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Findings from the AFSA Member Survey of Installment Lending

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Summary

1. Government ceilings on interest rates extend to the farthest reaches of recorded history.

2. In contemporary US, most controversial are current ceilings on smaller loan sizes in some states where advocate individuals and groups would like to see ceiling rates much lower.

3. As long as four decades ago a federal study commission showed that production and risk costs of making small installment loans *compared to the amount of the loan* meant that lending rates would need to be higher on these loans than on other consumer credit before legal lenders would be interested in lending. The commission showed statistically what the Russell Sage Foundation had argued beginning almost a century ago, leading to development of the Uniform Small Loan Law in 1916.

4. Findings from the AFSA survey of installment lenders are consistent with hypotheses developed many years ago from the economic theory of credit rationing. These hypotheses suggest that users of small dollar amounts of installment credit from secondary credit sources are "rationed" borrowers in an economic sense, those borrowers unable to obtain as much credit as they need or want from primary lenders at low rates. Specific findings include:

- Most loans (more than 85 percent) clearly are subprime on the basis of credit scores. (Table 1)
- These installment loans are both small and short term. Almost 80 percent of the loans are made for $2000 or less and almost 85 percent for two years or less. (Table 2) These are precisely the loans the federal study commission determined would require high rates.
- High APRs are due to both small size and high risk. (Table 1 and Table 3)
- Loans are made with low payments to satisfy both demand among rationed borrowers for small payments and supply by lenders who also are interested in easy repayment. More than 40 percent of the loans have payments of $100 or less monthly and almost 80 percent $150 or less. (Table 4)

5. Survey results demonstrate clear evidence of lending risk. Delinquency among loans made is correlated with:

[1] Respectively, Federal Reserve Board (Retired), Federal Reserve Board, and George Washington University. The views expressed here are of the authors and do not represent those of the Federal Reserve Board or its staff. The authors thank the American Financial Services Association (AFSA) for making the data available for analysis. The views expressed here also do not reflect those of AFSA. Any errors are the responsibility of the authors.

- Loan size (inversely, Table 6).
- Credit Score (inversely, Table 7).
- APR (directly, Table 8).

6. Loans vary substantially by state, due to regulatory differences that limit the locations acceptable to lenders.

- Frequency of lending varies sharply among states. States with low rate ceilings have few loans (Table 9).
- There are loans made to residents of low rate Arkansas, but almost all of them (99 percent) are to residents of counties that border other states, especially Oklahoma, Missouri, Louisiana, and Texas. This suggests the loans actually are made elsewhere.
- Similarly, evidence suggests that many small loans made to residents of border counties in North Carolina actually originate in South Carolina (Table 10).
- Compared to loans to Texas residents, loans to residents of low-rate Pennsylvania:
    - Are much less common.
    - Are considerably larger. (In Pennsylvania fewer than 1 percent of loans are made in size under $1000 compared to almost 70 percent in Texas, Table 11.)
    - Have considerably lower APRs. (In Pennsylvania, more than 99 percent of loans carry APR 19 to 36; in Texas 92 percent carry APR 49 to 99, Table 12.)
    - Have larger payment amounts due to larger sizes. (In Pennsylvania about 55 percent of loans have payment amount greater than $150, compared to about 21 percent in Texas, Table 13.)
    - Have about the same borrower credit scores, for loans where scores are recorded (Table 14). Larger loans at the same score suggest many Pennsylvania borrowers are borrowing more than they need or want in order to obtain loans at all.
    - Are more expensive in total finance charges. This can happen when the rate ceiling in Pennsylvania prevents borrowers from obtaining Texas-type small loans there and they must borrow more than they need and for an extended period (Table 15).

- Low rate ceiling on small loans in California together with no rate ceiling on loans larger than $2500 means that these lenders make few small loans but many loans larger than $2500.

Introduction

Interest rate ceilings on loans of money or goods are possibly the oldest continuously running controversy. Found in recorded history as early as the ancient Babylonian Code of Hammurabi (c. 1770 BC), imposed rate ceilings probably extend even farther back into unrecorded tribal antiquity. Historical evidence shows that through much of history ceilings have been evaded or ignored, which suggests, at a minimum, that ceilings have been continuously controversial and not popular with large segments of the population (for extended historical discussion, see Homer and Sylla 1996 and Gelpi and Julien-Labruyere 2000, included in the references at the end of this paper).

Today in the twenty-first century United States, a good deal of the modern argument over interest rate ceilings concerns a variety of consumer lending products and processes sometimes collectively referred to as "small dollar." High interest rates on smaller loans have attracted the attention of various individuals and organizations who would like to see these rates much lower. Much of the discussion has centered on single-payment so called "payday loans" found in many states and which exhibit very high Annual Percentage Rates (APRs), but sometimes other kinds of loans like small dollar installment loans become lumped into such discussions. Typical APRs on these other loans are much lower than on payday loans though higher than on some other familiar kinds of consumer credit. Heretofore, it seems that relatively little is recently known about this other small dollar form of consumer lending, despite discussions that sometimes lump such lending with payday. The purpose of this paper is to provide background, some discussion of relevant economic theory, and a look at some newly available statistical information on small dollar installment lending.

Background

At the outset, it seems worthwhile to review the reasons why small loans exhibit high interest rates in the first place. This phenomenon arises from the economic fact of "production cost economies of size." In other words, lending costs rise as loans become larger (because of the need for more careful screening, the need to take and record more payments over time, etc.), *but well less than proportionately*, due to production cost economies of size. A multi-million dollar loan to a top-rated international corporation may cost more to investigate, book, and collect than a small loan to a risky consumer, *but not per loan dollar*.

As a result, the loan charge to cover production costs is going to have to be higher for the small loan per loan dollar. For small loans, the dollar production cost of the loan looms large not in total but rather relative to the dollars of the loan. Much of the production cost arises from the necessity of maintaining lending locations entailing rent charges, employing personnel who must be paid salaries, and acquiring office supplies and equipment with prices and amortizations. There also is the cost of the lending capital itself and the cost of risk, which can also be substantial relative to loan amount for small loans. Almost by definition, a borrower in need of a small loan is going to be a risky borrower.[2]

To cover the average cost of extending a small size loan, a lender will need to charge a number of dollars for the loan that is large *relative to the amount of the loan*, even though the dollar amount of the cost is not in itself very large. Despite the loan size, the lender still needs enough revenue to justify obtaining and maintaining the lending location, hiring and paying the personnel, acquiring the supplies and equipment, raising the capital, and allocating the risk cost. Translating these necessities for small loans into an Annual Percentage Rate as required by Truth in Lending makes the disclosed rate very high, even though the dollars involved are much less startling. This anomaly occurs simply because the production cost looms large relative to the loan dollars involved and the short term of the loan on which the lending cost must be recovered.

The relationship of production cost to loan amount and term to maturity on small loans is hardly a new issue. It is worth recalling that the National Commission on Consumer Finance (NCCF) extensively discussed the matter in its *Report* to the Congress in late 1972. The NCCF was a federal study commission established by Title IV of the federal Consumer Credit Protection Act of 1968, the same law that established Truth in Lending as Title I. Section 404 states: “The Commission shall study and appraise the functioning and structure of the consumer finance industry, as well as consumer credit transactions generally. The Commission in its report and recommendations to the Congress, shall include treatment of … [t]he adequacy of existing arrangements to provide consumer credit at reasonable rates....” The Commission consisted of three members of the Senate, three members of the House of Representatives, and three public members appointed by the President. The Commission had a staff of economists and lawyers and retained the services of a number of outside economists and lawyers as consultants. In addition to its extensive *Report*, the Commission also issued six volumes of supporting technical studies.

