

COULD PEER-TO-PEER LOANS SUBSTITUTE FOR PAYDAY LOANS?

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ABSTRACT

Many consumer advocates consider payday loans—short-term, uncollateralized loans with high interest rates—to be predatory. The demand for short-term funding has spurred the quest for a substitute, an effort encouraged and supported by regulators like the Federal Deposit Insurance Corporation. In this paper, we evaluate the potential for online peer-to-peer markets to provide this alternative. We conclude that while certain features of peer-to-peer loans would be well suited (such as their longer terms, larger amounts, and multiple payments), the longer time to fund and the required minimum credit scores for borrowers present meaningful hurdles.

JEL: G18, G21, G28

KEYWORDS: Fringe Lending, Payday Loans, Peer-to-Peer Loans

INTRODUCTION

Payday loans have been called “one of the most expensive forms of credit in the world” (Skiba and Tobacman, 2008). A typical two-week payday loan costs \$15 per \$100 borrowed—a 391.07% APR, or 3,724% effective annual rate. Opponents accuse these extremely high-interest loans of drawing borrowers into a “debt trap.” The industry counters that its rapid growth proves that it is providing a necessary, welfare-enhancing service to its customers.

The fact that customers use payday loans does not imply that these loans are the optimal short-term product. In this paper, we evaluate a potential alternative, peer-to-peer (P2P) loans. In a P2P marketplace, potential borrowers post requests for loans, and potential lenders bid on those that interest them. A lender can bid as little as \$25 per loan, so it may take many lenders to fund a successful loan request. This more “democratic” process may lead to a more efficient outcome than can a payday transaction.

To evaluate the potential for the P2P market to provide short-term, unsecured, payday-like credit, we consider both the Prosper platform (the oldest P2P network in the United States, opened in 2006) and its highest-profile competitor, Lending Club. We find that, as the P2P market has evolved, its minimum loan sizes, bids per loan, and terms have all fallen, making it a more viable payday alternative. The biggest hurdles left are access, funding speed, and required credit score. However, we argue some payday customers nonetheless may be better off in the P2P market.

The paper proceeds as follows. In the next two sections, we review and evaluate the literature on payday loans and the payday borrower; this review allows us to characterize the market to which we want to apply the P2P approach. Given this characterization, we then evaluate the potential for P2P loans to serve the typical payday customer. The final section highlights the primary hurdles for short-term borrowers in the peer-to-peer market, suggests areas for future research, and concludes.

LITERATURE REVIEW

P2P loans cannot substitute for payday loans if they do not meet the needs of the payday customer. There is a significant literature describing the payday borrower, although much of it is primarily advocacy—written either by industry apologists or by consumer activists. In this section, we review the (smaller) literature from academics and regulators that more objectively characterizes the payday market. We concentrate on the demographics of the typical payday customer, the costs they incur, the number of loans they use, and the alternatives they have. We will see that payday customers are often lower-income minorities who use multiple short-term loans per year. If peer-to-peer loans are to be a viable substitute, they must meet the needs of this typical payday-loan customer.

One of the earliest studies of the payday market was Elliehausen and Lawrence's 2001 survey, which polled over half of the payday shops in the United States. They found customers who were Goldilocks borrowers, falling in the middle of many demographic categories. These borrowers were neither extremely well- nor poorly educated: almost three-fourths had a high-school diploma or some college. They were neither very old nor very young. Most were 25 to 49, making them older than the customers of pawnshop or finance companies, but younger than people who primarily use credit cards. (Pawnshops and finance companies are two types of "fringe" lenders, a category that also includes rent-to-own businesses, check cashers, refund anticipation lenders, auto-title lenders, and, most importantly for us, payday lenders.) Finally, their incomes were neither very high nor very low: just over half earned between \$25,000 and \$49,999, again between pawn and credit card borrowers.

Not all payday borrowers' incomes are this high, of course. Results of more recent studies, while broadly consistent with Elliehausen and Lawrence, suggest that many payday borrowers are lower-income. For example, Melzer (2009) asserts that the "vast majority" of payday borrowers have incomes between \$15,000 and \$50,000. Thus, his upper bound is comparable to Elliehausen and Lawrence's, but his lower bound—encompassing all borrowers, not just the majority—is much lower. Similarly, the average income in Skiba and Tobacman's (2005) sample was between \$18,000 and \$24,000; in Stegman (2007), it was between \$20,000 and \$30,000. These absolute income levels demonstrate that payday borrowers are not living in poverty, but they are certainly not "the 1%," either.

As for Lawrence and Elliehausen's findings on relative incomes, recent studies confirm that payday customers fall between pawn users and credit-card borrowers. At the upper end, Agarwal, Skiba, and Tobacman (2009) use a matched-sample study of payday and credit-card borrowers, finding that the average incomes for payday borrowers are "much lower" than those for their credit card group. In contrast, Buckland and Martin (2005) employ a sample that included several types of fringe activity, including pawning. They find that employed fringe borrowers have average annual incomes of between CD10,000 and CD20,000—levels consistent with the "notion that low income is a determinant in fringe bank use." However, by including pawn users, they included "lower-tier" customers whose incomes (usually below \$15,000) would generally screen them out of the payday market (Melzer, 2009). The average income in Buckland and Martin's sample therefore is lower than it would have been had they studied only payday borrowers. Thus, we can infer that the payday borrowers' incomes, as in Elliehausen and Lawrence, lie between those of credit card users and pawn users: lower income, but not poor.

Having placed payday borrowers in the middle categories for income, age, and education, we now turn to race as our final demographic descriptor. Temkin and Sawyer (2004) assert that it is "well established" that minority families are the primary clientele for payday lenders. Their survey evidence strongly supports this conventional wisdom. They studied eight urban counties to characterize the demographics of the residents and the availability of lending services. In seven of their eight counties, payday lenders were more concentrated in high-minority neighborhoods. (See also Skiba and Tobacman, 2009.) In particular, they were more prevalent in Hispanic neighborhoods: in all eight of the studied counties,

alternative providers clustered in neighborhoods where the proportion of Hispanic residents was higher than for the county as a whole. This was true for African-Americans in only two of the counties, and was not true at all for Asian-Americans. They conclude that “alternative financial providers [such as payday lenders] tend to cluster in neighborhoods that are disproportionately Hispanic.” Therefore, if peer-to-peer loans are to substitute for payday loans, it will be important to ensure proper outreach to this community.

