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Payday Lending in America:
Profitability and Regulation in the Payday Lending Market

by
Orion Wilcox

A thesis submitted to the faculty of the University of Mississippi in partial fulfillment of the requirements of the Sally McDonnell Barksdale Honors College.

Oxford
May 2014

Approved by

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Advisor: Professor Josh Hendrickson

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Reader: Professor Mark Van Boening

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Reader: Professor Thomas Garrett

Dedicated to my father Tony William Powers.

Abstract

Payday lending is a highly contentious form of credit. Consumer advocates often argue for strict regulation or complete banning of the industry based on the idea that payday lending rates are usurious. Providers of payday loans argue that their product offers access to credit that would not be available otherwise. In order to reconcile this debate, I analyze financial data on the largest payday lender in the country Advance America. Furthermore, I examine the 2008 Arkansas payday lending law to analyze the impact of the ban on bounced check fees, overdraft charges, and Non-Sufficient Funds charges at state chartered Arkansas banks. I show that, contrary to the conventional wisdom, margins in the payday lending market are actually quite slim with Advance America profiting only $2.10 per $100 lent during the most profitable year in the data set. Secondly, I show that following the Arkansas payday loan ban, income from service charges at banks in the state rose by an average of $390,000 per quarter. This analysis adds credence to the argument that bank fees may be substitutable for payday loans and questions whether or not payday lending bans are welfare improving.

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1. Introduction

Payday lending is the provision of small-sum, short-term loans, usually via the exchange of cash for a post-dated check or debit authorization on the borrower's checking account. According to the Consumer Financial Protection Bureau (CFPB), in 2013 the average payday loan was for $392.00, carried a charge of $56.45, and had a maturity of 18.3 days (Consumer Financial Protection Bureau , 2013).These charges equate to an Annualized Percentage Rate (APR) of 339%. High APRs have caused payday lending to become a highly controversial financial product, referred to by those in the formal financial industry as a type of "fringe banking service," and many consumer advocates have called for more stringent regulation or an outright ban.

Payday lending is regulated by state law, with some states setting rate caps and others banning the practice. As an example, Mississippi and many other states regulate payday lending through "Check Cashers' Acts." Obtaining a license as a Check Casher allows lenders to perform two services: 1) to cash income checks for a fee and 2) to offer "deferred presentment," in which a borrower provides the lender with a postdated check, valuing the loan amount plus fees, to be cashed on their next payday (Mississippi Department of Banking and Consumer Finance, 2013). Under state law, a Check Casher cannot write a check for more than $500 and the maximum fee is $21.95 per $100 loaned.

If a lender is to charge the maximum fee, then the most a borrower may receive is $390.25, after paying fees of $109.75. Such a transaction yields an APR of 572%.[1]The CFPB estimates that approximately 12 million Americans use a payday loan annually (Consumer Financial Protection Bureau , 2013).

Today thirty-eight states allow for payday lending via specific statutes that allow lenders to circumvent usury laws applied to banks and other formal financial service providers. Eleven states have either specifically banned payday lending or have not written a law that allows for lenders to operate (National Conference of State Legislatures, 2013). In recent years Arizona, North Carolina, and Arkansas have all repealed their statutes allowing payday lending.

In order to qualify a person must have proof of employment and a blank check. This means that payday loan users are employed and are not part of the large portion of Americans designated as “unbanked.” The CFPB estimates that payday loan users’ income is primarily between ten and thirty thousand dollars per year, just straddling the poverty line in most states (Consumer Financial Protection Bureau , 2013).

Understanding payday lending is important for citizens, policymakers as well as economists. For citizens and consumers, using a payday loan is almost always a sign of financial instability. That being said, in some situations a payday loan may be the best option available to some individuals or households. Borrowers of payday loans are often

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[1] [(109.75/500) * (365/14)] * 100 = 572%

limited by liquidity constraints and may choose a payday loan to avoid fees imposed by banks for insufficient funds or bounced checks.

For policymakers, understanding the payday lending market and the effects of regulation is necessary in order to create a welfare improving regulatory environment. As the newly appointed director of the CFPB has noted "We recognize the need for emergency credit. At the same time, it is important that these products actually help consumers, rather than harm them" (Consumer Financial Protection Bureau , 2013). The reality is that for many people limited access to credit and emergencies can combine to make a payday loan a best option. The goal of policymakers should not be to limit peoples' options or patronize their decision making, but instead to ensure that the best options are available to their constituents and that consumers are fully informed of those options.

Finally, the payday lending market offers a number of interesting questions for economists and those studying finance. Payday loans are an example of a small-sum, short-term and uncollateralized form of credit whose pricing structure has gone understudied. The pricing structure of payday loans can offer insight into other fields such as microfinance. In addition, the payday lending market is a segmented market. Due to usury limits on banks and traditional lenders there are in effect two markets for credit. In some circumstances banks may be better capable of serving the needs of short term borrowers. However, due to usury limits these borrowers have been shut out of the market and forced to seek services in the Alternative Financial Services (AFS) market.

In effect, the payday lending market is an important issue for citizens and policymakers and offers a number of insights into lending and borrowing at the fringes of today's modern economy.

In this paper I will shed light on the payday lending industry by analyzing the cost structure of one of the nation's largest payday lending firms and by examining the effects of the 2008 Arkansas payday lending ban. The remainder of the paper proceeds as follows. In section 2, I will provide further background on the payday lending debate. Section 3 describes the history of consumer lending and regulation in the United States. In section 4, I review the economic literature concerning payday loans and regulation. Section 5 is an examination of the payday loan market, first through a supply side analysis of Advance America and secondly with a basic model of payday loan demand. Section 6 presents the econometric model, data and research findings and section 7 concludes.

