations are forged the credit standards of individual lenders, modified, of course, by competitive pressures, by actual loss and recovery experience, by changing evaluations of risk, and by changing opportunities to recoup losses from finance charges or to shift risks to others.

In considering the evidence on loan experience, it is again necessary to take into consideration the fact that the statistical record is based on loans that have already been subjected to lender selection. All the loans making up the experience have already been screened for moral risk, terms have normally been adjusted to make repayment possible within the scope of the purchaser's budget, and unusual risks in one direction may have been balanced by more strict loan or collateral conditions in another direction. Preselection of loans and tailoring to counter-balance unusual risks with stricter conditions accordingly are reflected in the experience statistics.

It is important to note also that only rarely is the avoidance of loan losses and collection difficulties the prime determinant of lending standards. While each lender differs somewhat in what he regards as his policy, those who try to maximize their net revenue generally will lend to a given class of borrowers if the anticipated return at least covers the additional expense of the loan including collection difficulties and the additional expected losses to be incurred by accepting poorer quality loans. In some circumstances individual lenders will accept poorer quality credit risks at a higher schedule of finance charges. For example, most lenders accept loans secured by used cars at higher interest rates than on loans on new cars. Moreover, for the economy as a whole, an informal structure of lending institutions exists, with some firms taking mostly prime quality consumer paper, others taking less attractive loans at higher rates, and still others lending to extremely poor risks at high and sometimes illegal rates of interest. Accordingly, quality changes may take place not only through shifts in the individual lender's loan standards but also through shifts in the volume of business done by financing institutions with differing standards.

There is a great deal of scattered (and frequently unsatisfactory or unreliable) material which purports to relate collection difficulty or loss to the terms of the loan, the characteristics of the borrower, and even the type and condition of the collateral. While its examination here is neither complete nor definitive, we attempt to view these relations in more consistent fashion than has heretofore been possible.

We have chosen to use two convenient methods of quantifying loan experience as a measure of loan quality. The first method, that of calculating delinquency, repossession, or loss rates, involves computing

for each category of loan—say those on which the down payment was less than one-third—the percentage that loans with collection difficulty or loss constituted of total outstandings or volume per period in that same category. The second method, that of computing “bad loan relatives,” requires that the percentage a particular category of loans makes up of total bad loans (loans on which collection difficulty or loss is sustained) be divided by the percentage that this same category makes up of total good loans. If, for example, 40 per cent of the bad loans were in the group on which a down payment of less than one-third had been obtained, whereas among the good loans only 20 per cent were in this low down payment category, the bad-loan relative would be $40/20 = 2.0$. It would indicate that the actual bad-loan rate (derived by the first method) on low-down-payment loans would be about twice as high as the average rate on all loans.¹ Occasionally, we shall use the percentage distribution of all loans, instead of good loans, for the denominator of the bad-loan relative. This makes the bad-loan relative a precise index of the actual bad-loan rate when the samples of good and bad loans are in proper proportions, but in practice the two variants of bad-loan relatives yield similar results. The relation between the first measure and the two variants of the second is shown by the following hypothetical example:

<i>Item</i>	<i>Down Payment Percentage</i>		
	<i>Under 33 per cent</i>	<i>33 per cent and over</i>	<i>Total or Average</i>
Number of loans:			
1. Repossessed	1,000	1,500	2,500
2. Not repossessed	9,000	38,500	47,500
3. Total	10,000	40,000	50,000
Percentage distribution of loans:			
4. Repossessed	40	60	100
5. Not repossessed	19	81	100
6. Total	20	80	100
Repossession rate (method 1):			
7. Line 1 ÷ line 3	10.00	3.75	5.00
Bad-loan relatives (method 2):			
8. Line 4 ÷ line 5	2.11	0.74	1.00
9. Line 4 ÷ line 6 (or line 7 ÷ col. 3)	2.00	0.75	1.00

¹ The second method does not require information on the actual proportion of bad loans, and provides only an index of the way this proportion varies among categories. The advantage of this method for studies of loan experience

If we are to utilize the several available samples, we cannot adopt a uniform definition of a bad loan or unfavorable collection experience. Several sources provide repossession rates, one covers repossession as well as other forms of delinquency, others give actual loss rates or loans charged off, and one allows the lender to define unfavorable collection experience.² It is conceivable, accordingly, that inconsistent results will appear if loans of a given class result in a great deal of delinquency but little dollar loss because of the ultimate collection of most of the funds in question. For the purpose of extending the available data, some experience on unsecured loans has been included even though these types of loans are ordinarily not used for the purchase of durable goods, the type of transaction upon which this report is focused.

A final shortcoming of most of the available data must be mentioned. With rare exceptions the loan experience samples are classified by only one criterion at a time. That is, they show the experience on loans with less than one-third down payment, or on loans with a term of more than thirty months, but not on loans with less than one-third down *and* a term of more than thirty months. The evidence discussed in Chapter 2 showed, however, that the several characteristics by which loans are classified are associated with one another—e.g., long maturities and low down payments often go together. As a result, it is difficult to determine to what extent differences in loan experience are associated with the particular characteristic being observed rather than with some other one that is tied to it. In some cases the influence of the other factor or factors may completely obscure that of the characteristic underlying the given distribution. We shall illustrate some important instances of this sort below, but the possibility of effects of this sort should be kept in mind throughout.

In reviewing the evidence on the relation between the terms on which loans are made (primarily the size of the down payment and the length of time the loan contract has to run) and the subsequent

is that it permits oversampling of bad loans, which ordinarily occur infrequently, thereby reducing sampling variability and increasing the firmness of conclusions concerning the characteristics differentiating good and bad loans.

² The analytical advantages and disadvantages of four major measures of collection difficulty are discussed in Appendix C. One of these, renegotiations of loans with an extension of the repayment period, has not been included in our bad-loan category because such extensions are ambiguous—they can reflect credit difficulty or simply the desire to free funds for further purchases. Moreover, few data are available on loan extensions.

collection experience, we shall first deal briefly with the various analyses of this material that have appeared since the 1920's. Next we shall consider new data that have been developed from the Federal Reserve Survey of New Car Purchases in 1954-55. Finally, we shall analyze certain new data on loan terms and collection experience in different sections of the country.