In Chapter 7 of its *Report*, the Commission explored relationships among lending production costs, rate ceilings, and credit availability for consumer finance companies making small installment loans. As part of its investigations, the Commission undertook extensive data gathering and empirical work. To study costs of consumer finance companies, the Commission reanalyzed data from a major study of costs at consumer finance companies by Paul F. Smith (1967). The Commission also obtained cost data from AFSA and engaged the late Professor George J. Benston of the University of Rochester, the leading expert in the country at the time on the use of statistical cost studies of production processes of financial institutions (see Benston 1975 and Benston 1977). While the Commission undertook its work many years ago, the underlying principles have not changed and the Commission’s work remains illustrative. As a first look at small loan lending more recently, it is useful to examine the Commission’s findings.

[2] The credit card industry has spent huge sums of money to automate the lending process for small amounts of credit and reduce overall lending costs, but this impersonal kind of lending is not available to all consumers, especially the riskiest ones. Evidence from the Federal Reserve’s most recent Survey of Consumer Finances in 2010 shows that only 68 percent of families (economic units) have credit cards. And, riskier borrowers who have credit cards may also quickly reach their smaller credit limits but occasionally still need additional credit to meet some emergency or for some other need or desire. The basic theory of why credit-constrained consumers can obtain more credit only at higher rates is in Juster and Shay (1964), especially Appendix I, discussed here later. See also, Durkin, Elliehausen, Staten, and Zywicki (2014), Chapters 3 and 5.

One of the Commission's important findings based upon its cost studies was that the annual percentage rates would have to be quite high, approaching triple digits at the smaller loan sizes, due to the necessity of covering production and risk costs with only small amounts of loan dollars. Examining Smith's (1967) data, the Commission estimated a $50 fixed cost per loan ($370 in 2013 dollars) plus a variable cost of about 11 percent of the loan amount for a one-year loan (the average loan term). This cost estimate enabled the Commission to calculate break-even APRs for different loan sizes. Figure 1 shows the calculated inverse relationship between break-even APR and loan amount:

- A $100 loan ($739 in 2013 dollars) has a break-even APR of 91.36 percent.
- A $136 loan ($1000 in 2013 dollars) has a break-even APR of 77.86 percent. $1000 is the largest allowed payday loan in some states.[3]
- A loan size of $282 ($2100 in 2013 dollars) has a 42 percent break-even APR. Reformers in the early twentieth century recommended a 42 percent rate ceiling for small loans (Robinson and Nugent 1935).
- A loan size of $352 ($2600 in 2013 dollars) has a 36 percent break-even APR. In recent years, a 36 percent APR has sometimes been sometimes mentioned as a desirable maximum APR for small loans.[4]
- And a loan amount of $1021 ($7550 in 2013 dollars, has a break-even APR of 19.21 percent. $7750 is about the median of credit card balances financed, as reported in the 2010 Survey of Consumer Finances (Bricker et al. 2012).

The Commission also estimated costs for a 15 percent variable cost markup, which it suggested would "… allow for enlargement of the market through a higher degree of risk acceptance" (National Commission on Consumer Finance 1972, p. 144). The 15 percent markup produced a similar inverse relationship between loan amount and the break-even APR. Translating the Commission's findings directly into today's dollars, the Commission's conclusion was that the Annual Percentage Rate on today's $739 loans for one year would have to exceed 94 percent before lenders would be willing to make such loans at the risk level the Commission suggested was necessary to expand the market. Further, rates would have to exceed 36 percent for any loan size less than $2300 in 2013 dollars (see discussion and table in National Commission on Consumer Finance 1972, p. 144).

The Commission's findings adjusted for inflation are generally still valid because much of the operations of consumer finance companies making such loans has not changed very much. While some cost-causing features of lending have undoubtedly changed over the decades, for example, office automation has reduced record keeping costs and development of credit bureau scores has aided underwriting, most have not. Activities such as discussing loan options, taking

[3] The typical payday loan ($300 to $400) is much smaller than $1000 (Elliehausen 2009).

[4] See, for example, the discussion of the FDIC's Small-Dollar Loan Pilot Program in Miller et al. (2010) . The paper concluded "… given the small size [of the loans] …, the interest and fees generated were not always sufficient to achieve robust short-term profitability (p. 32)." The maximum loan size for the program was $2,500. The maximum loan size was increased from $1000 after the first year to enhance profitability: "Data collection was expanded to … [$1,001-$2,500] after the first year of the pilot, when some bankers relayed … the importance of these loans to their business plans. In particular, they indicated that some of their customers could qualify for larger loans and the these loans cost the same to originate and service as … [smaller loans] , but resulted in higher revenues" (p. 30).

applications, assessing ability to pay, processing payments, and collecting delinquent accounts are labor intensive.[5] Consumer finance company lenders still must pay personnel costs, rents, equipment costs, utilities, postage, and taxes. Salaries and benefits of employees per price-adjusted loan dollar likely have not decreased, even with office automation, because the more sophisticated nature of the technologies employees now use for record keeping and today's more stringent regulatory obligations require better educated and trained employees.

Even then, these conclusions about necessary rates assumed that loans would be made for a one year period. The Commission specifically noted that shorter term loans would need even higher APRs because the loans would be outstanding and earning revenue even less time but the operating costs would still need to be recovered. According to the Commission, "Recognizing that loans of [typical small sizes found then], the required APR will be higher than in Exhibit 7-16 [of the Commission's *Report*] because the costs of putting the loan on the books and servicing it must be recaptured over the shorter time" (National Commission on Consumer Finance 1972, p. 145). The Commission's cost estimates also assumed monthly payments. Operating costs would be higher for loans with more frequent payments because they would require more personnel costs for servicing the more frequent payments, other things equal.

The historical record demonstrates the seriousness of the Commission's concerns over credit availability. Well known to the Commission, beginning in 1910 the Russell Sage Foundation had undertaken a philanthropic program to fight illegal loan sharks then prevalent in many places. The Foundation proposed for passage in the various states model legislation known as the Uniform Small Loan Law and advocated its acceptance. This model act provided for exceptions to low state rate-ceiling laws to permit state-licensed lending entities to provide small dollar cash loans to consumers legally. By the 1960s, almost all states had passed a version of this law. Even so, well known inadequacies of legal rates on the smallest loan sizes had come to the National Commission's attention and were the motivating factor in its study of this area and its recommendations at the end of 1972.[6]

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[5]In a recent conference presentation, Phillips (2013) discussed costs at a large small-loan company. He noted that while credit bureau scores are important, an employee's judgmental analysis is a critical input in underwriting low credit score applications. Employees must assess the applicant's ability to pay and determine a set of loan terms (loan amount and monthly payment) that an applicant can easily afford to repay. He noted further that the collections process was especially labor intensive. Despite efforts to make monthly payments easily affordable, a significant share of borrowers makes late payments. Employees spend considerable time attempting to contact delinquent borrowers, making arrangements for payment, and resolving problems. Phillips also provided break-even APRs for different loan sizes based on the company's costs. His data showed an inverse relationship between APR and loan size, and the levels of APR at each loan size were broadly consistent with the NCCF estimates.

[6] The Uniform Small Loan Law's early choice of 3½ percent rate per month was based on the Russell Sage Foundation's studies of cost and experience of remedial loan companies and other small loan lenders at the time (see Clark 1931, pp. 46-7, Robinson and Nugent 1935, pp. 115-7), and Carruthers, Guinnane, and Lee 2009, p. 13).

Even then, the Foundation recognized that most lending costs are fixed, so that a 3½ percent ceiling made a $100 loan less profitable than a $300 loan, discouraging production of the smaller loans. The Foundation's position on transparency and simplicity of the transaction prevented it at first from supporting any particular remedy for this problem, however, such as allowing the lender to charge a higher percentage finance charge for smaller loans or a fixed fee per loan (see Carruthers, Guinnane, and Lee 2009). Either of these changes would complicate the transaction. Graduated rate ceilings, which allow higher rates on smaller loans, later became a common feature in state small loan laws.

