

# **Economic Impact on Storefront Lenders of the Payday Lending Rules Proposed by the CFPB**

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## Table of Contents

|   |    |
|---|----|
| Executive Summary.....  | 3  |
| Payday Lending Industry Overview.....                                       | 4  |
| CFPB's Proposed Rules.....  | 5  |
| Methodology and Findings.....   | 7  |
| Data.....   | 7  |
| Steps to Assess The Ability to Repay Requirements.....                      | 7  |
| Steps to Assess The Alternative Requirements.....                           | 8  |
| The Alternative Requirements: Payday Loan Revenue Changes Assumptions.....  | 8  |
| The Alternative Requirements: Results of the Estimated Revenue Changes..... | 10 |
| Cost Changes.....   | 10 |
| Net Income Changes Assumptions.....   | 11 |
| Net Income Changes Results.....   | 11 |
| Other Effects.....  | 12 |
| Appendices.....   | 14 |
| Appendix A. Alternative Requirements Example.....                           | 15 |
| Appendix B. Payday Lending Revenue vs. Population Density.....              | 18 |
| About the Financial Economics Practice at Charles River Associates.....     | 19 |

## EXECUTIVE SUMMARY

The Community Financial Services Association of America (“CFSA”) retained Charles River Associates (“CRA”) to evaluate the likely impact on payday lenders of the Consumer Financial Protection Bureau’s (“CFPB”) proposed rules for payday loans.<sup>1</sup> CRA previously undertook a study of the likely impact on small payday lenders of the rules under consideration by CFPB, prior to its June 2, 2016 proposed rule.<sup>2, 3</sup> This study includes an evaluation of the impact on the payday lending supply of credit, associated revenues and the profitability of larger storefront payday lenders.

The Proposed Rules, by definition, result in a significant reduction in the supply of payday credit. The CFPB and others have estimated this reduction to be large, and our findings are similar. We estimate the reduction in the supply of payday credit to be approximately, 82.5% or \$19.5 billion, based on the CFPB’s estimates of the size of the industry.<sup>4</sup> If we apply the estimated reduction in the supply of credit of 82.5% to the \$2 billion in outstanding single-payment loans for 2012 reported by the CFPB, then the payday loan credit would have been reduced by 1.7 billion.<sup>5</sup> The forced reduction in supply of credit has a number of negative effects, including reductions in store level profitability and viability, and potential disutility to consumers related to unmet demand and the use of less preferable products.

Using loan level data and income statements collected from a sample of larger storefront payday lenders, we estimate that the proposals are likely to impact the lenders negatively and significantly. The Proposed Rules will likely make the larger stores that offer payday loans unprofitable on average, resulting in significant losses for larger storefront payday lenders. The application of the CFPB’s Proposed Rules to data from 2013 and 2014 would have impacted the 2014 financial performance of larger storefront lenders in our sample as follows:

Under the ability to repay (“ATR”) requirements:

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<sup>1</sup> The CFPB issued its proposed rule on June 2, 2016; available at [http://files.consumerfinance.gov/f/documents/Rulemaking\\_Payday\\_Vehicle\\_Title\\_Certain\\_High-Cost\\_Installment\\_Loans.pdf](http://files.consumerfinance.gov/f/documents/Rulemaking_Payday_Vehicle_Title_Certain_High-Cost_Installment_Loans.pdf), last accessed on 9/19/2016 (“CFPB’s Proposed Rule”).

<sup>2</sup> Outline of Proposals Under Consideration and Alternatives Considered, CFPB March 26, 2015; available at [http://files.consumerfinance.gov/f/201503\\_cfpb\\_outline-of-the-proposals-from-small-business-review-panel.pdf](http://files.consumerfinance.gov/f/201503_cfpb_outline-of-the-proposals-from-small-business-review-panel.pdf), last accessed on 4/28/2015 (“CFPB’s Rules Under Consideration”).

<sup>3</sup> <http://www.crai.com/sites/default/files/publications/Economic-Impact-on-Small-Lenders-of-the-Payday-Lending-Rules-under-Consideration-by-the-CFPB.pdf>.

<sup>4</sup> We estimated based on our sample that the reduction in total original principal during 2014 under the alternative model would have been 82.5%. If there is a similar reduction for the industry as a whole, using the 23.6 billion dollars market size reported by the CFPB for 2015 (CFPB’s Proposed Rule, p. 26), we obtain  $19.5 = 23.6 \times 82.5\%$ .

<sup>5</sup> CFPB’s Proposed Rule, p. 26.

- Revenues declined by 90.5% on average,<sup>6, 7</sup>
- Net income per store from a +\$99,800 profit to a -\$21,200 loss, on average (or a decrease of about \$121,000 on average).

Under the alternative requirements:

- Revenues declined by 83% on average,<sup>8</sup>
- Net income per store was reduced from a +\$99,800 profit to a -\$10,800 loss, on average (or a decrease of about \$110,600 on average).