1. The Payday Lending Debate

Since the 2008 financial crash and the ensuing Great Recession, the country has been engaged in a debate over the nature of our financial markets. While much of this debate has revolved around the largesse and moral hazard issues of Wall Street, there has also been increasing discussion about the role of alternative financial products and low income households' access to financial services. At the heart of this debate are the many providers of these alternative financial services, known as "fringe banking services," and their customers. In response to this debate, the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act created the Bureau for Consumer Financial Protection with the mandate of making credit markets, both large and small, fair, transparent and competitive (Dodd-Frank, 2010).

Perhaps the most commonly known type of alternative banking service is the payday loan. A payday loan is a closed end, single-payment loan that matures on the borrowers next payday. Although the base model varies by lender and state, largely due to differing regulations across state lines, the typical payday loan is for less than $500, has a two week term limit and an APR around 400%.[2]According to the Consumer Financial Protection Bureau (CFPB) payday loans typically carry three characteristics: 1)

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[2] Payday Loan pricing is typically presented as a fee (such as $20 for every $100 loaned), although Title Z regulation requires APRs to be displayed as well.

small-sum 2) short-term 3) require access to repayment through a post-dated check or access to a deposit account (Consumer Financial Protection Bureau, 2012).

Payday loans are offered through brick & mortar storefronts that specialize specifically in offering payday loans and cashing checks. In addition, payday loans are increasingly available online and even a few banks and credit unions have begun offering similar products. In the typical scenario, someone with a liquidity need can go to a payday lender and receive a loan of around $375 with a fee of $55 and a term of two weeks, or until the customer's next payday. The borrower presents the lender with either a postdated check or an authorization to electronically debit a deposit account. The $55 fee, while being easily understandable to the borrower, equates to an APR of 382%, well above most state usury laws.[3] Due to the high APRs, most states that allow payday lending have specific acts which differentiate between payday lending and traditional bank loans.

Payday lending is highly controversial, with consumer advocates arguing that the practice is "predatory." Industry proponents argue that payday lending and other fringe banking services allow underserved households to solve temporary cash-flow problems.

Those who argue for the outright banning or strict regulation of payday lending typically claim that payday lending is predatory and that lenders profiteer off of the poor. However, both the terms "predatory" and "profiteering" are highly ambiguous. As Senator Phil Gramm has stated "There is no definition of predatory lending. I don't know

[3] APR Calculation = 55 * (365/14)/ 375 =3.82 *100 = 382%

how we can hope to address the problem before we know what it is" (Federal Reserve Bank of New York, 2007).

In the absence of clear definitions, the argument for restricting payday lending relies on two principles. First, the argument is that payday lending is "predatory," based on the idea that payday lenders rely on borrowers falling into "debt-traps" by "rolling-over" or renewing payday loans multiple times (Center for Responsible Lending, 2013). Secondly, the high costs of payday loans (embodied by triple digit APRs) are seen as "unfair" (Center for American Progress, 2013). From an economic perspective this can only be true if there are economic profits to be obtained in the payday loan industry. I will further explore these arguments in a subsequent section.

A final argument made by opponents of payday lending is that consumers who utilize payday loans are systematically acting irrationally (Francis, 2010). This argument is favored by proponents of behavioral economics who believe that individuals do not always act rationally, face asymmetric information problems and do not always seek to maximize utility. While there are certainly those that use payday loans for reasons other than the intended purpose (to offset emergency expenses or income gaps), it is difficult to determine whether or not a preponderance of borrowers fall into this category. When determining whether or not an individual is making an irrational choice, all of his or her alternative options must be taken into account. If an individual has no other access to credit and prefers not to delay consumption, then a payday loan may increase his or her welfare. On the other hand it is certainly possible for borrowers to underestimate their future need for borrowed funds and overestimate their future income. In this case

borrowers may systematically borrow more than they should, leading to prolonged indebtedness.

Those who support the deregulation of payday lending argue that the high APRs associated with their loans are due to the small loan size, short term and high risk associated with offering uncollateralized credit. Because fixed costs incurred in lending are set regardless of the size of the loan, smaller loans necessitate higher prices in order to remain profitable. I will further explore this concept in a later section.

Industry insiders and proponents of payday lending argue that their products provide credit access to households that have been marginalized from the formal financial sector. They point out that following the banking deregulations of the 1970s formal banking and credit institutions largely abandoned low-income areas, seeking to compete for more profitable markets. In the absence of payday lending there would be few alternatives for low-income households to diffuse temporary cash flow emergencies and many would be forced to live without access to credit (Advance America, 2013).

The first alternative to a payday loan is the absence of credit. This also may be the worst case scenario if the costs associated with not borrowing are higher than the fees for a payday loan. With the average fee for a payday loan equaling approximately fifty-five dollars it is easy to imagine many circumstances where the alternative would be much more costly (Consumer Financial Protection Bureau , 2013).

A second alternative is to risk a bounced check fee by attempting to *float* a check. If an individual anticipates income she or he may simply write a check for consumption in the hopes that the recipient will not cash the check until after additional funds are

deposited into the account. This alternative carries the risk of a fee (usually around twenty-five dollars) from the bank as well as potential fees or consequences from the recipient of the check.

Finally, a third alternative is for the borrower to overdraft his or her account. Many banks now offer overdraft services in which the bank will cover a withdrawal exceeding the account balance for a charge, usually around twenty-five dollars. Depending on the amount of the overdraft, this option may be cheaper or more expensive than a payday loan. If the payday lender charges fifteen dollars per one-hundred dollars lent then the breakeven point (at twenty-five dollars for the overdraft) is $167. For overdrafts greater than $167, the APR is less than that of a payday loan. According to the Federal Deposit Insurance Corporation, the median overdrafts are twenty dollars for debit cards, sixty dollars for ATMs and sixty-six dollars for checks (Federal Deposit Insurance Corporation, 2008). According to these data, overdrafts are more costly on average than payday loans.

