AN EMPIRICAL EXAMINATION OF CONSUMER LITIGATION FUNDING

By

Jean Y. Xiao

Dissertation

Submitted to the Faculty of the

Graduate School of Vanderbilt University

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in

Law and Economics

May, 2017

Nashville, Tennessee

Approved:

Paige M. Skiba, Ph.D. (chair)

Andrew F. Daughety, Ph.D.

Rosa Ferrer, Ph.D.

Brian T. Fitzpatrick, J.D.

Jennifer F. Reinganum, Ph.D.

Copyright © 2017 by Jean Y. Xiao
All rights reserved

To the Heavenly Father,
who knit me together in my mother's womb and
chose me before the foundation of the universe

To Jesus Christ,
who is my LORD and Savior, Best Friend, and King

To the Holy Spirit,
who teaches me all things and
bears all things, believes all things, hopes all things, endures all things

**For of Him and through Him and to Him are all things,
to whom be glory forever. Amen.
Romans 11:36**

ACKNOWLEDGMENTS

Dad, thank you for always encouraging me in my educational pursuits; you instilled in me a strong work ethic and a value for lifelong learning. Mom, thank you for the countless prayers, words of encouragement, and unfaltering support; you imparted to me the virtue of perseverance by never letting me quit. Michelle, my sister, you have taught me almost as much as I have taught you; we are not only sisters by blood but also sisters by choice.

Professors Hersch and Viscusi, thank you for co-founding such an innovative, interesting, and integrated Ph.D. Program in Law and Economics. I am incredibly thankful to the Ph.D. Program in Law and Economics for its financial, professional, and administrative support throughout my entire time as a graduate student. Specifically, with regard to this dissertation, the Program provided the funds for the 1998–2012 county-level bankruptcy data for Chapter 2 and provided the funds for me to present Chapter 1 at multiple conferences. I am also very thankful to Vanderbilt University for its generous financial support of my graduate education in the form of the Provost's Graduate Fellowship and University Graduate Fellowship.

Professor Skiba, as my chair, thank you for all of the time that you have invested in shepherding me through the dissertation process and for being an incredible mentor. Among many other things, you have taught me how to face every research challenge with optimism and confidence, how to graciously and humbly respond to criticism, and how to celebrate the small and big successes along the way. You are a powerhouse of a professor and researcher, and it was an honor to have you as my chair.

Professors Daughety and Reinganum, thank you for being my academic parents for the last eight years. You both are world-class theorists, and your ability to distill complex situations into relevant models always amazes me. Among many other things, thank you for introducing me to law and economics eight years ago (which subsequently resulted in my pursuit of graduate studies in law and economics) and for introducing me to consumer litigation funding four years ago (which subsequently resulted in my pursuit of this topic for my *Vanderbilt Law Review* note and eventually my dissertation).

Professor Fitzpatrick, thank you for taking an interest in my work and for your raw, incisive comments that were always wrapped with a positive and kind tone. Professor Ferrer, thank you for your comments that always pushed me to think more critically about my empirical methods and the data.

Professor Hersch, thank you for your unwavering faith in my ability to be a good researcher, for teaching me critical lessons in empirical methods (many of which I applied to my dissertation research), and for inspiring me to find a dissertation topic that I was truly passionate about. Professor Anderson, thank you for your patience and guidance on my third-year paper as I was taking the first step from being a consumer to a producer of research.

Amy Cates and Laurel Donahue, thank you for always offering a compassionate, listening ear and taking care of the academic needs of all of the students in the Ph.D. Program in Law and Economics. Past and present law-and-economics colleagues—including Ben McMichael, Elissa Gentry, Henri Rautonen, Danielle Drory, Scott DeAngelis, Hannah Frank, Clayton Masterman, Erin Meyers, and Nick Marquiss—thank you for helping me to think through chapter ideas and confront empirical challenges,

thank you for reading and providing helpful comments on my drafts, and thank you for helping me with whatever I needed in the moment—whether it be proofreading my papers or giving me feedback on my presentations.

I am also extremely thankful to the consumer litigation funders that took the time to share their business experiences and knowledge about the industry with me. Finally, to the participants at the Vanderbilt Applied Microeconomics Work-in-Progress Seminar, Association for Public Policy Analysis & Management 2016 Fall Research Conference (especially Professor Sebastian Tello-Trillo), 11th Annual Conference on Empirical Legal Studies (especially Professor Maya Steinitz), and the Southern Economic Association 2016 Annual Meeting, thank you for thoughtful comments and suggestions on Chapter 1.

TABLE OF CONTENTS

Page

DEDICATION iii

ACKNOWLEDGMENTS iv

LIST OF TABLES ix

LIST OF FIGURES xi

INTRODUCTION 1

Chapter

I. THE EFFECT OF CONSUMER LITIGATION FUNDING ON MEDICAL MALPRACTICE LITIGATION 4

1. Introduction 4
2. Background Information 8
3. Related Literature 10
4. State Actions 13
   4.1 Prohibition 14
   4.2 Interest Rate or Fee Cap 15
   4.3 Disclosure Law 16
   4.4 Acknowledgment 17
5. Conceptual Framework 17
6. Data and Empirical Specifications 21
   6.1 Data 21
      6.1.1 Outcomes of Interest and State Actions 21
      6.1.2 Other Laws, Individual-Level Controls, and State-Level Controls 23
   6.2 Empirical Specifications 25
7. Results 27
   7.1 Claim Payment and Claim Duration 27
   7.2 Filing Rate 29
8. Robustness Checks 29
   8.1 Claim Duration 29
   8.2 Endogeneity 29
   8.3 Effect of the Great Recession and Bootstrap Standard Errors 33
9. Discussion 34
10. Conclusion 37

References 39

Tables 47

Appendix 55

II. THE EFFECT OF CONSUMER LITIGATION FUNDING ON BANKRUPTCY.....60

1. Introduction.....60
2. Background on Consumer Litigation Funding and Related Laws.....63
3. Overview of Bankruptcy.....67
4. Conceptual Framework: How Funding Affects Bankruptcy.....69
5. Data and Empirical Specification.....72
   5.1 Data.....72
   5.2 Empirical Specification.....74
6. Results.....75
   6.1 Main Regressions.....75
   6.2 Endogeneity.....78
   6.3 Extension: Informal Bankruptcy.....80
7. Discussion.....82
8. Conclusion.....85

References.....86
Tables.....93
Appendix.....99

III. CONSUMER LITIGATION FUNDING AND THE FINANCIER-LAW FIRM RELATIONSHIP.....102

1. Introduction.....102
2. Background on Consumer Litigation Funding.....105
3. Conflicts of Interest and Related Laws.....108
4. Conceptual Framework.....112
   4.1 The Financier-Law Firm Relationship and Gross Return on Funding.....113
   4.2 The Financier-Law Firm Relationship and Interest Rate.....114
5. Data and Empirical Specifications.....116
   5.1 Description of the Data.....116
   5.2 Empirical Specifications.....120
6. Results.....122
7. Discussion.....124
8. Conclusion.....126

References.....128
Tables and Figures.....133

LIST OF TABLES

CHAPTER I

Table 1. Consumer Litigation Funding State Actions 47
Table 2. Expected Effects of State Actions on Claim Payment and Claim Duration 48
Table 3. Summary Statistics 49
Table 4. The Effects of Consumer Litigation Funding State Actions on Claim Payment.....51
Table 5. The Effects of Consumer Litigation Funding State Actions on Claim Duration Hazard Rate 52
Table 6. The Effects of Consumer Litigation Funding State Actions on Filing Rate per 100,000 Residents.....53
Table 7. The Effects of Consumer Litigation Funding State Actions on Filing Rate per 1,000 Physicians 54
Table A1. Full Results of the Claim Payment, Claim Duration Hazard Rate, and Filing Rate Regressions with All Controls.....55
Table A2. The Effects of Consumer Litigation Funding State Actions on Claim Duration Hazard Rate with Adjusted Zero Values 57
Table A3. The Effects of State-Level Characteristics on Existence of State Actions.....58
Table A4. The Effects of Consumer Litigation Funding State Actions with Post-2007 Indicator.....59

CHAPTER II

Table 1. Consumer Litigation Funding State Actions 93
Table 2. Expected Effects of State Actions on Number of Nonrecourse Loans and Bankruptcy Rates.....94
Table 3. Summary Statistics 95
Table 4. The Effects of Consumer Litigation Funding State Actions on Chapter 7, Chapter 13, and Joint Chapter 7 and 13 Filing Rates 96
Table 5. The Effects of Consumer Litigation Funding State Actions on Nonbusiness and Business Bankruptcy Filing Rates 97
Table 6. Comparison of the Effects of Credit Access on Chapter 7 and 13 Bankruptcy Filing Rates in Different Studies.....98
Table A1. The Effects of Consumer Litigation Funding State Actions on Chapter 7, Chapter 13, and Joint Chapter 7 and 13 Filing Rates – Fixed-Effects, Lagged-Controls Specification Full Results 99
Table A2. The Effects of State-Level Characteristics on Existence of State Actions.....100
Table A3. The Effects of Consumer Litigation Funding State Actions on FTC and CFPB Complaint Rates.....101

CHAPTER III

Table 1. Consumer Litigation Funding Statute Provisions that Mitigate Conflicts of Interest....133
Table 2. Predictions on How the Duration of the Financier-Law Firm Relationship Is Associated with Gross Return and Interest Rate....134
Table 3. Summary Statistics....135
Table 4. Law Firm Statistics....136
Table 5. Gross Return Regressions....143
Table 6. Interest Rate Regressions....144

LIST OF FIGURES

CHAPTER III

Figure 1. Average Absolute Return by Year 137
Figure 2. Average Return Ratio by Year 138
Figure 3. Average Interest Rate by Year 139
Figure 4. Financier-Law Firm Relationship Duration and Average Absolute Return.....140
Figure 5. Financier-Law Firm Relationship Duration and Average Return Ratio 141
Figure 6. Financier-Law Firm Relationship Duration and Average Interest Rate.....142

INTRODUCTION

In the last decade, alternative litigation finance ("ALF") has increasingly garnered attention from news reporters, policymakers, and scholars. ALF is the funding of litigation through third-party companies—entities other than plaintiffs, defendants, and the litigants' attorneys or insurers. The ALF industry has grown rapidly in the past two decades and has three primary segments: the financing of tort plaintiffs ("consumer litigation funding"), the financing of law firms ("law firm funding"), and the financing of business plaintiffs involved in commercial lawsuits ("commercial litigation funding"). This dissertation examines consumer litigation funding ("CLF"). CLF is structured as a nonrecourse loan: a plaintiff obtains a cash advance in exchange for repaying that advance and any interest or fees out of the lawsuit proceeds that remain after the attorney and other higher-priority creditors are paid ("remaining case proceeds"). The maximum amount that a CLF financier can collect from the plaintiff is the remaining case proceeds; that is, the plaintiff pays either the total owed to the financier or the remaining case proceeds—whichever amount is lower. The plaintiff pays the financier nothing if he loses his lawsuit.

This dissertation is the first work to empirically analyze issues involving CLF. In Chapter I, I investigate the effect of access to CLF on medical malpractice litigation. Advocates of tort reform, which allege that the current tort system incentivizes too much litigation (particularly, frivolous litigation) and arbitrarily awards high damages, have rallied against CLF. Theoretically, CLF can decrease a plaintiff's risk premium and discount rate so that the plaintiff is able to hold out for a higher settlement. CLF can also increase the plaintiff's expected benefits of filing so that they outweigh the expected

costs, enabling the plaintiff to bring the lawsuit. Chapter I examines whether there is empirical support for such theoretical effects. Specifically, I explore the impact of the availability of these nonrecourse loans on medical malpractice litigation outcomes by using 2004–2012 closed claim data from the National Practitioner Data Bank. Exploiting time and geographic variation of state actions related to CLF ("difference-in-differences"), I find evidence consistent with the aforementioned theoretical effects. Access to CLF increases claim payment, claim duration, and the filing rate.

In Chapter II, I investigate the effect of access to CLF on bankruptcy. Because funded individuals are likely unsophisticated, have low incomes, and have been physically injured in the incidents implicating the legal claims, consumer advocacy organizations argue for harsh restrictions on this financial service. Chapter II presents the first empirical study of CLF's impact on consumer welfare, measured by Chapter 7 and 13 bankruptcy filings. I obtain bankruptcy data from the Public Access to Court Electronic Records (1998–2012) and U.S. Courts Statistics and Reports (2013–15). Employing difference-in-differences with state actions related to CLF, I find that access to CLF reduces the Chapter 7, Chapter 13, and joint Chapter 7 and 13 filing rates. This suggests that CLF may improve consumer welfare by helping liquidity-constrained plaintiffs avoid bankruptcy as they wait for the resolution of their cases.

In Chapter III, I examine whether the strength of the relationship between the financier and the funded individual's law firm is positively or negatively associated with the financier's gross return and interest rate. Critics of the legal finance industry have claimed that a strong financier-law firm relationship creates situations in which the law firm is tempted to make decisions that benefit the financier at the expense of the law

firm's current clients. Chapter III explores whether empirical support of this claim exists. It is the first study to use financier administrative data. I find that the strength of the financier-law firm relationship, measured by relationship duration, is negatively associated with the gross return on funding and interest rate. The results do not provide support for critics' allegation but is instead consistent with the following theory: over time, the financier learns more about a law firm's skills and trustworthiness. After positive repeat interactions with the law firm, the financier becomes increasingly willing to fund high-risk cases affiliated with that law firm, thus reducing the financier's gross return. The financier also becomes more reliant on that law firm's recommendations to fund cases, thus decreasing the financier's case screening expenses and, in turn, the interest rate.

In sum, this dissertation provides the first empirical examination of issues related to CLF. It shows that access to CLF increases medical malpractice claim payment, claim duration, and the filing rate, as well as decreases the Chapter 7 and 13 bankruptcy filing rates. It also provides some evidence that closer relationships between financiers and plaintiffs' law firms do not harm plaintiffs. While the data used in these studies do not allow for an evaluation of social welfare, the results suggest that CLF may be a beneficial source of credit for cash-constrained plaintiffs and that good working relationships between financiers and plaintiffs' law firms may benefit plaintiffs.

CHAPTER I. THE EFFECT OF CONSUMER LITIGATION FUNDING ON MEDICAL MALPRACTICE LITIGATION

1. Introduction

The modern tort reform movement began in the 1970s when a coalition of businesses, professional groups, and nonprofits sought to curb what the coalition viewed as frivolous litigation (Rhode 2004, p. 473). Since then, several waves of tort reform have taken place in the mid-1980s, late 1990s, and early 2000s. Each wave resulted in modest success for the reformers as state legislatures enacted damages caps, modified joint and several liability, and altered the collateral source rule.[1] Those behind this effort, including the National Association of Mutual Insurance Companies ("NAMIC"), the American Tort Reform Association ("ATRA"), and the U.S. Chamber Institute for Legal Reform ("ILR"), assert that the existing tort liability system fosters too much litigation, that many of the cases are frivolous, and that juries award arbitrary damages (see, e.g., NAMIC 2005; ATRA 2016; Doroshow 2011).

Now the actors behind the tort reform campaign have a new opponent: the litigation funding industry. This industry has grown rapidly in the last twenty years and has three primary segments: "(1) companies that provide consumers with legal funding

[1] Economic damages compensate plaintiffs for tangible harms such as lost wages. Non-economic damages compensate plaintiffs for intangible harms such as pain and suffering; non-economic damages caps limit these damages. Punitive damages are awarded to deter defendants from engaging in tortious acts; punitive damages caps limit these damages. Total damages caps limit the sum of economic, non-economic, and punitive damages. Joint and several liability allows plaintiffs to recover the entire award from any defendant, regardless of that defendant's percentage of liability. Many states now permit plaintiffs to recover from each defendant only the portion of the award for which the defendant is responsible. Other states allow plaintiffs to collect the total award from a defendant only if that defendant was liable for more than a certain percentage of the harm. The collateral source rule prevents defendants from introducing evidence that plaintiffs were compensated for harm from other sources such as plaintiffs' own insurance. Many states now require or permit compensation from other sources to be factored into the calculation of damages.

[consumer litigation funders], (2) companies that lend to plaintiffs' law firms [law firm lenders], and (3) companies that invest in commercial (i.e., business-against-business) claims on the plaintiff side [commercial litigation funders]" (Garber 2010, p. 8). Unlike the traditional financiers of lawsuits—litigants, law firms, and insurers—legal finance businesses are third parties with no direct interest in the underlying cases (Garber 2010, p. 1). NAMIC, ATRA, and ILR have taken firm stances against funding (NAMIC 2011; ATRA 2010; Beisner et al. 2009). Their argument against legal finance resembles that against the tort liability system: funding incentivizes more litigation and specifically more frivolous lawsuits (NAMIC 2011, p. 6–7; Joyce 2011, p. 2–4; Beisner and Rubin 2012, p. 4). These organizations allege that financiers take on individually risky cases if financiers' overall litigation portfolios are strong and that financiers encourage plaintiffs to file lawsuits with little merit. Proponents of funding maintain that financiers are rational in their investments, that they have incentives to create reputations for aiding meritorious cases, and that plaintiffs have already gained the support of attorneys prior to applying for funding (Rodak 2006, p. 519; Lyon 2010, p. 593).

The industry segment most relevant to tort litigation is consumer legal funding. A tort plaintiff, such as one in a medical malpractice lawsuit, can apply for a cash advance from a funder. If the financier gives the plaintiff an advance, the plaintiff must return the advance plus interest and fees out of the case proceeds that remain after payment of attorney's fees and other higher-priority debts (Garber 2010, p. 10–12; Beydler 2012, p. 1163). If this remaining portion of the settlement or trial award is lower than the total sum owed to the funder, then the plaintiff is not required to pay the difference between

the amount owed and the remaining portion. In essence, funding operates as a nonrecourse loan, where the collateral is the lawsuit.[2]

As of 2016, seventeen states have already taken steps to address these nonrecourse loans. As more states confront this growing industry, the need for empirical evidence on the effects of this alternative credit source becomes more urgent. This paper is the first to empirically examine consumer litigation funding. Specifically, it explores the effect of access to funding on medical malpractice claims.[3] Limiting medical malpractice liability has been a chief focus of tort reformers since medical malpractice insurance premiums have spiked several times over the last few decades (Black et al. 2005, p. 208; Avraham 2007, p. S184). Tort reformers are concerned that increasing liability will lead to rising insurance premiums, higher levels of defensive medicine, and more reductions in physician supply.

In this study, I employ a difference-in-differences identification strategy and use the variation in timing and geography from funding-related state actions to investigate the impact of the availability of nonrecourse loans on medical malpractice litigation outcomes. I draw on 2004–2012 medical malpractice closed claim data from the National Practitioner Data Bank. I run ordinary least squares regressions to examine claim payment, which is the amount paid in the resolution of the claim, and the filing rate, which is defined as the number of closed claims at the state-year level per 100,000 residents or per 1,000 physicians. I also run Cox Proportional Hazards Model regressions

[2] Depending on the state, the cash advance may or may not be considered a "loan" for legal purposes. For example, courts in Michigan and Colorado, as well as financial regulators in Maryland, Kansas, and South Carolina, have ruled that funding is a loan under state consumer credit law. In contrast, a Texas court has held that funding is not a loan but instead an investment.

[3] Many financiers provide cash advances to medical malpractice plaintiffs. A Google search for "litigation finance medical malpractice" brought up sixteen of these companies on the first two pages alone.

to examine the claim duration hazard rate; claim duration is the time from the year of incident to the year of resolution. The hazard rate is the probability that the claim will be resolved at *t* years, conditional on the claim not being resolved yet.

This paper provides some evidence that access to funding increases medical malpractice claim payment, claim duration, and the filing rate. An Ohio Supreme Court decision expressly banned litigation finance from 2003 to 2008. I find that this prohibition decreased claim payment by 18 percentage points and caused cases to resolve 3.4 times faster, reducing claim duration. The prohibition also lowered filings by 1.2 per 100,000 residents and by 3.6 per 1,000 physicians. Next, state appellate courts in Florida (1996) and Texas (2006) refused to condemn funding under usury laws or doctrines against champerty and maintenance—an action that I call "acknowledgment." Judicial acknowledgments of funding are analogous to legislature legalizations of a credit product. I find that these acknowledgments caused cases to resolve 15 percent slower, lengthening claim duration. The acknowledgments also increased filings by 0.34 per 100,000 residents and 1.6 per 1,000 physicians.