For both large and small lenders, a large share of the stores analyzed would have experienced overall losses. The negative effects on relatively smaller payday lenders are likely to be larger, due to economies of scale.

Finally, we note that the payday lending industry supports the production of goods or the provision of services of other industries. The expected reduction of payday lending activity (including store closing) will also negatively affect these supported industries.

## PAYDAY LENDING INDUSTRY OVERVIEW

A payday loan is a single-payment short-term small value unsecured loan.<sup>9</sup> In many cases, the lender holds a personal check issued by the debtor in the amount of principal plus interest until the maturity of the loan. The transaction could also be based on an agreement authorizing the lender to make an electronic withdrawal from the borrower's checking account on the maturity date. Underwriting standards vary across lenders, but the lender generally requires proof of the borrower's income (recent pay stubs usually suffice) and that the borrower has a checking account. A lender could assess the applicant's previous performance on payday loans it granted previously. Some lenders have developed more sophisticated in-house risk assessment software, or rely on third-party providers (e.g., CoreLogic Teletrack), to assess default risk considering such factors as the applicant's performance on payday loans and/or other credit products. In certain states, a lender checks a state-level database to identify payday loans granted to the applicant by other lenders in that state. For example, a lender could verify the applicant's outstanding balance of all other payday loans to ensure that the loan under consideration would not result in indebtedness exceeding the state cap. The maturity date for loan repayment usually coincides with the borrower's next paycheck or date-of-deposit of other funds. At maturity,

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<sup>6</sup> For our analysis of the impact of the ATR requirements, we assumed the decrease in payday loan revenues of 90.5% estimated by "Evaluating CFPB Simulations of the Impact of Proposed Rules on Storefront Payday Lending," By Rick Hackett, nonPRIME101.com.

<sup>7</sup> The CFPB estimated that under the ability to repay requirements the revenues would decline between 60% and 81-82%. Supplemental findings on payday, payday installment, and vehicle title loans, and deposit advance products, CFPB, June 2016, available at [http://www.consumerfinance.gov/documents/329/Supplemental\\_Report\\_060116.pdf](http://www.consumerfinance.gov/documents/329/Supplemental_Report_060116.pdf), last accessed on 9/26/2016 ("CFPB 2016 Supplemental Findings"), p. 146.

<sup>8</sup> The CFPB estimated that the revenues would decline between 71% and 76%. CFPB 2016 Supplemental Findings, p. 148.

<sup>9</sup> Also known as deferred deposit, deferred presentment transaction, post-dated check loan, payday advance, deposit advance or cash advance loan.

either the personal check from the debtor is deposited by the lender or the borrower pays in cash to redeem the check.

Payday lenders are regulated primarily at the state level, and there are variations in the restrictions that exist across states. For example, there are requirements regarding the maximum fees and/or interest that can be charged, the maximum loan amount, the maximum number of renewals or rollovers, assets and bond requirements, and license and registration requirements. In certain states, such restrictions have contributed to no lender operating in those states.<sup>10</sup> At the federal level, the restrictions imposed on the payday loans to active duty service members and their spouses, children, and other dependents by the 2007 National Defense Authorization Act have effectively led lenders to stop offering payday loans to this group. In addition, payday lenders are subject to various federal regulations such as The Truth in Lending Act and the Equal Credit Opportunity Act.

We previously estimated that there were about 19,000 locations in 36 states that were offering payday loans during 2012, each of which had, on average, about 2.5 employees involved directly in payday lending.<sup>11, 12</sup> The CFPB estimated that there were 16,000 payday loan stores in 2014.<sup>13</sup>

## CFPB'S PROPOSED RULES

The CFPB has proposed new rules that would place significant restrictions on the provision of certain short-term and longer-term loans. Covered short-term loans would include loans with maturity no longer than 45 days, or loans required to substantially be paid within 45 days. The covered longer-term products would include loans with maturity longer than 45 days, or loans not required to be substantially paid within 45 days, and with an all fees included annual percentage rate greater than 36%, where the lender either obtains a leveraged payment mechanism for repayment, or secures the loan with a vehicle. The leveraged payment mechanism is defined to represent a way through which the lender obtains the repayment directly from the borrower's account or other source of income."<sup>14, 15</sup> Most payday loans currently offered will be considered short-term products under the CFPB's Proposed Rules. As a result, our study focused only on the effects of the short-term loans provisions.

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<sup>10</sup> See, for example, <http://www.ncsl.org/research/financial-services-and-commerce/payday-lending-state-statutes.aspx>, last accessed on 9/26/2016.

<sup>11</sup> This does not include the locations of some depository institutions that offered deposit advances, tribal lenders or other entities not licensed or registered with state regulators to engage in payday lending.

<sup>12</sup> Economic Impact of the Payday Lending Industry, prepared for CFSA, Marsha Courchane and Steli Stojanovici, Charles River Associates, July 8, 2014.

<sup>13</sup> The CFPB's Proposed Rules, page 27.

<sup>14</sup> The CFPB's Proposed Rules, pages 1,132-1,135.