Having reviewed the evidence on the demographics of payday customers, we now consider the supply side of the market. Here, the available data shows that payday borrowers have access to traditional banking products, but that they nonetheless repeatedly turn to expensive payday credit. This reliance on payday credit can aggravate the cashflow problems that led to the loans in the first place.

Most payday borrowers have traditional banks in their neighborhoods. According to Temkin and Sawyer (2004), fringe providers almost always share their neighborhoods with at least one bank, usually closer than seven blocks away. In fact, for all of their study areas with less than 75% minority population, banks outnumbered alternative providers. This was true regardless of a state’s regulatory environment; climates friendlier to alternative lending did not have higher concentrations of fringe lenders (although they might have a different mix). Thus, the “spatial void” hypothesis, which suggests that fringe lenders gravitate to areas with no other loan supply, appears false; wherever they live, payday customers probably have access to banks and their services.

Despite this access, payday customers turn to payday lenders, often many times per year. Although payday loans are marketed as short-term credit, critics charge that borrowers’ problems often are not resolved during one payday term, so that they end up rolling loans over multiple times. Indeed, the evidence for multiple rollovers is overwhelming. We summarize some of this evidence in Table 1. (See also Stegman, 2007.) This data clearly supports Flannery and Samolyk’s (2005) conclusion that “a substantial subset of [payday] borrowers appear to use the product chronically.”

Table 1: Evidence on Payday Loan Rollovers

Reference	Loans Per Yr.	Sample %	Notes
Skiba & Tobacman, 2005	8.4		average for borrowers paid biweekly
Skiba & Tobacman, 2005	9.6		average for borrowers in highest income quintile
Skiba & Tobacman, 2009	5.2		average number of additional loans taken out by first-time borrowers
Stegman, 2007		50%	% of payday borrowers who already have a payday loan outstanding
Stegman, 2007		75%	% of payday borrowers who cannot pay their loans when due (Oregon)
Freedman & Jin, 2008	6+	70%	(Wisconsin)
Elliehausen & Lawrence, 2001	7+	48%	
Skiba & Tobacman, 2008	10+	25%	
Flannery & Samolyk, 2005	13+	25%	
Melzer, 2009	13+	30%	
Skiba & Tobacman, 2008	20+	10%	
Freedman & Jin, 2008	20+	18%	(Wisconsin)

This table summarizes evidence from prior studies on payday loan rollovers. In the bottom half of the table, the “Sample %” column gives the proportion of surveyed borrowers who took out the number of loans specified in the “Loans Per Yr.” column. For example, 48% of Elliehausen and Lawrence’s (2001) sample took out at least 7 loans per year.

This chronic use is a concern for regulators. The FDIC’s (2005) examination and compliance guidelines for payday lending state that “[a]lthough the contractual term of each payday loan may be short, institutions’ methodologies for estimating credit losses on these loans should take into account the fact that many payday loans remain continuously outstanding for longer periods because of renewals and

rollovers.” They direct examiners to ensure that institutions issuing these loans establish policies that prohibit lending to customers who have had payday loans *from any lender* for three of the last twelve months. In 2005, the FDIC prohibited regulated institutions from making more than six loans per year to any borrower (Stegman, 2007). The industry also addresses rollovers in their (nonbinding) best practices, asking that lenders limit rollovers to four per year, at most.

However, chronic borrowers are critical for the profits of the payday loan industry. Data from North Carolina show that 85% of their payday lenders’ revenue comes from customers who take out more than six loans per year; 50% comes from those with more than 13 loans per year (CRA-NC, 2010). Stegman (2007) reports that the most important determinant of a payday store’s success, after the number of customers, is the percentage of customers who take out a new loan or roll over a loan at least once a month. Similarly, Flannery and Samolyk (2005) find that “high-frequency borrowers account for a disproportionate share of a payday store’s loans and profits.” While the latter authors are unwilling to assert that the profitable high-frequency borrowers necessarily are rolling over loans, they do note that the industry’s “current size...and prospects for future growth do reflect the activity of the frequent borrower.”

Of course, if payday loans were innocuous and inexpensive credit, critics would not worry about customers’ taking out multiple loans per year. However, research strongly links payday loans to borrowers’ financial distress.

The average payday borrower who defaults has already repaid or serviced five payday loans within the year, making total interest payments of 90% of the principal of his first loan (Skiba and Tobacman, 2008). Credit card customers who have taken out a payday loan are 92% more likely to become seriously delinquent—over 90 days late—than are those customers who have not (Agarwal, Skiba, and Tobacman, 2009). Payday loans clearly do not *solve* financial distress; in fact, Melzer (2009) finds “no evidence that payday loans alleviate economic hardship.”

Worse, they may exacerbate it. Payday loan access makes it more likely that households will pay rent and utility bills late or delay medical care (Melzer, 2009). For Air Force personnel, “payday loan access causes financial distress and severe misbehavior for relatively young, inexperienced, and financial[ly] unsophisticated airmen” (Carrell and Zinman, 2008). Skiba and Tobacman (2009) find that payday borrowers are over twice as likely as the general population to file Chapter 13 bankruptcy. These authors blame interest payments on rolled-over payday loans—accruing at very high rates and after very short terms—for being the straws that tip financially stressed borrowers into bankruptcy.

THE PAYDAY MARKET: ANALYSIS

In the previous section, we characterized the payday loan market. In this section, we evaluate that market by drawing on other strains of research, particularly the behavioral finance literature. Our goal is to determine if there are behavioral features of demanders and/or structural features of suppliers that—despite the potential drawbacks—make the payday loan optimal for certain borrowers.

First, we will consider the demand side of the market. Are there possible behavioral explanations for the clustering of payday lenders in Hispanic neighborhoods? More broadly, is there a behavioral rationale for the demand for high-rate, short-term credit?