When regulating funding, policymakers should consider the costs and benefits of the business practice. This study sheds light on these considerations. The claim payment and claim duration results are consistent with the theory that funding strengthens a plaintiff's bargaining position by lowering his risk premium and discount rate. Further, the empirical analysis provides support that nonrecourse advances increase the filing rate. Even if plaintiffs enter legal finance agreements after contracting with attorneys (Rodak 2006, p. 519), the availability of these advances appears to affect plaintiffs' filing decisions. While a rise in the filing rate may translate into an increase in liability costs for

the medical industry, this rise may also signal an increase in access to justice for plaintiffs who were previously barred from the legal system due to high risk aversion or scarce financial resources.

Section 2 presents background information on nonrecourse advances. Section 3 gives an overview of the relevant literature. Section 4 describes the state actions that affect the aggregate number of these advances. Section 5 provides the theoretical predictions while Section 6 presents the data and empirical specifications. Sections 7 and 8 report the results of the main regressions and robustness checks. Section 9 discusses the results, and Section 10 concludes.

2. Background Information

In order to obtain a nonrecourse loan, the plaintiff must disclose basic lawsuit information to the financier so that the financier can calculate the expected profitability of the case (Estevao 2013, p. 474). Specifically, the funder determines its expected return from the lawsuit by examining the extent and type of harm, the predicted damages, the likelihood of a settlement or trial award, and any debts that must be paid prior to the repayment of the advance (Estevao 2013, p. 474). Providing case information to the financier may result in the waiver of attorney-client privilege or protection derived from the work-product doctrine. Currently, there is no general rule regarding waiver across all U.S. jurisdictions (Nieuwveld and Shannon 2012, p. 141–42; Giesel 2012; Giesel 2014).

If the funder approves the plaintiff's application, then it advances 10 to 20 percent of the expected value of the lawsuit (Appelbaum 2011a; Garber 2010, p. 12). Commentators have reported that cash advances vary from $500 to $100,000 (Carter 2004; Garber 2010, p. 12) and that interest rates range from 2 to 15 percent per

month (Carter 2004; Griffis 2011; Appelbaum 2011a). Plaintiffs generally use their cash advances to cover their utilities, car payments, rent, mortgage, food, and medical expenses (Rodak 2006, p. 514; Estevao 2013, p. 476; Garber 2010, p. 12; Skiba and Xiao, forthcoming). They do not spend the funding on attorney's fees and litigation expenses because in personal injury cases, plaintiffs typically make contingency fee arrangements with their lawyers (Garber 2010, p. 9). Under a contingency fee contract, the lawyer fronts the litigation costs in exchange for a portion (normally one-third) of the client's settlement or trial award (Kritzer 2004, p. 39). The attorney's percentage is higher in priority than the repayment to the financier; thus, the attorney gets paid prior to the funder.

Consumer legal funding differs from law firm lending and commercial litigation funding. Law firm lending involves the provision of credit to plaintiffs' law firms (Garber 2010, p. 13). The firm can use its assets (e.g., real property, future lawsuit revenues) to secure its debt to the financier (Garber 2010, p. 13). Interest rates begin at 25 percent per year and can vary depending on the firm's future prospects (Molot 2010, p. 98). The loan is usually not capped at the remaining case proceeds, though some financiers offer nonrecourse loans to firms to fund certain lawsuits (Garber 2010, p. 13; Engstrom 2013, p. 117). Next, commercial litigation funding involves supplying capital to plaintiffs in commercial cases in exchange for a portion of the lawsuit proceeds (Garber 2010, p. 13; Molot 2010, p. 96). This funding is nonrecourse since the financier recovers nothing if a plaintiff loses. Patent and antitrust cases are those most commonly funded (Garber 2010, p. 13; Shepherd 2012, p. 601). Financiers give hundreds of thousands to millions of dollars to business plaintiffs in these

suits (Garber 2010, p. 16). Unlike consumer advances that are used for living expenses, commercial advances are often used to front attorney's fees and litigation costs (Molot 2014, p. 179; Shepherd and Stone 2015, p. 946). Molot (2014, p. 179, 183) has claimed that commercial legal funding often helps secure a higher quality law firm.

3. Related Literature

No previous study has empirically analyzed legal finance in the United States, and no paper has empirically examined consumer litigation funding anywhere in the world. While a number of law review articles have detailed the issues related to litigation finance and offer policy recommendations (e.g., Rodak 2006; Molot 2010; Steinitz 2011; Beydler 2012; Estevao 2013; Molot 2014; Shepherd and Stone 2015; Xiao 2015), few papers involve formal theoretical or empirical analysis. This Section highlights three studies with such analysis that are most relevant to the inquiry at hand.

First, Daughety and Reinganum (2014) modeled the relationship between consumer litigation funding and settlement. They presented a two-period (five-stage) signaling model in which a plaintiff and his attorney have private information about his true lawsuit value. Daughety and Reinganum found that an "optimal loan" (i.e., a loan that maximizes the joint expected payoff to the plaintiff and funder) leads to full settlement. The optimal loan is a nonrecourse loan that is structured so that the plaintiff's expected net proceeds from trial do not vary based on the true case value. A non-optimal loan may lead to bargaining breakdown; that is, a nonrecourse loan that is too small to make the plaintiff indifferent between trial and settlement may incentivize the plaintiff to go to trial.[4]

[4] Avraham and Wickelgren (2014) constructed a model in which a consumer legal funding agreement could be used as evidence to signal that the case is strong and demonstrated that such signaling can lead to lower

Second, the only empirical litigation funding studies that exist are Abrams and Chen (2013) and Chen (2015), both of which examined the financing of commercial lawsuits in Australia. Abrams and Chen (2013) obtained data from Australian courts, administrative agencies, and IMF Ltd., which is the largest funder in Australia. First, the authors used IMF Ltd. expenditures for each Australian jurisdiction as a proxy for the presence of legal finance in that jurisdiction and found that higher expenditures were associated with greater court backlogs, fewer case finalizations, and lower lawsuit clearance rates. Second, the authors employed a case study methodology to examine seven funded and sixteen unfunded cases with published opinions. Abrams and Chen discovered that funded case opinions cited, and were cited, almost twice as much as those of unfunded cases; this suggests that litigation finance promotes the faster development of legal precedent.

Chen (2015) used similar data as that used in Abrams and Chen (2013). First, Chen presented a model that predicts the third-party financing of cases where there exists no strong legal precedent. Second, the author provided empirical analysis that confirmed the results of Abrams and Chen (2013) and produced additional findings. Chen found that IMF Ltd.'s profits were negatively associated with case citations, and in Australian jurisdictions where litigation funding is de jure legal, IMF Ltd. expenditures were positively associated with the number of case filings and finalizations.

The conclusions from Abrams and Chen (2013) and Chen (2015) likely cannot be extrapolated to consumer lawsuit finance in the United States for two primary reasons. First, these studies focused on commercial litigation funding. Such funding is quite

interest rates. Deffains and Desrieux (2015) modeled the effect of commercial litigation funding on lawsuit outcomes and found that such funding may decrease settlements in some scenarios and may increase claims in which the plaintiff did not suffer the alleged injury.

different from consumer funding. Consumer financiers advance cash to individuals who are plaintiffs in tort lawsuits; commercial financiers supply capital to businesses that are plaintiffs in commercial cases. Though both advances are nonrecourse, the cash given in the former is much less than that in the latter (thousands versus millions of dollars). Second, these papers examined funding in Australia, where contingency fee arrangements are not permitted (Chen 2015, p. 28; Papadakis 2016).[5] The effect of funding in the United States may differ from that in Australia because contingency fees already existed in the United States when funding arose. Further, financiers in Australia see their role as one akin to insurers; that is, financiers may help plaintiffs by choosing attorneys and deciding how to handle the legal claims (Martin 2008, p. 109; Cameron 2012, p 64). In contrast, financiers in the United States generally do not direct or manage the litigation,[6] in part due to stringent rules of attorney conduct that do not allow third parties to interfere with the independent judgment of lawyers (see Model Rules of Professional Conduct 1.2, 2.1, and 1.8(f)).

Finally, despite the existence of a substantial literature on medical malpractice litigation, no study has yet explored the effect of nonrecourse loans on this type of personal injury action. Empirical papers on medical malpractice claims cover topics such as tort reforms (Danzon 1984; Danzon 1986; Sloan et al. 1989; Born and Viscusi 1998; Yoon 2001; Viscusi and Born 2005; Avraham 2007; Born et al. 2009), apology laws (Ho

[5] Although contingency fees do not exist in Australia, some lawyers take clients on a "no win-no fee" basis (Cameron 2012, p. 61–62). That is, lawyers receive payment only if they win the case. The payment can be an ex ante fixed fee or a fee calculated based on an hourly rate. These no win-no fee agreements can also include additional "success fee[s]" if the lawyers win.

[6] Each member of the American Legal Finance Association agrees not to "[a]cquire ownership in [the] client's litigation" and not to "[i]nterfere or participate in [the] client's litigation" (ALFA 2016). *See also Charge Injection Techs, Inc. v. E.I. DuPont de Nemours & Co.*, C.A. No. N07C-12-134-JRJ (Del. Super. Ct. March 9, 2016) (finding that the financier was neither "controlling or forcing" the plaintiff to pursue litigation nor "controlling the litigation for the purpose of continuing a frivolous or unwanted lawsuit").

and Liu 2011a, 2011b), fee shifting (Snyder and Hughes 1990; Hughes and Snyder 1995), characteristics of payments (Sloan and Hsieh 1990; Hyman et al. 2007; Hyman et al. 2011), and early offer reform (Hersch et al. 2007; Black et al. 2009). This work expands the literature by considering the effect of third-party funding on medical malpractice litigation outcomes.

4. State Actions

This paper employs a difference-in-differences estimation strategy to examine the effect of consumer legal funding on lawsuit outcomes. In conducting the analysis, I use state actions that affect access to, and demand for, funding as proxies for changes to the aggregate number of nonrecourse loans. I find all state actions that impact the time period 2004–2012 and organize them into four groups based on whether an action restricts or promotes funding and how large the action's effect should be on the total number of nonrecourse advances.[7] From most to least restrictive, these categories are (1) prohibition, (2) interest rate or fee cap, (3) disclosure law, and (4) acknowledgment. Table 1 reports these state actions, along with their citations, by category. When a state action has features that relate to more than one category, I put the action in the category that reflects its most restrictive feature since this feature primarily dictates how financiers respond to the law. Because I am the first to study the effects of these governing actions, the categories are not based on previous studies. The rest of this Section provides a description of each category.

[7] In addition to my own research using Westlaw and LexisNexis, I obtain information from the following secondary sources: Nieuwveld and Shannon (2012, p. 144–59) provide a state survey of laws related to litigation funding; Bond (2002, p. 1333–41) provides a state survey of maintenance and champerty laws; Xiao (2015, p. 270–75) describes laws and regulations relevant to consumer litigation funding; the U.S. Chamber Institute for Legal Reform updates its website with news about third-party litigation funding (ILR 2016); and the National Conference of State Legislatures documents litigation finance bills considered by state legislatures in recent years (NCSL 2016).

4.1 Prohibition

Prohibitions eliminate litigation finance completely. There is only one express ban that affects the time period 2004–2012. In 2003, the Ohio Supreme Court held that a consumer legal funding contract is void based on common law prohibitions against champerty and maintenance. In this case, the plaintiff had received a $6,000 advance from Future Settlement Funding Corporation and a $1,000 advance from Interim Settlement Funding Corporation. The plaintiff had agreed that she would repay the advances with interest out of the proceeds of her lawsuit against State Farm in which she sought uninsured motorist benefits after a serious collision. The court stated that these cash advances would "prolong litigation and reduce settlement incentives" and thus invoked the doctrines against champerty and maintenance in order to ban funding. Though the legal definitions differ from state to state, maintenance is generally when a third party with no bona fide interest in the case assists a litigant in bringing the lawsuit, and champerty is a type of maintenance in which the third party seeks to profit from litigation proceeds. The *Rancman* prohibition was in effect until August 2008, when the Ohio legislature adopted a statute that permitted third parties to make nonrecourse loans to plaintiffs.[8]

Consumer litigation funding does not automatically fall under the prohibitions against champerty and maintenance. Some courts have previously concluded that the bans do not apply to nonrecourse advances. For example, in 2008, a North Carolina appellate court held that legal finance is not champertous.[9] The plaintiff had obtained a $3,000 advance from Legal Bucks, LLC, and promised to repay the advance with interest

[8] Ohio Rev. Code Ann. § 1349.55.

[9] *Odell v. Legal Bucks, LLC*, 665 S.E.2d 767 (N.C. Ct. App. 2008).

out of the proceeds of her motor vehicle accident case. Although the facts resembled those in *Rancman*, the court noted that North Carolina's laws, unlike Ohio's laws, required financiers to have the intent of instigating litigation—an element that was missing in the case at hand. Indeed, funders recognize that the elements and application of the laws against champerty and maintenance vary from state to state. Thus, they still operate in states that have these prohibitions but have not yet applied them to funding, such as Alabama and Georgia.[10]

The bans against champerty and maintenance directly affect financiers only when courts apply them to void funding contracts as in *Rancman*. Thus, I treat the Ohio prohibition as a litigation funding state action and create a separate variable to account for any indirect effects that the champerty and maintenance laws may have on lawsuit outcomes through a non-funding mechanism (see Section 6.1.2).

4.2 Interest Rate or Fee Cap

An interest rate or fee cap limits the price of consumer litigation funding and makes it unprofitable for financiers with capital costs above the maximum price to continue operating. Many commentators note that annual percentage rates ("APRs") for funding often amount to over 100 percent per year (Carter 2004; Griffis 2011; Appelbaum 2011a, 2011b). Thus, the caps described in the following paragraph should be binding for high-cost financiers or cause low-cost financiers to scale back on high-risk advances, reducing the total number of nonrecourse advances (see, e.g., ALFA 2014).[11]

[10] For example, Oasis Financial, a consumer litigation funder, does not list Alabama or Georgia as states in which the firm does *not* provide cash advances to plaintiffs, even though these states have laws against champerty and maintenance (Oasis Financial 2016).

[11] I attempt to run regressions in which I break out the four categories into smaller categories and treat certain caps as categories by themselves. However, increased multicollinearity makes the results unreliable, as narrower categories cause many state fixed effects to fall out.

Four interest rate or fee caps affect the time period 2004–2012. In 2004, a Michigan appellate court concluded that a lawsuit advance is subject to the state usury law's interest rate cap of 7 percent per year. In 2008, a North Carolina appellate court held that funding is an "advance" that falls under the state usury law, which restricts interest during the term of the loan to the greater of 16 percent or a rate determined by the Commissioner of Banks. In 2009, the Maryland Commissioner of Financial Regulation ruled that funding is a loan subject to the state interest rate limit of 24 percent per year for a principal amount of more than $1,000 and 33 percent per year for an amount up to $1,000. Similarly, in 2009, the Kansas Office of the State Bank Commissioner opined that funding is a loan under the state consumer credit code. The code restricts the interest rate to 21 percent per year for the amount of the total owed that is more than $860 and 36 percent per year for the amount of the total owed that is under $860.

4.3 Disclosure Law

The purpose of a disclosure law is to help consumers understand the true cost of nonrecourse loans and make rational, utility-maximizing decisions to obtain these loans. Maine, Ohio, and Nebraska have enacted disclosure statutes to govern funding. These laws require measures such as a minimum font size, itemization of one-time fees, presentation of a schedule of repayments, disclosure of the APR, and translation of the contract into the consumer's primary language. In 2005, the New York State Attorney General entered into an agreement with nine financiers that contains disclosure requirements similar to those in the funding statutes. All current and new members of the American Legal Finance Association ("ALFA")—a trade association for consumer litigation funders—have to comply with this agreement (ALFA 2016).

Disclosure laws theoretically decrease the total number of nonrecourse loans. Financiers incur extra expenses in complying with such laws, making it more costly to do business. Consumers often are not financially sophisticated (Beydler 2012, p. 1166). Thus, disclosure requirements may help consumers comprehend the terms of the contract and lead them to decide that the costs of taking out a cash advance outweigh the benefits. On a practical note, these requirements may have no actual effect on funding. Many financiers supported disclosure measures in lieu of the more restrictive alternative of interest or fee caps (Appelbaum 2011a, 2011b). Further, many consumers are financially desperate (Garber 2010, p. 10, 12; Martin 2008, p. 84–85; Beydler 2012, p. 1166) and may not be motivated to forgo funding, even with new information from the disclosures.

4.4 Acknowledgment

In two states where the three aforementioned categories do not apply, there have been judicial acknowledgments of funding. An acknowledgment (or implicit allowance) of nonrecourse advances occurs when a state court does not restrict these advances under usury laws or prohibitions against champerty and maintenance. Acknowledgments are comparable to legislature legalizations. They reduce litigation costs for financiers and thus increase the supply of legal finance.

5. Conceptual Framework

State actions should affect the aggregate number of nonrecourse advances. These advances, in turn, should affect litigation outcomes. In this paper, claim payment and claim duration are the "end outcomes" that I examine. There are two mechanisms through which nonrecourse advances affect the end outcomes: bargaining and filing. In this Section, I do not introduce a formal model, but I provide a framework for thinking about

how funding affects claim payment and claim duration. First, I explain how nonrecourse loans can affect the end outcomes through bargaining dynamics, under the assumption that filing is constant. Then, I address how funding can impact the end outcomes through filing.

Assuming that filing is constant, litigation finance can increase or decrease claim payment and claim duration by changing bargaining dynamics. On one hand, funding can boost the plaintiff's bargaining power because it can shift risk to the financier and lower the plaintiff's discount rate. A plaintiff values trial at the present value of the expected judgment from trial minus the risk premium (i.e., $(1/(1+r)^t)EJ - R$). A higher length of time to the resolution of the case at trial, t, decreases the present value of the expected judgment. A higher discount rate, r, reflects a less patient plaintiff. A higher risk premium, R, reflects a more risk averse plaintiff. The plaintiff is indifferent between settling for $(1/(1+r)^t)EJ - R$ and going to trial. Theoretically, legal finance ("LF") can decrease the risk premium by shifting the risk from the plaintiff to the repeat-player funder (i.e., $R > R_{LF}$) and can reduce the discount rate by providing a cash advance to the plaintiff for current living expenses (i.e., $r > r_{LF}$). Thus, a nonrecourse loan can increase the value at which the plaintiff is indifferent between settlement and trial. Under this scenario, funding would likely increase claim duration. Plaintiffs who are less risk averse and have more monetary resources can hold out for higher settlements or trial awards.

While funding can increase both claim payment and claim duration, legal scholars have raised the possibility of the opposite outcome (Molot 2010, p. 89–91; Rodak 2006, p. 522–23). High interest and fees associated with nonrecourse loans may incentivize plaintiffs to resolve their cases faster and, perhaps, for a lower amount than they would

have gotten without funding. Under this scenario, the risk-transfer benefit is negated due to the pressure the plaintiff experiences from the rapid accumulation of interest owed to the funder. That is, the plaintiff's discount rate with funding is actually higher than without (i.e., $r < r_{LF}$). A rational plaintiff would likely not obtain a cash advance unless the advance relieved some financial pressure, allowing him to be more patient in waiting for a fair settlement. However, Skiba and Xiao (forthcoming) have explained that plaintiffs may make cognitive mistakes in their cost-benefit analyses of taking out nonrecourse loans.

Finally, nonrecourse loans can increase claim payment and decrease claim duration. Litigation finance may encourage defendants to offer fair deals earlier by making plaintiffs' trial threats more credible (Rodak 2006, p. 522–23). In this scenario, negotiations may resolve sooner without any detrimental effect on the magnitude of the plaintiff's settlement.

