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AN ANALYSIS OF CONSUMERS' USE OF PAYDAY LOANS

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Gregory Elliehausen

Division of Research and Statistics
Board of Governors of the Federal Reserve System
Washington, DC 20551

and

Financial Services Research Program
The George Washington University School of Business
Washington, DC 20052

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The views expressed in this monograph are those of the author and should not be attributed to the Board of Governors of the Federal Reserve System or the Federal Reserve System.

AN ANALYSIS OF CONSUMERS' USE OF PAYDAY LOANS

EXECUTIVE SUMMARY

Payday lending is a controversial segment of the consumer finance industry. A payday loan is a small, single-payment loan that is repayable on the borrower's next payday. The customer writes a post-dated check for the amount of the loan and fee. Typically, payday loans are between $100 and $500 and have a term to maturity of about 14 days. Fees are commonly between $15 and $20 dollars per $100 borrowed. Because of the small loan amount and short term to maturity, annual percentage rates for payday loans are commonly between 390 and 700 percent.

Not surprisingly, the high annual percentage rates have led to allegations that payday loans are predatory. Industry critics often argue that the high interest charges and single-payment feature of the product make repayment of the debt difficult, trapping many borrowers in a series of renewals that ultimately lead to insolvency. Payday lenders contend that the product satisfies credit-constrained consumers' liquidity needs for short-term credit to manage unexpected expenses and shortfalls in cash. Although payday loans have a relatively high price, the costs arising from delinquencies, late payments, and loss of goods or services that such unexpected events could trigger may be even higher. These contentions need not be mutually exclusive. As with other credit products, some borrowers may have problems repaying while others are able to pay on time and receive benefits from the item being financed.

This monograph reviews existing evidence and presents new evidence from a 2007 survey on the economic and demographic characteristics of payday loan customers, their patterns of payday loan use, their understanding of payday loan costs and alternatives, and outcomes of payday loan use. This monograph seeks to assess whether payday loan customers know what they are doing when they use such credit and the extent to which payday loan credit benefits or harms consumers. Chapter I of the monograph provides a brief description of the payday loan product, its costs, and regulation. Chapter II outlines economic and psychological models for consumer credit decisions. These models are the framework for analysis of the evidence on payday loan decisions. Chapter III describes new survey data. Chapter IV examines whether or not demographic and economic characteristics of payday loan customers are consistent with predictions from the economic model for consumer credit use. Chapter V examines payday loan customers' most recent new payday loan transaction for evidence of whether or not customers' decisions are purposive and intelligent. Chapter VI reviews evidence from previous studies that investigate whether or not consumers obtain any benefits from payday loans or whether or not payday loans lead to unsustainable levels of debt that end in default. Finally, Chapter VII provides a brief summary and conclusions.

Are Payday Loan Customers Consumers Who Might Benefit from Such Credit?

The typical payday loan customer has lower or moderate income, is in an early family life-cycle stage and has children, has little liquid assets, and uses other types of credit.

These characteristics describe consumers who may have relatively high returns on household investment, but because of limited discretionary income have difficulty obtaining additional debt to finance such investment. The economic model for consumers' credit decisions predicts that such consumers may benefit from a relaxation of credit constraints from high-cost, unsecured credit. While payday loans would not normally be used to finance household investment, they may provide liquidity to credit-constrained consumers facing shortfalls in their monthly budgets. Payday loans may be a transitional product for many consumers: As families age and income rises, consumers may become less vulnerable to financial distress.

Are Payday Loan Decisions Purposive and Intelligent?

Payday loan customers generally appear to make purposive decisions. Most payday loans are used to pay unexpected expenses or expenses that could not be postponed. Most customers perceived that they had few if any options to payday loans. Despite the urgency, the small size of the loan relative to income, and perception that few alternatives were available, many payday loan customers showed signs of deliberation in their decisions. Many customers considered other sources of credit before obtaining their most recent new payday loan. Nearly all payday loan customers were aware of the dollar cost of payday loans. Awareness of the finance charge does not necessarily mean that customers used that information in their decisions. That customers recalled the amount of the finance charge suggests that the information was important to them, however.

Do Payday Loan Customers Benefit from Such Credit?

The survey evidence indicates that most customers used payday loans as a short-term source of financing. They used payday advances a small or moderate number of times during the past year, typically for less than a month at a time. About two-thirds of customers used payday loans on average once a month or less frequently during the last twelve months. Such use seems consistent with the intended purpose of payday loans as short-term borrowing to pay unexpected expenses or relieve temporary shortfalls in income.

Nevertheless, a considerable percentage of payday loan customers used payday loans frequently, owing payday debt in over half of the year though not necessarily continuously. If payday loan customers live from paycheck to paycheck with very little discretionary income, even small expenses may cause financial problems and make emergencies a frequent event. In such cases, payday loans are expensive but still may be better than the alternatives. Studies have found that access to payday loans may increase communities' resiliency to financial difficulties, relax credit constraints without increasing delinquency, and reduce the incidence of financial problems.

Evidence suggests that some frequent users did have problems, however. A small percentage of customers obtained a payday loan from one company to repay a payday loan from another company in the last year. By far most of these customers owed payday loans over half of the year, and nearly half made late payments on payday loans. The higher incidence of late payments among customers seeking to extend the length of the

loan sequence by paying off a payday loan with the proceeds of a loan from another company suggests that use of short-term credit for longer term financing is very risky.

Nearly all payday loan customers evaluated their own experience with their most recent payday loan positively and believed that payday loan companies provide a useful service to consumers. Findings that some consumers may benefit from payday loans do not preclude that other consumers do have difficulty getting out of debt, but consumers with debt problems typically also have substantial amounts of other debts. In giving consumers access to additional credit for unexpected expenses or shortfalls in income, payday loans give the consumers a little more control over their financial situations than they would otherwise have had.

AN ANALYSIS OF CONSUMERS' USE OF PAYDAY LOANS

I. INTRODUCTION

Payday lending is a controversial segment of the consumer finance industry. A payday loan is a small, single-payment loan that is repayable on the borrower's next payday. Typically, payday loans are between $100 and $500 and have a term to maturity of about 14 days. Because of the small loan amount and short term to maturity, annual percentage rates for payday loans are commonly between 390 and 700 percent. Not surprisingly, the high annual percentage rates have led to allegations that payday loans are predatory. Industry critics often argue that the high interest charges and single-payment feature of the product make repayment of the debt difficult, trapping many borrowers in a series of renewals that ultimately lead to insolvency. Payday lenders contend that the product satisfies credit-constrained consumers' liquidity needs for short-term credit to manage unexpected expenses and shortfalls in cash. Although payday loans have a high price, the costs arising from delinquencies and late payments that such unexpected events could trigger may be even higher. These contentions need not be mutually exclusive. As with other credit products, some borrowers may have problems repaying while others are able to pay on time and receive benefits from the item being financed.

Historically, consumer finance companies provided small loans to relatively high-risk, credit constrained consumers. Finance companies have largely abandoned the small loan market (Brito and Hartley 1995). Finance companies along with banks and credit unions prefer to provide access to such credit to more creditworthy consumers through revolving accounts. A notable characteristic that distinguishes payday loan customers from customers of other high-price lenders—such as pawnbrokers and rent to own companies—is that all payday loan customers have a banking relationship. Payday loan customers must have a checking account to qualify for a payday loan, and most have an automobile loan or other type of consumer debt with a bank or finance company.

The modern payday loan industry developed during the 1990s. The industry originated as an innovation in the check cashing industry: The check cashing firm took the customer's post-dated personal check and agreed to defer cashing the check until a few days later (Mann and Hawkins 2007). The payday loan industry has grown considerably since its inception. The number of payday loan offices grew from under 200 offices in the early 1990s (Caskey 2001) to over 22,800 offices at the end of 2005 (Samolyk 2007). Check cashing companies remain a major source of payday loans, but pawnbrokers and monoline payday loan companies are also important sources of payday loans.

This monograph reviews existing evidence and presents new evidence on the economic and demographic characteristics of payday loan customers, their patterns of payday loan use, their understanding of payday loan costs and alternatives, and outcomes of payday loan use. This monograph seeks to assess whether payday loan customers know what they are doing when they use such credit and the extent to which payday loan credit benefits or harms consumers. Chapter I provides a brief description of the payday loan product, its costs, and regulation. Chapter II outlines economic and psychological models for consumer credit decisions. These models are the framework for analysis of the evidence on payday loan decisions. Chapter III describes new survey data. Chapter

IV examines whether or not demographic and economic characteristics of payday loan customers are consistent with predictions from the economic model for consumer credit use. Chapter V examines payday loan customers' most recent new payday loan transaction for evidence of whether or not customers' decisions were purposive and intelligent. Chapter VI reviews evidence from previous studies that investigate whether or not consumers obtain any benefits from payday loans or whether or not payday loans lead to unsustainable levels of debt that end in default. Finally, Chapter VII provides a brief summary and conclusions.

A. The Payday Loan Transaction

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. 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. 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 391.07 percent, which is the periodic rate ($15 ÷ $100) = 15.00 percent multiplied by 26.07, 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 loan companies typically request that applicants provide the last bank statement, the last pay stub, identification (for example, Social Security number and driving license), and proof 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 the applicant's recent payday loan use and warns the company if an applicant uses a fraudulent Social Security number. The risk assessment service may also provide the company other information about the applicant including charge-offs or payments on charge-offs for non-prime financial, service, or rental agreements; landlord or other business enquiries; evictions; and bankruptcy filings. In addition, the risk assessment service offers skip tracing services, a payday loan risk score, and automated decision making.[1]

Taking a post-dated 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

[1] See www.teletrack.com/advance.

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 post-dated check provides an incentive to repay the payday loan, thereby reducing the probability of default and the expected value of collection costs.

B. Payday Loan Costs

Studies of costs of consumer lending typically classify costs into operating expense, cost of borrowed funds, and taxes. Operating expense is by far the largest category of costs. Operating expense consists of expenses for loan acquisition, processing of payments, collection of delinquent accounts, and loan losses. Loan acquisition expenses include taking an application, evaluating an application, preparing loan documents, and dispersing funds. Processing expenses include receiving and recording payments, and monitoring accounts to ensure prompt payment. Collection costs include monitoring accounts and contacting customers who are late to arrange for collection of late payments. Most of these activities must be performed whenever an application is taken or a loan is extended, regardless of the size of the loan. Consequently, operating expense is greater relative to loan size for small loans than for large loans. This characteristic of loan costs produces the result that break-even interest rates are higher for small loans than for large loans.[2]

Total revenue and operating costs for payday lending are quite high relative to the loan amount. In an analysis of data from two large, monoline payday loan companies for 2002 through 2004, Flannery and Samolyk (2005) found total revenue of $407.16 per $100 of average outstanding loans and operating expense of $393.08 per $100 of average outstanding loans (table I-1).[3] These amounts are considerably larger than revenue and operating costs at finance companies making small loans in a size range comparable to payday loans. A study of lenders in Texas found that these finance companies, which operate under special rate ceilings that permit rates in excess of 100 percent, had total revenue of $102.75 per $100 of average outstanding loans and operating costs of $81.62 per $100 of average outstanding loans (column 2).[4,5] Revenues and costs at both payday

[2] See analyses of costs in National Commission on Consumer Finance (1972) or Durkin, Elliehausen, Staten, and Zywicki (forthcoming).

[3] The payday loan cost data in table I-1 are weighted averages for new, young, and mature payday loan offices computed from data in Flannery and Samolyk (2005). Nearly one-fifth of the 300 payday loan offices sampled were open less than a year, and a third were one to four years old. Offices had on average 2.4 full-time equivalent employees, made 6,370 loans per year, and incurred direct operating costs of $166,957.

[4] These data are for finance companies operating under Article 3.16 of the Texas Consumer Finance Code. Article 3.16 specifies special interest rate ceilings for loans up to $100 between 1968 and 1970 (about $440 in current dollars), with term to maturity from one to six months. The rate ceilings correspond to annual percentage rates of 109 to 240 percent, depending on loan size and term to maturity. For discussion of Article 3.16 lenders, see Durkin (1975), Durkin and McAlister (1977), or Elliehausen (2006).

[5] The finance company data in table I-1 are older than the payday loan data, but nevertheless may serve as a benchmark. Durkin, Elliehausen, Staten, and Zywicki (forthcoming) examined cost data for different classes of lenders over many years. Operating costs as percentages of revenue and total operating costs by lender class and type of loan were quite similar over many years, while operating costs across lender

lenders and these specialized finance companies are large because the small loan size and short term to maturity cause average outstanding loans to be relatively small. Finance companies that lend larger amounts for longer periods of time had total revenue of $23.73 per $100 of average outstanding loans and operating cost of $12.72 per $100 of average outstanding loans (column 3). Flannery and Samolyk pointed also to the rapid growth of the companies as a factor contributing to high costs of payday lending. A sizable proportion of new offices at these companies spread overhead and fixed costs over low loan volumes, raising average cost per loan.

Regardless of the cause, the high operating costs associated with payday lending largely offset the revenue generated by this high-annual percentage rate product. The operating profit (that is, profit before funding cost and taxes) of $14.08 per $100 of average outstanding loans for payday lending does not appear to be especially large compared to operating profits of the other high-risk lenders.[6]

I-1. Income and Operating Costs of Payday Lending

Income and expense per $100 of average outstanding loans (dollars)	Payday loan companies	Finance companies, small loan size comparable to payday loans	Finance companies, larger loan sizes
Total revenue	407.16	102.75	23.73
Operating expense	393.08	81.62	12.72
Operating profit	14.08	21.13	11.01
Percent of operating expenses			
Salary and wages	58.7	50.0	43.3
Losses	14.2	11.0	16.1
Other expenses	27.2	39.0	40.6
Total	100.0	100.0	100.0
Memo:			
Average loan size (2005 dollars)	243	361	5,419

Source: Durkin, Elliehausen, Staten, and Zywicki (forthcoming). Calculated from data in Flannery and Samolyk (2005).

classes and product type differed considerably. Revenue and cost percentages within a lender class have not changed very much because employees still perform a considerable share of the tasks for acquisition, servicing, and collection for most types of consumer credit.

[6] Skiba and Tobacman's 2007 analysis of financial data of publicly traded payday loan companies supports a conclusion that the profitability of payday lending is consistent with its risk. They found average annual return of 10.1 percent since listing for seven publicly traded payday loan companies. Annual returns were highly variable, however. Variability is an indicator of risk. Assessing the Sharpe index, a measure of the excess return per unit of risk, Skiba and Tobacman concluded that the payday loan companies provided little excess return relative to risk. Sharpe indices for these companies were close to zero.

The distribution of operating expenses across various cost categories was similar for these three types of lenders. Salaries and wages were the largest category, accounting for more than half of operating expense of the payday lenders and somewhat smaller percentages at consumer finance companies.[7] Losses were 14.2 percent of operating expenses at payday loan companies, 11.0 percent of operating expenses at finance companies making small loans, and 16.1 percent of operating expenses at finance companies making larger loans.

Although loss percentages of operating expenses were similar for the different lenders, the level of losses per $100 of average outstanding loans at payday loan companies was substantially larger. Losses were $55.28 per $100 of average receivables outstanding (14.2 percent × $393.08), a figure that is over six times the $8.99 per $100 of average receivables at finance companies making small loans (11.0 percent × $81.62). Payday loan companies' higher losses may be attributed to the nature of the product and their more limited underwriting process than finance companies making small loans. The finance companies lend on an installment basis and attempt to arrange a loan with a low monthly payment, which the borrower can afford to pay with ease. In contrast, payday loan companies lend on a single-payment basis up to a specified percentage of the customer's take-home pay without consideration of other obligations the customer may owe. Thus, payday customers may be less constrained in the amount that they can borrow than the finance company customers. Payday loan customers may also require more discipline to pay down the loan over time if they are unable to liquidate the entire loan on the due date.

Flannery and Samolyk (2007) estimated regression models explaining operating expenses, loan losses, and profitability of payday loan offices as functions of number of loans, number of customers, average loan size, average loan duration, factor costs (wage rate and rent), and market characteristics. They estimated separate regressions for mature stores (open more than four years) and young stores (open one to four years). Results of estimation were similar for mature and young stores, although sometimes the size of estimated effects differed by store age group.

Flannery and Samolyk found significant economies of scale at payday loan offices. That is, operating expenses increased less than proportionately with number of loans. The size of the estimated coefficient for mature offices indicated a 1.3 percent increase in operating expenses for a 10 percent increase in loan volume. This result means that per unit costs are lower at offices that have greater loan volumes than those at offices that have lower loan volumes. The result may be explained by spreading fixed costs of maintaining an office and employing office staff over a larger number of loans. Loan losses (a component of operating expense) were not significantly related to number of loans. In part reflecting economies of scale in operating expenses, office profitability (measured by operating income) increased with number of loans, though much closer to proportionally (6.5 percent for a 10 percent increase in loan volume) than operating expense.

Operating expense increased much less than proportionately with average loan size (1.4 percent for a 10 percent increase in average loan size at mature stores) and average loan duration (1.9 percent for a 10 percent increase in average duration at mature stores), a result suggesting that a considerable part of operating expense is fixed relative

[7] Cost categories are not entirely comparable, as the different data sources did not classify costs identically.

to loan size and term to maturity. Losses increased about proportionately with average loan size and average loan duration. Profitability increased proportionately by about half of the percentage increase in average loan amount but decreased proportionately by about half of the percentage increase in average loan duration. Because payday loan fees do not vary by term to maturity, longer term payday loans would be less profitable than shorter term loans despite less than proportionate increases in operating expense.

Operating expense also increased less than proportionately with number of customers. The size of the estimated coefficient indicated that operating expense increased 3.5 percent for a 10 percent increase in the customer base. Considering only a 1.2 percent estimated operating cost effect of increasing loan volume by 10 percent at an office, the 3.5 percent estimated cost increase for a 10 percent increase in customer base suggests that a larger customer base obtaining fewer loans is more costly to service than a smaller customer base with more loans.

Losses increased somewhat less than proportionately with number of customers at mature offices and about proportionately at young offices. Number of customers was not significantly related to profitability at mature offices but negatively related at young offices. Thus, young offices appear to be less profitable if they have a larger customer base of less frequent users than a smaller base of more frequent users.

Flannery and Samolyk's findings on the effects of loan volume on costs and profitability are clear. Their findings on how the prevalence of frequent users affects costs and profitability are less certain. In an earlier analysis of the same data, Flannery and Samolyk (2005) considered variables for percentage of customers borrowing 12 or more times during the year and the ratio of renewals to total payday loans in regression models explaining the costs and the profitability of payday lending. They found that a greater percentage of high frequency borrowers was associated with lower total costs and loan losses but was not significantly related to profitability. In contrast, a greater ratio of renewals to total payday loans was associated with greater costs and greater losses. And again, despite significant effects on cost, the frequent use variable was not significantly related to profitability. The estimated effects for the percentage of customers borrowing 12 or more times during a year suggest that repeat borrowers may be less expensive to service and more likely to repay than infrequent users. But the estimated effects for the ratio of renewals suggest that some types of frequent use may be more costly. Specifically, frequent use by repeated renewal of existing payday loans appears to be risky behavior, increasing losses and collection costs and thereby increasing total cost.[8]

C. Regulation of Payday Lending

Both state and federal laws regulate payday lending. In addition, an industry trade group representing about half of the payday loan industry has self-regulatory guidelines that influence its members' practices.

[8] Stegman and Faris (2003) examined company-level administrative data from the North Carolina Commissioner of Banks and found that total number of customers and the percentage of customers who borrow monthly was positively related to revenue less selected costs (salaries, losses, and subscription costs for a screening service). These results may confound the effect of repeat customers with scale. The total number of customers and percentage of customers who borrow monthly is also related to the total number of loans, which was not included in the regression model. Thus, the separate effect of repeat customers is not distinguishable from the effect of volume. For additional discussion, see Samolyk (2007).