Consumers have voiced their views on payday lending. According to a survey conducted by the CFPB, consumers of payday loans appreciate the speed at which these loans can be issued and their availability compared to other financial services. Many borrowers view payday loans as an alternative to late fees on unpaid bills or overdraft charges. Among the characteristics that concern consumers are the high costs and aggressive debt collection practices (Consumer Financial Protection Bureau , 2013).

2. ***History***

The practice of lending small sums of money to financially distressed individuals at high interest rates is not a recent development. Many early societies had money lenders, the early antecedents of today's "fringe banking services" providers. There has also always been criticism of this type of financial service, with philosophers advising against indebtedness and theologians describing *usury* as a sin. However, there have also been times throughout history in which politicians and social critics have acknowledged the need of the poor for credit as well as the high costs associated with providing this form of credit. In these instances, efforts have been made to create a legitimate credit market for the poor that also safeguards against exploitation.

In this chapter I will trace the development of small loan lending, leading up to the current payday loan market. Secondly, I will explain the legal status and social attitudes toward usury laws at different times in American history. Finally, I will argue that in the early part of the twentieth century a real effort was made to develop a fair and transparent credit market for the poor, but that today's laws regulating payday lending have devolved from that standard .

Today, payday lending is one piece of a larger fringe financial industry including check cashers, title loans, rent-to-own stores and pawnshops. All of these institutions offer forms of credit to households outside of the formal financial sector. Payday lending

in its current form may be the most recent innovation of this industry, only appearing as a stand-alone business in the early 1990s. Although some consumer finance institutions, such as MoneyTree, offered forms of payday loans since the 1980s, the first company to offer a payday loan as its primary product was Check Into Cash of Cleveland, Tennessee (Rivlin, 2010).

Early entrants into the fledgling industry, such as Check Into Cash CEO Allan Jones, quickly realized that it was potentially profitable to provide financial services to households ignored by larger banks and financial service companies. “The thing about the poor peoples’ economy,” Jones noted, “is that it is basically recession proof. You’re always going to have people who need $100 or $200 real quick” (Rivlin, 2010). In a relatively open and unregulated market, the industry grew exponentially, reaching over 25,000 storefronts by 2000; more than all the nation’s McDonalds, Burger King, Sears, J.C Penny and Target outlets combined (Peterson, 2008). It was clear that the “payday technology” had lowered costs enough to make it profitable to offer credit to low income households. One Check Into Cash report claimed that a new store could be opened in under two weeks with $20,000 dollars and recover its initial costs after only nine months of operation (Rivlin, 2010).

In those early days payday lending operated in a legal grey area. As non-bank institutions, payday lenders assumed that they were not limited by state usury laws. One of the early investors in payday lending was William Webster IV, CEO of Advance America, who had previously worked in the Clinton Administration. Webster used his connections in Washington to help clear the way for payday lending (Rivlin, 2010).

Initially payday lenders circumvented interest rate ceilings by referring to their product as “check cashing.” Lenders claimed to be offering the same service as gas stations and grocery stores that cashed income checks for a nominal fee. However, after a number of legal battles payday loans were deemed subject to usury laws. This new legal interpretation put payday lenders in a quagmire, until the late 1990s when many state legislatures passed laws defining payday lending as “deferred presentment” (Fox, 1998). Deferred presentment is subject to different interest rate ceilings than banks and other larger financial institutions. In what were largely called “Check Casher Acts,” state legislatures legalized triple digit APRs for payday lenders. In 1998, Mississippi, Washington D.C., Nevada and South Carolina passed Check Casher Acts (Fox, 1998).

Although payday lending in its current form may be a recent innovation, money lenders have operated under different guises at different times in history. Some of these lenders, recognizing the legitimate need for credit, operated from a philanthropic position such as the charitable pawnshops operated by Fransican monks in 15th century Italy, known as Monte de Pieta (Rivlin, 2010). However, more often than not money lenders aimed at profit and not philanthropy.

There is also a historical precedent for the current criticisms of usurious lending. Early Christianity banned interest all together. Even today, Islam does not allow its adherents to gain directly from interest – *riba* in Arabic. In *Dante's Inferno*, the seventh level of hell was reserved for money lenders. In medieval Europe these theological views led to statutes banning or limiting interest rates. Charlemagne prohibited interest in France and Pope Paul II set a ceiling at 6%. The precedent most directly linked to the

American context is the Statute of Anne, which capped all interest rates in England at 5% (Peterson, 2008).

Largely based on these legal and theological precedents, the original thirteen U.S. colonies all passed usury laws which capped interest rates at 5-6% (Pew State and Consumer Initiativs, 2012). The views towards money lending were summed up by Benjamin Franklin in Poor Richard's Almanac, "the second vice is lying, the first is running in debt (Peterson, 2008)." In general, the view during the colonial period was one of disdain for usury and admonishment of the poor for the use of any debt.

Despite this early foundation, in the early part of the twentieth century there was a shift in views towards short-term debt. Increasing consumption led to the rise of "salary lenders," otherwise known as "loan sharks". One example were the "5 for 6 boys," from whom five dollars could be borrowed with the promise of a six dollar payment on payday. Another example were "salary buyers," who would simply purchase a workers upcoming paycheck at a discounted price (Keest, 2000). In an effort to combat this exploitative form of consumer lending, a movement, led by the social reformer Arthur Ham, emerged to craft a law that would allow regulated financial firms to offer loans to low income households. As the legal scholar Kathleen Keest has noted, the "approach ultimately adopted involved the creation of a legal framework that permitted a return high enough to attract legitimate business into the small borrower market, but also included sufficient safeguards to prevent the kind of abuses that were all too evident in the 'loan shark' market" (Keest, 2000).

The movement of Arthur Ham eventually led to the creation of the Uniform Small Loan Act of 1916 upon which many state small loan laws were based (Peterson, 2008). These new laws, eventually adopted by every state except for Arkansas, capped small-sum consumer loans at 36-42% interest. The new legal environment quickly led to the development of a regulated small loan industry that reached $255 million by 1930 (Keest, 2000).