<sup>15</sup> The CFPB's Proposed Rules do not cover overdraft services, pawn loans, credit card accounts, student loans, real estate secured loans, and credit extended for the sole and express purpose of financing a consumer's initial purchase of a good when the credit is secured by the property being purchased.

A lender that wants to offer short-term loans covered by the CFPB's proposed rules is compelled to select one of the following, mutually exclusive regulatory operating models for each loan, each with its own set of requirements:

- The ability to repay model, under sections § 1041.5 and § 1041.6; and
- The alternative model, described in the Proposed Rules as the “Conditional exemption,” under section § 1041.7.

### ***The Ability to Repay Model***

Under these proposed rules, for each loan application, the lender must determine, for an underwriting period defined from the loan origination date until 30 days after the loan maturity date, that the borrower has the ability to repay the loan without reborrowing or defaulting, while satisfying any major financial obligations and living expenses, such as food and transportation. Under the ability to repay requirements, the lender would be required to consider, document and verify the applicant's income, credit history, financial obligations, including any housing payments (including mortgage or rent payments), debt obligations, child support or other legally required payments. The lender would also be required to consider the borrower's recent borrowing history, including the history with other payday loan lenders. A lender is prohibited from granting more than three loans in a sequence; with a loan sequence consists of any loan that is taken out within 30 days of another outstanding loan. In addition, the lender is allowed to grant a second or third loan in a sequence only if it can document and verify that the applicant's ability to repay has improved.

### ***The Alternative Model***

A lender can grant a loan without meeting the ability to repay constraints if it meets the alternative requirements, detailed in section § 1041.7. These consist of loan size, loan term, and borrowing history limitations. The lender cannot grant a loan if (i) the consumer has an outstanding payday loan with any lender; (ii) the loan is part of a sequence with more than three loans; (iii) the new loan would result in the consumer receiving more than six loans in the last 12 months; (iv) the new loan would result in the borrower being in debt (on payday loans) for more than 90 days in the last 12 months. The loans covered by this section cannot be larger than \$500, or have a maturity longer than 45 days. In addition, there are restrictions on the loan size in a sequence: (a) the second loan in a loan sequence has a principal no greater than two-thirds of the principal amount of the first loan in the loan sequence, and (b) the third loan in a loan sequence has a principal no greater than one-third of the principal amount of the first loan in the loan sequence.

The Proposed Rules also include collection restrictions and compliance requirements, including written notifications to borrowers prior to each attempt to collect payment (even though the borrower already authorized the lender for that purpose at origination). After two failed attempts to receive the loan payment from the borrower's account, the lender would have to obtain a new authorization from the borrower.

## METHODOLOGY AND FINDINGS

### DATA

CRA received loan level data and financial information from a sample of three large store-front payday lenders which are CFSA members.

The loan level data (“Loan Data”) consist of loan transactions, and include information on loan characteristics and performance (loan amount, fees, loan date, term, the date the loan was paid), on the borrower (social security number, income, pay period, zip code) and on the store that originated the loan (state, zip code). The lenders provided us with all the payday loans they originated in 2013 and 2014. The Loan Data used in the analysis consist of 33.6 million payday loans made in almost 4,000 stores across 30 states to 2.7 million consumers. A typical loan, as measured by the median statistic, was for \$300 with a term of 14 days and generated a \$46 fee.

We also received monthly Profit & Loss (“P&L”) statements at store level from these payday lenders, for the same time frame, covering about 4,100 stores with payday lending revenues across 30 states. For the stores analyzed, the revenues from payday loans represented about 70% of the companies’ total revenues in 2014. During 2014, the stores averaged \$99,800 in positive net profits as measured by net income.

### STEPS TO ASSESS THE ABILITY TO REPAY REQUIREMENTS

We expect that the ability to repay requirements would require substantial changes to the operations of payday lenders. The CFPB envisions payday loan underwriting standards that appear to be more stringent than the standards used by mortgage originators. Given the typical loan size and the state specific fee caps which are applicable in most of the states in which the payday lenders operate, lenders may find it difficult to recover the additional costs generated by the compliance with the proposed requirements for short term loans. In addition, the extensive documentation and verification requirements appear to change the product dramatically – potentially putting downward pressure on demand for such a “new” product, further reducing volume relative to current levels.

We lack sufficient data to directly estimate how many of the loans previously granted by lenders would have failed to meet the ability to repay requirements. We note, however, that others have estimated the impact of the ability to repay rule, and found it to result in an even larger loan reduction than the alternative requirements.<sup>16</sup> Hackett estimated “a 90.5% - 92.7% reduction in volume, using the same ‘optimistic’ assumptions that underlie the CFPB’s 60% reduction.” For the purpose of estimating the impact of the ability to repay requirements, we assumed that the payday loan revenues would have decreased by 90.5%.

To assess the potential impact of requirements of the ability to repay under proposed section § 1041.5 and 1041.6, we analyzed the financial position of the larger storefront lenders in two steps. Assuming the payday loans revenue losses estimated by Hackett, we estimated:

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<sup>16</sup> “Evaluating CFPB Simulations of the Impact of Proposed Rules on Storefront Payday Lending,” By Rick Hackett, nonPRIME101.com.