While there is widespread recognition of the concentration of fringe lenders in minority neighborhoods, there is little evidence explaining it. The Hispanic Institute, in a paper supportive of payday access for Hispanics, makes several conjectures (Hispanic Institute, 2010). For example, they suggest that many recent Hispanic immigrants come from countries where banks are distrusted. Even if these immigrants trusted banks, the banks might not trust them, since traditional lenders often discriminate against

Hispanics. Banks usually do not locate in Hispanic neighborhoods (note that this assertion is contrary to the evidence in Temkin and Sawyer, 2004), and those few that do have hours that are inconvenient for shift workers. On the other hand, unbanked Hispanics who need to cash their paychecks, and perhaps to send money back to their home countries, will quickly become familiar with the payday lenders who also perform these services.

Buckland and Martin (2005) provide some evidence consistent with these conjectures. In their survey of fringe banking customers in inner-city Winnipeg, they find that lack of identification and desire for anonymity fuel demand for fringe banking services. Some of their respondents reported feeling discriminated against by mainstream banks if they were unable or unwilling to provide acceptable forms of identification; these customers preferred the “no questions asked” approach of fringe providers. Similarly, Washington (2006) cites a survey in which 18% of respondents report that they are “not comfortable dealing with banks,” and 9% of Elliehausen and Lawrence’s (2001) sample identified “privacy or a lack of credit reporting” as the primary reason for choosing a payday loan. Buckland and Martin (2005) conclude that these attitudes imply that some customers “are so often questioned about their identity, and not always for legitimate reasons, that they are ready to pay a higher price for a service that will treat them as regular and trusted clients.” If such attitudes are most common in Hispanic communities, they might help explain payday-lender clustering in Hispanic neighborhoods.

The behavioral finance literature also offers an (oblique) insight. Thaler and Shefrin (1981) suggest that families and role models often pass down their self-control mitigation rules—personal standards that allow people to manage the tension between their desire for current consumption and their need to save for future consumption. The authors predict that different groups would use different rules, where age, social class, and education might be valuable predictors. If different ethnic groups follow different norms, this might account for the concentrations of fringe lenders in certain neighborhoods. In fact, the Hispanic Institute (2010) makes a point of describing its community in terms of age, occupation, and education, contrasting the Hispanic community with the demographic coveted by traditional lenders; perhaps, then, we can posit that the Hispanic community follows norms amenable to payday lending. If so, then peer lenders would need to account for any such norms if P2P loans are to be a viable substitute.

The behavioral link between Hispanic culture and payday borrowing has not been fully explored in the literature. However, in their seminal study, Elliehausen and Lawrence (2001) tried a broader application of behavioral finance to payday lending in general, arguing that—for certain borrowers—use of extremely high-cost loans can be rational. Since their defense of the payday industry has framed the debate ever since, it is important to examine their arguments carefully.

Elliehausen and Lawrence first defend payday lending by invoking Juster and Shay’s (1964) model of consumer credit use. This model predicts that “rationed” borrowers with “relatively high-return investment opportunities, low current income, and strong preferences for current consumption” may rationally choose to borrow at high rates. Elliehausen and Lawrence suggest that such borrowers might be in early stages of their family life cycles (young parents) with low or moderate income and little savings. These borrowers would be more concerned with the term of a loan than with its stated rate.

However the types of loans envisioned by Juster and Shay were for household durables that provided a valuable stream of services over time. (“This monograph is concerned with the use of survey data on consumer anticipations as an aid to prediction of durable goods purchases”: Juster and Shay, 1964, p. 3.) These assets offer high rates of return, considering the opportunity cost. (For example, buying a washing machine can be immensely rewarding compared to the hassle of using a public laundry.) However, this rationale does not apply to payday borrowing, since borrowers are unlikely to use payday loans to buy household durables. Instead, these loans are “small short-term loans intended to carry a borrower through a temporary cash deficiency” (Flannery and Samolyk, 2005). In fact, in their report on use by Hispanic

borrowers, the Hispanic Institute (2010) bases its defense of the industry on the fact that payday loans are used for “basic living expenses and emergencies, and...normal bills.” Similarly, Buckland and Martin (2005) find the top uses for payday loans were school supplies, childcare expenses, expenses for travel to visit sick relatives, and presents for birthdays and Christmas. Elliehausen and Lawrence assert that over half of their respondents had a payday loan outstanding because their survey was taken around Christmas. They summarize: the “[u]se of payday loans is determined more by unplanned events than by the characteristics of the consumer or the consumer’s financial circumstances... nearly two-thirds of customers reported unexpected expenses or shortfalls in income as the reason for their most recent payday loan sequence.” Given the consensus on the uses of short-term loans, Elliehausen and Lawrence’s appeal to household durable purchases to justify the high rates charged by payday lenders does not work.

The authors then turn more directly to behavioral economics to defend payday lending, specifically to the “precautionary motive for saving” and “precommitment.” The precautionary motive for saving supposes that consumers want to preserve valuable liquidity for future emergencies, and are reluctant to draw down their liquid assets even for large expenditures. These customers would rather borrow at high rates than deplete their cash cushion—implying that the “subjective” yield they earn on their liquid assets can be higher than the rates on payday loans. However, for the precautionary savings motive to be relevant, a borrower must have liquid assets to protect. In Elliehausen and Lawrence’s own survey, “payday customers have very limited liquid assets”: only 16% of the respondents had sufficient funds in checking and savings to cover their most recent advance. The argument has theoretical difficulties as well; for example, in Skiba and Tobacman’s (2005) model, the income shock necessary to induce rational borrowers to resort to payday loans is *larger* when they allow a precautionary motive for saving.

Precommitment also seems an unlikely justification for payday borrowing. The precommitment motive for borrowing implies that consumers appreciate the discipline imposed by a loan. These consumers worry that, without a contractual obligation, they may be unwilling to save for large purchases, repay depleted assets, or restore utilized credit lines. However, payday borrowing may not be the best way to combat these fears. In Thaler and Shefrin’s (1981) model of self-control, precommitment is the most extreme form of rule-setting: it is a way of altering the opportunity set of an actor such that all of his discretion is eliminated. Such restrictive rule-setting can be rational in their model only if the outcome is comparable with what would obtain if the actor had no self-control problems. Using this standard, it is difficult to interpret a payday loan to be a rational precommitment mechanism. If payday loans are used for their advertised purpose—bridging short-term income gaps—then they are too short to engender meaningful savings discipline. On the other hand, if the loans are rolled over (as we know they often are), then payday loans still are not optimal; borrowers who need this type of credit, and who had no self-control problems, would be much better off with lower-rate revolving debt.