1. State Laws

State legislation has facilitated the rapid growth of the payday loan industry. In early 2008, 36 states either did not limit interest rates or fees for small loans or had laws that specifically authorized payday loans.

a. Payday Loan Laws. Typically, state payday loan laws exempt payday loans from usury or other interest rate ceilings in exchange for establishing maximum fees, rollover limits, and restrictions on other non-price terms. State payday loan laws also require licensing and periodic examinations to ensure that the licensees are abiding by all applicable state and federal laws.

Maximum rates on payday loans are usually a percentage of the amount (or equivalently a dollar amount per $100) of the loan or check. Some payday loan rate ceilings are graduated, with lower ceilings for incremental increases in loan amount. For example, Colorado allows up to 20 percent on the first $300 and 7.5 percent on additional amounts above $300. A few laws also allow a fixed fee. Alaska allows a $5 origination fee, for example; and California allows a $10 set up fee on the initial loan.

Limits on the number of times a payday loan may be rolled over or refinanced are common. Most state laws regulating payday loans do not allow rollovers, and others limit rollovers to four or fewer. Some states also mandate a minimum time interval (cooling-off period) between payday loan transactions.

Size limits frequently range between $300 and $600 per loan, although a few states allow payday loans as large as $1,000. Some states directly limit the size of the loan. Others limit the size of the check, which includes the amount of the loan plus the finance charge. Montana has a variation on size limits that restricts payday loans to the lesser of $300 or 25 percent of the customer's net monthly income. Nevada limits the amount of the loans to 25 percent of the customer's gross monthly income. Many states also limit the aggregate amount of loans to a customer, which is generally the same as the size of the maximum advance.

The purpose of such restrictions on non-price terms is to force consumers to use payday advances for short-term needs and to prevent consumers from incurring large amounts of debt from payday loans. A few states require an industry-wide database that records customers' payday loan transactions. These databases are used to comply with and enforce restrictions on rollovers and aggregate borrowing.

State laws generally prohibit payday loan companies from threatening defaulting clients with criminal prosecution or civil damage penalties to intimidate or force repayment. Nevada specifically prohibits lenders from harassing defaulting debtors by posting an NSF check in a public area or publishing a list of consumers who have given bad checks. Some state provisions may allow criminal prosecution in cases of fraud, however. Hawaii, for example, allows the criminal process to be used in cases where the consumer either stops payment on the check or closes the bank checking account before the advance has been repaid.

The state laws explicitly authorizing payday lending provide for oversight of the industry. The laws impose requirements on licensees for bonding and minimum net worth. The laws also usually require licensees to provide periodic written reports and submit to on-site examinations by regulators. Oversight requirements are intended to protect consumers from unscrupulous or financially weak lenders and help enforce

compliance with state and federal laws. To enforce their regulations, most states have criminal or supervisory penalties that can be used against payday advance companies. Some states authorize private enforcement. Seven state payday loan laws expressly state consumers' right to file a private cause of action to obtain relief against a payday loan company.

b. Payday Lending in States with Binding Rate Ceilings. Interest rate ceilings in states that do not authorize payday loans generally make very small loan sizes unprofitable and thereby effectively prevent lenders located in the state from legally making payday loans or any other small loans. For example, Oregon limits finance charges to 36 percent per annum plus an origination fee of $10 per $100 up to $30 (Oregon Revised Statute §725.622). A lender in Oregon may charge a maximum of $26.12 on a $200 cash advance for 31 days (the minimum term to maturity allowed by the law), for example. This amount is less than the $30 to $45 that payday advance companies charge for this same product in states that authorize payday loans or have no limits on fees. Since payday loan companies generally do not extend loans in states with restrictive interest rate ceilings, it is likely that the annual percentage rate is lower than the payday loan industry's breakeven annual percentage rate for payday advance credit.

Until recently, a payday lender in states with binding rate ceilings have been able to operate in partnership with a national or federally insured bank to take advantage of federal preemption of state laws. The National Bank Act (12 U.S.C. §§ 85-86) allows national banks to charge the higher of (1) the interest rate allowed in the state in which the bank is domiciled or (2) 1 percent above the discount rate on 90-day commercial paper in the Federal Reserve district in which the bank is located. The courts have consistently upheld this provision of the act.[9] The Depository Institutions and Deregulation and Monetary Control Act of 1980 (12 U.S.C. §1831d(a), §1463(g), §1785(g), and §1735(f-7a) extended this provision to state-chartered banks and other financial institutions accepting federally insured deposits. In effect, these acts preempt state interest rate ceilings of the borrower's home state in favor of the ceiling in the bank's home state. Nationally chartered banks and federally insured banks and savings institutions are able to charge interest rates (or fees) that they are allowed in their home state to customers in other states.[10] The payday loan company acts as a local agent for the national or federally insured bank, which originates the payday loan.

Actions of federal bank regulatory agencies have discouraged national banks and federally insured banks and savings institutions from entering into partnerships with payday loan companies. On several occasions the Office of the Comptroller of the Currency, Office of Thrift Supervision, and Federal Deposit Insurance Corporation

[9] Marquette v. First of Omaha Serv. Corp., 439 U.S. 299 (1978); Smiley v. Citibank (South Dakota), N.A., 135 L. Ed. 2d 25, 116 S. Ct. 1730 (1996).

[10] This aspect of the National Bank Act induced many financial institutions to establish credit card banks in South Dakota and Delaware, which have no interest rate ceilings for revolving credit. The ability to export interest rates is not limited to revolving credit, for which business is conducted through the mail. A firm may act as an agent for a bank claiming preemption. The key requirement for preemption is that the bank grants the credit; but the local offices are owned by the agent, not by the bank. See *Cade v. H&R Block, Inc.*, 43 F 3d 869 (4th Cir., 1994); *Christiansen v. Beneficial Nat'l Bank*, 972 F. Supp. 146 (S.D. Ga., 1997); *Basile v. H&R Block, Inc.*, 897 F. Supp. 194 (E.D. Pa., 1995). These cases concern tax refund anticipation loans made through local tax preparation offices.

characterized payday lending arrangements as highly risky and issued detailed guidelines enforced through the bank examination process. The guidelines included provisions on credit risk, capital adequacy, control over payday loan company operations, reputation risk, provisions for loan losses, compliance and legal risk, and policies toward rollovers. All three agencies have taken enforcement actions against institutions they supervise to terminate payday lender relationships. These actions have been motivated in large part by concerns about the quality of bank supervision of third-party agents.[11]

A few states have adopted additional measures to ban payday loans. These state measures are intended to reinforce federal bank regulatory agency actions taken to discourage national banks and federally insured banks and savings institutions from participating in payday lending. Georgia, for example, enacted legislation that defines payday lending as a criminal offense, prohibits non-bank entities from partnering with out-of-state banks or savings institutions to avoid Georgia's usury laws, and imposes criminal and civil penalties for violations. North Carolina's Commissioner of Banks ruled that payday lending through a local agent of an out-of-state bank or savings institution illegally circumvented state law. This ruling effectively prohibited payday lending by banning the distribution channel used in the state for payday lending since expiry of its payday loan law in 2001.

c. Payday Lending in Texas. Until 2005, payday lenders in Texas operated as agents of out-of-state banks or savings institutions. The actions of federal bank regulatory agencies to discourage bank participation in payday lending prompted virtually all payday loan companies to register as a credit services organization (CSO) to act as a broker for payday credit. A CSO payday loan company arranges a loan funded by a third-party lender.[12] The CSO payday lender receives a fee for arranging the loan and the third-party lender receives interest. The lender receives interest, which complies with the state rate ceiling. As a credit service organization the payday loan company operates in much the same way as it would as an agent of an out-of-state bank or savings institution. The fees are divided differently, however. Most of the revenue is from the brokerage fee, which is not limited, rather than the regulated interest charge.

2. Federal Laws

Payday loans are subject to all federal regulations governing consumer lending including the Truth in Lending Act and the Fair Debt Collection Practices Act, and the National Defense Authorization Act for Fiscal Year 2007.

Payday loans are subject to the federal Truth in Lending Act (15 U.S.C. §1601 *et seq*.), which is implemented by the Federal Reserve Board's Regulation Z. Truth in Lending requires a detailed set of disclosures of the price and other terms of consumer credit transactions. The key price disclosures are the annual percentage rate and the

[11] See Smale (2005) for a summary of federal bank regulatory agency initiatives to discourage payday lending.

[12] A credit services organization is defined by the Texas Credit Services Organization Act (Section 393 of the Texas Finance Code) as an entity or person that provides one of the following services: (1) improving a consumer's credit history or rating, (2) obtaining an extension of consumer credit for the consumer, or (3) providing advice or assistance to a consumer regarding the previous two services.

finance charge. For payday loans, the annual percentage rate is the periodic interest rate applied to outstanding balances multiplied by the number of periods in a year. The finance charge is the total dollar amount of all interest payments. Other disclosures for payday loan transactions include the amount of the loan (amount financed), the total of payments (for payday advances, the check amount), and the schedule of payments. The Federal Trade Commission has jurisdiction for Truth in Lending for payday loan companies.

The Fair Debt Collection Practices Act (15 U.S.C.§1692 *et seq.*) establishes debt collection standards for third-party collectors. The act prohibits harassment, false statements, and certain other practices in collecting debts. Third-party collectors are collection professionals and firms who assist creditors in collecting past-due accounts. A small loan size makes use of third-party collectors uneconomical. Very few payday loan companies, if any, use third-party collectors. Payday loan companies normally collect their own past due accounts. However, an industry trade association, the Community Financial Services Association of America, includes limitations of the Fair Debt Collection Practices Act as a guideline for member companies' own collection efforts. And most of the largest payday loan companies make bulk sales of their defaulted loans to professional debt purchasers. These purchasers are deemed to be debt collectors under the Fair Debt Collection Practices Act and are subject to the act's restrictions.

The Defense Department regulation implementing the National Defense Authorization Act for Fiscal Year 2007 (Public Law 109-364 §670) established a rate ceiling of 36 percent per annum for payday loans, automobile title loans, and refund anticipation loans to military personnel and their families. The regulation includes most fees in calculating a military annual percentage rate, including credit insurance premiums and fees for other products sold with the loan, which may not be included in the annual percentage rate under Regulation Z. It also regulates other terms for these types of credit. Notably for payday loans, the regulation prohibits rollovers, renewals, refinancing, or consolidation loans unless the new loan has better terms than the old one. The 36 percent per annum rate ceiling effectively prohibits payday lending to military personnel and their families.

3. Self-Regulation

In 1999, a group of payday loan companies founded an industry trade association, the Community Financial Services Association of America (CFSA). The association represents more than half of the nearly 24 thousand payday advance locations nationwide (http://www.cfsa.net/about_cfsa.html).

A primary function of the CFSA is to guide industry standards and to promote a favorable regulatory environment for payday lending. The crucial element of a favorable regulatory environment is that any regulation of prices (that is, finance or interest rate limits) does not make payday advance lending unprofitable, which would effectively prohibit payday lending. The association supports a set of industry standards for payday advance lending, which it designates as "Best Practices." The "Best Practices" consist of the following standards:

1. *Full Disclosure*. A member will comply with the disclosure requirements of the state in which the payday advance office is located and with federal disclosure requirements including the federal Truth in Lending Act. A contract between a member and the customer must fully outline the terms of the payday advance transaction. Members agree to disclose the cost of the service fee both as a dollar amount and as an annual percentage rate ("APR"). A member, in compliance with CFSA guidelines where they do not conflict with applicable federal, state or local requirements, will further ensure full disclosure by making rates clearly visible to customers before they enter into the transaction process.
2. *Compliance*. A member will comply with all applicable laws. A member will not charge a fee or rate for a payday advance that is not authorized by state or federal law.
3. *Truthful Advertising*. A member will not advertise the payday advance service in any false, misleading, or deceptive manner, and will promote only the responsible use of the payday advance service.
4. *Encourage Consumer Responsibility.* A member will implement procedures to inform consumers of the intended use of the payday advance service. These procedures will include the placement of a "Customer Notice" on all marketing materials, including all television, print, radio and on-line advertising, direct mail and in-store promotional materials.
5. *Rollovers.* Members shall not allow customers to roll over a loan (the extension of an outstanding advance by payment of only a fee) unless expressly authorized by state law, but in such cases where authorized the member will limit rollovers to four (4) or the state limit, whichever is less.
6. *Right to Rescind.* A member will give its customers the right to rescind, at no cost, a payday advance transaction on or before the close of the following business day.
7. *Appropriate Collection Practices.* A member must collect past due accounts in a professional, fair and lawful manner. A member will not use unlawful threats, intimidation, or harassment to collect accounts. CFSA believes that the collection limitations contained in the Fair Debt Collection Practices Act (FDCPA) should guide a member's practice in this area.
8. *No Criminal Action.* A member will not threaten or pursue criminal action against a customer as a result of the customer's check being returned unpaid or the customer's account not being paid.
9. *Enforcement.* A member will participate in self-policing of the industry. A member will be expected to report violations of these Best Practices to CFSA, which will investigate the matter and take appropriate action. Each member company agrees to maintain and post its own toll-free consumer hotline number in each of its outlets.
10. *Support Balanced Legislation.* A member will work with state legislators and regulators to support responsible legislation of the payday advance industry that incorporates these Best Practices.
11. *Extended Payment Plan.* Each member will provide customers who are unable to repay a payday advance according to their original contract the option of repaying the advance over a longer period of time. Such an extended payment plan will be

offered in compliance with any requirement in state law to provide an extended payment plan or, in the absence of such a requirement in state law, in compliance with the Best Practice "Guidelines for Extended Payment Plans." A member will adequately disclose the availability of the Extended Payment Plan to its customers in compliance with any requirement in state law for such a disclosure or, in the absence of such a requirement in state law, in compliance with the Best Practice "Guidelines for Extended Payment Plans."

12. *Internet Lending.* A member that offers payday advances through the Internet shall be licensed in each state where its payday advance customers reside and shall comply with the disclosure, rollover, rate, and other requirements imposed by each such state, unless such state does not require the lender to be licensed or to comply with such provisions, or the state licensing requirements and other applicable laws are preempted by federal law.
13. *Display of the CFSA Membership Seal.* A member company shall prominently display the CFSA Membership Seal in all stores to alert customers to the store's affiliation with the association and adherence to the association's Best Practices.

Member payday loan companies are required to adhere to these self-governance rules unless state law requires otherwise.

Some of the protections included in the "Best Practices" are contained in state or federal laws. However, many states do not have all of the protections of the "Best Practices," and the protections in the Fair Debt Collection Practices Act do not apply to payday advance companies collecting their own accounts. Thus, the association's standards are a constraint on member firms' behavior.

The association also promotes incorporating its standards into state laws. Colorado, for example, passed an improved payday advance law during the 2000 legislative session and was the first state to incorporate the "Best Practice" of providing the consumer a right to rescind the transaction at no cost by the close of the following business day. When incorporated into state law, the standards with their consumer protections and associated compliance costs are imposed on nonmember companies as well as CFSA-member companies.

II. MODELS OF CONSUMER CREDIT BEHAVIOR

This monograph relies on models from economics and psychology to assess the extent to which payday loan customers' use of payday loans is rational. The economic model of inter-temporal consumption and investment provides the framework for assessing outcomes. The model predicts that credit constrained or rationed consumers may benefit from the availability of additional credit at higher prices. Such consumers have high rates of return on household investment but low levels of discretionary income and liquid assets. They tend to be in early family life-cycle stages and typically have relatively high levels of debt. Such consumers may also have experienced loan denials or received smaller amounts of credit than they requested. These predictions from the economic model lead one to expect that payday loan customers would be credit constrained. One cannot conclude that any individual customer who has characteristics of a credit constrained consumer made rational decisions on payday loan use or that a customer who did not have these characteristics did not make a rational decision. But a pattern of such use suggests behavior that is consistent with rational use.

The psychological model describes the cognitive process for rational decisions. The process consists of a series of stages that includes information gathering, evaluation of alternatives, and choice. The model provides a framework for assessing the extent to which behavior is purposive and intelligent. While not identical with the economic concept of rationality, the psychological model resembles the economic concept in its consideration of deliberation and weighting of alternatives. The psychological model helps assess whether or not payday loan customers know what they are doing in choosing to use payday loans.

A. 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 a 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 good or service, 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 DVD players 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.[13] This consideration facilitates comparisons of the benefits and costs of acquiring durables.

1. The Consumption/Investment Model and Credit Demand

The economist's model for analysis of such decisions is Fisher's inter-temporal 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 in 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.

Juster and Shay extended Fisher's model to consider how certain institutional features of consumer credit markets affect consumer choices.[14] One extension involved Hirschleifer'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.

Juster and Shay pointed out that 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.[15] 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

[13] Poapst and Waters (1964) and Dunkelberg and Stephenson (1975) calculated rates of return for household durables at different levels of use. In many cases, the calculated rates of return were quite high. In particular, high rates of return were associated with high usage levels, which would typically characterize behavior of families with children.

[14] The extensions are presented in appendix A of Juster and Shay's monograph.

[15] Lenders may also retain security interest in a durable being financed. Even if a durable has little market value, the durable may still serve as collateral if it has value to the consumer (for example, the consumer values the flow of services). Loss of the durable (that is, the flow of services) would be costly to the consumer. Thus the threat of loss may help enforce payment of the debt. See Barro (1976) or Benjamin (1978).

using unsecured personal credit, but this credit is riskier and therefore more costly than other forms of credit. For many consumers, additional unsecured credit is available only from specialized high-risk lenders at a substantially higher cost.[16] And at some point, a consumer may not be able to borrow additional amounts at all. At the time Juster and Shay wrote their monograph, personal loans from consumer finance companies supplied much of this marginal credit. Pawnbroker loans were also available at that time. Bank credit cards provide most of this type of credit today.

Juster and Shay's extensions led 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 developed in Hirschleifer's model. 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 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.

2. 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. 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 age, rationed borrowers generally have not accumulated large amounts of liquid assets. Precautionary motives strongly influence their saving behavior. These consumers' limited liquid asset holdings have a high subjective yield, which makes

[16] Bizer and DeMarzo (1992) develop a similar model with sequential credit decisions.

liquidation of assets to acquire durables costly.[17] High rates of time preference and high subjective yields on 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.

3. 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 (Board of Governors of the Federal Reserve System 2007). Such changes have raised the credit limits of primary lenders (Edelberg 2006). Equity requirements have been relaxed, as terms to maturity have lengthened for most closed-end instalment credit. Down payment 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, today 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 result, unsecured credit is now available to more consumers at a lower cost than in the past.

Subprime products have 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

[17] Many consumers simultaneously owe higher cost consumer debt and hold relatively high levels of lower yield liquid assets. Moreover, Katona (1975) observed that many consumers are reluctant to use liquid assets when adverse events require large expenditures or temporarily reduce income because they believe that current difficulties increase the need for reserves for future emergencies. Such behavior provides evidence that subjective yields on liquid asset holdings are higher than nominal yields for many consumers.

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 credit products may facilitate the accumulation of household assets even when they are not used directly to finance household investment. Ready availability of short-term credit can be viewed as a reserve that can be tapped when desired or needed.[18] Such 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.

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

Fisher's consumption/investment model provides the net present value rule for deciding whether or not an investment is wealth increasing. An investment is any expenditure that provides a benefit or stream of benefits in the future. The benefit may be a one-time event such as avoiding a late payment penalty or a stream of benefits such as daily savings in transportation costs from repairing an automobile. Net present value (*NPV*) is calculated as follows:

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

where C is the cost of an expenditure, S_t is a periodic saving for n periods from making an expenditure, and d is the periodic discount rate. An expenditure is wealth increasing if the present (discounted) value of its benefits exceeds the 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 to avoid a late payment, take advantage of a one-time sale, or avoid some more costly alternative.

