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CONSUMERS' USE OF HIGH-PRICE CREDIT PRODUCTS: DO THEY KNOW WHAT THEY ARE DOING?

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Abstract: A variety of consumer credit products have particular notoriety because of their high prices. The products include some small personal loans, pawnbroker loans, payday loans, automobile title loans, and refund anticipation loans. Critics of these credit products see little or no benefit to using high-price credit, assert that high-price credit products have great potential to harm consumers, and contend that consumers using such products often are uninformed or have been misled. This paper examines available evidence on consumers' use of high-price credit within the context of their credit situation and decision process. The findings indicate that users of high-cost credit generally fall into groups that economic theory predicts might benefit from use of such credit and suggest that decision processes for high-price credit products typically show signs of deliberation but usually do not include extensive problem solving. As such, decision processes for high-price credit products do not appear to be much different from decision processes for mainstream credit products.

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CONSUMERS' USE OF HIGH-PRICE CREDIT PRODUCTS: DO THEY KNOW WHAT THEY ARE DOING?[1]

Gregory Elliehausen

I. INTRODUCTION

A variety of consumer credit products have particular notoriety because of their high prices. The products include some small personal loans, pawnbroker loans, payday loans, automobile title loans, and refund anticipation loans. Prices for these products are indeed high. Finance charges are large relative to loan amounts, and annual percentage rates often exceed 100 percent. Certain short-term lease transactions with purchase options, called rent-to-own transactions, have also been singled out because the purchase option has a relatively high price.

Not surprisingly, triple-digit interest rates invite criticism. The critics of high-price credit products contend that consumers would be better off without such borrowing opportunities. They see little or no benefit to using high-price credit and assert that high-price credit products have great potential to harm consumers. They assert further that consumers using such products often are uninformed or have been misled. The critics often support these views using anecdotal evidence. There clearly have been instances in which consumers have suffered harm and have been misled or were uninformed. However, systematic evidence on frequency of problems or the extent to which use of high-price credit may be informed is very limited.

This paper examines available evidence on consumers' use of high-price credit within the context of their credit situation and decision process. The economists' model for inter-temporal consumption and investment decision and psychologists' cognitive model of the decision process provide the framework for the analysis. The economists' model helps answer the question whether actual users of high-cost credit fall into groups that the theory predicts might benefit from use of such credit. The psychologists' model of the decision process then provides criteria for assessing the extent to which these consumers' behavior is purposive and intelligent.

This paper is organized as follows: Section II describes the different high-price credit products. Section III outlines the economic model of consumer credit use, which predicts characteristics of consumers that may benefit from high-price credit. Section IV compares the demographic characteristics and credit experiences with the predictions of the economic model. The findings indicate that high-price credit users generally are those whom economic theory predicts may benefit from such credit. This conclusion leads to the question whether high-cost credit users know what they

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are doing. Section V describes the psychological model of the decision process, which provides a framework for assessing high-price credit customers' decisions. Section VI then examines decision processes for several high-price credit products for which information is available. Section VII provides a summary and conclusions.

II. THE PRODUCTS

High-price loan products are quite diverse. Most are small single-payment loans with relatively short terms to maturity. However, a few may involve larger amounts or be paid in instalments over a year or longer. The characteristic that makes them distinctive other than their relatively high price is their availability to consumers who have difficulty qualifying for many types of credit. The diversity of the products at least in part reflects efforts of various lenders to find ways of making credit available to such consumers. This characteristic differentiates high-price loans from the mainstream credit products, which are familiar to most consumers.

Pawnbroker loans

Pawnbroker loans are one of the oldest forms of consumer credit. The borrower brings an item that secures the loan to the pawnshop. The most frequently used security in a pawnbroker loan is jewelry. Electronic equipment, guns, and tools are also frequently used as security. A pawnshop employee inspects the item and estimates its value.[2] Based on the estimated value, a loan amount will be determined. The item will be left with the pawnbroker. At the end of the term of the loan, typically, one month, the borrower may pay the loan amount plus a finance charge to redeem the item. The borrower may also extend the loan for an additional month or two, paying additional finance charges for extensions. If the borrower does not redeem the item at the end of three months, the item is forfeited.

Pawnbroker loans are quite small. In 1997, pawn loans typically ranged from $35 to $260, with an average size of about $70 (see Johnson and Johnson 1998).[3] The finance charge consists of interest and a storage and security charge. The finance charge on a $70 loan, for example, might be $9.40, with $1.40 (2 percent per month) in interest and an $8.00 charge for storage and security. The annual percentage rate for this example is ($9.40 ÷ $70) × 12 = 161.14 percent.

A pawnbroker loan is based on the value of the item used as security and perhaps for a repeat customer, the borrower's history of previous redemptions. The loan does not depend on the borrower's income or credit history. The borrower's performance on a pawnbroker loan is not reported to credit bureaus.

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[2] The inspection may include a request for the borrower to demonstrate how an item works. The purpose of the demonstration is twofold. The demonstration shows whether the item indeed works but also whether the borrower knows how the item works. Not knowing how an item works raises a question whether the borrower actually owns the item.

[3] See also Casky (1991, 1994).

Because the pawnbroker takes physical possession of the item, the pawnbroker must safely secure pawned items. The pawnbroker is liable for replacement value of any pawned item that is lost, stolen, or damaged. Pawnbrokers must be able to assess the market value of a wide variety of items. An item worth less than the loan amount is unlikely to be redeemed. Pawnbrokers also need to be able to identify and note defects in pawned items, distinguish genuine items from imitations, and be watchful that the customer does not substitute an item of lesser value for one that is inspected.

Small Consumer Finance Instalment Loans

The consumer finance industry emerged early in the twentieth century after states enacted laws established special interest rate ceilings for relatively small loans to consumers. These laws typically required lenders to obtain a license from the state. The interest rate ceiling was often graduated by size of loan, with higher rates being allowed for smaller loans. The laws also often regulated other loan terms such as maximum loan sizes and terms to maturity. Small consumer loans from consumer finance companies are typically repaid in monthly instalments. The loans are amortized, with a part of each payment repaying principle so that the loan is paid in full by the last scheduled payment. These loans are often unsecured.

The Texas Consumer Finance Code is an example of a law with a graduated interest rate ceiling and limits on term to maturity and maximum loan size. The maximum interest rate is 18 percent per year (add-on) for loan amounts up to $1,320 and 8 percent per year (add-on) for loan amounts from $1,321 to $11,000 (Article 3.15). The maximum term to maturity is 37 months for loans of $1,500 or less, 49 months for loans from $1,501 to $3,000, and 60 months for moans over $3,000. The rate ceiling can be converted into an annual percentage when loan size and term to maturity are specified. The rate ceiling for a 12-month $1,000 loan is 31.71 percent per annum, for example; and the rate ceiling for a 24-month $2,000 loan is 25.91 percent per annum. The average size of Article 3.15 loans in 1994 was $2,053 (Consumers Union 1998).

The Texas Consumer Finance Code is of interest because it specifies special interest rate ceilings for very small loans, defined in the code as loans of $440 or less (Article 3.16). The rate ceilings for very small loans are considerably higher than the ceilings for larger small loans. Loans under $30 have a maximum finance charge of $1 per $5 borrowed; loans between $30 and $100 have a maximum finance charge of 10 percent of the loan amount plus $3.50 to $4.00 per month, depending on loan amount; and loans from $101 to $440 have a maximum charge of $10 plus $4.00 per $100 per month. The maximum term to maturity is one month for each $10 up to a maximum of 6 months for loans of $100 or less and one month for each $20 up to a maximum of 12 months for loans of $101 to $440. These rate ceilings range from 109 to 240 percent per annum, depending on loan size and term to maturity. The average size of Article 3.16 loans in 1994 was $255 (Consumers Union 1998).

Consumer finance companies generally target consumers whose income or past debt payment performance prevents them from qualifying from prime credit. The primary consideration is the consumer's ability to service the debt. Lenders look for a reliable source of income and attempt to arrange a loan with a relatively low monthly payment, which the borrower can afford to pay with ease. Thus, the term to maturity tends to be at the maximum allowed term, and loan amounts may be limited to keep monthly payments low. A history of previous payment problems does not normally disqualify a consumer in this market, but previous problems at the same lender may preclude further borrowing.

The Texas Article 3.15 rate ceilings are similar in structure to rate ceilings in many other states, although the level of ceilings in other states may be somewhat higher. The Texas 3.15 and many other state rate ceilings are not sufficiently high to allow lenders to make very small loans profitably. In contrast, the Article 3.16 rate ceilings are among the highest rate ceilings for consumer finance instalment loans. The Article 3.16 ceilings allow consumer finance companies profitably to make very small loans, which are competitive in loan size ranges that pawnbrokers and payday loan companies offer.

Payday Loans

The payday loan industry developed during the 1990s. A payday loan is a small, short-term, single-payment consumer loan. In a payday loan transaction, the customer writes a personal check for the sum of the loan amount and finance charge. [4] The payday loan company agrees in writing to defer presentment of the check until the customer's next payday, which is typically 10 to 30 days later. At the next payday, the customer may redeem the check by paying the loan amount and the finance charge, or the payday advance company may cash the check. In some states, the customer may extend the payday loan by paying only the finance charge and writing a new check.

Payday loans usually range from \$100 to \$500, although some states permit payday loans up to \$1,000 (see Elliehausen and Lawrence 2001). Finance charges are typically between \$15 and \$20 per \$100 of the loan amount. The calculation of the cost of a payday loan is straightforward. Consider, for example, a customer borrowing \$200 for 14 days, where the finance charge is assessed at a rate of \$15 per \$100 borrowed. The finance charge is \$200 × (\$15 ÷ \$100) = \$30. The annual percentage rate for this transaction is 390.00 percent, which is the periodic rate (\$15 ÷ \$100) = 15.00 percent multiplied by 26, the number of 14-day periods in a year.

