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3. Consumer Uses of
Finance Charge Information

THE DEMAND FOR CONSUMER CREDIT depends on current prices
of goods and credit, on credit terms, on consumer incomes and
wealth, on expected changes in these factors, and on the time prefer-
ences of consumers—i.e., their preferences for present versus future
consumption. We are concerned here mainly with the credit price
factor.

Consumer response to changes in finance charges is measured by
the related changes in the amount of credit demanded, i.e., the price
elasticity of the demand for credit. The extent to which consumers
take credit cost into account in deciding how much, if any, credit
to use and where to get credit depends, in part, on the form in
which finance charge information is available to them. As seen in
Chapter 2, consumers currently receive such information in differ-
ent forms in different sectors of consumer financing. This chapter
deals with the usefulness of these various forms as measures of
credit cost.

Measures of Credit Cost

FINANCE CHARGES IN DOLLARS

Dollar finance charges are relatively easy to adjust for differences
in the quoted prices on goods to be financed or dollar amounts to
be borrowed since all these quantities are expressed in dollars.
Their usefulness as a measure of cost is limited, however, to com-
parisons of alternative financing opportunities that have a common
maturity. Consumers who must accept the maximum maturity
available to them in order to secure a monthly payment low enough

for them to purchase a desired commodity can compare dollar charges and select their lowest cost alternative.[1]

Dollar finance charges do not provide complete information to credit users who want to compare the cost of credit for shorter contract maturities with that for longer contract maturities. A potential credit user, for example, will know that it costs him x dollars more to finance a credit contract of thirty-six months' maturity than one of thirty months' maturity. He must compute an effective monthly or annual rate on both maturities to discover whether the added dollars represent a higher, lower, or equal rate of charge.

Dollar charges are also difficult for borrowers to use as a standard of credit cost when they wish to compare the cost of borrowing with the return on funds invested in savings accounts, government bonds, or other interest-yielding liquid assets. For this purpose the borrower must compute finance charges as an effective annual rate, the medium usually used in expressing the return or yield on liquid assets.

SIZE AND NUMBER OF MONTHLY PAYMENTS

Comparison of the size of monthly payments on alternative credit opportunities is a useful yardstick for credit cost when the number of payments is the same for a given amount of credit. This limitation is the same as for dollar charges. Within this limitation, monthly payments are superior to dollar charges in one respect, however. When an alternative credit opportunity for the same maturity offers a lower price for the goods purchased but a higher dollar finance charge, the monthly payment comparison directly reveals the more costly alternative.

Monthly payment information is not a useful yardstick for credit cost when alternative credit opportunities involve different maturities and different amounts of credit. Comparison of credit costs in such cases requires that monthly payments be converted first to finance charges in dollars and then to effective monthly or annual rates. Similarly, monthly payment data are not useful for comparing

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[1] The same conclusion holds for consumers who can accept below-maximum-maturity contracts provided they limit their dollar finance charge comparisons to contracts having *the same maturity.*

credit cost with yields on liquid assets. Here again, dollar charges must be converted to effective annual rates, the form in which liquid asset yields are usually quoted.

COMPUTATIONAL RATES OF CHARGE AND COMPUTATIONAL EQUIVALENTS

Add-on, discount, and per cent per month computational rates (or equivalents) are not useful as a measure of comparative credit cost when they are all used at the same time by different financing agencies and sellers. Thus, a 6 per cent annual add-on rate is not the same as a 6 per cent annual discount rate, and neither is the same as a monthly rate of $\frac{1}{2}$ per cent on the unpaid balance. Any one of these three computational rates (or equivalents) could be a useful measure of comparative credit cost if all financing agencies and sellers published rates (or equivalents) based on the same computational method.

Publication of computational rates is not legally acceptable, however, unless they are also effective rates, for courts generally hold that any published finance or interest rate should mean an effective rate. This rules out add-on and discount computational rates, for neither is an effective rate.

Court decisions against the form of rate quotation used in the General Motors Acceptance Corporation's 6 per cent add-on plan are an illustration.[2] When the General Motors Acceptance Corporation advertised this plan in 1935, it clearly labeled the 6 per cent add-on rate as follows: "6% a multiplier—not an interest rate." On the basis of the findings quoted below, the Federal Trade Commission called the plan an unfair trade practice and enjoined it: [3]

The Commission's findings were that the term "6%," when used in connection with monthly payments, was understood by the public to mean 6 per cent simple interest per annum computed on the declining balance as reduced by the monthly payments; but that, as actually carried out, the purchaser paid 6 per cent, 9 per cent, or 12 per cent, as the case might be, on the total amount originally owed, until the final payment was made, resulting in a charge of approximately 11½ per cent simple interest per annum on an original balance as reduced by monthly payments.

[2] See U.S. Circuit Court of Appeals, Second Circuit, August 12, 1940 (114 F. 2d 33), and U.S. Circuit Court of Appeals, June 5, 1941 (120 F. 2d 175).