Using this approach, Elliehausen and Lawrence (2001) considered two examples: One was a payday loan taken out to avoid late payments on a utility and a credit card bill. In the example, the consumer needs $100 to avoid $35 in penalty fees for late payments of a utility and credit card bill. The net present value of using a payday loan costing $15 per $100 dollar borrowed is

$$(2) \quad NPV = -C + S_t (1+d)^{-1} = -\$100 + \$135(1+0.15)^{-1} = \$17.39$$

The cost of the expenditure is the $100 proceeds of the payday loan to pay the utility and credit card bills. The consumer saves the $135 (which comprises the $100 in payments for the utility and credit card bills plus $35 in penalties) that he would have paid after the

[18] Gross and Souleles (2002) and Castronova and Hagstrom (2004) observed that credit card accountholders appear to have target utilization rates for borrowing well below their credit limits, which the studies attributed to a desire to maintain a reserve of available credit.

next payday had the payday loan not been taken out. The discount rate, 0.15 (the $15 finance charge divided by the $100 amount of the payday loan), accounts for the cost of the payday loan. Note that the 15 percent discount rate implies a three-digit annual interest rate; for example, 390 percent for a typical two-week term to maturity (15 percent × 26 weeks per year). The positive net present value, $17.39 indicates that the transaction is wealth increasing.[19] That is, the payday loan provides a net discounted benefit, even at a three-digit annual interest rate.[20]

Elliehausen and Lawrence's second example was a payday loan taken out to pay for a $200 repair of an automobile. The benefits consist of a flow of weekday savings in transportation costs to and from work ($4.56 per day for ten days) and the cost of the repair at the end of two weeks, which were discounted at a 15 percent rate.[21] The net present value of taking out a payday loan to repair the automobile was $14.55. Thus, the payday loan was less costly than waiting to repair the automobile. Other assumptions may have produced different conclusions. For example, benefits would have been less if the consumer had to pay for parking or greater if the consumer had to use public transportation for shopping or other trips.

These examples are hypothetical, of course. Costs and benefits differ for each circumstance. One cannot generalize when numerous transaction-specific calculations are possible, but such examples can illustrate the possibility of plausible situations in which short-term borrowing of small sums at high rates of interest can be wealth increasing. After examining the survey evidence on the demographic and economic characteristics of payday loan borrowers, patterns of payday loan use, and payday loan borrowers' decision process, this monograph will review the findings of the few papers that have attempted to test empirically hypotheses whether payday loans benefit or harm consumers.

B. 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

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[19] Note that the net present value is not much smaller than the undiscounted net benefit of $20 (the $35 savings in penalty fees less the $15 cost of the payday loan). The dollar amount of the difference is small because the loan amount is small. The annual rate of interest is high because the short term to maturity produces a large number of periods per year, which is multiplied by the periodic rate to obtain an annual rate. Elliehausen (2005) suggests that discounting does not make much difference for small, short-term transactions. For a similar high-price credit product (refund anticipation loan), Elliehausen compared net present values and undiscounted net benefits for 30 alternative transactions that differed in the amount of benefit (five alternatives ranging from $25 to $125) and discount rate (six alternatives ranging from 2.2 percent to 11.3 percent). For none of the alternatives, did an undiscounted net benefit rule produce a different conclusion from the net present value rule.

[20] Savings over alternatives can be converted to annual rates of saving and compared with payday loan annual percentage rates. Again, because of the short time periods, the number of periods in a year and hence annual rates of savings can be quite high. For example, Fusaro (2008) notes that when converted to annual interest rates, the median bank overdraft fee obtained from transaction records of sample checking accounts was over 4000 percent, more than 20 times that for comparable payday loans. See also FDIC Study of Bank Overdraft Programs (2008).

[21] The savings in transportation costs consist of bus and subway fares less the cost of fuel and depreciation on the automobile (which would be incurred if the consumer drives) plus opportunity cost for additional commuting time for public transportation.

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 their 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 Hastak 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 (Day and Brandt 1973; or more recently, Durkin and Elliehausen 2002).

1. 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.[22] Consumers may simplify, use heuristics, or take shortcuts during the decision process.

a. 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 automobile title loans may arise because an unexpected situation produces a need for additional funds.

[22] 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).

b. 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 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 forego 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 obtaining credit is not possible.

c. External Search. 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.[23] 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.

d. 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

[23] 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.

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.

2. 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. 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. The consumer 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' familiarity with add-on rates at that time.[24]

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

[24] More recently, Durkin and Elliehausen (2002) 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.

information may be forgotten. Thus, new borrowers sometimes appear to be better informed than more experienced borrowers.

3. 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. These factors reflect the importance of the decision, the extent to which past experience provides clear and unambiguous guidelines for behavior, and the perceived cost of the decision process.

a. Situational Factors. 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.
- The consumer is dissatisfied with the previous purchase of the product.

In such situations, past behavior does not provide clear, unambiguous guidelines for behavior. In contrast, when consumers have recent experience and are satisfied with a product or service, they may feel that they have sufficient information and make choices without an extended decision process.

b. 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 have a high price relative to the consumer's income.
- Products having substitutes with both desirable and undesirable characteristics relative to the product.

These product characteristics involve commitments that affect future expenditures, consideration of tradeoffs between the product and expenditures for other items in the budget, or weighing different product attributes. Decisions regarding such choices may be difficult and have significant consequences if they are made without deliberation. Hence, consumers are likely to perceive the decision as important and devote time and effort to the decision rather than take shortcuts or behave routinely.

c. Consumer Characteristics. Evidence indicates that many socioeconomic characteristics of consumers are correlated with the extent of the decision process. 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 relatively young.
- The consumer enjoys shopping.
- The consumer perceives no urgent or immediate need for the product.

Some of the characteristics probably reflect cognitive ability and the cost associated with search. Consumers with a college education, for example, may tend to have cognitive abilities that increase the benefit of an extended decision process, or consumers who do not have an urgent need may perceive little cost in taking time to make a decision.

d. 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.

4. 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 between a current and previous decision. In such situations, consumers may perceive that information obtained from previous decisions is not obsolete.

5. Rationality and the Decision Process

The buyer-behavior model suggests that extensive collection of information and weighing of all available alternatives may not always be necessary for purposive, intelligent decisions. Some other benchmark for evaluating high-price credit customers' decisions would be desirable. Katona (1975, 220) 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, and special features—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.

As discussed earlier in this section, urgency, a relatively small transaction size, and short-term commitment are characteristics that are not associated with extended decision processes. Evidence that consumers understand the transaction and exercise some thought, therefore, seems a reasonable benchmark for judging decisions on the use of payday loans.

III. DATA AND METHODOLOGY

The target population for the survey was customers of companies belonging to the Community Financial Services Association of America (CFSA), a trade organization for the payday loan industry. CFSA-member companies are estimated to account for a little more than half of offices offering payday loans. The target population consisted of customers who had taken out or renewed a payday loan in the most recent three months before the survey.

A. Data Collection

A two-stage cluster sample design was used to provide adequate representation by size (number of offices) of company and type of office (monoline or multiproduct). In the first stage, offices were selected from among a sampling frame of companies agreeing to participate in the survey. In the second stage, a sample of customers who had obtained a payday loan from one of the selected offices within the three months prior to fielding was randomly selected. An equal number of customers were selected from each company.

The questionnaire was similar to the one used in the previous 2001 payday loan customer survey (Elliehausen and Lawrence 2001). Interviews were conducted in May and June 2007 using computer assisted telephone interviewing. A total of 1,173 completed interviews were obtained.

Weights were designed to reflect the two-stage cluster design and the disproportionate sampling of customers in the second stage of the survey. An office selection weight was defined as the number of offices existing in a stratum divided by the number of offices selected from that stratum. A customer selection weight for each company was defined as the number of customers in the frame divided by the number selected. The selection weight was adjusted for customer-level non-response by a ratio of the number of customers selected to the number of customers responding. The final weight is computed as the product of the store selection weight and the customer selection weight.

B. Analysis

The data from the payday loan customer survey are best interpreted when measured against benchmarks. This paper uses all consumers and consumers who revolve bank credit card balances as benchmarks. Consumers who revolve bank credit card balances are of particular interest because this group uses an unsecured, relatively high-price mainstream credit product, which allows borrowing small amounts quickly and conveniently. As mentioned earlier in this monograph, consumers often use bank credit card debt in the way they might have used unsecured personal loans in the past to increase the share of debt financing of household investment beyond levels acceptable to primary lenders. The data for these benchmarks are from the Federal Reserve Board's Surveys of Consumer Finances (SCF). The 2007 benchmark is from the 2004 Survey of Consumer Finances, the most recent survey that is currently available. Both the 2007 payday loan customer survey and its SCF benchmark are labeled "2007" in tables that follow.

This monograph also presents statistics from the 2001 payday loan customer survey. Some companies participated in both the 2001 and 2007 surveys. In both years, survey participants included the largest, medium-sized, and small companies. Nevertheless, participation was voluntary and not random. It is not possible to rule out that any observed differences in the two years are due to differences in participating companies rather than differences in customer behavior. This consideration does not alter the expectations based on predictions of the models in the previous chapter. That is, consumers in early family life-cycle stages with families but lower or moderate incomes are likely to have relatively high demand for debt. Such consumers are often credit constrained and potentially benefit from relaxation of credit constraints through high-price credit products such as payday loans. Similarly, expectations about influences of different factors on decision processes would be unaffected. Thus, patterns of behavior in both surveys should be similar.

Economic conditions did change and almost certainly affect results. Regulatory changes between 2001 and 2007 altered the geographic distribution of companies and influenced how customers used payday loans. Bank regulatory agencies adopted policies that discouraged national bank participation in payday lending. North Carolina and Georgia effectively banned payday lending, and Oregon passed legislation that caused most payday lenders to close offices in the state. State legislation has tightened rules on renewals and frequency of use during this period. Some states have amended payday loan laws to restrict the number of permissible renewals or to prevent customers from evading restrictions by using different payday loan companies to avoid limitations on simultaneous loans and renewals.

Despite unfavorable legislation that caused payday lenders to leave some states, the payday loan industry continued growing. Samolyk (2007) reports that the number of payday loan offices increased 29 percent from 17,679 offices in 2003 to 22,854 offices in 2005. Population per office declined in most states between 2003 and 2005. This statistic suggests that in some markets transaction costs of finding a payday loan office likely decreased and that competition may have increased.

IV. ECONOMIC CHARACTERISTICS OF PAYDAY LOAN CUSTOMERS

Survey results show that payday loan customers are predominately found in demographic groups that economic theory predicts have high demand for credit to finance household investment and may be credit constrained. They are young and in early family life-cycle stages with children. They have limited discretionary income to service debts, and have low amounts of liquid assets. As discussed above in Chapter II, consumers having these characteristics may benefit from relaxation of credit constraints, which high-price credit products provide. Hence, we would expect payday loan customers disproportionately to have these characteristics.

A. Income

By far, most payday loan customers are from lower and middle income households (table IV-1). The lowest income payday loan customers (those having incomes less than $15,000) account for a small but slightly disproportionate percentage of payday loan customers. The requirement that payday loan customers have a checking account disqualifies many low-income consumers.

IV-1. Household income (percent)

	Payday loan customers		Bank credit card revolvers		All consumers	
	2007	2001	2007	2001	2007	2001
Less than $5,000	3.9	0.5	1.1	0.8	1.8	1.2
$5,000-14,999	11.9	6.8	5.2	7.6	9.7	11.0
$15,000-24,999	17.6	17.0	9.6	11.7	11.9	13.3
$25,000-39,999	27.6	32.8	18.0	22.5	16.6	18.3
$40,000-49,999	13.4	17.7	12.6	10.6	10.2	9.0
$50,000-74,999	16.7	19.9	23.2	22.8	18.9	18.9
$75,000 or more	8.9	5.3	30.3	24.0	30.9	27.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

More than half of payday loan customers in 2007 came from the next three higher income groups. Eighteen percent of customers had incomes between $15,000 and $24,999, 27.6 percent had incomes between $25,000 and $39,999, and 13.4 percent had incomes between $40,000 and $49,999. These income groups are much more heavily represented among payday loan customers than among all consumers.

A large percentage of payday loan customers had higher incomes. Thirty-nine percent of payday loan customers had incomes of $40,000 or more, about a quarter had incomes of $50,000 or more, and 8.9 percent had incomes of $75,000 or more. The percentages of payday loan customers in the three highest income groups were less than the percentages of all consumers in these income groups. Higher income consumers disproportionately used bank credit cards as a source of higher cost unsecured credit. Nevertheless, it is notable that the higher income customers (income ≥ $50,000) are a larger share of payday loan customers than lower income (income < $15,000) customers.

B. Age and Family Life-Cycle Stage

By far, most payday loan customers were in younger age groups, which tend to use relatively large amounts of credit. Most payday loan customers were less than 45 years of age in 2007, and three-fourths were less than 55 (table IV-2). Payday loan customers were disproportionately represented in the less than 35 years age group relative to the population: 29.3 percent of payday loan borrowers were less than 35 years old compared to 21.8 percent of the population.

IV-2. Age (percent)

	Payday loan customers		Bank credit card revolvers		All consumers	
	2007	2001	2007	2001	2007	2001
Less than 35	29.3	36.4	22.0	26.2	21.8	28.7
35-44	23.4	31.9	27.7	28.6	21.3	22.5
45-54	22.7	21.7	26.2	23.6	21.6	17.3
55-64	16.1	6.5	12.6	12.1	15.5	12.0
65 or older	9.5	3.5	11.5	9.5	19.9	19.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Relatively few payday loan customers were old. Ten percent of payday loan customers were 65 years or older. This percentage is considerably less than the 19.9 percent of all consumers who were 65 years or older. Bank credit card revolvers, another group borrowing at relatively high interest rates, also were less than proportionately represented in the 65 years or older group: 11.5 percent of bank card revolvers were 65 years of age or older.

It is noteworthy that the percentages of both payday loan customers and bank card revolvers in the 65 years of age or older group are larger in 2007 than in 2001. These results do not appear to be anomalous. Older households were more likely to owe both mortgage debt and various forms of consumer debt in the most recent Survey of Consumer Finances survey than the 2001 survey (Bucks, Kennickell, and Moore 2006).

Life-cycle stage involves consideration of family situation—specifically, marital status and presence of children under age 18 in the household—as well as age. Families with children tend to have strong demand for credit, which is a consequence of high rates of return on household investment for larger family sizes. High rates of return on household investment may lead to use of relatively high-price unsecured credit products such as payday loans and revolving credit. Consistent with this expectation, more than half (62.7 percent) of payday loan customers were from families with children (table IV-3, sum of rows 3, 6, and 7). Two of the life-cycle groups in which children were present—"age 45 or older, married, children" and "any age, unmarried, children" (rows 6 and 7, respectively)—accounted for a much larger share of payday loan customers than the population as a whole. In contrast, individuals who were age 45 or older with no children in the household accounted for only a relatively small share (18.1 percent) of payday loan customers (rows 4 and 5). The percentage of consumers in these groups is much smaller than these groups' share in the population.

IV-3. Life-cycle stage (percent)

	Payday loan customers		Bank credit card revolvers		All consumers	
	2007	2001	2007	2001	2007	2001
Under age 45						
Unmarried, no children	14.1	11.1	7.3	7.9	6.7	11.8
Married, no children	5.1	7.2	8.9	12.5	8.2	8.0
Married, children	15.8	35.2	28.6	30.2	23.8	22.0
Age 45 or older						
Unmarried, no children	6.4	8.9	8.7	7.7	12.2	14.9
Married, no children	11.7	9.4	18.9	18.1	25.3	24.9
Married, children	23.6	5.0	19.2	16.4	16.4	6.0
Any age						
Unmarried, children	23.3	23.3	8.3	7.3	7.6	12.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Life-cycle use of revolving credit is similar to that of payday loans. More than half (56.1 percent) of bank card revolvers were from families with children. Individuals 45 years of age or older with no children in the household accounted for a much smaller share (27.6 percent) of bank card revolvers.

C. Liquid Assets

Payday loan customers' liquid assets are quite limited. Fewer than half (44.7 percent) of payday loan customers reported having savings or reserve funds in 2007 (table IV-4). The amount of these customers' savings likely is small. Responses tabulated in the next chapter indicate that by far most did not have sufficient funds in checking or savings accounts to pay expenses when they obtained their most recent new payday loan. The mean amount of the most recent new payday loan in the 2007 survey was $315, and the maximum amount was $1,000 (numbers not in tables). Even with banks' balance requirements or customers' precautionary holdings influencing account balances, the size of most payday loans suggests that customers' checking and savings balances could not have been very large.

IV-4. Payday loan customers' savings or reserve funds (percent)

Have savings or reserve funds	44.7
Difficulty replacing funds after taking them from savings	
Very easy	3.2
Somewhat easy	11.1
Somewhat difficult	44.6
Very difficult	37.9
Do not know	3.1
Total	100.0

Katona (1975) observed that a major motive for saving is to have funds available for emergencies. However, when emergencies arise, consumers may resort to savings only grudgingly because the worse the current situation, the greater looms the need to maintain reserves for future emergencies. Furthermore, Katona noted, that many consumers are reluctant to draw on savings to pay for expenses because they fear that they will not replace the funds. Many payday loan customers appear to have this concern. Customers generally reported that they found it difficult to replace funds after taking them from savings. Thirty-eight percent of customers said that replacing funds was very difficult, and 44.6 percent said that replacing funds was somewhat difficult.

Payday loan customers' saving behavior justifies the concern about replacing savings. Most payday loan customers did not save regularly. Thirty-six percent of customers reported spending all the income that they receive (table IV-5), and 33.4 percent reported saving whatever was left over at the end of the month. Just 29.0 percent of payday loan customers said that they regularly set aside money for savings. Customers' lack of regular savings and perceived difficulty in replacing withdrawn funds suggest that customers may place a high value on whatever small amounts of savings and reserve funds that they do have, possibly quite higher than the nominal value of the accounts.

IV-5. Payday loan customers' saving and spending habits (percent)

Spend all income received and do not save	36.4
Save whatever is left over at the end of the month	33.4
Regularly set aside money for savings	29.0
Do not know	1.2
Total	100.0

D. Credit Use

Nearly all payday loan customers used some form of credit other than payday loans. Eighty-five percent of customers used other types of consumer credit in 2007 (table IV-6). The incidence of other types of consumer credit was not much different from the population as a whole, but the consumer credit debt service burden (that is, monthly consumer debt payments to monthly income) and types of consumer credit used differed. Payday loan customers were much more likely to use closed-end consumer credit, which involve a one-time advance of funds and a scheduled term to maturity, than all consumers. Fifty-two percent of payday loan borrowers had automobile loans, and 49.7 percent had other closed-end consumer credit, compared to 38.0 and 7.1 percent of all consumers.

IV-6. Use of other types of credit (percent)

	Payday loan customers		Bank credit card revolvers		All consumers	
	2007	2001	2007	2001	2007	2001
Any consumer credit	85.4	91.6	100.0	100.0	83.0	84.3
Open-end credit						
Bank credit cards	54.4	56.5	100.0	100.0	74.5	75.5
Retail credit cards	21.7	21.5	65.7	67.3	50.4	52.2
Closed-end credit						
Automobile loan	52.4	52.9	53.3	52.5	38.0	36.7
Other loan	49.7	36.6	10.4	14.5	7.1	10.2
Any mortgage credit						
Home equity credit line	9.1	6.8	14.6	8.5	14.3	8.6
Closed-end mortgage	22.5	32.0	62.6	56.2	49.1	46.7
Memo: Owns home	31.8	41.7	75.2	70.2	72.8	71.8

In contrast, payday loan borrowers were less likely to have open-end credit than all consumers. Fifty-four percent of payday loan customers had a bank credit card, compared to 74.5 percent of all consumers; and 21.7 percent of payday loan customers had a retail credit card, compared to 50.4 percent of all consumers. Payday loan customers' less frequent use of revolving credit may reflect both supply and demand considerations. On the supply side, some payday loan customers may have been unable to obtain revolving credit, because of their relatively high debt service burdens and frequent payment problems. On the demand side, customers who have difficulty saving or managing personal finances may have preferred types of credit that impose the discipline of a fixed payment schedule.[25]

Payday loan customers were less likely than all consumers to owe mortgage debt because they were less likely to be homeowners. Just 31.8 percent of payday loan customers were homeowners in 2007, compared to 72.8 percent of all consumers. However, the incidence of mortgage debt for payday loan customers who own homes was greater than for all homeowners. Seventy-one percent (22.5 percent/31.8 percent) of payday advance customers who were homeowners had closed-end mortgages, which is slightly higher than the 67.4 percent of all homeowners who have closed-end mortgages. More notable is the 28.6 percent of payday advance customers who were homeowners

[25] Bertaut and Haliassos (2001) found that several variables reflecting individuals' ability for self control were negatively related to having a bank credit card but are positively related to revolving credit card balances when individuals have a bank credit card. This pattern of results is difficult to explain by either individuals' need to borrow or lenders' decision to reject such applicants. Bertaut and Haliassos argued that the pattern is consistent with self-control considerations that tend to discourage individuals from applying for credit cards but encourage those who have credit cards to borrow heavily against their limits. That large percentages of payday loan customers do not have credit cards or fully utilize their credit limits when they have credit cards (see section E below) suggests self-control considerations may influence payday loan customers behavior regarding revolving credit.

who also had home equity lines of credit, a much larger percentage than the 19.6 percent of all homeowners having home equity lines of credit.