CONSPECTUS OF EVIDENCE
FROM THE 1920'S TO THE 1950'S

The several analyses of the relations between loan terms and subsequent collection experience developed by previous investigators enable us to consider separately the relation of down payments and of maturities to collection experience for a number of periods scattered over a thirty-year span.

Table 24 presents the earliest data we have found bearing on the relation of down payment percentages and collection experience. It shows clearly that in the earlier history of automobile instalment credit, repossession rates were consistently higher for loans with a small down payment than for those with a substantial down payment in terms of percentage of purchase price.

This relation has not changed markedly from the 1920's to recent years. All the evidence in Chart 7 and Table 25, as well as in Table 28 in the next section, shows that repossession and loss rates are higher, on the average, when the down payment is small than when it is large. This is true of used cars as well as new cars, although collection experience with a given down payment percentage is materially worse for used than for new cars. Since the data are so varied and the samples so limited, it is not possible to make precise comparisons. For example, the practice of "writing up" both the trade-in and the purchase price of the new car and thereby raising the down payment percentage, a practice that probably became more prevalent in the 1950's than formerly, makes doubtful the precise comparability of the figures, both within a given sample and from year to year.³

³ To avoid some of these problems the Federal Reserve Board in 1956 began collecting data on contract balance as a percentage of dealer cost, a type of loan-to-value ratio, thereby avoiding the problem of defining the "true down payment" altogether. Although this "dealer cost ratio" is analytically more precise, its introduction has had the unfortunate effect of making comparisons with earlier data on down payment percentage virtually impossible.

TABLE 24

*The Relation of Down Payment Percentage to Repossession Rate,
New and Used Automobiles, 1925-30*

Down Payment Percentage							Average,
	1925	1926	1927	1928	1929	1930	1925-30
<i>Repossession Rate (per cent)</i>							
New cars:							
Under 25 per cent	11.0	11.5	n.a.	n.a.	n.a.	n.a.	12.0 ^a
25 per cent	3.8	4.0	5.9	4.1	5.1	4.6	4.6
33 1/3 per cent	1.7	2.1	2.7	2.8	2.8	3.6	2.6
Used cars:							
35 per cent or less	6.2	8.6	6.9	10.9	9.0	9.8	8.6
40 per cent	3.0	4.3	5.2	5.3	5.3	6.5	4.9

Source: "Composite Experience of Finance Companies and Automobile Dealers," a mimeograph statement of the National Association of Finance Companies, April 13, 1931.

^aEstimated by raising the 1925-26 average by 0.7 percentage points, which is the excess of the 1925-30 average over the 1925-26 average for the other two down-payment classes.

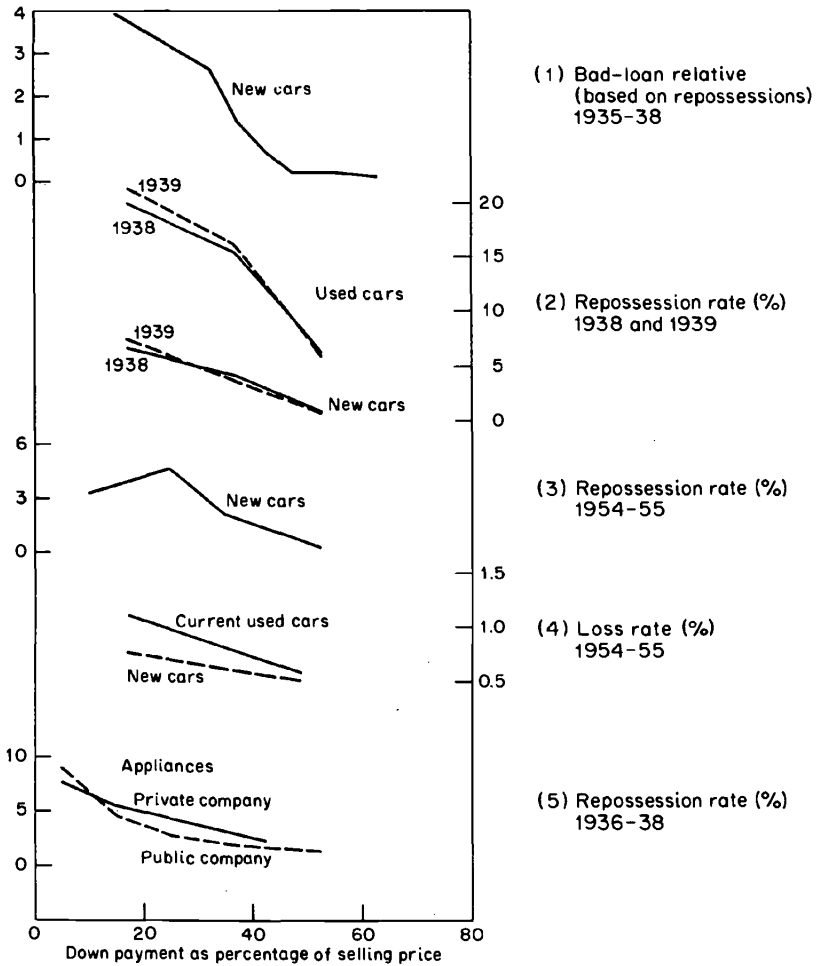
n.a. = not available.

Evidence from one large sales finance company that repossession rates are lower the lower the dealer cost ratio on new cars and the lower the percentage of wholesale value financed on used cars is given for 1958 and 1959 in Paul W. McCracken, James C. T. Mao, and Cedric V. Fricke, *Consumer Instalment Credit and Public Policy*, Ann Arbor, Mich., 1966, p. 138. For more comprehensive but indirect evidence, see our analysis of the dealer cost ratio in Chapter 7 and Appendix H. As noted below, even though the down payment percentage is an imperfect measure of borrowers' equity, every study of it has shown it to be closely associated with loan experience.