The underwriting process for payday loans consists primarily of verifying the applicant's income and the existence of a bank account. Payday advance companies typically request that applicants provide the last bank statement, the last pay stub, identification (e.g., social security number and driving license), and sometimes proof

[4] Payday loan companies may provide only payday loans, or they may provide payday loans and other services such as check cashing, pawnbroker loans, and wire transfers.

of residence. Companies generally limit the maximum amount of the loan to a specified percentage of the customer's take-home pay. Unlike traditional lenders, payday loan companies do not obtain a credit bureau report. However, some companies do subscribe to a risk assessment service that provides information on recent payday loan use by the applicant.

Taking a postdated check helps reduce the costs of collection. If the consumer fails to redeem the check, the payday loan company has a relatively low-cost method of collection. The company can deposit the check to obtain payment of the loan amount and finance charge. Depositing the check does not ensure payment, of course, since the customer may not have sufficient funds in his account. But not having sufficient funds in the account subjects the customer to overdraft fees, which makes failure to repay the payday loan costly to the customer. Thus, the postdated check provides an incentive to repay the payday loan, thereby reducing the probability of default and the expected value of collection costs.

Refund Anticipation Loans

A tax refund anticipation loan is a short-term loan to a consumer that is based on the amount of the consumer's tax refund. The consumer receives the amount up to the refund amount less the loan fee. The tax preparation fee and perhaps other fees may also be deducted from the loan amount.[5] The proceeds of the refund anticipation loan may be paid by check, deposited in a bank account, or disbursed through a prepaid cash card, within one to three days of filing the tax return. The refund anticipation loan and fees are normally repaid by the tax refund.

Refund anticipation loans are typically arranged through tax preparation services—such as H&R Block, Jackson Hewitt, and a large number of smaller tax preparers—which act as a middleman between the borrower and the lender. The lender makes the credit decision and funds the loan. Lenders with large refund anticipation loan programs include Bank One, HSBC Bank, Santa Barbara Bank & Trust, Republic Bank & Trust, and River City Bank.

Refund anticipation loans range from $200 to $7,000, but most are greater than $2,000 (see Elliehausen 2005). Lenders may make loans up to the amount of the claimed refund less fee. However, some lenders limit the loan amount regardless of the size of the refund or lend only up to a specific percentage of the refund amount if they have had no previous experience with the customer. The refund anticipation loan fee ranges from $10 to $100 depending on the size of the loan.[6] The term of the loan depends on the time the Internal Revenue Service takes to process the refund claim. The term of the loan is generally between ten and fourteen days. Annual percentage rates for a refund anticipation loans are relatively high. Consider, for

[5] Customers usually receive funds from a refund anticipation loan within a day of filing the tax return.
[6] Other fees such as electronic filing and deposit account setup fees may be charged in conjunction with a refund anticipation loan. Whether or not such fees are included in the finance charge depends on whether the charge would be incurred in comparable cash transactions.

example, a $2,000 refund anticipation loan having a loan fee of $89, which is 4.45 percent of the loan amount. If the loan is outstanding for 10 days, the annual percentage rate would be 4.45 percent multiplied by 365/10 = 36.5 periods per year, or 162.43 percent.

A refund anticipation loan is not risk free. The borrower is obligated to repay a refund anticipation loan but may not receive all or part of the anticipated refund, which is expected to repay the loan. The Internal Revenue Service may reduce a request for a refund for any number of errors or omissions in the borrower's tax return. The Internal Revenue Service may also apply funds from a refund to offset unpaid federal income tax obligations from previous years, student loans, other federal agency debts, state taxes, or child support. On electronic filings, the Internal Revenue Service will provide notice of the existence of an offset on the acknowledgement of the electronic transmission. That notice does not indicate the amount of the offset, however.

The lender collects or may collect information on applicants' name, address, telephone number, and social security number; amount of income, deductions, and refund from the tax return; debts or liens owed to the government; other debts and assets; previous refund anticipation loans; employment; and credit history. Most applications for a refund anticipation loan are accepted. Some lenders advertise that they accept nearly 90 percent of applications. Many refund anticipation loans are for the full amount of the refund less the amount of fees deducted. However, in some situations, lenders may limit loan amounts to control risk. As mentioned, lenders may limit the dollar amount of a refund anticipation loan or the percentage of the refund financed if the customer had no previous refund anticipation loan or a refund anticipation loan from another lender. Lenders may also limit the amount or percentage of the refund anticipation loan covered by an earned income tax credit or limit loans that rely on income from schedule C (sole proprietorships). And lenders may limit or refuse applications if the consumer owes delinquent child support or government debts or liens.

Automobile Title Loans

Automobile title loans are typically as one-month contracts secured by a first lien on the borrower's automobile. The borrower gives the lender the title to the car and a copy of keys as security for a loan. The entire balance of the loan plus finance charge is due at the end of the month. The borrower may extend the loan by paying the finance charge at the end of the month. Borrowers commonly extend loans by paying the finance charge and a percentage of the amount borrowed, often for three to five months.

Automobile title loans range from $100 to a few thousand dollars, but the typical loan size is from $400 to $600 (see Verant 2000). A typical finance charge would be $25 per $100 borrowed. The annual percentage rate would be 300 percent.

Automobile title loan lenders typically require applicants to provide information on the automobile, income, proof of employment (such as a pay stub), proof of residency, information on the title and insurance. Loan evaluation consists of an examination of the condition of the automobile, determination of its value, and evaluation of the borrower's ability to repay. Lenders may verify employment and obtain a credit report. However, some automobile title loan lenders will lend to consumers who are not employed or have a bad credit history.

Rent-to-Own Transactions

The rent-to-own industry consists of dealers that rent on a week-to-week or month-to-month basis furniture, appliances, home electronics, and jewelry to consumers. In a rent-to-own transaction, the customer enters into a self-renewing weekly or monthly lease for the item. The customer is not obligated to continue payments beyond the current weekly or monthly period. At the end of the period the customer can continue to rent by paying for an additional period or return the item. The rental agreement provides an option to purchase the item, either by continuing to pay rent for a specified period of time; by paying a specified percentage of the rental payments that remain to be paid before the item is purchased; or by some other formula that depends on factors such as the number of payments made and value of the item.

The rent-to-own transaction differs from transactions involving an instalment purchase or a multi-period financial lease in that the rent-to-own company, not the consumer, bears the risk of ownership.[7] The rent-to-own company incurs the costs of delivery, setup, repair, loaner services, pickup, refurbishing, and re-rental. Sellers generally do not deliver and set up items without charging for the services. Sellers also do not normally repair items or provide a loaner during the repair period, although they may for an additional charge sell a customer a service package. The rent-to-own customer can return the item without penalty at the end of the week or month if he is dissatisfied or no longer needs the item. A consumer who purchases an item would have to seek a buyer in the second hand market or otherwise dispose of an unwanted item, and a consumer who uses a financial lease normally would pay an early termination fee. These features make rent-to-own purchases more costly than an instalment purchase or a multi-period financial lease.

The terms of a rent-to-own transaction can be illustrated by considering the rental of a 50-inch high-definition digital television. The rental cost for the television is $209 per month. The customer would own the television after 36 months. If the customer wanted to purchase the television earlier than 36 months, he would have to pay the difference between the rent-to-own company's specified cash price of $3,119 and 45 percent of the sum of rental payments made.

[7] Rent-to-own transactions are not covered by Truth in Lending (Regulation Z) or Truth in Leasing (Regulation M).

Determining the cost of credit when a product, credit, and possibly other services are purchased jointly can be a problem. The calculated cost of credit depends on the allocation of costs among the items purchased jointly; but the allocation of costs may be arbitrary if the product and other services are not also sold separately for cash, which is normally the case for rent-to-own transactions. Using retail prices for the same television, one estimate of the cost of credit can be obtained. The same television has a list price of $2,500 and retails for $1,600 to $1,900. In addition, a consumer would have to pay sales tax and also shipping if purchased through the Internet. Assuming a retail price of $1,750 and a five-percent sales tax rate, sales tax would be an additional $87.50. Shipping would be between $225 and $500, depending on the shipping option chosen. For this example, the fast shipping option costing $500 is used. A three-year, in-home extended warranty may be obtained for $300. Adding these additional costs to yields a cash purchase price of $2,637.50. The periodic rate which equates the purchase price and the 36 payments of $209 is 7.30 percent, which is 87.60 percent on an annual basis.

The 87.60 percent annual rate does not include setup, nor more importantly does it include the value of the option to return the item at any time. Presumably the value of these features would be included in the rent-to-own-company's cash price of $3,119, although there is no assurance that this price would be a market price. Equating the company's cash price and the 36 payments of $209 yields a period rate of 5.83 percent, or 69.96 percent annually.

Illegal Loans

The passage of small loan laws in the early twentieth century, which gave rise to the consumer finance industry, did not eliminate unmet demand for small loans. During the 1920s, racketeers in New York City entered the small loan business. By the 1950s, illegal lending (also known as loansharking) was a standard business activity of criminal organizations operating in major metropolitan areas (Haller and Alviti 1977).[8]

Illegal loans range in size from $50 to $1,000, with an average probably between $150 and $400 (Seidl 1970). The customary interest rate is 20 percent per week, which amounts to 1,040 percent per annum. Interest charges are due each week as long as the principal is outstanding. The principal can be reduced only in lump-sum, or sometimes, half-lump-sum payments. Loan sharks typically use the threat of force or violence to enforce payment. However, instances of actual violence are limited because violence discourages new or continued borrowing by making customers more apprehensive and because some forms of violence may make it more difficult for the borrower to repay.