Many payday loan customers had high debt service burdens for consumer credit. Nearly a third (31.8 percent) of customers had monthly consumer debt payments of 30 percent or more of monthly household income in 2007 (table IV-7). Another 12.9 percent had monthly consumer debt payments between 20 and 29 percent of monthly household income. Such levels of consumer debt payments might well prevent customers from obtaining additional credit from mainstream lenders. In other words, nearly half of payday loan customers have debt levels that might cause them to be credit constrained or rationed.

IV-7. Monthly consumer debt payments to monthly household income (percent)

	Payday loan customers		Bank credit card revolvers		All consumers	
	2007	2001	2007	2001	2007	2001
Less than 10 percent	37.7	52.7	50.7	54.0	73.7	75.6
10-19 percent	17.6	19.9	30.1	26.9	17.5	15.0
20-29 percent	12.9	8.9	9.9	9.9	4.8	4.9
30 percent or higher	31.8	18.5	9.3	9.2	3.9	4.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

The percentages of payday loan customers with high debt service burdens for consumer credit are notable. Far fewer consumers using bank credit card debt had high debt service burdens. Nine percent of bank credit card revolvers had debt service burdens of 30 percent or higher for consumer credit, and 9.9 percent had debt service burdens of 20 to 29 percent. And the incidence of high debt burdens among all consumers is even lower. Just 3.9 percent of all consumers had debt service burdens of 30 percent or more, and 4.8 percent had debt service burdens of 20 to 29 percent.

E. Credit Availability

Fifty-five percent of payday loan customers experienced credit limitations in the previous five years (table IV-8). An even higher percentage of customers considered applying for credit but did not because they thought that they would be denied. Payday loan customers' experience with credit limitations and perceptions of lack of credit availability in 2007 were less frequent than in 2001. However, customers' experience of credit limitations in 2007 was still two and three-fourths times greater than that of the population as a whole, and their perceptions of lack of credit availability were four times greater than that of all consumers.

IV-8. Experience and perceptions of credit availability over the last 5 years (percent)

	Payday loan customers		Bank credit card revolvers		All consumers	
	2007	2001	2007	2001	2007	2001
Credit request denied or limited	55.1	73.0	30.2	31.2	20.0	21.8
Considered applying for credit but did not because expected to be denied	59.8	67.7	18.2	18.2	14.9	14.3
Filed for bankruptcy	16.3	15.4	5.0	5.0	4.2	3.7

Many payday loan customers have characteristics that may limit their access to credit. As mentioned in the previous section, a considerable percentage of payday loan customers have relatively high debt service burdens. In addition, 16.3 percent of recent payday loan customers had previously filed for bankruptcy sometime in the last five years, a rate that is 3.9 times greater than the percentage for all consumers (table IV-8). Twenty-one percent of payday loan customers were 60 or more days past due on a consumer credit account in the previous 12 months, compared to 6.9 percent for all consumers. Of the payday loan customers with a bank credit card, 40.2 percent refrained from using a bank credit card in the last 12 months because they would have exceeded their credit limits (numbers not in tables).

F. Credit Constraints and Payday Loan Use

The percentage of the population that uses payday loans at any one time is quite small. In September 2005, responses to an omnibus survey conducted by International Communication Research indicated that just 2 percent of all US adults used a payday loan in the past 12 months (Lawrence and Elliehausen 2008). Many more consumers are credit constrained than use payday loans. According to the Survey of Consumer Finances, 25.7 percent of consumers had incomes less than $50,000 and were under 45 years of age or unmarried with children. Nearly half of these consumers in the last five years had been turned down or did not apply for credit because they thought they would be turned down (numbers not in tables). Thus, being credit constrained does not by itself appear to be sufficient to cause consumers to turn to payday loans.

Stegman and Faris's (2003) analysis of survey data from North Carolina families with incomes below $30,000 suggests that financial stress plays a key role in decisions to use payday loans. Six percent of the families in that survey had obtained at least one payday loan in the previous 24 months. Using a logistic regression model, Stegman and Faris considered the effect of various demographic characteristics (marital status, age, number of children, education, and race or Hispanic origin), income and savings, events associated with financial stress, and market variables (number of bank branches, and entry by check cashers) on the likelihood of payday loan use. Events associated with financial stress—specifically, having overdrawn a checking account and working with a credit counselor—were statistically significant (positively) and strong predictors of

payday loan use. In contrast, the demographic characteristics associated with being credit constrained generally were not statistically significant by themselves.

G. Education

Higher levels of education are associated with more extended decision processes than lower levels of education. Almost all payday loan customers had a high school diploma or higher education, but customers were concentrated in the middle levels of educational attainment. Thirty-six percent of payday loan customers had high school diplomas, and 35.1 percent had completed some college (table IV-9). The percentage of payday loan customers having high school diplomas is slightly higher than the 30.4 percent of all consumers having high school diplomas. But the percentage of payday loan customers with some college education was about two times greater than the percentage of all consumers with some college education. These consumers with a high school diploma or with some college are generally not as predisposed to search, nor are they generally as aware of credit costs as college graduates. However, available evidence indicates that some do shop for credit and that most can be considered aware of credit costs (Durkin and Elliehausen 1978).

IV-9. Education (percent)

	Payday loan customers		Bank credit card revolvers		All consumers	
	2007	2001	2007	2001	2007	2001
No high school diploma	9.8	6.2	8.5	9.7	13.4	9.7
High school diploma	36.3	38.3	33.2	35.6	30.4	34.3
Some college	35.1	36.1	21.8	23.4	17.5	21.1
College degree	18.7	19.4	36.5	31.4	38.7	34.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

Payday loan companies do not draw heavily on consumers from the lowest and highest educational attainment groups. One in ten payday loan customers does not have a high school diploma, a slightly lower share than this group's share of the population. Nearly twice as many payday loan customers have college degrees than do not have a high school diploma. However, the 18.7 percent of payday loan customers with college degrees is less than half the percentage of the population with college degrees.

V. Payday Loan Use and Experience

This chapter examines the decision process for the most recent new payday loan and discusses payday loan use during the last twelve months.

A. Most Recent Payday Loan

The stimulus by far for most payday loans was an unexpected expense or an expense that could not be postponed. Seventy percent of payday loan customers agreed strongly with the statement "I had an unexpected expense that could not be postponed" (table V-1). Forty-seven percent agreed strongly with the statement "I knew that an expense was coming but did not have the cash when the expense was due." Note that these statements are not mutually exclusive. A customer may have had an unexpected expense that the customer paid and later not have enough funds to pay a regular expense.

V-1. Urgency of most recent payday loan (percent)

Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Do not know	Total
I had an unexpected expense that could not be postponed.					
70.8	15.7	4.5	8.3	.7	100
I knew that an expense was coming but did not have the cash when the expense was due.					
46.6	17.7	11.6	23.2	.9	100
I could have postponed the expense until the next payday but did not want to wait.					
25.3	13.8	13.3	46.9	.8	100
I had a purchase opportunity that would have been lost if I had waited.					
21.8	9.9	11.6	55.4	1.4	100

Some customers used their most recent payday loan for an expense that was apparently more or less discretionary, however. One quarter of customers agreed strongly that they could have postponed the expense until the next paycheck but did not want to wait. Most customers who did not want to wait said that they had a purchase opportunity that would have been lost if they had waited. Again, the categories in the table are not mutually exclusive, although it may seem so. Customers may have an unexpected expense and later decide that they did not want to postpone a particular expense or take advantage of a purchase opportunity.

Assigning a single reason for using a payday loan may be arbitrary and inconsistent across consumers. Responses to these questions suggest that initial use of payday loans is almost always associated with unexpected expenses. How they adjust their budgets varies. Clearly some consumers do not want to wait to make some other discretionary expenditures until their next paycheck. However, more than half disagreed (mostly disagree strongly) that they could have waited. Perhaps many could have postponed some expenditures, but it seems likely that urgency rather than impatience is the greater motivation to use payday loans.

Most payday loans were quite small. Sixty-four percent of new payday loans in 2007 were $300 or less, and 91.4 percent were $500 or less (table V-2). Just 8.7 percent of most recent new loans were more than $500. Regulation influences the size distribution of payday loans. Many state payday loan laws have limits on the maximum size of payday loans that are $500 or lower.

V-2. Size of most recent new payday loan (percent)

	2007	2001
$100 or less	14.3	7.0
$101-200	20.5	27.3
$201-300	29.4	45.4
$301-400	10.6	8.9
$401-500	16.6	9.2
More than $500	8.7	2.2
Total	100.0	100.0

1. Awareness of Price

Payday loans are a simple product. Price is the key term. Payday loan customers receive two price disclosures, the finance charge and annual percentage rate. Truth in Lending requires disclosures of these two prices. Customers likely would be aware of the finance charge regardless of regulation since the finance charge is the difference between the amount of the check and the amount of cash they receive.

Almost all customers reported a finance charge for their most recent new payday loan. Just 2.3 percent of customers said that they did not know the finance charge on their most recent new advance.

V-3. Finance charge per $100 advanced for most recent new payday loan (percent)

	2007	2001
Less than $10	3.2	4.1
$10-11	8.1	6.5
$12-14	13.5	9.4
$15-19	51.5	49.8
$20-24	8.6	20.0
$25 or more	12.8	6.0
Do not know	2.3	4.3
Total	100.0	100.0

To assess the accuracy of reported finance charges across different loan amounts, reported amounts are standardized to a finance charge per $100 advanced. Payday loan price ceilings commonly are between $15 and $20 per hundred dollars advanced, although some are lower than $15 per hundred dollars advanced largely because fixed

fees or graduated rate ceilings produce lower ceilings on larger loans.[26] Finance charges of less than $10 per hundred dollars advanced are probably too low to be accurate.[27] Thus, the 3.2 percent of payday loan customers who reported finance charges less than $10 per hundred dollars can be judged to be unaware of the finance charge on their most recent payday loan.

The remaining 94.5 percent of payday loan customers reported plausible finance charges. The majority of reported finance charges were in the $15 to $19 per hundred dollars range, which is within the range of state rate ceilings. Awareness does not necessarily indicate that the finance charge was an important consideration in these customers' decisions, but it seems likely that customers who did use the finance charge in a recent transaction would be aware.

Eighty-one percent of payday loan customers recalled receiving information on the annual percentage rate for their most recent new payday loan, but far fewer customers were able to recall the actual annual percentage rate. When asked for the annual percentage rate on their most recent payday loan, just 34.3 percent of customers reported a rate (numbers not in table).

About half of the customers reporting a rate reported rates that were too low to be plausible. Thirty-four percent of customers reported rates less than 30 percent (table V-4). Customers reporting rates less than 30 percent may have been thinking of the finance charge as a percent of the loan amount rather than the annual percentage rate. Another 16.6 percent reported rates 30 to 199 percent. Annual percentage rates for payday loans normally would not fall in these two intervals. The remaining 49.0 percent of customers reporting a rate (16.3 percent of all customers) reported rates that were 200 percent or more, which are consistent with payday loan annual percentage rates observed in the market.

[26] Payday loan prices tend to be priced at or near the legal maximum (DeYoung and Phillips 2006; Flannery and Samolyk 2007). DeYoung and Phillips observed that the percentage of prices at the ceiling increased over time in Colorado to about 95 percent in 2005, which they attributed to focal point pricing (a type of tacit collusion in oligopolistic markets). Nevertheless, competition may have some influence on payday loan prices. Morgan (2007) found that payday loan prices were lower in areas with greater numbers of payday loan and pawnshop offices.

[27] Because in interview surveys the annual percentage rates or finance charges reported by respondents typically cannot be checked against the rates respondents actually pay, researchers have devised the concept of ''awareness zones'' to measure knowledge of credit prices. If a respondent reports a value within a range deemed, on the basis of a survey of current market practices, to be reasonable, the respondent is characterized as ''aware''; if the respondent reports a value outside the range or answers ''do not know,'' the individual is characterized as ''unaware.'' Although this is an inexact means of measuring credit prices, it does make possible a broad look at the phenomenon. For discussion, see Durkin (2000).

V-4. Annual percentage rate for most recent new payday loan
(percent of customers reporting a rate)

	2007	2001
Less than 30 percent	34.4	40.8
30-199 percent	16.6	15.8
200-399 percent	26.2	20.8
400-599 percent	13.3	18.3
600 percent or higher	9.5	4.2
Total	100.0	100.0

To investigate customer characteristics associated with awareness of the annual percentage rate, a logistic regression was estimated for awareness of the annual percentage rate for the most recent new payday loan as a function of variables describing frequency of payday loan use, saving behavior, use of and behavior for other types of credit, financial problems, demographic characteristics associated with credit use or decision making, and the customer's situation when the most recent new payday loan was obtained. Awareness of the annual percentage rate positively related to the number of payday loans obtained in the last 12 months (appendix 2). Having a bank credit card was negatively related to awareness, but frequently revolving bank credit card balances and fully using card limits were positively related to awareness. In other words, customers who used bank credit cards for borrowing tended to be aware of the annual percentage rate for their most recent payday loan. Customers who were aware of the annual percentage rate for their most frequently used bank cards also tended to be aware of the annual percentage rate for payday loans. Consideration of other sources of credit before taking out the most recent new payday loan (see next section) was positively related to awareness of annual percentage rate for payday loans.

Among the demographic characteristics, customers with higher levels of education were more likely to be aware of annual percentage rates for payday loans than customers with lower levels of education. Customers aged 45 or older were less likely to be aware than younger customers. Awareness was negatively related to having young children in the family. Women were less likely than men to be aware of annual percentage rates for payday loans, but divorced women were more likely than men or never married and married women to be aware. Awareness was not significantly related to family income.

The findings presented in this section indicate nearly all payday advance customers are aware of the finance charges for their most recent new payday advance. That customers are aware of the finance charge suggests that this measure of cost is useful and relevant to them. They can readily compare the finance charge for a payday loan with a dollar amount of savings or avoided costs from use of a payday loan to make a decision. Awareness does not necessarily mean that consumers use the information in making decisions, but it seems unlikely that they would be unaware had they used the information in a recent decision (Day 1976).

That most payday loan customers are not aware of the annual percentage rates suggests that they may not have found the annual percentage rate very useful in their most recent decision. Penalties, late fees, or other costs that customers save through use of payday loans are not normally expressed as annualized percentages. Annual

percentage rates are, of course, available for other types of credit. Because payday loan customers use of other types of consumer credit, it is probable that payday loan customers have been exposed to annual percentage rates and even have considered annual percentage rates in other credit decisions. This previous experience perhaps explains the finding that payday loan customers recalled receiving information about the annual percentage even though most did not remember the annual percentage rate.

2. Consideration of Alternatives

Many payday advance customers perceived that they had few options to their most recent new advance. Cash generally was not available. Just 17.5 percent of customers reported having had enough cash in a checking or savings account (table V-5) when they obtained the payday loan. Bank credit cards also generally were not an option. Recall that 45.6 percent of customers did not have a bank card. Twenty-two percent of payday loan customers (40.2 percent of the customers who had a bank card) said that they would have exceeded their credit limit if a credit card had been used. Twenty-eight percent of customers said that they could have borrowed from a friend or relative. But overall, 50.6 percent of customers reported believing that a payday loan was their only choice at the time they obtained their most recent new payday loan.

V-5. Perceptions of options to most recent payday loan (percent)

Could have used money in checking or savings account	17.5
Did not have bank credit card	45.6
Would have exceeded credit limit if credit card was used	21.9
Could have borrowed from friend or relative	28.2
Believed payday loan was the only choice	50.6

Many payday loan customers thought about alternatives to their most recent new payday loan, even if some ultimately concluded that specific alternatives were not available to them at that time. Nearly, half (46.4 percent) of payday loan customers said that they considered another source of credit before they obtained their most recent new payday loan (table V-6). That source was most likely to be a friend or relative. The percentage of customers who considered a friend or relative—nearly half of those considering other sources, or 22.7 percent of all customers—was less than the 28.2 percent who thought that they could actually obtain a loan from a friend or relative (from table V-5), however. Many customers considered an institutional source (bank, credit union, finance company, or credit card company). Few customers considered pawnshops or automobile title loan companies.[28] These high-price credit products apparently are not considered very close substitutes for payday loans.

Convenience was an important reason for choosing payday loans over other sources of credit. Twenty-eight percent of customers cited the speed and ease of obtaining a payday loan, as the most important reason for choosing a payday loan, and another 12.4 percent mentioned a convenient location. Hardly any customers said that

[28] Many more payday loan customers had previous experience with other high-price credit products than considered them as alternatives. Seventeen percent of all payday loan customers borrowed from a pawnshop in the previous five years, and 15.0 percent borrowed from an automobile title loan company.

they chose a payday loan because it was less expensive than another source. About one in five of customers who considered another source reported that in the end a payday loan was the only choice. Thirty percent gave various other reasons for choosing a payday loan over another source.[29]

V-6. Consideration of other credit sources before obtaining most recent new payday loan

	2007	2001
Considered source other than payday loan company (Percent of payday loan customers)	46.4	38
Types of other sources considered (Percent of those considering other sources)		
Bank	23.3	48.5
Credit union	5.2	15.5
Finance company	6.2	29.8
Credit card	2.8	6.2
Automobile title loan company	.4	2.5
Pawn shop	.9	.6
Friend or relative	49.0	5.0
Other	16.6	8.7
Total	(1)	(1)
Most important reason for choosing a payday loan over another source (Percent of those considering other sources)		
Quick easy process, fast approval, little paper work	28.2	59.0
Convenient location	12.4	10.9
Payday loans are short term	1.3	2.6
Payday loans provide more privacy, not in credit history	6.2	9.0
Payday loans are less expensive	1.6	3.9
No other alternative	20.8	6.4
Other	29.6	7.1
Total	100.0	100.0

[1] Total sums to more than 100 percent because some customers mentioned more than one reason.

3. Post-Purchase Evaluation

The final stage of the decision process is an evaluation of the decision. As discussed in a previous chapter, the post purchase evaluation may influence subsequent decision processes. Consumers who are satisfied with a recent choice may purchase the product again with little or no additional search. Consumers who are dissatisfied, in contrast,

[29] The percentage distribution of responses in 2007 contains many more "other" responses than the 2001 survey. The difference may in part be an artifact of different survey companies conducting the two surveys, where one company permits interviewers greater discretion in assigning responses to defined response categories.

tend to undertake extensive information gathering and deliberation in subsequent decisions.

Nearly all payday loan customers were satisfied with their decisions. More than half of customers were very satisfied with their most recent payday loan, and about a third of customers were somewhat satisfied (table V-7).

V-7. Satisfaction with most recent payday loan (percent)

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied	Do not know	Total
2007	54.7	33.7	5.1	5.7	.9	100
2001	42.2	n.a.	n.a.	5.9	n.a.	100

n.a. = Not available. Comparable categories for 2001 are not available because the 2001 survey allowed respondents to report that they were neither satisfied nor dissatisfied.