The relation between loan experience and the length of time given for repayment seems to be more complicated. The earliest evidence bearing on this, pertaining as before to 1925-30, suggests that the

CHART 7

The Relation of Down Payment Percentage to Subsequent
Repossession and Loss Experience



SOURCE: (1) David Durand, *Risk Elements in Consumer Instalment Financing*, New York, NBER, 1941, Table 9, p. 61. (2) G. A. Ames, "Our Responsibility to Consumer Credit," talk given at the National Instalment Credit Conference, sponsored by the American Bankers Association, Chicago, March 25, 1953. (3) See Table D-1. Unpublished lender report data from National Analysts Survey of New Car Purchases for Federal Reserve Board, 1954-55. (4) E. F. Wonderlic, "Control of Losses in Instalment Credit," *Time Sales Financing*, February 1956. (5) Wilbur C. Plummer and Ralph A. Young, *Sales Finance Companies and Their Credit Practices*, New York, NBER, 1940, Table 46, p. 184.

TABLE 25

*Bad-Loan Relatives by Down-Payment Percentage, Based on
Repossessions, Automobile Contracts, 1954-56*

Down Payment Percentage	Bad-Loan Relative ^a		
	Jan. 1954	Jan. 1955	Jan. 1956
New cars:			
Under 33 per cent	3.3	2.5	2.2
33-40 per cent	1.6	1.3	1.0
Over 40 per cent	0.2	0.2	0.2
Used cars:			
Under 33 per cent	1.4	1.4	1.3
33-40 per cent	1.2	1.1	1.1
Over 40 per cent	0.4	0.5	0.5

Source: A large sales finance company, NBER Consumer Credit Quality Study.

^aComputed by dividing the percentage distribution of repossessions in January by the corresponding percentage distribution of all accounts purchased during the preceding calendar year.

losses on loans with longer maturities were higher (Table 26). More recent evidence is shown in Chart 8 and Table 27. These materials indicate some of the complications which ensue from a consideration of maturities. Chart 8 shows bad-loan relatives and repossession and loss rates for various samples ranging from signature loans to automobile loans. Each of the samples pertaining to loans on new cars and appliances shows that collection difficulties increase as the maturity of the contract is lengthened. On the other hand, the loans on used cars exhibit more favorable experience on the longer maturities, and the evidence on personal or unsecured loans is mixed.*

Interviews with lenders suggest that the reason for the poor ex-

*Some further evidence on maturities in relation to loan experience which broadly supports the above results for new and used cars and personal loans is presented for 1958-59 by McCracken, Mao, and Fricke, *Consumer Instalment Credit*, p. 139, and for 1952-58 by Paul Smith, "Measuring Risk on Instalment Credit," *Management Science*, November 1964.

TABLE 26

*The Relation of Loan Maturity and Repossession Losses,
Automobile Contracts, 1925-30*

Length of Contract	1925	1926	1927	1928	1929	1930
<i>Average Direct Loss Per Repossessed Car, In Dollars</i>						
12 or fewer equal monthly payments	50	65	43	56	60	61
13 to 18 equal monthly payments	78	94	58	75	n. a.	n. a.
Over 18 monthly payments or balloon note	220	158	n. a.	n. a.	n. a.	n. a.

Source: "Composite Experience of Finance Companies and Automobile Dealers," a mimeographed statement of the National Association of Finance Companies, April 13, 1931.

n. a. Not available.

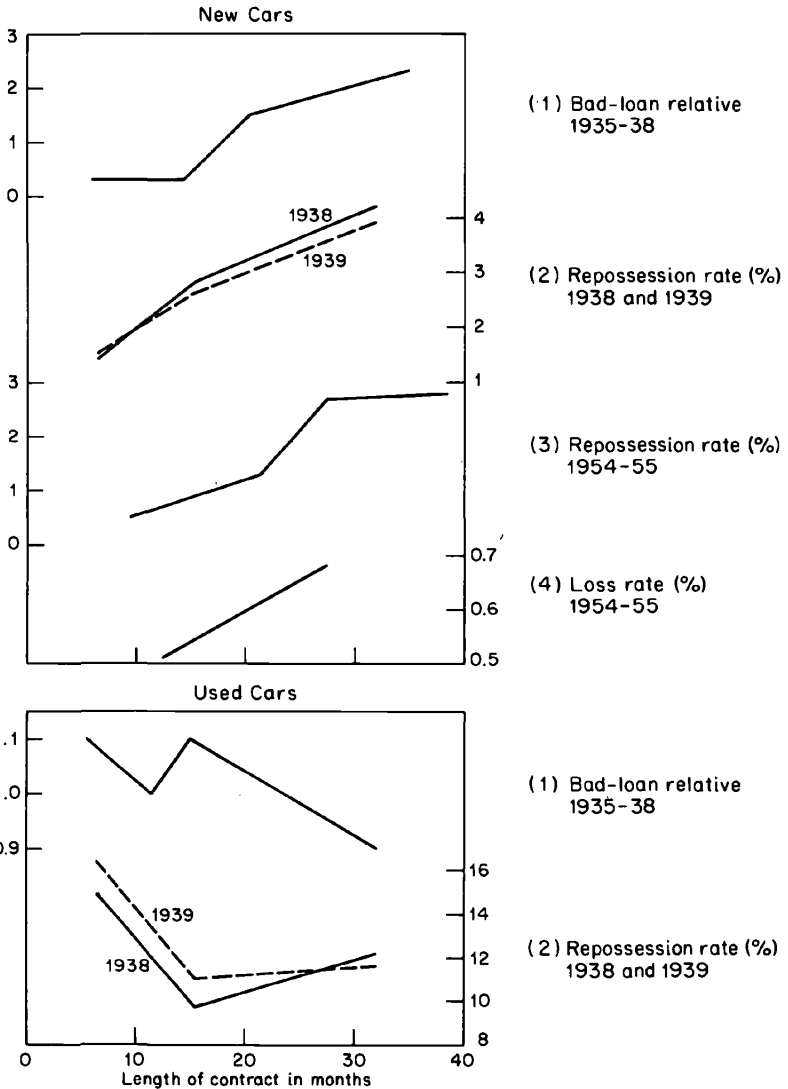
perience on used-car loans of extremely short maturities is that the short-maturity loans are generally on the cheapest cars, purchased usually by the poorest credit risks. This is to some extent borne out by Durand's findings, which indicated very little difference in collection experience on new cars of different price ranges up to \$1,500 (1938 price levels), but that the incidence of collection difficulty for used cars selling for under \$200 was about three times that for cars selling for over \$600. In order to establish the point definitely, however, loans should be cross-classified by maturity, selling price, down payment percentages, and so on. An experiment of this sort has been made with the limited data available and is considered below.

