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Assessing the Optimism of Payday Loan Borrowers

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Assessing the Optimism of Payday Loan Borrowers

Ronald Mann

Columbia Law School

March 12, 2013

This essay compares the results from a survey administered to payday loan borrowers at the time of their loans to subsequent borrowing and repayment behavior. It thus presents the first direct evidence of the accuracy of payday loan borrowers’ understanding of how the product will be used. The data show, among other things, that about 60% of borrowers accurately predict how long it will take them finally to repay their payday loans. The evidence directly contradicts the oft-stated view that substantially all extended use of payday loans is the product of lender misrepresentation or borrower self-deception about how the product will be used. It thus has direct implications for the proper scope of effective regulation of the product, a topic of active concern for state and federal regulators.
Assessing the Optimism of Payday Loan Borrowers

1 Introduction

Payday lending is at the heart of debates about “alternative” financial products. Since its rise in the early 1990’s, the product has gained widespread traction with consumers. In the typical transaction, an individual borrows $200-$500 and commits to repay the borrowed funds, together with a one-time fee of 12-18% of the loan’s principal, out of the individual’s next paycheck.¹ Payday loans are now available at about 20,000 storefront locations throughout the Nation, where more than ten million Americans borrowed money in 2010.² To put their success in context, there are more payday lender locations in this country than there are Starbucks and McDonald’s locations combined.³

Concerns about payday lending come from its role in the development of “fringe” lending, which has played a major part in the oft-chronicled rise of modern America’s culture of indebtedness.⁴ With a vehemence surprising

³See Donald P. Morgan et al., How Payday Credit Access Affects Overdrafts and Other Outcomes, 44 J. Money, Credit & Banking 519, 519 (2012).
⁴See, e.g., John P. Caskey, Fringe Banking: Check-Cashing Outlets, Pawnshops and
for a product so successful with consumers, consumer advocates are almost uniformly critical of the product.\textsuperscript{5} Two attributes in particular attract the most attention. The first is the relatively high interest rates characteristic of the product, which typically are in the range of 400\% (a fixed fee of about 15\% for a loan of two weeks or less).\textsuperscript{6} Concerns about those rates led, for example, to 2007 legislation\textsuperscript{7} prohibiting loans to military personnel and their families at interest rates above 36\%; this essentially terminated payday lending to military families.\textsuperscript{8}

The second concern relates to persistent use of the product. It is well-

\begin{footnotesize}
\begin{enumerate}
\item See, e.g., Hawkins & Mann, supra note 1, at 857. The relatively high nominal interest rate reflects the cost structure of the industry. On the one hand, operating costs do not decline proportionately with the size of the loan; thus, the administrative costs for small loans are quite high when measured on a percentage basis. At the same time, because the loans are effectively unsecured and typically made with relatively little inquiry into creditworthiness, losses are not insubstantial. See, e.g., Edward C. Lawrence and Gregory Elliehausen, A Comparative Analysis of Payday Loan Customers, 26 Contemporary Econ. Pol'y 299, 301-02 (2008). For a detailed numerical analysis of the operating expenses and losses of payday lenders and how those compare to fee revenues, see Gregory Elliehausen, An Analysis of Consumers’ Use of Payday Loans 3-6 (unpublished 2009 manuscript).
\item See, e.g., Johnson, supra note 5, at 663-66 (discussing effects of Talent-Nelson Amendment on lending to military families). For detailed discussion of the implementation of the amendment, see Patrick M. Aul, Note, Federal Usury Law for Service Members: The Talent-Nelson Amendment, 12 N.C. Banking Inst. 163 (2008).
\end{enumerate}
\end{footnotesize}
known that many borrowers use the product frequently; in the common phrasing they are said to “roll over” the loans from pay period to pay period because they lack the funds to pay them off as they come due. This leads consumer advocates to fear that borrowers frequently become “mired” in debt that they could have avoided had they never used the product. The specific concern is that excessive optimism causes users to believe they will pay off their loans rapidly, when in fact they usually will not. Indeed, Bar-Gill and Warren go so far as to assert that no rational consumer expecting to roll over the loan would agree to the terms of a payday loan.

These concerns are at the forefront of current regulatory initiatives at the state and federal level. At the state level, many states have adopted specific limitations on rollovers. Still others have adopted even stricter regimes, that effectively ban payday lending at retail locations. But the most notable activity has come at the federal level, with the recent formation of the federal Consumer Financial Protection Bureau (“CFPB”). Two regulatory

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9E.g., R. Mayer, supra note 4; C. Peterson, supra note 5; Alan M. White, Behavior and Contract, 27 J. L. & Inequality 13, 159-63 (2009).
11Bar-Gill and Warren, supra note 10, at 44. Alan White’s analysis is similar. See White, supra note 9, at 159-63.
13See, e.g., National Conference of State Legislatures, Payday Lending Statutes, available at http://www.ncsl.org/issues-research/banking/payday-lending-state-statutes.aspx (last updated January 18, 2013) (last visited March 7, 2013) (suggesting that 38 states permit payday lending and nine do not); Pew 2012 Report, supra note 2, at 21 (categorizing state regulatory approaches and suggesting that 15 states have successfully banned retail payday lending operations). For a detailed summary of recent state regulatory changes, see Morgan et al., supra note 3, at 529-30.

3
innovations are salient. First, the agency has not only the authority long held by the Federal Trade Commission to respond to unfair and deceptive practices, but also a new, broader power over “abusive” practices by financial firms (12 U.S.C. § 5531). In addition to having broader substantive powers, the CFPB also has sweeping regulatory and supervisory jurisdiction over bank and nonbank financial service providers that previously did not exist at the federal or state level.\textsuperscript{14} Because federal regulators previously had no direct supervision over the lending practices of nonbanks like the major payday lenders, the new authority of the CFPB raises the possibility of major new regulatory initiatives in this area.\textsuperscript{15} Recent CFPB enforcement actions against major credit card issuers\textsuperscript{16} suggest it will pursue its mandate vigorously, which makes an accurate perspective on the payday loan a valuable commodity. Because the CFPB has no authority to regulate interest rates (12 U.S.C. § 5517(o)), concerns about repetitive use and rollovers are likely to be at the heart of any such regulatory initiative.\textsuperscript{17}

\textsuperscript{14}The CFPB was created by Title X of Dodd-Frank, the Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376, §§ 1001-1100H. The regulatory authority directed specifically at nonbank financial service providers appears in Section 1024 of Dodd-Frank, codified at 12 U.S.C. § 5514.

