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In Section I, we explore the relation between the finance rates charged on instalment credit contracts and the demand for credit. The empirical data, while unusual, highly experimental, and subject to more than ordinary difficulty in interpretation, nevertheless suggest strongly that, for particular types of consumers, the demand for consumer credit is responsive to finance rates. The responsive groups are those whose holdings of liquid assets are large relative to potential credit needs and those whose credit needs are limited because their demand for durable goods is limited. The same data also suggest that the demand for credit is almost wholly unresponsive to finance rates among other classes of consumers, notably, those with limited liquid assets and strong demands for durable goods.

These observed differences in the response to finance rates are the chief basis for development of a theoretical model of consumer borrowing decisions. A major feature is the delineation of behavior differences among two broad classes of borrowers, "rationed" and "unrationed." Rationed consumers are defined as those who, given the finance rate, desire more credit than the major or "primary" credit sources (banks, sales finance companies) are willing to grant; unrationed consumers are those whose demand for credit is satisfied by their actual borrowing from primary credit sources.

In our view, the existence of credit rationing is due mainly to the fact that lending institutions customarily will not extend maturities on credit contracts beyond some maximum limit currently regarded as the norm. The existence of an institutional norm is documented by the large percentage of credit contracts found at the maximum term. Borrowers on many such contracts would be willing to pay higher finance rates if they could get longer maturity contracts, hence they are rationed and must accept less debt than they would prefer. These borrowers are faced

with alternatives that effectively involve much higher financing costs than indicated by the market rates they actually pay. For example, rationed borrowers may have to choose between not buying at all, reducing liquid assets that carry a high subjective yield, reducing current consumption in order to meet the payments schedule implicit in the longest available contract maturity, or borrowing from supplementary lenders at relatively high market finance rates.

Although the analytical model was developed in part from the observed data on rate response, other implications drawn entirely from the model can also be found in the data. For example, the model predicts that rationed consumers will prefer a combination of longer maturities and higher finance rates rather than one of shorter maturities and lower rates, while unrationed consumers will have the opposite preference. The data are consistent with this prediction in 23 of 24 samples.

Our findings suggest a number of conclusions:

- 1. Consumers are not, as frequently thought, wholly unresponsive to the finance rates charged on instalment credit contracts. Rather, they are unresponsive to rates when subject to credit rationing, as that term is used here. Since the majority of consumers probably fall into the rationed category, there will be little rate response observable in the population as a whole under existing conditions.
- 2. The often-observed fact that consumer demand for durable goods is significantly related to the size of the monthly payments on instalment credit contracts can be explained within the framework of traditional investment theory, once the significance of institutionally determined maturity limitations is recognized. If consumer borrowers are unable to choose combinations of higher-than-normal finance rates and longer-than-normal contract maturity, they will react strongly to an extension of the institutional maturity norm but will react little if at all to a change in finance rates at the same maturity. This reaction can be interpreted as the response to a decline in the real cost of borrowing, due to an extension of the upper limit on maturities. If all consumer borrowers were unrationed, there would be no expected response to an extension of the maturity limit, a much stronger response to changes in market finance rates.
- 3. It follows that consumer finance-rate response in the population as a whole would be significantly stronger than at present if lenders

were to offer a complete spectrum of rate-maturity combinations commensurate with the risks involved. Because the maturity norm has in fact been extended considerably during the past several decades, it is also possible that consumer response to a change in finance rates is stronger at present than it has been in the past. Since, however, the lengthening of maturity norms and the general easing in standards of acceptability have given many new borrowers access to the credit market, it is likely that any increase in rate sensitivity has been modest.

In Section II we examine the extent of consumer knowledge of finance rates charged on instalment credit contracts, the relation between knowledge of rates and rate responses, and how borrowers' decisions may be influenced by the acquisition of rate knowledge. The majority of respondents had little awareness of the finance rates they had actually paid on their past instalment credit transactions: about 7 per cent of the sample gave reasonably accurate estimates of the effective annual finance rates paid; 11 per cent estimated the approximate add-on or discount rate equivalent paid; the remaining 82 per cent were unable to give rate estimates of reasonable accuracy.