Reasons for satisfaction largely involve the process. Large percentages of customers mentioned an easy, convenient process or obtaining needed money quickly as reasons for satisfaction (table V-8). Many customers also mentioned courteous, professional, or friendly treatment by the payday loan company's employees.

V-8. Reasons for Satisfaction, 2007 (percent of satisfied customers)

Reason	
Cost	
Reasonable fee/cost	3.3
Low fee/cost	1.9
High fee/cost (partial satisfaction)	1.0
Process	
Obtained needed money quickly	36.5
Easy convenient process/little paperwork	41.3
Courteous/professional/friendly staff	23.9
Other	
Convenient location	2.5
No/little credit investigation	1.8
No obligation/payments over an extended period of time	2.7
Difficult to get out of debt/repay in instalments	1.8
Do not know	4.0
Total	(1)
Memo: Satisfied customers (percent of all customers)	88.4

[1] Total sums to more than 100 percent because some customers mentioned more than one reason.

Cost was not a very common reason for satisfaction. Only a very small percentage of customers mentioned reasonable (3.3 percent) or low (1.9 percent) fees as a reason for satisfaction (table V-8). And a few customers mentioned high cost as a reason

for being only partially satisfied. Other reasons also were not mentioned very often. A few customers mentioned the short duration of the loan as a reason for satisfaction. A slightly smaller percentage of customers mentioned difficulty of getting out of debt or difficulty in repaying in instalments as a reason for being only somewhat satisfied with their most recent new payday loan.

Five percent of customers were somewhat dissatisfied with their most recent new payday loan, and 5.7 percent were very dissatisfied (table V-7). More than half of dissatisfied customers reported cost as a reason for dissatisfaction (table V-9). Thirty-eight percent of customers mentioned high interest rates; 16.0 percent mentioned high fees; and 14.5 percent mentioned high costs but did not specify either the interest rate or fee.

V-9. Reasons for Dissatisfaction, 2007 (percent of dissatisfied customers)

Reason	
Cost	
High interest rate	38.0
High fee	16.0
High cost (not ascertained whether interest rate or dollar amount)	14.5
Process	
Insufficient or unclear information	0.6
Handling or processing of payments	2.3
Discourteous/indifferent/unfriendly staff	9.0
Availability of credit	
Not able to borrow as much as requested	0.5
Not allowed to renew	4.9
Too difficult to get out of debt	15.9
Other	17.5
Do not know	3.4
Total	(1)
Memo: Dissatisfied customers (percent of all customers)	10.8

[1] Total sums to more than 100 percent because some customers mentioned more than one reason.

The percentage of dissatisfied customers mentioning insufficient or unclear information as a reason for dissatisfaction was negligible. The percentage of customers expressing dissatisfaction with the handling or collection of payments was not much larger, although a small percentage of customers reported discourteous, indifferent, or unfriendly treatment by employees as a reason for dissatisfaction.

Customers only infrequently felt that payday loans were a debt trap. Sixteen percent of dissatisfied customers mentioned difficulty of getting out of debt as a reason

for dissatisfaction. These customers together with the 1.8 percent of satisfied customers mentioning this reason from table V-9 accounted for just 3.2 percent of all payday loan customers (number not in table).

B. Payday Loan Use during the Last Twelve Months

In the last 12 months, many payday loan customers increased credit purchases or experienced adverse events that made them vulnerable to financial stress. Sixteen percent of customers had higher debt service burdens because they incurred a large amount of credit purchases (table V-10). Thirty-one percent of customers had major medical expenses, 10.3 percent experienced a significant loss or damage of property, and 29.4 percent experienced a significant reduction in income. In many cases, these events produced various financial strains. Forty-three percent of customers wrote checks that overdrew their checking accounts.[30] And 20.8 percent of customers were 60 or more days delinquent on consumer credit accounts in the last 12 months, an incidence of serious delinquency that is much higher than for the population as a whole (6.4 percent, number not in table).

V-10. Payday loan customers' financial problems in the last 12 months (percent)

Problem	2007	2001
Incurred a large amount of credit purchases	15.9	n.a.
Experienced major medical expenses	30.9	n.a.
Experienced extended period of unemployment	19.6	n.a.
Experienced a significant reduction in income	29.4	n.a.
Experienced significant loss or damage of property	10.3	n.a.
Was 60 or more days past due on a consumer credit (nonmortgage) account	20.8	25
Wrote checks that have overdrawn checking account	43.1	68

n.a. = Not available.

1. Frequency and Duration of Use

The 2001 payday loan customer survey found a dichotomy in frequency of customers' use of payday loans. Some payday loan customers had few payday loans and did not renew payday loans very often. Other payday loan borrowers had many payday loans and frequent renewals. The 2007 survey finds a similar dichotomy. Considering the total number of loans, which includes both new loans and renewals, a little more than a fifth of customers obtained fewer than five payday loans in the last 12 months: 9.9 percent of customers obtained just one or two payday loans, and another 11.7 percent of customers obtained three or four payday loans (table V-11). Another 12.9 percent of customers obtained five or six payday loans in the last 12 months. At the high end of use, nearly 30 percent of customers obtained 14 or more payday loans in the last 12 months.

[30] The FDIC Study of Bank Overdraft Programs (2008) reports that about a quarter of accounts in its account-level survey at 29 banks had one or more non-sufficient funds transactions over the twelve month period of the study.

V-11. Total payday loans, new loans, and renewals in the last 12 months (percent)

	2007			2001		
	Total loans	New loans	Renewals	Total loans	New loans	Renewals
None	Inap.	Inap.	28.1	Inap.	Inap.	25.1
1-2	9.9	19.7	17.3	15.6	35.5	21.1
3-4	11.7	20.4	12.8	19.2	31.4	13.9
5-6	12.9	19.8	15.0	16.9	15.3	10.4
7-8	9.1	13.1	8.1	10.3	7.0	9.6
9-13	26.6	22.9	16.6	15.6	6.7	9.4
14 or more	29.6	4.1	2.1	22.5	4.2	10.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Inap. = Inapplicable

To investigate customer characteristics associated with frequency of payday loan use, a negative binomial regression was estimated for the number of payday loans obtained in the last 12 months as a function of variables describing saving behavior, use of and behavior for other types of credit, financial problems, and demographic characteristics associated with credit use or decision making.[31] Results show that variables suggesting greater financial strength or knowledge were associated with less frequent use of payday loans. Customers who save income that is left over at the end of the month or save regularly used fewer payday loans than customers who did not save (appendix 3). Homeowners used fewer payday loans than renters. And customers who were aware of annual percentage rates on credit cards and their most recent new payday loan used fewer payday loans than customers who were not aware. In contrast, customers who did not pay credit card balances in full, fully utilized credit card limits, and overdrew checking accounts used more payday loans. Of the demographic characteristics, only age was statistically significant. Customers in age groups 35 or older used more payday loans than customers under age 35, with the factors held constant in the regression.[32]

The data on frequency of use suggest the length of time during the year that different customers owed payday loans. Assuming an average term of two weeks, the 21.6 percent of customers who obtained fewer than five loans owed payday loans in aggregate for less than two months during the year, and the 12.9 percent of customers who obtained five or six loans owed payday loans between two and three months. A considerable percentage of customers owed payday loans for substantial periods of time, however. The 29.6 percent of customers who obtained 14 or more loans a year owed payday loans over half of the year.

[31] Poisson and negative binomial regression models are applicable for analyses when the dependent variable is a count. The negative binomial distribution is more general than the Poisson distribution, however. The negative binomial is appropriate when the variance of the distribution is not equal to its mean, which is indicated by a dispersion parameter. A dispersion parameter equal to zero indicates that the variance is not equal to the mean. For discussion, see Greene (1997). The estimate of the log of the dispersion parameter in appendix 3 is statistically significantly greater than zero, which suggests that the negative binomial model is appropriate.

[32] Differences in estimated coefficients among the three 35 or older age groups are not statistically significant.

The percentages of frequent customers in 2007 are greater than in 2001. A definitive explanation is not possible. Economic conditions may contribute to the difference. Both June 2007 and January 2001 preceded deterioration in economic conditions. For example, the University of Michigan's Index of Consumer Sentiment, a consumer survey-based assessment of current and future economic prospects of the survey respondents and the economy in general, began sharp declines at about the time of interviewing for both payday loan customer surveys. The 2001 decline was from near a 30-year high in the index, while the 2007 decline was from an average level of the index, which suggests that consumers' financial situations in 2001 may have been healthier than in 2007.[33] As mentioned in Chapter 2, other factors may also contribute to differences in the distributions of frequency of payday loan use. These factors may include changes in the geographic distributions of payday loan customers and offices through industry growth or through changes in regulation of payday lending activities, and differences in the companies participating in the survey.

Payday loan customers were also asked the longest number of weeks that they had a payday loan outstanding without a break during the last 12 months. Most payday loan customers had relatively short sequences of consecutive loans (which include a new loan and subsequent renewals). Thirty-five percent of customers reported that their longest sequence was two weeks or less (table V-12). Another 29.4 percent reported longest sequences between 3 and 4 weeks. However, as with frequency of use, there is also a dichotomy in reported longest sequences. Some customers had very long sequences. Nine percent of customers had longest sequences of 9 to 13 weeks, and 7.8 percent had longest sequences of 14 weeks or more.

V-12. Length of longest sequence of consecutive loans in the last 12 months (percent)

	2007	2001
Two weeks or less	35.2	27.6
3-4 weeks	29.4	29.0
5-6 weeks	9.3	10.4
7-8 weeks	9.2	14.5
9-13 weeks	9.1	8.6
14 or more weeks	7.8	10.0
Total	100.0	100.0

Forty percent of payday loan customers obtained payday loans from more than one company in the last 12 months (table V-13). Just under half of these customers obtained loans from more than two different companies. Thirty-six percent of customers obtaining loans from more than one company (14.6 percent of all customers) reported having paid off one company with the proceeds of a payday loan from another company.

[33] The University of Michigan's Index of Consumer Sentiment averaged 107.7 in the 12 months before January 2001 and 88.9 in the 12 months before June 2007. The highest index value between January 1978 and June 2007 was 112.0. The average for the period was 88.1. The index declined 6.2 percent from its January 2001 value in the next 12 months and 29.9 percent from its June 2007 value in the next 12 months. Data are available from the Federal Reserve Bank of St. Louis's FRED database at the following address: http://research.stlouisfed.org/fred2/series/UMCSENT?cid=98.

One motive for such behavior is to extend the period of time over which a debt is outstanding (that is, the length of the sequence of consecutive loans), which may be limited by state law, industry guidelines, or company policies regarding renewals.[34]

V-13. Use of more than one payday loan company in the last 12 months (percent)

	All payday loan customers		Payday loan customers using more than one company	
	2007	2001	2007	2001
Used more than one company	40.4	47.0	100.0	100.0
Number of companies used				
Two	21.0	30.0	51.9	63.7
Three	10.7	11.1	26.4	23.6
Four or more	8.8	5.9	21.7	12.6
Total	40.4	47.0	100.0	100.0
Paid off one company with the proceeds of a payday loan from another company	14.6	16.5	36.1	35.2

Payday loan customers using more than one company were more likely to be frequent users and have long payday loan sequences than customers using only one company (table V-14). Customers who paid off one company with the proceeds of a payday loan from another company were especially likely to be frequent users: Well over half of these customers obtained 14 or more payday loans in the last 12 months, compared to 31.0 percent of customers who used two or more companies but did not pay off a payday loan with a loan from another company and 19.4 percent of customers who used only one company.

[34] Other motives include obtaining a greater aggregate amount of payday loans than the payday loan company's underwriting policy or the state payday loan size limit allow, finding an office at a more convenient location after change in residence or shopping patterns, or the opening of a new office at a more convenient location.

V-14. Number of payday loans and length of longest sequence, by use of more than one company (percent)

	Borrowed from only one company	Borrowed from two or more companies	
		Did not pay off one company with proceeds from another company	Paid off one company with proceeds from another company
Obtained 14 or more payday loans in last 12 months	19.4	31.0	70.5
Longest sequence of payday loans 14 or more weeks	6.4	8.2	13.5
Total	59.6	25.8	14.6

2. Late Payments on Payday Loans

Considering payday loan customers' frequent problems with overdrawn checking accounts and delinquencies on other types of debts, one might expect that customers would also have frequent problems with late payments on payday loans. Twenty-one percent of customers made late payments on payday loans during the previous 12 months. A little more than half of customers making late payments, made late payments two or more times during the year.

V-15. Customers making late payments on payday loans in the last 12 months (percent)

	All payday loan customers		Payday loan customers making late payments	
	2007	2001	2007	2001
Made late payments	20.8	24.1	100.0	100.0
Number of times paid late				
One time only	10.1	12.8	48.7	53.0
Two or more times	10.6	11.3	51.3	47.0
Total	20.8	24.1	100.0	100.0
Resolution of late payments				
Treated fairly	17.5	20.2	83.9	83.8
Treated unfairly	3.2	3.4	15.2	14.1
Do not know	.2	.5	.9	2.1
Total	20.8	24.1	100.0	100.0

It is notable that payday loan customers who used more than one payday loan company in the previous 12 months were more likely to have made late payments than customers who used only one company. Just 14.2 percent of customers who obtained loans from one company made late payments. Among customers obtaining loans from

two or more companies, 22.4 percent of customers who did not use the proceeds of a payday loan from one company to repay a payday loan from another company made late payments on payday loans; and 45.1 percent of those who paid off a payday loan with a payday loan from another company made late payments on payday loans (numbers not in tables). That customers using more than one company resorted more frequently to payday loans may in part explain these customers' higher incidence of late payments. The higher incidence of late payments among customers seeking to extend the length of the loan sequence by paying off a payday loan with the proceeds of a loan from another company suggests that use of short-term credit for longer term financing is very risky.

By far, most customers (83.9 percent) who made late payments on payday loans reported that they were treated fairly in resolving late payments (table V-15). The most common complaint of customers who said that they were treated unfairly was that they were harassed (table V-16). The second most frequent complaint was that the customer was inconvenienced because the check was cashed.

V-16. How customers making late payments were treated unfairly, 2007

Reason	Number of reasons	Percent of reasons	Percent of customers making late payments
Threatened with criminal prosecution	15	12.2	38.5
Embarrassed in front of others	18	14.6	46.2
Inconvenienced because the check was cashed	25	20.3	64.1
Not allowed to make partial payments	16	13.0	41.0
Harassed	28	22.8	71.8
Treated unfairly in some other way	21	17.1	53.8
Total	123	100.0	(1)

[1] Greater than 100 percent because 39 respondents reporting unfair treatment provided 123 reasons.

Logistic regression analysis found that serious delinquency in consumer credit payments, overdrawing checking accounts, unemployment, reductions in income, and property losses were associated with greater probability of one or more late payments for payday loans in the last 12 months (appendix 4, part I). Having an automobile loan, having a retail credit card, and homeownership were associated with lower probability of late payments. Of the demographic characteristics considered, age greater than 65 and higher levels of family income were associated with lower probability of late payments. Lower levels of education were associated with greater probability of late payments than higher levels of education. Having borrowed from more than one payday loan company and borrowing from one company to pay off a payday loan at another company were associated with higher probability of late payments on payday loans. The total number of payday loans was not statistically significant, however.

The total number of payments is statistically significantly associated with a higher probability of late payments on payday loans if the variables for use of more than one payday loan company are excluded from the regression (appendix 4, part II). Table V-15 and the regression discussed in the previous paragraph indicate that use of more than one

payday loan company is associated with late payments. Table V-14 shows that customers using more than one company are disproportionately frequent borrowers but also that many customers using only one company were frequent borrowers. That number of payday loans is not significant in the first regression but significant in the second suggest that frequent use may not be risky per se. Rather, actions such as seeking to avoid restrictions on the number of consecutive renewals and the number or aggregate amount of payday loans, which might be accomplished using multiple payday loan companies, are risky. These results seem broadly consistent with Flannery and Samolyk's (2005) findings that a greater percentage of repeat borrowers is associated with lower servicing costs and loan losses but that a greater percentage of renewals was associated with higher servicing costs and loan losses.

3. Attitudes toward Credit and Payday Loans

Like many consumers, payday loan customers are ambivalent about credit.[35] Payday loan customers largely regard credit as good. By far, most payday loan customers agreed at least somewhat that people benefit from the use of credit: 45.9 percent agreed strongly, and 40.5 percent agreed somewhat (table V-17). However, consumers sometimes overspend and incur too much debt. That is not good. If consumers do overspend, by far most payday loan customers also believed that overspending is the fault of consumers, not lenders. But, a large majority also agreed with the statement that there is too much credit available today. These attitudes appear to reflect widely held beliefs about credit. Consumers feel confident in their use of credit but are often skeptical of other consumers' ability to use credit (see Durkin 2000).

V-17. Payday loan customers' attitudes toward credit (percent)

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Do not know	Total
Most people benefit from the use of credit.						
2007	45.9	40.5	8.4	4.7	.6	100
2001	40.1	42.2	10.5	6.8	.5	100
Overspending is the fault of consumers, not lenders.						
2007	52.0	30.9	8.6	6.1	2.4	100
2001	56.2	23.0	11.7	8.2	.9	100
There is too much credit available today.						
2007	43.6	25.8	15.4	13.9	1.3	100
2001	31.9	22.3	17.6	26.2	2.1	100

Payday loan customers' attitudes about payday loans are also ambivalent. By far most customers agree that payday loan companies provide a useful service to consumers

[35] For discussions of consumers' attitudes toward credit, see Katona (1975), Durkin (2000), and Calder (2002).

(86 percent) and that most people are satisfied in their dealings with payday loan companies (75.8 percent) (table V-18). However, more than half of customers (64.6 percent) believed that payday loan companies made it hard for consumers to get out of debt. This belief did not cause most payday loan customers to support regulations limiting the number of payday loans they can get in a year: Fifty-nine percent of customers disagreed that the government should limit the number of payday loans they can get in a year. Nor did this belief cause very many customers to be dissatisfied with their own payday loan experiences: Recall that just 10.8 percent of customers were dissatisfied with their most recent payday loan and that only a small percent mentioned difficulty of getting out of debt as a reason for dissatisfaction.

V-18. Payday loan customers' attitudes toward payday loans (percent)

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Do not know	Total
Payday loan companies provide a useful service to consumers.						
2007	43.1	42.9	5.8	7.7	.6	100
2001	53.9	38.2	2.8	4.7	.5	100
Payday loan companies make it hard for consumers to get out of debt.						
2007	34.9	29.7	17.8	16.4	1.2	100
2001	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
The government should limit the number of payday loans I can get in a year.						
2007	23.1	17.0	15.7	42.9	1.4	100
2001	17.1	12.4	18.7	50.4	1.4	100
Most people are satisfied in their dealings with payday loan companies.						
2007	36.7	39.1	9.7	10.9	3.6	100
2001	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

n.a. = Not available

Attitudes often reflect experience. A third of payday loan customers believed that payday loan companies make it hard to get out of debt and that the government should limit the number of payday loans (table V-19, row 4). These customers were significantly more likely to have made late payments on payday loans in the last 12 months than customers overall. Customers who did not believe that payday loan companies make it had to get out of debt but believed that the government should limit the number of payday loans also were more likely to have made late payments than payday loan customers overall (row 3). In contrast, customers who believed that the government should not limit the number of payday loans in a year were less likely than customers overall to have made late payments (rows 1 and 2). Interestingly, more than half of this group (that is, rows 1 and 2) did not favor limits on the number of payday loans they could obtain in a year (row 2). These customers would seem to be customers who are confident in their own use of payday loans but doubt other consumers' ability to limit use of payday loans.