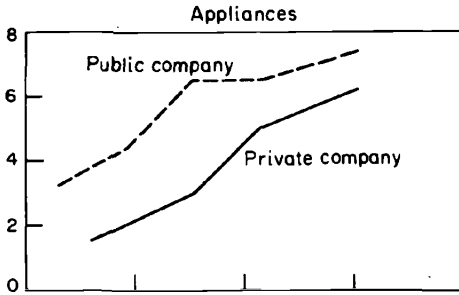
THE 1954-55 SURVEY OF NEW-CAR PURCHASES

The results described above can now be supplemented by special tabulations from the Federal Reserve survey of new-car purchases in

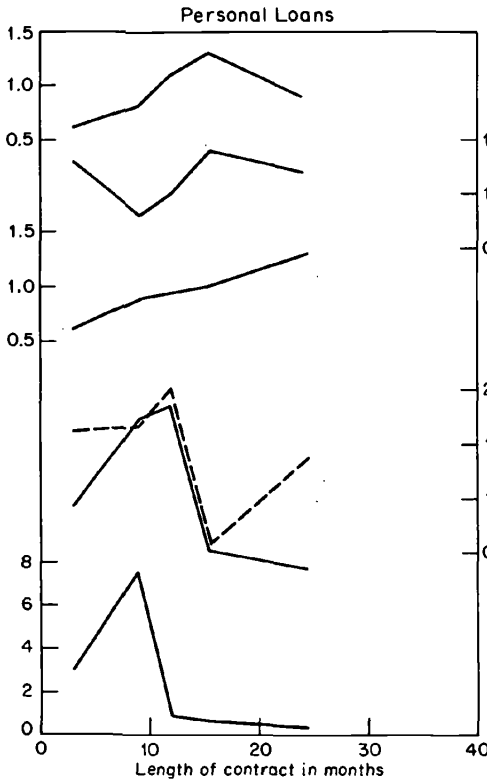
CHART 8

The Relation of Length of Contract to Subsequent Repossession and Loss Experience





(5) Repossession rate (%), 1936-38



(1) Bad-loan relative, 1935-38

- 21 commercial banks
- 10 industrial banks
- 2 personal finance companies

(6) Bad-loan relative, 1950-51

- 7 consumer finance companies
- 6 credit unions
- 7 commercial banks

SOURCE: (1) *Risk Elements*, Table 6, p. 54. (2) Ames, "Our Responsibility to Consumer Credit." (3) See Table D-4. Unpublished lender report data from National Analysts Survey of New Car Purchases for Federal Reserve Board, 1954-55. (4) Wonderlic, "Control of Losses in Instalment Credit." (5) Plummer and Young, *Sales Finance Companies*, Table 47, p. 186. (6) W. David Robbins, *Consumer Instalment Loans*, Columbus, Ohio, 1955, Table 34, p. 106.

TABLE 27

Bad-Loan Relatives by Length of Contract, Based on Repossessions by a Large Sales Finance Company, 1954-56

Length of Contract (months)	Bad-Loan Relative ^a		
	Jan. 1954	Jan. 1955	Jan. 1956
New cars:			
12 or less	.9	.7	.7
13-18	.9		
19-24	1.0	1.1	.8
25-30		1.1	1.2
Over 30	1.2	1.2	1.2
Used cars:			
12 or less	1.3	1.3	1.3
13-18	1.0	.9	1.0
19-24	.6	.6	.6
Over 24	1.0	.8	.7

Source: NBER Consumer Credit Quality Study.

^aComputed by dividing the percentage distribution of repossessions in January by the corresponding percentage distribution of all accounts purchased during the preceding calendar year.

1954-55.⁵ Two independent tests of the relation between down payment ratio and subsequent collection experience, as measured by delinquency and repossession rates, are shown in Table 28, cols. 3 and 5—one using data from lender reports; the other, personal interviews of borrowers.⁶ According to the lender report data, with the exception

⁵ Some of the tabulations were made for the National Bureau of Economic Research by National Analysts, Inc., the concern that conducted the survey. For others we are indebted to the Division of Research and Statistics of the Federal Reserve Board. The tabulations are based on what was termed the "replicated sample" of loans, as explained in the Appendix to Part IV of *Consumer Instalment Credit*. Briefly, the individual loan cards were replicated to allow for changes in the ratio of the sample (550 loans every month) to total loan volume (which, of course, varied) and also for nonresponse items. The replication rate was 1.9; that is, the replicated number of loans was nearly twice the actual number.

⁶ This important feature of the survey not only permitted validation of the findings from both the lender and the borrower but also provided information from the borrower that the lender did not have and vice versa. Many of the data used in this study have been derived from the personal interview materials,