[3] *Annual Report of the Federal Trade Commission for the Fiscal Year Ended June 30, 1940*, p. 81. The FTC ruling does not apply to banks.

As the quotation indicates, the FTC feared that the 6 per cent rate would be interpreted as an effective rate which, clearly, it was not. Consumers who made this interpretation would be led to underestimate the actual rate of charge.

This possibility of underestimation does not change the fact, however, that the plan increased the competitive atmosphere among sellers and financing agencies in 1936. It did so by teaching the borrowing public a simple method of comparing General Motors Acceptance Corporation's low-cost borrowing plan with other finance plans. Through advertisements the public was instructed to determine the finance charge by adding the unpaid balance and insurance cost and multiplying the sum by 6 per cent for twelve months or by 6 per cent plus or minus $\frac{1}{2}$ per cent for periods more or less than twelve months.[4]

Computational equivalents, i.e., rates of charge in dollars per \$100 of the amount borrowed, are close counterparts of computational rates and are used mainly as alternatives to add-on and discount percentage rates. The distinction is nonetheless worth making for there have been no court rulings on the matter of publishing computational equivalents.

The legal distinction between add-on (discount) rates and add-on (discount) equivalents may be a fine one, but distinctions of varying degrees of fineness exist in all lines of activity. The final determination of the legality of the distinction rests with legislatures, government commissions, and the courts.[5]

The use of any single type of computational equivalent (or rate) in quoting credit cost enables consumers to appraise competing opportunities on the basis of comparative rates of charge. They still have to value the goods part of their purchases separately from the credit part and, when the advantages appear to affect one another, must make an adjustment to permit a comparison of the combined goods and credit cost. In order to compare costs with liquid-asset yields, computational equivalents (or rates) must either

[4] For reproduction of the relevant part of an advertisment, see Robert P. Shay, "The Price of New-Automobile Financing," *Journal of Finance*, May 1964, p. 214.

[5] For a discussion of the merits of different computational methods, see Roland Stucki, *Analysis of Instalment Financing Legislation and Practices in Utah*, Salt Lake City, 1956, pp. 26–27.

be converted to effective rates or liquid-asset yields must be converted to computational rates.

Computational equivalents (or rates) have an advantage over dollar charge and monthly payment information in that they are a useful means of comparing credit costs over different time periods. The add-on and per cent per month methods of computing charges are more useful than the discount method in this respect, for the variation in the effective rate equivalents of a given add-on or per cent per month equivalent (or rate) is small within customary maturity periods. Any given discount equivalent (or rate) involves progressively higher effective rates as maturities lengthen and, therefore, is less satisfactory as measure of cost of contracts on varying maturities.[6]

FINANCE RATES

Annual and monthly finance rates provide a common denominator for determining the cost of all credit transactions, regardless of size, maturity, or other characteristics. Annual finance rates may be compared directly with liquid-asset yields. Since monthly finance rates are approximately one-twelfth of equivalent annual finance rates, they must be multiplied by twelve for an approximate comparison with liquid-asset yields.[7]

Annual finance rates on small, short-maturity credit contracts are generally very high even when dollar finance charges are nominal. They are high because such contracts magnify the importance of cost elements (particularly acquisition costs) which are independent of the amount of credit or its maturity. The combination of small dollar finance charges and extremely high effective annual rates make it important that dollar charge information supplement effective annual rate information which, by itself, may be misleading to prospective borrowers. Conversely, on large loans with long maturities (e.g., mortgages) dollar charge quotation reveals that relatively low effective rates of charge represent substantial dollar finance charges, approaching or even exceeding the amount borrowed.

Evidence presented below and in Chapter 5 indicates that annual

[6] See Appendix B.
[7] See Appendix A.

finance rates on short- and intermediate-term credit are above the rates which most consumers believe to be commonly available. The converse is likely on long-term credit. As noted earlier in the discussion of dollar finance charges, finance rates, whether monthly or annual, will not provide as useful a measure of credit cost as the comparison of monthly payments on contracts of identical size and maturity whenever the selling price of the good is changed by the seller to offset a higher or lower finance charge.

MULTIPLE EFFECTIVE RATES

It is important to distinguish clearly between finance rates and multiple effective rates. A finance rate is an effective monthly or annual rate on a credit contract as a whole. Multiple effective rates are separate (usually two to four) effective monthly or annual rates on different portions of a given credit balance. As an example, a given $800 credit contract may have three brackets and three multiple effective monthly rates as follows: 3 per cent on the bracket under $200; 2 per cent on the bracket from $200 to $600; and 1 per cent on the bracket from $600 to $800.[8]

Multiple effective rates have a much more limited usefulness than finance rates as a measure of credit cost because they do not give the cost of the contract as a whole, but rather separate costs of separate brackets of the contract. They provide a useful measure only if all financing agencies and sellers shift from one effective rate to another at identical credit-size intervals and show similar patterns of variation of effective rates within each credit bracket. They must be converted to an effective annual rate for comparison of the credit cost of a contract as a whole with liquid-asset yields. However, since each multiple effective rate shows the marginal rate on an additional amount borrowed, it can be used directly for comparison with liquid-asset yields when liquid assets might be used to reduce the amount of existing debt or to alter the amount borrowed initially.