Hypotheses from the Economic Theory of Credit Rationing

In their economic analyses of the consumer's credit decision, Juster and Shay (1964) explained why consumers may sometimes be willing to borrow at the relatively high rates of interest charged by the small dollar installment lenders (see also Durkin, Elliehausen, Staten, and Zywicki 2014, Chapter 3, for further discussion). To summarize, Juster and Shay argued that many products purchased using credit provide benefits over a period of time. Examples include car purchase for transportation to place of employment, acquisition of labor saving appliances, home or car repair, and emergency health care expenditures. Such benefits imply a rate of return that can be compared with the cost of acquiring the product or service, and acquisitions that produce returns greater than costs are wealth and utility increasing. Limited empirical evidence at that time suggests that the return on durable assets can be quite large for many households, especially growing households with young children (see Poapst and Waters 1964 and Dunkelberg and Stephenson 1975).

Juster and Shay's Analysis

Juster and Shay's analyses extended the economic model of the inter-temporal investment and consumption decision to situations in which a lender limits the amount of credit it is willing to extend to a borrower but a smaller amount of additional credit may be available at a higher interest rate from a different lender. These situations are common in consumer lending. Primary lenders financing the purchase of autos and other durables commonly require that borrowers provide equity and collateral. These requirements may constrain some consumers' debt-financed household investment. However, secondary lenders offer at higher rates additional, smaller amounts of credit, often on an unsecured basis. Historically these secondary lenders were consumer finance companies. Juster and Shay showed that credit constrained consumers might achieve greater household investment and more highly valued inter-temporal consumption using higher rate credit from secondary lenders than would be possible borrowing only from primary lenders.

Credit Constraints and High Rate Credit in the 21st Century

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.[7] Lenders' requirements for borrowers' equity in the purchases have also relaxed, as terms to maturity have lengthened for most closed end installment credit, and down payment requirements have also been reduced. Furthermore, home equity lines of credit and cash out refinancing of mortgage loans have developed to allow consumers to finance acquisition of durable goods using savings from equity

[7] Credit reporting through automated credit reporting agencies (credit bureaus) is now close to comprehensive. Credit reports thus generally 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 lenders.

in their homes. Thus, today many consumers are more able to finance a greater proportion of their household investment through primary lenders at the lower rates they offer.

Nonetheless, higher rate credit products from secondary lenders have also proliferated. Unsecured credit has become more widely available through bank credit cards, and many borrowers today 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 has extended availability of bank credit cards to many consumers who previously would have had difficulty qualifying for them. As a result, unsecured credit is now available to more consumers at lower cost than in the past.

Various "subprime" versions of credit cards, automobile financing, mortgage loans, and other credit exist. As this term suggests, such products are mostly used by those who exhibit greater amounts of credit risk than mainstream consumers and likely are more credit constrained at low rates. These subprime products allow consumers to finance a larger share of the value of household durable goods and services, borrow more heavily against future income, and obtain credit despite previous problems repaying debts. The financial crisis of 2008-2009 disrupted aspects of subprime credit markets, but after necessary reevaluation and restructuring, these credit sources are unlikely to go away.

There also are new short term subprime cash-lending products to go with the small loan industry that has existed for decades and pawn lenders prevalent for centuries. The payday lending industry allows consumers to obtain an advance on their next paycheck and automobile title lenders offer small loans secured by consumers' automobiles. Consumer finance companies still make small installment loans, and small installment loans are different from these other products because their multipayment nature suggests they can be better adapted to the budgets of rationed borrowers.

Characteristics of Credit Constrained Consumers

As mentioned, household investment is wealth or utility increasing when its return is greater than the cost of financing it. Some consumers can finance all of their household investment solely using funds from primary market lenders or themselves. Other consumers may still have wealth increasing investment opportunities after exhausting their ability to borrow from primary lenders and themselves. This latter group of credit constrained consumers, called rationed borrowers by Juster and Shay, might well consider secondary lenders such as consumer finance companies. The rate of return on the expenditures could be as high as the higher rate charged by secondary lenders (or even greater than the higher borrowing rate in which case the preferred amount of borrowing exceeds the secondary lenders' limit).

Based on this theory, users of high APR credit products would be expected to have characteristics of rationed borrowers. Unrationed borrowers generally would not find high APR credit products attractive.[8] Within this theoretical context, Juster and Shay identified characteristics that likely distinguish rationed and unrationed borrowers. Their distinction between unrationed and rationed borrowers is useful in assessing consumers' use of high APR credit products.

Specifically, rationed borrowers are likely to be in early family life cycle stages. For them, rates of return on household investment tend to be high. They tend to have relatively low or moderate current incomes and little discretionary income, making the sacrifices in current consumption to pay for large expenses personally costly. And because of their moderate incomes and relatively young age, rationed borrowers generally would not have accumulated large amounts of liquid assets. At this stage in the life cycle, their liquid asset holdings have a high subjective yield due to precautionary savings motives.

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

Unrationed borrowers, in contrast, typically are in later family life cycle stages or have relatively higher incomes or assets. Unrationed borrowers in later life cycle stages or with more income may have relatively few high return household investment opportunities. For them, high income may provide discretionary amounts that allow for relatively large expenditures without costly reductions in current consumption. Moreover, their age or income may allow them to accumulate some discretionary savings. Consequently, subjective yields on liquid assets can be substantially lower for unrationed borrowers than for rationed borrowers. Availability of low cost discretionary income and liquid assets for acquisition of durable goods and important services would make unrationed borrowers generally unwilling to pay high interest rates for additional credit.

Empirical tests of Juster and Shay's Theory

Juster and Shay suggested several empirically testable hypotheses about rationed and unrationed borrowers' demand for credit. Looking at the hypotheses relevant for small installment lending, they predicted that:

(1) unrationed borrowers' demand for credit would be more sensitive to interest rates than rationed borrowers' demand;

[8] A large, disproportionate percentage of unrationed borrowers using high APR credit products would raise a question whether the credit use is irrational, as marginal borrowing rates for unrationed borrowers are normally relatively low. But surveys of users of high rate consumer credit products have found that they are not representative of the population as a whole or even of credit users generally, but rather are more limited in their credit options. For discussion, see Durkin, Elliehausen, Staten, and Zywick (2014), Chapter 8.

(2) a simultaneous increase in the interest rate and term to maturity that reduces the amount of monthly payments would increase borrowing by rationed borrowers and decrease borrowing by unrationed borrowers;

(3) and, more generally, that rationed borrowers would respond more strongly than unrationed borrowers to differences in monthly payments.

Juster and Shay tested these hypotheses in an experimental study in which a panel of consumers was asked to express preferences for different hypothetical sets of credit terms. Consumers were classified into rationed and unrationed groups based on their income and family life cycle stage, and responses were used to compute elasticities of credit demand for rationed and unrationed groups.

Evidence from the experimental data was consistent with the predictions of Juster and Shay's theoretical model. The evidence strongly supported hypotheses that unrationed borrowers' demand was more sensitive to interest rates than rationed borrowers' demand (hypothesis 1) and that a simultaneous increase in the interest rate and term to maturity that reduces the amount of monthly payments increased rationed borrowers' demand and decreased unrationed borrowers' demand (hypothesis 2). They also found that rationed borrowers responded more strongly than unrationed borrowers to changes in monthly payments (hypothesis 3).