The creators of these early small loan laws recognized two important points. The first is the legitimate need of low income households for credit to offset emergency expenses. The second is the truly higher costs associated with offering small-sum, short-term, and largely uncollateralized loans compared to traditional loans. It is worthwhile to take a quick detour from the history of interest rates in order to explain the significance of this recognition.

One point of contention for payday lenders today is their high prices. In his book *Broke USA*, Gary Rivlin sums up the opinion of many critics of payday lenders when he questions "the morality of making a much higher profit on the working poor than on more prosperous citizens" (Rivlin, 2010).

Despite these criticisms, the reality is that issuing small loans does necessitate higher prices, and higher prices do not necessarily equate to higher profits. The reason is two-fold. First, revenues from issuing small-sum, short-term loans are by definition lower than from larger loans that have more time to mature. However, the costs are relatively analogous. Like banks, payday lenders still have real estate and payroll costs in addition to the costs associated with adverse selection (vetting borrowers' employment and

income) and moral hazard (collection). The second reason for high rates is the significantly larger risk associated with issuing largely uncollateralized loans. It should be mentioned that there is some doubt as to whether or not loss rates for payday loans are actually higher than other commercial loans. This question will be examined in more detail in a following section.

Returning to the history of small-loan lending, the small loan acts of the early 1900s led to the creation of a relatively fair and transparent market for short-term consumer loans. However, as the century progressed and consumption of durable goods increased exponentially, interest rate ceilings became less common. The de facto end of usury laws came in 1978. In *Marquette National Bank v. First of Omaha Service Corp.* the Supreme Court ruled that when a national bank lends across state lines it may *export* its home state interest rate, regardless of whether or not this rate adheres to the usury laws of the borrower's state. As the legal scholar Christopher Peterson has explained, this ruling set off a "race-to-the-bottom in American usury law." Eventually two states, Delaware and South Dakota would abolish usury laws altogether, attempting to attract financial service providers to their states (Peterson, 2008). *Marquette v. First of Omaha* led to the de facto end of usury laws in the United States as far as banks were concerned.

Although the decision of *Marquette v. First of Omaha* did not directly impact payday lenders (payday lenders are not normally nationally chartered financial institutions and, therefore, cannot export interest rates), the de facto end of interest rate ceilings was one factor leading to the change in cultural attitudes toward usury. Of course, there were other factors setting the stage for the entrance of payday lending, including the

spread of consumer credit, the high inflation of the seventies and the banking reforms of the eighties and nineties.

Most notable were the banking reforms of the Reagan era which allowed more competition between banks. This more competitive environment led to an exodus of traditional banks from low-income areas and the adoption of higher fees where they remained. The resulting marginalization of the working class from the financial sector was one of the causes of the development of the "fringe banking sector" of which the payday lenders are a major player (McGray, 2008). This marginalization only continued during the 1990s as bank mergers reduced the number of banking institutions by 27% (Sherman, 2009).

Keest argues that,

> "the abandonment of the small loan marketplace by the traditional small loan lenders on the one hand, and the adequacy of the credit card to serve the majority of America's small-dollar credit needs on the other, created a void that grew under the radar screen of regulators, policy-makers, and for a time, even the mainstream industry. In this void, an industry resurfaced that the first few decades of the century were spent trying to stamp out" (Keest, 2000).

Today consumer lending at the fringes of the economy is in a transitional stage. Payday lenders compete for the business of financially unsophisticated borrowers who do not qualify for a secured credit card and want to avoid high overdraft charges and bounced check fees. While some banks and credit unions have made half-hearted attempts to enter the small loans market (under the auspices of an FDIC program), their largest addition has been the creation of deposit advance products, often with comparable

interest rates to payday loans. Recently, many states have regulated or banned payday lending, but the emergence of online lenders is complicating legal boundaries.

3. Literature Review

Much of the discourse regarding payday lending is tied up in advocacy positions either for or against regulation. In the economic literature the research can be segmented into three distinct topic areas. The first is research that deals with analyzing the payday lending industry in terms of profitability, pricing and competition. The second area of research deals with analyzing borrowers and demand for payday loans. This research looks at usage patterns, price and non-price characteristics and behavioral theories of payday loan demand. Finally, the third area of research analyzes the effects of payday loan regulation; it is this research which is most pertinent to this paper.

In the industry research, papers such as (Samolyk, 2005) and (Huckstep, 2007) argue that the high APRs associated with payday loans are justified based on high fixed costs and high loss rates. Using proprietary store-level data, Flannery and Samolyk find that fixed operating costs and high loss rates account for a large proportion of high APRs. In addition the authors “find no evidence that rollovers and repeat borrowers affect store profits beyond their proportional contribution to loan volume (Samolyk, 2005).”

On the other side of the debate Michael Stegman (2003) finds that profitability is ”significantly enhanced by the successful conversion of more and more occasional users into chronic borrowers.” Stegman’s findings are based on a study of North Carolina payday lenders.

Another important contribution to the research on the payday loan industry is a paper by Robert Young and Ronnie Phillips (2009). The authors estimate the pricing determinants of over 35,000 Colorado payday lenders. They find that in 2006 over 97% of loans carried the maximum legal fee, and they conclude that firms may gravitate toward strategic pricing behaviors using rate caps as focal points. They also find that multi-store firms were more likely to charge higher fees.

There is little economic research on payday loan demand due to a lack of data on borrowers. Consequently, much of the work on demand for short-term lending is theoretical or speculative. Stango (2012) examines borrower decision making and argues that borrowers prefer payday loans over similar products from traditional lenders due to non-price characteristics, the most important of which are speed, business hours, location and simplicity.