TABLE 28

Credit Terms and Collection Experience on New-Car Loans, 1954-55

Contract Down- Payment Ratio (%)	Lender Report Sample		Personal Interview Sample		Effective Down- Payment Ratio (%)		Personal Interview Sample		Lender Report Sample		Personal Interview Sample					
	No. of Con- tracts (1)	Bad Loan Rate (%) (2)	No. of Con- tracts (3)	Bad Loan Rate (%) (4)	Under 20.0	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-49.9	50.0 & over	Total	No. of Con- tracts (9)	Bad Loan Rate (%) (10)	No. of Con- tracts (11)	Bad Loan Rate (%) (12)
Under 20.0	346	8.4	311	3.5	Under 20.0	1,382	4.2	Less than 18	856	1.3	556	2.3				
20.0-24.9	429	13.8	275	6.2	20.0-24.9	659	1.7	18-23	687	2.4	492	2.2				
25.0-29.9	1,084	11.9	533	3.2	25.0-29.9	581	2.9	24-29	3,021	4.9	1,674	2.3				
30.0-34.9	1,797	6.7	991	3.7	30.0-34.9	615	1.8	30-35	3,080	7.8	1,597	3.3				
35.0-39.9	1,127	5.8	695	1.9	35.0-39.9	413	2.4	36 & over	1,232	7.9	728	1.3				
40.0-49.9	1,438	2.4	920	1.5	40.0-49.9	562	0.9	Total	8,876	5.8	5,047	2.5				
50.0 & over	1,793	1.8	1,322	0.8	50.0 & over	822	1.0									
Total	8,014	5.8	5,047	2.4	Total	5,034	2.4									

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

Note: The bad-loan rate is total number of delinquencies and repossessions expressed as a percentage of the number of contracts in the group. Contracts that could not be classified because information was lacking are excluded.

of the smallest down payment group, the repossession and delinquency rate falls steadily as the contract down payment ratio increases. The personal interview data (col. 5) present a similar though weaker pattern.⁷

In both cases it is clear that loans on which the contract down payment ratio fell below 35 per cent had markedly inferior collection experience. The broad relationships are similar despite the fact that the frequency of collection difficulty disclosed by personal interview was substantially less than that reported by lenders.

The Federal Reserve survey adopted a special method for handling the difficult problem mentioned above of estimating the degree to which stated down payment percentages are altered by the large variation in trade-in allowances given on new-automobile instalment contracts. The method, which involved an effort by the interviewers themselves to estimate the degree of overallowance on trade-ins, is admittedly subject to considerable error.⁸ Both the size of the contract

because the lender reports included few questions on borrower characteristics. For a detailed account of the survey method, definitions, and sampling procedure see Volume VI of the Federal Reserve Board's report.

In Table 28 and subsequent text tables the number of loans reported delinquent and the number on which repossession had occurred are combined to produce a bad-loan rate. The separate data for the two categories, which are given in Appendix D, provide more information by distinguishing a more serious from a less serious form of credit difficulty. However, the combined data are less subject to erratic sampling variations and also eliminate the tendency, in this survey, for offsetting variations to occur between contracts classified as repossessed and as delinquent. This occurs because contracts recorded as repossessed undoubtedly were delinquent at an earlier date but are not so recorded (except in a very few instances). Hence the repossessions in effect remove an equivalent number of contracts from the delinquent category. Another way to regard the combined repossession and delinquency rate, therefore, is to say that it represents a more comprehensive delinquency rate (assuming all repossessions were initially delinquent).

⁷ If, therefore, it is true, as the credit industry has long maintained, that it scrutinizes carefully the credit records and other pertinent characteristics of the borrowers to whom it grants loans involving the lowest initial equity, the effects show up only in the lowest (under 20 per cent) down payment class, where in fact the collection experience is somewhat better than in the next higher class. The explanation for this deviation from the over-all pattern might lie, at least partially, in the compensatory screening of these prospective borrowers. However, the general pattern suggests that the credit industry does not, as a rule, offset liberal loan terms with stricter borrower standards. Cf. Chapter 5, especially Table 36, which also suggests that the notion of offsetting the risks attendant on easy terms with higher standards for borrowers does not generally hold.

⁸ For a detailed discussion of the method, see *Consumer Instalment Credit*, Part IV, pp. 136-137.

down payment and the contract price were adjusted by the estimated amount of overallowance on trade-ins. The result gave what the Federal Reserve termed the "effective" down payment and the "effective" price. Since the overallowance on trade-ins is subtracted from both the contract price and the contract down payment to obtain the effective ratio, the effective down payment ratios are substantially smaller than the contract ratios (compare the distribution of loans in Table 28, cols. 4 and 7).

The analysis, available only for the personal interview data, suggests that the highest incidence of repossession and delinquency occurs among loans involving smaller effective down payment ratios. However, there is no evidence here that "effective down payment" is more consistently related to collection experience than is the "contract down payment." Indeed, in these data, the contract down payment is the more effective discriminator. Apparently the overallowance on trade-in can be included without adversely affecting the relation between down payment and subsequent collection experience.

Columns 11 and 13 in Table 28 pertain to the relation between loan maturity and subsequent collection experience as revealed by lender reports and personal interviews, respectively. From the data on lender reports it appears that loans with shorter maturities have significantly lower risk of delinquency or repossession. This relation is less clear in the personal interview sample. Indeed, in the personal interview data, the longest maturity group (thirty-six months and over) had lower than average repossession and delinquency rates. How can this be accounted for?

Incomplete coverage of collection difficulties in the personal interview sample may be partly responsible. The lender reports were evidently much more complete on this score, and hence probably provide more dependable estimates of the relation of collection experience to credit terms. Another factor to be considered in evaluating the performance of the long maturity loans in this survey is that loan experience was measured only up to the date of the survey and not through the full life of the loan (unless it had already terminated). The loans were made in 1954 and 1955, and the survey was taken in June and July 1956. Thus loans issued in the last month of 1954 were only eighteen months old at the time of the survey, and loans made in the last month of 1955 were only six months old. Since during this period the proportion of loans made at longer maturities was rising

TABLE 29

*Distribution of Instalment Contracts by Maturity and Date of Origination,
Federal Reserve Survey of New-Car Purchases, 1954-55*

Date When Contract Originated	Total Number of Contracts ^a (1)	Percentage Distribution Within Each Period, by Maturity			Percentage Distribution Within Each Maturity Class, by Period				
		Under 30 Mos. (2)	30-35 Mos. (3)	36 Mos. and Over (4)	Under 30 Mos. (6)	30-35 Mos. (7)	36 Mos. and Over (8)		
		Total (5)	Total (5)	Total (5)	Total (9)	Total (9)	Total (9)		
A. Lender Report Sample									
1954, first half	1,688	66	27	7	100	27	14	8	19
1954, second half	1,858	52	35	13	100	23	20	16	21
1955, first half	2,517	43	39	18	100	26	30	30	28
1955, second half	2,863	34	41	25	100	24	36	47	32
Total	8,921	46	37	17	100	100	100	100	100
B. Personal Interview Sample									
1954	2,027	64	28	8	100	48	35	22	40
1955	3,042	47	34	19	100	52	65	78	60
Total	5,069	54	32	15	100	100	100	100	100

Source: *Consumer Instalment Credit*, Part IV, "Financing New Car Purchases," Tables 33 and 38, pp. 59 and 63, Board of Governors of the Federal Reserve System, 1957.