Skiba and Tobacman (2008) propose another application of precommitment, linking it to default. Default can serve as a type of discipline, since defaulters must stop borrowing. Perhaps borrowers take out a payday loan planning to default, so that they cannot borrow again. However, this proposed strategy does not fit the facts. In reality, payday borrowers wait *too long* to default, rolling through five loans—paying in interest 90% of the original loan’s value—before defaulting. This is more consistent with the characterization (from Elliehausen and Lawrence themselves) that payday borrowers “may lack self-control or have poor financial management skills that cause them to live from paycheck to paycheck for extended periods of time” than it is with the idea that these borrowers choose payday loans to enforce self-discipline.

These demand-side defenses for payday lending are not convincing. Consumers use payday loans, but the behavioral explanations advanced so far do not imply that these loans are the *best* type of short-term credit to meet their needs. We now turn instead to some supply-side considerations: the alternatives

available to borrowers, and the costs of payday lending. Perhaps customers choose payday loans because they have no choice; perhaps those loans have high fees simply because they are so expensive to make.

We noted earlier that payday customers probably have banks in their neighborhoods. In fact, by definition, payday borrowers must access at least one bank service, since a payday loan requires a post-dated check. Therefore, bank overdrafts are a logical alternative to payday loans, and many authors have identified protected overdrafts as the closest payday substitute. (See, for example, Carrell and Zinman, 2008; Morse, 2009; De Young and Phillips, 2009; Flannery and Samolyk, 2005; Elliehausen and Lawrence, 2001; and Morgan and Strain, 2008.) However, overdrafts are expensive, and may be especially so for customers in areas served by payday lenders. Melzer (2009) shows that, in these areas, banks charge higher fees for bounced checks and overdrafts, and customers are more liable to have their checking accounts closed involuntarily. And, as noted earlier, banks may not keep the convenient hours that payday shops do, and may require more intimidating processes and interactions than payday lenders (Elliehausen and Lawrence, 2001; Buckland and Martin, 2005). Thus, bank overdrafts, while accessible, may not be viable substitutes for payday loans for some customers.

Credit cards may be another alternative. Most payday borrowers do have credit cards (Elliehausen and Lawrence, 2001; Agarwal, Skiba and Tobacman, 2009). However, 61% of Elliehausen and Lawrence's sample could not use their cards because they were too close to their credit limits. In contrast, two-thirds of borrowers in Agarwal, Skiba and Tobacman's (2009) matched sample still had had at least \$1,000 in unused credit on their cards when they took out their first payday loan. However, their liquidity was deteriorating quickly: their available card credit had shrunk by almost \$550 in the prior year, with the most dramatic decline in the most recent five months. Thus, having a credit card, even one with available credit, may not be sufficient to protect a payday borrower from financial distress.

Payday borrowers, while nominally having alternatives, may nonetheless face credit constraints. There could still be room for a new product to alleviate those constraints, but there would be no reason to create one if it could not be more affordable. Thus, if we are to propose P2P loans as an alternative, we must first consider the industry's defense of its seemingly high fees.

The payday industry justifies its fees by noting that payday lending is expensive. There is a substantial fixed cost to lending; smaller loan amounts mean this cost is relatively higher. In addition, payday default rates are high (13.7% of gross revenues in Elliehausen and Lawrence's 2001 sample, compared to about 8.7% for consumer finance companies).

However, if fees simply reflect costs, then, for example, we would have expected them to fall in our current low interest-rate environment. But payday fees are sticky. De Young and Phillips (2009) find that payday fees are set near the regulatory maximum. (See also Flannery and Samolyk, 2005.) When a state maximum is imposed, fees rise and cluster at that maximum. Pricing behavior becomes less competitive, and strategic pricing patterns emerge: lenders began to charge higher fees in areas with less elastic demand (minority and military neighborhoods), and to charge higher fees to repeat borrowers. Any remaining price differences are small and insignificant. For example, while Morgan (2007) found that adding 50 stores to an area with 100,000 people lowers fees by 50¢ per loan, his result is strongly influenced by one outlier; without it, his statistical significance disappears. (As for the economic significance, decreasing the mean fee of \$17.10 per \$100 borrowed by 50¢ lowers the APR from 446% to 433%, and the effective annual rate from 6,029% to 5,382%.)

(Buckland and Martin (2005), in contrast, find that there is great variation among the payday lender fees charged by providers in Winnipeg's inner city. However, their lenders include transactions fees, such as check-cashing and processing fees, that are not mentioned by other authors. There also are fees

associated with some of the innovations in payday lending. For example, in the “Credit Services Organization” model being used in Texas to circumvent usury laws, Advance America charges a referral fee of \$20 per \$100 borrowed, an application fee of \$10, and interest of \$10 (Stegman, 2007.)

Thus, payday loan fees are set systematically near the highest allowed rate. Flannery and Samolyk (2005) interpret this as reflecting inelastic demand, so that the payday industry naturally competes on the convenience of its locations, not on price. However, there is another explanation. De Young and Phillips (2009) note that the patterns they observe in payday prices are consistent with implicit collusion. Consider how similar the payday situation is to another anticompetitive pricing scheme that caused a much greater scandal. In 1994, Christie and Schultz (1994) showed that Nasdaq dealers were able to collude implicitly to double their spreads, given the established practice in the market of avoiding odd-eighth quotes. Like these dealers, payday lenders operate in markets where prices are public, and they make repeated transactions. Thus, we can consider payday lending an infinitely repeated game of perfect and complete information, where the regulatory maximum price acts as the focal point. Collusion is therefore possible, and the immediate gains for lenders who deviate are lower than their foregone future benefits. This potential for collusion undermines the industry’s argument that fees simply reflect their costs.

High fees matter. Customers may need short-term loans, but they do not need expensive payday loans *per se*. As one of Buckland and Martin’s (2005) respondents reported: “I guess I am only satisfied that there is a service available for me to use—I am not really satisfied with fringe banking.” Given the demand for small loans, the “healthy” profits of the payday industry, and the potential for abuse, there is room for a new product. Flannery and Samolyk (2005) suggest multi-period, amortizing loans, which would allow borrowers more time to remedy financial problems. In the next section, we consider one such possibility: the peer-to-peer loan.