Francis (2010) develops a behavioral model of demand in which borrowers prefer payday loans due to cognitive biases and hyperbolic discounting. In this model borrowers overestimate their future ability to repay a loan and underestimate their future borrowing needs. The issue with this type of model is that it is difficult to test its effectiveness without direct evidence on borrower decision making. Attempts to gather evidence to fit this type of model rely on survey data which themselves are susceptible to a number of biases.

A growing amount of research is dedicated to the impact of payday loan regulation, motivated by the spread of regulation across a number of states. Zinman(2008) analyzes the Oregon rate cap and shows that after state legislators capped interest rates

for payday loans at ten dollars per one hundred dollars loaned, short-term borrowing fell by between seven and nine percent. The author conjectured that overdrafts were a likely substitute for the decrease in short term lending.

In another recent paper, Morgan and Strain (2008) test the claim that payday lending is a "predatory debt trap." The authors track bounced check rates, complaints to the Federal Trade Commission, and Chapter 7 Bankruptcies in Georgia and North Carolina both before and after the states banned payday lending. They found that households in Georgia bounced more checks, filed more complaints, and filed for Chapter 7 Bankruptcy more often after the ban took effect. Similar results were reported for North Carolina. The authors argue that these results support the thesis that consumers may substitute between payday loans and less preferable alternatives such as bounced check fees.

The antithesis to this research is culminated in a paper by Paige Marta Skiba and Jeremy Tobacman(2009) in which the authors find that access to payday loans leads to more Chapter 13 Bankruptcy filings. The authors exploit a discontinuity in a lender's loan approval rule to show that for first time applicants at or near the 20th percentile of the credit-score distribution, access to payday loans causes Chapter 13 Bankruptcy to double. It is interesting to note that Morgan and Strain (2008) found a negative correlation between payday borrowing and Chapter 7filings.

Chapter 13 filing is for individuals with sufficient financial assets to complete a multi-year payment plan, whereas Chapter 7 Bankruptcy is allowed for applicants with little to no assets. These findings may imply that for borrowers with little or no assets

payday loans may be able to help smooth fluctuations in income during emergencies. However, for borrowers with high income, payday borrowing may lead to "living beyond one's means," and therefore exacerbate debt problems.

A final paper of note is Morse (2009), who finds that access to payday loans may mitigate the negative effects of emergency situations. Using natural disasters as an exogenous shock, the author studies whether or not the presence of payday lenders mitigates or exacerbates financial distress. Using a difference-in-difference framework, the author shows that the presence of payday lenders mitigates 2.67 larcenies per 1000 households following a natural disaster (this represents 30% of the rise in larcenies following a disaster). According to the author, the study sheds light on the potential benefits of payday lending to an individual facing distress.

The data on borrower demand is sparse due to the difficulty in surveying consumers, however, two recent studies, by the Pew Foundation and the CFPB, have shed light on the consumers of payday loans and their habits. In 2012 the Pew Foundation sponsored a study conducted by Social Science Research Solutions which surveyed 33,576 adults in the continental United States. The study found that approximately 12 million adults (5.5% of the U.S. population) had used a payday loan in the last twelve months with 75% of these loans being issued at a storefront location while the remaining were brokered online. Of those who had borrowed from a payday lender, 69% claimed to have used the loan for recurring expenses and 16% had used the cash for an emergency expense (Pew Safe Small-Dollar Loans Research Project, 2012).

The second study, published by the CFPB in April of 2013, tracked 15 million loans in 33 states. The CFPB found that 66% of borrowers took out 7 or more loans annually with transactions occurring within 14 days of one another (Consumer Financial Protection Bureau, 2012). The study also showed that the typical borrower was middle to low income with incomes clustered (56%) between $10,000 and $30,000 annual income. Furthermore, payday borrowers are employed and banked.

What both of these studies indicate is that a large portion of users of payday loans may not be using the products in the manner that they are prescribed and marketed by payday lenders; as a response to a short-term gap in income or for emergency expenses. If borrowers are in fact using payday loans in an unsustainable manner, then these loans may lead to spiraling debt.

These findings also indicate that there is a high demand for short-term credit, whether it is used for emergency spending or recurring expenses. In order to understand why borrowers use payday loans it is necessary to explore the alternatives available to payday loan users. In essence the researcher must understand the opportunity cost associated with forgoing borrowing.

The academic literature on payday lending sheds light on the pricing structure and competition within the payday lending market. This paper makes two contributions, first it highlights the importance of taking into account the cost of providing short-term, small-sum loans when determining the profitability and competition of payday lending. Secondly, this paper adds to the literature on the demand for payday loans and shows the necessity for taking into account all aspects of the decision making process (such as

opportunity costs and substitutable products) when determining a model of payday loan demand.

4. ***Supply Side Analysis: Advance America***

One of the criticisms often levied against the payday industry is that interest rates on payday loans are usurious and that lenders “profiteer off the poor.” This criticism is largely based on cash advance fees calculated as Annualized Percentage Rates (APR), which often exceed three-hundred percent. Industry insiders see the situation differently, claiming that their service provides much needed access to credit to households marginalized from the formal financial sector. According to Advance America “the high charges associated with having insufficient funds in one's bank account, as well as overdraft fees and other late fees charged by financial institutions and merchants, helped create customer demand for cash advance services. We believe customers value cash advance services as a simple, quick, and confidential way to meet short-term cash needs between paydays while avoiding the potentially higher costs and negative credit consequences of other alternatives (Advance America, Cash Advance Centers Inc, 2011).”

In this section I will analyze the supply-side of the payday lending industry using data obtained from 10-K forms filed by Advance America with the SEC from 2009 through 2011. This analysis examines Advance America’s pricing structure by calculating costs per one hundred dollars lent, among other statistics.