^aFrom special tabulations. Lender report sample includes forty-five cases that did not report maturity; personal interview sample includes twenty two such cases.

rapidly (see Table 29, cols. 3-5), the long loans in general would have been outstanding for a shorter period than the short loans at the date of the survey. Hence the experience record on long loans would not only fail to cover their full life but would actually cover a shorter interval than many of the shorter loans made early in the period. Table 29 (cols. 7-9) shows that 47 per cent of all loans for thirty-six months and over originated within the last six months of the survey period, according to the lender report sample, while this was true of only 24 per cent of the shortest maturities. This difference might, therefore, tend to produce fewer cases of delinquency or repossession on the longer loans.

This inference must be qualified, however, because most collection difficulties appear in the first few months of the life of a loan, and all the loans in the survey were at least six months old at the time of the survey. It may be that delinquency takes longer to develop in long-maturity as compared with short-maturity loans, but we have no evidence on this point. Moreover, the distribution of long-maturity loans within the survey period, according to column 9 of the table, seems to be about the same for both the lender report and personal interview samples, whereas the low delinquency rates on these loans appeared only in the personal interview data.

Another possible explanation is that loan experience generally improved between 1954 and 1955 in the course of the recovery from the 1953-54 recession. Since the long-maturity loans were granted chiefly in 1955, they were less affected by adverse economic conditions than the short loans. Again, however, this consideration would apply to both the lender report and personal interview samples. The upshot is that we are unable to account for the sharp divergence between the two samples with respect to the relation between length of maturity and collection experience, but the pattern revealed by the lender report data is consistent with that shown by all other samples utilized in this study, namely, poorer collection experience on longer maturity loans for new cars.

Apart from these considerations having to do with the survey itself, the relation between repayment experience and loan maturity is complicated by the operation of several factors that have different effects. One is that longer maturities for a given size loan imply smaller monthly payments, which, being easier to pay, make delinquency less

Quality of Consumer Instalment Credit

TABLE 30

*Frequency of Refinancing to Reduce Monthly Payments,
New-Car Loans, Classified by Original Maturity, 1954-55*

Original Maturity (months)	Number of Loans		Refinancing Rate (per cent)
	All	Refinanced to Reduce Monthly Payments	
<i>Lender Report Sample</i>			
Less than 18	856	12	1.4
18-23	687	21	3.1
24-29	3,021	111	3.7
30-35	3,080	97	3.1
36 and over	1,232	20	1.6
All loans	8,876	261	2.9
<i>Personal Interview Sample</i>			
Less than 18	556	11	2.0
18-23	492	11	2.2
24-29	1,674	59	3.5
30-35	1,597	43	2.7
36 and over	728	6	0.8
All loans	5,047	130	2.6

Source: Unpublished data from the National Analysts Survey of New Car Purchases for the Federal Reserve Board.

likely. However, as noted earlier and again below, long maturities and low down payments typically go together, so that the effect of the longer period in reducing monthly payments is mitigated. Another factor is that longer maturities mean a longer time for the financial position of the borrower to change, increasing the possibility of delinquency at some time during the life of the loan. Such shifts in financial circumstances are indicated by the frequency with which loans are refinanced to reduce monthly payments, which tends to in-

crease, up to a point, with length of maturity (Table 30). A third factor is that longer maturities mean that it takes longer for the borrower to build up his equity by any given date, making his stake in fulfilling his contract correspondingly smaller.⁹ Apparently these last two factors generally dominate the result in new-car lending, so that the longer maturities typically represent greater credit risk.

The Federal Reserve survey of new-car purchases enables us to determine, for the first time, the joint relationship between down payments and maturities, on the one hand, and subsequent collection experience, on the other. Unfortunately this can be done only for the personal interview data, which appear to be less reliable, especially with respect to maturities, than the lender reports. Nevertheless, it is clear from Table 31 that within each maturity group, collection experience improves consistently as the effective down payment percentage increases. Also, within a given down payment group, maturities of thirty to thirty-five months experience higher repossession and delinquency rates than do shorter maturities. The abnormally low repossession and delinquency rates on loans of thirty-six months or more also appear consistently, but this result must be heavily discounted for the reasons alluded to earlier.

Table 31 brings out the fact that loans with long maturities are predominantly low down payment loans, while short maturities much more frequently involve high down payments. As a result, when only one of these characteristics is taken into account at a time, its relationship to collection experience is apt to be exaggerated. To illustrate the point, in Table 31 the largest number of contracts is in the group with maturity "under 30 months" and down payment "40 and over," and the next largest is in the group with maturity "30-35 months" and down payment "under 29." Hence the low delinquency and repossession rate for the first group (1.0 per cent) dominates the weighted average rate for all loans with maturities under 30 months and the high rate for the second group (3.4 per cent) dominates the average for all loans of 30-35 months. Similarly, the average rate for all high down payment loans is heavily influenced by the low rate in

⁹ In his pamphlet *Easy Credit Can be Tough*, Thomas W. Rogers of the American Finance Conference suggests that, with a 25 per cent down payment, maturities of thirty-six months on the automobile loans he examined result in a situation in which the customer's debit balance exceeds the wholesale value of the car for the first twenty months of the contract period.