V-19. Difficulty of getting out of debt and limits on the number of payday loans

Attitudes[1]	Percent of all customers	Percent of customers in group that made late payments
Payday loan companies do ***not*** make it hard to get out of debt; the government should ***not*** limit the number of payday loans I can get in a year.	27.3	16.4
Payday loan companies make it hard to get out of debt; the government should ***not*** limit the number of payday loans I can get in a year.	30.6	16.7
Payday loan companies do ***not*** make it hard to get out of debt; the government should limit the number of payday loans I can get in a year.	6.7	23.3
Payday loan companies make it hard to get out of debt; the government should limit the number of payday loans I can get in a year.	32.8	28.6
Do not know	2.5	10.9
Total	100.0	20.8

[1] Strongly agree is combined with somewhat agree, and strongly disagree is combined with somewhat disagree. "Do not know" includes customers who answered "do not know" to one or both questions.

VI. ARE PAYDAY LOANS WEALTH INCREASING?

As mentioned, a few research papers have attempted to test empirically hypotheses whether payday loans benefit or harm consumers. One hypothesis follows from the wealth maximization model. Over the course of time, some consumers experience negative events—such as medical expenses or car repair expenses—that leave them with a cash shortfall in their monthly budget. If revolving credit is not available, these consumers may face the prospect of penalties for returned checks or late payments. In extreme cases, they may even face service suspensions, eviction, foreclosure, or bankruptcy. If payday loans are less costly than these prospects (that is, they produce positive net present values), these prospects would be expected to occur less frequently when consumers have greater access to payday loans.

An alternative hypothesis (sometimes called the predatory or debt trap hypothesis) is that payday loans harm consumers by enticing them to maintain over the short-run unsustainable levels of consumption. Consumers repeatedly renew payday loans to maintain consumption. The burden of high finance charges at each renewal hastens the ultimate default and decline in future levels of consumption.

A. Community Well-Being in the Aftermath of Natural Disasters

Morse (2007) examined the effect of the availability of payday loans on measures of community well-being after the occurrence of floods, fires, or other natural disasters. Natural disasters create a natural experiment in which the treatment, financial distress, is exogenously induced on communities with and without access to payday loans. To obtain a comparison group of comparable communities that did not experience financial distress, she matched disaster and non-disaster communities (defined as ZIP-code areas) using propensity scores that reflected the degree to which residents in the community were credit constrained (a characteristic that Elliehausen and Lawrence (2001) argued was strongly related to payday loan demand) before the disaster.[36] Availability of payday loans was measured by the presence of payday lenders. Payday lenders did not open new offices in communities following disasters, making access to payday loans unrelated to any disaster-induced increase in demand for payday loans. Morse was thus able to compare the effect of payday loan availability on well-being in communities that experienced natural disasters relative to that in communities that did not experience

[36] Propensity scores are often used with observational data to create a comparison group for observations that non-randomly have been subjected to a treatment. The propensity score is the conditional probability of being subjected to the treatment given a set of explanatory variables. Each observation in the treatment group is matched on the basis of propensity scores to an observation that has not been subjected to the treatment. The matched observations not subjected to the treatment form the comparison group. Morse used the 1995 and 1998 Surveys of Consumer Finances to identify socio-economic characteristics associated with being credit constrained as the basis for assigning propensity scores for communities. She then used community-level Census data to create propensity scores reflecting the degree to which the residents of the community were credit constrained. She defined credit constrained in two ways, having credit card debt within $1,000 of combined credit card lines and experiencing a credit rejection in the previous five years.

natural disasters. This before/after comparison group design permits relatively strong conclusions on the effect of payday loan availability on well-being.[37]

Morse considered three negative effects on well-being (foreclosures, mortality, and admission to drug and alcohol abuse treatment programs) and one positive effect (births). Increases in financial distress may lead to greater mortgage defaults and ultimately foreclosures; delays in medical treatments resulting in higher mortality, or alcohol and drug abuse with consequent need for treatment. And financial distress may delay the formation or expansion of families. She hypothesized that if payday loans increase welfare their availability would mitigate negative effects of disasters and hasten a return to normal life following distress.

To test her hypothesis, Morse estimated regression models in which the measure of well-being is a function of dummy variables for treatment (disaster) group, post-disaster time period, availability of payday loans, and interactions of these variables. The three-way interaction of treatment, post-disaster time group, and availability of payday loans measures the effect of payday loans on well-being following a disaster relative to the comparison group. She also included three additional explanatory variables to account for size of the community, house prices, and the level of economic activity.

Morse's regressions indicate that areas with payday lenders recovered more quickly following a natural disaster—with fewer foreclosures, deaths, and admissions to alcohol and drug abuse treatment programs and with more births—than areas without payday lenders. For each measure of well-being, the estimated coefficient for the effect of payday loans (that is, the interaction of treatment, post-disaster time group, and availability of payday loans) had the hypothesized sign (negative for the negative measures and positive for the positive one) and was with one exception statistically significantly different from zero.[38]

On the basis of these findings, Morse concluded that despite its high price, payday lending increases welfare by increasing communities' resiliency to financial difficulties. She noted, however, that these findings do not indicate that payday loans increase welfare for all consumers. The data do not address the welfare effects of payday loans on consumers who borrow to maintain unsustainable levels of consumption.

B. Credit Availability, Debt, and Delinquency of Vulnerable Borrowers

Morgan (2007) used data from the 1995 and 2001 Surveys of Consumer Finances to investigate whether payday loans are predatory. He defined predatory lending as welfare reducing lending. Such lending might arise if lenders persuade consumers to borrow more than they can afford to repay or take advantage of consumers' self-control problems.

To test the predatory lending hypothesis, Morgan compared credit availability, amount of debt, and incidence of delinquency for households in states that differed in whether or not payday loans were permitted and, where permitted, the maximum payday

[37] See Phillips and Calder (1979, 1980) for discussion of this and other research designs using quasi-experimental data.

[38] The exception was admission to alcohol and drug abuse treatment, where communities were matched on propensity scores for the credit constrained definition based on credit rejections.

loan size allowed.[39] His model focused particularly on three types of households hypothesized to be vulnerable to being enticed to excessive borrowing: (1) borrowers with uncertain incomes, (2) borrowers without a college degree, and (3) smokers. Morgan suggested that predatory lenders might be able to tempt the first two types to believe that income prospects will be favorable. The third type, smokers, has been used in some studies as a proxy for borrowers who have hyperbolic discount rates, that is, borrowers who have very high short-term discount rates and lower discount rates over longer periods of time. The rationale for treating smoking in this way is that the smoker apparently discounts the short-term discomfort of quitting much more heavily than the long-term harm to his health. If payday loans are predatory, Morgan hypothesized, vulnerable households would have higher debt and greater debt repayment problems in states with payday lending than in states without payday lending.

Results of Morgan's estimations indicated that borrowers with uncertain incomes, borrowers without a college degree, and smokers were significantly more likely than other consumers to have experienced loan turndowns in 1995. Smokers also had lower amounts of debt. Payday lending laws generally were not significant in explaining credit availability, amount of debt, and incidence of delinquency for any of the three types of borrowers in 1995. As payday lenders were still relatively rare in 1995, Morgan interpreted these findings as a benchmark for conditions prevailing in consumer credit markets before payday lending.

In 2001 in states with less restrictive payday loan laws (higher or unrestricted loan limits), borrowers without a college degree or uncertain income were significantly less likely to be denied credit, had equal or greater debt, but the same or significantly lower incidence of delinquency than in states with more restrictive payday loan laws. Similarly, smokers in 2001 in states with higher payday loan limits were less likely to be denied credit but did not have significantly greater debt or higher incidence of delinquency. That greater credit availability and sometimes greater amounts of debt were not associated with greater delinquency contradicts the prediction of the predatory or debt trap hypothesis.[40] Instead, absent higher delinquency, the finding that these groups of households faced looser credit constraints, Morgan argued, suggests that payday loans may help risky households better manage their finances.

C. Credit Problems after Payday Loan Bans

Morgan and Strain (2008) considered the predatory lending hypothesis further. They pointed to a finding by Stegman and Faris (2003) that a history of returned checks and previous experience with a credit counselor were highly predictive of payday loan use. (Recall that this monograph finds that payday loan borrowers often have problems with returned checks and servicing their debts.) These findings raise the question are payday

[39] Defining access to payday loans by whether or not state law authorizes payday loans and allows fees that permit profitable payday lending is imprecise. In the absence of such a law, payday loans may still be available through a local agent of a national bank operating in another state or through the Internet. As a consequence, a variable indicating availability of payday loans is correlated with the error. This correlation causes the estimated coefficient for availability of payday loans to be inconsistent, with a persistent bias toward zero (see Greene 1997).

[40] Because of the very small size of payday loans, one may not observe an increase in the level of debt associated with a loosening of credit constraints from payday lending.

loans part of the problem or part of the solution. If payday loans are part of the problem, then availability of payday loans would be expected to exacerbate problems with returned checks and debt servicing. In contrast, if payday loans are part of the solution, Morgan and Strain hypothesized, availability of payday loans would be associated with lower levels of such problems.

Morgan and Strain investigated these hypotheses by examining changes in the number of returned checks, complaints about collection behavior against lenders and debt collectors, and bankruptcies following the passage of legislation in Georgia and North Carolina that permanently closed all payday lenders operating in these states.[41] They examined post-payday-ban changes in North Carolina relative to other states not experiencing a change in payday lending laws. This feature of their research design permits greater confidence that any observed differences are because of changes in the law rather than some other event. For two of the three types of problems, Morgan and Strain also considered liberalization in Hawaii's payday loan law, which would have the opposite effect of a ban.[42]

Morgan and Strain's findings indicated that consumers' problems generally increased significantly in Georgia and North Carolina relative to other states following the payday loan bans. The number of returned checks increased, although the increases for North Carolina were not statistically significant. Complaints about collection behavior of debt collectors increased in both states following the bans. Complaints against lenders, which were far less numerous than complaints against debt collectors, increased in Georgia but declined by a small amount in North Carolina following the payday loan bans. Chapter 7 bankruptcies increased significantly in both Georgia and North Carolina. Chapter 13 bankruptcies, which involve continued payments to creditors rather than debt discharges, decreased in Georgia and North Carolina relative to other states after payday loans were banned. The difference in the estimated effect of the payday loan bans on Chapter 7 and Chapter 13 bankruptcies might be explained by greater difficulty in managing finances when payday loans are no longer available. Removing a means of managing finances might prompt a debt-strapped borrower to choose a Chapter 7 debt discharge rather than seek a workout under a Chapter 13 plan.

These results are more compelling because the changes in complaints and bankruptcies in Hawaii after liberalization of the payday loan law are opposite those in Georgia and North Carolina after payday loan bans. Overall, complaints about collection behavior of debt collectors and lenders declined significantly relative to other states after the payday loan size limit increased. The fall in complaints against debt collectors was 3.7 times greater in absolute value than the increase in complaints against lenders. Chapter 13 bankruptcies in Hawaii increased following the increase in the loan size limit, and Chapter 7 bankruptcies decreased.

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[41] Georgia passed legislation making payday lending a felony subject to class-action lawsuits and prosecution under racketeering, effective May 2004. The North Carolina Commissioner of Banks effectively ended payday lending when it ruled that payday lending through a local agent of a national bank, which was the method for payday lending in North Carolina after the 2001 expiry of the payday loan exemption to the state's usury limits, was a violation of North Carolina law.

[42] Hawaii increased the maximum loan size for payday loans from $300 to $600 in July 2003. Morgan and Strain were unable to consider changes in check returns in Hawaii because Hawaii does not have a Federal Reserve check processing center.

A recent study by Zinman (2008) provides further evidence on effects of restrictions on payday loans. Zinman examined panel data from surveys of payday loan customers before and five months after Oregon imposed a restrictive rate ceiling, which caused most payday loan companies to exit the state. Surveys of payday loan customers in Washington provided data for a comparison group. Zinman found that the use of payday loans in Oregon fell relative to Washington. Use of several other types of short-term credit (automobile title loans, credit card advances, and bank overdraft credit lines) individually in Oregon did not increase significantly relative to Washington. Apparently these loan products were not available or were not close substitutes for payday loans. And the incidence of returned checks or late payments of bills did not change significantly. Taken together, the use of any of these types of short-term credit (including payday loans) in Oregon declined significantly relative to Washington, but the decline was smaller in size than that for payday loans alone. Thus, collectively these other forms of short-term credit appeared to substitute for some of the loss in payday loan credit.[43]

Zinman also examined customers' perceptions of credit availability and their own financial situation. Five months after Oregon's restrictive rate ceiling became effective, payday loan customers in Oregon reported more frequently relative to customers in Washington that short-term credit was more difficult to obtain in the last three months. After the rate ceiling became effective, customers in Oregon did not more frequently report a worsening of their financial situation in the previous six months. However, after the rate ceiling, a greater proportion of customers in Oregon relative to customers in Washington said that they expected their financial situation to get worse in the future. Whether availability of short-term credit was related to customers' assessment of their financial situation was not examined.

D. Payday Loans and Bankruptcy

Skiba and Tobacman (2008) provide further evidence on payday loans and bankruptcy. They examined data on payday loan applications of about 145,000 consumers at a payday loan company's offices in Texas. These data were matched with public records on bankruptcy filings, which allowed them to identify payday loan applicants whose subsequent credit problems led them to file for bankruptcy. Nearly one percent of the applicants filed for Chapter 7 bankruptcy within two years of the first application, and 1.56 percent applied for Chapter 13 bankruptcy.

Skiba and Tobacman used a statistical model to estimate the effects of payday loans on marginal customers. The margin was a threshold payday loan risk score that the payday loan company used to approve applications. They included payday loan applicants just below and just above the threshold in their analyses.[44] In a regression explaining the number of payday loan applications, they found that conditional on having the first payday loan application approved, consumers applied for about five additional

[43] Pawnshop, non-cash advance credit card borrowing, and loans from friends or relatives may also be substitutes for payday loans but were not considered.

[44] The model is based on a regression discontinuity design, in which individuals are assigned to a treatment group based on a threshold value of a continuous variable. Individuals just above the threshold are assigned to the treatment group, and observations just below the threshold serve as the comparison group. A comparison of outcomes for individuals just above and just below the threshold yields an estimate of the effect of the treatment. For discussion, see Imbens and Lemieux (2008).

payday loans over the next 12 months. In regressions for the probability of bankruptcy filing, Chapter 7 bankruptcy filings were not significantly different for applicants whose first application was approved and applicants whose first application was not approved, but Chapter 13 bankruptcy filings were significantly higher for applicants whose first application was approved. The statistical association between payday loan approval and Chapter 13 bankruptcy filing does not imply that payday loan approval caused bankruptcy filing, however. Recall that payday loan use is typically a response to financial distress, which may ultimately end in bankruptcy.

Whether or not payday loans improved payday loan customers' welfare or pushed them closer to bankruptcy cannot be concluded from Skiba and Tobacman's analysis. Their results apply to marginal applicants, not applicants whose risk scores were much lower or higher than the threshold. That these applicants had financial difficulties can reasonably be inferred by their initial application for a payday loan and their subsequent use of payday loans.

Skiba and Tobacman were able to provide information on the financial condition of the applicants who subsequently filed for bankruptcy. These applicants had substantial debts: Applicants whose first applications were approved, for example, reported on average $103,783 in secured debt and $34,171 in unsecured debt, which in total was 1.7 times greater than their total assets.[45] These applicants had substantial debts and an economic incentive to file for bankruptcy. Twenty-three percent of the applicants who filed for bankruptcy had payday loans outstanding, sometimes at more than one payday loan company, at the time they filed for bankruptcy, but payday loans constituted a very small fraction of applicants' $34,171 of unsecured debt. Payday loans likely did hasten some of these consumers' decision to file for bankruptcy. However, it is far from clear that payday loans drove most of these consumers into bankruptcy. The $54 dollar finance charge for the average $300 payday loan was an insignificant fraction of the average monthly income of these consumers.[46] Thus, payday loans would seem to be a factor in some bankruptcy decisions but not in others.

Mayer (2004) provides additional evidence supporting a conclusion that payday loans may contribute to but do not play the definitive role in bankruptcy filing decisions. Mayer examined a sample of 3,600 bankruptcy petitions in three counties in different parts of the country. Payday loans were listed in 9.1 percent of the petitions. For petitioners with payday loans, payday loans were a very small percentage of total unsecured debt. The median percentage of payday loans to total unsecured debt was six percent. The percentage of credit card debt was over five times greater.

In many cases, payday loans may have contributed to petitioners' financial difficulties. Sixty percent of petitioners owed more than one payday loan. The distribution of the number of payday loans varied widely. In a few cases, petitioners accumulated substantial payday loans. Mayer reported that the largest number of payday loans owed by a petitioner was 23 for a total of $5,675 and that another petitioner owed

[45] Applicants whose initial payday loan application was rejected and subsequently filed for bankruptcy had on average $145,317 in secured debt and $32,221 in unsecured debt. Total debt was on average 93 percent of total assets, but more than half of these applicants reported debts greater than assets.

[46] Skiba and Tobacman report average monthly pay of $1,699 for the entire sample.

21 payday loans totaling $5,985.[47] In these cases, the total amount of payday loans was greater than net monthly income. These two examples are extreme cases and not usual. The median number of payday loans was two. The median amount of payday debt was $880, which was 46 percent of net monthly income. These petitioners had substantial debts and probably would have ended up filing for bankruptcy anyway, but payday loans likely hastened the outcome. That these cases often involved different payday lending companies and frequent renewals underscores the risk of such behavior to both customers and lenders.

For the 40 percent of petitions showing payday loans with just one payday loan, the average amount of the payday loan was about $350, which was 1.3 percent of the amount of unsecured debt of petitioners with payday loans. The cost of servicing a $350 payday loan—that is, the finance charge—would be about $53 or 2.4 percent of the average net monthly income of petitioners with payday loans. It is unlikely that payday loans drove these petitioners to bankruptcy.

E. Experimental Studies

Wilson et al. (2008) conducted an experimental study investigating how availability of payday loans and overdraft protection affected subjects' ability to manage a hypothetical household budget over a 30-month interval, which was implemented by computer simulation. The budget consisted of monthly bills and income that placed subjects in tight financial situations. The subjects were university students. The students were paid to participate, with the amount of payment depending on the students' performance. Subjects were required to maintain a minimum level of consumption and were offered optional discretionary consumption opportunities. Monthly bills included regularly recurring payments and unexpected expenses. Failure to pay bills resulted in penalties that were deducted from consumption. Subjects were required to pay any missed bills and late fees in order to continue to the next month (and increase the amount of the payment for participating in the experiment). Some subjects had payday loans or overdraft protection as alternatives to missing bills.

An analysis of subjects' performance indicated that subjects' likelihood of surviving to month *t* (satisfying obligations while maintaining the minimum required consumption level) was inversely related to the level of average monthly consumption to income. That is, subjects who consumed a larger share of their monthly income were less likely to survive. Availability of payday loans increased the likelihood of survival by 31 percent, but a greater number of payday loans used reduced the likelihood of survival by about 3 percent for each additional loan. This finding suggests that availability of payday loans increases consumers' well-being, but the gain diminishes as use becomes more frequent.

Karlan and Zinman (2008) analyzed data from a field experiment in South Africa. A lender randomly reconsidered applicants for short-term, high-rate small loans to consumers who would marginally be rejected under the lender's standard underwriting

[47] One case involving an accumulation of 17 payday loans appeared to be fraudulent. Using a closed checking account, the petitioner obtained 14 of the 17 loans at different branches of the same company in a two-week period before filing for bankruptcy. The payday loan company challenged the discharge of debt and eventually obtained an agreement with the petitioner for repayment of the principal.

criteria. Reconsidered applicants, which formed the treatment group, were offered a four-month instalment loan with an annual percentage rate of 200 percent. The control group consisted of still rejected applicants. They evaluated consequences of providing the loan over the medium term using data from a survey conducted six to 12 months after the application and over the longer term using credit scores 13 to 15 months and 25 to 27 months after the application. Although the loan product in this study is not a payday loan, the results provide evidence on whether or not short-term borrowing at triple-digit interest rates increases rationed consumers' well being.[48]

Analysis of the data indicated that the control group of rejected applicants did not obtain the loan elsewhere and that the treatment group obtained additional loans in the six to 12 months following the initial loan by the lender. Moreover, the percentage of applicants in the treatment group that had credit scores increased relative to the control group one and two years after the initial loan. The increase in the percentage with credit scores indicates increased credit use, since having little or no credit history is usually the reason for lack of a credit score. Thus, differences between treatment and control groups can be interpreted as effects of relaxation of credit constraints among rationed borrowers.