COULD P2P LOANS SUBSTITUTE FOR PAYDAY LOANS?

The peer-to-peer loan market, an outgrowth of the microfinance movement, started in the United States in 2006 with the opening of the Prosper marketplace. In a peer-to-peer (P2P) market, potential borrowers use an online forum to post listings requesting loans. Listings contain certain objective information verified by the P2P platform (such as the debt-to-income ratio), as well as any additional information volunteered by the borrower (perhaps pictures or a description of the loan’s purpose). Lenders browse listings and bid on those they like. Bids can be as low as \$25. Most loans are funded by multiple lenders, and most lenders build diversified portfolios of loans. Only about 10% of listings are funded (see, for example, Herzenstein, *et al.*, 2008; Freedman and Jin, 2008b). Although there are now multiple P2P platforms, we focus on two: Prosper, the oldest U.S. platform, and Lending Club, probably its best-known direct competitor. Basic features of loans on these platforms are outlined in Table 2. In this section, we consider both the loan-specific features and the structural features of this market to evaluate the potential for P2P loans to substitute for payday loans.

P2P loans differ from payday loans in size, term, and maturity structure: P2P loans are larger, longer, and repaid in installments. All of these features could make P2P loans attractive alternatives for payday borrowers.

P2P loans are larger than payday loans. The minimum Lending Club loan is \$1,000; on Prosper, it is \$2,000. In contrast, the *maximum* payday loans is around \$700, and 80% of them are for less than \$300 (Stegman, 2007). The size mismatch may not be as large as it appears, however. As noted earlier, there is extensive evidence that payday borrowers frequently roll over their loans multiple times per year. Smaller initial loans do not meet the needs of these customers—they just end up turning into much bigger

loans. Having a larger loans, especially ones with a substantially lower interest rate and with dollar costs that vary with the term of the loan, may be a better solution to these serial borrowers’ cashflow problems.

Table 2: Comparison of Loan Characteristics at Lending Club and Prosper

Loan Characteristic	Lending Club	Prosper
rate: fixed/variable	fixed	fixed
Payments	equal, monthly	equal, monthly
prepayment penalty?	no	no
maximum posting term for listing	14 days	14 days
late fee if	> 15 days late	> 15 days late
default if	> 120 days late	> 120 days late
minimum loan amount per lender	\$25	\$25
minimum FICO score	660	640
minimum loan size	\$1,000	\$2,000
maximum loan size	\$35,000	\$25,000
loan term	3 or 5 years	1, 3, or 5 years
Fee	1.11%-5%	0.5-4.5%
loan credit-grade factors	# recent credit inquiries	# of inquiries
	credit utilization	bankcard utilization
	open # of accounts	# of recently opened trade accounts
	total # of accounts	# of trade accounts
	length of credit history	# of delinquent accounts
	loan amount	amount of available credit on bankcards
	desired term	

This table outlines the characteristics of two major peer-to-peer lending platforms. Lending Club sorts loan applications into 35 “risk buckets” based on the criteria listed as loan credit-grade factors; Prosper assigns seven ratings grades and ten “Prosper scores” based on its criteria. This data was compiled from guidelines specified on the firms’ websites, LendingClub.com and Prosper.com, respectively.

Dobbie and Skiba (2011) show that relaxing the credit constraints on payday borrowers actually does reduce the risk of default. In their sample, loans are lumpy—they come in increments of \$50, and are limited to half a borrower’s net pay. This creates discontinuities in the loan schedule, where the jumps in maximum loan size constrain borrowers with paychecks just below the cutoffs. The authors show that relaxing these constraints—allowing borrowers to increase their loan size—decreases the default rate. It also mitigates the potential moral hazard of borrowers’ being more likely to default on larger loans. Thus, the greater flexibility and availability of larger loans in the P2P market could improve default rates for some constrained borrowers. Since lower-income borrowers may be more credit constrained, P2P loans may be of the most use for just the people who might otherwise turn to payday lenders.

Lengthening the term of a loan can also relax credit constraints. Adams, *et al.* (2009) find that subprime borrowers’ demand for loans is much more sensitive to the loans’ terms than to their rates. The rollover evidence underscores this—even Elliehausen and Lawrence (2001) believe that customers roll over their payday loans because they really want longer-term loans. Regulators agree. The FDIC’s small-dollar loan pilot program—a project designed to help banks find profitable ways to provide short-term credit—found that 90 days was the minimum time necessary for repaying a small loan. Applying this lesson, regulators are moving toward requiring that payday lenders allow their customers to extend the term of at least one loan per year. For example, a recent Washington state law gives payday borrowers the right to opt into a no-fee payment plan, as long as they are current on their loans. Borrowers with loan balances of less than \$400 may take up to 90 days to pay; those with larger loans have up to 180 days. (Perversely, this move toward longer terms may actually stimulate demand for payday loans, since Skiba and Tobacman, 2005, find that allowing the option for multi-period repayment decreases the income shock

necessary to induce payday borrowing.) In any case, a longer payday loan is still a payday loan. P2P loans—with their one- to five-year terms—are longer loans that are truly different from payday loans.

Term and size are not the only differences. Another important distinction is that P2P loans are repaid in installments. This makes P2P loans a better vehicle for the savings discipline that Lawrence and Elliehausen (2008) ascribe to payday loans (referencing Juster and Shay, 1964). In addition, because payment is automatic and systematic, loan performance should improve (FDIC, 2005).

We turn to structural features that may affect loan suitability for payday borrowers. We consider supply and demand effects: first, lenders' ability to screen in the P2P market, then borrowers' ability to access the market and to meet its required credit scores.

Supply in the P2P market depends upon the willing participation of many, probably amateur, individual lenders. Freedman and Jin (2008b) identify two possible information problems for these lenders. First, they cannot see borrowers' exact credit scores, so they face the potential for adverse selection. Second, because they need not be professional lenders, they may not be able to screen loans effectively. Of course, the two problems are related: if lenders are somehow able to screen, they can mitigate any adverse selection. In fact, there is evidence that borrowers can screen. This ability, plus efforts by the platforms to improve information available to lenders, enhances the potential of P2P markets to serve payday borrowers despite the possible information problems.