Significantly, Juster and Shay's analysis reconciled the apparent inconsistency noted at that time between consumers' lack of sensitivity to interest rates and the predictions of neoclassical economic theory as handed down from Fisher (1907, 1930) and Seligman (1927): Rationed consumers, whose demand for debt exceeded the amount available at going interest rates and who, therefore, were not sensitive to these interest rates, likely comprised a large majority of the population at that time. Thus, aggregate data from then and earlier largely reflected the behavior of these rationed borrowers. The aggregate data obscured the behavior of the smaller group of unrationed borrowers, who were sensitive to interest rates.

The hypothesized large proportion of rationed consumers at the time also provides insight into consumers' lack of knowledge of interest rates also noted then: Rationed consumers do not need to know the interest rate to minimize credit costs. Rationed consumers find the longest available maturity and shop for the lowest monthly payment (payment size is perfectly correlated with interest rate for a given loan size and maturity). Juster and Shay found that knowledge of interest rates actually paid on recent credit transactions was concentrated mainly among the unrationed consumers, who need to know the interest rate to make rational credit decisions. Nevertheless, at that time, before Truth in Lending, many of the unrationed borrowers also underestimated or did not recall the rate paid. Later studies have shown that lack of knowledge has changed in the years since Truth in Lending went into effect in 1969 (see Durkin and Elliehausen 2011, Chapter 7).

Juster and Shay believed that the proportion of unrationed consumers (and, therefore, consumers' overall sensitivity to interest rates) would increase gradually over time. They pointed to secular growth in consumer income and a trend toward longer terms to maturity as factors that would shift consumers from rationed to unrationed groups. In addition to the factors identified by them, advances in creditors' ability to assess and price risk have likely reduced the proportion of rationed consumers in the population in recent years. It seems that all these factors likely have reduced the proportion of rationed borrowers in the marketplace, but certainly not to zero.

There also were limited subsequent empirical tests of Juster and Shay's theory. In an experimental study, Walker and Sauter (1974) presented to a random sample of consumers pairwise comparisons of five alternative sets of financing terms for a household appliance. The sets of financing terms varied in terms of interest rate, product price, monthly payment size, and amount of downpayment. For each of ten possible pairs of alternatives, consumers chose the alternative that they preferred. Comparing the responses of lower income and higher income consumers, Walker and Sauter found that greater proportions of lower income consumers than higher income consumers preferred alternatives with lower monthly payments regardless of interest rate over sets with higher monthly payments or positive downpayment. They interpreted these results as consistent with Juster and Shay's hypotheses.[9]

More recently, Attanasio, Goldberg, and Kyriazidou (2000) used automobile purchase data from the 1987-1995 Consumer Expenditure Surveys to estimate interest rate and maturity elasticities for households hypothesized to be more or less likely to be rationed. Both their modeling and their statistical work are somewhat technical, but they provided evidence based on actual consumer behavior that credit choices of households likely to be rationed are sensitive to loan term (hence, other factors being equal, to the size of monthly payments). In contrast, they found that credit choices of households likely to be unrationed were sensitive to the interest rate but not loan term. Classifying consumers as rationed or unrationed on the basis of age or income alone is not precise, since rationing involves both high demand for debt and limited resources for servicing the debt.[10] Nonetheless, these findings provide additional support for Juster and Shay's theoretical model of consumer credit use.

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[9] Walker and Sauter's analysis has several technical flaws that diminish its contribution to understanding consumers' credit preferences, however (see Burstein 1978). For instance, they did not take into account that the size of monthly payment is not independent of price, downpayment, interest rate, and term to maturity. Some of the alternatives were clearly preferable to others, and choice between a higher product price or a higher interest rate is a matter of indifference for all consumers when the monthly payment and the downpayment are the same. Several pairs of alternatives did involve tradeoffs that theory predicts would cause rationed or unrationed borrowers to choose one or the other of the alternatives, but Walker and Sauter's classification of consumers as rationed or unrationed consumers solely on the basis of income is inadequate. (For example, a household in retirement may have low income but would not normally be rationed because demand for credit would often be low.) Walker and Sauter reported statistically significant differences by education, occupation, marital status, and sex. However, they did not discuss how such differences might be related to Juster and Shay's or any other hypotheses about consumers' behavior.

[10] Attanasio, Goldberg, and Kyriazidou also estimated their model for age groups (less than 35 years and 35 or older) interacted with education (high school diploma or less and some college or college degree). Partial derivatives were not statistically significant except for the group of households headed by persons less than 35 years of age with a high school diploma or less education. For that group, the partial derivative with respect to maturity is statistically significant and positive. As lower levels of education are associated with lower income, this group is likely to have booth high demand and limited resources.

Available information specifically about the characteristics of borrowers of small installment loans suggests the likelihood of their being rationed by primary lenders, although the only study specifically of these borrowers (undertaken for the National Commission on Consumer Finance) is also quite old (Durkin 1975). This study shows that at that time small loan borrowers were concentrated among the lower income segments of society. The results of a survey of borrowers showed that most of them belong to the parts of the population that often had trouble at the time obtaining credit elsewhere. Many of them reported being turned down elsewhere.

Recent Experience

With this as background, what does this mean for small dollar installment cash lending today? Little statistical information about small installment loans or borrowers has been available, but recently the American Financial Services Association has surveyed its members about small dollar installment loans. The survey collected information on the characteristics of 6.0 million installment loans outstanding as of the end of December, 2013. To focus on the most current lending, the discussion here reflects loans outstanding on December 31, 2013 and that were made in the previous six months. There were 3.1 million of these loans made by surveyed companies during this six month period.

Evidence from this survey suggests that the overwhelming majority of these loans were subprime in nature (discussed in more detail below). More than half of the loans reported a credit score, and about 88 percent of these loans can be classified as subprime (Table 1). Among the loans with scores, about 24 percent were deep subprime, with scores below 551. Only about 2 ½ percent of the loans with scores went to borrowers with good credit standing (fifth column from left in the table). In other words, most of the customers for this kind of installment loans probably were ineligible for much additional credit from mainstream lenders.

The subprime character of these loans immediately suggests some specific hypotheses about small installment loans based ultimately upon the work of Juster and Shay. (Among the hypotheses about these loans, the fourth concerns the geographic distribution of the loans, suggesting they may not be available everywhere. Consequently, the other hypotheses apply only to the areas where the loans are available.)

First, the loans likely are quite small. Since they are mostly subprime in character, many of them likely are made to borrowers who have little availability of credit at primary lending sources or who have loans from primary lenders but have exhausted any further credit availability from them and are only eligible for relatively small loans at secondary (subprime) lenders. This suggests that large loans are unlikely.

Second, the loans likely exhibit relatively high APR’s both because they are small and because they are made to risky borrowers.

Third, consistent with the findings of Juster and Shay, the loans likely are of appropriate size to keep the payments low and within budgets of subprime consumers. This result would come about because credit constrained consumers will demand longer maturities and smaller payments whenever possible. And to assure an acceptable likelihood of receiving their money back, lenders will offer a term to maturity and limit the amount of credit granted to an amount that allows affordable monthly payments.

Fourth, because rate ceilings vary substantially among the states, prevalence and characteristics of these loans probably vary substantially among the states as well. Smaller loans will be more prevalent when rates ceilings are high. Mostly large loans will be available when rates ceilings are low.

Examination of the survey data produces findings consistent with each of these hypotheses. First, survey results show that these cash loans are mostly quite small. Almost 80 percent of the loans were made in amounts of $2000 or less (sum of the first three lines of Table 2). The small size of loans suggests they may have been substitutes for amounts of credit otherwise available on credit cards, likely indicating many of these customers were unable to obtain credit using cards, or at least as much credit as they preferred. Consistent with their generally small size, these loans also exhibited short maturities: Almost 85 percent were made for a term of 24 months or less (sum of first three columns of Table 2). Almost 60 percent had terms of one year or less.