[8] The expansion of high-price credit products during the 1990s has not eliminated racketeer loansharking. For recent instances, see "Reputed Mob Associate Sentence in Loan Shark Case," *Associated Press Newswire* (December 20, 2005); "Man Accused of Loan Sharking Signs Plea," *St. Petersburg Times* (March 1, 2006).

Illegal lending probably accounts for a small part of high-price lending. Most consumers with unmet demand for small loans likely would not turn to racketeer loansharks if legal high-cost loans were not available. Nevertheless, illegal lending is worth mentioning because its existence is a reminder that there are sources willing to provide high-price credit even if the provision of such credit is illegal.

III. THE ECONOMIC MODEL OF CONSUMER CREDIT USE

Credit is not obtained as a good in itself. Rather credit is typically associated with the purchase of goods or services. Many goods and services purchased using credit provide utility over a period of time. Automobiles, furniture, appliances, and education are all examples of such goods or services. They are not used up immediately after purchase. Acquisition of goods and services that provide future utilities is not fundamentally different from investment. Indeed acquisition of such goods can be thought of as consumer investment. Consideration of the economic theory concerning consumer decisions in this area explains why consumers are sometimes willing to borrow at high rates of interest.

In their analysis of the consumer's credit decision, Juster and Shay (1964) noted the similarity of the consumer's decision to finance the purchase of household durable goods to business investment. The value of a stream of services from a durable, they suggested, can often be measured in terms of the cost of purchasing those services in the market. For example, the value of the services of a washing machine can be measured by the cost of obtaining the services in a Laundromat, or the services of an automobile can be measured by the cost of using public transport. Even the services of durables like televisions or video recorders can be valued in such a way. The value of services of a television, for example, can be measured by the cost of going to the cinema, a concert, or other entertainment activities that would be undertaken if television were not available.[9] This consideration facilitates comparisons of the benefits and costs of acquiring durables.

The Consumption/Investment Model and Credit Demand

The economist's model for analysis of such decisions is Fisher's intertemporal consumption/investment model (Fisher 1930). The consumption/investment model relates investment opportunities, time preference, and the interest rate to solve the problem of allocating resources over time. The solution provides an individual's optimal time pattern of consumption. In a perfect market, the consumer invests along among opportunities until the rate of return on investment is equal to the interest rate and then borrowing or lending at that rate to achieve the time pattern of consumption that provides the highest achievable utility level.

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[9] A few researchers have estimated rates of return for household durables using methods suggested by Juster and Shay. See Poapst and Walters (1964) and Dunkelberg and Stephenson (1975).

Juster and Shay extended Fisher's model to consider how certain institutional features of consumer credit markets affect consumer choices.[10] One extension involved Hirschliefer's (1958) then recent theoretical developments that addressed an imperfect capital market in which the interest rate for borrowing is greater than the interest rate for lending. In this market, the consumer invests among investment opportunities until the rate of return on investment is equated with the discount rate, which depending on circumstances may be the borrowing rate, lending rate, or the consumer's rate of time preference. The optimal time pattern of consumption is achieved by equating the discount rate to the rate of time preference by borrowing, lending, or neither.

Juster and Shay considered further extensions to the model to address two other institutional characteristics of consumer credit supply, which have been designated as credit or liquidity constraints in subsequent literature. The extensions address (1) borrowing opportunities in which larger amounts of borrowing have a higher marginal borrowing rate, and (2) borrowing opportunities with an absolute limit on the amount that can be borrowed. These extensions account for many lenders' unwillingness to finance the entire cost of consumer durables and the existence of specialized lenders offering unsecured credit at relatively high interest rates.

Many mainstream lenders reduce their exposure to default risk by requiring borrowers to repay the loan before the end of the service life of the durable. This requirement forces the borrower to build equity in the durable being financed, reducing default risk by making default costly to the borrower.[11] The equity requirement may also affect the cost of financing the durable because building equity forces the borrower to forgo current consumption. If the cost of forgoing current consumption is sufficiently high, borrowers sometimes may obtain additional credit by using unsecured personal credit, but this credit is riskier and therefore more costly than other forms of credit. For many consumers, additional unsecured personal credit is available only from specialized high-risk lenders at a substantially higher cost.[12] And at some point, a consumer may not be able to borrow additional amounts at all.

These further extensions lead to two types of outcomes, an equilibrium outcome and a rationing outcome. Consider a simple example in which there are two borrowing rates, a lower rate charged by primary lenders and a higher rate charged by secondary lenders. Both lenders have an absolute limit on the amount that can be borrowed. The equilibrium outcome is similar to the one in Hirschleifer's extension. The consumer invests in durables until the rate of return on investment is equated with the discount rate, which in a situation involving borrowing is the rate charged

[10] These extensions are presented in appendix A of Juster and Shay's monograph.
[11] They also typically retain a security interest in the durable. Many consumer durables used for collateral have little market value. They nevertheless may serve as collateral if they have value to the borrower (such as providing a stream of services). Loss of the durable would thus be costly to the borrower. See Barro (1976) or Benjamin (1978). See chapter 4 below for further discussion.
[12] See also Bizer and DeMarzo (1992) for a model of markets with sequential credit decisions.

by primary lenders. The amount borrowed does not exceed the limit set by primary lenders, and the rate of return on investment, discount rate, and rate of time preference are equal.

Rationing outcomes occur when the consumer is unable to equate the rate of return on investment, discount rate, and rate of time preference. In some rationing outcomes, the consumer is able to equate the rate of return on investment and the rate of time preference. However, discontinuities in market opportunities for borrowing prevent the consumer from taking advantage of potentially utility increasing investments. Rationing prevents a consumer from borrowing further at a lower rate, and the return on investment is not sufficiently high enough to justify borrowing at the next higher available rate.

A second rationing outcome occurs when the consumer exhausts availability of credit at the lower rate charged by primary lenders and borrows at the higher rate. In this case the rate of return on investment is less than the consumer's rate of time preference. The rate of time preference may be equal to the higher rate charged by secondary lenders or greater than the higher rate if the amount of borrowing exceeds the secondary lenders' limit. Again, rationing prevents the individual from taking advantage of potentially utility increasing investments.

Consumer Characteristics Associated with Credit Rationing

Juster and Shay identified characteristics that distinguish rationed and unrationed borrowers. Borrowers who have high rates of time preference and are constrained by equity requirements that limit amounts that can be borrowed were called "rationed" borrowers. Rationed borrowers typically are in early family life-cycle stages. They have relatively few durables and frequently have growing families. Consequently, rates of return on household investment tend to be high.[13] Rationed borrowers also have relatively low or moderate current incomes, making the sacrifices in current consumption necessary to satisfy creditors' equity requirements costly. And because of their moderate incomes and young early age, rationed borrowers generally have not accumulated large amounts of liquid assets. At this stage in the life cycle, precautionary motives loom large in consumers' saving decisions. Thus, their liquid asset holdings have a high subjective yield, which makes it costly to liquidate assets to acquire durables.[14] High rates of time preference and high subjective yields on

[13] Calculations by Poapst and Walters (1964) and Dunkelberg and Stephenson (1975) provide support for the view that rates of return on investment in household durables can be quite high, especially for families with children. Consumers' actual returns are likely higher that these studies estimate because the studies omit from the calculations factors such as greater flexibility in use of time, any special features not available from commercial alternatives, and the convenience of not having to leave the home.

[14] Subjective yields on liquid asset holdings are higher than nominal yields for many consumers because of strong precautionary motives. Many consumers use liquid assets grudgingly even when events occur that impair their earning potential or require large expenditures. Their reluctance to use liquid assets stems from a belief that the worse the current situation, the greater is the need to maintain reserves for future emergencies (Katona 1975). As a consequence, subjective yields on liquid assets

liquid assets cause equity requirements to be expensive for rationed borrowers, making them willing to pay high interest rates to obtain more credit.

Unrationed borrowers, in contrast, typically are in later family life-cycle stages or have relatively high incomes. Unrationed borrowers in later life-cycle stages may have relatively few high-return household investment opportunities. And relatively high income may provide discretionary income that allows unrationed borrowers to satisfy equity requirements without costly reductions in current consumption. Moreover, their age and income may allow unrationed borrowers to accumulate relatively high levels of savings. Consequently, subjective yields on liquid assets are often substantially lower for unrationed borrowers than for rationed borrowers. Availability of low-cost discretionary income and liquid assets for acquisition of durables make unrationed borrowers unwilling to pay high interest rates for additional credit.

New High-Cost Borrowing Opportunities for Rationed Consumers

Consumer credit markets have changed considerably since Juster and Shay's study. Advances in information availability and in the technology to manage and analyze large amounts of information have improved lenders' ability to assess risk. Credit reporting is now close to comprehensive. Credit reports thus reflect a consumer's complete credit history, making information in credit reports more useful for predicting future payment performance. In addition, the development of credit bureau scores has made statistical credit evaluation available to all creditors.

Such changes have loosened the credit limits of primary lenders. Equity requirements have been relaxed, as terms to maturity have lengthened for most closed-end instalment credit. Downpayment requirements have also been reduced. And home equity lines of credit have been developed to allow consumers to finance acquisition of durables using the equity in their homes. Thus, many consumers are able to finance a greater proportion of their household investment through primary lenders.