Professional lenders in the payday market use a streamlined screening process, to cut costs. ("An applicant with a bank account, a pay stub, a telephone, and an adequate—albeit subprime—credit history can usually get a payday loan"—Flannery and Samolyk, 2005). Eligible borrowers whose credit score is above a threshold are approved; those below are not (Skiba and Tobacman, 2009). This thumbs up/thumbs down threshold does not exist in the P2P market. In fact, P2P lenders do not even see the borrowers' credit scores. Instead, P2P platforms separate applicants into risk groups based on their credit characteristics, and lenders are told only this risk assignment. Since higher- and lower-quality borrowers in a given risk group look the same, there is a "lemons" problem. This problem is not just hypothetical; adverse selection in these markets is real. Freedman and Jin (2008b) find that listings within credit grades in fact have migrated toward the lower end of the credit-score range. The platforms address this problem using both loan caps—which they have always had—and disclosure, providing consistently more borrower information as they have aged. However, the platforms cannot unilaterally mitigate the second problem identified by Freedman and Jin: if lenders are poor screeners, all the information disclosure in the world will not lead to a viable market. P2P lenders, though, are not poor screeners.

Several factors facilitate their effective screening. First, peer lenders are using their own money. This gives them a strong incentive to make careful decisions. As an example, consider the SOES "bandits." These traders operated at the fringes of the Nasdaq market, exploiting its Small Order Execution System. Using their own money, they "hit" professional dealers after carefully watching quote movements. Many of these proprietary traders were able to profit at the expense of the professionals. Nonetheless, the dealers did not hire anyone to protect them from the bandits, since they knew that a hired hand could not match the diligence of someone trading for himself (Harris and Schultz, 1998).

Second, lenders learn. Freedman and Jin (2008a) conclude that loan performance on Prosper indicates that lenders exhibit dynamic learning—making better loan selections over time—and that new lenders benefit from that accumulated knowledge. Third, P2P lenders turn out to be quite adept at interpreting the "soft data" in borrowers' listings, perhaps even more skilled than traditional bankers, who instead rely heavily on collateral (Iyer, *et al.*, 2009).

This last point is critical. Lenders on Prosper are able to use the pictures, descriptions, social network information (such as “friend” endorsements), and other data voluntarily provided by potential borrowers to elicit about one-third of the incremental information that could be gleaned from the exact credit score (Iyer, *et al.*, 2009; see also Freedman and Jin, 2008b). They are able to evaluate “trustworthiness” (the borrowers’ willingness to repay a loan) from pictures alone, forecasting default even after financial variables are controlled (Duarte, *et al.*, 2009). While the screening is better for higher credit grades, the soft information is especially relevant at the lower grades (Iyer, *et al.*, 2009). Thus, P2P lenders have demonstrated the ability to interpret just the type of information that would be most relevant for payday borrowers.

There are still some structural features inhibiting screening. The small minimum bid per loan may lead lenders to substitute diversification for screening. Lenders also now have an “out,” since both Prosper and Lending Club have introduced platforms for secondary-market trading. (Iyer, *et al.*, 2009, imply that P2P lenders would screen less carefully if they had a securitization market; the secondary platform is a step in that direction.) However, the most significant change affecting screening has been Prosper’s elimination of the borrower’s posted maximum rate. Borrowers used to list the highest rate they were willing to pay for a loan. Iyer, *et al.* (2009) found that this rate was the most informative soft indicator available to lenders, since it was a credible and costly signal of borrower quality. (See also Herzenstein, *et al.*, 2008.) Higher quality borrowers could afford to set a lower rate, since they had better alternatives if their loans were not funded. However, now that Prosper simply assigns rates based on loan characteristics (as Lending Club always has), borrowers can no longer send this signal. This change has probably diminished the quality of screening in the P2P market.

Despite these challenges, peer screening is still possible, so the P2P market is a viable payday alternative from the loan-supply side. On the demand side, however, there are bigger hurdles.

If borrowers are to use the P2P market, they must be able to access it. Payday borrowers highly value the long hours, convenient locations, and personal service they receive at payday shops (Buckland and Martin, 2005; Washington, 2006; Hispanic Institute, 2010). The internet-based P2P platforms may be poor substitutes. However, as Buckland, Hamilton, and Reimer (2006) note, internet access is becoming increasingly available to lower-income borrowers (through community organizations and libraries, for example). In rural areas, internet access actually may be much more convenient for small-dollar borrowers, since fringe lenders are less common outside of cities (FDIC, 2005). In addition, the increasing push by payday lenders into online lending suggests that an internet platform need not automatically preclude payday borrowers from P2P markets. Carrell and Zinman (2008) cite estimates that 12% of payday loans in 2006 were internet loans, and that web-based volume was growing 40% per year. (In fact, one payday lender believes that “[i]nternet-savvy borrowers who are more educated are better risks than retail customers”; Stegman, 2007.) In addition, P2P platforms have offered borrowers and lenders the opportunity to communicate with borrowers, so peer borrowing is not a completely asocial experience. Thus, access and interactions need not be deal-breakers for the P2P market.

Of course, internet access does not guarantee a timely—or any—loan. Payday borrowers leave the store with their money. P2P borrowers must create a listing, go through screening by the platform (for example, credit verification), then wait for bids. If there are not enough bids, there is no loan. Even if the loan receives enough lender interest to be funded, there is still a delay before the borrower gets her cash. Prosper describes its process this way:

If you've created a borrower listing, you've created a request for a loan which lenders can invest in. First, enough lenders will need to invest in the listing for it to be 100% funded. At that point, you can either let the auction continue for its full 14 days, or you can end it early. Prosper must complete the loan review process before Prosper can transfer loan

proceeds to your account. The loan review process itself will last no longer than seven business days. Loan proceeds should be available to you one to three business days after your listing is approved for funding.

Payday borrowers may not be the types who generally plan this far ahead. Agarwal, Skiba and Tobacman (2009) attribute payday use to “impatience, general financial mismanagement, or persistent shocks”; Carrell and Zinman (2008) cite youth, “lack of financial experience and...sophistication.” These sorts of borrowers may require significant education before being able to use P2P loans effectively. Of course, they undoubtedly would require that education for *any* payday alternative. In addition, after the first loan, the longer term and amortizing nature of the P2P loan may make funding speed a less urgent concern for these borrowers.