8 As indicated in Chapter 2, a number of small-loan laws and a few installment and industrial loan laws require that financing agencies quote multiple effective rates in credit contracts.

Influence of Finance Charge Information on Consumer Behavior

FINANCE RATE VS. SIZE OF MONTHLY PAYMENT

Considerable attention has been given in the literature to the effect of changes in finance charges, down payments, maturities, and size of monthly payments on the amount of credit demanded. In his 1952 study Avram Kisselgoff discusses the hypothesis that even significant variations in finance charges are not likely to result in a significant change in the amount of commodities purchased on credit.[9] In the absence of empirical data, he suggests that this may be attributable partly to consumer lack of knowledge of the cost of credit but is "mainly due to the fact that the cyclical changes that are likely to occur in finance charges are relatively small and can have very little effect on the amount of the monthly payments." [10]

Empirical evidence has not yet firmly established the degree of cyclical variability of finance charges.[11] Thus, the hypothesis that the demand for credit is little affected by changes in finance charges came to rest heavily upon the mechanical relationship between finance charge changes and the size of the monthly payment. A given percentage change in finance charges causes a much lower (usually negligible) percentage change in monthly payments. Thus, raising the add-on rate from 10 to 12 per cent, or by a fifth, on a twelve-month $300 instalment contract increases the monthly pay-

[9] Avram Kisselgoff, *Factors Affecting the Demand for Consumer Instalment Credit,* NBER Technical Paper 7, New York, 1952, p. 18. Along parallel lines, Gottfried Haberler comments as follows in his 1942 study, ". . . the view is now rather generally accepted by economists that the amount people save is not much influenced by changes of a few per cent in the rate of interest which can be earned on savings." (See his *Consumer Instalment Credit and Economic Fluctuations,* New York, NBER, 1942, p. 35.) For an alternative view, see Martin J. Bailey, "Saving and the Rate of Interest," *Journal of Political Economy,* August 1957, pp. 279–305.

[10] *Ibid.,* p. 18.

[11] Robert P. Shay found that new-auto finance rates moved with open-market borrowing rates between 1953 and 1959. The rise and fall (in basis points) of the new-auto series was somewhat less than short-term open-market rates and somewhat greater than long-term rates. New-auto rates lagged behind the three cyclical turning points consistently. (See Shay's *New-Automobile Finance Rates, 1924–62,* NBER Occasional Paper 86, New York, 1963.)

ment from $27.50 to $28.00, or less than 2 per cent. Doubling the add-on rate from 10 to 20 per cent on the same contract increases the monthly payment less than 10 per cent.

Regulation W, the Federal wartime control of the volume of consumer credit, is evidence of belief in consumer insensitivity to finance charges. It controlled volume by regulating credit terms (down payments and maturities) rather than finance charges. This choice reflects the fact that, in the short run, demand for consumer credit was thought to be relatively inelastic with respect to finance charges and sensitive to credit terms. Higher down payments were expected to deter purchases by consumers who were unable or unwilling to sacrifice liquidity, and shorter maturities would also be a deterrent because of the resulting increase in size of the monthly payment. Thus, reducing maturity by 20 per cent increases monthly payment size by 25 per cent and cutting maturity in half doubles monthly payment size.

A 1964 National Bureau study, based on data collected from a Consumers Union Members' Panel, attempts to measure the relative sensitivities of consumer demand for credit to changes in finance rates and maturities.[12] The sample was divided into sixteen randomly selected variant groups. Each of thirteen groups was sent a hypothetical question that specified four alternative ways in which a stated purchase might be financed. One group was given three alternatives and two groups were given five alternatives. The purchase was identical for all groups, an automobile costing $1,500, after trade-in allowance.

Alternative finance plans consisted of offsetting variations in two of the following: down payments, monthly payments, maturities, and finance rates. For fourteen groups there were alternative variations among down payments, monthly payments, or maturities with the finance rate held constant. (The finance rate was often different between groups, however, i.e., 4, 8, or 16 per cent.) Within each of two groups there were offered alternative variations in finance rates. Respondents were asked to rank the alternatives in order of preference and to indicate which alternatives were unacceptable.

[12] For the details of this analysis, see F. Thomas Juster and Robert P. Shay, *Consumer Sensitivity to Finance Rates: An Empirical and Analytical Investigation*, NBER Occasional Paper 88, New York, 1964.