Next, this Section discusses how funding can impact claim payment and claim duration through the mechanism of filing. A plaintiff will initiate a claim if his expected benefits are greater than his expected costs of filing. Assume that the plaintiff's expected benefits are his share of the claim payment (i.e., $[(1/(1+r)^t)EJ - R](1-\alpha)$), and his expected filing costs are C_F, which may include search costs for an attorney. The constant α represents the share that the contingency fee attorney receives. Without funding, the expected benefits may be lower than the expected costs (i.e., $[(1/(1+r)^t)EJ - R](1-\alpha) < C_F$). Funding may increase the expected benefits, by reducing the discount rate and risk premium, so that the expected benefits outweigh the expected costs (i.e., $[(1/(1+r_{LF})^t)EJ - R_{LF}](1-\alpha) > C_F$). How funding affects the mean claim payment and mean

claim duration through filing depends on the characteristics of the additional claims. If the additional claims have an average payment that is higher than the status quo, then the overall mean payment will increase, and vice versa. If the additional claims have an average duration that is higher than the status quo, then the overall mean duration will increase, and vice versa.

While funding may increase the number of lawsuits, it should not decrease the number of lawsuits. A financier does not advance the plaintiff cash until the plaintiff has contracted with an attorney and the financier has verified the viability of the case with the attorney (see Rodak 2006, p. 519). The attorney has his own participation constraint and will not take on a case if his expected share of the lawsuit proceeds is lower than his expected litigation costs (i.e., $[(1/(1+r_{LF})^t)EJ - R_{LF}]\alpha < C_L$). If a plaintiff applies for funding prior to hiring an attorney, then the financier will ask the plaintiff to first obtain legal representation. The financier will not approve the application unless an attorney takes the case.

Table 2 summarizes how each type of state action is predicted to impact the mean claim payment and mean claim duration and through what potential mechanisms. Because consumer litigation funding can positively or negatively impact the end outcomes, the subsequent empirical analysis is important. With the available data, I examine the effects of the state actions on claim payment and claim duration. While the data also allow me to examine the filing rate, it does not allow me to examine bargaining. Thus, I am unable to empirically disentangle the mechanisms through which funding affects the end outcomes.

6. Data and Empirical Specifications

6.1 Data

The data come primarily from the National Practitioner Data Bank ("NPDB") Public Access File, which includes all medical malpractice payments since 1991. The Health Care Quality Improvement Act of 1986 (42 U.S.C. §§ 11101–11152) and its associated regulations (45 C.F.R. § 60) require that these payments be reported to the Department of Health and Human Services within 30 days of payment. Claims that are still open, or which were closed without payment, are not included in the NPDB. This study uses the data from claims initiated after 2003 since certain individual-level characteristics such as patient age, patient gender, and severity of injury are not available prior to 2004.[12] Also, I examine only claims initiated in 2004–2012 because a low percentage of claims initiated in 2013–2016 have been closed.

6.1.1 Outcomes of Interest and State Actions

The outcomes of interest are claim payment, claim duration, and the filing rate. Table 3 presents the means of these variables. The NPDB reports the claim payment (i.e., the amount paid in the resolution of the claim) as the midpoint of a range. For example, payments from $101 to $500 are coded as $300. Imprecision in claim payment will not bias the coefficients of the independent variables of interest because the measurement error is likely uncorrelated with these variables (Wooldridge 2009, p. 316). The NPDB reports the year of the medical incident and year of claim resolution. I define claim duration to be the year of resolution minus the year of incident.

[12] I drop a small number of post-2004 observations that are missing patient gender, patient age, practitioner age, or severity of the injury.

Filing is a potential mechanism through which funding may affect claim payment and claim duration. The NPDB data are imperfect and, as noted above, contain only closed claims with positive payments. I use the total number of claims in the data as a proxy for the actual number of filings.[13] I construct an outcome variable equal to filings by state-year per 100,000 residents (see Lee et al. 1994). I create another outcome variable equal to filings by state-year per 1,000 physicians (see Avraham 2007). The filing rate per 100,000 residents may better reflect the litigiousness of the population, and the filing rate per 1,000 physicians may better capture the cost of funding on healthcare practitioners.

The independent variables of interest are the four state action categories described in Section 4: prohibition, interest or fee cap, disclosure law, and acknowledgment. In constructing variables corresponding to these categories, I aim for a conservative estimate. For the prohibition, I define a variable that equals one for claims in Ohio that were initiated in 2004–2008 and resolved before 2009. This definition accounts for the possibility that a plaintiff can apply for a nonrecourse loan at any point in the case. The plaintiffs that were involved in claims resolved after 2008 had an opportunity to obtain a cash advance. I classify claims in Ohio that were initiated in 2004–2008 and resolved after 2008 under the disclosure law variable because Ohio implemented a funding statute with disclosure provisions in 2008. Unfortunately, for the state-level regressions, I cannot be as precise in the formulation of the state action variables and include all claims initiated in Ohio in 2004–2008 in the prohibition category.

[13] The National Center for State Courts reported the 2014 medical malpractice filing rates for fourteen states (NCSC 2014). Among these fourteen, the average filing rate was 5.8 filings per 100,000 people—almost twice the average closed claim rate found in this dataset (i.e., 3.10 claims per 100,000 people). Thus, any empirical finding should be a lower bound of the effect of funding on the filing rate.

For the remaining categories (i.e., cap on interest or fees, disclosure law, and acknowledgment), I create variables that equal one beginning in the year after the state actions occurred. For example, an appellate court in North Carolina subjected funding to state usury law in 2008. I code the state action variable to reflect that the ruling took effect in North Carolina starting in 2009. If prior claims were also affected, then the coefficients would be underestimates of the true effects. Since Maine's disclosure statute was enacted on January 1, 2008, I code the state action variable to reflect the law starting to impact Maine in 2008.

6.1.2 Other Laws, Individual-Level Controls, and State-Level Controls

First, in my empirical analysis, I account for other legal changes. Specifically, I create an indicator variable that equals one for states that still have a common law or statutory prohibition against champerty and maintenance.[14] As noted in Section 4.1, this variable controls for any effects that champerty and maintenance laws may have on litigation outcomes through a non-funding mechanism. I also control for five tort reforms: (1) noneconomic damages cap, (2) punitive damages cap, (3) total damages cap, (4) joint and several liability reform, and (5) collateral source rule reform. To code these five reforms, I employ information in Avraham's Database of Tort Law Reforms (5th edition, 2014), which documents tort reforms in all fifty states since the 1980s. Next, consumer advocacy organizations have analogized nonrecourse loans to payday loans

[14] I opt for broad inclusion in creating this variable; I include any state for which I found a statute or an un-overruled court opinion with doctrines against champerty and maintenance (or an un-overruled court opinion with a general public policy that may enable a claim on the basis of champerty and maintenance). The variable includes these states: Alabama, Alaska, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

because both are last-resort alternative credit products (Skiba and Xiao, forthcoming). A payday loan is a one-to-two week cash advance of less than $1,000; a consumer can qualify for such a loan if he has proof of income and a bank account. Since consumer advocacy organizations consider payday loans to be very similar to (and thus a potential substitute for) funding, I control for access to payday lending. I draw information from Morgan et al. (2012), Bhutta (2014), the Consumer Federation of America's website (CFA 2016), and Westlaw to form a variable to account for state laws that expressly prohibit payday loans or have interest rate or fee caps that make it unprofitable for lenders to offer these loans ("effective payday loan bans").

Second, I use the NPDB data to create indicator variables to account for individual-level characteristics. Table 3 presents these variables, along with their means, and marks the omitted category. I control for patient gender, patient age, severity of the injury, practitioner age, practitioner graduation year, type of malpractice allegation, and practitioner field of license. Further, I construct indicator variables that equal one if there was a judgment (instead of a settlement) and if there was a state fund payment.[15]

Finally, I create state-level controls and match them to the NPDB data by state and incident year.[16] Table 3 reports the means of these controls. The demographics, unemployment rate, and income per capita account for the potential characteristics of the injured party and economic conditions that may affect medical malpractice litigation. The

[15] Some states have funds that make payment in addition to the malpractice insurer's payment if the settlement or judgment is higher than the maximum amount dictated in the law regarding payment by the primary insurer.

[16] The state-level data are from Bureau of Labor Statistics (unemployment rate), Bureau of Economic Analysis (income per capita), American Bar Association (number of lawyers per 100,000 people), Area Health Resources Files (number of physicians per 100,000 people), Centers for Medicare and Medicaid Services' National Health Expenditure Data (health expenditures per capita), and National Highway Traffic Safety Administration's Fatality Analysis Reporting System (number of fatal car accidents per 1,000,000 people).

lawyer and physician variables account for access to and competition among these professionals. Health expenditures per capita reflect medical care costs and extent of utilization, and the fatality rate controls for trends in events that necessitate care.

6.2 Empirical Specifications

This paper employs a difference-in-differences estimation approach. This strategy identifies the effect of consumer legal funding on litigation outcomes by using variations in the timing and geography of funding state laws. In all of the regressions, I cluster standard errors by state in order to avoid difference-in-differences estimation problems related to serial correlation (Bertrand et al. 2004).

For all of the following equations, I am interested in the effects of the state actions that are captured by the coefficients β_1, β_2, β_3, and β_4. I will first examine how funding affects claim payment and claim duration. Then, I will explore whether funding impacts the filing rate. Below, *other laws* include prohibitions against champerty and maintenance, tort reforms, and effective payday lending bans. *Individual-level controls* include patient, practitioner, injury, and case characteristics. *State-level controls* account for state demographics, economic conditions, and other factors that may affect medical malpractice lawsuits. All equations incorporate year fixed effects to account for time trends and state fixed effects to control for time-invariant characteristics of the states.

First, to examine claim payment for claim *i*, state *s*, and year *t*, I estimate the following ordinary least squares equation:

(1) $\text{Log}(\textit{Claim Payment}_{ist}) = \alpha + \beta_1 \textit{Prohibition}_{st} + \beta_2 \textit{Interest or Fee Cap}_{st} + \beta_3 \textit{Disclosure Law}_{st} + \beta_4 \textit{Acknowledgment}_{st} + \Sigma_c \tau_c \textit{Other Laws}_{st} + \Sigma_h \gamma_h \textit{Individual-Level Controls}_i + \Sigma_j \lambda_j \textit{State-Level Controls}_{st} + \Sigma_t \delta_t \textit{Year}_t + \Sigma_s \mu_s \textit{State}_s + \varepsilon_{ist}.$

Second, I follow Ho and Liu (2011a) and employ the Cox Proportional Hazards Model, a type of duration analysis, to study the effects of the state actions on the claim duration hazard rate for claim *i*, state *s*, and year *t*:

(2) $h(t, \mathbf{X}, \alpha, \beta, \tau, \gamma, \lambda, \delta, \mu) = h_0(t)\exp(\alpha + \beta_1 Prohibition_{st} + \beta_2 Interest\ or\ Fee\ Cap_{st} + \beta_3 Disclosure\ Law_{st} + \beta_4 Acknowledgment_{st} + \Sigma_c \tau_c Other\ Laws_{st} + \Sigma_h \gamma_h Individual\text{-}Level\ Controls_i + \Sigma_j \lambda_j State\text{-}Level\ Controls_{st} + \Sigma_t \delta_t Year_t + \Sigma_s \mu_s State_s)$.

The $h(t, \mathbf{X}, \alpha, \beta, \tau, \gamma, \lambda, \delta, \mu)$ is the hazard rate, which is the probability that the claim will be resolved at *t* years (i.e., the claim duration), conditional on the claim not being resolved yet. Note that the hazard rate is inversely related to the claim duration; that is, a higher hazard rate indicates a lower claim duration. The baseline hazard function is $h_0(t)$. Under the Cox Proportional Hazards Model, the baseline hazard function need not be specified, and it can be any function of *t* as long as $h_0(t) \geq 0$.[17]

The actual effects of the state actions on claim payment and claim duration depend on which theories, discussed in Section 5, dominate. If the plaintiff's discount rate and risk premium both decrease or cases with a higher average claim payment and longer average claim duration are filed with funding, then in equation (1), β_1, β_2, and β_3 should be negative, and β_4 should be positive; in equation (2), β_1, β_2, and β_3 should be positive, and β_4 should be negative (because claim duration is inversely related to the hazard rate). If the plaintiff's risk-transfer benefit is negated by a discount rate increase or cases with a lower average claim payment and shorter average claim duration are filed

[17] In the Cox Proportional Hazards Model, the hazards are proportional to each other, and the estimates of the coefficients are not dependent on time. That is:

$$\frac{h(t, x_{i1}, ..., x_{in}, \alpha, \beta, \tau, \lambda, \delta, \mu)}{h(t, x_{j1}, ..., x_{jn}, \alpha, \beta, \tau, \lambda, \delta, \mu)} = \frac{h_0(t)\exp(\alpha + \beta_1 x_{i1} + ...)}{h_0(t)\exp(\alpha + \beta_1 x_{j1} + ...)} = \exp\{\beta_1(x_{i1} - x_{j1}) + ...\}.$$

Accordingly, $\exp(\beta_1)$ is the hazard ratio associated with a one-unit increase in x_1.

with funding, then in equation (1), β_1, β_2, and β_3 should be positive, and β_4 should be negative; in equation (2), β_1, β_2, and β_3 should be negative, and β_4 should be positive. If the defendant is more willing to make a fair offer sooner (with funding), then in equations (1) and (2), β_1, β_2, and β_3 should be negative, and β_4 should be positive.

Third, I examine whether the filing rate changed as a result of the different state actions. Empirical analysis of filings can shed light on a mechanism through which nonrecourse advances affect claim payment and claim duration. This paper explores the impact of funding on the filing rate for state *s* and year *t* by estimating the following ordinary least squares equation:

$$(3)\ \textit{Filing Rate}_{st} = \alpha + \beta_1 \textit{Prohibition}_{st} + \beta_2 \textit{Interest or Fee Cap}_{st} + \beta_3 \textit{Disclosure Law}_{st} + \beta_4 \textit{Acknowledgment}_{st} + \Sigma_c \tau_c \textit{Other Laws}_{st} + \Sigma_j \lambda_j \textit{State-Level Controls}_{st} + \Sigma_t \delta_t \textit{Year}_t + \Sigma_s \mu_s \textit{State}_s + \varepsilon_{st},$$

in which *filing rate* can be per 100,000 residents or per 1,000 physicians. If funding increases the filing rate, then in equation (3), β_1, β_2, and β_3 should be negative, and β_4 should be positive.

7. Results

7.1 Claim Payment and Claim Duration

In Tables 4 and 5, column (1) presents the effects of the four categories of state actions with state and year fixed effects. Columns (2) to (4) account for other laws. Columns (3) and (4) include individual-level controls, and column (4) adds state-level controls. Table 4 reports the results of regressions in which the dependent variable is the log of claim payment. The Ohio prohibition has a significant effect in all four columns. With all controls, the prohibition decreased claim payment by approximately

18 percentage points or $54,467.[18] All of the other state actions have insignificant effects once the individual-level controls are added. However, the coefficients on the state action variables are jointly significant at the one percent level, even for the regression with all controls.[19]

Table 5 reports the hazard ratios that come from the Cox regressions. The hazard ratio is the hazard rate of the claims affected by the state action divided by that of the claims not affected by the state action. A hazard ratio greater than one reflects a positive beta in equation (2) for that state action, and a hazard ratio less than one reflects a negative beta in equation (2) for that state action. A hazard ratio greater than one indicates that claims affected by the state action resolve faster (i.e., claim duration is shorter); a hazard ratio less than one shows that claims affected by the state action resolve slower (i.e., claim duration is longer). The results for the prohibition in Ohio and acknowledgment, which occurred in Florida and Texas, are robust across the four columns. With all controls, the prohibition caused claims to resolve 3.4 times faster. This implies that the prohibition decreased claim duration. With all controls, acknowledgment caused the probability a claim resolves at *t* years, conditional on it not being resolved yet, to decrease by 15 percent. This implies that acknowledgment increased claim duration. Column (3) shows that the probability a claim resolves at *t* years, conditional on it not being resolved yet, increased by 10 percent when a disclosure law was in place. However, this effect disappears once state-level controls are added in column (4).

[18] Because the dependent variable is the log of claim payment and the state action categories are indicator variables, I obtain the marginal effect by subtracting one from the exponentiation of the coefficient. I calculate the average dollar amount of the decrease by taking the average claim payment of the claims not covered by the Ohio prohibition ($302,592) and multiplying this number by the percentage point effect (0.18).

[19] Table A1 shows the full results of the regressions with all controls in Tables 4 to 7.

7.2 Filing Rate

In Tables 6 and 7, column (1) presents the effects of the four categories of state actions with state and year fixed effects. Columns (2) and (3) add controls for other laws. Column (3) includes state-level controls. Table 6 depicts the results of regressions in which the dependent variable is the number of claims per 100,000 residents. With all controls, there were approximately 1.2 fewer claims per 100,000 people as a result of the Ohio prohibition, and 0.34 more claims per 100,000 people as the result of an acknowledgment, which occurred in Florida and Texas. Table 7 reports the findings of regressions in which the dependent variable is the number of claims per 1,000 physicians. With all controls, the prohibition decreased claims by 3.6 per 1,000 physicians, and an acknowledgment increased claims by 1.6 per 1,000 physicians.

8. Robustness Checks

8.1 Claim Duration

The Cox regressions drop all observations for which the claim duration is zero years. Claim duration is defined as the year of resolution minus the year of incident; thus, having a duration of zero years means that the resolution occurred in the same year as the incident. To check that the zero-value observations do not alter the results, I change the zero values to 0.01923 years (1 week), 0.33 years, 0.67 years, and 1 year and then run the Cox regressions again. Table A2 reports the results, which are very similar to those in Table 5.

8.2 Endogeneity

Funding-related state actions affect litigation outcomes. However, litigation outcomes may affect the existence of state actions. Therefore, endogeneity may be a

concern. To address this issue, I attempt to instrument for the state actions by using campaign contributions data for several industries, the dominant political party of the state legislature, and the political party of the state governor. Previously, scholars have used political variables to instrument for tort reform (see, e.g., Avraham 2007; Rubin and Shepherd 2007; Durrance 2010). Thus, these variables may work as instruments for funding-related state actions.

Campaign contributions data come from the National Institute on Money in State Politics (NIMSP 2016). The Institute collects data from the mandatory disclosure filings that donors make for all state primary and general elections. It classifies the donors by their affiliated industry groups. From the Institute's website, I download contributions data of the insurance, health, lawyers and lobbyists, and financial institutions industries.[20] The insurance industry is one of the legal funding industry's biggest lobbying opponents. As plaintiffs file more claims or hold out for higher settlements, insurance companies' profits will fall. Lawyers and lobbyists care about nonrecourse advances because these advances influence plaintiff participation in lawsuits. Health industry groups care about litigation finance because as plaintiffs gain higher settlements, insurance premiums will rise and the number of available insurance options will decrease. Other financial institutions care because funders are their competitors in providing credit to consumers. I create total-dollar contributions variables for these four industries for the election year and also one-year, two-year, and three-year lags. Further, I construct cumulative

[20] The health industry includes health professionals, health services, hospitals and nursing homes, pharmaceuticals and health products, and miscellaneous health-related groups. The financial institutions industry includes banks and lending institutions, commercial banks, credit unions, finance and credit companies, payday/title loans, and savings and loans groups (NIMSP 2016).

contributions variables (e.g., election year plus the previous year, election year plus the previous two years, etc.).

I obtain data on state legislature and governor party affiliation for years 2004 to 2011 from Carl Klarner's open access databases (Klarner 2013a, 2013b) and for the year 2012 from the National Conference of State Legislatures partisan composition tables (Warnock 2016). From the raw data, I form two indicator variables. The state legislature indicator equals one if Democrats dominate both state legislative houses in that year. The state governor indicator equals one if the governor was a Democrat in that year.

I run regressions and conduct statistical tests using several combinations of the political contributions and party affiliation variables. Unfortunately, all combinations yield extremely low Cragg-Donald (or, if robust standard errors, Kleibergen-Paap rk Wald) statistics of less than three. This means that the instrumental variables ("IVs") are extremely weak, and the IV regressions may be extremely biased (with a potential relative bias of over 30 percent) (Bound et al. 1995; Stock and Yogo 2005). Thus, due to the weak instrument problem, the results of my IV regressions are not reliable, and I do not report them. Avraham (2007) experienced similar problems with his IV analysis involving multiple potentially endogenous tort reforms and reported that he had no choice but to abandon his IV analysis.