Another potential barrier between payday borrowers and the P2P market is credit score. Both Prosper and Lending Club require minimum FICO scores for borrowers. Prosper, in particular, is becoming more stringent (as Lending Club always was); so much so, in fact, that Freedman and Jin (2008a) assert that Prosper is moving from being a “comprehensive” market toward being one that simply serves traditional borrowers. If payday borrowers’ credit scores are too low, they are shut out of the P2P market.

As noted earlier, payday borrowers are more traditional than the fringe borrowers of pawn or rent-to-own shops. At least half of the payday borrowers in Elliehausen and Lawrence’s (2001) survey made more than \$25,000, were over age 35, were married, had children, and had at least some college. The vast majority used closed-end consumer credit (like car loans) and credit cards. 42% had a mortgage. Although they were credit constrained to some degree, these were the sorts of borrowers—banked, independent, with stable income—who, for a given credit category, are less likely to default (Adams, *et al.*, 2009).

Whether they are traditional enough for the P2P platforms, though, depends on their FICO scores. FICO credit scores range from 350-800; the national median is between 700 and 750 (Adams *et al.*, 2009). Only 27% of Americans have FICO scores below 650 (Curry, 2006). In February of 2007, after a year in business, Prosper raised its FICO cutoffs for its lowest two credit grades, E and HR, by 20 points each, while prohibiting borrowers with no credit or with credit scores below 520 from borrowing. In July of 2009, “to improve and optimize returns,” they raised the minimum credit score for all borrowers to 640 (Larsen, 2009).

Lending Club’s 660 minimum FICO is even more stringent. However, Lending Club’s typical borrower also seems less like a payday borrower. Paravisini, Rappoport, and Ravina (2010), in their sample of 1,661 Lending Club borrowers, find an average FICO score of just below 700; debt-to-income of approximately 13%; monthly income of \$5,400; and an average loan size of \$9,200. In contrast, the average Prosper listing in Iyer, *et al.*’s (2009) sample is from a borrower with a 54% debt-to-income ratio (although the DTI for *funded* loans is only 33%). Duarte *et al.* (2009) find that the average Prosper borrower has a lower credit score and less education than the national average. Prosper therefore may be a better option for a payday borrower.

It is not straightforward to determine if payday borrowers can meet even Prosper’s FICO minimum. The difficulty is that fringe lenders use a different credit score—the Teletrack score—when making loans. Teletrack scores incorporate information from subprime loans, and are eight times more effective in predicting payday loan default than are FICO scores. However, the two scores are not highly correlated (only 0.26 in a matched sample; Agarwal, *et al.*, 2009). Therefore, it is not obvious whether the typical payday borrower can meet the P2P market’s FICO thresholds.

We do have some information on the FICO scores of fringe borrowers. In Adams, *et al.*'s (2009) study of subprime auto lending, half of their borrowers' FICO scores were less than 500. These fringe borrowers were low-income; they rented or lived with their parents; one-third had neither a checking nor savings account; and more than half had a delinquency less than six months before their auto loans. Their credit scores suggested "sparse or checkered" credit histories, and they had "problematic" access to credit. Over half of those loans ended in default; only 39% were paid in full. These, then, were not like the typical payday borrowers—and we would not expect them to be, since subprime auto lending attracts "fringier" borrowers than payday lending. We can conclude, however, that payday borrowers should have higher FICO scores than Adams, *et al.*'s auto borrowers.

Additional evidence comes from Agarwal, *et al.*'s (2009) study of a sample of borrowers who have both credit cards and payday loans. The average FICO score for this group is 673, high enough for both Prosper and Lending Club (although the standard deviation is 68 points). 89% of the borrowers in their sample have FICO scores greater than 600; 62% are above 650. The average Teletrack score for this group is 425 ($s = 283$). In a more recent study of payday borrowers, Dobbie and Skiba (2011) find an even higher mean Teletrack score of 550. These values suggest that at least some payday borrowers would be able to use the P2P markets.

As a rough check of this conclusion, we used FICO's score estimator to provide score ranges that might apply to a payday borrower. (<http://www.myfico.com/ficocreditscoreestimator/>; accessed 10/17/11.) The score estimator is based on the ten questions listed in Table 3. As discussed above, the literature on payday borrowers characterizes the typical borrower, and we used this information to guide our answers. (The relevant sources are noted next to the associated questions.) For questions for which there was no guidance, we chose conservative responses. The resulting estimate for the answers listed in Table 3 was 525-575—too low for a P2P loan.

However, note that our choices for this baseline are not necessarily internally consistent. For example, if the last missed payment was 3-6 months ago, it is probably more likely that none—not 2 or more—of the credit cards is currently past due. To explore the sensitivity of the estimator to our choices, we tested numerous alternatives. All else equal, increasing to "6 or more" (from 2) the number of loans or credit cards applied for in the last year dropped the score by 20 points. Maximizing the number of credit cards (from "2-4" to "5 or more") had no effect; neither did decreasing the amount of balances on loans and credit cards to from \$5,000-\$9,999 to \$1,000-\$4,999. Decreasing credit card utilization from 70-89% to 40-49% raised the score by only 15 points; surprisingly, eliminating the bankruptcy by only 10. None of these changes gets the upper score limit above 600. However, decreasing the maximum delinquency to 30 days raised the upper score limit to 600, and having no credit cards currently late raised it to 620. These impacts are consistent with FICO's guideline that 35% of the score—the largest proportion—is based on credit history. Given this emphasis on credit history, it is not surprising that we get much larger score increases when we combine the "delinquency" and "number of credit cards currently late" questions into scenarios. Having the last delinquency 1-2 years ago (instead of 3-6 months ago), with no currently late cards, raises the maximum score to 640—high enough for P2P. (In Elliehausen and Lawrence's 2001 sample, only 25% of respondents had payments at least 60 days late in the prior year.) If we also remove the bankruptcy, the maximum score is 650. If we have never had a delinquency, or a bankruptcy, the score range becomes 665-715. These credit history adjustments are not overly optimistic, given the FDIC found default risk for small-dollar borrowers comparable to that for the general population (FDIC, 2005).