- The change in store costs as described below;
- The change in net income as described below.

#### **STEPS TO ASSESS THE ALTERNATIVE REQUIREMENTS**

To assess the potential impact of requirements of the alternative to the ability to repay under proposed section § 1041.7<sup>17</sup>, we analyzed the financial position of the larger store-front lenders in three steps. We estimated:

- The change in payday loan revenues;
- The change in costs;
- The change in net income.

#### **THE ALTERNATIVE REQUIREMENTS: PAYDAY LOAN REVENUE CHANGES ASSUMPTIONS**

We estimated the change in payday loan revenues based on the Loan Data. For each borrower, we analyzed their loan history and determined whether or not each loan would have met the requirements considered under section § 1041.7 of the proposed rules. Except as noted below, we assumed that if a loan did not meet the requirements that loan would not have been originated. We then compared the fees hypothetically generated by the loans that met the alternative requirements with the fees generated by the actual loans originated and calculated the percentage change in payday lending revenues that can be attributed to the application of the alternative requirements envisioned by the CFPB's Proposed Rules.

To undertake this analysis, we separated the Loan Data of each borrower into two periods: a 12-month assessment period and a subsequent policy period. All loans originated during 2013 were part of the assessment period. The policy period included all loans originated during 2014. The assessment period data were used to determine whether a loan granted in the policy period would have met the proposed alternative requirements. The revenues associated with loans during the assessment period were excluded from the calculation of the revenue decline. The policy period data were used both to determine whether a loan granted in the policy period would have met the proposed alternative requirements and to calculate the revenue change.

For each borrower, each loan in the policy period was analyzed sequentially, applying the following parameters to determine if the loan would have met the alternative requirements.

1. We determined whether five or more loans would have been granted to the borrower during the 365 days preceding the date of the proposed new loan.
2. We determined whether the duration of indebtedness exceeded 90 days in the 365 days preceding the maturity date of the proposed new loan. A loan that started prior to this 365 days window contributes to this calculation only the number of days that are within this 365 days window.

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<sup>17</sup> Referred to as the "Conditional Exemption" requirements.



3. We determined if there was any loan outstanding as of the date of the proposed new loan. To make this determination, we calculated the number of days from the payoff of the previously granted loan. If the date paid was missing, we assumed the previous loan ended at the date of the proposed new loan.
4. We determined if the proposed new loan would be the fourth in a sequence of granted loans.

If the proposed new loan failed any of these four tests, we assumed the loan did not occur. If the proposed new loan passed these four tests, we assumed the loan originated and undertook the following analyses and adjustments.

5. We determined if the new loan would be the first loan in a potential new sequence or a subsequent loan in an existing sequence based on the number of days from the payoff of the previously granted loan. If the new loan was part of a sequence, we determined its rank in that sequence – that is, whether the new loan was the second or third loan in the sequence.
6. If a new loan was determined to be the first loan in a sequence, and its principal was larger than \$500, we reduced its principal to \$500, and assumed the borrower would still have proceeded with the loan. We then adjusted down the loan fee proportionally.
7. If a new loan was determined to be the second loan in a sequence, and its principal was larger than two-thirds of the principal of the first loan in the sequence, we reduced its principal to two-thirds of the principal of first loan in the sequence, and assumed the borrower would still have proceeded with the loan. We then adjusted down proportionally the fees. If the new loan was the third loan in a sequence, and if its principal was larger than one-third of the principal of the first loan in the sequence, we reduce its principal to one-third of the principal of the first loan in the sequence, and assumed the borrower would still have proceeded with the loan. We then reduced its fee by the same rate.
8. If the new loan had a term greater than 45 days, we assumed that the borrower would still have proceeded with a 45 day loan, and we adjusted the maturity date to 45 days. We similarly adjusted the loan payoff date, constraining the adjusted payoff date to not precede the loan date.<sup>18, 19</sup>

Based on these parameters, we determined whether each loan in the policy period met the alternative requirements and could have been originated under the CFPB's Proposed Rules and what fee revenue it would have generated. See Appendix A for a numerical example.

We next estimated the decrease in payday lending revenues as the ratio of total actual fees less the total adjusted fees that met the alternative requirements relative to the total actual fees of the loans in the policy period ( $[\text{actual fees} - \text{adjusted fees}] / \text{actual fees}$ ).

Given the variation in the state level current regulatory constraints, we estimated the change in the payday lending revenues at the state level, based on the location of the store that granted the loans.

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<sup>18</sup> This maturity reduction assumption is conservative, and given that there were just a handful of these loans, it does not materially change our results.

<sup>19</sup> As a practical matter of implementation, we made this adjustment prior to all other steps.

### **THE ALTERNATIVE REQUIREMENTS: RESULTS OF THE ESTIMATED REVENUE CHANGES**

Under the alternative requirements, the decrease in payday lending revenues varied across states from approximately 54% to 90%. Overall, we estimated an average decrease of 83% for the larger storefront lenders we analyzed.