Higher cost credit products from secondary lenders have also proliferated. Unsecured credit is now widely available through bank credit cards. Many borrowers use bank credit cards in much the same way as Juster and Shay described borrowers using unsecured personal loans (see Bizer and DeMarzo 1992, Brito and Hartley 1995). Competition extended availability of bank credit cards to many consumers who previously would have had difficulty qualifying for bank cards. As a

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are often substantially greater than nominal yields. This characteristic of consumers' financial behavior may explain consumers' simultaneous holding of consumer debt and relatively large amounts of liquid assets. The weighted average annual percentage rate on the outstanding consumer credit is greater than the nominal yield but less than the subjective yield on the liquid assets. Since many consumers who have relatively high-cost personal loans from finance companies or credit card debt also hold liquid assets is, the subjective yield on liquid assets is likely to be quite high for some consumers.

result, unsecured credit is now available to more consumers at a lower cost than in the past.

Subprime products have also been developed for credit cards, automobile financing, and mortgages. These subprime products allow consumers to finance a larger share of the value of household durables, borrow more heavily against future income, or obtain credit despite previous problems repaying debts.

Various short-term credit products have also been developed. As mentioned, the payday advance industry allows consumers to obtain an advance on their next paycheck. Automobile title lenders offer small loans secured by consumers' automobiles. And, refund anticipation loans enable consumers to obtain an advance on expected tax refunds. Short-term products may facilitate the accumulation of household assets even when they are not used directly to finance household investment. The availability of short-term credit may reduce consumers' vulnerability to unexpected expenses or reductions in income when they use relatively large amounts of debt to finance household investment. Although these short-term credit products may be very costly, consumer losses resulting from a lack of liquidity may be quite large. Thus, short-term products may also have expanded the opportunities for rationed consumers to finance household investment.

Is Use of High-Price Credit Products Ever Wealth Increasing?

The net present value rule for evaluating investments is derived from the consumption/ investment model. Net present value (*NPV*) is calculated as follows:

$$NPV = -C + \sum_{t=1}^{n} S_t (1+d)^{-t}$$

where C is the cost of an expenditure, S_t is a periodic saving for n periods from an making an expenditure, and *d* is the periodic discount rate. An expenditure is wealth increasing if the present value of its benefits exceeds its cost. As noted by Juster and Shay the benefits from durable acquisitions can often be measured in dollars as saved costs. The benefits of using a short-term loan may also be expressed in terms of the costs of some market alternative. For example, a short-term loan may be used avoid a late payment, take advantage of a one-time sale, or avoid some more costly alternative.

Elliehausen and Lawrence (2001) provide an example of a net present value calculation evaluating use of a payday advance to repair an automobile. In this example, a consumer needs \$200 to repair an automobile. The consumer can obtain a \$200 payday loan for a \$30 fee due on the next payday in two weeks or take public transportation until next payday.

The example is based on commuting from a Washington, DC suburb to the district. The US government mileage rate was used for calculating automobile fuel and depreciation cost. Opportunity cost for extra time for commuting by public transportation was calculated for a \$10.00 per hour wage rate. Parking was provided by the employer. Table 1 summarizes the calculation of the daily cost of using by public transportation.

Table 1
Daily cost of public transportation

Bus and subway fare (2 × \$3.50)	\$7.00
Less: Automobile mileage (2 × 12 miles × \$0.31 per mile)	\$7.40
Plus: Opportunity cost for commuting (2 × 0.25 hours × \$10 per hr.)	\$5.00
Equals: Net daily cost	\$4.56

Elliehausen and Lawrence further assumed that the automobile was used only for commuting between the consumer's residence and place of employment. Table 2 summarizes the cash flows and calculates the net present value of using a payday loan to pay for the repair. The cost of the repair C is the net cash flow on day 0. The cost of public transportation is the periodic savings, S_t, which are \$4.56 per day on weekdays and \$0.00 on weekends. In addition the consumer would incur the cost of repairing the automobile at the end of two weeks.

Table 2
Net present value of using a payday loan to repair automobile

Day		Net cash flow	Discounted cash flow
0	Tuesday (repair car)	−$ 200.00	−$200.00
1	Wednesday (daily cost)	4.56	4.51
2	Thursday	4.56	4.46
3	Friday	4.56	4.42
4	Saturday	0.00	0.00
5	Sunday	0.00	0.00
6	Monday	4.56	4.28
7	Tuesday	4.56	4.23
8	Wednesday	4.56	4.19
9	Thursday	4.56	4.14
10	Friday	4.56	4.10
11	Saturday	0.00	0.00
12	Sunday	0.00	0.00
13	Monday	4.56	3.97
14	Tuesday (daily cost and car repair)	$204.56	$176.24
	Sum of cash flows	**$45.60**	**$14.55**

The column on the right of table 2 provides the discounted value of the cash flow. The periodic discount rate is 1.07 percent per day, which is the finance charge of $15 per $100 borrowed divided by the 14 days (the term of the payday loan). The net present value is the sum of discounted cash flows $14.55. The positive net present value indicates that borrowing at 1.07 percent per day, a 309 .00 percent annual percentage rate, is wealth increasing.

It is worth noting that the undiscounted net value of using the payday loan is the $45.60 sum of net cash flows from the table less the $30 finance charge for the payday loan. That result, $15.60, is not much different from the $14.55 net present value. Despite the high discount rate, the effect of discounting is small because of the very short term to maturity. Decisions can reasonably be made on the basis of undiscounted cash flows. Thus, the short term to maturity for many of the high-price credit products simplifies the consumer's decision.

This example is obviously hypothetical. Different assumptions might lead to different decisions. A more costly repair or daily parking fees would reduce net present value and might produce negative net present values. Additional trips using public transportation or a higher opportunity cost rate would increase net present value and might produce a positive net present value even for a more costly repair or daily parking fees. Data that permit calculation of net present values for actual payday loan decisions are not available. Nevertheless the example illustrates that there are plausible situations in which use of high-price credit is rational.[15]

IV. Characteristics of High-Price Credit Customers

The economic model of consumer credit use predicts that users of high-price credit products would be consumers in early family life-cycle stages, have limited discretionary income for servicing debt, and face constraints to additional credit use. An examination of demographic characteristics and credit experiences suggests that high-price credit customers generally have these characteristics.

Life-Cycle Stage

Users of high-price credit products generally are young. Over half of pawnbroker loan, rent-to-own, and refund anticipation loan customers are less than 35 years of age; and 36.4 percent of payday loan customers are less than 35 years of age (table 3).[16] These percentages are considerably higher than the 28.6 percent of householders less than 35 years of age across all households.

Although the percentage of automobile title loan customers who are less than 35 is the same as the population, the percentage of automobile title loan customers who are 35-44 years is nearly twice the percentage for the population in that age group. Greater than proportionate percentages of pawnbroker loan, payday loan, rent-to-own, and refund anticipation loan customers are also in 35-45 years age group.

[15] Elliehausen (2005) calculates net present values of using a refund anticipation loan to obtain savings of $50, $75, $100, and $125 for several refund anticipation loan amounts ranging from $1,250 to $4,000. The savings range from one to eight percent of the loan amount. The calculations provide further illustrations of plausible situations in which use of high-price credit rational.

[16] The surveys on which this and subsequent tables are based were conducted between 1998 and 2005. The statistics are from the following sources: Johnson and Johnson (1998), pawnbroker loans; Elliehausen and Lawrence (2001), payday loans; Lako, McKernan, and Hastik, (2000), rent-to-own transactions; Elliehausen (2005), refund anticipation loans; and Verant (2000), automobile title loans. Statistics for bank card revolvers are from the University of Michigan Survey Research Center's January 2000 Survey of Consumer Attitudes. The statistics for all households are from an omnibus telephone survey of adults conducted in 2004 (Elliehausen 2005).

Table 3
Age of customer
(Percentage distribution)

Age	**Pawn-broker loan**	**Payday loan**	**Rent to own**	**RAL**	**Auto title loan**	**All households**
Less than 35 years	53.1	36.4	50.8	61.0	28.6	28.6
35-44 years	31.1	31.9	28.6	25.4	39.2	21.3
45-54 years	11.6	21.7	15.9	10.4	17.1	18.4
55 years or older	4.3	10.0	4.5	3.3	15.1	31.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

High-price credit customers are less likely than the population overall to be in older age groups, especially in the 55 years or older age group. Older consumers generally have less demand for credit than younger consumers. Older consumers would therefore be expected to be less likely than younger consumers to be in situations in which mainstream credit would not be available.

Elliehausen and Lawrence (2001) and Elliehausen (2005) provide statistics on certain high-price credit customers' life cycle stage, which includes consideration of marital status and children as well as age. They find that both payday loan and refund anticipation loan customers are concentrated in two life-cycle groups: Thirty-five percent of payday loan customers and 47.2 percent of refund anticipation loan customers were less than 45 years of age, married, with children; and 23.3 percent of payday loan customers and 28.3 percent of refund anticipation loan customers were any age, unmarried, with children. These life-cycle groups' percentage of payday loan and refund anticipation loan customers is substantially greater than their percentage of the population.

Table 4
Life-cycle stage
(Percentage distribution)

Life-cycle stage	Payday loan	RAL	Bank card revolver	All households
Less than 45 years of age, unmarried, no children	11.1	8.1	12.7	13.7
Less than 45 years of age, married, no children	7.2	4.8	7.8	8.0
Less than 45 years of age, married, children	35.2	47.2	25.5	19.2
Age 45 or greater, married, children	5.0	2.0	8.2	5.1
Age 45 or greater, married, no children	9.4	4.2	21.2	20.2
Age 45 or greater, unmarried, no children	8.9	5.4	9.9	22.3
Any age, unmarried, children	23.3	28.3	14.7	11.5
Total	100.0	100.0	100.0	100.0

It is notable that married couples less than 45 years with children and unmarried individuals of any age with children are also more likely households overall to revolve credit cards. Credit cards are another source for borrowing small amounts for short periods of time.