\textsuperscript{15}See, e.g., Johnson, supra note 5, at 689-726 (detailed discussion of regulatory strategies available to the CFPB).

\textsuperscript{16}See In re Capital One Bank, (USA) N.A., No. 2012-CFPB-0001 (July 18, 2012) (consent order); In re American Express Centurion Bank, No. FDIC 12-315b etc. (Sept. 21, 2012) (consent order); In re Discover Bank Greenwood Delaware, No. FDIC-11-548b etc. (Sept. 24, 2012) (consent order).

\textsuperscript{17}See, e.g., Prepared Remarks by Richard Cordray, Director of the Consumer Financial Protection Bureau, Consumer Advisory Board Meeting (Washington, D.C., Feb. 20, 2013), available at http://www.consumerfinance.gov/speeches/prepared-remarks-by-richard-cordray-at-a-consumer-advisory-board-meeting/ (last visited March 5, 2013) (suggesting propriety of CFPB action against products for which “a substantial percentage of
In the spirit of Cass Sunstein’s call\textsuperscript{18} for empirical validation of regulatory strategies, this study responds to that backdrop with a direct test of the accuracy of consumer understanding about repetitive use of the product. Comparing the results from a survey administered to payday loan borrowers at the time of their loans to subsequent borrowing and repayment behavior, this essay presents the first direct evidence of the accuracy of payday loan borrowers’ understanding of the product. In general, the evidence suggests two things. First, most borrowers do not expect that they will be free of debt at the end of the first loan term; on the contrary, more than half of borrowers expect that they will need to continue to borrow for additional pay cycles. Borrower estimates of an ultimate repayment date are realistic; the mean predicted period of borrowing after the initial loan matures is 36 days. Among other things, that finding directly rebuts the idea that borrowers never understand that they are likely to roll their loans over.

More importantly for present purposes, most (though surely not all) borrowers have a good understanding of their own use of the product. Specifically, most borrowers finally repay their loans and are free of debt within two weeks of the date they predicted on the date of the loan. The evidence that such a large share of borrowers accurately understands how the product will be used contradicts the accepted premise that substantially all extended use

\textsuperscript{18}Cass R. Sunstein, Empirically Informed Regulation, 78 U. Chi. L. Rev. 1349 (2011) [hereinafter Sunstein, Empirically Informed Regulation].
of payday loans is the product of lender misrepresentation or borrower self-
deception about how the product will be used. More broadly, that evidence 
contradicts the standard premise of behavioral policy-making, the so-called 
“golden rule” of policymaking under which regulatory intervention is appro-
priate only if it can correct a choice that is an error for substantially all of 
those who make it.\textsuperscript{19}

Section 2 of the essay situates the survey against prior writing about pay-
day loans. Section 3 describes the survey and resulting dataset. Section 4 
describes the results. Section 5 elucidates the implications of the empirical 
results for the theoretical and policy debates about payday lending regula-
tion. Section 6 briefly concludes and suggests directions for extension.

\section{Literature Review}

The focus of this essay is on the particular concern that payday loan bor-
rowers do not understand the product, and specifically that a bias toward 
optimism causes them systematically to overestimate the likelihood that they 
promptly will be able to free themselves from debt. The idea of an optimism 
bias is often attributed to Weinstein’s well-known study of the life expect-
tations of students.\textsuperscript{20} The basic concept is that individuals systematically 
assess their own future opportunities and behavior with undue and excessive

\textsuperscript{19}See Richard R. Thaler and Cass R. Sunstein, Nudge: Improving Decisions About 

\textsuperscript{20}Neil D. Weinstein, Unrealistic Optimism About Future Life Events, 39 J. Personality 
& Soc. Psychology 806 (1980).
optimism. Buttressed by numerous empirical studies,\(^{21}\) the idea has been widely accepted as a basic tenet of the behavioral economics literature.\(^{22}\)

Among legal academics, concerns about the optimism bias as a cause of excessive use of payday loans have been pervasive. The claim has been pressed in passing by several scholars,\(^{23}\) but by far the most prominent and detailed support for that perspective comes from Oren Bar-Gill and Elizabeth Warren. Payday loans are one of the central examples in their work on “Making Credit Safer.”\(^ {24}\) Their strategy with respect to payday loans is to suggest that borrowers who roll their loans over have underestimated the risk of nonpayment, reflecting their premise that no rational consumer would borrow from a payday lender with an expectation to roll over the loan. Thus, they argue, only the “customer who misestimates her ability to repay the loan in fourteen days will likely roll the loan over.”\(^ {25}\) That perspective is particularly important because of their role in the creation and design of the


\(^{23}\)E.g., C. Peterson, supra note 5, at 165-69; White, supra note 9, at 159-63.

\(^{24}\)Bar-Gill and Warren, supra note 10, at 44-46.

\(^{25}\)Bar-Gill and Warren, supra note 10, at 44.
CFPB,26 and because of Warren’s place now in the United States Senate (on the Senate Banking Committee), where she can be expected to play a key role in financial regulation.

A similar perspective pervades the more recent work of the Pew Institute’s Safe Small-Dollar Loans Research Project. Their recent study, based on a nationally representative survey of payday lending borrowers, finds that most borrowers do not use the product for short periods of time, but rather are indebted for about five months out of each year.27 Again, their study works from the premise that the product is designed for immediate repayment, and that use in extended borrowing cycles necessarily is problematic. In their own words, the product’s actual use is in “sharp contrast” to its “advertise[ment] as short-term, small-dollar credit intended for emergency or special use.”28 Those concerns are even more prominent in the most recent report from the Pew Project, which emphasizes the premise that borrowers “hold unrealistic expectations about payday loans.”29

Although the perspective articulated by Bar-Gill, Warren, and Pew has been taken for granted among legal scholars, its analytical shortcomings are