Data

Advance America is the nation’s largest provider of payday loans and the company’s outlets make up ten percent of payday storefronts nationwide (Advance

America, Cash Advance Centers Inc, 2011). Due to its size Advance America offers a useful subsection of data on the payday lending industry. One potential weakness of the dataset, however, is that it offers no insight into the operations of single store lenders, also known as “mom and pop” outlets. Previous research (DeYoung and Phillips 2009) has indicated that the pricing strategies of single store outlets and multi-store firms may differ, with franchises charging higher rates on average.

Analysis

My analysis will show that fixed operating costs, particularly at the store level, are a major driver of high interest rates and that these costs do in fact necessitate APRs of over three-hundred percent. Furthermore, I show that the industry’s claim that high default rates are a major contributor to firm costs is untenable, as loss rates for payday lenders are equal to or below the financial industry average for consumer loans. Finally, I calculate the contribution margin per loan and the breakeven point in terms of loan volume for a typical Advance America outlet. This analysis indicates that while payday lenders’ profit margins are slim, the industry is particularly capable of taking advantage of economies of scale due to the low marginal costs per loan.

In order to analyze the costs per payday loan I define three categories for Advance America’s costs: corporate-level costs, store-level costs, and default-costs. Corporate-level costs include administrative costs, legal settlements, interest expenses etc. Store-level costs include employees’ salaries, occupancy costs, advertising, and other miscellaneous expenses. Default-costs are expenses associated with defaulted loans. In order to quantify default costs I calculate the firm’s loan loss rate, calculated as the ratio

of total charge-offs for each period to the aggregate principle of loans originated during the period. Because employee salaries and occupancy costs are fixed, default-costs are the only variable costs in the analysis. There are certainly some costs associated with processing a new loan (such as supplies or ACH charges) which are not included here, however, these charges are negligible and thus should not impact conclusions.

Lending Costs

Table 1. shows the cost breakdown per one hundred dollars loaned by Advance America in for the years 2009 through 2011. The average fees are not significantly higher than total costs and even in the most profitable year (2011) the firm profits are only $2.10 per one hundred dollars lent. The table also indicates that the major driver of firm expenses are fixed costs particularly at the store level.

Fig. 1. shows the percentage of each expense category in total firm costs. Fixed costs make up over three-quarters of the firm costs. Variable costs make up slightly under a quarter of firm costs. These data suggest that payday lenders should be able to exploit economies of scale, as fixed costs make up the majority of total costs.

Loss Rates

The above analysis demonstrates that expenses from defaulted loans only accounted for twenty-four percent of Advance America's total costs per loan processed in

TABLE 1. COST BREAKDOWN PER $100 LOAN

	Total Costs	Average Fee	Profit	Store Costs (Fixed)	Corporate Costs (Fixed)	Default Costs (Variable)
2009	$15.03	$16.51	$1.48	$9.20	$1.91	$3.92
2010	$15.01	$16.18	$1.17	$9.19	$2.39	$3.42
2011	$13.68	$15.78	$2.10	$8.49	$1.91	$3.27

2011. In 2011 the cost of lending one hundred dollars was $13.68 with defaults accounting for $3.27 of the total. In order to determine whether or not loss rates for payday lenders are particularly high compared to other lenders, I compare Advance America's loss rates (defined as charge-offs/total principle of loans originated in time period) with the average loss rates for all consumer loans as reported by the federal reserve (Federal Reserve, 2014).

As shown in Table 2, loss rates for Advance America were lower than the market average for four of the seven years in the data set with the average loss rate being nearly a percentage point lower for Advance America than other consumer loans. A paired t-test has a p-value of 0.23 indicating that the two means are not statistically different than one another. My analysis demonstrates that, contrary to industry claims, loss rates on payday loans are similar to the market average for consumer loans.

Breakeven APR

As stated above, a major criticism of payday loans are the high APRs charged by lenders. Using the analysis above, it is possible to calculate a breakeven APR for Advance America in each of the years within the data set. The breakeven APR is calculated by dividing 365 by the average term of a payday loan (ex. 17.6 for 2009) and then multiplying this ratio by the total costs per one-hundred dollars lent. The breakeven APR indicates the price that the firm must charge in order to recover its costs.

Table 3 shows that for two of the three years in the data set the breakeven APR is over three-hundred percent. In 2011, the year with the largest margin between breakeven and actual APR, the difference is forty-two percent. Previous research (DeYoung and

TABLE 2. LOSS RATES: ADVANCE AMERICA COMPARED TO ALL OTHER CONSUMER LOANS

	2005	2006	2007	2008	2009	2010	2011	Mean
Advance America	**1.52%**	**2.64%**	**3.05%**	**3.79%**	**3.92%**	**3.42%**	**3.27%**	**2.70%**
All Consumer Loans	**2.75%**	**2.05%**	**2.48%**	**3.51%**	**5.49%**	**5.87%**	**3.61%**	**3.68%**
Difference	**-1.23%**	**0.59%**	**0.57%**	**0.28%**	**-1.57%**	**-2.45%**	**-.034%**	**-.98%**

TABLE 3. BREAKEVEN APR

	2009	2010	2011
Breakeven APR	**311.70%**	**304.37%**	**274.35%**
Actual APR	**342.39%**	**328.09%**	**316.47%**
Excess	**30.69%**	**23.73%**	**42.12%**

Phillips 2009) has demonstrated that interest rates in the payday loan market tend to cluster near the legal maximum, indicating implicit collusion facilitated by price focal points. This finding, however, assumes that price caps are exogenously determined. It is more likely that legislators consult with industry leaders and researchers to determine a price ceiling that will still allow lenders to operate. This paper's analysis shows that payday lending prices are in fact near the legal maximum (approximately 300% APR in most states) because that is what costs necessitate.