Married couples less than 45 years with children and unmarried individuals of any age with children are may obtain high returns on household investment because they have not yet accumulated many household durables and because their families are growing. These families are the ones that Juster and Shay hypothesized would be most likely to turn to high-price credit to finance additional household investment.

Household Income

High-price credit customers are disproportionately drawn from low (less than $25,000) or moderate income ($25,000-49,999) groups, which are more likely than higher income groups to have limited discretionary income after necessities and be more vulnerable to unexpected expenses (table 5). This characteristic of high-price credit customers suggests that they are apt to be rationed.

Table 5
Family income
(Percentage distribution)

Income	Pawn-broker loan	Payday loan	Rent to own	RAL	Auto title loan	All households
Less than $15,000	38.5	7.3	27.0	18.6	11.9	19.3
$15,000 -24,999	26.4	17.0	33.5	27.9	17.4	15.1
$25,000 -49,999	28.1	50.5	33.2	38.8	40.8	30.6
$50,000 or more	7.1	25.2	6.3	14.8	30.2	34.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

Differences in the income distributions of high-price credit customers suggest that the market for high-price credit may be segmented. Most pawnbroker and rent-to-own customers are in lower income groups (less than $15,000 and $15,000-24,999). Only small percentages of pawnbroker and rent-to-own customers are in the highest income group. Most refund anticipation loan customers are in lower but not the lowest or moderate income groups ($15,000-24,999 or $25,000-49,999). Most payday loan customers and almost half of automobile title loan customers are in the moderate income group ($25,000-49,999). Only small percentages of payday loan and automobile title loan customers are in the lowest income group, but a quarter of payday loan customers and 30.2 percent of automobile title loan customers are in the higher income group.

Credit Experiences

High-price credit customers are less likely to have a credit card than all households. Fifty-seven percent of payday advance customers have a bank card, and 61.6 percent have any credit card, compared to 68.0 percent of all households having a bank card and 73.0 percent having any credit card (table 6). Other high-price credit customers are even less likely than payday loan customers to have a credit card. Less than half of pawnbroker, rent-to-own, and refund anticipation loan customers have credit cards. Thus, many high-price credit customers are unable to turn to open-end credit for short-term borrowing.

Table 6
Use of selected types of credit
(Percent)

Type of credit	Pawn-broker loan	Payday loan	Rent to own	RAL	All households
Bank card	n.a.	56.5	n.a.	39.0	68.0
Retail card	29.7	21.5	n.a.	15.0	50.0
Any credit card	41.5	61.6	43.6	43.1	73.0
Closed–end automobile loan	n.a.	52.9	n.a.	40.8	33.5
Other closed-end loan	n.a.	36.6	n.a.	28.1	21.4

n.a. Not available

Information on closed-end credit use is available for payday loan and refund anticipation loan customers. In contrast to open-end credit, both payday loan and refund anticipation loan customers are more likely than all households to owe automobile and other closed-end credit. Moreover, when they owe debt (regardless whether closed or open end), payday loan and refund anticipation loan customers are apt to have higher monthly debt service payments to income (numbers not in table).[17] These findings are consistent with these customers being predominately in early life-cycle stages, which use debt more heavily than consumers in later life-cycle stages.

Many high-price credit customers have characteristics that make qualifying for credit difficult. Pawnbroker, payday loan, and refund anticipation loan borrowers were more than several times more likely than all families to have a recent bankruptcy or serious delinquency. Twelve percent of pawnshop borrowers filed for bankruptcy in the last 10 years. More than a quarter of payday loan customers were 60 days or more past due sometime in the last year, and 15.4 percent filed for bankruptcy in the last five years. Twenty-six percent of refund anticipation loan customers were 60 or more days past due sometime in the in the last year. In contrast, over all households, just 5.8 percent were 60 or more days past due sometime in the last year, and 3.7 percent filed for bankruptcy in the last five years.

Large percentages of pawnbroker, rent-to-own, and refund anticipation loan customers do not have a checking or any bank account (table 7). Over half of pawnbroker customers and a third or more of rent-to-own and refund anticipation loan customers do not have a checking account. Payday loan customers are the exception, since having a checking account is a requirement for obtaining a payday loan. It is notable that the use of mainstream credit products by refund anticipation loan customers having bank accounts is similar to that of payday loan customers. They are more likely than all families to owe closed-end credit (not in table). In

[17] Debt service payments include payments on both closed-end and open-end debts.

contrast, refund anticipation loan customers with no bank account are less likely than all families to owe closed-end credit.

Table 7
Ownership of bank accounts
(Percent)

	Pawn-broker loan	Payday loan	Rent to own	RAL	All families
Checking account	47.4	100.0	63.7	66.9	87.3
Any bank account	63.6	100.0	n.a.	75.3	90.9

Consistent with relatively high debt use, credit payment problems, and the frequent lack of a banking relationship, many high-cost credit customers experienced or perceived limitations in credit availability. Of the 32.2 percent of pawnbroker loan customers who applied for credit in the previous 12 months, 50.2 percent experienced a turndown. Seventy-three percent of payday advance customers and 46.5 percent of refund anticipation loan customers were turned down or limited in the last five years (table 8). Almost half of payday loan customers and three-fourths of refund anticipation loan customers said that during the last year they thought about applying for credit but did not because they thought that they would be turned down.

Table 8
Perceptions of credit availability
(Percent)

	Payday loan	RAL	All households
Turned down or limited in last 5 years	73.0	46.5	21.8
Did not apply in last 5 years because thought would be turned down	67.7	48.2	14.3

Further evidence of credit constraints is available for payday loan and refund anticipation loan customers with bank credit cards, which consumers might use for short-term borrowing of small amounts. Sixty-one percent of payday loan customers with a bank card and a third of refund anticipation loan customers with a bank card reported that they refrained from using a bank card in the last year because they would have exceeded their credit limit.

In sum, consumers using different types of high-price loans tend to be in life-cycle and income groups that are associated strong demand for credit and are often rationed. They are relatively young, and in early family life-cycle stages. They have low or moderate incomes, depending on the product. Some (payday loan and refund anticipation loan customers with bank accounts) are more likely to use closed-end credit than all families and apt to have higher debt burdens than families with debt generally. Others (pawnbroker, refund anticipation loan customers without bank accounts, and rent-to-own customers) are less likely than all families to use mainstream credit products. Regardless of their use of mainstream credit products, many high-price credit customers have characteristics that limit their access to credit, and most have experienced turndowns or perceive that they are constrained. Thus, the consumers that use high-price loans generally are the ones that economic theory predicts might benefit from relaxation of credit constraints.

V. THE PSYCHOLOGICAL MODEL OF THE DECISION PROCESS

The standard economic analysis of consumer behavior focuses on the outcome of decisions. Such analysis uses a utility optimization model together with data on product choices, prices, consumer income, and perhaps consumers' demographic characteristics to estimate the responsiveness of decisions to differences in prices and income. These analyses have been highly successful in predicting outcomes, but they provide little insight on the actual decision process.

To understand the consumer decision process, many researchers have used a cognitive model of consumer decision process, which is often called the buyer-behavior model in the marketing literature (Engel, Blackwell, and Miniard 1997). The acquisition, understanding, use, and retention of information are parts of the decision process. Day and Brandt (1973) first used this model to analyze consumer credit decisions in his study for the National Commission on Consumer Finance. This model has been used in subsequent studies of consumers' decisions on credit generally (Durkin and Elliehausen 1978; Shay and Brandt 1981) and consumers' decisions on specific credit products (Durkin 1975; Durkin and McAlister 1977; Johnson and Johnson 1998; Lacko, McKernan, and Hastik 2000; Elliehausen and Lawrence 2001). The buyer-behavior model has provided an especially useful framework for assessing regulatory policies in the consumer credit area, many of which address perceived information difficulties faced by consumers (see Day and Brandt 1973; or more recently, Durkin and Elliehausen 2001).

The Buyer-Behavior Model

The buyer-behavior model views the consumer's decision as a process occurring over several stages: problem recognition, internal and external search for information, choice, and outcome evaluation. These stages are interrelated, with feedback occurring throughout the process. Developments occurring during each stage may cause the process to stop, move to the next stage, or proceed immediately to the purchase.[18] Consumers may simplify, use heuristics, or take shortcuts during the decision process.

Problem Recognition

The decision process begins with problem recognition. Demand for credit is a derived demand. It normally arises out of a desire to purchase some good or service. Sometimes a purchase is planned in advance. Other times the desire to purchase occurs because of a perception of a special opportunity. For example, consumers may be aware of the availability of refund anticipation loans at tax time and plan expenditures to coincide with tax filing, or an opportunity to obtain a refund anticipation loan at tax filing may allow a consumer to proceed with a purchase, reduce credit card debt, or deal with an unexpected emergency. Information on rent-to-own opportunities may stimulate a credit constrained consumer to consider acquisition of a durable. In many cases, however, an unexpected expense may stimulate consideration of a high-price credit product. Demand for pawnshop, payday advance, and title automobile loans may arise because an unexpected emergency produces a need for additional funds.