26 For their recommendations for formation of something like the CFPB, see Elizabeth Warren, Unsafe at Any Rate, Democracy, Summer 2007; Bar-Gill and Warren, supra note 10.
28 Pew 2012 Report, supra note 2, at 13. The suggestion that the lenders are misrepresenting the nature of the product in some way is not unique to the Pew Project. See, e.g., White, supra note 9, at 159 (suggesting that payday loans “are described (falsely) as a short-term credit product, exploiting the consumer’s optimism bias”).
apparent. For one thing, as a theoretical matter, it is not at all clear that optimistic behavior reflects poor financial choices. Thus, such empirical evidence as there is suggests that those who are optimistic in fact make better financial choices than those who are not.\textsuperscript{30} Moreover, it is well known that many consumers do a poor job of managing their lifetime consumption and savings choices. The typical “prudent” consumer invests too conservatively, resulting in a substantial shortfall in lifecycle investing; Ayres and Nalebuff vigorously argue that a more “audacious” pattern of behavior would be beneficial.\textsuperscript{31} Also, as an empirical matter, it seems far too simple to attribute misperception of product use to a vague and general bias toward “optimism.” More recent scholars have emphasized the variety of cognitive limitations that might lead to arguably ill-advised borrowing. For example, some borrowing might relate to a misprediction of future self-control (such as a failure to appreciate the likely effects of hyperbolic discounting), a classic example of the optimism bias.\textsuperscript{32} Others recently have emphasized the possibility that scarcity creates a cognitive “load” that might force inattention to the costs of future borrowing.\textsuperscript{33} Still again, some of the borrowing is likely to relate to

\textsuperscript{30}See Manju Puri and David T. Robinson, Optimism and Economic Choice, 86 J. Fin. Econ. 71, 87-90 (2007). Indeed, Puri and Robinson document a broad range of choices in which optimism produces superior life outcomes; more optimistic people are likely to work harder, retire later, remarry, and the like. See id. at 84-87.

\textsuperscript{31}See Ian Ayres and Barry Nalebuff, Lifecycle Investing: A New, Safe, and Audacious Way to Improve the Performance of Your Retirement Portfolio (2010).

\textsuperscript{32}See Paige Marta Skiba and Jeremy Tobacman, Payday Loans, Uncertainty, and Discounting: Explaining Patterns of Borrowing, Repayment, and Default 3 (unpublished 2008 manuscript).

\textsuperscript{33}See Anuj K. Shah et al., Some Consequences of Having Too Little, 338 Science 682 (2012).
a misprediction of the income and consumption shocks necessary for repayment to occur.\textsuperscript{34} Thus, absent a research design that can distinguish among those causes, even empirical evidence that borrowers mispredict their use of the product well might reflect any number of problems more or less closely related to excessive optimism.

Against that background, it is distressing that those who seem so sure that all payday loan borrowers are making incorrect choices have failed to observe either the theoretical or empirical ambiguity that plagues their claims. Indeed, legal scholars writing about the role of optimism bias in consumer lending have not for the most part offered empirical evidence; rather they have imported the findings of the behavioral economists and psychologists into this context, using the possibility of optimism bias to explain increases in consumer borrowing.\textsuperscript{35} Hence, empirical work about the prevalence and significance of optimism among payday loan borrowers has come from other venues. An important paper by Bertrand and Morse\textsuperscript{36} tests the effectiveness of various disclosure forms in altering perceptions about how the product will work. Bertrand and Morse also surveyed borrowers about how long they

\textsuperscript{34}See Ronald J. Mann, After the Great Recession: Regulating Financial Services for Low- and Middle-Income Communities, 69 Wash. & Lee L. Rev. 729, 744-47 (2012) (emphasizing that problem).


\textsuperscript{36}Marianne Bertrand and Adair Morse, Information Disclosure, Cognitive Biases, and Payday Borrowing, 66 J. Fin. 1865 (2011).
believed payday loans typically remain outstanding; about half the borrowers in their study thought that loans typically remain outstanding beyond the base two-week period. A recent survey by researchers at the Center for Financial Services Innovation asked a sample of borrowers using a variety of alternative financial services, after the fact, if it “took more time than expected to repay the loan.” Of the payday loan borrowers, only 32% reported that it did take longer than expected.\textsuperscript{37} Similarly, the 2013 report from the Pew Project addresses this question obliquely, finding on the one hand that the overwhelming majority of borrowers report the terms of the transactions as clear but at the same time report that they do not have funds in their monthly budget to repay the loan in one cycle.\textsuperscript{38}

Collectively, those studies suggest that payday lending borrowers understand that many borrowers roll over their loans, and that this understanding is, at the most general level, accurate. Neither study, however, sheds any light on the central factual question: how well do individual borrowers understand their own likely future behavior? If optimism in fact is driving these decisions, then borrowers systematically are likely to underestimate the time to repayment. That is the question that motivated this study.

\textsuperscript{37}Rob Levy and Joshua Sledge, A Complex Portrait: An Examination of Small-Dollar Credit Consumers 21 (unpublished 2012 manuscript).
\textsuperscript{38}See Pew 2013 Report, supra note 29, at 13-17.
3 Data and Methods

3.1 The Survey

3.1.1 Survey Design

Because the survey instrument was to be administered to borrowers at the point of borrowing, the interest in obtaining a high response rate suggested that it should be concise, limited to one side of a single sheet of paper. Limited by that constraint, the instrument inquires about borrower characteristics, use of the borrowed funds, and borrower expectations about repayment.

The questions eliciting background data mirror similar questions examined in the existing literature, and help to establish a baseline of the characteristics of the payday loan borrowers in the sample. The instrument collects information about race, age, gender, education, and prior experience with payday lenders.

On the second topic, the instrument offers thirteen specific uses. Borrowers can check as many as apply or add text into a catchall into which borrowers can add written comments; that question tracks precisely the question asked on that topic in Bertrand and Morse’s paper, with the addition of an option for education expenses.

The focal point of the survey is assessing the quality of borrower under-

39See, e.g., Lawrence & Elliehausen, supra note 6, at 305-08; Elliehausen, supra note 6, at 27-29; Michael S. Barr, No Slack: The Financial Lives of Low-Income Americans 148 (2012).
40Bertrand & Morse, supra note 36, at 1870.
standing of how the product will be used. Initially, the object was to take the topic of Bertrand and Morse’s paper\textsuperscript{41} and test the accuracy of perception, by comparing the borrower’s expectation to actual subsequent borrowing and repayment behavior. As it turned out, however, it was far more complicated than expected to modify the Bertrand and Morse survey question for this project.