As we showed in Appendix B, stores in rural areas are likely to be affected more by the CFPB's Proposed Rules than other stores. Each point on the graph represents a store. Stores in locations with relatively lower population density areas (located in relatively more rural areas) are likely to experience a larger decrease in the payday lending revenue under the alternative requirements (Chart 1). For example, we estimated an average reduction of 81.6% for stores located in zip codes with a population density  $\leq 100$  individuals / square mile, and 69.8% for stores located in zip codes with population density  $> 15,000$  individuals / square mile.

Consumers may respond to the CFPB's Proposed Rules in such a way that the reduction in revenues may exceed our estimate. For example, a consumer who is precluded by the Proposed Rules from taking out a new payday loan for six months may utilize alternative sources for funds and not return to the payday market. A consumer who is seeking a loan larger than \$500 or a loan for a term longer than 45 days, but is precluded from doing so by the Proposed Rules, may choose not to take a payday loan at all. We have not attempted to estimate the potential incremental revenues lost under such scenarios. From this perspective, the decline in revenue that we estimated is conservative and actual declines may be larger.

We have also considered, but have not quantified, certain potential indirect effects. To the extent payday lenders offer other products that are complementary to payday loans, the revenue of these other products may be reduced when fewer payday loans are made. For example, if a consumer is unable to take out a payday loan, the consumer may not purchase a phone card from the payday lender or use the payday lender's money transfer services. Additionally, if the consumer is precluded from taking out the payday loan, the consumer clearly need not return to the store to pay off the loan, and the payday lender's opportunity to sell other products at the time of the loan payoff is lost.

### **COST CHANGES**

In order to understand how profits are impacted by the expected payday loans revenue reduction, we estimated the degree to which lenders' costs would decline as the payday loans revenues decrease under the CFPB's Proposed Rules. We used the monthly P&L statements for each lender to assess the degree to which their costs were fixed or variable.

For each lender, for each type of cost, we estimated cost multipliers that reflect the fixed/variable nature of the cost. A cost multiplier measures the change in that cost when the payday loan revenues change by \$1. Cost multipliers were estimated using actual payday loan revenues and costs as reported on the monthly P&L's. The analysis reflected the manner in which each lender aggregated its cost on its P&L. The P&L's for the lenders in our sample reflected differing degrees of variability in their cost structures with respect to changes in payday loan revenues.

While the P&L's for the lenders in our sample reflect actual increases and decreases in both revenues and costs, these actual changes are within a more narrow range as compared with the revenue declines we have estimated are likely to occur under the CFPB's Proposed Rules. As such, this approach likely overestimates the latitude that they have to reduce costs when revenues decline to the degree we have estimated here. For example, the number of employees required to be working in each store during all store hours cannot fall below one. Perhaps, it would be more realistic to assume that as revenues decline, each lender's ability to reduce costs may be diminished. We have not attempted to make such an adjustment, and we believe this approach to be conservative.

#### NET INCOME CHANGES ASSUMPTIONS

To estimate the expected changes in the net income as a result of the CFPB's Proposed Rules, we used the store level P&L statements for all the stores in our sample that originated payday loans.

$$\text{The Net Income}_{\text{actual}} = (\text{Payday Loan Revenues}_{\text{actual}} + \text{Other Revenues}_{\text{actual}}) - \text{Costs}_{\text{actual}}$$

For each store, we estimated the expected revenues under the ATR or the alternative requirements by applying the payday loan revenues change<sup>20</sup> to the actual payday loan revenues.

$$\text{Payday Loan Revenues}_{\text{CFPB}} = \text{Payday Loan Revenues}_{\text{actual}} \times (1 - \% \Delta \text{ Payday Loan Revenues})$$

For each store and cost type, the change in costs under the alternative requirements was estimated as the cost multiplier times the change in payday loan revenues.

$$\text{Costs}_{\text{CFPB}} = \text{Costs}_{\text{actual}} - (\text{Payday Loan Revenues}_{\text{actual}} - \text{Payday Loan Revenues}_{\text{CFPB}}) \times \text{Cost Multiplier}$$

#### NET INCOME CHANGES RESULTS

As a result of the Proposed Rules forced reduction in supply of short term credit, the average per store net income was estimated to decrease from a profit of about \$99.8 thousand to

- a loss of \$21.2 thousand (e.g. a decrease of about \$121 thousand), under the ATR model;
- a loss of \$10.8 thousand (e.g. a decrease of about \$110.6 thousand), under the alternative model.

There were approximately 4,100 stores with payday lending revenues in our analysis.

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<sup>20</sup> For the ATR model this is the assumed 90.5%. For the alternative model, this is the state level payday loan revenues change estimated based on the Loan Data.