Internal Search

After the consumer recognizes a problem, the consumer must assess alternatives for action. The assessment begins with a search of stored information and experience. Consumers draw on past experience and are guided by existing attitudes to identify and evaluate alternative solutions to the problem. Several outcomes are possible. A consumer may decide that additional information is needed and search externally. For example, a consumer may recall having seen an advertisement by for a high-price credit product and decide to call or visit a lender. Alternatively, if past experience with a product produced satisfactory results, the consumer may forgo external search and proceed immediately to the purchase stage. Satisfied customers may be able to make intelligent and purposive decisions on the basis of very little information and with little deliberation (Katona 1975; Engel, Blackwell, and Miniard 1997). Thus, a consumer who previously obtained a high-price loan and was satisfied with the experience might decide to obtain another high-price loan without much thought or search for alternatives. Another possibility is that internal search leads the consumer to believe the problem cannot be solved. In this case, the decision process may stop and no purchase is made. For example, a consumer whose credit applications have previously been turned down may take no further action because he believes he cannot obtain credit.

External Search

[18] Economists also recognize that consumers may not obtain complete information about alternatives before making decisions. In the economist's framework, acquisition of information may be costly. A consumer will acquire additional information only if its expected benefit exceeds the cost. For discussion, see Stigler (1961).

In this stage of the decision-making process, the consumer uses various sources of external information, such as the mass media (for example, newspapers and magazines), personal sources (for example, friends and relatives), and seller-dominated sources (for example, advertisements and store visits). Before undertaking external search, the consumer may have little or no awareness of the characteristics of available brands or the advantages and limitations of the brands. The consumer may not even know appropriate criteria to use in evaluating alternatives.[19] External search will continue until the consumer believes he has enough information to make purchase and financing decisions.

Consumers differ in their willingness to search. Some consumers are cautious and will search for additional information even when they already have considerable knowledge about alternatives. Other consumers may dislike shopping and will not search very much even if they risk paying too much or not obtaining the preferred set of product characteristics. No matter how disposed a consumer is toward shopping, the willingness to search is limited. Search requires time and energy. At some point, the time and energy required for further search outweigh any expected gains from additional information. The consumer is then ready to make a purchase decision.

Choice and Outcome Evaluation

The purchase decision involves choosing whether or not to acquire the good or service and choosing the variety (that is, the specific set of characteristics) and supplier. The decision process does not necessarily end with the purchase, however. Consumers may continue to process information to evaluate their decisions. An evaluation of the outcome is especially likely when the decision process has been extended. Satisfaction with the purchase decision serves to reinforce existing attitudes and the evaluative criteria upon which they are based. Obviously, satisfaction tends to encourage repeat purchases. Dissatisfaction can lead to revisions in attitudes and a reevaluation of evaluative criteria. In this case, the consumer learns from experience and avoids similar mistakes in the future.

Information Processing in the Buyer-Behavior Model

Information processing occurs through a psychological command center, which includes both memory and the basic facilities for thinking and directing behavior. The components of the command center necessary for understanding behavior are the information and experience stored in memory, the criteria by which alternative choices are evaluated, and attitudes toward alternatives. Each component is affected by personality. These variables interact to form a filter through which incoming information is processed. The filter plays a critical role in information processing.

[19] Evaluative criteria are the product characteristics that the consumer deems to be important in his choice of alternatives. Evaluative criteria are shaped by personality, stored information, and experience. Obviously, a consumer must have some knowledge of the class of alternatives before specifying those characteristics that are important in decision making.

First, the filter greatly limits the amount of information that comes to the consumer's attention. The filter also may attenuate or distort information to be more consistent with the consumer's attitudes. Finally, the filter limits the amount of information that is retained in memory.

The operation of the filter has important consequences for the evaluation of credit decisions. The consumer must first become aware of the information. The creditor must provide easy access to information, but awareness also depends on the consumer's attitudes and evaluative criteria. A consumer may not become aware of some product characteristics if the characteristics are not important to him. He may focus only on the characteristics that are important to him, especially if the product has many characteristics.

A consumer may be aware of information but not comprehend the information correctly. It is common for information to be attenuated and distorted to be consistent with the individual's own attitudes and experiences. For example, add-on interest rates rather than actuarial rates were commonly disclosed before Truth in Lending. In studies of consumer responses to Truth in Lending shortly after the law became effective, many borrowers recalling annual percentage rates appeared to understand the annual percentage rate as an add-on rate (Shay and Schober 1973; Brandt, Day and Deutscher 1975, for example). This understanding probably reflected consumers' familiarly with add-on rates at that time.[20]

Not all information that is processed is retained in memory. Memory is limited, so the amount of information finally stored will be less than the initial set. Consumers tend to retain the information that is consistent with their attitudes and experience. First-time purchasers of a product might collect more information than previous customers because they do not know what information is important. They tend to retain the information that is useful and consistent with their experiences. Inconsistent or irrelevant information may be forgotten. Thus, new borrowers sometimes appear to be better informed than more experienced borrowers.

Determinants of the Extent of the Decision Process

Empirical evidence on consumer behavior suggests several different types of factors that may affect the extent of the decision process. They are situational factors, product characteristics, consumer characteristics, and environmental factors.

Situational Factors

[20] More recently, Durkin and Elliehausen (2001) reported that borrowers still do not understand the relationship between the annual percentage rate and finance charge. However, far fewer responses suggest that the borrowers understand the annual percentage rate as an add-on rate. One explanation for this decline is that consumers are no longer familiar with add-on rates because creditors no longer quote add-on rates.

Previous research has found several situations in which extended decision processes are likely. Among the situations are ones in which

- The consumer has little or no relevant experience because a consumer has never purchased the product.
- The consumer has no past experience because the product is new.
- Past experience is obsolete because the product is purchased infrequently.
- The purchase is considered discretionary rather than necessary.

Product Characteristics

There are several product characteristics that are associated with extended decision processes.

- Products that commit the consumer for a long period of time.
- Products that are high priced relative to the consumer's income.
- Products having substitutes with both desirable and undesirable characteristics relative to the product.

Consumer Characteristics

Evidence indicates that many socio-economic characteristics of consumers are correlated with the extent of the decision process. Some of the characteristics probably reflect cognitive ability and the opportunity cost associated with search. Others may reflect experience or attitudes. Decision processes are more likely to be extended than limited when

- The consumer has a college education.
- The consumer has moderate rather than high or low income.
- The consumer is under 35 years old.
- The consumer enjoys shopping.
- The consumer perceives no urgent or immediate need for the product.

Environmental Factors

Environmental factors include family and cultural influences. An extended decision process may be stimulated by differences between a consumer's attitudes and those of his family or one of his reference groups. Thus, consideration of personal characteristics may be justified, even if the characteristics' effects on the decision process cannot always be predicted.

Hypotheses on the Extent of High-Price Credit Decisions

High-price credit products have characteristics that are associated with limited decision processes. Most are short term. Because loan amount is usually small, the finance charge is high relative to loan amount but not generally relative to the borrower's monthly income.

Situational factors may also limit decision processes. A short term to maturity makes high-price credit products more suited to addressing temporary shortfalls in funds than financing investment in durables. Temporary shortfalls may often be the result of unexpected expenses and may therefore be viewed as urgent. Moreover, short-term use to address temporary shortfalls in cash may involve relatively short time periods since previous decisions. In such situations, consumers may perceive that information obtained from previous decisions is not obsolete.

VI. Decision Processes of High-Price Credit Customers

The buyer behavior model suggests that extensive collection of information and weighing of all available alternatives may not always be necessary for purposive and intelligent decisions. Some other benchmark for evaluating high-price credit customers' decisions seems desirable. Katona (1975) assessed consumers' decision process for household durable purchases, which typically included consideration of credit, as follows:

> If careful deliberation were defined as comprising all the features of decision making that were included in the study—consideration of alternatives and consequences, discussion with family members, information seeking, as well as concern with price, brand, quality, performance, special features, and gadgets—the conclusion would emerge that almost all people proceed in a careless way in purchasing large household goods. This conclusion, however, is not justified. Deliberation may be strongly focused on one aspect of the purchase to the exclusion of all others. Therefore, it may be considered as careful deliberation if some, but by no means all, of the features of problem solving and thinking are present.

Thus, evidence that consumers understand the transaction and exercise some thought seems a reasonable benchmark for judging decisions on high-cost credit products.

Small Consumer Finance Loan Decisions

In 1972, Durkin (1975) conducted a study of consumers obtaining very small consumer finance loans in Texas (Article 3.16 loans). The maximum loan size at this time was $100. Customer and loan information was obtained from lender files. Customers were also surveyed about their loans. The survey included questions about reasons for borrowing, awareness of loan price, and satisfaction with the loan.

Responses to the question on reasons for borrowing suggest some urgency for many consumers. The single greatest reason for borrowing was to pay old bills or consolidate debts. The next most frequently mentioned reasons were medical expenses and automobile purchase or repair. Together these three responses accounted for nearly two in five reported reasons. Adding other responses such as utility bills, food, and taxes or insurance suggest that most customers faced an urgent need for funds, which may have limited their decision process.

Information from lender files included the annual percentage rate and finance charge, which permitted a comparison with reported annual percentage rate and finance charge from the survey. Only 2.4 percent of customers were able to report an interest rate that indicated that they were aware of the annual percentage rate. Thirty-nine percent said that they did not know, and 27.2 percent reported dollar charges. Virtually all of the remaining 31.1 percent of customers reported rates that were too low.

In contrast, two-thirds of customers reported a finance charge that was reasonably accurate, suggesting that they were aware of the finance charge. Thirty-eight percent reported the exact amount of the finance charge; another 8.3 percent reported an amount that was close (± 20 percent) to the exact amount; and 20.1 percent reported an accurate finance charge for a different contract, which may have been a refinancing that occurred between the sampling and interview dates or a generalized price ($34 per $100 borrowed for 6 months, for example). Nearly all of the remaining one-third said that they did not know the finance charge or reported amounts that were too high or too high.