Karlan and Zinman considered a variety of tangible and subjective measures of well-being for the six to 12 months following the initial loan. They found positive effects on job retention, income, food consumption, and mental outlook for the treatment group relative to the control group. They found one negative effect on mental health (principally stress), however. Over the longer term, Karlan and Zinman found no deterioration in credit scores for the treatment group relative to the control group one and two years after the initial loan. These findings suggest that access to high-rate credit produced benefits in the medium term without a deterioration in applicants' performance in using and servicing debt.

[48] The experiment was part of the lender's evaluation of its underwriting criteria for short-term, high-price loans.

VII. SUMMARY AND CONCLUSIONS

A payday loan is a small, short-term consumer loan typically for unexpected expenses or shortfalls in income. Like other small, short-term consumer credit products, payday loans are relatively expensive because the considerable fixed expenses for originating, servicing, and collecting payments are spread across a small amount of dollars for a short period of time. Finance charges, commonly $15 to $20 per $100 borrowed for a period of about two weeks, may exceed 390 percent per annum. The relatively high price for the product suggests two questions: (1) Can it ever be rational to borrow at triple-digit interest rates, and (2) Do consumers using payday loans know what they are doing?

This monograph uses the models of economics and psychology to examine consumers' payday loan choices. The standard economic model of consumer credit use compares the expenditure financed by credit with the present value of benefits resulting from the expenditure. A credit transaction increases wealth if its net present value is positive. Consumers generally use credit to finance household investment, which enables them to produce higher levels of consumption currently and in the future. Because consumers may be unable or unwilling to repay their debts, lenders will limit the amount of credit they are willing to provide, often by requiring consumers to build equity in the durable assets. This requirement may limit consumers' ability to acquire wealth increasing consumer durables.

Juster and Shay (1964) classified consumers into one of two broad groups based on their willingness to forgo current consumption to build equity in consumer durable assets being financed by credit. Borrowers who are not constrained by equity requirements were classified as "unrationed." These borrowers have relatively high levels of liquid assets and discretionary income. Borrowers who are constrained by equity requirements are classified as "rationed." They have limited discretionary income and liquid assets, making sacrifices in current consumption or precautionary savings costly. Rationed borrowers would typically be in early family life-cycle stages and expect high returns on household investment.

Rationed borrowers not wishing to forego current consumption can sometimes obtain additional credit by using unsecured personal credit, but this credit is riskier and therefore more costly than other forms of credit. Juster and Shay demonstrated that use of such credit is sometimes wealth increasing.

For rationed borrowers, additional unsecured personal credit may be available only from specialized high-risk lenders at a substantially higher cost. Traditionally, consumer finance companies provided this type of credit. More recently, credit cards provide additional unsecured credit to many consumers. Payday loan companies also provide such credit. While payday loans might rarely if ever make sense for financing household investment directly, payday loans may provide rationed borrowers with a source of emergency funds that allows greater levels of debt-financed investment.

A. Are Payday Loan Customers Consumers Who Might Benefit from Such Credit?

The survey evidence shows that most payday loan customers are in early life-cycle stages and have lower or moderate incomes, which economic theory suggests characterize consumers who might benefit from a relaxation of credit constraints through access to

relatively high-price credit. Payday loan consumers tend to be young and are in families with children. They disproportionately have lower or moderate family income. Payday loan customers use other types of consumer credit, and many have relatively high debt service burdens. Large percentages of customers have demonstrated financial behavior that limits their access to additional credit, experienced recent loan turndowns, and perceived limits to obtaining new loans. These findings do not mean that any use of payday loans by customers having these characteristics is rational or that use by customers having different characteristics is not rational. It means simply the predominant users of payday loans are consumers that economic theory predicts are most likely to benefit from high-price consumer credit.

A noteworthy finding is that relatively small percentages of payday loan customers have very low income or low levels of education. Payday loan customers largely do not have profiles similar to the typical fringe banking customer. This result should not be surprising. The requirement that customers have a checking account prevents many low-income consumers from qualifying for a payday loan.

B. Do Payday Loan Customers Know What They Are Doing?

The psychological model of consumers' decision process involves several stages from problem recognition through information gathering and product choice to post-purchase evaluation. The process is not rigid but may be shortened or simplified depending on a variety of factors. These factors include urgency, importance of the decision, previous decisions and experience, and satisfaction. In this framework, rational decision making does not necessarily entail methodically proceeding through each stage of the decision process. Efforts may well be focused on some aspects of the decision to the exclusion of others. Therefore, rational behavior may be characterized as purposive and deliberative if some features of problem solving and thinking are present.

Responses to the payday loan customer survey indicate that most customers obtained their most recent new payday loan to pay unexpected expenses or expenses that could not be postponed. Many customers perceived that they had few options to payday loans. Less than one-fifth of customers had sufficient funds in a checking and savings account. Customers frequently either did not have a credit card or if they had a credit card would have exceeded their credit limit. A considerable percentage of customers believed that they could have borrowed from a friend or relative.

Despite the urgency, the small size of the loan relative to income, and perception that few alternatives were available, most payday loan customers showed signs of deliberation. Nearly half considered other sources of credit before obtaining a payday loan. The most frequent other source was a friend or relative, but a bank, finance company, or credit union were also frequently mentioned. Nearly all payday loan customers were aware of the finance charge of payday loans. Awareness of the finance charge does not necessarily mean that customers used that information in their decisions. That customers recalled the amount suggests that the information was important to them, however.

Although most payday loan customers remembered receiving information on the annual percentage rate, relatively few could recall accurately what annual percentage rate

was disclosed. Apparently, the annual percentage rate was not sufficiently useful to warrant retaining the information in memory.

Nearly all payday loan customers said that they were satisfied or somewhat satisfied with their most recent new payday loan. Receiving the funds quickly, the easy loan process, and courteous treatment accounted for by far most reasons for satisfaction. Most dissatisfied customers mentioned high cost as the reason for dissatisfaction. Insufficient or unclear information or difficulty of getting out of debt was seldom mentioned.

C. Rationality of Payday Loan Use

In late 2005, about 2 percent of all adults nationally reported obtaining a payday loan in the previous 12 months. The percentage of payday customers is lower than the percentage of consumers that are potentially credit constrained. According to the Federal Reserve Board's Survey of Consumer Finances perhaps 13 to 26 percent of all US households had credit related experiences, financial circumstances, or demographic profiles that suggest that they may be credit constrained. These households have low to moderate incomes, are in early stages of the family life cycle, and may have experienced recent credit denials or perceive that they would be denied.

Many payday loan customers used one or a relatively small number of payday loans (including renewals) in the last 12 months. This relatively infrequent use of payday loans by these customers seems consistent with the intended purpose of payday loans as short-term borrowing to pay unexpected expenses or relieve temporary shortfalls in income.

Assessing the behavior of the payday loan customers who used a relatively large number of payday loans is more difficult. Consider the 29.6 percent of customers that used 14 or more payday loans in the last 12 months. Assuming a two-week average term, 14 loans suggest that these consumers owed payday loans for over half of the year. That they owed payday loans for more than half of the year gives some credibility to the view that payday loans may lead consumers to ever increasing indebtedness that ultimately ends in default. Frequent use is not necessarily evidence of a debt trap, however. If payday loan customers live from paycheck to paycheck with very little discretionary income, even small expenses may cause financial problems and make emergencies a frequent event. In such cases, even frequent use of payday loans may be better than the alternatives. Few payday loan customers considered payday loans as a debt trap. Only about three percent of payday loan customers mentioned difficulty of getting out of debt as a reason for being dissatisfied or only partially satisfied with their most recent new payday loan.

A few researchers have investigated whether availability of payday loans is systematically related to various measures of well-being or financial distress. Morse (2007) compared incidence of foreclosure, mortality, admission to substance abuse treatment programs, and births following natural disasters in California communities that differed in access to payday loan offices. She found that areas with payday lenders recovered more quickly—with fewer foreclosures, deaths, admissions to substance abuse programs and more births—than areas without access to payday loans. Morse concluded

that despite its high cost, payday lending improves welfare by increasing communities' resiliency to financial difficulties.

Morgan (2007) compared credit availability, amount of debt, and delinquency in states that differed in whether or not payday loans were permitted and where permitted the maximum payday loan size allowed. He found that financially vulnerable consumers had greater credit availability, equal or greater debt, but equal or less incidence of delinquency in states with payday lending. Morgan argued that looser credit constraints without higher delinquency suggest that payday loans may help risky households better manage their finances.

Morgan and Strain (2008) examined returned checks, complaints against collection behavior of lenders and debt collectors, and bankruptcy following payday loan bans in North Carolina and Georgia. Returned checks, complaints against debt collectors, and Chapter 7 bankruptcies increased in North Carolina and Georgia relative to other states following payday loan bans. Chapter 13 bankruptcies decreased. That financial problems generally increased suggests that consumers had greater difficulties managing their finances when payday loans were not available.

None of the three studies just described examined payday loans role in bankruptcy filing decisions. Papers by Skiba and Tobacman (2008) and Mayer (2004) reviewed bankruptcy filings of payday loan borrowers. Skiba and Tobacman found that Chapter 13 but not Chapter 7 bankruptcy filings were significantly greater for payday loan applicants whose application for a payday loan was granted than for those whose applications were rejected. A review of the bankruptcy petitions indicated that petitioners had substantial debts. Payday loans were generally an insignificant fraction of their total obligations. They concluded that while payday loans probably hastened some petitioners' decision to file for bankruptcy, in the typical case the small amount of debt from payday loans did not cause petitioners to file for bankruptcy.

Mayer's examination of bankruptcy petitions led him to a similar conclusion. A little more than half of the bankruptcy petitions filed in three counties had more than one payday loan. The aggregate amount of these payday loans did not account for much of total unsecured debt, although in some cases payday loans were large relative to net income. In contrast, for the large percentage of petitioners with only one payday loan, payday loans were an insignificant share of unsecured debt and small relative to net income. Such small debts, Mayer concluded, did not drive these petitioners into bankruptcy.

D. Conclusions

The typical payday loan customer has lower or moderate income, is in an early family life-cycle stage, and uses other types of credit. These characteristics describe "rationed" consumers, which the economic model for consumers' credit decisions predicts may benefit from a relaxation of credit constraints on high-cost, unsecured credit. Payday loans may be a transitional product for many consumers: As families age and income rises, consumers may become less vulnerable to financial distress.

Most payday loans are used to pay unexpected expenses or expenses that could not be postponed. Most customers perceived that they had few if any options to payday loans. Despite the urgency, the small size of the loan relative to income, and perception

that few alternatives were available, many payday loan customers showed signs of deliberation. Many customers considered other sources of credit before obtaining a payday loan. Nearly all payday loan customers were aware of the dollar cost of their most recent payday loan.

The survey evidence indicates that most customers used payday loans as a short-term source of financing. They used payday advances a small or moderate number of times during the past year, typically for less than a month at a time. Frequent use is not in itself evidence that payday loans trap consumers into ever increasing indebtedness and eventual default. Studies have found that access to payday loans may increase communities' resiliency to financial difficulties, relax credit constraints without increasing delinquency, and reduce the incidence of financial problems. These findings do not preclude that some consumers do have difficulty getting out of debt, but such consumers typically also have substantial amounts of other unsecured debt.

In giving consumers access to additional credit for unexpected expenses or shortfalls in income, payday loans give the consumers a little control over their financial situations that they otherwise would not have.

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APPENDIX 1
VARIABLES USED IN MULTIVARIATE ANALYSES OF PAYDAY LOAN USE

A. Dependent Variables

```
AWAPR = 1 if reported annual percentage rate 200 percent or higher
      = 0 otherwise
TOTAL = Total number of payday loans obtained in the last 12 months
LATE  = 1 if customer made any late payments on payday loans in the last 12 months
      = 0 otherwise
```

B. Explanatory Variables

```
savesresid = 1 if customer saves the income left over at the end of the month
           = 0 otherwise
savesreg   = 1 if customer regularly saves part of his income
           = 0 otherwise
           (omitted category:  customer does not save)
repsvdif   = 1 if customer has trouble replacing funds withdrawn from savings
           = 0 otherwise
heloc      = 1 if customer has a home equity line of credit
           = 0 otherwise
autoloan   = 1 if customer has an automobile loan
           = 0 otherwise
retailcard = 1 if customer has a retail credit card
           = 0 otherwise
bankcard   = 1 if customer has a bank credit card
           = 0 otherwise
bankloan   = 1 if customer has a closed-end bank loan (non-auto)
           = 0 otherwise
fincoloan  = 1 if customer has a closed-end finance company loan (non-auto)
           = 0 otherwise
pawnloan   = 1 if customer has borrowed from a pawnshop in the last 5 years
           = 0 otherwise
autotitle  = 1 if customer has obtained an automobile title loan in the last 5 years
           = 0 otherwise
nopayful   = 1 if customer does not usually pay bank credit card balances in full
           = 0 otherwise
bkcardlim  = 1 if customer did not use a bank credit card in the last 12 months because
             the credit limit would have been exceeded
awccrd     = 1 if customer is aware of the annual percentage rate on his most frequently
             used bank credit card
           = 0 otherwise
nawfin     = 1 if customer is not aware of the finance charge for his most recent new
             payday loan
           = 0 otherwise
awapr      = 1 if customer was aware of the annual percentage rate on his most recent new
             payday loan
           = 0 otherwise
hidbur     = 1 if monthly consumer debt payments are 30 percent or more of monthly income
           = 0 otherwise
del60+     = 1 if customer was 60+ days past due on any consumer credit account in the
             last 12 months
           = 0 otherwise
odckacct   = 1 if customer has overdrawn a checking account in the last 12 months
           = 0 otherwise
reject     = 1 if a request for a loan has been turned down or the amount of credit
             limited in the last 5 years
           = 0 otherwise
expreject  = 1 if in the last 5 years the customer thought about applying for a loan but
             changed his mind because he thought that he would be turned down
           = 0 otherwise
bankrupt   = 1 if the customer filed for bankruptcy in the last 5 years
           = 0 otherwise
medexp     = 1 if customer experienced a major medical expense in the last 12 months
           = 0 otherwise
unemp      = 1 if customer experienced an extended period of unemployment in the last 12
             months
           = 0 otherwise
crdtpur    = 1 if customer experienced a large increase in expenditures made using credit
             in the last 12 months
           = 0 otherwise
```

```
incred     = 1 if customer experienced a significant reduction in income in the last 12
               months
           = 0 otherwise
loss       = 1 if customer experienced significant loss or destruction of property in the
               last 12 months
           = 0 otherwise
howner     = 1 if the customer is a homeowner
           = 0 otherwise
child<18   = 1 if there are children under 18 years of age are in the household
           = 0 otherwise
child<6    = 1 if children under age 6 are in the household
           = 0 otherwise
healthins  = 1 if household has health insurance
           = 0 otherwise
recentdiv  = 1 if customer divorced in the last 5 years
           = 0 otherwise
dage35     = 1 if customer age 35-44
           = 0 otherwise
dage45     = 1 if customer age 45-54
           = 0 otherwise
dage65     = 1 if customer age 65 or older
           = 0 otherwise
           (omitted category: customer age less than 35)
female     = 1 if customer is female
           = 0 otherwise
divfem     = 1 if customer is female and divorced
           = 0 otherwise
nohsgrad   = 1 if customer does not have a high school diploma
           = 0 otherwise
hsgrad     = 1 if customer has a high school diploma
           = 0 otherwise
somecoll   = 1 if customer has completed some college
           = 0 otherwise
           (omitted category:  customer has a college degree)
dinc05     = 1 if household income $5,000-14,999
           = 0 otherwise
dinc15     = 1 if household income $15,000-24,999
           = 0 otherwise
dinc25     = 1 if household income $25,000-39,999
           = 0 otherwise
dinc40     = 1 if household income $40,000-49,999
           = 0 otherwise
dinc50     = 1 if household income $50,000-74,999
           = 0 otherwise
dinc75     = 1 if household income $75,000 or greater
           = 0 otherwise
           (omitted category:  household income less than $5,000)
coninst    = 1 if customer considered other sources for funds when he obtained his most
               recent new payday loan
           = 0 otherwise
sav        = 1 if customer had funds in a checking or savings account that he could have
               used instead of a payday loan
           = 0 otherwise
bklim     = 1 if customer would have exceeded his credit limit if he used a credit card
              instead of a payday loan
           = 0 otherwise
total      = total number of payday loans obtained in the last 12 months, including any
             renewals
cogt1      = 1 if customer used more than one payday loan company in the last 12 months
           = 0 otherwise
payoff     = 1 if customer used proceeds from one payday loan to pay off another payday
               loan at a different company
           = 0 otherwise
```

APPENDIX 2
LOGISTIC REGRESSION FOR FACTORS ASSOCIATED WITH AWARENESS OF THE ANNUAL PERCENTAGE RATE ON THE MOST RECENT NEW PAYDAY LOAN

Dependent Variable AWAPR = 1 if reported annual percentage rate 200 percent or higher
= 0 otherwise

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	1034.526	974.167
SC	1039.593	1222.466
-2 Log L	1032.526	876.167

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	156.3593	48	<.0001
Score	144.8788	48	<.0001
Wald	117.7327	48	<.0001

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.9573	0.6938	7.9594	0.0048
total	1	0.0316	0.0141	5.0133	0.0252
savesresid	1	-0.8843	0.3828	5.3365	0.0209
savesreg	1	0.1167	0.2375	0.2413	0.6233
repsvdif	1	0.0703	0.2632	0.0714	0.7893
heloc	1	-0.2871	0.3385	0.7193	0.3964
autoloan	1	-0.0666	0.1880	0.1254	0.7232
retailcard	1	0.1662	0.2204	0.5689	0.4507
bankcard	1	-0.5280	0.2740	3.7136	0.0540
nopayful	1	0.8459	0.3628	5.4355	0.0197
awccrd	1	0.4525	0.2719	2.7695	0.0961
bkcardlim	1	-0.0584	0.2752	0.0451	0.8319
bankloan	1	-0.0755	0.2067	0.1335	0.7148
fincoloan	1	0.1085	0.1894	0.3280	0.5668
pawnloan	1	0.2759	0.2350	1.3792	0.2402
autotitle	1	0.2953	0.2316	1.6264	0.2022
hidbur	1	-0.2117	0.2006	1.1132	0.2914
del60+	1	0.1237	0.2225	0.3092	0.5782
odckacct	1	0.1488	0.1913	0.6051	0.4366
reject	1	0.1242	0.2128	0.3407	0.5594
expreject	1	-0.0894	0.2108	0.1800	0.6714
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
bankrupt	1	-0.0259	0.2405	0.0116	0.9143
medexp	1	0.2341	0.1917	1.4901	0.2222
unemp	1	0.1646	0.2481	0.4399	0.5071
crdtpur	1	0.3578	0.2349	2.3204	0.1277
incred	1	-0.0108	0.2226	0.0023	0.9614
loss	1	-0.4904	0.3002	2.6682	0.1024
howner	1	0.2323	0.2066	1.2639	0.2609
child<18	1	-0.5022	0.2336	4.6230	0.0315
child<6	1	0.4511	0.2804	2.5893	0.1076
healthins	1	0.2878	0.2577	1.2466	0.2642
recentdiv	1	0.0805	0.2682	0.0901	0.7640
dage35	1	-0.3352	0.2407	1.9399	0.1637
dage45	1	-0.6843	0.2337	8.5704	0.0034
dage65	1	-1.9546	0.5681	11.8396	0.0006
female	1	-0.8180	0.2044	16.0110	<.0001
divfem	1	0.5719	0.2755	4.3074	0.0379

nohsgrad	1	-2.0435	0.5527	13.6677	0.0002
hsgrad	1	-0.8673	0.2331	13.8445	0.0002
somecoll	1	-0.5412	0.2244	5.8148	0.0159
dinc05	1	-0.1469	0.6308	0.0542	0.8158
dinc15	1	0.4596	0.5790	0.6300	0.4274
dinc25	1	0.5114	0.5643	0.8213	0.3648
dinc40	1	0.7791	0.5815	1.7955	0.1803
dinc50	1	0.8606	0.5766	2.2281	0.1355
dinc75	1	0.9415	0.6038	2.4313	0.1189
consinst	1	0.5392	0.2222	5.8888	0.0152
sav	1	-0.00916	0.2460	0.0014	0.9703
bklim	1	0.4350	0.1952	4.9660	0.0259