- Under the ATR model, 73% of the stores are expected to experience net losses whereas only about 8% of the stores experienced a loss in the absence of the proposed rule. While 27% of the stores we analyzed are estimated to retain positive net profits, their net profits are estimated to decrease by 44% on average.
- Under the alternative model, 70% of the stores are expected to experience net losses. While 30% of the stores we analyzed are estimated to retain positive net profits, their net profits are estimated to decrease by 44% on average.

The negative impact on the larger storefront lenders we reported here is likely to be understated for several reasons, including but not limited to:

1. The Proposed Rules significantly limit a consumer's ability to roll over payday loans, and this may dampen demand to originate payday loans and/or increase default rates. We have not attempted to quantify the degree to which either of these may occur.
2. We have made conservative assumptions about consumers' appetite to initiate a payday loan for amounts and durations that would be dictated by the CFPB's Proposed Rules to be small/shorter than the amounts and durations for which they actually initiated a payday loan.
3. We did not include the expected increase in costs due to the new compliance requirements. The CFPB's Proposed Rules also include collection restrictions which may increase the costs of collection activities and could also affect the default rates.
4. We have assumed that lenders will be able to continue to eliminate costs even as revenues fall precipitously. As discussed above, lenders' ability to reduce costs may decrease as certain costs categories approach natural floors, below which they cannot be further reduced.

## OTHER EFFECTS

The effect of the decrease in the store profitability is likely to result in store closings. However, this type of adjustment to the CFPB's Proposed Rule is unlikely to simply be the sequential closures of less profitable stores until the reduced demand meets the profitability required by investors for risk of this business. The reason a simple consolidation of demand to fewer stores is less likely is because the demand for payday loans appears to be local: 75% of the borrowers in our data traveled less than 8 miles to a payday lending store.

The CFPB's Proposed Rule will, by definition, restrict short term credit access to some consumers. When access is restricted, consumers are forced to choose less preferred (potentially more expensive) alternatives.<sup>21</sup> Melzer and Morgan found that on average

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<sup>21</sup> Brian T. Melzer, Donald P. Morgan, Competition and Adverse Selection in the Small-Dollar Loan Market: Overdraft versus Payday Credit, Federal Reserve Bank of New York, Staff Report no. 391, available at

consumers with access to both payday and overdraft programs, use the products in a manner that reduces their overall borrowing costs, relative to using only one of the products. There is reason to believe these effects may be more pronounced in areas with lower population density and among populations with less access to the internet, as alternatives to storefronts may be more difficult for these populations to access.<sup>22</sup>

We previously estimated that during 2012, the payday lending industry supported the production of goods or the provision of services estimated to value approximately 9.5 billion dollars.<sup>23</sup> If the payday loan revenues would have decreased by 83%, as we estimated under the alternative model, the total value of the goods and services that would not have been produced during 2012 would have been 7.9 billion dollars. While the industry decreased somewhat in the meantime, the expected forced reduction in payday lending supply (including store closing) will also negatively affect these supported industries, with a negative impact on employment, value added, and taxes.

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[https://www.newyorkfed.org/medialibrary/media/research/staff\\_reports/sr391.pdf](https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr391.pdf), last accessed on 9/27/2016.

<sup>22</sup> Computer and Internet Trends in America, United States Census Bureau, available at <http://www.census.gov/library/visualizations/2014/demo/computer-use-infographic.html>, last accessed on 9/30/2016.

<sup>23</sup> Economic Impact of the Payday Lending Industry, prepared for CFSA, Marsha Courchane and Steli Stojanovici, Charles River Associates, July 8, 2014.