The relatively high level of awareness of the finance charge suggests that many consumers may have considered the finance charge in their decision.[21] Even if they did not use information on finance charges to shop for credit, it would be difficult to conclude that these consumers did not make informed decisions. In contrast, the lack of awareness of annual percentage rates suggests that these consumers were unlikely to have used the annual percentage rate in making their decisions.[22] The failure of virtually all customers to consider the effect of discounting, which may be the result of consumers simplifying their decision process, is not a serious error because of the very short term to maturity for these loans,

Most borrowers had institutional knowledge of credit costs. That is, they were aware that finance company loans were more expensive than bank loans. About two-thirds of borrowers said that borrowing from a finance company was more expensive than from a bank. The decision to borrow from a finance company apparently was often influenced by consideration of credit availability. About half of customers who said that borrowing from a finance company was more expensive, reported that they borrowed from a finance company because they could not get a similar loan from a bank. Twenty-three percent of customers reported that they had actually been turned down by a bank or finance company in the last five years.

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[21] Consumers using very small, short-term consumer finance loans were had a greater level of awareness of the finance charge than consumers using mainstream credit. Day and Brandt (1973) found that a little more than half of consumers using mainstream credit products were able provide estimate of the finance charge.

[22] Durkin hypothesized that respondents may have disregarded annual percentage rates as unimportant because they did not understand annual percentage rates and saw no relationship between the annual percentage rate and finance charge.

Consumers using very small consumer finance loans generally evaluated their purchase decision positively. When asked to evaluate whether the loan was worth it or not, 84.8 percent of customers said that the loan was worth it. Most customers gave reasons related to the need for funds as the reason for their satisfaction. Of those who said that the loan was not worth it, about half cited the high price as the reason for dissatisfaction. Seventeen percent of dissatisfied customers reported difficulty of getting out of debt as the reason for dissatisfaction, but these customers accounted for just 2.6 percent of all customers.

In sum, most customers used small consumer finance loans because they had an urgent need and did not have better alternatives. They were aware of the finance charge and were thereby able to make informed decisions, regardless of whether or not they shopped or had alternative sources of credit. Customers generally evaluated their decisions positively, saying that the loan was worth it because it provided needed funds.

The Payday Advance Decision

Elliehausen and Lawrence (2001) surveyed a representative sample of payday loan customers of companies belonging to the industry trade association. Companies belonging to the association operated about half of the offices offering payday loans at that time. Customers were asked about their use of payday loans, recent payday loan decisions, other credit use, and perceptions of credit availability.

Payday loans are often used to address urgent needs. Nearly two-two thirds of payday loan customers obtained their most recent new advance (not renewal) because of an unexpected expense or shortfall in income. Only 11.9 percent used a payday loan for a planned expenditure. The remaining 22.5 percent of customers used payday advances for various other purposes, some of which likely also were urgent.

About half of payday loan customers had been using payday loans for a year or less. Most use was short term, which is consistent with the design of the product. Over a quarter of payday loan customers' longest sequence of consecutive loans (new loan and renewals) was two weeks or less, and 56.6 percent of customers' longest sequence of consecutive loans was 6 weeks or less. Customers may have resorted to payday loans several times during the year, however. While a little more than a third of payday loan customers had four or fewer loans during the last 12 months, 27.2 percent had five to eight payday loans, and 38.1 percent had nine or more payday loans during the last 12 months. Most customers with a large number of loans had intervals between borrowing, but a few had payday loan sequences lasting 14 weeks or longer.

Payday loan customers were generally aware of finance charges but not annual percentage rates. Eighty-five to 96.1 percent of payday loan customers reported accurate finance charges paid for their most recent payday loan.[23] In contrast, only 20.1 percent of customers were able to report an accurate annual percentage rate, although 78.0 percent of customers recalled receiving information on the annual percentage rate. Thus, payday loan customers appear to use the finance charge rather than annual percentage rate in their decisions. The short-term use of the product suggests use of the finance charge in payday loan decisions usually did not cause consumers any significant harm.

Thirty-eight percent of customers reported that they considered another source before obtaining their most recent payday loan. Nearly all of the customers considering another source considered a depository institution or a finance company. That payday loan customers considered these sources is not surprising since their ownership of a checking account and relatively frequent use of mainstream credit suggests that they are familiar with these sources. In contrast, only 0.6 percent considered a pawnbroker, and 2.5 percent considered an automobile title loan company. Pawnbroker and automobile title loans do not appear to be very close substitutes to payday loans in the mind of payday loan customers.

By far most customers were satisfied with their most recent advance. Of the 12.2 percent of customers who were dissatisfied, 61.6 percent cited the high price as the reason for dissatisfaction. Difficulty of getting out of debt (which might indicate that customers did not understand that the product is designed for short-term use) or a lack of information about the product were rarely mentioned as reasons for dissatisfaction.

Conclusions about the payday loan decision are similar to those about the small consumer finance loan decision. Most customers used payday loans because they had an urgent need and had few alternatives. Customers generally used payday loans over relatively short time intervals consistent with the design of the product. They were aware of dollar cost of payday loans and evaluated their decision to use payday loans positively.

The Refund Anticipation Loan Decision

Elliehausen (2005) questioned a nationally representative sample of refund anticipation loan customers about their refund anticipation loan decision, other credit use, and perceptions of availability.

Forty-one percent of refund anticipation customers reported using refund anticipation loans to pay Christmas, credit card, or other bills; 21.2 percent reported unexpected expenditures; 12.9 percent reported planned purchases; and the remaining 25.0

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[23] Because actual finance charges and annual percentage rates were not known, consumers' knowledge of costs was based on awareness zones. An awareness zone is a range of finance charges or annual percentage rates that are available in the market. Respondents that report a value that falls within the awareness zone are classified as aware. For discussion of awareness zones, see Durkin (2000).

percent reported various other reasons for using refund anticipation loans. Need may have played a role in refund anticipation loan customers' decision to use refund anticipation loans, but many customers may have another motive. Refund anticipation loans may be part of a precommitment strategy to force saving. About a third of refund anticipation customers said that they had extra amounts withheld in order to get a refund. The uses of the funds were often foreseen. More customers mentioned paying Christmas bills or planned expenses than unexpected expenses as the reason for obtaining a refund anticipation loan.

Refund anticipation loan use appears to have become a habit for many customers. Less than a third of RAL customers were first-time customers. Of the more than two-thirds of refund anticipation loan customers with previous experience, 72.3 percent had three or more previous refund anticipation loans.

About half of refund anticipation loan customers were classified as aware of the refund anticipation loan fee. Only about a quarter of recalled receiving an annual percentage rate, and hardly any reported an accurate annual percentage rate. The levels of awareness of the refund anticipation loan fee may be influenced by the greater complexity of the transaction. The refund anticipation loan was purchased jointly with tax preparation and possibly other services. Customers may have focused on another aspect of the transaction which they considered more important or more difficult. The level of awareness may also have been influenced by previous experience. As mentioned, many customers had obtained refund anticipation loans three or more times in the past. Customers who were satisfied with previous experience may make decisions with little information gathering or deliberation.

Virtually all customers were aware of an electronic filing option, and 64.8 percent of customers reported discussing other options for obtaining funds faster before obtaining the refund anticipation loan. Most customers not recalling the refund anticipation loan fee were able to report other information about the transaction. Half reported the tax preparation fee, nearly three-fourths reported the cash advance amount, and a third reported both the loan and cash advance amounts. Thus, customers may have considered some information in decisions about refund anticipation loans.

Considering the high level of repeat usage, it is not surprising the refund anticipation loan customers generally were also satisfied with current loans. Eighty-five percent of customers said that they were satisfied with their last refund anticipation loan. Virtually all satisfied customers reported the quick receipt of needed money as a reason for satisfaction. Of the 14.0 percent of customers who said that they were dissatisfied, 70.2 percent cited the high price as a reason for dissatisfaction. Lack of information was not perceived as a problem. Eleven percent of dissatisfied customers mentioned inadequate information as a reason for dissatisfaction.

Although only about half of customers were aware of refund anticipation loan cost on their most recent loan, it is not clear that decisions were not purposive and intelligent. Virtually all were aware of the electronic filing, and more than half discussed other options for receiving funds faster before obtaining a refund anticipation loan. Evidence suggests that refund anticipation loans are part of an annual forced saving plan, in which some customers use tax withholding to accumulate funds for large purchases or paying Christmas, credit card, or other bills.

Rent-to-Own Decisions

Lacko, McKernan, and Hastak (2000) surveyed a nationally representative sample of rent-to-own customers about their experience with rent-to-own stores. A major focus of the survey was to ascertain the extent to which rent-to-own transactions result in the purchase of rented items. Survey responses indicate that 69.9 percent of customers purchased items that they rented. Three-fourths of customers initially intended to purchase the rented item. Purchases were consistent with purchase intentions. Eighty-seven percent of customers intending to purchase actually did purchase. About half of purchases were rented for a year or less, suggesting that many customers exercised the early purchase option. Nearly all items on which customers made substantial payments towards ownership were purchased by the customer.

A quarter of rent-to-own customers intended a temporary rental.[24] Ninety percent of these customers returned the item. Most returned the items after a relatively short period, averaging five months. The relatively short rental period is consistent with these customers' initial intentions.

By far most were satisfied with their rent-to-own experiences. Seventy-five percent or customers said that they were very or somewhat satisfied. Eight percent said that they were somewhat dissatisfied, and 10.5 percent said that they were very dissatisfied. the remaining 6.5 percent were neither satisfied or dissatisfied or said that they did not know.