Not surprisingly, loan size and maturity are correlated. The smallest loans have the shortest maturities and larger loans longer maturities (demonstrated by the slant of the numbers in Table 2 downward to the right). The relationship between size and maturity so that the largest loans have the longest maturities, likely is an attempt to fit the loan payments effectively into monthly budgets. This is unlike payday lending where the single-payment payday loans are due in one lump, probably causing frequent budget difficulties.

Second, the survey results also show that the APRs on these loans are higher than on the most familiar mainstream kinds of credit for consumers like mortgage credit, auto, and credit card credit. APRs range upward to and over 100 percent on an annual basis for the smallest loans (Table 3). The loans also show an inverse relationship between loan size and APR: the highest APRs are associated with the smallest loans, which are also the loans with the shortest maturities. This is exactly what the National Commission on Consumer Finance predicted in 1972 that a competitive market would produce. Further, the range of rates is right where the National Commission predicted in 1972 they would have to be, based on its cost studies, before lenders would be willing to make loans of this kind.

Third, consistent with suggestions from Juster and Shay, the survey results also demonstrate directly what appears to be an attempt to fit repayments into households' budgets. Virtually all the smallest loans have monthly payments of $100 or less (less than two tanks of gas in recent months), and up to $1000 loans $150 or less (intersection of the first two lines of Table 4 with the first three columns).

The survey also shows that, on balance, installment borrowers are slightly younger than the population average (Table 5). Further, smaller loans more often go to younger borrowers and larger loans to older ones. However, neither relationship is especially strong. Rather, borrowers of all ages borrow in amounts across the board, but with some limited tendency toward a direct relationship between age and loan size.

In sum, the survey of installment lending shows that the industry makes mostly small subprime loans with short maturities, the kind of loans that might be expected of secondary lenders as predicted by Juster and Shay. The Annual Percentage Rates of charge on these loans are relatively high by the standards of many common (and larger) kinds of loans made to middle class consumers, but the rates are right where the National Commission on Consumer Finance predicted a generation ago they would have to be before lenders would make this sort of loan. There is evidence of attempt to make repayment plans fit into budgets, which is much different from the single-payment nature of other subprime cash loans like payday, auto title, and pawn loans. Although younger consumers tend to borrow in smaller amounts, the tendency is not strong. Loans of all sizes range across all age groups.

Further Evidence of Lending Risk

The survey results also demonstrate further evidence of the relationship between various loan features and after-the-fact measurement of lending risk in this lending segment. For instance, the survey showed that nearly one quarter of the loans were in some state of delinquency on the survey date (December 31, 2013), a high proportion. A portion of these loans (though not all) are destined for eventual repayment but probably with some (costly) difficulties, like employee reminders, loan modifications, and even potential legal action for some of them.

Delinquency on the survey date is clearly correlated with loan features. For example, small loans are much more likely to be delinquent than larger loans (Table 6). More than 38 percent of the smallest loans were delinquent on the survey date (even though likely most of this money is headed eventually toward repayment, even if with some difficulty), but only about 12 percent of the largest loans. This tendency undoubtedly reflects the greater willingness of lenders to take chances with smaller amounts of money than large amounts.

Likelihood of delinquency is definitely correlated with credit score (Table 7). More than a third of the loans in the lowest score group were in delinquent state on the survey date, but only about 7 percent of those in the highest score grouping. This relationship is very strong and not surprising. Based on this evidence, it is easy to conclude that both loan size and credit score are predictors of risk. (The totals in this table differ slightly from Table 6, because not all loans report a credit score.)

The fact of greater risk on loans with different sizes and credit scores clearly shows itself in the relationship between delinquency and APRs charged (Table 8). Simply stated, riskier loans, as demonstrated by their actual delinquency state on the survey date, are also the ones that receive the highest APRs. This demonstrates the common-sense notion that lenders are willing to make loans to the riskiest borrowers only if they receive compensation for the risk.

While loan size clearly is also a factor explaining APR, with the smallest loans exhibiting the highest APRs, the smallest loans also are the riskiest and for that additional reason are going to be associated with high APRs. Again, this is consistent with the contentions of the National Commission on Consumer Finance in 1972 and noted above that only sufficient rates would "allow for enlargement of the market through a higher degree of risk acceptance" (National Commission on Consumer Finance 1972, p. 144). It is possible to contend that causality is the other way and the high APRs cause the delinquency, but this seems unlikely in most cases, since calculations show that higher APRs have a much greater impact on lenders' revenues (and compensation for the costs of risk) than they do on monthly payments, since repayment of the principal sum and not interest on the loan represents the dominant share of the payment amount, as it also does on other kinds of small dollar credit.

Differences Among States

To examine the fourth hypothesis above, that prevalence and characteristics of installment lending vary substantially among the states according to regulatory features, it is possible to array the loans according to residence area of the borrowers. By concentrating on totals, the discussion so far masks any differences that may exist among the states. Differences among state may arise either because of differences in local demand or because of variations in supply factors, notably including variations in regulation. As the National Commission on Consumer Finance pointed out in its report in 1972, demand for small cash loans is widespread but legal rate ceilings will alter supply.

States With and Without Small Loans

Distribution of the loans in the database according to the residence of the borrower (zip code) shows large differences in concentration of these loans among the states. One large state (Texas) accounts for more than one fifth of the surveyed loans, and ten states combined account for more than three quarters of the loans (Table 9). In contrast, there were fewer than 1000 loans each made to residents in zip codes of 17 states (plus the District of Columbia), including the populous states of Maryland New York, New Jersey, and Massachusetts. Fifteen states, including Massachusetts and New York (plus the District of Columbia), had fewer than 100 loans.

Median loan size made also varies sharply among the states. The six states with the largest number of loans outstanding show median loan size made of $1000 or less. In contrast, ten other states show median loan size made of more than $3000, including California, Colorado and Washington at more than $4000 (not in table).

Geographic distribution of these closed end cash loans naturally reflects the distribution of the lending locations or offices where lenders make these closed end loans, and the location of the offices reflects rate ceilings. All of the nine states that account for the bulk of the small loan lending are states permitting relatively high rates of charge on these small loans. In contrast, all of the states with very few loans are low rate states.

Loans Across State Borders

It is, of course, possible for borrowers to approach a lender in another state if regulatory differences suggest greater availability of lending offices and credit there. For this purpose, Arkansas offers a good test. It is a known low rate state; consumer loan rates are capped at 17 percent. The survey shows more than 20,000 loans made to Arkansas residents despite having a rate ceiling that makes loans less than about $10,500 unprofitable. Arkansas is especially noteworthy because it borders five of the states identified in Table 9 as states with many small closed end cash loans (Texas, Tennessee, Oklahoma, Louisiana, and Missouri).

Examination of the zip codes of Arkansas loans shows that almost all of the borrowers reside in the 31 counties that border other states, in particular Oklahoma, Missouri, Louisiana, and Texas. Consequently, it seems probable that most of these small loans were made by lenders across the state border. In sharp contrast, only 411 of the 21,078 Arkansas loans were made in the 44 interior counties, despite inclusion within them of the Little Rock area, the largest population center in the state. Likely at least some, if not all, of the loans in the interior counties also involved borrowing across the state line.

North Carolina offers another test. It is a state that allows relatively low rates on the smaller loan sizes but rates on larger loans that are within the range the NCCF predicted would be necessary to encourage installment lending. This state offers an interesting test because it has a border with South Carolina that permits higher rates on small loan sizes and because some major North Carolina population areas are near this border.

Arraying loans in the database that were made to residents of the counties in North Carolina bordering South Carolina shows that loans made to these individuals are typically smaller than the loans made in the rest of North Carolina (Table 10). This suggests that many North Carolina residents in border counties are travelling across the state line and into South Carolina in order to obtain small loans. The table indicates that small loans are much more available in South Carolina from the surveyed companies than in North Carolina.