The study uses two approaches to test elasticities of demand with respect to changes in finance rates and maturities. The traditional approach assumes that consumer demand for credit is primarily a function of required monthly payments. "Since monthly payment size is regarded as the price of the asset, longer maturities with lowered monthly payments amount to lower prices. A change in finance rates influences demand only insofar as it changes monthly payments, holding loan size, downpayment, and maturity constant. Let us label this the monthly payments model." [13] If this approach is correct, a change in finance rates can only change the demand for credit through its effect upon monthly payment size.

The second approach, called the marginal borrowing cost model, assumes that consumer demand for credit is a function of a consumer's marginal rate of return from his investment in assets and his marginal borrowing cost (borrowing rate). For empirical analysis consumers are classified as "rationed" or "unrationed." The latter are those whose marginal borrowing cost is equal to or less than going finance rates of primary (lower-rate) credit sources (i.e., banks and sales finance companies). They can borrow additional amounts at rates about equal to the rates they are paying primary lenders. Rationed consumers are those whose marginal borrowing cost exceeds the going rates of primary lenders. They can borrow additional amounts only from secondary (higher-rate) credit sources. "Defined in another way, rationed consumers are those whose average outstanding debt to primary lenders is less than the amount they would prefer, given the rates charged, and unrationed consumers are those whose actual and preferred debt levels are the same." [14]

Both models have empirically observable implications some of which are in direct contradiction. The marginal borrowing cost model predicts that (1) a finance rate rise confined to primary lenders will reduce the borrowing of unrationed consumers and have no effect on that of rationed consumers and (2) a simultaneous increase in finance rates and maturities will reduce the borrowing of unrationed consumers and increase that of rationed consumers.

[13] *Ibid.*, p. 17.
[14] *Ibid.*, p. 14.

Under this model, consumer response to changes in finance rates depends on the relative importance of rationed and unrationed consumers.

The monthly payments model predicts that all consumers will increase (decrease) borrowing if maturities lengthen (shorten) irrespective of rate changes. It also predicts that ". . . the elasticity of demand for credit with respect to changes in finance rate can be measured indirectly by the elasticity with respect to changes in minimum monthly payments. If consumers respond only to changes in monthly payments, and if a 100 per cent increase in rates increases monthly payments by 10 per cent . . . , the elasticity of demand for credit with respect to rates must be one-tenth the elasticity with respect to payments." [15] Under this model, the separate elasticities of demand for credit with respect to finance rates and contract maturities are a function of the proportionate effect of the changes in each on monthly payment size.[16]

Table 5 summarizes elasticities of demand from the responses of relevant variant groups in the Consumers Union sample. It shows that the elasticity of demand predicted by the payments model, when the finance rate is held constant, varies from -0.058 (variant pairs 10–11), to -0.299 (variant pairs 11–14), to -0.172 (variant pairs 10–14). The elasticity based on the largest payment difference is -0.172 and is taken as the most reliable estimate.

The payments elasticity thus estimated, -0.172, is applied to the difference in minimum monthly payments between other pairs of variants, differences that are a consequence, other things being equal, of differences in the implicit finance rates. . . .

This estimate answers the question, how much variation takes place in what people say they would do as maturities are extended, other things equal. The four independent comparisons of a similarly hypothetical finance rate elasticity shown in Table [5] indicate that the response to rate differences is greater than predicted by the payments model in three of the four cases, variant pairs 6–8, 14–15, and 13–16. The computed finance rate elasticity in the fourth case, variant pair 9–12, though negative, is slightly less than would have been predicted on the basis of the difference in minimum monthly payments. Averaging the four comparisons: the mean

15 *Ibid.*, p. 18.
16 *Ibid.*, p. 19.

predicted elasticity is − .020; the mean observed elasticity is − .047—more than double although still quite small in absolute terms.[17]

TABLE 5

Fraction Accepting One or More Alternative Finance Plans for Specified Variant Groups, Credit Users Only

Variant Groups		No. of Usable Responses	A	Variant Pairs	Elasticities	
No.	Characteristics				Computed	Predicted by Payments Model
		INTEREST (FINANCE) RATE CONSTANT (8%)				
10	Maximum M = 24	261	76.6	10-11	-.058	neg.
11	Maximum M = 36	252	78.2	11-14	-.299	neg.
14	Maximum M = 48	254	84.3	10-14	-.172	neg.
		DOWN PAYMENT CONSTANT (0)				
14	(i = 8%)	254	84.3	14-15	-.098	-.034
15	(i = 16%)	252	79.0			
8	(i = 4%)	211	80.6	8-6	-.048	-.029
6	(i = 16%)	255	76.1			
		CONTRACT LENGTH CONSTANT				
9	(i = 4%)	265	81.5	9-12	-.005	-.016
12	(i = 16%)	248	81.0			
		MONTHLY PAYMENTS CONSTANT ($65.10)				
13	(i = 4%)	246	84.7	13-16	-.036	.000
16	(i = 16%)	263	80.2			

SOURCE: Juster and Shay, *Consumer Sensitivity*, p. 29.