**APPENDICES**

Appendix A. Alternative Requirements Example

Appendix B. Payday Lending Revenue vs. Population Density

**APPENDIX A. ALTERNATIVE REQUIREMENTS EXAMPLE**

| Policy Period | Loan Date  | Due Date   | Date Paid  | Original Principal | Principal | Original Fees | Fees    | Sequence Number | Number in a Sequence | Loan Granted | Not Granted Reasons   |
|---------------|------------|------------|------------|--------------------|-----------|---------------|---------|-----------------|----------------------|--------------|---|
| No            | 1/10/2013  | 1/22/2013  | 1/22/2013  | \$150.00           | \$150.00  | \$20.00       | \$20.00 | 1               | 1                    | Yes          | .   |
| No            | 2/6/2013   | 2/18/2013  | 2/20/2013  | \$150.00           | \$150.00  | \$20.00       | \$20.00 | 1               | 2                    | Yes          | .   |
| No            | 3/14/2013  | 4/1/2013   | 4/1/2013   | \$100.00           | \$100.00  | \$15.00       | \$15.00 | 1               | 3                    | Yes          | .   |
| No            | 4/4/2013   | 4/15/2013  | 4/15/2013  | \$100.00           | \$100.00  | \$15.00       | \$15.00 | 1               | 4                    | Yes          | .   |
| No            | 5/6/2013   | 5/21/2013  | 5/21/2013  | \$150.00           | \$150.00  | \$20.00       | \$20.00 | 1               | 5                    | Yes          | .   |
| No            | 6/5/2013   | 6/18/2013  | 6/18/2013  | \$150.00           | \$150.00  | \$20.00       | \$20.00 | 1               | 6                    | Yes          | .   |
| No            | 6/24/2013  | 7/11/2013  | 7/5/2013   | \$250.00           | \$250.00  | \$30.00       | \$30.00 | 1               | 7                    | Yes          | .   |
| No            | 7/15/2013  | 7/26/2013  | 7/26/2013  | \$400.00           | \$400.00  | \$45.00       | \$45.00 | 1               | 8                    | Yes          | .   |
| No            | 7/27/2013  | 8/9/2013   | 8/9/2013   | \$200.00           | \$200.00  | \$25.00       | \$25.00 | 1               | 9                    | Yes          | .   |
| No            | 8/29/2013  | 9/6/2013   | 9/6/2013   | \$100.00           | \$100.00  | \$15.00       | \$15.00 | 1               | 10                   | Yes          | .   |
| No            | 9/9/2013   | 9/20/2013  | 9/20/2013  | \$150.00           | \$150.00  | \$20.00       | \$20.00 | 1               | 11                   | Yes          | .   |
| No            | 10/8/2013  | 10/25/2013 | 10/23/2013 | \$100.00           | \$100.00  | \$15.00       | \$15.00 | 1               | 12                   | Yes          | .   |
| No            | 11/8/2013  | 11/22/2013 | 11/25/2013 | \$100.00           | \$100.00  | \$15.00       | \$15.00 | 1               | 13                   | Yes          | .   |
| No            | 11/27/2013 | 12/13/2013 | 12/14/2013 | \$150.00           | \$150.00  | \$20.00       | \$20.00 | 1               | 14                   | Yes          | .   |
| Yes           | 1/10/2014  | 1/24/2014  | 1/25/2014  | \$100.00           | \$100.00  | \$15.00       | \$15.00 | .               | .                    | No           | 4th or more ln in the same seq   NbrLnsPr12mo > 6   DaysInDebtPr12mo > 90 |
| Yes           | 2/17/2014  | 2/27/2014  | 2/27/2014  | \$400.00           | \$400.00  | \$45.00       | \$45.00 | .               | .                    | No           | NbrLnsPr12mo > 6   DaysInDebtPr12mo > 90                                  |
| Yes           | 3/1/2014   | 3/13/2014  | 3/13/2014  | \$150.00           | \$150.00  | \$20.00       | \$20.00 | .               | .                    | No           | NbrLnsPr12mo > 6   DaysInDebtPr12mo > 90                                  |
| Yes           | 4/10/2014  | 4/24/2014  | 4/24/2014  | \$150.00           | \$150.00  | \$20.00       | \$20.00 | .               | .                    | No           | NbrLnsPr12mo > 6   DaysInDebtPr12mo > 90                                  |

| Policy Period | Loan Date  | Due Date   | Date Paid  | Original Principal | Principal | Original Fees | Fees    | Sequence Number | Number in a Sequence | Loan Granted | Not Granted Reasons                               |
|---------------|------------|------------|------------|--------------------|-----------|---------------|---------|-----------------|----------------------|--------------|---|
| Yes           | 5/3/2014   | 5/22/2014  | 5/23/2014  | \$100.00           | \$100.00  | \$15.00       | \$15.00 | .               | .                    | No           | NbrLnsPr12mo > 6   DaysInDebtPr12mo > 90          |
| Yes           | 5/27/2014  | 6/5/2014   | 6/5/2014   | \$150.00           | \$150.00  | \$20.00       | \$20.00 | .               | .                    | No           | NbrLnsPr12mo > 6   DaysInDebtPr12mo > 90          |
| Yes           | 6/23/2014  | 7/3/2014   | 7/2/2014   | \$100.00           | \$100.00  | \$15.00       | \$15.00 | .               | .                    | No           | NbrLnsPr12mo > 6   DaysInDebtPr12mo > 90          |
| Yes           | 7/9/2014   | 7/17/2014  | 7/17/2014  | \$100.00           | \$100.00  | \$15.00       | \$15.00 | .               | .                    | No           | NbrLnsPr12mo > 6   DaysInDebtPr12mo > 90          |
| Yes           | 7/30/2014  | 8/14/2014  | 8/14/2014  | \$500.00           | \$500.00  | \$55.00       | \$55.00 | 2               | 1                    | Yes          | .   |
| Yes           | 8/26/2014  | 9/12/2014  | 9/11/2014  | \$100.00           | \$100.00  | \$15.00       | \$15.00 | .               | .                    | No           | NbrLnsPr12mo > 6                                  |
| Yes           | 9/25/2014  | 10/9/2014  | 10/9/2014  | \$500.00           | \$500.00  | \$55.00       | \$55.00 | 3               | 1                    | Yes          | .   |
| Yes           | 10/16/2014 | 10/23/2014 | 10/24/2014 | \$150.00           | \$150.00  | \$20.00       | \$20.00 | 3               | 2                    | Yes          | .   |
| Yes           | 10/25/2014 | 11/6/2014  | 11/5/2014  | \$500.00           | \$166.67  | \$55.00       | \$18.33 | 3               | 3                    | Yes          | .   |
| Yes           | 11/6/2014  | 11/20/2014 | 11/18/2014 | \$300.00           | \$300.00  | \$35.00       | \$35.00 | .               | .                    | No           | 4th or more ln in the same seq   NbrLnsPr12mo > 6 |
| Yes           | 11/21/2014 | 12/4/2014  | 12/1/2014  | \$100.00           | \$100.00  | \$15.00       | \$15.00 | .               | .                    | No           | 4th or more ln in the same seq                    |
| Yes           | 12/15/2014 | 12/26/2014 | 12/26/2014 | \$200.00           | \$200.00  | \$25.00       | \$25.00 | 4               | 1                    | Yes          | .   |
| Yes           | 12/30/2014 | 1/8/2015   | 1/9/2015   | \$150.00           | \$133.33  | \$20.00       | \$17.78 | 4               | 2                    | Yes          | .   |