The Bertrand and Morse survey included the following question: “What’s your best guess of how long it takes the average person to pay back in full a $300 payday loan? Please answer in weeks.”\textsuperscript{42} In modifying that question for use in this survey, several issues arose, which ultimately led to three separate questions on this topic. The biggest problem relates to the inherent ambiguity of what it means in this context to pay a loan “back in full.” As it happens, the law of many states (including the five states in which the survey was given) technically forbids “rollover” loans.\textsuperscript{43} Still, it is possible in most states (including all of the survey states other than Florida) for the lender to conduct same-day transactions in which a new loan is issued on the same day as the loan being paid off. Although the difference between a rollover (collecting a new fee and extending the term of the existing loan) and issuing a new loan shortly after repayment of the old loan might seem technical, it complicates the survey process considerably. For one thing,

\textsuperscript{41}Bertrand & Morse, supra note 36.
\textsuperscript{42}Bertrand & Morse, supra note 36, at 1876.
excluding borrowers who default on the first loan (and there were no such
borrowers in this dataset), all borrowers in fact pay the loan back in full at
the conclusion of the first pay period. Thus, if I had used the Bertrand and
Morse question without revision (asking how many weeks it would take for
a loan to be paid “back in full”), all borrowers who understood the product
and answered truthfully would have responded with an answer indicating
the original date of maturity (in this dataset typically something less than
14 days). Yet, if the question is designed to test perceptions about rollovers,
such answers would indicate ignorance of the likelihood that many if not
most of the borrowers would take out a new loan shortly after repayment of
the original loan. Because of the difficulty of separating the responses that
might reflect a literal reading of the question from those that might reflect a
colloquial reading of the question, I decided to phrase the question differently.

Trying to ask a question that could be answered with literal accuracy in
an informative way, I revised the Bertrand and Morse question and divided it
into two separate questions. The first asks about the borrower’s anticipation
of whether the survey loan will be rolled over: “Do you expect to continue
this borrowing after the due date of this loan?” Paired with that question is a
followup about the extent of likely rollovers, roughly parallel to the Bertrand
and Morse estimate: “If so, for how many additional weeks?” To be sure, this
question is more complex than the Bertrand and Morse question, and thus

\footnote{It is apparent, in accordance with applicable local law, that none of the loans in this
dataset were rolled over at their original date of maturity.}
poses a risk that subjects will not understand what the question is asking, but ultimately I decided that the virtue of precision justified the more complex phrasing.

A second problem relates to a mismatch between rollovers as the problematic aspect of the product and borrowers being mired in a long-term debt relationship as the ultimate policy concern.\footnote{E.g. D. Graeber, supra note 4; L. Hyman, supra note 4.} Even if we extend the concept of rollovers to include substantially contemporaneous new borrowings (the subject of the revised question discussed above), we have missed much of what makes the pattern of payday borrowing troubling. In truth, even if a borrower does not roll a loan over, but instead repays the loan out of incoming salary, the borrower has not become free from the cycle of payday borrowing until the borrower goes an entire pay cycle without a new loan.\footnote{For a detailed discussion of that problem and the weakness of typical state regulatory responses, see Mann and Hawkins, supra note 1, at 898.} Thus, the proper topic of inquiry is the length of the borrowing cycle – starting from the initial loan, how much time elapses before the borrower is free from debt in the sense of going an entire pay period without a new loan.\footnote{For a similar technique constructing the “spell” of an individual’s borrowing, see Marc Anthony Fusaro and Patricia J. Cirillo, Do Payday Loans Trap Consumers in a Cycle of Debt (unpublished 2011 manuscript).}

The final question of the survey attempts to gauge expectations about that broader notion of repayment: “We’d like to understand more about your overall financial picture. How long do you think it will be before you have saved enough money to go an entire pay period without borrowing from this
lender? If you aren’t sure, please give your best estimate.”

3.1.2 Survey Administration

With the cooperation of a large national payday lender, the survey instrument was administered to borrowers at payday lending stores in a group of five states during the summer of 2012; the goal was for administration to continue at each store until the total number of surveys had reached approximately 1200. The survey was presented to every other eligible borrower. To ensure that the borrower was not in the middle of a borrowing cycle, borrowers who had borrowed during the preceding 30 days were not eligible. Aside from that exclusion, all borrowers approved for loans were eligible. The reason for presenting the survey only to alternate borrowers was to limit the possibility that potential borrowers would come to the store for the purpose of receiving the modest survey compensation ($10). In the end, the survey was presented to 1374 borrowers. The response rate was quite high; only 48 refused, for a response rate of 96.5%.\footnote{Unfortunately, I did not receive loan numbers for the 48 borrowers who refused the survey. As a result, I cannot compare the borrowing characteristics of those borrowers who refused the survey to the borrowing characteristics of those that completed it.} Table 1 summarizes the distribution of the surveys and store locations among the five states.

3.2 Lender Data

Because the purpose of the project was to assess the accuracy of borrower expectations about the product, it was crucial to obtain data about the
actual borrowing and repayment practices of the survey subjects. The lender provided access to complete data about all borrowers for a period of twelve months. Access to this type of data is crucial, because it makes it possible to study the actual patterns of borrowing and repayment at the individual level. For this particular project, it allowed me to examine two aspects of the behavior of payday borrowers that has not previously been studied. First, as discussed above, it allowed me to calculate the actual borrowing cycles for each borrower – I was able to determine for each borrower who answered a survey how long from the date of the contemporaneous loan elapsed before the borrower went an entire pay period without borrowing. Second, because the survey displays the borrower’s expectations about repayment behavior, I was able to compare the borrower's expected repayment behavior to what actually transpired.

<table>
<thead>
<tr>
<th>State</th>
<th>Locations</th>
<th>Surveys</th>
</tr>
</thead>
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<td>California</td>
<td>24</td>
<td>374</td>
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<tr>
<td>Florida</td>
<td>14</td>
<td>447</td>
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<tr>
<td>Kansas</td>
<td>4</td>
<td>86</td>
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<td>Louisiana</td>
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<td>60</td>
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<tr>
<td>Total</td>
<td>58</td>
<td>1326</td>
</tr>
</tbody>
</table>

Table 1: Summary of Survey and Store Distribution
4 Results

The most important results of the survey relate to the central questions that motivated the project; three topics warrant detailed discussion. First, most borrowers expected that they would continue borrowing for some time after the initial loan. This undermines the notion (characteristic of much of the legal literature on the subject) that the repeated borrowing that is typical of payday borrowers generally reflects surprise on the part of the borrowers or deception on the part of the lenders. Second, the borrower’s predictions about their future repayment behavior, although imperfect, are surprisingly accurate. On the principal question – when would the borrower be free from borrowing for an entire pay period – about 60% of the borrowers predicted the final repayment date with reasonable accuracy (within a 14-day window, as discussed below). That is to say, most borrowers could predict to within one pay period when they would be free of debt. Third, most surprisingly, the demographic characteristics do little to differentiate borrowers in explaining the accuracy of predictions. The strongest and most consistently significant predictor of accuracy are heavy prior use of the product, which relates substantially to poor predictions, and the nature of state regulation, which leads to substantial variation in the quality of predictions (presumably because of differences in the pool of borrowers).
4.1 Borrower Characteristics

Before turning to the substantive results, a few words about the characteristics of the borrowing population are warranted. Figure 1 summarizes the distribution by race, gender, age, and educational attainment. As the figure indicates, payday loan borrowers are less likely to be white (less than 25%) and more likely to be black (about 50%) than the general population, more likely to be female (about 60%), likely to be relatively young (the modal group is aged 25-34), and likely to be relatively educated (more than half have attended college). In general, those characteristics are consistent with the findings of prior academics that have collected similar information about payday lending customers.