What can be gleaned from this analysis is that arguments against payday lending based on the claim that three-hundred percent APRs are usurious are untenable. It is not appropriate to compare a two-week, three-hundred dollar loan to a loan of ten-thousand dollars with a term of twenty-four months. The intuition behind this finding is simple. In both scenarios fixed costs are similar, both banks and payday lenders must pay salaries, occupancy costs and the expenses related to adverse selection and moral hazard, however, because bank lending involves larger sums, banks can afford to charge lower APRs.

Margins and Breakeven Points in Volume

To further illustrate the profitability of the payday loan market I calculate the contribution margin per loan processed. The contribution margin measures the contribution of each loan processed to the firm's profits. Here the contribution margin is defined as marginal revenue minus marginal costs. As defined the firm's sole variable costs are those associated with default loans. In essence, marginal cost is the probability of a borrower failing to repay the loan multiplied by the loan amount.

Table 4 demonstrates that the contribution margin (measured as a percentage) of each loan processed is around seventy-five percent for each year in the data set. This suggests that at the margin payday loans are highly profitable and that lenders can exploit economies of scale.

This analysis also adds credence to the argument that lenders profit specifically off of "rolled-over" loans in which a borrower pays a new fee to extend the maturity date of a loan. Many states have banned rolling-over payday loans, however, this does not stop borrowers from simply paying off a loan only to borrow again immediately which is effectively a "roll-over." In 2011 Advance America outlets served 1,347,000 customers but originated over 10,561,000 new loans. Indicating an average of 7.84 loans per borrower, these data suggest that the vast majority of payday users are repeat customers.

Breakeven in Terms of Volume

In addition to showing the breakeven APR for lenders I can also show the breakeven number of loans and aggregate principle for Advance America at the firm and store-front level. Table 5 shows that in 2011 the average store had to issue eleven or more payday loans per day worth a total of over $3,839.00 in order to remain profitable. During the same year the average store only processed 11-12 loans per day.

Again this shows that the profit margins within the payday lending industry are in fact quite slim, despite the rhetoric of advocacy groups.

TABLE 4. CONTRIBUTION MARGIN (MARGINAL REVENUE – MARGINAL COSTS)

	Average Fee	Average Loan Amount	Loss Rate	Default Costs Per Loan	Contribution Margin
2009	**$53.00**	**$361.00**	**3.92%**	**$14.15**	**73.30%**
2010	**$53.00**	**$370.00**	**3.42%**	**$12.65**	**76.99%**
2011	**$53.00**	**$375.00**	**3.27%**	**$12.26**	**77.70%**

TABLE 5. BREAKEVEN IN TERMS OF VOLUME

Firm Level	Breakeven Loan (#)	Breakeven Loan ($)
2009	11221	$4,050,349.97
2010	10162	$3,759,485.19
2011	9565	$3,620,760.46
Store Level		
2009	4338	$1,565,655.19
2010	4321	$1,589,420.57
2011	3737	$1,401,223.09
Per Store Per Day		
2009	13	$4,289
2010	13	$4,379
2011	11	$3,839

5. ***Empirical Analysis***

Using a fixed effects regression model, I measure the changes in income from service charges on deposit accounts at state chartered banks in Arkansas both before and after the 2008 Arkansas ban on payday lending. Measuring changes in income from service charges yields an indirect measure of the ban's impact on consumer welfare. As previously stated, supporters of the payday lending industry argue that borrowers may use payday loans to avoid bounced check fees, NSF charges and overdraft fees. In essence this analysis tests the assumption that payday loans are a substitute for additional fees from banks by attempting to capture the effect of an exogenous decrease in credit access (the Arkansas payday ban) on income from service charges.

6.a Banning The Arkansas Check Cashers' Act

On November 6, 2008 the Arkansas Supreme Court ruled that the 1999 Check Cashers' Act, which regulated payday lending in the state, was illegal under the state's constitution. This ruling followed a case, *McGhee v. Arkansas State Board of Collection Agencies,* in which McGhee charged that a payday lender had carried out illegal activities in collecting a debt. Although the original case regarded the collections process, by the time the case reached the Arkansas Supreme Court the court was determining the legality of the Arkansas Check Casher's Act. As stated previously, check casher's acts were established in the 1990s in order to allow payday lenders to charge rates above state usury laws.

Although the court's final ruling was that the Check-Casher's Act allowed usurious interest rates and is therefore, unconstitutional, the justices did acknowledge that payday lending may be of some value to consumers. In an excerpt from the ruling the justices states: "It was argued to this court both in the briefs and at oral argument by those in favor of the Act that the check-cashers provide a service to Arkansas citizens that would not otherwise be available. While such a statement might have some semblance of truth, we simply must refuse to allow arguments, however plausible, to lead us away from the plain wording and spirit of our Constitution." In essence the Justices did not deal with the issue from a perspective of consumer welfare but instead as a constitutional dilemma.

The Arkansas Attorney General Dustin McDaniel followed up on the ruling, issuing cease and desist letters to the state's registered Check Cashers and cracking down on illegal brokers. On August 11th, 2009 the last payday lender left Arkansas (Garry S. Wann, 2012).

6.b Data and Potential Shortcomings

The data for the analysis come from bank call reports filed with the FDIC each quarter. The Consolidated Report of Condition and Income, colloquially referred to as call reports, provide information on the financial health of the bank. The specific variable of interest is Service Charges on Deposit Accounts under the sub-heading non-interest income. This variable is comprised of bounced check fees, overdraft charges and minimum balance fees. My analysis assumes that all of these variables are influenced by a change in the availability of short-term credit. Because the call reports do not

differentiate between bank branches and only provide information for each bank, I have selected 76 state chartered banks which only operate in Arkansas.

The descriptive statistics in Table 6 for the data shows that the mean income from service charges per quarter for an Arkansas bank is $532,000.46 compared to net interest income of $5,119,000.97. That is, service charges generate approximately one tenth as much income as interest earning assets. However, at over half a million dollars, income from service charges in non-trivial. It is also worth noting the huge variation within both metrics as evidenced by the high standard deviations.