Distribution of Loans in High and Low-Rate States

Loans to borrowers in other low rate states also may be made across state lines, but it is more difficult for borrowers if a state with greater availability (higher ceiling rate) does not border the state in question, and there are going to be greater difficulties for residents of interior counties in either case. It appears that unless rates on the smallest loan sizes are sufficiently high to cover operating and risk expenses on the loans, small dollar lenders are not going to populate these states and loans actually made by lenders who do locate there are going to be considerably different, especially larger. California and Pennsylvania provide examples. Neither has an especially high rate ceiling on the smallest sizes and neither borders another state with this characteristic. In fact, the surveyed loans to the residents of these two states are much different from those in the states permitting higher rates on the smaller sizes, for instance, Texas.

Using Pennsylvania for the comparison state, cash lending was much more common by surveyed companies in Texas during the period of the lending survey. There were 23.9 loans outstanding at surveyed companies in Texas on the survey date per 1000 population, but only 1.5 loans per 1000 population in Pennsylvania. Furthermore, the loans had very different characteristics.

Loans in Pennsylvania are much larger than in Texas. In Pennsylvania, the survey found almost no loans of $500 or less and only about 1 percent of the loans at $1000 or less (Table 11).[11] This Pennsylvania distribution compares to about 31 percent of Texas loans in the smallest size and almost 70 percent in amount of $1000 or less. This difference suggests that small loans sizes are mostly unavailable in Pennsylvania but also the potential that borrowers in Pennsylvania might sometimes need to borrow more than they really prefer in order to find lenders willing to make any loan.

Other comparisons are consistent with the loan size difference. For instance, APRs on Texas loans are higher (Table 12). This is consistent with the contention of the National Commission on Consumer Finance that high rates are necessary on small loans in order for the lenders to be able to recover lending costs on the small dollars of credit involved. In Pennsylvania, almost all loans were made at APRs from 19 to 36 percent but the mostly smaller loans in Texas showed rates 49 to 99 percent, in line with what the NCCF suggested would happen. (Looking more closely at the Pennsylvania distribution, more than 80 percent of the loans carried APRs of 25 to 27 percent, reflecting the rate ceiling in this range (not in table). Almost all of the rest of the loans carried APRs of 22 to 24 percent.) Payment size also reflected loan size difference. In Pennsylvania, 55 percent of the loans were made with monthly payment size greater than $150; the corresponding proportion in Texas was 21 percent (Table 13).

It is interesting to note that the difference in credit scores is not as pronounced between the states as the other loan characteristics (Table 14). Clearly, most borrowers in both states can be considered subprime (scores below 661). It is possible that lenders in Pennsylvania are willing to take the risks of making larger loans with some borrowers, albeit a smaller number than in Texas. It is possible that this reflects individual lender favorable experiences with certain borrowers that make them willing to grant the loans despite subprime credit scores or no credit scores. (Almost all Pennsylvania loans had scores.) It also again suggests the possibility that some Pennsylvania borrowers may be taking larger loans than they otherwise would prefer if smaller loans were available under the state's lower rate ceilings.

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[11] It appears that the bulk of the Texas loans at surveyed companies were made under Chapter 342, Subchapter F of the Texas Finance Code, a provision that allows higher rates on loans of $1300 or less. There is no comparable provision of Pennsylvania law. For recent discussion of Section 342 of the Texas Code see Hutchings and Nance (2012).

This highlights difficulties that occur when rate ceilings prevent subprime borrowers from obtaining loans in the sizes they desire and have to obtain larger loans than necessary to be able to obtain loans at all. A first difficulty arises from the potential risk that these consumers may not have the requisite self discipline or show enough care to retain in their reserves the excess funds they must borrow beyond what they want to borrow. If they also spend the additional funds, this increases their repayment burden beyond what it would be with a smaller loan. Simply put, they have to repay more principal over a longer time and this can pose financial risks for them.

A second difficulty is that the additional borrowing for a longer time also means higher finance charges, despite the lower APR. It is easy enough to see this effect from some examples using typical APRs and loan sizes in Texas and Pennsylvania.

Suppose a credit constrained borrower in Pennsylvania needs or wants a $500 loan, a typical small loan in Texas, but it is unavailable from either primary or secondary lenders in Pennsylvania. In Texas, suppose this small loan would entail 6 monthly payments of $107.88 at APR of 95 percent. Total finance charge over the six months would be $147.31 (top panel of Table 15).

Suppose also that a secondary lender in Pennsylvania is unwilling to make Texas-type small loans but is willing to lend typical Pennsylvania-type small loans. This entails a loan of $2000 at 27 percent. To keep the payments roughly equivalent, the loan is made for 24 payments of $108.76 (lower panel of Table 15). The problem is that the finance charge more than quadruples despite the lower APR, due to the larger loan and longer maturity.

The calculus is similar if the borrower wants a $1000 loan, a typical large loan for these Texas small dollar lenders. In this case, the Texas lender would make this loan at 72 percent APR for 12 months of payments of $119.28. Such a loan is illegal in Pennsylvania.[12] A borrower there in need of a $1000 loan but unable to obtain one because of the ceiling might instead obtain a $2000 loan at 27 percent, assuming the borrower qualifies for the larger loan. Using the same example for the Pennsylvania loan, it would involve almost the same payment size as the Texas loan ($108.76 in Pennsylvania at 27 percent APR versus $119.28 in Texas at 72 percent APR). But because the loan would be both larger and longer in Pennsylvania, the finance charge would accrue for a longer time and in total would be considerably more than on the shorter Texas loan at higher APR, assuming the Pennsylvania borrower even qualifies for the larger loan at the lower rate. It is not at all clear that these Pennsylvania borrowers are better off when looking for small loans under the Pennsylvania rate ceiling than they are in Texas where the rate ceilings are much higher but small loans are available.

Finally, the survey results show that Texas borrowers are somewhat younger than their counterparts in Pennsylvania (Table 16). In Texas, the survey found that about 27 percent of

[12] The small number of such loans visible in Table 12 probably are loans made by telephone, mail, Internet, or to individuals who subsequently moved to Pennsylvania from some other state.

loans were to borrowers under age 35, compared to about 17 percent in Pennsylvania. This also is consistent with the Juster-Shay conception of rationed borrowers.

In contrast to comparison with Texas, comparison of Pennsylvania with California shows similar absence of small loan lending in these two states. Both states specify relatively low rate ceilings on smaller loan sizes and both show few loans in these size groups (California not in table). Unlike Pennsylvania, however, California has no rate ceiling on loans greater than $2500, and the surveyed installment lenders make larger loans there. Overall, more than 91 percent of surveyed loans in California were larger than $2500. The bulk of them were in a size group of $2500 to $14,999.99. In this group, the median loan size was $4311 with median maturity 35 months. Median payment size was $190 and median APR 34 percent. Again, presence or absence and height of the rate ceiling are reflected in differential availability of loans of different sizes in the jurisdiction.

Comparison of Rates and Loan Availability with Recommendations of the NCCF

It is possible to construct a series of APRs recommended by the National Commission on Consumer Finance (NCCF) as necessary for small loans lenders to produce loans of various sizes (see discussion above) and then to compare them with some existing state ceilings and the availability of loans of various sizes in those states. Table 17 provides such a comparison. [TO BE CONTINUED]

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Table 1. Credit Score

Installment Loans Outstanding End of September 2012
and Made During Previous Six Months

	Credit Scores					
	≤551	551-619	620-659	660-699	≥700	All
All	24.3	43.6	20.5	8.9	2.6	100.0

Notes for Tables 1 through 5:

Values are percents of the total.

Columns and rows may not add exactly to totals because of rounding.

Source for Tables 1-14: Installment Loans Survey.