NOTE: A = proportion of respondents accepting one or more of the financing alternatives; M = contracts in months; i = interest (finance) rate.

Juster and Shay believe that the evidence in Table 5 suggests that the monthly payments model, i.e., the traditional approach, may underestimate consumer responses to variations in finance rates. To test this hypothesis further, they divided the sample households into rationed and unrationed groups on three bases: family income and marital status, liquid-asset holdings, and attitude to-

[17] *Ibid.*, pp. 28–32. The figure − .020 is the average of the last four numbers in the last column of Table 5 and the figure − .047 is the average of the last four numbers in the next to last column.

TABLE 6

Estimated Finance Rate and Monthly Payment Elasticity of Demand for
Households Classified as Rationed or Unrationed on Three Bases

Variant Numbers	Observed Elasticities		Elasticities Predicted by Payments Model
	Rationed Households	Unrationed Households	
A. FAMILY INCOME AND MARITAL STATUS[a] Monthly Payment Elasticities			
10-11	-.152	+.150	neg.
11-14	-.334	-.420	neg.
10-14	-.231	-.083	neg.
Finance Rate Elasticities			
8-6	-.029	-.099	-.029
9-12	-.048	+.116	-.016
14-15	-.120	-.235	-.034
13-16	-.044	-.068	.000
Average of four	-.060	-.072	-.020
B. LIQUID-ASSET HOLDINGS[b] Monthly Payment Elasticities			
10-11	+.054	-.114	neg.
11-14	-.155	-.376	neg.
10-14	-.032	-.226	neg.
Finance Rate Elasticities			
8-6	+.027	-.051	-.029
9-12	-.091	-.029	-.016
14-15	-.014	-.253	-.034
13-16	+.030	-.080	.000
Average of four	-.012	-.103	-.020
C. ATTITUDE TOWARD THE USE OF CREDIT[c] Monthly Payment Elasticities			
10-11	-.020	+.009	neg.
11-14	-.426	-.368	neg.
10-14	-.191	-.148	neg.
Finance Rate Elasticities			
8-6	-.024	-.128	-.029
9-12	+.029	-.138	-.016
14-15	-.137	-.276	-.034
13-16	-.014	-.152	.000
Average of four	-.036	-.174	-.020

SOURCE: Juster and Shay, *Consumer Sensitivity*, pp. 35, 38, and 41.

NOTES TO TABLE 6

a

Marital Status	Income After Tax (dollars)		
	Under 8,000	8,000– 10,000	Over 10,000
Married 15 years or less	R	R	U
Married more than 15 years or unmarried ·	R	U	U

(R = rationed, U = unrationed)

b Rationed consumers are those with less than $2,000 in checking accounts, savings accounts, and savings bonds; unrationed are those with $2,000 or more.

c Rationed consumers were those who indicated they intended to use con-sumer credit in the future and unrationed ones were those who indicated they did not intend to use consumer credit in the future.

ward the use of consumer credit. Table 6 gives the observed elas-ticities for the rationed and unrationed groups on each of the three bases and also the elasticities predicted by the payments model. On all three bases the results are generally more consistent with the marginal borrowing cost model than with the payments model as follows: (1) except for the liquid-asset classification, rationed con-sumers respond more to differences in minimum monthly payments than do unrationed ones; (2) unrationed consumers are more sensi-tive to finance rates; (3) for the most part a combination of higher rates and longer maturities, minimum monthly payments declining on balance, increases the borrowing of rationed consumers and de-creases the borrowing of unrationed consumers.[18]

Juster and Shay conclude that their results ". . . clearly indicate the necessity for qualification of the widely held view that consumer borrowing decisions are unresponsive to changes in finance rates, aside from the effect of rate changes on monthly payments. This generalization appears to be valid for rationed consumers . . . [but] is not valid for unrationed consumers." [19]

[18] Ibid., pp. 33–40. The authors attach little importance to the perverse be-havior of the monthly payments elasticities in the liquid-asset classification in Table 6. They attribute it to the choice of $2,000 as a cutting point so that "the sample sizes in the rationed group are quite small and the sampling errors correspondingly large."

[19] Ibid., p. 45. Since the elasticities in Table 5 are not statistically significant, Juster and Shay point out that neither group's elasticity of demand with respect to finance rate changes is large in an absolute sense, but only that the unra-tioned group's elasticity is relatively larger—more than double that of the ra-tioned group (ibid., p. 32).