Despite the lack of rate knowledge, consumers seemed to know that certain types of credit are more costly than others. For example, consumers' estimates of the rates, as well as the actual rates, tended to be higher than average for credit transactions for purchasing furniture, lower than average for transactions involving automobiles, and higher than average for small amounts of credit. This degree of knowledge is termed "institutional." Once institutional knowledge is accounted for, there is almost no correlation between consumers' estimates of rates and the rates actually paid.

Next, the limited amount of accurate rate information found in our sample (aside from institutional knowledge) is heavily concentrated among unrationed consumers; rationed consumers showed virtually no knowledge of rates. When considered with the findings of Section I, we note that both rate knowledge and rate sensitivity are located mainly within the unrationed group.

From our analysis, it appears that wider provision of finance-rate information would be of most benefit to the relatively small, but possibly growing, group of unrationed consumers, since their borrowing decisions frequently require comparison of yields on liquid assets with the cost of credit. The lack of accurate information may be less serious for rationed consumers, who can minimize credit costs for purchase of a

given commodity simply by finding the longest available maturity and shopping among competing credit sources for the lowest monthly payments.<sup>1</sup>

The last part of Section II deals with the possible influence of the acquisition of finance-rate knowledge on borrowing decisions. The data suggest that consumer response to rate changes would be much stronger if finance rates were specified in the credit contract than if rates had to be inferred from other terms of the contract. We also find that unrationed consumers react more strongly than rationed ones to the same change in rates, whether specified or implicit. In addition, our data suggest that the use of credit is apt to be cut if finance rates are specified and actual rates are relatively high (say, 16 per cent per year); credit use is apt to be expanded if rates are specified and actual rates are relatively low (say, 4 per cent). Since market rates are predominantly closer to 16 per cent than to 4 per cent, the data imply that specification of effective annual finance rates would tend to reduce the use of credit.<sup>2</sup>

The empirical findings dealing with consumer response to the provision of accurate information about finance rates (i.e., those in the last paragraph) are subject to a major interpretive problem. This analysis is based on observed differences in the response to hypothetical financing

1 Judgments will clearly differ about the over-all significance of rate knowledge for rational purchase decisions. Our analysis suggests that knowledge is essential for unrationed consumers, not necessarily essential for rationed ones. Hence the degree of increased rationality that would result from the acquisition of rate knowledge depends on the relative sizes of these groups, and on the extent of present ignorance among unrationed consumers. One of the authors inclines to the view that rate knowledge would mean considerably more rationality in decisions about credit purchases, with consequent improvement in the allocation of consumer resources. The other author thinks that rate knowledge would make no difference to most decisions about credit purchases, hence would have little influence on resource allocation. This difference in view turns partly on the question of the relative importance of rationed and unrationed households in the population (on which our data shed very little light), partly on the question of whether consumers use "unrealistic" discount rates because of finance rate ignorance, and partly on the question of whether "shopping for payments, other things standardized," is a relatively common or uncommon alternative.

<sup>2</sup>Specification of add-on or discount rates in terms of the amount borrowed would presumably affect credit use much less; these rates are about one-half the level of effective annual finance rates, they are currently specified in many instances, and the predominance of those specified are in the neighborhood of 6 per cent. For further discussion, see Wallace P. Mors, "Consumer Credit Finance Charges: Rate Information and Quotation," a National Bureau study, in preparation.

alternatives identical in all respects except in the amount of information supplied to respondents; the finance rate is given to one group but not to the other. When the actual rate on a particular transaction is specified, the respondent is likely to suppose that the particular transaction described on the questionnaire carries the indicated finance rate, but that credit is generally available to him elsewhere at whatever finance rate he thinks is the going market rate. Since most respondents appear to think that finance rates are much lower than they are in fact, the response pattern indicated by the survey data is therefore a biased estimate of the response that might be observed if rates on alternative credit opportunities were specified and widely disseminated.