Table 2. Installment Loan Maturities (Months)

Loan Amount (TIL Amount Financed)	1-6	7-12	13-24	25-36	37-120	>120	All
< $501	11.1	11.4					22.5
501-1000	0.3	26.1	1.7				28.2
1001-2000	0.2	9.9	15.9	1.7			27.7
2001-5000		0.1	7.8	8.5	0.7		17.1
5001-10,000			0.2	2.8	0.9		4.0
>$10,000				0.2	0.2		0.4
All	11.6	47.5	25.7	13.3	1.9		100.0

Table 3. APR (Percent)

Loan Amount (TIL Amount Financed)	<18	19-36	37-48	49-99	100-199		All
< $501			0.4	12.8	9.3		22.5
501-1000		1.8	2.5	22.3	1.6		28.2
1001-2000	0.6	7.8	5.3	14.1			27.7
2001-5000		14.1	2.4	0.5			17.1
5001-10,000		4.0	0.1				4.0
>$10,000		0.4					0.5
All	0.6	28.1	10.6	49.7	10.9		100.0

Table 4. Payment Amount (Dollars)

Loan Amount (TIL Amount Financed)	<50	50-100	101-150	151-200	>200	All
< $501	1.0	21.3	0.1			22.5
501-1000	0.2	13.9	13.9	0.1		28.2
1001-2000		4.5	16.9	6.2	0.2	27.7
2001-5000		0.3	6.5	7.7	2.6	17.1
5001-10,000				0.2	2.8	4.0
>$10,000					0.4	0.4
All	1.2	40.0	37.5	14.2	7.0	100.0

Table 5. Age of Borrower

Loan Amount (TIL Amount Financed)	18-24	25-34	35-44	45-54	55-64	≥65	All
<$501	4.2	5.3	4.1	4.0	3.1	2.0	22.8
501-1000	1.9	5.3	5.8	6.2	5.2	3.7	28.2
1001-2000	1.0	4.4	5.9	6.7	5.6	3.6	27.3
2001-5000	0.4	2.5	3.9	4.4	3.6	2.3	17.1
5001-10,000	0.1	0.5	1.0	1.2	0.9	0.5	4.1
>$10,000			0.1	0.2	0.1		0.4
All	7.6	18.1	20.9	22.7	18.6	12.2	100.0
All adults[13]	13.1	17.5	17.5	19.2	15.6	17.2	100.0

[13] Source: 2010 Census (US Census Bureau 2011, Table 7, p. 11).

Table 6. Delinquency and Loan Amount

	<\$500	501-1000	1001-2000	2001-5000	5001-10000	>\$10,000	All
Delinquent:							
Yes	38.6	26.1	19.7	14.7	11.7	11.5	22.8
No	61.4	73.9	80.3	85.3	88.3	88.5	77.2
All	100	100	100	100	100	100	100

Table 7. Delinquency and Credit Score

	<550	559-659	660-699	650-699	≥700	All
Delinquent:						
Yes	34.6	21.6	14.4	10.4	6.6	21.9
No	65.4	78.4	85.6	89.6	93.4	78.1
All	100	100	100	100	100	100

Note for Tables 6 through 8:

Values are percents of each column.

Columns and rows may not add exactly to totals because of rounding.

Table 8. Delinquency and APR (Percent)

	<18	19-36	37-48	69-99	100-199	All
Delinquent:						
Yes	11.2	14.4	18.8	29.0	36.3	22.7
No	88.8	85.6	81.2	71.0	63.7	77.3
All	100	100	100	100	100	100

Table 9. States with Many and Few Loans

States with Many Loans:	Percent of Total	Median Size [UPDATE] (Dollars)
Texas	21.6	701
Georgia	9.2	929
South Carolina	8.6	865
Tennessee	7.7	900
Alabama	6.0	818
Oklahoma	5.4	872
Illinois	5.3	1102
Louisiana	4.9	1086
North Carolina	4.4	2031
Missouri	4.2	1000
Total Ten States	77.3	

Some Populous States with Very Few Loans[1]	Number of Loans	
Maryland	665	*
New Jersey	535	*
New York	98	*
Massachusetts	24	*

Notes for Table 9:

[1] After rounding, each of these states accounts for 0.0 percent of the total. In addition, there also were 13 additional states not listed in the table (plus the District of Columbia) with fewer than 1000 loans.

* Not enough loans to construct a meaningful average size.

Table 10. Loan Sizes Made to North Carolina and South Carolina Borrowers

Loan Size:	South Carolina (Cumulative Pct.)	NC Counties Bordering SC (Cumulative Pct.)	Other NC Counties (Cumulative Pct.)
Less than $500	22.7	7.9	0.4
Less than $1000	55.0	25.4	7.8
Less than $1500	74.4	46.9	31.2
Less than $2000	82.4	59.5	44.2
Less than $2500	89.0	70.5	57.9
All	100.0	100.0	100.0

Table 11. Installment Loan Maturities (Months)

Pennsylvania Loans

Maturities (Months):	1-6	7-12	13-24	25-36	37-120	>120	All
Loan Amount (TIL Amount Financed)							
< $501	0.1						0.1
501-1000	0.1	0.3					0.5
1001-2000	0.2	1.9	7.3	1.2			10.7
2001-5000		0.4	15.3	41.5	0.9		58.2
5001-10,000			0.7	22.1	5.2		28.0
>$10,000				0.9	1.6		2.5
All	0.4	2.7	23.4	65.7	7.7		100.0

Texas Loans

	1-6	7-12	13-24	25-36	37-120	>120	All
Loan Amount (TIL Amount Financed)							
< $501	21.0	10.4					31.4
501-1000		36.0	0.4				36.4
1001-2000		19.4	8.8				28.2
2001-5000			2.4	0.8			3.2
5001-10,000			0.1	0.5	0.1		0.6
>$10,000							
All	21.1	65.8	11.7	1.3	0.1		100.0

Table 12. APR

Pennsylvania Loans

APRs (Percent):	<18	19-36	37-48	49—99	100-199	≥200	All
Loan Amount (TIL Amount Financed)							
< $501				0.1			0.1
501-1000		0.3		0.1			0.5
1001-2000		10.6		0.1			10.7
2001-5000		58.2					58.2
5001-10,000		28.0					28.0
>$10,000		2.5					2.5
All		99.7	0.1	0.2			100.0

Texas Loans

	<18	19-36	37-48	49—99	100-199	≥200	All
Loan Amount (TIL Amount Financed)							
< $501				27.9	3.5		31.4
501-1000		0.1	0.1	35.2	1.1		36.4
1001-2000		0.7	0.4	27.1			28.2
2001-5000		3.2					3.3
5001-10,000		0.1	0.6				0.6
>$10,000							
All		4.1	1.1	90.2	4.6		100.0

Table 13. Payment Amount

Pennsylvania Loans

Payments (Dollars):	<50	50-100	101-150	151-200	>200	All
Loan Amount (TIL Amount Financed)						
< $501		0.1				0.1
501-1000	0.1	0.4	0.1			0.5
1001-2000	0.1	7.7	2.6	0.2		10.7
2001-5000		3.5	30.2	22.5	2.1	58.2
5001-10,000				3.3	24.8	28.0
>$10,000					2.5	2.5
All	0.2	11.6	32.8	25.9	29.5	100.0

Texas Loans

	<50	50-100	101-150	151-200	>200	All
Loan Amount (TIL Amount Financed)						
< $501	3.0	28.4				31.4
501-1000		10.2	26.1			36.4
1001-2000		0.3	9.6	18.4		28.2
2001-5000			0.9	1.7	0.6	3.2
5001-10,000					0.6	0.6
>$10,000						0.1
All	3.0	39.0	36.7	20.1	1.3	100.0