A majority of the households in the Consumers Union sample and an even larger proportion of the population are probably in the rationed category. Several factors suggest that there has been a shift of borrowers from the rationed to the unrationed category over the past several decades and that the shift will continue in the future. One is the tendency for lenders to lengthen maturities for the same quality of borrower. The other is the secular growth of incomes and wealth. "On both counts, we may expect consumers to be relatively more responsive to variations in finance rates in the future than at present, and also to be more responsive at present than they had been in earlier decades." [20] As the number of consumers in the unrationed category grows, the greater is the usefulness of finance rates in influencing consumer borrowing decisions on credit contracts of different maturities.

Juster and Shay also find that "responses to rate differences were substantially stronger when finance rates were specified for borrowers than when identical rates of charge were unspecified, although implied by payment details." [21] They note, too, that response to specified finance rates was greater when finance rates are high than when they are low. These responses may have some upward bias. For many respondents believe finance rates to be lower than they are and thus may have rejected high specified rates by mistakenly believing that lower cost alternatives are available to them in the market. [22]

USE OF DEBT VS. LIQUID ASSETS

As noted earlier in this chapter, special problems of rate quotation arise for consumers who have liquid assets at the time they incur debt. To what extent are such consumers willing to use liquid assets as a partial or complete substitute for debt? To what extent would their decisions be affected by a more precise knowledge of finance rates?

[20] *Ibid.,* p. 46. The authors note the possibility that increased responsiveness could be offset to the extent that consumer wants expand with rising incomes, wealth, and access to credit.

[21] *Ibid.,* p. 75.

[22] *Ibid.,* p. 75.

Except for demand deposits and cash, liquid assets usually bring in pecuniary income to their owners. Rates of return on income-bearing liquid assets are generally expressed as effective annual interest rates or yields. The compounding intervals used in determining these rates vary according to the nature of the credit or deposit agreement and are, in the main, a quarter, a half year, or a year.

The analysis of Juster and Shay referred to above suggests that consumers with liquid assets of $2,000 and over have a greater elasticity of demand for consumer credit with respect to changes in finance rates than consumers with liquid assets of $2,000 or less.[23] A November 1959 survey of the Survey Research Center provides information on consumer attitudes toward the concurrent holding of liquid assets and debt. A number of consumers were asked their opinions on why a person buys a car on time even though he has sufficient money (savings) in the bank to pay cash. As Table 7 indicates, 68 per cent give what may be termed positive reasons for such behavior: 56 per cent state that he is earmarking his cash for other purposes and 12 per cent state that he is gaining in some way by using the credit. Less than 7 per cent give derogatory reasons for such behavior. In describing such a person, 52 per cent use flattering adjectives such as intelligent and informed and 17 per cent use unflattering adjectives such as stupid and foolish. Thus, on balance, consumers view holding debt and liquid assets concurrently as rational behavior.

In an earlier, essentially deductive treatment of the same problem, Haberler says: "Those who incur instalment debt in spite of the fact that they possess liquid assets must have strong reasons for not using these assets for the purchase of goods. Instalment credit is expensive." [24] He advances the following as possible reasons: (1) consumers may consider liquid assets as long-term assets to be held for long-term purposes; (2) they may lack confidence in their will power to replace any liquid assets which are liquidated; and (3) liquidating liquid assets may involve costs or loss of potential

23 *Ibid.*, pp. 36–38.
24 Haberler, *Consumer Instalment Credit*, p. 44.

profit.[25] His first two reasons closely parallel the first two reasons given in Table 7.

TABLE 7

Consumer Attitudes Toward Credit Users with Liquid Assets

Reasons Given (first question)	Per Cent of Replies	Description (second question)	Per Cent of Replies
To keep bank account for emergencies intact	42	Intelligent; informed; plans ahead	30
Difficulty of replacing savings	5	Cautious; conservative	11
Cash wanted for something else	9	Wise guy; smart; shrewd	11
	56		52
To establish credit	6		
Better service; better price	5		
Use of car while paying	1		
	12		
Only derogatory statements; no reason	7	Stupid; unwise; foolish; crazy	12
		Does not calculate; not good with money; poorly informed	4
		Impatient; impulsive; extravagant	1
			17
Other; don't know; not ascertained	25	Other; average; ordinary; don't know; not ascertained	31
Total	100		100

SOURCE: November 1959 Interim Survey of the Survey Research Center of the University of Michigan. The questions asked consumers were: "Speaking of buying a car on time, Mr. Smith has just done so although he has enough money in the bank to pay cash. Why do you think he bought the care on time? What kind of a man is he?"

Philip Klein's National Bureau study of financial adjustments to unemployment indicates that the two most frequently used techniques of adjusting financially to unemployment were to decrease savings and checking accounts (liquid assets) and to borrow money: 40 per cent of the 1,836 households which experienced unemployment over an extended period decreased liquid assets as an adjust-

25 *Ibid.*, pp. 44–45.