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
total	1.032	1.004	1.061
savesresid	0.413	0.195	0.875
savesreg	1.124	0.705	1.790
repsvdif	1.073	0.641	1.797
heloc	0.750	0.387	1.457
autoloan	0.936	0.647	1.352
retailcard	1.181	0.767	1.819
bankcard	0.590	0.345	1.009
nopayful	2.330	1.144	4.745
awccrd	1.572	0.923	2.679
bkcardlim	0.943	0.550	1.618
bankloan	0.927	0.618	1.390
fincoloan	1.115	0.769	1.616
pawnloan	1.318	0.831	2.088
autotitle	1.344	0.853	2.115
hidbur	0.809	0.546	1.199
del60+	1.132	0.732	1.750
odckacct	1.160	0.798	1.688

Effect	Point Estimate	95% Wald Confidence Limits	
reject	1.132	0.746	1.718
expreject	0.914	0.605	1.382
bankrupt	0.974	0.608	1.561
medexp	1.264	0.868	1.840
unemp	1.179	0.725	1.917
crdtpur	1.430	0.903	2.266
incred	0.989	0.640	1.530
loss	0.612	0.340	1.103
howner	1.261	0.841	1.891
child<18	0.605	0.383	0.957
child<6	1.570	0.906	2.720
healthins	1.333	0.805	2.210
recentdiv	1.084	0.641	1.833
dage35	0.715	0.446	1.146
dage45	0.504	0.319	0.798
dage65	0.142	0.047	0.431
female	0.441	0.296	0.659
divfem	1.772	1.032	3.040
nohsgrad	0.130	0.044	0.383
hsgrad	0.420	0.266	0.663
somecoll	0.582	0.375	0.904
dinc05	0.863	0.251	2.973
dinc15	1.583	0.509	4.926
dinc25	1.668	0.552	5.039
dinc40	2.180	0.697	6.813
dinc50	2.365	0.764	7.321
dinc75	2.564	0.785	8.372
consinst	1.715	1.109	2.650
sav	0.991	0.612	1.605
bklim	1.545	1.054	2.265

Association of Predicted Probabilities and Observed Responses

Percent Concordant	77.0	Somers' D	0.543
Percent Discordant	22.7	Gamma	0.545
Percent Tied	0.4	Tau-a	0.146
Pairs	185180	c	0.771

APPENDIX 3
NEGATIVE BINOMIAL REGRESSION FOR FREQUENCY OF PAYDAY LOAN USE DURING THE PREVIOUS 12 MONTHS

Dependent Variable TOTAL = Total number of payday loans obtained in the last 12 months

Criteria For Assessing Goodness Of Fit

Criterion	DF	Value	Value/DF
Deviance	1126	1243.5367	1.1044
Scaled Deviance	1126	1243.5367	1.1044
Pearson Chi-Square	1126	1120.4326	0.9951
Scaled Pearson X2	1126	1120.4326	0.9951
Log Likelihood		18651.9276	

Analysis Of Parameter Estimates

Parameter	DF	Estimate	Standard Error	Wald 95% Confidence Limits		Chi-Square	Pr > ChiSq
Intercept	1	2.3023	0.1485	2.0113	2.5932	240.48	<.0001
savesresid	1	-0.2866	0.0852	-0.4535	-0.1196	11.32	0.0008
savesreg	1	-0.1717	0.0480	-0.2657	-0.0777	12.82	0.0003
repsvdif	1	0.1001	0.0515	-0.0009	0.2010	3.77	0.0521
heloc	1	0.0034	0.0669	-0.1276	0.1345	0.00	0.9589
autoloan	1	0.0819	0.0376	0.0083	0.1556	4.75	0.0292
retailcard	1	-0.0118	0.0472	-0.1044	0.0807	0.06	0.8023
bankcard	1	-0.0213	0.0507	-0.1206	0.0780	0.18	0.6741
nopayful	1	0.2153	0.0818	0.0551	0.3756	6.94	0.0084
awccrd	1	-0.1037	0.0526	-0.2068	-0.0007	3.89	0.0485
bkcardlim	1	0.1061	0.0541	0.0000	0.2121	3.84	0.0499
bankloan	1	0.0262	0.0436	-0.0594	0.1117	0.36	0.5488
fincoloan	1	0.0308	0.0394	-0.0464	0.1079	0.61	0.4344
pawnloan	1	0.0658	0.0516	-0.0354	0.1669	1.62	0.2024
autotitle	1	0.0753	0.0480	-0.0188	0.1694	2.46	0.1169
awapr	1	-0.1213	0.0503	-0.2198	-0.0227	5.81	0.0159
nawfin	1	-0.0915	0.0765	-0.2415	0.0585	1.43	0.2318
hidbur	1	0.0520	0.0389	-0.0241	0.1282	1.79	0.1804
del60+	1	0.0318	0.0467	-0.0597	0.1233	0.46	0.4960
odckacct	1	0.0874	0.0387	0.0115	0.1634	5.10	0.0240
reject	1	0.0571	0.0418	-0.0249	0.1391	1.86	0.1721
exprejject	1	0.0832	0.0421	0.0006	0.1657	3.90	0.0483
bankrupt	1	0.0802	0.0489	-0.0156	0.1760	2.69	0.1009
medexp	1	0.0414	0.0398	-0.0366	0.1194	1.08	0.2983
unemp	1	0.0573	0.0514	-0.0433	0.1580	1.25	0.2643
crdtpur	1	-0.1049	0.0517	-0.2062	-0.0036	4.12	0.0425
incred	1	-0.0476	0.0445	-0.1348	0.0395	1.15	0.2840
loss	1	0.0320	0.0595	-0.0847	0.1486	0.29	0.5911
howner	1	-0.1321	0.0427	-0.2158	-0.0483	9.55	0.0020

Parameter	DF	Estimate	Standard Error	Wald 95% Confidence Limits		Chi-Square	Pr > ChiSq
child<18	1	0.0109	0.0455	-0.0782	0.1000	0.06	0.8105
child<6	1	-0.0049	0.0579	-0.1183	0.1085	0.01	0.9328
healthins	1	0.0683	0.0482	-0.0262	0.1627	2.01	0.1566
recentdiv	1	-0.0588	0.0576	-0.1717	0.0540	1.05	0.3066
dage35	1	0.1719	0.0524	0.0693	0.2745	10.78	0.0010
dage45	1	0.1172	0.0493	0.0205	0.2139	5.65	0.0175
dage65	1	0.2476	0.0761	0.0984	0.3968	10.59	0.0011
female	1	-0.0491	0.0418	-0.1310	0.0328	1.38	0.2401
divfem	1	0.0743	0.0543	-0.0320	0.1807	1.88	0.1707
nohsgrad	1	0.0439	0.0713	-0.0958	0.1836	0.38	0.5376
hsgrad	1	-0.0030	0.0529	-0.1067	0.1006	0.00	0.9542
somecoll	1	-0.0558	0.0529	-0.1594	0.0478	1.11	0.2914
dinc05	1	0.0219	0.1031	-0.1801	0.2239	0.05	0.8316
dinc15	1	0.0102	0.1004	-0.1866	0.2069	0.01	0.9194
dinc25	1	-0.0583	0.0979	-0.2502	0.1335	0.36	0.5511
dinc40	1	-0.0903	0.1053	-0.2966	0.1160	0.74	0.3909
dinc50	1	-0.0662	0.1028	-0.2677	0.1353	0.41	0.5194
dinc75	1	-0.0082	0.1112	-0.2261	0.2097	0.01	0.9411
Dispersion	1	0.2616	0.0152	0.2318	0.2914		

APPENDIX 4
LOGISTIC REGRESSION FOR ANY LATE PAYMENTS ON PAYDAY LOANS IN THE LAST 12 MONTHS

Dependent Variable: LATE = 1 if customer made any late payments on payday loans in the last 12 months
= 0 otherwise

I. Model Including Variables for Use of More Than One Payday Loan Company

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	1239.002	1140.891
SC	1244.067	1394.129
-2 Log L	1237.002	1040.891

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	196.1110	49	<.0001
Score	186.6451	49	<.0001
Wald	151.8150	49	<.0001

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.6481	0.6623	6.1917	0.0128
total	1	0.00869	0.0135	0.4151	0.5194
savesresid	1	0.0712	0.3802	0.0351	0.8515
savesreg	1	0.2049	0.2120	0.9337	0.3339
repsvdif	1	0.3326	0.2435	1.8655	0.1720
heloc	1	-0.2152	0.3288	0.4285	0.5127
autoloan	1	-0.2992	0.1657	3.2608	0.0710
retailcard	1	-0.5946	0.2364	6.3270	0.0119
bankcard	1	-0.3793	0.2320	2.6735	0.1020
nopayful	1	-0.0635	0.3625	0.0306	0.8611
awccrd	1	-0.0767	0.2443	0.0985	0.7537
bkcardlim	1	0.1058	0.2493	0.1801	0.6713
bankloan	1	-0.1058	0.1934	0.2995	0.5842
fincoloan	1	-0.2013	0.1758	1.3110	0.2522
pawnloan	1	-0.0595	0.2298	0.0669	0.7959
autotitle	1	-0.2474	0.2102	1.3857	0.2391
awapr	1	0.0161	0.2223	0.0052	0.9424
nawfin	1	0.3217	0.3400	0.8954	0.3440
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
hidbur	1	-0.1168	0.1736	0.4531	0.5008
del60+	1	0.4415	0.1911	5.3398	0.0208
odckacct	1	0.6106	0.1708	12.7762	0.0004
reject	1	0.1227	0.1886	0.4230	0.5155
expreject	1	0.0215	0.1915	0.0127	0.9104
bankrupt	1	0.2311	0.2074	1.2417	0.2651
medexp	1	-0.1943	0.1761	1.2168	0.2700
unemp	1	0.3518	0.2136	2.7113	0.0996
crdtpur	1	0.0905	0.2247	0.1622	0.6871
incred	1	0.4862	0.1904	6.5203	0.0107
loss	1	0.5154	0.2413	4.5615	0.0327
howner	1	-0.3753	0.1978	3.6001	0.0578
child<18	1	0.0825	0.2030	0.1652	0.6844
child<6	1	0.0688	0.2475	0.0773	0.7810
healthins	1	-0.2682	0.1989	1.8185	0.1775
recentdiv	1	0.2915	0.2459	1.4048	0.2359
dage35	1	0.0191	0.2260	0.0071	0.9326
dage45	1	-0.1532	0.2127	0.5190	0.4713
dage65	1	-0.9367	0.3974	5.5564	0.0184

female	1	0.0425	0.1858	0.0524	0.8189
divfem	1	-0.2820	0.2447	1.3274	0.2493
nohsgrad	1	0.8589	0.3284	6.8385	0.0089
hsgrad	1	0.8155	0.2551	10.2157	0.0014
somecoll	1	0.5596	0.2578	4.7123	0.0299
dinc05	1	-1.4047	0.4325	10.5494	0.0012
dinc15	1	-1.1086	0.4099	7.3139	0.0068
dinc25	1	-0.8216	0.3954	4.3188	0.0377
dinc40	1	-0.8364	0.4300	3.7828	0.0518
dinc50	1	-0.8596	0.4207	4.1746	0.0410
dinc75	1	-0.9219	0.4739	3.7840	0.0517
cogt1	1	0.5477	0.1879	8.4975	0.0036
payoff	1	0.8721	0.2282	14.6101	0.0001

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
total	1.009	0.982	1.036
savesresid	1.074	0.510	2.262
savesreg	1.227	0.810	1.860
repsvdif	1.395	0.865	2.248
heloc	0.806	0.423	1.536
autoloan	0.741	0.536	1.026
retailcard	0.552	0.347	0.877
bankcard	0.684	0.434	1.078
nopayful	0.939	0.461	1.910
awccrd	0.926	0.574	1.495
bkcardlim	1.112	0.682	1.812
bankloan	0.900	0.616	1.314
fincoloan	0.818	0.579	1.154
pawnloan	0.942	0.601	1.478
autotitle	0.781	0.517	1.179

Effect	Point Estimate	95% Wald Confidence Limits	
awapr	1.016	0.657	1.571
nawfin	1.379	0.708	2.686
hidbur	0.890	0.633	1.250
del60+	1.555	1.069	2.261
odckacct	1.841	1.318	2.574
reject	1.131	0.781	1.636
expreject	1.022	0.702	1.487
bankrupt	1.260	0.839	1.892
medexp	0.823	0.583	1.163
unemp	1.422	0.935	2.161
crdtpur	1.095	0.705	1.700
incred	1.626	1.120	2.362
loss	1.674	1.043	2.687
howner	0.687	0.466	1.012
child<18	1.086	0.729	1.617
child<6	1.071	0.660	1.740
healthins	0.765	0.518	1.129
recentdiv	1.338	0.827	2.167
dage35	1.019	0.655	1.587
dage45	0.858	0.566	1.302
dage65	0.392	0.180	0.854
female	1.043	0.725	1.502
divfem	0.754	0.467	1.219
nohsgrad	2.360	1.240	4.493
hsgrad	2.260	1.371	3.727
somecoll	1.750	1.056	2.900
dinc05	0.245	0.105	0.573
dinc15	0.330	0.148	0.737
dinc25	0.440	0.203	0.954
dinc40	0.433	0.187	1.006
dinc50	0.423	0.186	0.966
dinc75	0.398	0.157	1.007
cogt1	1.729	1.197	2.499
payoff	2.392	1.529	3.741

Association of Predicted Probabilities and Observed Responses

Percent Concordant	76.2	Somers' D	0.528
Percent Discordant	23.5	Gamma	0.529
Percent Tied	0.3	Tau-a	0.182
Pairs	235949	c	0.764

II. Model Excluding Variables for Use of More Than One Payday Loan Company

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	1239.002	1177.334
SC	1244.067	1420.443
-2 Log L	1237.002	1081.334

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	155.6678	47	<.0001
Score	145.3333	47	<.0001
Wald	124.7662	47	<.0001

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.6220	0.6508	6.2119	0.0127
total	1	0.0361	0.0122	8.7057	0.0032
savesresid	1	-0.0360	0.3685	0.0095	0.9222
savesreg	1	0.1696	0.2076	0.6673	0.4140
repsvdif	1	0.3349	0.2375	1.9890	0.1584
heloc	1	-0.1894	0.3246	0.3404	0.5596
autoloan	1	-0.2908	0.1625	3.2043	0.0734
retailcard	1	-0.5495	0.2321	5.6043	0.0179
bankcard	1	-0.3717	0.2260	2.7053	0.1000
nopayful	1	0.0222	0.3518	0.0040	0.9497
awccrd	1	-0.1939	0.2384	0.6617	0.4160
bkcardlim	1	0.1912	0.2437	0.6153	0.4328
bankloan	1	-0.0850	0.1883	0.2039	0.6516
fincoloan	1	-0.1552	0.1710	0.8234	0.3642
pawnloan	1	-0.0720	0.2232	0.1041	0.7470
autotitle	1	-0.2096	0.2041	1.0543	0.3045
awapr	1	-0.00206	0.2176	0.0001	0.9924
nawfin	1	0.2027	0.3345	0.3672	0.5445
hidbur	1	-0.1551	0.1689	0.8424	0.3587
del60+	1	0.3967	0.1861	4.5433	0.0330
odckacct	1	0.6815	0.1661	16.8369	<.0001
reject	1	0.2226	0.1825	1.4872	0.2226
exprejject	1	0.0190	0.1858	0.0104	0.9186
bankrupt	1	0.3464	0.2006	2.9827	0.0842
medexp	1	-0.2152	0.1718	1.5697	0.2102
unemp	1	0.3121	0.2083	2.2446	0.1341
crdtpur	1	0.2015	0.2188	0.8481	0.3571
incred	1	0.4955	0.1851	7.1665	0.0074
loss	1	0.4424	0.2348	3.5481	0.0596
howner	1	-0.3820	0.1943	3.8663	0.0493
child<18	1	0.0853	0.1974	0.1868	0.6656
child<6	1	-0.0112	0.2407	0.0021	0.9630
healthins	1	-0.2790	0.1953	2.0410	0.1531
recentdiv	1	0.1647	0.2400	0.4713	0.4924
dage35	1	-0.00410	0.2193	0.0003	0.9851
dage45	1	-0.1709	0.2087	0.6710	0.4127
dage65	1	-0.9594	0.3870	6.1449	0.0132
female	1	0.0151	0.1817	0.0069	0.9337
divfem	1	-0.1098	0.2359	0.2166	0.6416
nohsgrad	1	0.8606	0.3182	7.3158	0.0068
hsgrad	1	0.7591	0.2467	9.4689	0.0021
somecoll	1	0.5556	0.2500	4.9378	0.0263
dinc05	1	-1.2969	0.4216	9.4633	0.0021
dinc15	1	-0.9782	0.3987	6.0191	0.0142
dinc25	1	-0.7191	0.3859	3.4722	0.0624
dinc40	1	-0.6578	0.4183	2.4735	0.1158
dinc50	1	-0.7961	0.4104	3.7623	0.0524

dinc75	1	-0.7833	0.4594	2.9074	0.0882

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
total	1.037	1.012	1.062
savesresid	0.965	0.468	1.986
savesreg	1.185	0.789	1.780
repsvdif	1.398	0.878	2.226
heloc	0.827	0.438	1.563
autoloan	0.748	0.544	1.028
retailcard	0.577	0.366	0.910
bankcard	0.690	0.443	1.074
nopayful	1.022	0.513	2.037
awccrd	0.824	0.516	1.314
bkcardlim	1.211	0.751	1.952
bankloan	0.918	0.635	1.329
fincoloan	0.856	0.612	1.197
pawnloan	0.931	0.601	1.441
autotitle	0.811	0.543	1.210
awapr	0.998	0.651	1.529
nawfin	1.225	0.636	2.359
hidbur	0.856	0.615	1.193
del60+	1.487	1.032	2.141
odckacct	1.977	1.428	2.738
reject	1.249	0.874	1.787
expreject	1.019	0.708	1.467
bankrupt	1.414	0.954	2.095
medexp	0.806	0.576	1.129
unemp	1.366	0.908	2.055
crdtpur	1.223	0.797	1.878

Effect	Point Estimate	95% Wald Confidence Limits	
incred	1.641	1.142	2.359
loss	1.556	0.982	2.466
howner	0.682	0.466	0.999
child<18	1.089	0.740	1.603
child<6	0.989	0.617	1.585
healthins	0.757	0.516	1.109
recentdiv	1.179	0.737	1.887
dage35	0.996	0.648	1.531
dage45	0.843	0.560	1.269
dage65	0.383	0.179	0.818
female	1.015	0.711	1.450
divfem	0.896	0.564	1.423
nohsgrad	2.365	1.267	4.412
hsgrad	2.136	1.317	3.465
somecoll	1.743	1.068	2.845
dinc05	0.273	0.120	0.625
dinc15	0.376	0.172	0.821
dinc25	0.487	0.229	1.038
dinc40	0.518	0.228	1.176
dinc50	0.451	0.202	1.008
dinc75	0.457	0.186	1.124

Association of Predicted Probabilities and Observed Responses

Percent Concordant	73.4	Somers' D	0.470
Percent Discordant	26.3	Gamma	0.472
Percent Tied	0.3	Tau-a	0.162
Pairs	235949	c	0.735