**Notes**

[1]: "4th or more ln in the same seq" = If granted, the loan would have been the 4<sup>th</sup> or more loan in the same sequence

[2]: "NbrLnsPr12mo > 6" = If granted, there would be more than six loans in the last 12 months.

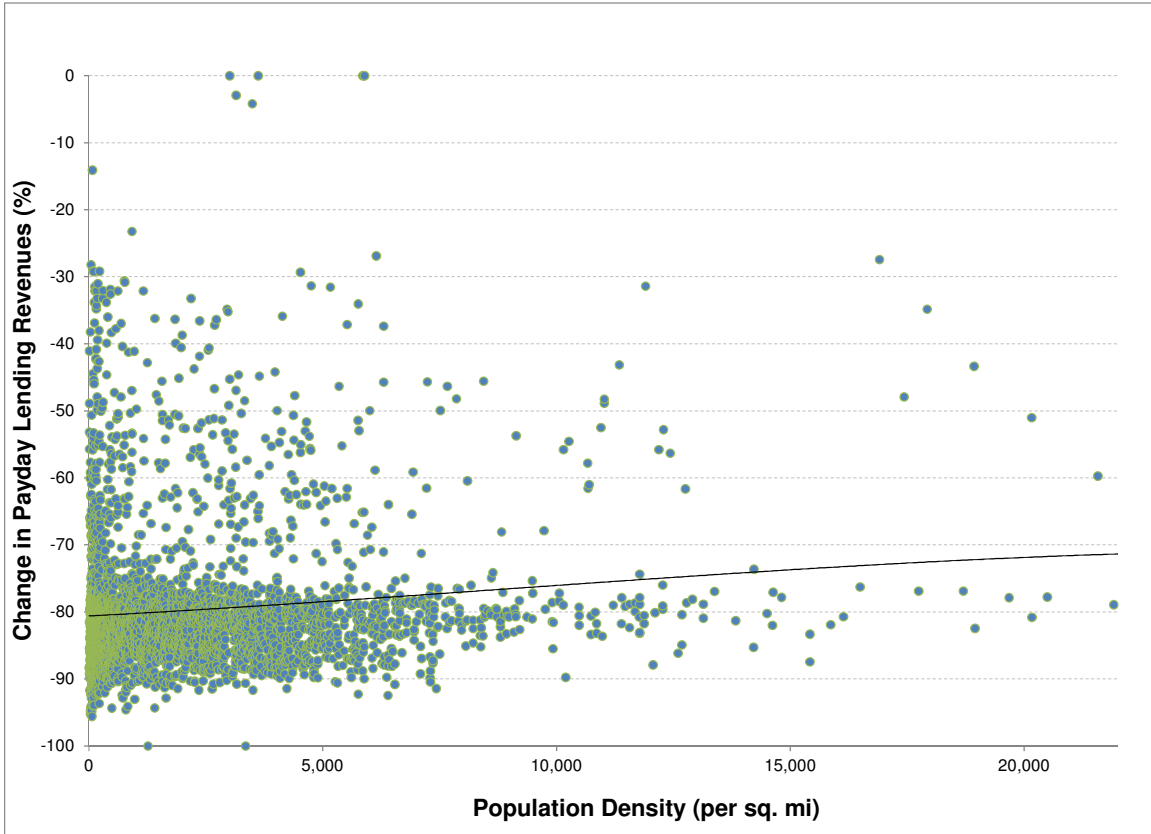
[3]: "DaysInDebtPr12mo > 90" = If granted, the borrowers would be more than 90 days in debt in the last 12 months.



[4]: The actual fees during the policy period were \$460.00. We estimated that the alternative requirements fees during the policy period would have been \$191.11.

APPENDIX B. PAYDAY LENDING REVENUE VS. POPULATION DENSITY

Chart 1. Change in Payday Lending Revenues vs. Store Population Density



## **ABOUT THE FINANCIAL ECONOMICS PRACTICE AT CHARLES RIVER ASSOCIATES**

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