TABLE 31

*Collection Experience on Loans Cross-Classified
by Effective Down Payment and Original Maturity, 1954-55*

Original Maturity (mos.)	Effective Down Payment (per cent)			Total	
	Under 30	30-39	40 and over		
<i>1. Number Of Contracts</i>					
Under 30	991	592	1,119	2,702	
30-35	1,060	343	187	1,590	
36 and over	564	86	72	722	
Total	2,615	1,021	1,378	5,014	
<i>2. Bad Loan Rate</i>					
				<i>Average</i>	
				Unwtd.	Wtd.
Under 30	3.1	1.6	1.0	1.9	2.1
30-35	3.4	3.2	1.1	2.6	3.1
36 and over	1.8	0	0	0.6	1.3
Average, unwtd.	2.8	1.6	0.7	1.7	--
wtd.	3.0	2.1	1.0	--	2.2

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).

the shortest maturity class, and the average for all low down payment loans is more influenced by the high rate in the 30-35-month class. The unweighted averages shown in the table represent a crude way of eliminating much of this joint effect and more nearly approximate the relationship between each characteristic separately and the measure of lending experience.

INTERAREA ANALYSIS, 1953-56

The relation between changes in loan terms and subsequent collection experience can be further studied by means of data provided by a large sales finance company for twelve metropolitan areas for every third month from 1953 to April 1956. In this analysis we have concentrated on the repossession rate related to the date the loan was made as the best single measure of collection experience.¹⁰

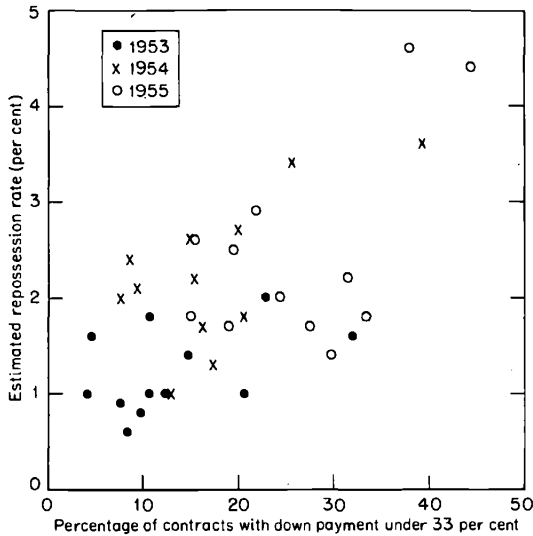
Chart 9 shows how the repossession rate varied with the proportion of loans with down payments under 33 per cent in each of the years 1953, 1954, and 1955. In each area, for each year, the ultimate repossession rates are estimated for the same loans to which the down payment percentages apply. First, it is fairly clear from the over-all pattern that between 1953 and 1955 the easing of down payments in most areas was accompanied by an increase in repossession rates on the loans made. Second, *within* each of the three years 1953, 1954, and 1955, the areas with the most liberal down payment requirements had the poorest repossession experience. Viewed either way, the association of low down payments with high repossession rates is moderately close.

We have observed previously that while down payments and maturities tend to move together, by and large, down payments seem to be a clearer indicator of what subsequent collection experience will be. Chart 10, comparable with Chart 9, relates the percentage of new automobile loans with maturities of twenty-five months or more to the estimated repossession rates on the same loans. The over-all positive association for the three years is clearly visible, but the interarea association within each of the three periods is considerably less pro-

¹⁰ Other measures of collection experience are considered in Appendix C. The consequences of using repossession figures arranged by date of repossession instead of by date loan was made are discussed in Appendix F.

CHART 9

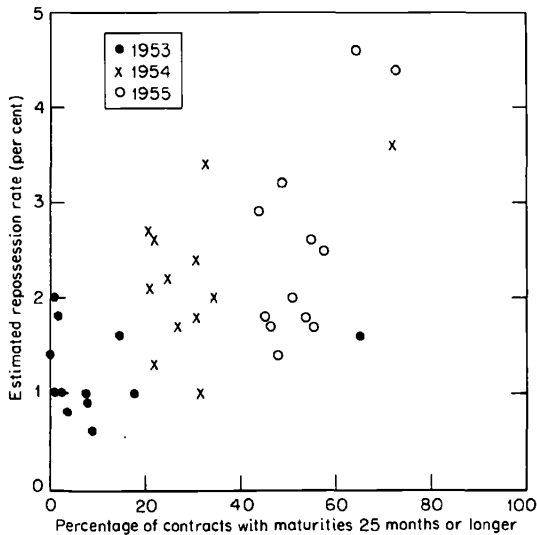
New-Automobile Contracts with Down Payments Under 33 Per Cent and Estimated Repossession Rate as of Year of Purchase, Twelve Metropolitan Areas, 1953-55



SOURCE: Tables F-2 and F-5. Data from a large sales finance company; 1955 based on January and April.

CHART 10

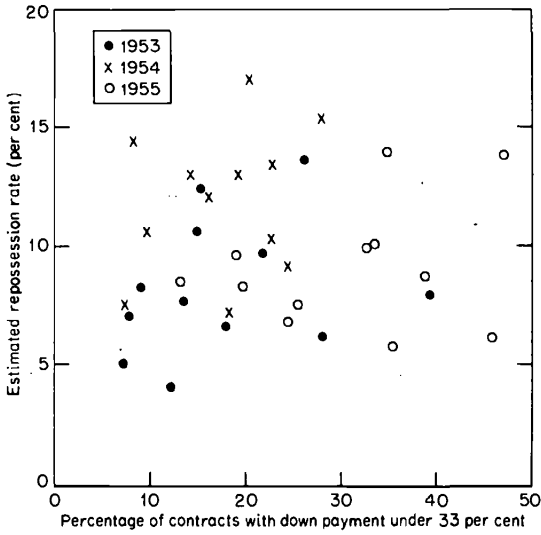
New-Automobile Contracts with Maturities 25 Months or Longer and Estimated Repossession Rate as of Year of Purchase, Twelve Metropolitan Areas, 1953-55



SOURCE: Tables F-3 and F-5. Data from a large sales finance company; 1955 based on January and April.