Lacko, McKernan, and Hastak did not question respondents about costs, but responses to questions about satisfaction with rent to own experiences suggest that many respondents were aware that the price is high. When asked why they were satisfied or dissatisfied with their rent-to-own experience, 26.7 percent of all customers mentioned high price as a reason for being dissatisfied or only somewhat satisfied.

High price was the most commonly reported reason for dissatisfaction. Two-thirds of dissatisfied customers said that they were dissatisfied with their rent-to-own experience because of high prices.

Satisfied customers typically reported characteristics of the item being rented or services provided by the rent-to-own company as a reason. However, 16.1 percent

[24] The remaining 8.1 percent of customers were not sure or did not know their intentions. About half or those who were not sure or did not know their intentions eventually purchased the items.

of satisfied customers said that because of high prices they were only somewhat satisfied. The percentage of satisfied customers mentioning high prices is far greater than the 3.5 percent of satisfied customers cited low price as a reason for satisfaction.

Very few customers gave inadequate cost information as a reason for their evaluation. Five percent of dissatisfied customers (1.0 percent of all customers) reported hidden or added costs as a reason for dissatisfaction.

The consistency of purchase intentions with actual behavior suggests that rent-to-own customers generally know whether they will purchase the item at the beginning of the rental period. The survey evidence indicates that at least a quarter of customers believe that rent-to-own prices are high. The actual proportion of customers believing that rent-to-own prices are high may be greater. Customers may have been aware of that purchasing items using rent-to-own is relatively expensive but did not volunteer this information when responding about their reasons for satisfaction or dissatisfaction. It is therefore likely that many consumers who intended to purchase were aware that rent-to-own purchases are expensive. Nevertheless, most customers evaluated their rent-to-own decisions positively. The analysis of customer characteristics in a previous section of this paper suggests that limited availability credit from other sources likely have played a role in their decisions.

VII. CONCLUSIONS

This paper uses an economic model of the consumer's credit decision and a psychological model of the decision process to evaluate consumers' decisions to use high-price credit products. The model predicts circumstances in which high-cost credit permit a consumer to increase utility or wealth. The economic model helps answer the question: Are the borrowers using high-price loans likely to benefit from use of such credit? The psychological model is a cognitive model describing the decision process from the recognition of a problem through information gathering to the post-purchase evaluation of the decision. The cognitive model of the decision process helps answer the question: Are borrowers' decisions purposive and intelligent?

Consumers in early stages of the family life cycle who have high returns on household investment and limited discretionary income to service debt may benefit from a relaxation of credit constraints afforded by higher price credit. The paper examines plausible situations in which use of high-price credit may increase wealth. Evidence presented indicates that customers of high-price credit products disproportionately have characteristics of groups that economic theory predicts might benefit from use of higher cost credit. Customers are concentrated in two life-cycle groups: (1) young, married, with children and (2) unmarried, with children. Customers have low or moderate incomes, depending on the product. And customers are credit constrained (rationed). Some (payday loan customers and refund anticipation loan customers with bank accounts) tend use more credit than all families and may have experienced credit problems. Others (pawnbroker loan customers, refund anticipation loan customers with no bank accounts, and rent-to-own customers) have characteristics that make qualifying for credit difficult and are less likely than all families to use mainstream credit products.

Most consumers using high-price credit products are aware of the cost of such credit. They generally are able to recall reasonably accurate finances charges but are largely unaware of annual percentage rates for recent loans. Because high-price loan products have a short term to maturity knowledge of the finance charge is sufficient for making informed decisions. Costs and benefits can generally be evaluated without consideration of their timing. Thus, annual percentage rates do not provide additional useful information and tend to be forgotten.

Many customers show signs of deliberation in their decisions, but most probably do not have an extended decision process. Many customers have previous experience with the product and may not exert much effort in subsequent decisions. Relatively low loan amounts and short-terms to maturity also may contribute to lack of awareness and lack of deliberation. Customers are largely satisfied with their decisions and generally do not believe that they have insufficient information. Decision processes for high-price credit products do not appear to be much different from decision processes for mainstream credit products. The decision to use high-price credit typically is a result of the consumer's situation rather than a lack of knowledge or information.

REFERENCES

Barro, Robert J. "The Loan Market, Collateral, and Rates of Interest." *Journal of Money, Credit, and Banking*. 8 (November 1976): 439-56.

Benjamin, Daniel K. "The Use of Collateral to Enforce Debt Contracts." *Economic Inquiry*, 16 (July 1978): 333-58.

Bizer, David and Peter M. DeMarzo, Sequential Banking, *Journal of Political Economy* 100 (April 1992): 41-61.

Brandt, William K., George S. Day, and Terry Deutscher. "The Effect of Disclosure on Consumer Knowledge of Credit Terms." *Journal of Consumer Affairs*, 9 (Summer 1975).

Brito, Dagobert L. and Peter R. Hartley. Consumer Rationality and Credit Cards, *Journal of Political Economy* 103 (April, 1995): 400-433.

Caskey, John P. "Pawnbroking in America: The Economics of a Forgotten Credit Market," *Journal of Money, Credit and Banking* 23 (February 1991): 85-99.

Caskey, John P. *Fringe Banking*. New York: Russell Sage Foundation, 1994.

Consumers Union. "Our Neighborhood Banks: High Cost Loans for Low Income Borrowers." Available at http://consumersunion.org/finance/nb2.htm, (1998).

Day, George S. and William K. Brandt. A Study of Consumer Credit Decisions: Implications for Present and Prospective Legislation. In *Technical Studies*, Vol. I, National Commission on Consumer Finance. Washington: US Government Printing Office, 1973.

Dunkelberg, William C. and James Stephenson. "Durable Goods Ownership and the Rate of Return." In *Technical Studies*, Vol. IV, National Commission on Consumer Finance. Washington: US Government Printing Office, 1975.

Durkin, Thomas A. "Credit Cards: Use and Consumer Attitudes, 1970-2000." *Federal Reserve Bulletin*, 86 (September 2000): 623-34.

Durkin, Thomas A. "A High-Rate Market for Consumer Loans: The Small Small Loan Industry in Texas." In *Technical Studies*, Vol. II, National Commission on Consumer Finance. Washington: US Government Printing Office,1975.

Durkin Thomas A. and Gregory Elliehausen. *1977 Consumer Credit Survey*. Washington: Board of Governors of the Federal Reserve System, 1978.

Durkin, Thomas A. and Gregory Elliehausen. "Disclosure as Consumer Protection." In *Consumer Credit in the 21st Century*, Thomas A. Durkin and Michael E. Staten, eds. Boston: Kluwer Academic Publishing, 2001.

Durkin, Thomas A. and E. Ray McAlister. *An Economic Report on Consumer Lending in Texas*. Monograph No. 4. West Lafayette, Indiana: Purdue University, Krannert Graduate School of Management, Credit Research Center, 1977.

Elliehausen, Gregory. *Consumer Use of Tax Refund Anticipation Loans*. Monograph No. 37. Washington: Georgetown University, McDonough School of Business, Credit Research Center, 2005.

Elliehausen, Gregory and Edward C. Lawrence. *Payday Advance Credit in America: An Analysis of Customer Demand*. Monograph No. 35. Washington: Georgetown University, McDonough School of Business, Credit Research Center, 2001.

Engel, James F., Roger D. Blackwell, and Paul W. Miniard. *Consumer Behavior*. Fort Worth, Texas: Dryden Press, 1997.

Fisher, Irving. *The Theory of Interest*. New York: The Macmillan Company, 1930.

Haller, Mark H. and John V. Alviti. "Loansharking in American Cities: Historical Analysis of a Marginal Enterprise." *American Journal of Legal History*, 21 (April 1977): 125-56.

Hirschleifer, Jack. On the Theory of Optimal Investment Decision, *Journal of Political Economy* 66 (August 1958): 329-352.

Johnson, Robert W. and D.P. Johnson, *Pawnbroking in the U.S.: A Profile of Customers,* Monograph # 34 (Washington: Credit Research Center, 1998).

Juster, F. Thomas and Robert P. Shay. *Consumer Sensitivity to Finance Rates: An Empirical and Analytical Investigation.* Occasional Paper 88. New York: National Bureau of Economic Research, 1964.

Katona, George. *Psychological Economics*. New York: Elsevier Scientific Publishing, 1975.

Lacko, James M., Signe-Mary McKernan, and Manoj Hastik. *Survey of Rent-to-Own Customers*. Bureau of Economics Staff Report. Washington: Federal Trade Commission, April 2000

Poapst, J.V. and W.R. Walters. "Rates of Return on Consumer Durables." *Journal of Finance*, 19 (December 1964): 673-77.

Seidl, John M. "Lets Compete with Loan Sharks." *Harvard Business Review*, (May-June 1970): 69-77.

Shay, Robert P. and William K. Brandt. "Public Regulation of Financial Services: The Truth in Lending Act." In *Regulation of Consumer Financial Services*, Arnold A. Heggestad (ed.). Cambridge, Massachusetts: Abt Books, 1981.

Shay, Robert P. and Milton Schober. "Consumer Awareness of Annual Percentage Rates Before and After Truth in Lending Became Effective." In *Technical Studies*, Vol. I, National Commission on Consumer Finance. Washington: US Government Printing Office, 1973.

Verant, William J. "Consumer Lending Study Committee Report for the Forty Fourth Session of the New Mexico State Legislature. Submitted by the Financila Institutions Division Director, as requested by House Memorial 36 (January 2000).