In general, those characteristics are consistent with the findings of prior academics that have collected similar information about payday lending customers. The data about the uses to which the funds are put are also, broadly speaking, similar to prior survey results asking about similar topics. In general, they show that the dominant use (about two-thirds of all borrowers) is for ordinary recurring expenditures (rent, utilities, groceries, or the like). A much smaller share (about 10%) respond to emergencies, and an even smaller share (less than 5%) are for leisure expenditures (gifts, dining, and the like).

There is a substantial group that reports attending college, but that has not achieved a B.A. degree or the equivalent. This is in part due to the young age of that portion of the sample and the concomitant likelihood that their postsecondary education is ongoing.

See supra note 39 (summarizing prior similar data collections).

About 17% report uses in multiple categories. For comparison, the similar figures from the Pew Project’s survey appear in Pew 2012 Report, supra note 2, at 14. Having said that, it does seem likely that the Pew sample involves a considerably less creditworthy group of borrowers than the sample analyzed here. See Pew 2013 Report, supra note 29, at 33 (discussing overdraft rates in the Pew sample). This most likely relates to the
Figure 1: Demographic Characteristics of Borrowers. Histograms display distribution of demographic characteristics based on survey responses of borrowers. N=1318-1324.
Figure 2: Planned Uses of Borrowed Funds. N=1069. Histograms based only on responsive surveys.
4.2 Ex Ante Understanding of Continued Use

The most straightforward information to come from this survey involves the expectations of payday lending borrowers about the expected length of their borrowing. As summarized above, the survey asked a series of closely related questions on that topic. However the question was phrased, a large group of borrowers expected, at the time of their loans, that they would be using the product continuously for a considerable time. So, for example, when asked whether they would “continue” their borrowing after its original due date – essentially whether they anticipated rolling over their loans – 40% (n=518) thought that they would and another 2% (n=19) wrote in an answer indicating in one way or another that they couldn’t be sure (“don’t know” “idk” “maybe” “not sure” etc.).

What is most notable, however, is the variability of expectations about how long the borrowing would continue (the followup question to the question whether the borrowing was expected to continue). As the first panel of Figure 3 displays, among the borrowers who offered an estimation as to when they

inclusion in the Pew sample of a large number of online customers. See Pew 2013 Report, supra note 29, at 55 (Pew sample includes 451 storefront customers and 252 internet customers). Because those lenders are not readily supervised by state regulators, there is a strong likelihood of more abusive lending and collection practices, and considerable reason to think that the borrowing pool is less creditworthy. See, e.g., Jessica Silver-Greenberg, Major Banks Aid in Payday Loans Banned by States, N.Y. Times, Feb. 23, 2013, available at www.nytimes.com (last visited Mar. 7, 2013); see also Pew 2013 Report, supra note 29, at 16 (reporting that more than twice as money online customers think terms are unclear as storefront customers).

That answer resonates with the concerns emphasized in Mann, supra note 34, at 744-47, about the inherent unpredictability of a solution to the financial problems of the desperate.
would repay their debt, a substantial group (more than half) expected that it would take more than 20 days, which is to say, that they expected that the borrowing would continue for more than two weeks beyond the due date of the original loan. To put it another way, a majority of the respondents to that question contemplated at least three consecutive loans.

Because of the practical ambiguity about what it means to “continue” borrowing in a system in which rolling over a loan is formally unlawful (and thus something that apparently does not happen in any of the stores covered by the survey), the broader question about when the borrower expected to be debt free for an entire pay period seems considerably more instructive about the reality of borrower expectations. The data also suggest some reason to believe that the question made more sense to the borrowers, because they responded to it much more readily: only two-thirds (340/518) of the borrowers who said they would “continue” borrowing responded to the question “how long,” but 80% of the borrowers (n=1072) who answered surveys responded with a numeric answer to the question how long it would take for them to be clear of debt.

The second panel of Figure 3 summarizes the results for that question.

\footnote{For a variety of reasons, the number of respondents providing a numerical response to that question was relatively small (n=340). For one thing, the instrument sought a response only from those that expected to “continue” their borrowing after the initial loan (a little less than half of the respondents). Furthermore, even among the group who did indicate they expected to continue, a substantial group of respondents (about a third) did not answer the question. Finally, as noted above, a number of respondents (about 20) responded with written text indicating in one way or another that they could not be sure when the borrowing would end.}
Figure 3: Expected Borrowing Patterns. First panel (n=340) depicts the number of days the borrower expected the borrowing to continue beyond the original due date; second panel (n=1072) depicts the predicted number of days from loan date to date when borrower expects to be free from debt for an entire pay period. Histograms based on numerical responses only.
The responses suggest a relatively long period of expected borrowing. Thus, looking only to the numerical responses, fully half of all borrowers expected to remain in debt three weeks or more; the mean response was 36 days. Because this question was asked of all borrowers (not only those who expected to continue in debt past the period of the original loan), it indicates yet again, using this somewhat different metric, that most of the borrowers expected that they would borrow again after the initial period of debt. What is most striking is the long right tail of the distribution. Fully ten percent of respondents expected to remain in debt 70 days and 5% to remain in debt more than 110 days.