While endogeneity is a possibility, there are four reasons to believe that the problem is not significant in this study. First, the litigation outcomes studied are for medical malpractice, but the state actions are not specific to medical malpractice cases. The connection between medical malpractice lawsuit outcomes and state actions related to the funding of all torts is therefore attenuated (see similar rationale for tort reforms in

Avraham 2007, p. S214, and Frakes and Jena 2016, p. 155). Second, judicial decisions and agency enforcement orders are more likely to be exogenous than legislature actions because courts and agencies are less prone to the influence of interest groups (see similar rationale for tort reforms in Avraham 2007, p. S214; see also Epstein 1990, p. 841; Fesler 1940, p. 942). During the time period 2004–2012, most of the state actions are not legislative but instead come from judges or agencies. This may in fact be the reason that the political contributions and party affiliation IVs perform so poorly.

Third, the significant results concern the prohibition and acknowledgment categories. Regarding the prohibition, the Ohio Supreme Court *sua sponte* used the champerty and maintenance doctrines to ban funding as neither party had raised the claim. Further, no amici had petitioned the court to apply these doctrines. On appeal, from the perspective of the parties, the worst possible outcome facing the funders was invalidation of the transactions at hand under state usury laws and allowance for future transactions that complied with such laws. Thus, it was a surprise that the court expressly prohibited legal finance. Regarding the Florida and Texas acknowledgments, for the chain of reverse causality to work (i.e., lawsuit outcomes cause state actions), observing litigation outcomes that confirm nonrecourse loans' effects on the court system (i.e., plaintiffs' awards and claim durations increasing) should prompt courts to limit funding, not leave it unrestricted (see similar argument for tort reform in Avraham 2007, p. S214).

Finally, Table A3 reports the results of regressions that examine the effects of state-level characteristics on the existence of funding-related state actions. The first dependent variable is an indicator that equals one if a state action of any kind affects that state-year; the second dependent variable equals one if the prohibition is in effect, two if

an interest rate or fee cap is in effect, three if a disclosure law is in effect, four if an acknowledgment is in effect, and zero if no state action is in effect. All of the demographic, socioeconomic, and political variables have insignificant effects. This provides evidence that no endogeneity bias comes from these factors.

8.3 Effect of the Great Recession and Bootstrap Standard Errors

I examine the effect of an increase in the supply of legal finance that resulted from the Great Recession. The financial crisis prompted hedge funds and other investors to funnel their capital into funding because lawsuit outcomes are not correlated with the market (Steinitz 2011, p. 1283–84). I account for this capital increase with a post-2007 indicator because the National Bureau of Economic Research defined the start of the recession to be December 2007 (NBER 2010). While an increase in funding should increase claim payment, claim duration, and the filing rate, the Great Recession may have affected litigation outcomes in a negative way since many people experienced adverse financial events during this time.

Table A4 reports the results. The coefficients on the state action categories resemble the ones in the main regressions. The post-2007 variable is associated with shorter claim duration and a lower filing rate per 1,000 physicians. This suggests that though the number of nonrecourse loans increased, the monetary benefits of funding were not able to keep financially desperate consumers afloat during this period, leading them to accept settlements sooner. Also, the increase in funding likely was not enough to incentivize financially troubled households to initiate medical malpractice claims, resulting in a filing decrease.

Finally, because the number of policy changes in each category is very small (see Conley and Taber 2011), I estimate all regressions with bootstrap standard errors.[21] For the most part, the significant effects in Tables 4 to 7 remain significant in the regressions with bootstrap standard errors.[22] The exception is that the coefficients on acknowledgment in both filing rate regressions become insignificant, though the magnitudes and signs remain the same. I cannot discern whether this is a result of the small sample size at the state-year level (N=450) or the small number of policy changes. With a small sample size, the filing rate regressions may not have enough power to sustain significance with the bootstrap standard errors.

9. Discussion

In deciding how to best govern consumer litigation funding, policymakers should examine the costs and benefits of this practice. This study may shed light on such considerations. The Ohio prohibition decreased claim payment by 18 percentage points and caused claims to resolve 3.4 times faster (shorter claim duration). The prohibition also reduced claims by 1.2 per 100,000 people and 3.6 per 1,000 physicians. Judicial acknowledgment, which occurred in Florida and Texas, caused claims to resolve 15 percent slower (longer claim duration). Acknowledgment also increased claims by 0.34 per 100,000 people and 1.6 per 1,000 physicians, but these two effects are not robust to bootstrap standard errors. Acknowledgment has effects of a lower magnitude than those of prohibition and has no effect on claim payment. This is likely because funders already

[21] Bootstrapping is a nonparametric method of estimating the distribution of a parameter through random resampling. A bootstrap sample is created when one draws with replacement N observations from the N-observation dataset. The formula for computing a bootstrap standard error is $\hat{se} = \{(1/(k-1))\sum(\hat{\theta}_i - \bar{\theta})^2\}^{1/2}$, where $\hat{\theta}_i$ is the parameter calculated using the *i*-th bootstrap sample, $\bar{\theta}$ is the average of the bootstrap calculations, and *k* is the number of replications.

[22] The bootstrap results are available upon request.

operate in states with no state actions. While the prohibition caused funders to completely cease their operations, acknowledgment changed the status quo very little.

The results related to claim payment and claim duration are consistent with the theory that nonrecourse loans benefit plaintiffs by decreasing their discount rates and risk premiums so that they can hold out for higher settlements. This paper also provides evidence that funding is changing plaintiffs' filing calculus, by reducing plaintiffs' discount rates and risk premiums, so that the expected benefits of filing are greater than the expected costs. This is plausible because financiers elicit consumers via television and Internet advertisements. Plaintiffs may see these advertisements and learn about funding prior to obtaining legal representation and filing claims, even if they enter into agreements with financiers after their cases have commenced. Unfortunately, with the available data, I am unable to disentangle the mechanisms through which funding affects claim payment and claim duration. Although I find that funding increased the filing rate, I am unable to determine whether the additional claims had an average claim payment and average claim duration that were different than the status quo.

The filing results suggest that a cost of legal finance to medical practitioners may be an increase in malpractice liability risk. Higher liability risk is associated with higher insurance premiums (see, e.g., Viscusi and Born 2005), defensive medicine (see, e.g., Currie and Macleod 2008), and potentially undesirable shifts in the physician labor market (see, e.g., Matsa 2007). An increase in litigation alone is not enough of a justification to prohibit funding. This study does not resolve the question of whether the benefits to plaintiffs outweigh costs to medical practitioners. Funding may precipitate more filings because plaintiffs' risk aversion and income constraints were previously

barriers to the courts. Thus, in a regime without funding, there may be under-filing, under-compensation of plaintiffs, and suboptimal deterrence of defendants. Policymakers should consider the increase in liability risk when evaluating funding, but they should not, without further cost-benefit analysis, ban this financial product.

Another interesting finding is that effective payday loan bans have no significant impact in any of the regressions that control for other laws. When calling for funding regulation, consumer advocacy organizations have continuously contended that funding should be regulated in the way that payday lending is. Skiba and Xiao (forthcoming) argued that funding's relationship with litigation not only distinguishes it from payday lending but also provides a rationale for a policy approach that differs from the one used to regulate payday lending. As payday lending does not affect medical malpractice litigation outcomes (but funding does), this paper provides some empirical support for Skiba and Xiao's argument that funding's tie to litigation makes it unique and less comparable to payday loans.

With all controls, the coefficients on the interest or fee cap category are not significant for any of the litigation outcomes. One reason may be that caps on interest or fees do not affect medical malpractice lawsuit funding but impact the financing of other types of tort cases. Another reason may be that a lack of publicity and the possibility of a future overruling caused firms to do little to respond to the interest or fee caps. In 2004–2012, the state actions involving caps were two lower court opinions and two agency rulings. Financiers may have believed that there was a reasonable probability that the points of law in the lower court opinions would be overturned at the state supreme court

level in subsequent cases. Funders also may not have known about the court opinions or agency actions, as they were not statutes.

With all controls, the coefficients on the disclosure law category are not significant for any of the litigation outcomes. In contrast to interest or fee caps, disclosure provisions were passed by statute or part of a binding agreement. Thus, I cannot attribute the lack of significance to a dearth of publicity or the probability of an overruling. Instead, the provisions did not significantly impact litigation outcomes likely because financiers and consumers did not appreciably change their behavior. Such an explanation would be consistent with the previous literature on disclosure laws, which shows that these laws often do not achieve their intended goals of informing consumers and improving decision-making (see Ben-Shahar and Schneider 2011, p. 665–78).

Finally, this paper has several limitations. This study examines only medical malpractice claims. Next, as noted before, the data contain only closed claims with positive payments. The number of claims by state and year, created from this data, only serves as an approximation of the number of filings. Endogeneity also may be a problem, though probably a small one as explained in Section 8.2.

10. Conclusion

Consumer litigation funding is a growing business in the United States—one that state policymakers have increasingly scrutinized. This paper is the first to empirically examine this alternative credit source. It draws on 2004–2012 medical malpractice closed claim data from the National Practitioner Data Bank. This work employs a difference-in-differences identification strategy, using state actions that affect demand for, and access

to, nonrecourse loans. This study provides evidence that access to funding increases claim payment, claim duration, and the filing rate.

References

Abrams, David S., and Daniel L. Chen. 2013. "A Market for Justice: A First Empirical Look at Third Party Litigation Funding." *University of Pennsylvania Journal of Business Law* 15 (4): 1075–109.

American Legal Finance Association (ALFA). 2014. "Tennessee Citizens Lose as New Law Leaves Thousands Without a Vital Lifeline." *Reuters*, June 26. http://www.reuters.com/article/ny-american-legal-financ-idUSnBw265967a+100+BSW20140626 (last accessed January 2016).

American Legal Finance Association (ALFA). 2016. "The ALFA Code of Conduct." https://americanlegalfin.com/what-is-alfa/alfa-code-of-conduct/ (last accessed September 2016).

American Tort Reform Association (ATRA). 2010. "ATRA Opposes 'Third-Party Financing' of Lawsuits." *American Tort Reform Association*, June 14. http://www.atra.org/newsroom/atra-opposes-third-party-financing-lawsuits (last accessed September 2016).

American Tort Reform Association (ATRA). 2016. "About ATRA." http://www.atra.org/about (last accessed September 2016).

Appelbaum, Binyamin. 2011a. "Lawsuit Loans Add New Risk for the Injured." *N.Y. Times*, January 16. http://www.nytimes.com/2011/01/17/business/17lawsuit.html?pagewanted=all&_r=0 (last accessed September 2016).

Appelbaum, Binyamin. 2011b. "Lobby Battle over Loans for Lawsuits." *N.Y. Times*, March 10. http://www.nytimes.com/2011/03/10/business/10lawsuits.html (last accessed September 2016).

Avraham, Ronen. 2007. "An Empirical Study of the Impact of Tort Reforms on Medical Malpractice Settlement Payments." *Journal of Legal Studies* 36 (S2): S183–S229.

Avraham, Ronen. 2014. "Database of State Tort Law Reforms (DSTLR 5th)." University of Texas Law School, Law and Economics Research Paper No. e555. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=902711 (last accessed September 2015).

Avraham, Ronen, and Abraham Wickelgren. 2014. "Third-Party Litigation Funding – A Signaling Model." *DePaul Law Review* 63 (2): 233–64.

Beisner, John, Jessica Miller, and Gary Rubin. 2009. "Selling Lawsuits, Buying Trouble: The Emerging World of Third-Party Litigation Financing in the United States." *U.S. Chamber Institute for Legal Reform*, October 29. http://www.instituteforlegalreform.com/research/selling-lawsuits-buying-trouble-the-emerging-world-of-third-party-litigation-financing-in-the-united-states (last accessed September 2016).

Beisner, John H., and Gary A. Rubin. 2012. "Stopping the Sale on Lawsuits: A Proposal to Regulate Third-Party Investments in Litigation." *U.S. Chamber Institute for Legal Reform*, October 24. http://www.instituteforlegalreform.com/research/stopping-the-sale-on-lawsuits-a-proposal-to-regulate-third-party-investments-in-litigation (last accessed September 2016).

Ben-Shahar, Omri, and Carl E. Schneider. 2011. "The Failure of Mandated Disclosure." *University of Pennsylvania Law Review* 159 (3): 647–749.

Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan. 2004. "How Much Should We Trust Differences-in-Differences Estimates?" *Quarterly Journal of Economics* 119 (1): 249–75.

Beydler, Nicholas. 2012. "Risky Business: Examining Approaches to Regulating Consumer Litigation Funding." *University of Missouri Kansas City Law Review* 80 (4): 1159–86.

Bhutta, Neil. 2014. "Payday Loans and Consumer Financial Health." *Journal of Banking and Finance* 47 (1): 230–42.

Black, Bernard, David A. Hyman, and Charles Silver. 2009. "The Effects of 'Early Offers' in Medical Malpractice Cases: Evidence from Texas." *Journal of Empirical Legal Studies* 6 (4): 723–67.

Black, Bernard, Charles Silver, David A. Hyman, and William M. Sage. 2005. "Stability, Not Crisis: Medical Malpractice Claim Outcomes in Texas, 1988–2002." *Journal of Empirical Legal Studies* 2 (2): 207–59.

Bond, Paul. 2002. "Making Champerty Work: An Invitation to State Action." *University of Pennsylvania Law Review* 150 (4): 1297–341.

Born, Patricia H., and W. Kip Viscusi. 1998. "The Distribution of the Insurance Market Effects of Tort Liability Reforms." *Brookings Papers on Economic Activity: Microeconomics*: 55–100.

Born, Patricia, W. Kip Viscusi, and Tom Baker. 2009. "The Effects of Tort Reform on Medical Malpractice Insurers' Ultimate Losses." *Journal of Risk and Insurance* 76 (1): 197–219.

Bound, John, David A. Jaeger, and Regina M. Baker. 1995. "Problems with Instrumental Variables Estimation when the Correlation Between the Instruments and the Endogenous Explanatory Variable Is Weak." *Journal of the American Statistical Association* 90 (430): 443–50.

Cameron, Camille. 2012. "The Price of Access to the Civil Courts in Australia – Old Problems, New Solutions: A Commercial Litigation Funding Case Study," in *Cost and Fee Allocation in Civil Procedure*, edited by Mathias Reimann, p. 59–68. New York: Springer.

Carter, Terry. 2004. "Cash Up Front: New Funding Sources Ease Financial Strains on Plaintiffs' Lawyers." *American Bar Association Journal*, October 8. http://www.abajournal.com/magazine/article/cash_up_front (last accessed September 2016).

Chen, Daniel L. 2015. "Can Markets Stimulate Rights? On the Alienability of Legal Claims." *RAND Journal of Economics* 46 (1): 23–65.

Conley, Timothy G., and Christopher R. Taber. 2011. "Inference with 'Difference in Differences' with a Small Number of Policy Changes." *Review of Economics and Statistics* 93 (1): 113–25.

Consumer Federation of America (CFA). 2016. "Legal Status of Payday Loans by State." http://www.paydayloaninfo.org/state-information (last accessed June 2016).

Currie, Janet, and W. Bentley Macleod. 2008. "First Do No Harm? Tort Reform and Birth Outcomes." *Quarterly Journal of Economics* 123 (2): 795–830.

Danzon, Patricia. 1984. "The Frequency and Severity of Medical Malpractice Claims." *Journal of Law and Economics* 27 (1): 115–48.

Danzon, Patricia M. 1986. "The Frequency and Severity of Medical Malpractice Claims: New Evidence." *Law and Contemporary Problems* 49 (2): 57–84.

Daughety, Andrew F., and Jennifer F. Reinganum. 2014. "The Effect of Third-Party Funding of Plaintiffs on Settlement." *American Economic Review* 104 (8): 2552–66.

Deffains, Bruno, and Claudine Desrieux. 2015. "To Litigate or Not to Litigate? The Impacts of Third-Party Financing on Litigation." *International Review of Law and Economics* 43 (2015): 178–89.

Doroshow, Joanne. 2011. "The Secret Chamber of Commerce and Its 'Tort Reform' Mission." *Huffington Post*, May 25. http://www.huffingtonpost.com/joanne-doroshow/the-secret-chamber-of-com_b_337634.html (last accessed September 2016).

Durrance, Christine Piette. 2010. "Noneconomic Damage Caps and Medical Malpractice Claim Frequency: A Policy Endogeneity Approach." *Journal of Law, Economics, and Organization* 26 (3): 569–91.

Engstrom, Nora Freeman. 2013. "Re-Re-Financing Civil Litigation: How Lawyer Lending Might Remake the American Litigation Landscape, Again." *UCLA Law Review Discourse* 61: 110–25.

Epstein, Richard A. 1990. "The Independence of Judges: The Uses and Limitations of Public Choice Theory." *Brigham Young University Law Review* 1990 (3): 827–55.

Estevao, Martin J. 2013. "The Litigation Financing Industry: Regulation to Protect and Inform Consumers." *University of Colorado Law Review* 84 (2): 467–96.

Fesler, James W. 1940. "Independence of State Regulatory Agencies." *American Political Science Review* 34 (5): 935–47.

Frakes, Michael, and Anupam B. Jena. 2016. "Does Medical Malpractice Law Improve Health Care Quality?" *Journal of Public Economics* 143 (November): 142–58.

Garber, Steven. 2010. "Alternative Litigation Financing in the United States." RAND Institute for Civil Justice (Law, Finance, and Capital Markets Program) Occasional Paper.

Giesel, Grace M. 2012. "Alternative Litigation Finance and the Work-Product Doctrine." *Wake Forest Law Review* 47 (5): 1083–140.

Giesel, Grace M. 2014. "Alternative Litigation Finance and the Attorney-Client Privilege." *Denver University Law Review* 92 (1): 95–143.

Griffis, Kirby. 2011. "Follow the Money: Litigation Funders Back Your Foes." *Metropolitan Corporate Counsel*, July 1. http://www.metrocorpcounsel.com/articles/14606/follow-money-litigation-funders-back-your-foes (last accessed September 2016).

Hersch, Joni, Jeffrey O'Connell, and W. Kip Viscusi. 2007. "An Empirical Assessment of Early Offer Reform for Medical Malpractice." *Journal of Legal Studies* 36 (S2): S231–59.

Ho, Benjamin, and Elaine Liu. 2011a. "Does Sorry Work? The Impact of Apology Laws on Medical Malpractice." *Journal of Risk and Uncertainty* 43 (2): 141–67.

Ho, Benjamin, and Elaine Liu. 2011b. "What's an Apology Worth? Decomposing the Effect of Apologies on Medical Malpractice Payments Using State Apology Laws." *Journal of Empirical Legal Studies* 8 (S1): 179–99.

Hughes, James W., and Edward A. Snyder. 1995. "Litigation and Settlement under the English and American Rules: Theory and Evidence." *Journal of Law and Economics* 38 (1): 225–50.

Hyman, David A., Bernard Black, and Charles Silver. 2011. "Settlement at Policy Limits and the Duty to Settle: Evidence from Texas." *Journal of Empirical Legal Studies* 8 (1): 48–84.

Hyman, David A., Bernard Black, Kathryn Zeiler, Charles Silver, and William M. Sage. 2007. "Do Defendants Pay What Juries Award? Post-Verdict Haircuts in Texas Medical Malpractice Cases, 1988–2003." *Journal of Empirical Legal Studies* 4 (1): 3–68.

Joyce, Sherman. 2011. "Comments of the American Tort Reform Association Concerning Alternative Litigation Financing." *American Tort Reform Association*, March 7. http://www.atra.org/sites/default/files/documents/8551_Alt-Litigation-FinanceLTR.pdf (last accessed September 2016).

Klarner, Carl. 2013a. "Governors Dataset." Harvard Dataverse. https://dataverse.harvard.edu/dataset.xhtml?persistentId=hdl:1902.1/20408 (last accessed September 2016).

Klarner, Carl. 2013b. "State Partisan Balance Data 1937–2011." Harvard Dataverse. https://dataverse.harvard.edu/dataset.xhtml?persistentId=hdl:1902.1/20403 (last accessed September 2016).

Kritzer, Herbert M. 2004. *Risks, Reputations, and Rewards: Contingency Fee Legal Practice in the United States*. Stanford, California: Stanford University Press.

Lee, Han-Duck, Mark J. Browne, and Joan T. Schmit. 1994. "How Does Joint and Several Tort Reform Affect the Rate of Tort Filings? Evidence from the State Courts." *Journal of Risk and Insurance* 61 (2): 295–316.

Lyon, Jason. 2010. "Revolution in Progress: Third-Party Funding of American Litigation." *University of California Los Angeles Law Review* 58 (2): 571–609.