These results reinforce the expectation that at least some borrowers who currently use payday loans could instead access the peer-to-peer market. This potential is not merely hypothetical: Freedman and Jin (2008a) find that 6% of listings in their P2P sample were for loans to pay off payday loans. In fact, while lenders on Prosper tend to shy away from riskier loans, they are apparently more forgiving when it comes to loans mentioning payday borrowing, perhaps because of an underlying charitable motivation.

Table 3: Results of the FICO Score Estimator

	Question	Answer	Reference	Score	History	Amts.	Other
1	How many credit cards do you have?	2-4	EL (2001), Table 5-16; Agarwal, <i>et al.</i> (2009) Table A1	X			X
	How long ago did you get your first credit card?	4-5 years ago	62 months: Agarwal, <i>et al.</i> , Table A1				X
2	How long ago did you get your first loan?	5-10 years ago					X
3	How many loans or credit cards have you applied for in the past year?	2		X			X
4	How recently have you opened a new loan or credit card?	3-6 months ago	see rollover data	X			X
5	How many of your loans and/or credit cards currently have a balance?	0-4	2.63: Agarwal, <i>et al.</i> , Table A1	X		X	
6	Besides any mortgage loans, what are your total balances on all other loans and credit cards combined?	\$5,000-\$9,999	Agarwal, <i>et al.</i> , Table A1	X		X	
7	When did you last miss a loan or credit card payment?	3-6 months ago	Morgan (2007)		X		
	What is the most delinquent you have ever been on a loan or credit card?	> 90 days	Agarwal, <i>et al.</i>		X		
8	How many of your loans and/or credit cards are currently past due?	2 or more	13.85%: Agarwal, <i>et al.</i>	X	X		
	What are your total balances on all currently past due accounts?	\$500-\$4,999			X		
9	What percent of your total credit card limits do your credit card balances represent?	70-89%		X		X	
10	Please indicate if you have ever gone through any of the following negative financial events in the last 10 years: bankruptcy, tax lien, foreclosure, repossession, or account referred to a collection agency.	Yes	Payday customers 4x as likely as general population to have filed for bankruptcy (Stegman, 2007). For Ch. 13, 2x as likely (Skiba and Tobacman, 2008b).		X		
	If so, how long ago did the most recent negative event occur?	1-3 years ago			X		

This table lists the questions from the "FICO Estimator." The "Answer" column gives the baseline response; these responses are informed by the payday research cited in the "Reference" column. Note that some answers were chosen to be conservative, and may not be internally consistent with other baseline responses. The baseline FICO estimate was 525-575, too low for the P2P platforms. The last four columns in the table associate questions with components of the "Prosper scorecard" (the inputs to the Prosper score) and of the FICO score (last 3 columns). For the FICO score, 35% is based on payment history ("History"); 30% on current amounts owed ("Amts."); and 30% on the length of the history, new credit activity, and the types of credit used ("Other").

CONCLUSION

In this paper, we draw on the growing literature on peer-to-peer lending to evaluate the potential for P2P markets to serve payday borrowers. The dramatic, public, and ongoing conflict between payday apologists and consumer advocates has focused primarily on whether or not payday shops should be allowed to exist, not on what alternatives there might be. We hope to stimulate that latter conversation.

There is a demand for some type of relatively short-term credit. 92% of Elliehausen and Lawrence's (2001) payday customers agree that "payday advance companies provide a useful service to consumers." The authors conclude that "The overwhelmingly favorable response...strongly suggests that payday advance companies serve a real economic need for their customers." The extraordinary growth of the industry seems to corroborate this interpretation. However, acknowledging the need for short-term, uncollateralized credit is not the same as asserting that payday loans are the best way to provide it.

The consumer advocates who accuse payday lenders of being "predatory" purveyors of "debt traps" obviously think we need an alternative, as do regulators:

Payday loans to individuals who do not have the ability to repay, or that may result in repeated renewals or extensions and fee payments over a relatively short span of weeks, do not help to meet credit needs in a responsive manner (FDIC, 2005).

The payday advance as presently structured is unlikely to help people regain control of their finances if they start with serious problems (Flannery and Samolyk, 2005).

The rise of fringe banks will not assist low-income people towards better financial security (Buckland and Martin, 2005).

Herzenstein, *et al.* (2008) agree that payday loans are "extremely detrimental" to consumers. They also suggest that P2P lending can improve payday borrowers' welfare. So do Iyer, *et al.* (2009), who say, "The uncollateralized nature of lending and the ability to lenders to partly screen suggests that peer-to-peer markets can indeed complement and add value to the existing lending models and improve access to credit, particularly for small individual borrowers who may otherwise be limited to costly sources of finance like payday lenders." Despite this recognition, there has not yet been a systematic evaluation of the P2P markets' ability to provide fringe credit.

We have reconsidered the young P2P literature to assess this ability. In some ways, the peer markets appear well suited for payday borrowers. P2P loans are longer-term, which is a critical difference according to consumer advocates and regulators. They are accessible anywhere, around the clock, by internet. Their rates are magnitudes lower. Nonetheless, there are hurdles. One potential—though not insurmountable—hurdle is the required minimum FICO credit score of at least 640. The biggest problem, however, is probably the time to fund: P2P loans take as long to fund as a payday loan does to mature! Consumer advocates who wish to use the promising peer-to-peer platforms to offer alternatives to payday loans therefore should focus their efforts on speeding up the funding process. Harnessing the social network potential of P2P "groups" may be one way to shorten the actual bidding process (for example, if groups bid on members' loans, facilitating funding). The verification and actual funding are the purview of the platforms; creating efficiencies there would require coordination between consumer advocates and the platforms.

Consumer advocates should also focus on the use of payday loans by Hispanic borrowers. Payday shops are highly concentrated in Hispanic neighborhoods, and loan pricing in those neighborhoods reflects a

highly inelastic demand. Outreach and education about alternatives for this demographic may require unique strategies, especially if cultural norms are pushing Hispanics away from traditional banks.

This paper reviews extant literature, with a new focus. However, given the potential, we need surveys of payday borrowers explicitly evaluating the possibility for their use of peer-to-peer markets, and pilot projects to assess the practical suitability of peer loans to meet their needs. Even if P2P markets turn out not to be a viable substitute for payday loans, we at least hope to change the conversation from banning fringe loans toward finding a substitute.

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