### 4.3 Predicting Freedom from Debt

The survey responses discussed in the preceding section are not unique. Although the questions are modified somewhat (as discussed above), they are in substance similar to the questions Bertrand and Morse asked about the borrower’s understanding of typical product use. What is novel about this data structure, however, is the ability to match those predictions to the actual behavior of the borrowers, which allows a direct test of the extent to which excessive optimism about future behavior relates to borrower use of the product. It is also important that this study examines the cycle of repayment, rather than the narrower question of rollovers. By examining the entire cycle, I get a much more extended (and realistic) understanding of the continuing indebtedness related to a single loan.
There is, to be sure, a glass half-empty/half-full quality to assessment of the responses. As with the effects of the disclosures that Bertrand and Morse discuss,\textsuperscript{54} assessments of borrower psychology depend directly on a baseline intuition about “typical” or “normal” psychology. So, in this case, an assessment of whether the borrower’s predictions are “surprisingly” accurate, inaccurate, optimistic, or pessimistic depends directly on a baseline about how accurate such predictions reasonably could be expected to be.

As it turns out, the difference between the outcomes and predictions is quite varied, with a considerable number of borrowers becoming clear from debt earlier than expected and a considerable number becoming clear from debt later than expected. Given the rough quality of the predictions (which the survey instrument requests in weeks), it makes little sense in evaluating the predictions to ask whether the debt was repaid on the precise date predicted. Thus, in making a rough judge of the quality of the predictions, it seems sensible to provide for a window on either side of the precise date. Because the lending cycle for these borrowers is the pay period, and because the overwhelming majority of the borrowers appear to have a two-week pay cycle, I ultimately decided to analyze whether the prediction of the date on which the borrower will be clear of debt falls within two weeks of the actual date on which the borrower turns out to become clear of debt.\textsuperscript{55} From that

\textsuperscript{54}See Bertrand & Morse, supra note 36, at 1889-90.

\textsuperscript{55}For purposes of these calculations, this is the number of days from the date of the surveyed advance to the date the borrower repays a loan and has no new borrowings for a period that exceeds fourteen days. For purposes of these calculations, the five borrowers who defaulted on their loans without making payment are treated as late.
Window of Predictions | % On-Time
---|---
7 Days | 51%
14 Days | 57%
21 Days | 63%

Table 2: Accuracy of Predictions of Payday Borrowers. N=1072.

perspective, Table 2 summarizes the central findings of the essay. As the Table indicates, almost 60% of respondents managed to become free of debt either before or within two weeks of their predicted date of clearance. To test the robustness of that estimate, I made parallel calculations using 7-day and 21-day windows. Those produced results that bracketed the 57% figure for the 14-day window: 51% for the 7-day window and 63% for the 21-day window. To put it conversely, only 43% failed to clear themselves from debt within two weeks of their predicted date and less than half were late by more than a week. That is, of course, not an insignificant share, but it does suggest that a strong majority of those using the product have a basic understanding of what will happen when they borrow.

4.4 The Role of Demography and Experience

Although the findings summarized in the previous section suggest that the quality of borrower predictions is reasonably good, it is important to consider the possibility that the quality of predictions relates substantially to race, gender, age, or education. If it were clear, for example, that borrower predictions were systematically less accurate for low-income, elderly, or mi-
nority populations, those findings would be considerably less reassuring than they seem at first glance. Figure 4 is a dotplot that summarizes the results of a logistic regression model assessing those relationships. The dependent variable is whether the particular borrower was more than 14 days late in becoming clear from debt, as compared to the borrower’s prediction in the survey instrument. The model includes explanatory variables for the borrower’s race, gender, age, education, state of residence, and prior experience with the product. The reference borrower is a white male 25-34 years old residing in California with a college education and some prior experience (reporting 1-10 prior transactions) with payday lending.

Because the dataset is relatively small, there may be relatively small effects undetected here, but in general the regressions largely exclude the possibility that demographic characteristics of the borrowers have a substantial effect on the accuracy of borrower predictions. For example, with respect to

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56 The dotplot (or nomogram) shows the estimated coefficient, represented by the dot, and 95% confidence intervals, represented by the bars. Visually, the nomogram is preferable to a tabular presentation because it is easier to compare the relative size and direction of the coefficients, while allowing statistical significance to be inferred from the ends of the confidence intervals. See, e.g., Andrew Gelman et al., Let’s Practice What We Preach: Turning Tables into Graphs, 56 Amer. Statistician 121, 121-29 (2002); Lee Epstein et al., On the Effective Communication of the Results of Empirical Studies, Part II, 60 Vand. L. Rev. 799, 836-37 (2007); see also Lee Epstein et al., On the Effective Communication of the Results of Empirical Studies, Part I, 59 Vand. L. Rev. 1811, 1827-35 (2006) (discussing deficiencies of the commonly used tabular display of coefficients and confidence intervals).

57 I investigated the possibility that those effects related to the purpose for which the borrower obtained the initial advance, but found no significant relationships (either for individual purposes or for a variety of aggregated groups of purposes). That well might relate to the relatively small number of borrowers that sought loans for the various purposes included on the survey.
Figure 4: Nomogram Predicting Results from Logistic Regression Analysis of the Effects of Geography, Demography, and Experience, on Predicting Product Usage. N=1041. Panels depict coefficients with 95% confidence intervals for logit regression model estimating the relation between listed borrower characteristics and the likelihood that the borrower’s predicted date of debt clearance will be more than 14 days late. The reference borrower is a white male 25-34 years old residing in California with a college education and some prior experience with payday lending. Although the effects are nonlinear, textual interpretation of the coefficients uses the “divide by 4 rule,” which approximates the effects at the steepest point of the logistic curve.
race, all of the race variables included in the model have positive coefficients, suggesting a greater likelihood of unexpectedly late payment for nonwhite respondents than for white respondents, but none of the coefficients is significant even at the 10% level. Similarly, gender appears to be wholly irrelevant. Age produces a substantial result only for the 55-64 year old group, who appear to be about 11 percentage points more likely to have underestimated the repayment period than 25-34 year olds; against a mean of 37%, that reflects an increased likelihood of late payment of about 30%.

At the same time, geography (presumably at least in part a proxy for differences in the local legal regime) does appear to play a substantial role. Borrowers in Florida are about 12 percentage points less likely to pay later than expected (as compared to California borrowers), where borrowers in Kansas are about 25 percentage points more likely to pay later than expected. The small sample from Oklahoma suggests a likelihood of later-than-expected payment elevated by 15 percentage points, significant only at the 10% level. Although the small group of states in which the survey was administered makes it difficult to interpret those results, it is instructive to look briefly at the differing regulatory regimes in the five survey states to consider potential explanations.