Martin, Susan Lorde. 2008. "Litigation Financing: Another Subprime Industry that Has a Place in the United States Market." *Villanova Law Review* 53 (1): 83–116.

Matsa, David A. 2007. "Does Malpractice Liability Keep the Doctor Away? Evidence from Tort Reform Damage Caps." *Journal of Legal Studies* 36 (S2): S143–82.

Molot, Jonathan T. 2010. "Litigation Finance: A Market Solution to a Procedural Problem." *Georgetown Law Journal* 99 (1): 65–115.

Molot, Jonathan T. 2014. "The Feasibility of Litigation Markets." *Indiana Law Journal* 89 (1): 171–94.

Morgan, Donald P., Michael R. Strain, and Ihab Seblani. 2012. "How Payday Credit Access Affects Overdrafts and Other Outcomes." *Journal of Money, Credit, and Banking* 44 (2-3): 519–31.

National Association of Mutual Insurance Companies (NAMIC). 2005. "NAMIC Applauds Passage of Tort Reform Bill." *Property and Casualty*, October 27. http://www.propertyandcasualty.com/doc/namic-applauds-passage-of-tort-reform-bill-0001 (last accessed September 2016).

National Association of Mutual Insurance Companies (NAMIC). 2011. "Third-Party Litigation Funding: Tipping the Scales of Justice for Profit." *NAMIC Issue Analysis*, May. http://www.namic.org/pdf/publicpolicy/1106_thirdPartyLitigation.pdf (last accessed September 2016).

National Bureau of Economic Research (NBER). 2010. "Business Cycle Dating Committee." *NBER*, September 20. http://www.nber.org/cycles/sept2010.html (last accessed September 2016).

National Center for State Courts (NCSC). 2014. "Statewide Medical Malpractice Caseloads and Rates." *NCSC Court Statistics Project*. http://www.ncsc.org/Sitecore/Content/Microsites/PopUp/Home/CSP/CSP_Intro (last accessed September 2016).

National Conference of State Legislatures (NCSL). 2016. "Litigation or Lawsuit Funding Transactions 2015 Legislation." *NCSL*, January 1. http://www.ncsl.org/research/financial-services-and-commerce/litigation-or-lawsuit-funding-transactions-2015-legislation.aspx (last accessed September 2016).

National Institute on Money in State Politics (NIMSP). 2016. "About Our Data." http://www.followthemoney.org (last accessed June 2016).

Nieuwveld, Lisa Bench, and Victoria Shannon. 2012. *Third-Party Funding in International Arbitration*. The Netherlands: Kluwer Law International.

Oasis Financial. 2016. "Apply Now in Seconds." https://www.oasisfinancial.com/apply/ApplyForm/ (last accessed September 2016).

Papadakis, Marianna. 2016. "Law Council of Australia Rejects Success Fees." *Financial Review*, April 7. http://www.afr.com/business/legal/law-council-of-australia-rejects-success-fees-20160407-go0lca (last accessed September 2016).

Rhode, Deborah L. 2004. "Frivolous Litigation and Civil Justice Reform: Miscasting the Problem, Recasting the Solution." *Duke Law Journal* 54 (2): 447–83.

Rodak, Mariel. 2006. "It's About Time: A Systems Thinking Analysis of the Litigation Finance Industry and Its Effect on Settlement." *University of Pennsylvania Law Review* 155 (2): 503–35.

Rubin, Paul H., and Joanna M. Shepherd. 2007. "Tort Reform and Accidental Deaths." *Journal of Law and Economics* 50 (2): 221–38.

Sebok, Anthony J. 2005. "A New York Decision that May Imperil Plaintiffs' Ability to Finance Their Lawsuits: Why It Should Be Repudiated, or Limited to Its Facts." *FindLaw*, April 18. http://writ.news.findlaw.com/sebok/20050418.html (last accessed September 2016).

Shepherd, Joanna M. 2012. "Ideal Versus Reality in Third-Party Litigation Financing." *Journal of Law, Economics and Policy* 8 (3): 593–612.

Shepherd, Joanna M., and Judd E. Stone II. 2015. "Economic Conundrums in Search of a Solution: The Functions of Third-Party Litigation Finance." *Arizona State Law Journal* 47 (3): 919–60.

Skiba, Paige Marta, and Jean Xiao. 2017. "Consumer Litigation Funding: Just Another Form of Payday Lending?" *Law and Contemporary Problems*, forthcoming.

Sloan, Frank A., and Chee Ruey Hsieh. 1990. "Variability in Medical Malpractice Payments: Is the Compensation Fair?" *Law and Society Review* 24 (4): 997–1040.

Sloan, Frank A., Paula M. Mergenhagen, and Randall R. Bovbjerg. 1989. "Effects of Tort Reforms on the Value of Closed Medical Malpractice Claims: A Microanalysis." *Journal of Health Politics, Policy and Law* 14 (4): 663–89.

Snyder, Edward A., and James W. Hughes. 1990. "The English Rule for Allocating Legal Costs: Evidence Confronts Theory." *Journal of Law, Economics, and Organization* 6 (2): 345–80.

Steinitz, Maya. 2011. "Whose Claim Is This Anyway? Third-Party Litigation Funding." *Minnesota Law Review* 95 (4): 1268–338.

Stock, James H., and Motohiro Yogo. 2005. "Testing for Weak Instruments in Linear IV Regression," in *Andrews DWK Identification and Inference for Econometric Models*, p. 80–108. New York: Cambridge University Press.

U.S. Chamber Institute for Legal Reform (ILR). 2016. "Third-Party Litigation Funding (TPLF)." http://www.instituteforlegalreform.com/issues/third-party-litigation-funding (last accessed September 2016).

Viscusi, W. Kip, and Patricia H. Born. 2005. "Damages Caps, Insurability, and the Performance of Medical Malpractice Insurance." *Journal of Risk and Insurance* 72 (1): 23–43.

Warnock, Kae. 2016. "State Partisan Composition." National Conference of State Legislatures. http://www.ncsl.org/research/about-state-legislatures/partisan-composition.aspx (last accessed September 2016).

Wooldridge, Jeffrey M. 2009. *Introductory Econometrics: A Modern Approach*. United States of America: South-Western Cengage Learning.

Xiao, Jean. 2015. "Heuristics, Biases, and Consumer Litigation Funding at the Bargaining Table." *Vanderbilt Law Review* 68 (1): 261–96.

Yoon, Albert. 2001. "Damage Caps and Civil Litigation: An Empirical Study of Medical Malpractice Litigation in the South." *American Law and Economics Review* 3 (2): 199–227.

Tables

Table 1. Consumer Litigation Funding State Actions

State Action	State (Time Period)	Citation	Expected Effect on the Number of Nonrecourse Loans
Prohibition	Ohio (2003–2008)	*Rancman v. Interim Settlement Funding Corp.*, 789 N.E.2d 217 (Ohio 2003)	Decrease **(–)**
Interest Rate/Fee Cap	Michigan (2004–present)	*Lawsuit Financial, LLC v. Curry*, 683 N.W.2d 233 (Mich. Ct. App. 2004)	Decrease **(–)**
	North Carolina (2008–present)	*Odell v. Legal Bucks, LLC*, 665 S.E.2d 767 (N.C. Ct. App. 2008)	
	Maryland (2009–present)	Maryland Commissioner of Financial Regulation, DFR-EU 2008-241	
	Kansas (2009–present)	Kansas Office of the State Bank Commissioner, Consumer and Mortgage Lending Division, No. 2009-141	
Disclosure Law	New York (2005–present)	Attorney General of the State of New York, Bureau of Consumer Frauds and Protection, Assurance of Discontinuance Pursuant to Executive Law §63(15)	Decrease **(–)**
	Maine (2008–present)	Me. Rev. Stat. Ann. tit. 9–A, § 12-104	
	Ohio (2008–present)	Ohio Rev. Code Ann. § 1349.55	
	Nebraska (2010–present)	Neb. Rev. Stat. Ann. § 25-3303	
Acknowledgment	Florida (1996–present)	*Kraft v. Mason*, 668 So. 2d 679 (Fla. Dist. Ct. App. 1996)	Increase **(+)**
	Texas (2006–present)	*Anglo-Dutch Petroleum International, Inc. v. Haskell*, 193 S.W.3d 87 (Tex. App. 2006)	

Table 2. Expected Effects of State Actions on Claim Payment and Claim Duration

Litigation End Outcomes and Potential Mechanisms		Prohibition	Interest Rate/Fee Cap	Disclosure Law	Acknowledgment
Mean Claim Payment	If the following effects dominate: (1) the plaintiff's discount rate and risk premium both decrease; (2) the defendant is more willing to make a fair offer sooner; and/or (3) cases with a higher average claim payment are filed	**(–)**	**(–)**	**(–)**	**(+)**
	If the following effects dominate: (1) the plaintiff's risk-transfer benefit is negated by a discount rate increase; and/or (2) cases with a lower average claim payment are filed	**(+)**	**(+)**	**(+)**	**(–)**
Mean Claim Duration	If the following effects dominate: (1) the plaintiff's discount rate and risk premium both decrease; and/or (2) cases with a longer average claim duration are filed	**(–)**	**(–)**	**(–)**	**(+)**
	If the following effects dominate: (1) the plaintiff's risk-transfer benefit is negated by a discount rate increase; (2) the defendant is more willing to make a fair offer sooner; and/or (3) cases with a shorter average claim duration are filed	**(+)**	**(+)**	**(+)**	**(–)**

Table 3. Summary Statistics

Outcomes of Interest		Mean
Claim Payment (2016 $)		302,480.90
Claim Duration (Years)		3.82
Filings per 100,000 Residents		3.10
Filings per 1,000 Physicians		11.83
Individual-Level Controls		**Mean**
Patient Gender (%)	Male Patient†	42.46
	Female Patient	57.54
Patient Age (%)	Patient under 10†	7.52
	Patient 10 to 39 Years Old	27.39
	Patient 40 to 59 Years Old	39.22
	Patient over 59 Years Old	25.87
Severity of Injury (%)	Insignificant Injury† = Emotional Injury Only, Insignificant Injury, and Minor Temporary Injury	21.85
	Somewhat Significant Injury = Major Temporary Injury, Minor Permanent Injury, and Significant Permanent Injury	37.43
	Significant Injury = Major Permanent Injury, Quadriplegia, Brain Damage, or Life-Long Care, and Death	40.72
Practitioner Age (%)	Practitioner Age under 40†	20.29
	Practitioner Age 40 to 59	59.92
	Practitioner Age over 59	19.79
Practitioner Graduation Year (%)	Practitioner Graduated Before 1970†	9.71
	Practitioner Graduated 1970 to 1989	49.83
	Practitioner Graduated after 1989	40.46
Type of Malpractice Allegation (%)	Treatment Related	28.76
	Surgery Related	24.72
	Diagnosis Related	25.66
	Other†	20.86
Practitioner Field of License (%)	Allopathic and Osteopathic Physician/Resident	74.67
	Dentistry Related	12.19
	Eye Related	0.29
	Podiatry Related	2.11
	Chiropractor Related	1.54
	Nursing Related	5.53
	Physician Assistant	1.35
	Therapist	0.76
	Psychology Related	0.16
	Technician and Technology Related	0.12
	Other†	1.28
Other (%)	Judgment	1.83
	Settlement†	98.17
	State Fund Payment	3.75
	No State Fund Payment†	96.25
† Indicates the omitted category.		

State-Level Controls	Mean
Percent Nonwhite	24.64
Percent with At Least College Degree	25.03
Percent over 65 Years Old	16.26
Percent in Metropolitan Area	72.72
Unemployment Rate	6.32
Income per Capita (2016 $)	43,874.16
Number of Lawyers per 100,000 People	319.47
Number of Physicians per 100,000 People	274.61
Health Expenditures per Capita (2016 $)	7,698.84
Number of Fatal Car Accidents per 1,000,000 People	128.22

Note: Author's calculations for the outcomes of interest and individual-level controls are from the National Practitioner Data Bank Public Access File (claims initiated after 2003 and resolved by June 2016). The state-level controls are from Bureau of Labor Statistics (unemployment rate), Bureau of Economic Analysis (income per capita), American Bar Association (number of lawyers per 100,000 people), Area Health Resources Files (number of physicians per 100,000 people), Centers for Medicare and Medicaid Services' National Health Expenditure Data (health expenditures per capita), and National Highway Traffic Safety Administration's Fatality Analysis Reporting System (number of fatal car accidents per 1,000,000 people). The author calculated the means of claim payment, claim duration, and individual-level controls over 89,507 individual claims. The author calculated the means of the filing rates and state-level controls over 450 state-incident year cells.

Table 4. The Effects of Consumer Litigation Funding State Actions on Claim Payment

	(1)	(2)	(3)	(4)
Prohibition	-0.568***	-0.648***	-0.210***	-0.194***
	(0.0101)	(0.0412)	(0.0266)	(0.0409)
Interest Rate/Fee Cap	0.0308	0.0275	0.0310	0.0387
	(0.0621)	(0.0609)	(0.0541)	(0.0590)
Disclosure Law	-0.0372*	-0.0428*	-0.0278	-0.0281
	(0.0213)	(0.0218)	(0.0211)	(0.0271)
Acknowledgment	-0.0594***	-0.0640***	0.0180	-0.00602
	(0.0194)	(0.0189)	(0.0185)	(0.0306)
State and Year Fixed Effects	X	X	X	X
Other Laws		X	X	X
Individual-Level Controls			X	X
State-Level Controls				X
Observations	89,507	89,507	89,507	89,507
R-squared	0.071	0.072	0.398	0.398

Note: Author's calculations are from the National Practitioner Data Bank Public Access File (claims initiated after 2003 and resolved by June 2016) in conjunction with other sources cited below. The dependent variable is the log of claim payment. Clustered standard errors are in parentheses. Other laws include champerty and maintenance prohibitions, tort reforms, and effective payday loan bans. Individual-level controls include patient gender, patient age, injury severity, practitioner age, practitioner graduation cohort, type of malpractice allegation, practitioner field of license, whether there was a judgment, and whether there was a state fund payment. State-level demographics from the U.S. Census Bureau include the shares of the population that are nonwhite, over 65 years old, with at least a bachelor's degree, and live in a metropolitan area. Other state-level controls include unemployment rate (Bureau of Labor Statistics), income per capita (Bureau of Economic Analysis), number of lawyers per 100,000 people (American Bar Association), number of physicians per 100,000 people (Area Health Resources Files), health expenditures per capita (Centers for Medicare and Medicaid Services' National Health Expenditure Data), and number of fatal car accidents per 1,000,000 people (National Highway Traffic Safety Administration's Fatality Analysis Reporting System). *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 5. The Effects of Consumer Litigation Funding State Actions on Claim Duration Hazard Rate

	(1)	(2)	(3)	(4)
Prohibition	3.275***	3.785***	3.569***	3.382***
	(0.203)	(0.573)	(0.530)	(0.550)
Interest Rate/Fee Cap	0.953	0.960	0.956	0.942
	(0.0458)	(0.0457)	(0.0470)	(0.0438)
Disclosure Law	1.093***	1.104***	1.102***	1.051
	(0.0309)	(0.0318)	(0.0309)	(0.0425)
Acknowledgment	0.851***	0.859***	0.855***	0.853***
	(0.0346)	(0.0374)	(0.0375)	(0.0337)
State and Year Fixed Effects	X	X	X	X
Other Laws		X	X	X
Individual-Level Controls			X	X
State-Level Controls				X
Observations	88,147	88,147	88,147	88,147
Akaike's Information Criterion	1854979	1854946	1852550	1852511

Note: Author's calculations are from the National Practitioner Data Bank Public Access File (claims initiated after 2003 and resolved by June 2016) in conjunction with other sources cited below. The numbers reported are hazard ratios from Cox regressions. Clustered standard errors are in parentheses. The Akaike's Information Criterion provides a measure of fit; a smaller number indicates a smaller deviance from the empirical model. Other laws include champerty and maintenance prohibitions, tort reforms, and effective payday loan bans. Individual-level controls include patient gender, patient age, injury severity, practitioner age, practitioner graduation cohort, type of malpractice allegation, practitioner field of license, whether there was a judgment, and whether there was a state fund payment. State-level demographics from the U.S. Census Bureau include the shares of the population that are nonwhite, over 65 years old, with at least a bachelor's degree, and live in a metropolitan area. Other state-level controls include unemployment rate (Bureau of Labor Statistics), income per capita (Bureau of Economic Analysis), number of lawyers per 100,000 people (American Bar Association), number of physicians per 100,000 people (Area Health Resources Files), health expenditures per capita (Centers for Medicare and Medicaid Services' National Health Expenditure Data), and number of fatal car accidents per 1,000,000 people (National Highway Traffic Safety Administration's Fatality Analysis Reporting System). *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 6. The Effects of Consumer Litigation Funding State Actions on Filing Rate per 100,000 Residents

	(1)	(2)	(3)
Prohibition	-1.074	-1.057	-1.194*
	(0.723)	(0.733)	(0.690)
Interest Rate/Fee Cap	-0.150	-0.143	-0.180
	(0.330)	(0.292)	(0.347)
Disclosure Law	-0.584	-0.524	-0.520
	(0.694)	(0.698)	(0.591)
Acknowledgment	0.278**	0.337***	0.338**
	(0.118)	(0.110)	(0.150)
State and Year Fixed Effects	X	X	X
Other Laws		X	X
State-Level Controls			X
Observations	450	450	450
R-squared	0.793	0.803	0.811

Note: Author's calculations are from the National Practitioner Data Bank Public Access File (claims initiated after 2003 and resolved by June 2016) in conjunction with other sources cited below. The dependent variable is the total number of claims at the year-state level per 100,000 people. Clustered standard errors are in parentheses. Other laws include champerty and maintenance prohibitions, tort reforms, and effective payday loan bans. State-level demographics from the U.S. Census Bureau include the shares of the population that are nonwhite, over 65 years old, with at least a bachelor's degree, and live in a metropolitan area. Other state-level controls include unemployment rate (Bureau of Labor Statistics), income per capita (Bureau of Economic Analysis), number of lawyers per 100,000 people (American Bar Association), number of physicians per 100,000 people (Area Health Resources Files), health expenditures per capita (Centers for Medicare and Medicaid Services' National Health Expenditure Data), and number of fatal car accidents per 1,000,000 people (National Highway Traffic Safety Administration's Fatality Analysis Reporting System). *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 7. The Effects of Consumer Litigation Funding State Actions on Filing Rate per 1,000 Physicians

	(1)	(2)	(3)
Prohibition	-3.246*	-3.209*	-3.584*
	(1.652)	(1.685)	(1.799)
Interest Rate/Fee Cap	0.198	0.218	-0.0429
	(1.250)	(1.144)	(1.305)
Disclosure Law	-0.966	-0.781	-0.999
	(1.629)	(1.645)	(1.462)
Acknowledgment	0.846*	1.025**	1.624**
	(0.446)	(0.419)	(0.694)
State and Year Fixed Effects	X	X	X
Other Laws		X	X
State-Level Controls			X
Observations	450	450	450
R-squared	0.796	0.831	0.837

Note: Author's calculations are from the National Practitioner Data Bank Public Access File (claims initiated after 2003 and resolved by June 2016) in conjunction with other sources cited below. The dependent variable is the total number of claims at the year-state level per 1,000 physicians. Clustered standard errors are in parentheses. Other laws include champerty and maintenance prohibitions, tort reforms, and effective payday loan bans. State-level demographics from the U.S. Census Bureau include the shares of the population that are nonwhite, over 65 years old, with at least a bachelor's degree, and live in a metropolitan area. Other state-level controls include unemployment rate (Bureau of Labor Statistics), income per capita (Bureau of Economic Analysis), number of lawyers per 100,000 people (American Bar Association), number of physicians per 100,000 people (Area Health Resources Files), health expenditures per capita (Centers for Medicare and Medicaid Services' National Health Expenditure Data), and number of fatal car accidents per 1,000,000 people (National Highway Traffic Safety Administration's Fatality Analysis Reporting System). *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Appendix

Table A1. Full Results of the Claim Payment, Claim Duration Hazard Rate, and Filing Rate Regressions with All Controls