TABLE 8

Relation Between Personal Debt and Liquid Assets, by Income Group, Early 1959 [a]

(per cent of spending units)

	All Spending Units	1958 Money Income Before Taxes (dollars)								
		Under 1,000	1,000- 1,999	2,000- 2,999	3,000- 3,999	4,000- 4,999	5,000- 5,999	6,000- 7,499	7,500- 9,999	10,000 and over
No debt	40	58	57	44	36	32	30	29	31	49
No liquid assets	8	27	21	14	5	4	3	1	1	b
Some liquid assets	32	31	36	30	31	28	27	28	30	49
Some debt	60	42	43	56	64	68	70	71	69	51
No liquid assets	17	34	29	30	23	17	11	6	4	2
Some liquid assets	43	7	15	26	41	51	59	65	65	49
Debt as a percentage of liquid assets:										
Under 100	19	4	6	14	17	22	25	27	31	27
100 and over	23	3	9	11	24	30	34	38	34	23
All cases	100	100	100	100	100	100	100	100	100	100

SOURCE: "1959 Survey of Consumer Finances, the Financial Position of Consumers," Federal Reserve Bulletin, July 1959, p. 721.

a Personal debt and liquid assets as of time of interview; income before taxes in preceding year. Personal debt includes all short- and intermediate-term consumer debt other than charge accounts and excludes mortgage and business debt. Liquid assets include U.S. savings bonds, checking accounts, savings accounts in banks, and shares in savings and loan associations and credit unions; currency is excluded.

b No cases reported or less than .05 per cent.

NOTE: Detail may not add to total because of rounding.

ment technique and 26 per cent borrowed money.[26] This indicates that liquid assets are important in maintaining consumption and credit standing in an emergency such as unemployment. This liquidity value possessed by liquid assets (mentioned by 42 per cent of the replies in Table 7) may well compensate, in the minds of many persons, for a substantial difference between the earnings rate on liquid assets and the finance rate on credit.

The Survey Research Center data provide no direct evidence on the extent to which consumers might use liquid assets as a partial or full substitute for instalment debt if they knew finance rates. Indirect evidence is inconclusive but may be mentioned to give some perspective on the practical importance of the problem. Table 8 shows that, in early 1959, 43 per cent of all spending units surveyed had both personal debt and liquid assets: 19 per cent had liquid assets in excess of personal debt and 23 per cent had liquid-asset holdings which were less than their personal debt. Furthermore, those with liquid assets in excess of debt were relatively numerous in all but the lowest income groups. These facts mean that (1) roughly one-third of spending units with debt could have eliminated their entire personal debt had they chosen to substitute liquid assets for debt, (2) an additional one-third of those spending units with debt could have reduced their debt by substituting liquid assets, and (3) liquidation of debt could have been distributed widely among income groups.

Tables 8 and 9 give some support to the inference that the dollar decrease in personal debt would have been substantial if all spending units with personal debt and liquid assets in early 1959 had substituted assets for debt. The top four income groups contained (1) 44 per cent of all spending units (Table 9), (2) the highest percentages of spending units with personal debt (Table 8), (3) the highest percentages (25 per cent or more) of spending units with liquid assets in excess of personal debt (Table 8), (4) the highest percentages of spending units with personal debt of $200 and over (Table 9), and (5) the highest percentages of spending units with liquid assets

[26] Philip A. Klein, *Financial Adjustments to Unemployment*, NBER Occasional Paper 93, New York, 1965, Table 6.

TABLE 9

Distribution of Personal Debt and Liquid Assets, by Income Group, Early 1959 ª

(per cent of spending units)

	All Spending Units	1958 Money Income Before Taxes (dollars)								
		Under 1,000	1,000– 1,999	2,000– 2,999	3,000– 3,999	4,000– 4,999	5,000– 5,999	6,000– 7,499	7,500– 9,999	10,000 and over
Amount of personal debt										
Under $100	10	19	14	12	11	14	9	5	5	5
$100–$199	7	9	10	11	7	6	8	7	4	3
$200 and over	43	14	20	33	46	47	53	59	59	43
All cases with debt	60	42	43	56	64	68	70	71	69	51
Amount of liquid assets										
Zero	25	61	50	44	28	21	14	7	4	2
$1–$199	18	8	14	15	25	28	26	24	13	4
$200 and over	57	30	36	41	47	52	60	70	83	94
All cases	100	100	100	100	100	100	100	100	100	100
Spending units in each income group	100	7	13	12	12	12	12	12	12	8

SOURCE: "1959 Survey of Consumer Finances, the Financial Position of Consumers," *Federal Reserve Bulletin*, July 1959, pp. 713, 715, and 721.

ª See Table 8.

NOTE: Detail may not add to total because of rounding.

of $200 and over (Table 9).[27] A considerable number of the spending units in each of the four top income groups had both debt and liquid assets in excess of $200, for the combined percentages exceed 100, successively, as follows: 113, 129, 142, 137 (Table 9).