Interestingly, the most constraining regulatory system among the survey states matches up with the outlier on predictive accuracy. Florida’s regime is on each of the dimensions summarized in the table the most restrictive: the lowest interest rate, the only defined cooling-off period, and database-
<table>
<thead>
<tr>
<th>State</th>
<th>Highest Lawful Fee (per $100)</th>
<th>Rollover Constraints</th>
<th>Multiple Lender/Database Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>$15</td>
<td>Direct rollovers prohibited</td>
<td>None</td>
</tr>
<tr>
<td>Florida</td>
<td>$10</td>
<td>24-hour cooling off period</td>
<td>24-hour cooling off period applies to all lenders; database verification required</td>
</tr>
<tr>
<td>Kansas</td>
<td>$15</td>
<td>Direct rollovers prohibited</td>
<td>None</td>
</tr>
<tr>
<td>Louisiana</td>
<td>$16.75</td>
<td>Permitted with $25 partial payment</td>
<td>None</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>$15</td>
<td>Direct rollovers prohibited</td>
<td>No more than two loans (from all lenders) permitted at any time; database verification required</td>
</tr>
</tbody>
</table>

verified limitation to one loan. At the same time, as Figure 4 illustrates, Florida borrowers are substantially more accurate than the norm in this data. The most likely explanation is that the Florida borrowers are systemically less risky because the low-interest rate cap and other features of the Florida statute\(^{58}\) limits Florida stores to a more financially stable group of borrowers than the regulatory regimes in the other states.\(^{59}\)

Finally, prior experience with the product has a marked effect, with heavy users (those self-reporting more than 10 prior payday loans)\(^{60}\) being more than 11 percentage points more likely to pay late. This suggests a direction for the relation between product usage and understanding: it is not that

\(^{58}\)Among other things, the Florida statute also includes a 24-hour cooling-off period enforced by a database enforcement scheme that is more rigorous than in any of the other surveyed states.

\(^{59}\)It is difficult to tell whether this result is better, or worse, than the results in other States, because it obviously reflects a constraint of credit to the customers to whom it would be profitable to lend under the regulatory regimes of other States. Moreover, it seems quite likely that at least some portion of the relatively less creditworthy borrowers to whom it is unprofitable to extend loans under Florida’s regime are resorting to online lenders (whom Florida’s regulatory system cannot, practically, control). The Pew Project does suggest that stronger regulatory regimes do not result in an increased level of online borrowing, see Pew 2012 Report, supra note 2, at 5, 22, but the amount of data on which that conclusion is based makes it difficult to accept at face value. Among other things, it is plain that the number of borrowers from any particular state is quite small (there are only 451 borrowers in the nationwide sample for the 2012 report, see Pew 2012 Report, supra, at 32), which makes it impractical to conduct separate statistical analysis on a state-by-state basis of likely predictors of payday borrowing. Thus, the finding that online borrowing is no higher in aggressive regulatory regimes than in lax regulatory regimes well might relate to the demand for borrowing in the aggressively regulated states (with a relatively low demand for this kind of borrowing relating both to the tolerability of an aggressive regulatory regime and the limited demand for online borrowing).

\(^{60}\)The survey excludes borrowers who had a loan in the immediately preceding thirty days. The question about prior usage was designed to explore lifetime experience with the product, rather than short-term financial stability. I note that by excluding a group of possibly heavy users that feature of the data collection likely results in a less experienced, but possibly more creditworthy, sample.
understanding of the product comes from prior use. Rather, it is that heavy
users of the product tend to be those that understand least what is likely
to happen to them. Related to that point, it appears that those who pre-
dict long borrowing periods are those most likely to err substantially in their
predictions.\textsuperscript{61} Specifically, the likelihood of unexpectedly late payment in-
creases substantially with the length of the borrower’s prediction. This does
not necessarily mean that heavy users are those that understand the product
the least; it may simply indicate that they are the individuals who are in the
most serious financial distress, for whom freedom from debt is most difficult
to predict.\textsuperscript{62} In either event, however, it suggests that prior experience with
the product is not an important indicator of improved understanding.

\section{Implications}

Like the findings Bertrand and Morse report,\textsuperscript{63} the findings reported here
cut in two directions. On the one hand, they suggest that a substantial
share of payday lending is rational, in the sense that the borrowers generally
understand the outcome of product use at the time they receive an advance
of funds. It is not easy, as they note, to develop policy proposals based on
data that suggest that large groups of borrowers use the product with an

\textsuperscript{61} A T-test suggests that the difference between the likelihood of error for the quartile of
borrowers with the shortest predicted borrowing cycle and the likelihood of error for the
quartile of borrowers with the highest predicted borrowing cycle is significant at the 1\%
level.

\textsuperscript{62} I emphasize the likely prevalence of that problem in Mann, supra note 34, at 744-47.

\textsuperscript{63} See Bertrand & Morse, supra note 36, at 1889-90.
understanding of their future behavior.

Still, the findings are provocative against the backdrop of the understanding of the product that dominates legal and policymaking circles. As suggested above, the basic premise of the regulatory community to date (as reflected in the work of Bar-Gill, Warren, and the Pew Project\textsuperscript{64}) is that all uses of the product that lead to a cycle of borrowing are problematic—either because they rest on a prior misunderstanding of the product or, more seriously, because they demonstrate deceit by the lender. That premise, if true, implicitly supports a substantial prohibitory intervention related to the rollover feature of payday loans, at least under the standard behavioral economics theory of regulation. Although behavioral-based regulatory theorists generally suggest that regulators should aim strongly toward a “nudge,” and should avoid prohibitory regulation, they do recognize the propriety of prohibitory paternalistic intervention that aids an overwhelming majority of borrowers—“asymmetric” paternalism in the terminology of its most sophisticated advocates.\textsuperscript{65} If it were true, then, that an overwhelming majority (or all) payday lending borrowers who roll over their loans do so because of misperception, then prohibitory intervention would make sense.