	Log(Claim Payment)	Claim Duration Hazard Rate	Filing Rate (Population)	Filing Rate (Physician)
Prohibition	-0.194***	3.382***	-1.194*	-3.584*
	(0.0409)	(0.550)	(0.690)	(1.799)
Interest Rate/Fee Cap	0.0387	0.942	-0.180	-0.0429
	(0.0590)	(0.0438)	(0.347)	(1.305)
Disclosure Law	-0.0281	1.051	-0.520	-0.999
	(0.0271)	(0.0425)	(0.591)	(1.462)
Acknowledgment	-0.00602	0.853***	0.338**	1.624**
	(0.0306)	(0.0337)	(0.150)	(0.694)
Champerty and Maintenance Law	0.638**	0.568	1.567	7.274
	(0.239)	(0.243)	(1.271)	(4.501)
Noneconomic Damages Cap	0.0694	0.914**	-0.186	-0.670
	(0.0528)	(0.0411)	(0.389)	(1.540)
Punitive Damages Cap	-0.117*	1.316	0.144	0.497
	(0.0598)	(0.350)	(0.277)	(1.067)
Total Damages Cap	0.721*	0.985	-2.055	-10.45
	(0.367)	(0.428)	(2.404)	(9.497)
Joint and Several Liability Reform	0.0515*	0.981	0.302	1.360
	(0.0284)	(0.0354)	(0.383)	(1.455)
Collateral Source Rule Reform	0.449*	0.790	-0.192	-4.426
	(0.249)	(0.347)	(1.984)	(7.850)
Effective Payday Loan Bans	-0.000618	1.018	0.322	0.914
	(0.0403)	(0.0319)	(0.405)	(1.606)
Female Patient	-0.00258	1.027***	–	–
	(0.0120)	(0.00753)		
Patient 10 to 39 Years Old	-0.229***	1.237***	–	–
	(0.0370)	(0.0439)		
Patient 40 to 59 Years Old	-0.213***	1.230***	–	–
	(0.0416)	(0.0473)		
Patient over 59 Years Old	-0.487***	1.291***	–	–
	(0.0488)	(0.0467)		
Somewhat Significant Injury	1.255***	0.865***	–	–
	(0.0322)	(0.0163)		
Significant Injury	1.846***	0.831***	–	–
	(0.0603)	(0.0199)		
Practitioner Age 40 to 59	0.0370**	0.982	–	–
	(0.0165)	(0.0121)		
Practitioner Age over 59	-0.00999	1.009	–	–
	(0.0335)	(0.0242)		
Practitioner Graduated 1970 to 1989	0.00948	1.008	–	–
	(0.0250)	(0.0169)		
Practitioner Graduated after 1989	0.0139	0.974	–	–
	(0.0257)	(0.0177)		
Malpractice Allegation: Treatment Related	-0.0606**	0.966***	–	–
	(0.0245)	(0.0120)		
Malpractice Allegation: Surgery Related	0.230***	1.009	–	–
	(0.0207)	(0.0113)		
Malpractice Allegation: Diagnosis Related	0.178***	0.901***	–	–
	(0.0223)	(0.0149)		
Field of License: Allopathic and	0.976***	0.767***	–	–

Osteopathic Physician/Resident	(0.0867)	(0.0376)		
Field of License: Dentistry Related	0.142**	0.913*	–	–
	(0.0688)	(0.0429)		
Field of License: Eye Related	0.631***	0.780***	–	–
	(0.129)	(0.0449)		
Field of License: Podiatry Related	0.896***	0.776***	–	–
	(0.102)	(0.0405)		
Field of License: Chiropractor Related	0.341***	1.132**	–	–
	(0.126)	(0.0623)		
Field of License: Nursing Related	0.461***	0.770***	–	–
	(0.125)	(0.0339)		
Field of License: Physician Assistant	0.586***	0.810***	–	–
	(0.0952)	(0.0384)		
Field of License: Therapist	0.318**	1.154***	–	–
	(0.123)	(0.0615)		
Field of License: Psychology Related	0.958***	0.632***	–	–
	(0.133)	(0.0709)		
Field of License: Technician and	0.663***	0.859	–	–
Technology Related	(0.154)	(0.0795)		
Judgment	0.504***	0.706***	–	–
	(0.0687)	(0.0288)		
State Fund Payment	0.555***	0.777***	–	–
	(0.128)	(0.0392)		
Percent of Population Nonwhite	-1.486*	0.525	-5.160	-25.80
	(0.845)	(0.536)	(5.257)	(21.56)
Percent with At Least College Degree	-1.189	3.509	7.599	27.45
	(1.055)	(4.774)	(5.199)	(19.20)
Percent over 65 Years Old	-0.512	0.557	-0.0328	-2.667
	(1.628)	(0.937)	(6.772)	(26.13)
Percent in Metropolitan Area	-0.168	1.046	1.792	6.559
	(0.395)	(0.598)	(2.798)	(11.78)
Unemployment Rate	-0.0232*	0.994	-0.102	-0.0106
	(0.0135)	(0.0192)	(0.0796)	(0.274)
Income per Capita	-3.38e-06	1.000	-7.11e-05	-0.000239
	(9.37e-06)	(8.96e-06)	(4.94e-05)	(0.000177)
Number of Lawyers per 100,000	-0.000152	1.000	-4.44e-05	0.000497
People	(0.000261)	(0.000642)	(0.00548)	(0.0135)
Number of Physicians per 100,000	0.000408	0.999	-0.00418	0.00569
People	(0.000810)	(0.000408)	(0.00470)	(0.0163)
Health Expenditures per Capita	-3.57e-05	1.000	-0.000206	-8.76e-05
	(5.45e-05)	(8.34e-05)	(0.000309)	(0.00121)
Number of Fatal Car Accidents	-0.000866	1.001	-0.00195	0.00969
per 1,000,000 People	(0.000822)	(0.00120)	(0.00454)	(0.0164)
Constant	10.36***	–	7.267*	16.87
	(0.753)		(3.939)	(12.78)
Observations	89,507	88,147	450	450
R-squared	0.398	–	0.811	0.837
Akaike's Information Criterion	–	1852511	–	–

Note: Author's calculations are from the National Practitioner Data Bank Public Access File (claims initiated after 2003 and resolved by June 2016) in conjunction with other sources cited below. Clustered standard errors are in parentheses. All regressions include state and year fixed effects. State-level controls come from the U.S. Census Bureau (demographics), Bureau of Labor Statistics (unemployment rate), Bureau of Economic Analysis (income), American Bar Association (number of lawyers), Area Health Resources Files (number of physicians), Centers for Medicare and Medicaid Services' National Health Expenditure Data (health expenditures), and National Highway Traffic Safety Administration's Fatality Analysis Reporting System (number of fatal car accidents). *** p<0.01, ** p<0.05, * p<0.1

Table A2. The Effects of Consumer Litigation Funding State Actions on Claim Duration Hazard Rate with Adjusted Zero Values

	Zero defined as 0.01923	Zero defined as 0.33	Zero defined as 0.67	Zero defined as 1.0
Prohibition	3.464***	3.464***	3.464***	3.420***
	(0.569)	(0.569)	(0.569)	(0.549)
Interest Rate/Fee Cap	0.943	0.943	0.943	0.943
	(0.0432)	(0.0432)	(0.0432)	(0.0432)
Disclosure Law	1.059	1.059	1.059	1.059
	(0.0428)	(0.0428)	(0.0428)	(0.0427)
Acknowledgment	0.849***	0.849***	0.849***	0.850***
	(0.0335)	(0.0335)	(0.0335)	(0.0335)
State and Year Fixed Effects	X	X	X	X
Other Laws	X	X	X	X
Individual-Level Controls	X	X	X	X
State-Level Controls	X	X	X	X
Observations	89,507	89,507	89,507	89,507
Akaike's Information Criterion	1882845	1882845	1882845	1883141

Note: Author's calculations are from the National Practitioner Data Bank Public Access File (claims initiated after 2003 and resolved by June 2016) in conjunction with other sources cited below. The numbers reported are hazard ratios from Cox regressions. Clustered standard errors are in parentheses. The Akaike's Information Criterion provides a measure of fit; a smaller number indicates a smaller deviance from the empirical model. Other laws include champerty and maintenance prohibitions, tort reforms, and effective payday loan bans. Individual-level controls include patient gender, patient age, injury severity, practitioner age, practitioner graduation cohort, type of malpractice allegation, practitioner field of license, whether there was a judgment, and whether there was a state fund payment. State-level demographics from the U.S. Census Bureau include the shares of the population that are nonwhite, over 65 years old, with at least a bachelor's degree, and live in a metropolitan area. Other state-level controls include unemployment rate (Bureau of Labor Statistics), income per capita (Bureau of Economic Analysis), number of lawyers per 100,000 people (American Bar Association), number of physicians per 100,000 people (Area Health Resources Files), health expenditures per capita (Centers for Medicare and Medicaid Services' National Health Expenditure Data), and number of fatal car accidents per 1,000,000 people (National Highway Traffic Safety Administration's Fatality Analysis Reporting System). *** p<0.01, ** p<0.05, * p<0.1

Table A3. The Effects of State-Level Characteristics on Existence of State Actions

	State Action Indicator	State Action Tiers
Percent Female	10.27	25.24
	(11.35)	(33.19)
Percent Hispanic	-2.942	-3.355
	(6.240)	(21.47)
Percent Black	-6.429	-20.18
	(11.14)	(27.00)
Percent Asian or Pacific Islander	3.264	7.723
	(3.709)	(11.34)
Percent 65 Years or Older	-3.428	-12.10
	(6.323)	(17.38)
Percent with At Least a College Degree	1.232	1.168
	(1.846)	(5.658)
Income per Capita	4.07e-06	5.01e-06
	(1.10e-05)	(3.23e-05)
Unemployment Rate	-0.00333	-0.0361
	(0.0229)	(0.0732)
Home Price Index	-0.00125	-0.00269
	(0.00114)	(0.00260)
Financial Institutions Industry Contributions$_{(t-2)}$	-7.04e-09	-8.27e-09
	(9.80e-09)	(3.43e-08)
Health Industry Contributions$_{(t-2)}$	5.42e-09	1.05e-08
	(5.16e-09)	(1.52e-08)
Insurance Industry Contributions$_{(t-2)}$	-6.12e-10	-1.39e-08
	(6.61e-09)	(1.54e-08)
Lawyers and Lobbyists Contributions$_{(t-2)}$	-4.54e-10	4.47e-09
	(2.78e-09)	(6.86e-09)
State Governor Democrat	0.0455	0.123
	(0.0319)	(0.0876)
State Legislature Democrat	-0.0384	-0.0793
	(0.0414)	(0.112)
Constant	-4.848	-11.03
	(5.678)	(16.62)
Observations	650	650
R-squared	0.619	0.683

Note: Data at state-year level are from years 2000–2012. State-level characteristics are from the U.S. Census Bureau (demographics), Bureau of Economic Analysis (income per capita), Bureau of Labor Statistics (unemployment rate), and Federal Housing Finance Agency (home price index). Political contributions data come from the National Institute on Money in State Politics, and political affiliation data come from Carl Klarner's open access databases and the National Conference of State Legislatures partisan composition tables. Standard errors in parentheses are clustered at the state level. All regressions include state and year fixed effects. *** p<0.01, ** p<0.05, * p<0.1

Table A4. The Effects of Consumer Litigation Funding State Actions with Post-2007 Indicator

	Log(Claim Payment)	Claim Duration Hazard Rate	Filing Rate (Population)	Filing Rate (Physician)
Prohibition	-0.194***	3.382***	-1.194*	-3.584*
	(0.0409)	(0.550)	(0.690)	(1.799)
Interest Rate/Fee Cap	0.0387	0.942	-0.180	-0.0429
	(0.0590)	(0.0438)	(0.347)	(1.305)
Disclosure Law	-0.0281	1.051	-0.520	-0.999
	(0.0271)	(0.0425)	(0.591)	(1.462)
Acknowledgment	-0.00602	0.853***	0.338**	1.624**
	(0.0306)	(0.0337)	(0.150)	(0.694)
Post-2007 Indicator	0.122	2.201***	0.313	-7.466**
	(0.134)	(0.431)	(0.819)	(3.249)
State and Year Fixed Effects	X	X	X	X
Other Laws	X	X	X	X
Individual-Level Controls	X	X		
State-Level Controls	X	X	X	X
Observations	89,507	88,147	450	450
R-squared	0.398	–	0.811	0.837
Akaike's Information Criterion	–	1852511	–	–

Note: Author's calculations are from the National Practitioner Data Bank Public Access File (claims initiated after 2003 and resolved by June 2016) in conjunction with other sources cited below. Clustered standard errors are in parentheses. Other laws include champerty and maintenance prohibitions, tort reforms, and effective payday loan bans. Individual-level controls include patient gender, patient age, injury severity, practitioner age, practitioner graduation cohort, type of malpractice allegation, practitioner field of license, whether there was a judgment, and whether there was a state fund payment. State-level demographics from the U.S. Census Bureau include the shares of the population that are nonwhite, over 65 years old, with at least a bachelor's degree, and live in a metropolitan area. Other state-level controls include unemployment rate (Bureau of Labor Statistics), income per capita (Bureau of Economic Analysis), number of lawyers per 100,000 people (American Bar Association), number of physicians per 100,000 people (Area Health Resources Files), health expenditures per capita (Centers for Medicare and Medicaid Services' National Health Expenditure Data), and number of fatal car accidents per 1,000,000 people (National Highway Traffic Safety Administration's Fatality Analysis Reporting System). *** $p<0.01$, ** $p<0.05$, * $p<0.1$

CHAPTER II. THE EFFECT OF CONSUMER LITIGATION FUNDING ON BANKRUPTCY

1. Introduction

Consumer litigation funding ("funding")—a controversial credit source that helps households deal with financial shocks—has become increasingly popular over the last two decades. It is available to those who suffer an injury that can serve as the basis of a legal claim. A tort plaintiff can apply for a cash advance in exchange for repayment of that advance, interest, and fees out of the lawsuit proceeds. The financier is paid out of the case proceeds that remain after the attorney and other higher-priority creditors are compensated. If the remaining case proceeds are less than the total amount owed to the financier, the plaintiff is required to pay the financier only the remaining case proceeds. Funding is functionally a nonrecourse loan that uses the lawsuit as collateral.[23] As of 2016, seventeen states have already taken some form of state action concerning this growing financial product, while at least six other states are considering bills to regulate this practice.

In the name of protecting borrowers, several consumer advocacy organizations have argued for strict limitations on funding by comparing it to payday lending (Skiba and Xiao, forthcoming). A payday loan is a cash advance that is less than $1,000 with a cost of 10 to 20 percent interest during the loan term, which is typically one to two weeks. According to the Consumer Financial Protection Bureau, 80 percent of payday loans are renewed within two weeks; 50 percent of all payday loans are part of a renewal

[23] Whether funding is considered a "loan" for legal purposes depends on the state. Currently, funding is treated as a loan under the state consumer credit code in Michigan, North Carolina, Kansas, Maryland, Colorado, and South Carolina. In Texas, funding is considered an investment, not a loan.

chain of at least ten loans (Burke et al. 2014, p. 4). Critics of payday lending view borrower behavior related to renewals as evidence of a "debt trap"; that is, borrowers obtain, for example, a $500 loan, expecting to pay only $75 in interest, but instead pay many times that amount in interest due to the renewals (Morgan and Strain 2008, p. 9). One consumer advocacy organization has estimated that approximately five million payday loan customers fall into debt traps and are unable to pay off what they owe (Ernst et al. 2004, p. 2). Because of this, payday lending has a bad reputation among consumer advocates and policymakers (Skiba 2012, p. 1025). Unlike payday borrowing, obtaining a funding advance for litigation cannot result in a debt trap because the advance is nonrecourse and capped at the case proceeds. Although no empirical evidence exists to address the impact of funding on consumer financial outcomes, some states have been swayed by consumer advocates' analogies of funding to payday lending and severely restricted the funding industry. For example, the Colorado Supreme Court held that the same caps on interest and fees that govern payday loans also cover funding advances.

This paper examines the effect of access to funding on consumer welfare, measured by the Chapter 7 and 13 bankruptcy rates. County-level Chapter 7 and 13 filing data come from the Public Access to Court Electronic Records for 1998–2012 and the U.S. Courts Statistics and Reports for 2013–2015. I employ a difference-in-differences identification strategy, using state actions that affect funding, in order to evaluate the impact of the availability of funding on bankruptcy. In 2003, the Ohio Supreme Court expressly banned nonrecourse loans; this ban was lifted by the legislature in 2008. I find that this ban increased Chapter 7 filings by 5.3 per 10,000 people (or 20 percent relative to the mean) and Chapter 13 filings by 1.7 per 10,000 people (or 15 percent relative to the

mean). In Florida and Texas, a state court has held that neither the doctrines against champerty and maintenance nor usury laws restrict nonrecourse loans (an action that I call an "acknowledgment of funding"). Judicial acknowledgment of funding, which is analogous to legislature legalization of a credit product, decreased Chapter 13 filings by 2.6 per 10,000 people (or 23 percent relative to the mean). These results provide some evidence that funding may help plaintiffs absorb the financial consequences of adverse events. Funding may also prevent plaintiffs from accruing fees from more expensive credit products such as payday loans or credit card loans. By doing so, funding reduces bankruptcies. As Chapter 13 has a worse record of actual debt discharge and higher filing costs than Chapter 7 (Porter 2011, p. 107–13), access to funding may improve consumer welfare since it reduces the Chapter 13 filing rate.

This paper fits into the emerging literature on legal finance and is the first study to explore the effect of this type of credit on consumer financial outcomes. Previous works have focused on the effect of legal finance on litigation, as opposed to consumer welfare (see Abrams and Chen 2013; Daughety and Reinganum 2014; Avraham and Wickelgren 2014; Chen 2015; Deffains and Desrieux 2015; Xiao 2017). This paper also expands the literature on alternative financial products. Previous studies have addressed borrower behavior and outcomes associated with payday loans (Zinman 2010; Melzer 2011; Morse 2011; Hynes 2012; Morgan et al. 2012; Campbell et al. 2012; Bhutta 2014; Bhutta et al. 2015; Skiba and Tobacman 2015; Carter 2015; Carter and Skimmyhorn, forthcoming), car-title loans (Fritzdixon et al. 2014; Fritzdixon 2015), and pawnshops (Bos et al. 2012; Carter and Skiba 2012).

Finally, this work contributes to the literature on how credit supply affects personal bankruptcy. Morgan et al. (2012) and Skiba and Tobacman (2015) both provided evidence that payday loans increase Chapter 13 bankruptcies. Dick and Lehnert (2010) found that deregulation of traditional banks increases the Chapter 7 filing rate by enabling previously excluded high-risk individuals to obtain credit card loans. As with an increase in payday lending, an increase in borrowing on credit cards results in more finance charges and can put pressure on consumers to file for bankruptcy. In contrast, repayment of a funding advance is capped at the lawsuit proceeds. A funded plaintiff cannot roll over his nonrecourse loan or receive another advance on the same case. Further, repayment occurs at the end of the lawsuit and comes from an income-producing asset. Thus, plaintiffs need not continuously pay finance charges, nor do they need to rely on their own (lack of) self-control to decide when to repay the loan, as payday and credit card consumers do (cf. Skiba and Tobacman 2008).

Section 2 provides background information on consumer litigation funding. Section 3 gives an overview of bankruptcy. Section 4 presents the conceptual framework of how funding can impact bankruptcy. Section 5 describes the data and empirical specifications. Section 6 reports the results, and Section 7 discusses them. Section 8 concludes.

2. Background on Consumer Litigation Funding and Related Laws

In his application for a nonrecourse advance, the plaintiff must disclose to the financier basic case information, including the extent and type of harm and any lawsuit liens, so that the financier can calculate the expected profitability of the case. If the funder approves the plaintiff's application, then it advances 10 to 20 percent of the

expected lawsuit proceeds (Appelbaum 2011a; Garber 2010, p. 12). Commentators have reported cash advances ranging from $500 to $100,000 (Carter 2004; Garber 2010, p. 12) and interest rates ranging from 2 to 15 percent per month, with annual percentage rates ("APRs") commonly over 150 percent (Carter 2004; Griffis 2011; Appelbaum 2011a). Financiers fund all types of torts including car accident claims, medical malpractice lawsuits, and product liability cases.