6.c Econometric Model

The varialbe $ServCharges_t$ represent the dependent variable (service charges). There are three time periods: Pre-Ban, Post-Ban and Post-Implementation. Due to the fact that the Supreme Court's announcement of the ban did not lead to the immediate end of payday lending in the state, two marginal effects are measured. The time period Post-Ban measures the effect of the de jure banning of payday lending in the state, while the time period Post-Implementation measures the effect of the actual end of payday lending. The following model is estimated:

$$ServCharges_{it} = \propto\ + \beta_1 PostBan + + \beta_2 PostImp + \beta_3 CardAct + fe + te\ \varepsilon_{it}$$

Where:

PostBan: = 1 for quarters after Arkansas Payday Ban goes into effect but before last payday lender has closed (08Q3 – 09Q3)

PostImplement: = 1 for quarters after last payday lender has closed (09Q4 – 13Q4)

TABLE. 6 DESCRIPTIVE STATISTICS

Descriptive Statistics	Mean	Standard Deviation
Income from Service Charges	**$532,000.56**	**$555,000.13**
Net-Interest Income	**$5,119,000.97**	**6,119,000.974**

CardAct : The Credit Card Accountability, Responsibility, and Disclosure Act took effect in 2010Q1 and remains in place today. This act limited bank and credit card companies ability to charge late fees and other expenses to card carriers and account holders.

Fe: Fixed effects that measure unobserved heterogeneity at individual banks.

Te: Time Trend

The coefficients of interest here are β_1 & β_2 which embody the marginal effects of 1) the effects of the ban announcement and 2) the effects of all payday lenders leaving the state.

6.d Regression Results

Table 7 shows the regression results. The immediate effect of the ban was a drop in income from service charges of approximately $79,000. However, after the ban took full effect income from service charges rose by approximately $489,000. The combined marginal effects of both the ban and the implementation (postban + postimp) led to an increase in income from service charges of approximately $390,000 per quarter. In addition, the coefficient of the CARD act represents a drop in income from service charges of approximately $449,000.00 per quarter. This of course is the expected result of an act which sought to limit bank and credit card companies' ability to charge fees.

Table 8 displays the results of a difference of means F-test for the combined marginal effects of the ban and the implementation. The null hypothesis is that service charges are not statistically higher after the ban than before. The test statistic is significant at well above the 95% level, therefore I reject the null hypothesis. This test

TABLE 7. REGRESSION RESULTS (IN THOUSAND PER QUARTER)

Variable	Coefficient	Standard Deviation	P-Value
Postban	**-79.81**	**56.64**	**0.159**
Postimp	**489.48**	**88.02**	**0.000**
Cardact	**-449.96**	**84.15**	**0.000**
Time	**-14.77**	**12.05**	**0.221**
Cons.	**619.49**	**35.65**	**0.000**

indicates that the average rise in income from service charges of $390,000 (the combined marginal effects of the ban and the implementation) is statistically significant. In addition, this increase is practically significant if we consider that the mean level of service charges per quarter is approximately half a million dollars.

If payday loans and service charges (NSF fees, bounced check fees and overdraft charges) are substitutes, then the initial drop in income from service charges following the ban's announcement may have two explanations. The first is that consumers who may not have usually utilized a payday loan chose to borrow, knowing that the service would not be available in the future. The second explanation is that lenders were more aggressive in their attempts to lend existing capital. Both of these events would have led to more funds being obtained from payday lenders and perhaps less of a need for overdrafts or *floated* checks.

Lastly, as displayed by Table 7 the results for postban and time are not statistically significant at the 95% level. In order to determine their relevance for the model I performed a Joint F-test. The results are displayed below in Table 8. The Joint F-test shows that the variables postban and time are significant at the 95% level and therefore should be kept in the model.

Conclusion

Implications for Further Research

In this paper I have highlighted the importance of understanding the payday loan market for citizens, policymakers and economists alike. The debate over payday lending

TABLE 8. F-TESTS

	F-test	P-Value
Difference of Means (Postban +Postimp)	23.70	0.000
Joint F-Test (Postban, Time)	3.71	0.0249

is highly contentious and very important, especially for those living on the fringes of the American financial sector. Unfortunately, more often than not this debate slips into anecdotal rhetoric not based on principled analysis. I would argue that in American financial history there was a time in which the legitimate need of the poor for access to credit was recognized and an attempt was made to create a market which served that need. Today policymakers and entrepreneurs alike need to work together to develop a fair and transparent credit market for those without a credit history.

The analysis on Advance America indicates that profit margins are in fact quite slim in the payday loan market. Further research should take into account the fact that interest rate caps may be endogenous. Furthermore, this research indicates a need for a second look into the credit worthiness of sub-prime borrowers. If loss rates are indeed at or below the market average for consumer loans, then banks may need to reconsider the services they are currently offering to this subset of the population.

The results of the analysis on the Arkansas banks indicate an economically and statistically significant rise in income from service charges following the Arkansas payday loan ban. The results here are limited by a lack of comparative data from other states. However, the results offer prima facie credence to the theory that consumers may substitute payday loans for bounced check fees or overdraft charges. Further research should be conducted on the effect of payday loan bans on consumer welfare. Specifically, difference in difference estimates should be conducted between states with and without payday loan bans.

One example of successful cooperation between those on either side of the payday lending debate is the merger between Kinecta Federal Credit Union and Nix Check Cashing. Kinecta is a credit union which specialized in working in low income areas and has historically competed with payday lenders. Nix Check Cashing, founded in Los Angeles, was one of the first check cashers and payday lenders on the West Coast. Recently the two companies have joined forces to create a sustainable business model that offers short term credit to low-income households in California. The Kinecta-Nix collaboration is an example of what is possible if policymakers, consumer advocates and financial entrepreneurs work together (McGray, 2008).

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