\textsuperscript{64}See most notably Bar-Gill and Warren, supra note 10, at 44; Pew 2012 Report, supra note 2, at 13; Pew 2013 Report, supra note 29, at 19.
The findings summarized above, however, contradict that argument at its first step. Specifically, they document a set of borrowers, most of whom accurately understand, when they first borrow, how long it will take them to get free of their debt. More generally, those findings are in tension not only with the specific application of the optimism bias idea to payday lending but with the generally quick acceptance, without empirical investigation, of the idea that substantially all of the financial behavior of the less sophisticated are plagued by such misperceptions. That finding has two direct implications for regulatory design. First, it strongly undermines the likely efficacy of even a relatively forceful “nudge,” the kind of “sticky default” that Michael Barr and Sendhil Mullainathan have advocated for mortgage regulation.66

Second, it starkly undermines the conventional case for modern prohibitory behavioral regulation. As summarized above,67 the “golden rule” of regulation sought by the leading school of behaviorally influenced policymakers rests on the empirical premise that substantially all of the affected population would make the choice sought by the regulator (in this case, not to roll over the loan, or not to enter into it if roll over seemed likely). The empirical assumptions of Bar-Gill, Warren and others play directly into that

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66 See Michael S. Barr et al., The Case for Behaviorally Informed Regulation, in New Perspective on Regulation 27, 43-48 (David Moss & John Cisternino eds. 2009). Mullainathan is now the Assistant Director for Research at the CFPB, and it is reasonable to think his views influenced the CFPB’s recently promulgated comprehensive reform of mortgage disclosure regulation. See Bureau of Consumer Financial Protection, High-Cost Mortgage and Homeownership Counseling Amendments to the Truth in Lending Act (Regulation Z) and Homeownership Counseling Amendments to the Real Estate Settlement Procedures Act (Regulation X); Final Rule, 78 Fed. Reg. 6856 (2013).
67 See supra note 65
regulatory framework. But without those empirical assumptions, the case for a “golden” exercise of asymmetric paternalism is simply not available.

To be sure, at first glance there might seem some cause of concern for the 40% of borrowers who do not accurately foresee their use of the product. The natural question, however, is what share of borrowers could predict their future use of any modern financial product. Because scholars have not conducted similar surveys for other competing financial products, it is difficult to compare the approximately 60% share of payday lending borrowers who have a reasonably accurate perception of how they will use the product with the shares that could make similarly accurate predictions about other financial products. Still, many products might fare much worse on that metric. Is it fair to expect, for example, that 60% of those who borrow on a credit card could predict within two weeks the date on which they would finally repay all outstanding debt on the card? It would make little sense for regulatory intervention based on misperception to shift borrowers to other products that are plagued by higher rates of misperception than payday loans.

The closest recent information on this subject comes from Levy and Sledge’s study, which asks users of a variety of alternative financial services whether it took them longer than expected to repay the loan. Their results

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69 Levy & Sledge, supra note 37.
70 See Levy & Sledge, supra note 37, at 21. Because Levy and Sledge inquired about product use retrospectively – asking borrowers about their past use – it is possible that their results overstate the accuracy of borrowing expectations: we might expect borrowers after the fact to remember their performance as having been better than it actually was.
suggest that payday loans are not an outlier with respect to predictability of repayment: they found that 32% of payday lending borrowers reported taking longer than expected to repay their loans, as compared to 32% of auto title loans, 29% of pawn loan borrowers, and 20% of bank deposit advance borrowers.\footnote{Levy & Sledge, supra note 37, at 21.}

The obvious implications, then, are that the strongest case for direct regulation of payday rollovers is a direct exercise of paternalism, based not on the idea that informed customers would choose not to borrow when roll over seems likely, but rather on the regulatory conclusion that borrowers should not be allowed to have those loans even if they understand their consequences. Although this regulatory approach often is appealing to policymaking think tanks,\footnote{The 2013 Pew Report takes this tack directly. On the one hand, their survey results resonate strongly with the findings discussed above – they report that 88% of storefront customers say the terms of lending are clear. Pew 2013 Report, supra note 29, at 16.} it is much less likely to find favor with the more mainstream academic regulatory analysts. Thus, for example, Cass Sunstein has directly disavowed the propriety of this kind of regulation.\footnote{See Sunstein, Boundedly Rational Borrowing, supra note 35 (justifying “a firm presumption against strong paternalism” in the context of borrowing regulation). The detailed summary of regulatory strategies published after his stint in the Obama Administration does not even consider the possible propriety of this type of regulation. Cass R. Sunstein, Empirically Informed Regulation, supra note 18.} In this context, at least, with such a limited empirical understanding of either the factors that lead to such a high demand for high-cost credit or the factors that make other
credit alternatives seem so much more expensive to the customers,\textsuperscript{74} the quick choice of prohibitory regulation seems more like a palliative cop-out than a bold reform. In truth, what is needed is a better understanding of the financial problems of the increasing number of low- and middle-income households in our economy, coupled with a frank assessment about the problems with the social safety net that lead to the desperate demand for short-term credit that the Pew Project documents.\textsuperscript{75}

6 Conclusion

Payday loans are a fascinating topos for the regulatory analyst. Reviled for abusiveness by middle- and upper-class academics,\textsuperscript{76} the product remains intensely attractive to those for who it is designed. Thus, looking forward from the immediate regulatory possibilities discussed above, the findings suggest a wide variety of possibilities for further research. The most obvious possibility would be to probe the rationality of the borrowing decision in the first place. As discussed above, much literature has assumed that the decision to borrow expecting rollovers cannot be rational. If the data presented here suggest that most borrowers are making that choice consciously, it suggests the value of further inquiry into the longer-run status of balance-sheet deterioration of payday lending borrowers. Here, the suggestion of Agarwal and

\textsuperscript{74}See Mann, supra note 34, at 741-44 (discussing that problem).
\textsuperscript{75}See Mann, supra note 34, at 747-50 (making that point at length).
\textsuperscript{76}See Mann, supra note 34, at 739-40 (suggesting a link between the penchant for paternalistic intervention and the social class of those that seek it).
his co-authors that payday loan borrowing often reflects a long-term loss of liquidity from other sources such as credit cards, well might show the way to a broader understanding of the relevant balance-sheet problems.

Extending the work in a different direction, broader surveys of payday lending borrowers could explore the geographic variation identified above, with a view to identifying any relation between the share of misperceiving borrowers and the rigor (or laxity) of state regulation. Extension of the survey to online lenders (who have a much more aggressive business model) could explore the likelihood that the users of online loans are more likely to suffer from misperception. And more ambitiously, similar surveys of users of other financial products could document the relative accuracy of borrower understandings of those products. To the extent those products use different regulatory and disclosure regimes the comparative results might foster an understanding of the value (or futility) of those regimes. Similarly, to the extent that behavioral regulatory interventions more broadly are premised on misperception, such studies would help to focus interventions on the products where misperceptions are most pervasive.

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78 See supra note 51.