CHART 11

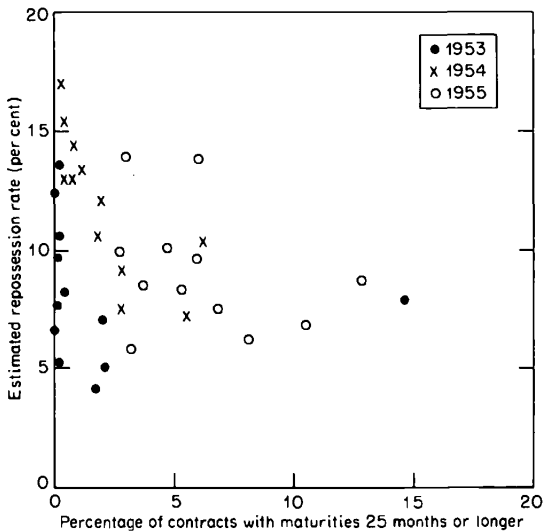
Used-Automobile Contracts with Down Payments Under 33 Per Cent and Estimated Repossession Rate as of Year of Purchase, Twelve Metropolitan Areas, 1953-55



SOURCE: Tables F-6 and F-8. Data from a large sales finance company.

CHART 12

Used-Automobile Contracts with Maturities 25 Months or Longer and Estimated Repossession Rate as of Year of Purchase, Twelve Metropolitan Areas, 1953-55



SOURCE: Tables F-7 and F-8. Data from a large sales finance company.

nounced than with down payments in Chart 9. In short, differences among areas in loan-maturity distribution in a given year are scarcely associated at all with differences in their repossession experience on these loans. This may be due to the fact that the differences in the maturity distributions within a year were relatively small. In 1953 and 1954, the one area in which terms were spectacularly easier than in the other eleven areas did have one of the higher repossession rates. In 1955, the two areas that were much more lenient than the rest in the matter of maturities had high repossession rates.

The data just considered were also analyzed on a quarterly basis (see Tables F-1, F-2, and F-3). That the general relations between down payments and ultimate repossession rates, and between maturities and ultimate repossession rates, are pervasive and fairly consistent was borne out by the quarterly analysis, although the results were striking only for those areas with very liberal terms.

Study of the quarterly data suggests that the general lowering of down payment requirements and lengthening of maturities during the 1953-55 period tended to raise repossession rates, and also that, as a consequence of the business recession of 1954, repossession rates tended to go up even without any change in loan terms. Chapter 6 will examine these materials from the latter point of view.

Another facet of the relation between loan terms and ultimate repossession experience on automobiles is revealed by examining loans on used automobiles made by the same sales finance company's branch offices in the same twelve metropolitan areas (Charts 11, 12, and 13).¹¹ Despite the fact that down payment percentages are about the same and maturities much shorter on used than on new cars, the estimated repossession rates on used-auto loans are far higher than those on new-auto loans (compare Chart 9 with 11, and 10 with 12). Other factors than credit terms evidently account for these differences in collection experience—differences that also appear in the other loan samples

¹¹ The data on down payment and maturities were available separately for late-model used automobiles and older-model used automobiles, whereas the repossession rate data apply to all used autos. Since the late-model used automobiles made up the bulk of the volume involved and hence are likely to be the major contributor to the used-automobile repossessions, the terms on late models are used here. Inclusion of the older model figures would tend to make the terms less liberal since more liberal provisions prevail on the higher-priced more recent models.

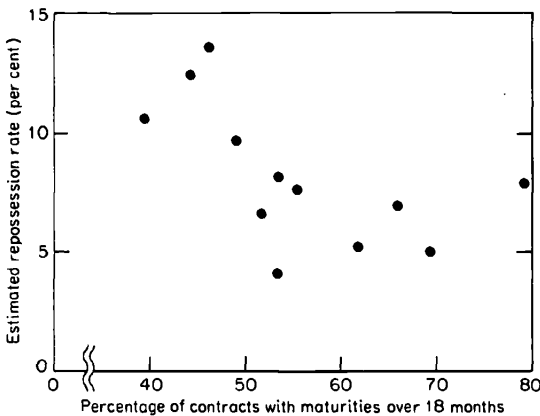
considered in the section "Conspectus of Evidence from the 1920's to the 1950's" in this chapter.

Chart 11 shows a modest tendency for the highest repossession rates to be associated with the greatest percentage of low-down-payment loans on used autos. But many areas with a high percentage of low-down-payment paper experienced repossession rates no higher than those with a low percentage.

Chart 12 reveals, like the national data considered earlier, that longer maturities in used-automobile loans are associated with lower repossession rates. This appears clearly in the 1954 figures and to some extent in 1955. In 1953, so few loans were made for twenty-five months or longer that the figures are not very meaningful. However, when a different grouping, eighteen months and over, is used for that year (Chart 13), the inverse relation between maturities and repossessions appears clearly. Thus the area data do not suggest that a lengthening of maturities on used-automobile loans typically leads to higher repossession rates, as in the case of new-automobile loans. In used-automobile loans other factors evidently offset the greater risks that longer maturities usually entail.

CHART 13

Late Model Used-Automobile Contracts with Maturity over 18 Months and Estimated Repossession Rate as of Year of Purchase, Twelve Metropolitan Areas, 1953



SOURCE: Tables F-7 and F-8. Data from a large sales finance company.

In sum, a partial answer is possible to the question posed at the beginning of this chapter. Credit terms do seem to be significantly related to subsequent collection experience. Utilizing data covering in varying degree the period since 1925, we can conclude that high down payment ratios have been consistently associated with a smaller degree of subsequent collection difficulty on both new- and used-automobile credit. Shorter maturities on new automobile paper also have been associated with better subsequent collection experience, though somewhat less strongly than down payments. In the case of contracts on used automobiles the maturity relationship is reversed.

Moreover, we find these general tendencies strikingly visible when collection experience is recorded for loans cross-classified by both down payment ratio and by maturity. This enables us to consider the effect of each aspect of the credit contract, holding the other constant, as well as the combined effect of an easing or tightening in both. We find that down payments and maturities typically reinforce rather than offset each other in their effects on subsequent collection experience.