Table 14. Credit Score

Pennsylvania Loans

Scores:	<551	551-620	621-660	661-700	≥700	All
Loan Amount (TIL Amount Financed)						
< $501						
501-1000	0.1	0.2	0.1	0.1		0.4
1001-2000	1.8	4.2	2.4	1.2	0.8	10.5
2001-5000	11.6	23.9	13.7	6.3	2.7	58.3
5001-10,000	5.3	11.5	6.9	3.2	1.3	28.3
>$10,000	0.7	0.9	0.6	0.2	0.1	2.5
All	19.5	40.8	23.7	11.0	5.0	100.0

Texas Loans

	<551	551-620	621-660	661-700	≥700	All
Loan Amount (TIL Amount Financed)						
< $501	7.2	10.1	3.7	1.3	0.3	22.5
501-1000	8.0	15.9	6.2	2.6	0.6	33.4
1001-2000	6.7	14.9	10.0	4.6	1.0	37.1
2001-5000	0.8	2.2	1.7	0.8	0.2	5.7
5001-10,000	0.2	0.4	0.3	0.1	0.1	1.1
>$10,000		0.1				0.1
All	22.9	43.6	21.9	9.4	2.2	100.0

Table 15. Examples of Loan Terms and Charges on Typical Small and Large Loans in Texas and Pennsylvania

Texas Loans

Small loan		
	Amount	$500
	APR	95 percent
	Maturity	6 months
	Payment size	$107.88
	Interest	$147.31
Large loan		
	Amount	$1000
	APR	72 percent
	Maturity	12 months
	Payment size	$119.28
	Interest	$431.32

Pennsylvania Loans

Small loan		
	Amount	$2000
	APR	27 percent
	Maturity	24 months
	Payment size	$108.76
	Interest	$610.25
Large loan		
	Amount	$4000
	APR	27 percent
	Maturity	36 months
	Payment size	$163.30
	Interest	$1878.83

Table 16 Borrower Age

Pennsylvania Loans

	18-24	25-34	35-44	45-54	55-64	≥65	All
Loan Amount (TIL Amount Financed)							
<$501							0.1
501-1000		0.1	0.1	0.1	0.1	0.1	0.5
1001-2000	0.5	1.9	2.1	2.6	1.9	1.8	10.7
2001-5000	1.7	8.9	13.8	14.6	11.1	8.1	58.2
5001-10,000	0.4	3.2	6.7	8.2	6.4	3.1	28.0
>$10,000		0.3	0.7	0.7	0.6	0.2	2.5
All	2.7	14.4	23.3	26.2	20.1	13.3	100.0

Texas Loans

	18-24	25-34	35-44	45-54	55-64	≥65	All
Loan Amount (TIL Amount Financed)							
<$501	5.6	7.3	5.9	5.6	4.3	3.0	31.7
501-1000	2.3	6.8	7.7	8.0	6.8	4.9	36.4
1001-2000	0.5	4.0	6.2	7.3	6.2	3.8	27.9
2001-5000		0.5	0.8	0.9	0.7	0.4	3.3
5001-10,000		0.1	0.2	0.2	0.1	0.1	0.6
>$10,000							
All	8.5	18.6	20.6	22.1	18.2	12.1	100.0

Notes for Tables 10 through 13 and Table 16:

Values are percents of the total.

Columns and rows may not add exactly to totals because of rounding.

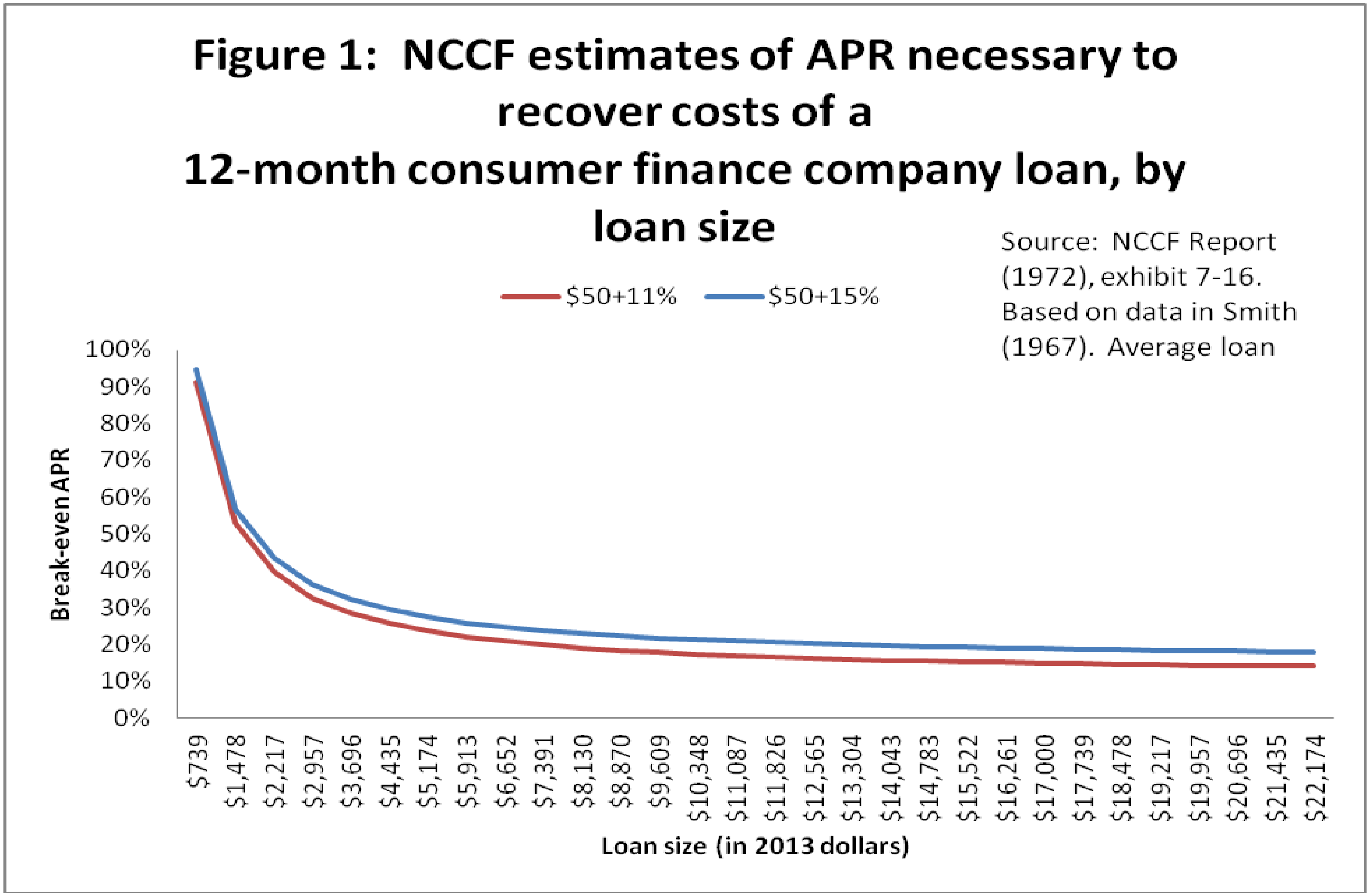
Figure 1: NCCF estimates of APR necessary to recover costs of a 12-month consumer finance company loan, by loan size
Source: NCCF Report (1972), exhibit 7-16. Based on data in Smith (1967). Average loan
$50+11%
$50+15%
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Break-even APR
$739
$1,478
$2,217
$2,957
$3,696
$4,435
$5,174
$5,913
$6,652
$7,391
$8,130
$8,870
$9,609
$10,348
$11,087
$11,826
$12,565
$13,304
$14,043
$14,783
$15,522
$16,261
$17,000
$17,739
$18,478
$19,217
$19,957
$20,696
$21,435
$22,174
Loan size (in 2013 dollars)