Since a substantial proportion of debt owed by spending units with liquid assets appears to be in the income groups of $5,000 and over, increased knowledge of finance rates would have the greatest chance of influencing a substitution of liquid assets for debt to the extent that an upward revision of their credit cost estimate made it appear desirable to hold fewer liquid assets and borrow less. Yet it is important to know both the absolute number as well as the proportion of borrowers with incomes above $5,000 who are misinformed. All borrowers have the option of not making a given purchase when costs appear to be higher. Borrowers with liquid assets have the additional option of borrowing less and still making the purchase.

Unfortunately, our data do not permit even an approximate estimate of the number of consumers who may be misinformed. Table 10 does, however, shed some light on the problem, for it shows that, when asked what interest or carrying charges one has to pay for buying a car on time, 40 to 48 per cent of the spending units in income groups of $5,000 and over gave answers which led to computed effective annual rates under 7 per cent. Spending units in these income groups contained about 29 per cent of all spending units with personal debt and about 27 per cent of all spending units with both personal debt and liquid assets in 1959.[28] Only 5

[27] The $10,000 and over group is an exception in points (2) and (4).
[28] These percentages are computed from Tables 8 and 9 as follows:

Percentage of Spending Units in Each Group with

Income Group (dollars)	% of All Spending Units (1)	Personal Debt (2)	Personal Debt & Liquid Assets (3)	Cols. 1 × 2 (4)	Cols. 1 × 3 (5)
5,000–5,999	12	70	59	8.4	7.1
6,000–7,499	12	71	65	8.5	7.8
7,500–9,999	12	69	65	8.3	7.8
10,000 and over	8	49	49	4.1	3.9
Percentage of all spending units with:					
Personal debt				29.3	
Personal debt and liquid assets					26.6

TABLE 10

Cumulative Percentage Distribution of Consumer Estimates of Finance Rates on Auto Financing, 1959, by Selected Income Groups, and New-Car Instalment Financing Rates, 1954-55 and 1959

Annual Rate (per cent)	Distribution of Consumer Responses by Income Groups[a] (dollars)			Effective Annual New-Car Finance Rate[b] (per cent)	New-Car Financing Instalment Rates[c] (number of contracts)			
	5,000–7,499	7,500–9,999	10,000 and over		All Credit Sources, 1954-55	Banks,[d] 1954-55	Sales Finance Companies, 1954-55	Large Sales Finance Companies, 1959
Under 4	4	1	1	Under 5	1	2	1	0
Under 7	40	48	45	Under 7	5	8	2	0
Under 10	54	64	60	Under 9	20	30	11	0
Under 13	73	85	80	Under 13	88	92	85	65
Under 16	80	87	84	Under 15	96	97	95	96
All rates	100	100	100	All rates	100	100	100	100

a Obtained from November 1959 Interim Survey of the Survey Research Center of the University of Michigan. The question asked consumers was: "Do you happen to know how much interest or carrying charges one has to pay to buy a car on time; suppose you need a thousand dollars which you would repay monthly over 2 years; about how much do you think the interest or carrying charges would be each year?" Then percentages are based on usable responses. Nonusable responses (don't know, uncodable answer, or answer not ascertained) comprised the following percentages of total responses in the three income groups reading from left to right: 28, 19, 32.

b Computed by the constant ratio formula.

c 1954-55 rates are based on data compiled by the Federal Reserve System. 1959 rates are computed by the National Bureau.

d Includes direct and indirect financing.

per cent of new-car instalment contracts were financed at effective
annual rates of 6 per cent or less in 1954–55. Judging solely from
the large sales finance company's figures in Table 10, an even lower
percentage of new-car contracts were probably financed at rates of
under 7 per cent in 1959.

Interpretation of the responses in Table 10 as effective annual
rates lends support to the inference that a not inconsiderable num-
ber of spending units with both liquid assets and personal debt have
some misconception of the finance rates they are paying. Interpre-
tation of the responses in Table 10 as computational annual rates
does not lend support to such an inference. Unfortunately, there
is no way to choose between the two interpretations, for the survey
did not ascertain which interpretation respondents had in mind
in giving their answers.

Yet even if it were possible to measure the number of persons
who were misinformed about finance rates, the crucial questions of
the effects of acquiring accurate information would remain. How
urgent are the purchases which might be foregone if consumers'
estimates of credit cost rise? How many persons would find that
knowledge of finance rates would cause them to liquidate assets
and curtail borrowing?

The evidence reviewed supports the general notion that a num-
ber of people use instalment buying as a budgetary device. Many
consumers feel that they lack the necessary fortitude to save ahead
and buy for cash and that instalment buying gives them better dis-
cipline in handling finances. It is likely that many consumers place
a high value on keeping liquid assets intact for other purposes;
finance rate information might merely provide a simple way to
measure the relative costs when borrowing rates are made compar-
able to rates paid for savings.