Plaintiffs typically use their advances for living expenses, such as utilities, car payments, rent, food, and medical bills (Rodak 2006, p. 514; Garber 2010, p. 12; Estevao 2013, p. 476; Skiba and Xiao, forthcoming). Generally, these plaintiffs have already entered into contingency fee contracts with lawyers who have agreed to represent the plaintiffs in exchange for a portion (on average, a third) of the lawsuit proceeds (Garber 2010, p. 9; Kritzer 2004, p. 39). Thus, consumer legal funding is not spent on litigation costs.

There are two primary reasons why this financial service prompts consumer protection advocates to call for strict limitations. First, although no formal data are available on the average income of funded plaintiffs, the fact that a majority of these plaintiffs spend their cash advances on living necessities has led several commentators to surmise that nonrecourse loans cater to the liquidity-constrained, low-income population (Rodak 2006, p. 514; Martin 2008, p. 84–85; Skiba and Xiao, forthcoming). Second, some express concerns that high funding rates "further victimize[]" plaintiffs who have already suffered physical and/or emotional injuries (Rodak 2006, p. 518; McLaughlin 2007, p. 656). Because opponents of funding view this credit product's

customers as vulnerable, they advocate for either outright bans or extremely low interest rate and fee caps (McLaughlin 2007, p. 656–59).

Table 1 presents all of the state actions that affect access to, and demand for, funding during the time period empirically examined in this paper (1998–2015). It also provides these actions' citations and the expected directions of these actions' effects on the number of nonrecourse loans. Only one express ban impacts this time period.[24] In 2003, the Ohio Supreme Court condemned funding contracts by using doctrines against champerty and maintenance. Though the elements and application of these doctrines vary by state, maintenance is generally when a third party with no direct interest in the case assists a litigant in bringing the lawsuit, and champerty is a type of maintenance in which the third party pursues profit from case proceeds. Next, a state—through a judicial decision or agency ruling—can subject nonrecourse loans to interest or fee caps in the state usury law. All of the caps listed in Table 1 restrict the interest rate to 36 percent or less per year. Since funding APRs are typically over 100 percent, these caps should be binding on high-cost financiers and should thus reduce the supply of nonrecourse loans.[25]

While consumer advocacy organizations have pushed for strict measures, the industry itself has lobbied for funding statutes with only disclosure provisions, a less restrictive alternative to bans or caps on interest and fees (Appelbaum 2011a, 2011b). These provisions mandate the communication of finance charges and APRs. During this

[24] Vermont implemented a temporary ban via statute from July 1, 2015, to July 1, 2016 (Vt. Stat. Ann. tit. 8, § 2246). However, I do not incorporate the Vermont ban into my analysis because I code state actions to take effect the year after the actions occurred.

[25] While South Carolina limits the interest for principal up to $600 to 25 percent per year with a maximum initial fee of 7 percent of the funding (S.C. Code Ann. § 34-29-140), it leaves interest for principal over $600 uncapped (S.C. Code Ann. § 37-3-201). Since the average funding amount runs between $1,750 and $4,500 (Garber 2010, p. 12), South Carolina's law arguably does not impact the industry much. The results of regressions leaving South Carolina out of the category of interest and fee caps are very similar to those with South Carolina. Thus, I leave this state in this category for the regressions reported in this paper.

time period, five legislatures passed statutes with disclosure provisions: Maine, Nebraska, Ohio, Oklahoma, and Tennessee.[26] Additionally, as a result of potentially questionable practices that some were accusing financiers of in the early 2000s (Nieuwveld and Shannon 2012, p. 122; Martin 2004, p. 70), the New York Attorney General conducted an investigation and entered into an agreement with nine financiers in 2005. This agreement contains disclosure provisions similar to those in the funding statutes. In order to become a member of the American Legal Finance Association (a trade association for funders), a financier must abide by the New York agreement (ALFA 2016). Theoretically, disclosure laws necessitate financier compliance expenditures and may lead some consumers to decide that the costs of an advance outweigh the benefits. While these laws hypothetically can decrease legal finance through reducing demand, borrower behavior in fact may not change much. Many consumers are financially desperate (Garber 2010, p. 10, 12; Martin 2008, p. 84–85; Beydler 2012, p. 1166) and may not forgo funding even with disclosures.

Finally, in states without a funding statute in place, a financier may win a case in state court that strikes down the two biggest legal challenges to nonrecourse loans: (1) funding should be subject to the interest or fee caps in state usury laws and (2) funding should be prohibited because it violates the state doctrines against champerty and maintenance. Such an action by a state court, which I call an "acknowledgment of funding," should reduce the industry's litigation costs and should thus increase the supply of nonrecourse loans. The impact of a judicial acknowledgment should be similar to the effect of legislature legalization of a credit product.

[26] The Tennessee statute also includes a cap on interest and fees, but the cap went into effect a year after the disclosure provisions went into effect. Thus, I do not empirically examine the Tennessee cap on interest and fees in this paper.

3. Overview of Bankruptcy

A large literature exists on Chapter 7 and 13 bankruptcy (see, e.g., Fay et al. 2002 and Dobbie and Song 2015). Under Chapter 7, all unsecured debts, including credit card bills and medical expenses, are dischargeable. A Chapter 7 filer must give the bankruptcy trustee all of his assets that are not exempted by law, and the trustee uses these assets to repay the filer's creditors. In contrast, a Chapter 13 filer is not required to turn over any assets but instead has to construct a plan to repay a percentage of his debts from future income. A bankruptcy judge must approve the filer's plan.

State exemption laws define the levels of assets that are protected from seizure by creditors during bankruptcy. Federal exemption laws also exist, and eighteen states allow debtors to choose between state and federal exemptions. Real property is an important asset that is protected by homestead exemptions. Florida, Iowa, Kansas, Oklahoma, South Dakota, and Texas do not cap the homestead exemption amount, and twenty-nine states have homestead exemptions over $50,000. The federal homestead exemption level is currently $23,675.

Wage garnishment laws define the amount of income that is protected from creditors. The Federal Consumer Credit Protection Act shields 75 percent of wages or thirty times the federal minimum wage per week from garnishment—whichever amount is greater—and protects employees from being fired due to garnishment. The Act also allows states to enact their own laws to specify an amount higher than the federal limit; twenty-six states have done this.

The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 ("BAPCPA") changed bankruptcy in three major ways (White 2007; White 2009). First,

the Act made it more difficult for debtors to file under Chapter 7 by requiring that debtors pass a "means test." Debtors' monthly household income, averaged over the six months prior to filing, must be lower than the median monthly household income in their state, adjusted for household size. Second, BAPCPA took away the freedom of debtors to propose their own Chapter 13 repayment plans. Debtors now must follow a strict procedure to determine their allowances for housing, utilities, transportation, food, clothing, and personal care. Finally, the Act raised the cost of filing for households by requiring higher court fees, submission of past tax returns, enrollment in a credit-counseling course before filing, and enrollment in a debt management course prior to debt discharge. Further, BAPCPA subjected attorneys to new registration requirements, certification of the accuracy of filers' information on bankruptcy forms, and liability for filers' false and misleading information. This led lawyers to increase their fees, making bankruptcy even more expensive for debtors.

Empirical research demonstrates that many different factors influence the bankruptcy filing decision and account for filing rate variations across states and time. These factors include the ability to pay for court and attorney fees (Mann and Porter 2010; Gross et al. 2014), high levels of medical and credit card debt (Domowitz and Sartain 1999; Zhu 2011; Himmelstein et al. 2005, 2009), divorce (Fay et al. 2002; Edmiston 2006), gambling (Barron et al. 2002; Edmiston 2006), social stigma or information costs of filing (Gross and Souleles 2002), access to credit (Dick and Lehnert 2010; Morgan et al. 2012; Hynes 2012; Skiba and Tobacman 2015; Fritzdixon 2015), state exemption laws and wage garnishment laws (Lefgren and McIntyre 2009; Miller 2012), public safety nets (Lefgren and McIntyre 2009), race

(Braucher et al. 2012), and local legal culture (Lefgren and McIntyre 2009; Lefgren et al. 2010).

4. Conceptual Framework: How Funding Affects Bankruptcy

Access to consumer litigation funding can theoretically increase or decrease the bankruptcy rate.[27] On one hand, funding is a source of credit for cash-constrained plaintiffs and may enable them to smooth their consumption, thus reducing the bankruptcy rate (see similar consumption smoothing argument for payday lending in Skiba 2012, p. 1026, and Dobridge 2016, p. 1). Specifically, funding can thwart bankruptcy for plaintiffs for whom an adverse event or debt from more expensive types of credit (or both an adverse event and debt) would have caused bankruptcy.

First, nonrecourse loans can help plaintiffs for whom an adverse event is a precipitating cause of bankruptcy. Some studies provide empirical evidence that an adverse event, such as an illness, injury, job loss, or divorce, may lead to an unexpected increase in expenditures and/or a decrease in income, which eventually culminates in bankruptcy (Fay et al. 2002; Edmiston 2006; Himmelstein et al. 2005, 2009).[28] Many who experience adverse events may be eligible for nonrecourse advances because these events frequently implicate legal claims. For example, automobile accidents often involve lawsuits against insurance companies (IRC 2014). In fact, most of the underlying cases in

[27] As of 2016, the only bankruptcy litigation funding that exists is the financing of litigation trusts related to Chapter 11 bankruptcies (Corrigan 2015; Cumings 2015). These funders do not structure transactions as nonrecourse loans; thus, the state actions discussed in Section 2 do not apply. Currently, funders do not supply capital to individual debtors specifically for the purpose of filing Chapter 7 and 13 bankruptcies.

[28] Scholars debate whether the incidence of adverse events or strategic filing is the primary cause of bankruptcy. Some view filing as mainly a strategic choice (White 1998; Fay et al. 2002; Hankins et al. 2011; Zhu 2011; Morrison et al. 2013). Accordingly, the availability of bankruptcy may influence consumption patterns and raise filing rates. This paper's research question and results do not depend on adverse events being the primary cause of bankruptcy. Instead, this paper asks and provides evidence on whether access to a new form of credit can help improve outcomes for individuals who suffer adverse events (either randomly or as a result of individual characteristics that also make them prone to bankruptcy).

funding are related to car accidents (Garber 2010, p. 10). An accident could cause a plaintiff to become unemployed and accumulate substantial medical bills. Sullivan et al. (1989, p. 167) gave a detailed description of a bankruptcy filer for whom a car accident was the "precipitating event for disastrous medical bills and [] eventual bankruptcy." Assuming that customers are rational and have the right information, funding advances can help plaintiffs wait for their settlements or trial awards without having to file for bankruptcy.

Nonrecourse loans can also help plaintiffs for whom debt from more expensive credit products is a precipitating cause of bankruptcy. The adverse event that these plaintiffs experience can be—but does not have to be—a concurrent cause of bankruptcy. Morgan et al. (2012) and Skiba and Tobacman (2015) found that payday loans cause more Chapter 13 bankruptcies. Skiba and Tobacman (2015) surmised that payday loan finance charges raise the debt-related household cash flow burden and thus tip consumers into bankruptcy. Dick and Lehnert (2010) found that removal of entry restrictions on out-of-state banks ("deregulation") increases Chapter 7 bankruptcies, likely due to a rise in the credit card loan rate. Like payday loans, credit card loans have high fees that accrue quickly over time and may put pressure on consumers to file for bankruptcy. By choosing funding, some plaintiffs may not need to obtain more expensive types of credit, such as payday or credit card loans, and may therefore avert bankruptcy.

There are four attributes of funding that make it a potentially less costly alternative to other financial products. First, although funding interest rates are high, the total payment is capped at the lawsuit proceeds. The plaintiff is not responsible for repaying fees that exceed the earnings from the case. Second, a plaintiff cannot obtain

more than one nonrecourse loan per lawsuit. Accordingly, the plaintiff cannot accumulate debt from multiple nonrecourse loans. Third, repayment occurs only once at the end of the case. Thus, no recurring payments can tip consumers into bankruptcy. Finally, repayment comes from an income-producing asset and does not rely on the level of the plaintiff's self-control.

In sum, funding can prevent bankruptcy by helping plaintiffs smooth their consumption. In particular, this credit source can aid those for whom an adverse event would have caused bankruptcy and those for whom the fees of more expensive types of loans would have caused bankruptcy.

On the other hand, access to funding can raise the bankruptcy rate in two ways. First, debtors may use their nonrecourse advances to pay for the filing costs of bankruptcy (Mann and Porter 2010; Gross et al. 2014). Second, consumers may be systematically susceptible to cognitive biases and errors in their cost-benefit analysis of obtaining these advances (see surveys Rabin 1998 and DellaVigna 2009). Skiba and Xiao (forthcoming) explained that salience effects, differential mental accounting, and the lack of the pain of payment may obscure this financial product's impact on consumer cash flow. Because repayment comes from lawsuit proceeds, the effect of funding on earnings is not salient, and borrowers may underestimate the costs of legal finance (see Chetty et al. 2009). Due to differential mental accounting, consumers may be more willing to spend money from case proceeds than ordinary earned income to pay for funding fees (see Thaler 1999). Since attorneys disburse the amount owed to financiers, customers do not experience the pain of payment associated with nonrecourse advances (see Prelec and Loewenstein 1998). Additionally, funding's tie to litigation may

complicate consumer repayment calculus (Skiba and Xiao, forthcoming). Customers may underestimate case duration and, in turn, the fees due at the end of the lawsuit. In sum, borrowers may make mistakes in obtaining these advances and end up in higher levels of debt with funding than without. Thus, legal finance may increase the bankruptcy rate.

As discussed in Section 2, state actions should impact the number of nonrecourse advances. As explained in this Section, these advances should decrease or increase bankruptcy. Table 2 summarizes how the state actions should affect the number of nonrecourse loans and, in turn, bankruptcy rates.

5. Data and Empirical Specification

5.1. Data

The dependent variables are the Chapter 7, Chapter 13, and joint Chapter 7 and 13 filing rates. Table 3 reports the means of these variables. Data on the annual number of nonbusiness (individual) Chapter 7 and 13 filings by county come from the Public Access to Court Electronic Records for years 1998–2012 and from the U.S. Courts Statistics and Reports for years 2013–2015. Population data come from the Bureau of Economic Analysis ("BEA"). From these datasets, I construct three variables by county and year: the number of Chapter 7 filings per 10,000 people, the number of Chapter 13 filings per 10,000 people, and the combined number of Chapter 7 and 13 filings per 10,000 people.

The independent variables of interest are the state actions that affect funding. I form variables that correspond to the four state action categories shown in Table 1: prohibition, interest rate or fee cap, disclosure law, and acknowledgment. The variables equal one for the states affected, starting the year after the actions occurred.

In order to control for the effect of other laws that may impact bankruptcy, I create variables for effective payday loan bans, state homestead exemptions, availability of federal exemptions, wage garnishment laws, BAPCPA, and prohibitions against champerty and maintenance. I construct a variable that is equal to one if a state has expressly prohibited payday loans or has enacted interest or fee caps that make it unprofitable for lenders to offer these loans ("effective payday loan bans"). I gather the information needed to construct such a variable from Bhutta (2014), Morgan et al. (2012), the Consumer Federation of America's website (CFA 2016), and Westlaw. Next, I form an indicator that is equal to one if the state homestead exemption is above $50,000 and another indicator that is equal to one if the state allows the filer to use federal exemptions. I also construct an indicator that is equal to one if the wage garnishment level is set at the federal limit. Information on bankruptcy exemptions and wage garnishment laws comes from Miller (2012), Carter (2012), Pettit and Platte (2011), and Westlaw. With a post-2005 indicator variable, I account for the effect of BAPCPA. Finally, as mentioned before, a court can utilize the doctrines against champerty and maintenance to ban funding. In order to verify that the effects of funding state actions are not the result of any indirect impact that these doctrines may have on bankruptcy through a non-funding mechanism, I create an indicator that equals one for any state that has a champerty or maintenance law in place. I obtain the information needed to construct this variable from Bond (2012) and Westlaw.

In order to control for household debt and asset levels, filing fees, and other unobservable characteristics, I form several variables related to demographics and economic conditions. Table 3 provides the means of these variables. The demographics

from the U.S. Census Bureau are the annual shares of the population that are female, Hispanic, black, Asian or Pacific Islander, 65 years or older, and with at least a college degree. The variables that account for annual economic conditions are income per capita from the BEA, unemployment rate from the Bureau of Labor Statistics, and home price index from the Federal Housing Finance Agency. All of these variables, except for the share of the population with at least a college degree and the home price index, are matched to the Chapter 7 and 13 filing rates by county and year; the two exceptions are matched by state and year.

5.2 Empirical Specification

This paper employs a difference-in-differences strategy to identify the effect of consumer litigation funding on bankruptcy rates. I run ordinary least squares regressions of the form:

$$\textit{Bankruptcy Rate}_{cst} = \alpha + \beta_1 \textit{Prohibition}_{st} + \beta_2 \textit{Interest or Fee Cap}_{st} + \beta_3 \textit{Disclosure Law}_{st} + \beta_4 \textit{Acknowledgment}_{st} + \Sigma_a \tau_a \textit{Other Laws}_{st} + \Sigma_h \gamma_h \textit{Demographics}_{cst} + \Sigma_j \lambda_j \textit{Economic Conditions}_{cst} + \Sigma_t \delta_t \textit{Year}_t + \Sigma_s \mu_s \textit{State}_s + \varepsilon_{cst},$$

in which *bankruptcy rate* can be the Chapter 7, Chapter 13, or joint Chapter 7 and 13 filing rate for county *c*, state *s*, and year *t*. *Other laws* include champerty and maintenance prohibitions, effective payday loan bans, state homestead exemptions, allowance of federal exemptions, wage garnishment limits, and BAPCPA. *Demographics* include percent female, percent Hispanic, percent black, percent Asian or Pacific Islander, percent 65 years or older, and percent with at least a college degree. *Economic conditions* consist of the income per capita, unemployment rate, and home price index. The regressions incorporate year fixed effects to account for time trends and state fixed

effects to control for time-constant characteristics of the states. I cluster standard errors by state in order to avoid difference-in-differences estimation problems related to serial correlation (Bertrand et al. 2004).

I am interested in the effects of the state actions that are captured by the beta (β_i) coefficients. In Table 2, the predicted directions of the effects on bankruptcy rates are the expected signs of the beta coefficients. Prohibition, cap on the interest rate or fees, and disclosure law decrease the number of nonrecourse advances while acknowledgment increases the number of these advances. If the consumption smoothing effect dominates, a reduction in funding should lead to a rise in the bankruptcy rate. Thus, β_1, β_2, and β_3 should be positive, and β_4 should be negative. If the filing cost effect and/or the cognitive biases-and-errors effect dominates, a decrease in funding should result in a decline in the bankruptcy rate. Therefore, the predicted signs of the coefficients should be the opposite of those under the consumption smoothing effect.

6. Results

6.1 Main Regressions

Table 4 reports the effects of the state actions in regressions in which the dependent variables are the Chapter 7, Chapter 13, and joint Chapter 7 and 13 filing rates. All regressions account for other laws, demographics, and economic conditions. Columns (1) to (4) also include state and year controls. The results for columns (2) to (4) are similar to the results of the basic specification regressions in column (1). Column (2) shows the outputs for models estimated with population weights, and column (3) presents the findings for models estimated with lagged demographics and economic conditions. Column (4) reports the outputs for regressions estimated with a post-2007 indicator to

control for the effect of the Great Recession on legal finance.[29] The Great Recession prompted investors to shift capital to litigation funding because lawsuit outcomes are not correlated with market outcomes (Steinitz 2011, p. 1283–84).

In Table 4, column (5), I follow Hynes (2012) and analyze the data using a fixed-effects empirical strategy available for panel data. Hynes (2012) used this methodology to examine the effect of payday loan legalization. In the fixed-effects regressions, I difference out unobservable, time-invariant factors, such as local legal culture, at the county level. Because the literature notes the large influence that local legal culture can have on bankruptcy (Lefgren and McIntyre 2009; Lefgren et al. 2010; Braucher 1993), the fixed-effects results in column (5) likely provide the most reliable findings. I report the results of fixed-effects regressions with lagged controls.[30] The Ohio prohibition increased Chapter 7 filings by 5.3 per 10,000 people and Chapter 13 filings by 1.7 per 10,000 people. Acknowledgment, which occurred in Florida and Texas, decreased Chapter 13 filings by 2.6 per 10,000 people. In contrast to the findings in columns (1) to (4), the coefficient on acknowledgment in the Chapter 7 filing rate regression in column (5) is no longer significant. This suggests that this effect was the result of time-invariant omitted factors, such as local legal culture. With regard to the joint Chapter 7 and 13 filing rate, the Ohio prohibition is the only state action that has an effect, though all the state actions are jointly significant at the one percent level. The prohibition raised Chapter 7 and 13 filings by 7.0 per 10,000 people.

[29] NBER dates the start of the Great Recession as December 2007 (NBER 2010).

[30] Table A1 presents the full results of the fixed-effects, lagged-controls specification.

Table 5 reports the state action estimates of three robustness checks.[31] First, I examine whether incorporating Chapter 11 bankruptcies affects the results. Only a few thousand people per year in the United States file for nonbusiness Chapter 11 bankruptcies; those who file are usually wealthier with monthly incomes in the top 40 percent of household incomes nationally (Hynes et al., forthcoming). Since nonrecourse loans primarily serve the low-income population, funding state actions should primarily affect nonbusiness Chapter 7 and 13 filings. Column (1) reports the results for the regression in which the dependent variable is all nonbusiness filings per 10,000 people, including Chapter 11 filings. The Ohio prohibition has the same effect as in the basic specification in which the dependent variable is only nonbusiness Chapter 7 and 13 filings per 10,000 people (see Table 4, column (1)). Incorporating individual Chapter 11 bankruptcies makes no difference to the results, indicating that nonbusiness Chapter 7 and 13 bankruptcies drive the findings.

Second, I conduct a falsification test to examine whether the state actions affect nonbusiness Chapter 11 bankruptcies. In Table 5, column (2) reports the estimates for the regression in which the dependent variable is only the nonbusiness Chapter 11 filings per 10,000 people. All of the state actions have insignificant effects. This is consistent with funding primarily affecting individuals who would file for Chapter 7 or 13. Finally, I conduct another falsification test to examine whether the state actions affect business bankruptcies. Consumer litigation funders do not advance cash to business entities; they focus on individuals with legal claims. Thus, the state actions should not impact the business filing rate. Table 5, column (3), confirms this. The estimates in columns (2)

[31] All results in Table 5 come from ordinary least squares regressions. Fixed-effects regressions yield very similar results.

and (3) are insignificant, close to zero, and precise. Thus, the results of the falsification checks provide evidence that access to funding affects nonbusiness Chapter 7 and 13 filings.

Finally, because the number of state actions in each category is very small (see Conley and Taber 2011), I estimate all regressions in Table 4 with bootstrap standard errors.[32] The significant effects in Table 4 remain significant in the regressions with bootstrap standard errors.[33]

6.2 Endogeneity

Although I am able to address time-invariant factors that may cause endogeneity by employing fixed-effects panel data analysis (see Table 4, column (5)),[34] I am unsuccessful in my efforts to account for time-varying factors related to funding that might cause endogeneity. I attempt to instrument for funding state actions with political contributions of different industries that may be influenced by these nonrecourse advances and political affiliations of the state legislature and governor, but statistical tests indicate that these instruments are extremely weak. This means that the two-stage least squares regressions with these instruments are unreliable. Therefore, I do not report them.

Endogeneity caused by time-varying factors related to funding is likely not significant in this study for four reasons. First, research has produced no evidence that bankruptcy was a consideration in the implementation of the state actions. Second, during

[32] Bootstrapping is a nonparametric method of estimating the distribution of a parameter through random resampling. A bootstrap sample is created when one draws with replacement N observations from the N-observation dataset. The formula for computing a bootstrap standard error is $\hat{se} = \{(1/(k-1))\sum(\hat{\theta}_i - \overline{\theta})^2\}^{1/2}$, where $\hat{\theta}_i$ is the parameter calculated using the *i*-th bootstrap sample, $\overline{\theta}$ is the average of the bootstrap calculations, and *k* is the number of replications.

[33] Bootstrap results are available upon request.

[34] Fixed-effects panel data analysis essentially differences out any time-invariant unobservable factors that may cause endogeneity.

1998–2015, most of the state actions came from courts or agencies, both of which are generally less prone than legislatures to the influence of interest groups (see Epstein 1990, p. 841; Fesler 1940, p. 942). Further, the Ohio Supreme Court's ban of litigation funding was spontaneous and independent. Neither the parties nor amici had argued for nonrecourse advances to be expressly prohibited.

Third, financiers generally do not offer these advances based on anticipated likelihood of bankruptcy. While some firms screen for whether a plaintiff is in bankruptcy at the application date, most do not look at predictors for future bankruptcy, such as the plaintiff's income or credit score. If the plaintiff enters into bankruptcy prior to the completion of the personal injury lawsuit, then one of two things can occur. Some states (e.g., California) allow plaintiffs to exempt part of their personal injury case proceeds; financiers may receive repayment from the exempted amount. Another outcome may be that no case proceeds are exempted. In this situation, funders may be treated as unsecured creditors with the lowest priority. Firms generally consider this second outcome to be the same as the outcome in which the plaintiff fails to recover any settlement or trial award, and thus, financiers do not seek repayment from the plaintiff's assets in the bankruptcy proceeding.

Fourth, ordinary least squares regressions examining the probability of a state action occurring provide evidence that state actions are not determined by time-variant demographic, economic, and political factors. For the dependent variables, I create an indicator that is equal to one if a state action impacts that time period; I also form a tiered variable that equals one if the prohibition is in effect, two if an interest or fee cap is in effect, three if a disclosure law is in effect, four if a judicial acknowledgment is in effect,

and zero if no state action is in effect. I regress the state action indicator and tiered variable on demographics, economic conditions, political contributions, and political affiliations. Table A2 shows that all of the independent variables have insignificant effects, which suggests that there is likely no bias due to these state characteristics.

6.3 Extension: Informal Bankruptcy

An emerging concept in the bankruptcy literature is "informal bankruptcy," which occurs when a consumer does not repay his debts for a long period of time and does not file for Chapter 7 or 13 (Agarwal et al. 2003; Dawsey and Ausubel 2004; Morgan et al. 2012). As the individual's debts increase, he gets calls and notices from lenders and third-party debt collectors, which may use illegal tactics like harassment in order to collect the money owed (Sullivan et al. 1989, p. 21). As informal bankruptcy rises, complaints against lenders and third-party debt collectors to federal agencies increase. This is why complaint rates can serve as measures for the level of informal bankruptcy. Morgan et al. (2012) found that effective payday loan bans increase third-party debt collector complaints to the Federal Trade Commission ("FTC") by 0.24 per 100,000 people (or 17 percent relative to the mean). The FTC is responsible for enforcing the Fair Debt Collection Practices Act of 1978. The goal of the Act is to curb abusive third-party debt collection practices. Accordingly, the FTC handles complaints from consumers regarding violations of this Act.

In this Section, I examine the effect of funding state actions on informal bankruptcy. I measure informal bankruptcy by the number of complaints against third-party debt collectors per 100,000 people (gathered by the FTC) and the number of complaints against credit card and mortgage lenders per 100,000 people (gathered by the

Consumer Financial Protection Bureau ("CFPB")).[35] The CFPB's mission is to protect U.S. consumers in the financial marketplace. While the FTC addresses complaints against third-party debt collectors, the CFPB handles complaints against primary lenders regarding their financial services and products. The CFPB began with addressing credit card complaints and has expanded over the last few years to handling complaints concerning a wide range of financial products from payday loans to student loans.

Through a Freedom of Information Act request to the FTC, I obtain annual data on complaints against third-party debt collectors by state for the years 2011–2015.[36] Using BEA population data, I create a variable equal to the number of FTC complaints per 100,000 people. The CFPB maintains a publicly accessible database of consumer complaints against lenders on its website. I obtain the 2012–2015 data for credit card and mortgage lenders, for which the longest period of information is available,[37] and generate annual counts of complaints by state. Using BEA population data, I construct a variable equal to the number of CFPB credit card and mortgage complaints per 100,000 people.

Table A3 reports the effects of the state actions in regressions in which the dependent variables are the FTC and CFPB complaint rates. The Ohio prohibition does not affect the time period 2011–2015. All regressions account for other laws, demographics, and economic conditions. Columns (1) to (3) also include state and year controls. In column (4), I difference out time-invariant factors at the state level, not the county level, since county-level identifiers are not available in the complaint data. As the

[35] Funders typically have no need to outsource debt collection to third parties. Attorneys disburse the repayment to funders prior to plaintiffs receiving any money, and plaintiffs do not owe anything above the remaining lawsuit proceeds.

[36] Unfortunately, the FTC deletes data older than five years, so I could not obtain any data prior to 2011.

[37] The CFPB started handling credit card complaints on July 21, 2011, and added mortgage complaints at the end of 2011.

fixed-effects strategy depends on differences across time, acknowledgment drops out because the variable remains constant in 2011–2015. The only effects that are robust across columns (1) to (4) are the ones involving interest rate and fee caps on funding in the FTC and CFPB regressions. Unfortunately, the findings in the FTC regressions in Table A3 are not robust to bootstrap standard errors.[38] Thus, the interest or fee cap effect in the CFPB regression is the only effect robust to all specifications. Column (4) reports that such a cap increases CFPB credit card and mortgage complaints by 1.2 per 100,000 people (or 7.8 percent relative to the mean). This provides some evidence that an interest or fee cap on funding may take away nonrecourse loans as a credit option for some plaintiffs, causing them to resort to more expensive financial products, like credit card loans, in order to cover sizable expenses.

7. Discussion

This paper provides the first empirical evidence that access to funding may positively impact consumer welfare. In the fixed-effects regressions, the Ohio prohibition increased Chapter 7 filings by 5.3 per 10,000 people (or 20 percent relative to the mean) and Chapter 13 filings by 1.7 per 10,000 people (or 15 percent relative to the mean). A judicial acknowledgment, which occurred in Florida and Texas, reduced Chapter 13 filings by 2.6 per 10,000 people (or 23 percent relative to the mean). When I examine the joint Chapter 7 and 13 filing rate, I find that the Ohio prohibition increased Chapter 7 and 13 filings by 7.0 per 10,000 people (or 18 percent relative to the mean). As the joint filing rate accounts for substitution between Chapter 7 and Chapter 13, this finding provides support that, overall, funding decreases the bankruptcy rate. These results are

[38] Bootstrap results are available upon request.

consistent with the hypothesis that nonrecourse advances help plaintiffs to absorb the financial shocks that come from adverse events or to avert more expensive forms of credit. In turn, these advances prevent bankruptcy.

The welfare effects of bankruptcy are difficult to measure. Bankruptcy is the climax of a consumer's financial distress, but it can also help the consumer get a "fresh start" (Chapter 7) or save his home (Chapter 13) (Livshits et al. 2007; White and Zhu 2010). Research shows that consumers benefit if they can get their debts discharged under Chapter 7 or 13. Parra (2016) found that debt relief under Chapter 7 increases the probability of the filer starting a business, obtaining secured lending, becoming a homeowner, and averting home foreclosure. Dobbie and Song (2015) demonstrated that Chapter 13 protection increases annual earnings, while reducing mortality and foreclosure rates. Also, Dobbie et al. (2015) found that Chapter 13 protection decreases adverse events including civil judgments and repossessions, raises the likelihood of being a homeowner, and improves credit scores.

While Chapter 7 results in debt discharge over 95 percent of the time, Chapter 13 debt discharge does not occur until a debtor's payment plan is fulfilled, which occurs only a third of the time (Porter 2011, p. 107). Most Chapter 13 filers never complete their plans due to case dismissal, failure to continue plan payments, and failure to pay court costs (Skiba and Tobacman 2015; Porter 2011, p. 113). Not only is Chapter 13 worse than Chapter 7 from the perspective of successful debt discharge but also filing costs for Chapter 13 are higher by about 250 percent (Porter 2011, p. 108). Thus, nonrecourse loans may raise consumer welfare by reducing Chapter 13 bankruptcies.

Table 6 shows the effect of access to funding, as well as access to other types of credit, on the Chapter 7 and 13 filing rates. In contrast to access to credit card loans, access to funding, payday loans, and car-title loans decrease Chapter 7 filings. In contrast to access to payday lending, access to funding and car-title loans reduce Chapter 13 filings. Obtaining more credit card or payday loans increases finance charges. These charges can escalate and exert pressure on consumers to file for bankruptcy. Title lenders take a security interest in the consumer's car; the existence of collateral may distinguish car-title loans from credit card and payday loans. Funding differs from credit card and payday loans by a larger degree than car-title loans. A plaintiff cannot renew his nonrecourse loan or get another advance on the same case. Funding is capped at the lawsuit proceeds. Further, repayment of funding occurs at the end of the case and comes from an income-producing asset. Thus, funding customers need not continuously pay finance charges nor rely on their own (lack of) self-control to repay the loan (cf. Skiba and Tobacman 2008).

In terms of the magnitude of effects, Table 6 shows that funding's impact on the Chapter 7 filing rate is larger than the effects of credit card loans, payday loans, and car-title loans. Funding's influence on the Chapter 13 filing rate is less than the effect of payday loans but greater than the effect of car-title loans. The market for nonrecourse loans is likely smaller than the credit card, payday loan, and car-title loan markets because a nonrecourse loan must be attached to a legal claim. However, the magnitudes of the effects of funding are plausible because funding helps consumers in "distress" states. Funding caters to consumers who are most likely to file for bankruptcy (i.e., those who are injured, have low incomes, and have substantial debts). A large injury can result

in joblessness and hefty medical bills, or it can prompt the injured to seek extremely expensive forms of credit. Aiding consumers when they are in "distress" states may have a greater impact than lending money to credit-constrained consumers in general. Dobridge (2016) demonstrated that payday loan access helps households smooth their consumption of food (at home), home repairs, and mortgage payments in the month of an extreme weather event (i.e., in a "distress" state) but decreases household well-being (as measured by consumption) in an "average" state of the world. This is consistent with Morse (2011), which found that the presence of payday lenders mitigates the number of home foreclosures and larcenies in the year after a natural disaster in California. Thus, the magnitudes of the effects found in this paper are reasonable.

8. Conclusion

Many opponents of consumer litigation funding argue for harsh restrictions, if not express bans, on this business practice in the name of consumer welfare. Their arguments hinge on comparisons of nonrecourse advances with payday loans, another high-cost financial product. This study is the first to empirically examine the effect of these advances on consumer welfare, as measured by Chapter 7 and 13 bankruptcies. I find that nonrecourse advances reduce both the Chapter 7 and 13 filing rates. This suggests that funding helps liquidity-constrained plaintiffs to avoid bankruptcy as they wait for the resolution of their cases. Unlike payday loans that increase Chapter 13 bankruptcies, funding reduces these bankruptcies. From the perspective of debt discharge success and bankruptcy filing fees, Chapter 7 is better than Chapter 13. Accordingly, funding may raise consumer welfare.

References

Abrams, David S., and Daniel L. Chen. 2013. "A Market for Justice: A First Empirical Look at Third Party Litigation Funding." *University of Pennsylvania Journal of Business Law* 15 (4): 1075–109.

Agarwal, Sumit, Chunlin Liu, and Lawrence Mielnicki. 2003. "Exemption Laws and Consumer Delinquency and Bankruptcy Behavior: An Empirical Analysis of Credit Card Data." *Quarterly Review of Economics and Finance* 43 (2): 273–89.

American Legal Finance Association (ALFA). 2016. "The ALFA Code of Conduct." https://americanlegalfin.com/what-is-alfa/alfa-code-of-conduct/ (last accessed September 2016).

Appelbaum, Binyamin. 2011a. "Lawsuit Loans Add New Risk for the Injured." *N.Y. Times*, January 16. http://www.nytimes.com/2011/01/17/business/17lawsuit.html?pagewanted=all&_r=0 (last accessed September 2016).

Appelbaum, Binyamin. 2011b. "Lobby Battle Over Loans for Lawsuits." *N.Y. Times*, March 10. http://www.nytimes.com/2011/03/10/business/10lawsuits.html (last accessed September 2016).

Avraham, Ronen, and Abraham Wickelgren. 2014. "Third-Party Litigation Funding – A Signaling Model." *DePaul Law Review* 63 (2): 233–64.

Barron, John M., Michael E. Staten, and Stephanie M. Wilshusen. 2002. "The Impact of Casino Gambling on Personal Bankruptcy Filing Rates." *Contemporary Economic Policy* 20 (4): 440–55.

Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan. 2004. "How Much Should We Trust Differences-in-Differences Estimates?" *Quarterly Journal of Economics* 119 (1): 249–75.

Beydler, Nicholas. 2012. "Risky Business: Examining Approaches to Regulating Consumer Litigation Funding." *University of Missouri Kansas City Law Review* 80 (4): 1159–86.

Bhutta, Neil. 2014. "Payday Loans and Consumer Financial Health." *Journal of Banking and Finance* 47 (1): 230–42.

Bhutta, Neil, Paige Marta Skiba, and Jeremy Tobacman. 2015. "Payday Loan Choices and Consequences." *Journal of Money, Credit and Banking* 47 (2-3): 223–60.

Bond, Paul. 2002. "Making Champerty Work: An Invitation to State Action." *University of Pennsylvania Law Review* 150 (4): 1297–341.

Bos, Marieke, Susan Payne Carter, and Paige Marta Skiba. 2012. "The Pawn Industry and Its Customers: The United States and Europe." Vanderbilt Law and Economics Research Paper No. 12-26.

Braucher, Jean. 1993. "Lawyers and Consumer Bankruptcy: One Code, Many Cultures." *American Bankruptcy Law Journal* 67 (4): 501–83.

Braucher, Jean, Dov Cohen, and Robert M. Lawless. 2012. "Race, Attorney Influence, and Bankruptcy Chapter Choice." *Journal of Empirical Legal Studies* 9 (3): 393–429.

Burke, Kathleen, Jonathan Lanning, Jesse Leary, and Jialan Wang. 2014. "CFPB Data Point: Payday Lending." *Consumer Financial Protection Bureau Office of Research*, March. http://files.consumerfinance.gov/f/201403_cfpb_report_payday-lending.pdf (last accessed February 2017).

Campbell, Dennis, F. Asis Martinez-Jerez, and Peter Tufano. 2012. "Bouncing Out of the Banking System: An Empirical Analysis of Involuntary Bank Account Closures." *Journal of Banking and Finance* 26 (4): 1224–35.

Carter, Susan Payne. 2012. "Homeownership Post Bankruptcy." Working Paper.

Carter, Susan Payne. 2015. "Payday Loan and Pawnshop Usage: The Impact of Allowing Payday Loan Rollovers." *Journal of Consumer Affairs* 49 (2): 436–56.

Carter, Susan Payne, and Paige Marta Skiba. 2012. "Pawnshops, Behavioral Economics, and Self-Regulation." *Review of Banking and Financial Law* 32 (1): 193–220.

Carter, Susan Payne, and William Skimmyhorn. "Much Ado About Nothing? New Evidence on the Effects of Payday Lending on Military Members." *Review of Economics and Statistics*, forthcoming.

Carter, Terry. 2004. "Cash Up Front: New Funding Sources Ease Financial Strains on Plaintiffs' Lawyers." *American Bar Association Journal*, October 8. http://www.abajournal.com/magazine/article/cash_up_front (last accessed September 2016).

Chen, Daniel L. 2015. "Can Markets Stimulate Rights? On the Alienability of Legal Claims." *RAND Journal of Economics* 46 (1): 23–65.

Chetty, Raj, Adam Looney, and Kory Kroft. 2009. "Salience and Taxation: Theory and Evidence." *American Economic Review* 99 (4): 1145–77.

Consumer Federation of America (CFA). 2016. "Legal Status of Payday Loans by State." http://www.paydayloaninfo.org/state-information (last accessed June 2016).

Corrigan, Tom. 2015. "Litigation Finance Comes to Bankruptcy." *Wall Street Journal*, July 27. http://www.wsj.com/articles/litigation-finance-comes-to-bankruptcy-1438029968 (last accessed November 2016).

Cumings, Stephanie. 2015. "Can Litigation Funding Thrive on Bankruptcy?" *Bloomberg Law*, August 20. https://bol.bna.com/can-litigation-funding-thrive-on-bankruptcy/ (last accessed November 2016).

Daughety, Andrew F., and Jennifer F. Reinganum. 2014. "The Effect of Third-Party Funding of Plaintiffs on Settlement." *American Economic Review* 104 (8): 2552–66.

Dawsey, Amanda E., and Lawrence M. Ausubel. 2004. "Informal Bankruptcy." University of North Carolina Greensboro and University of Maryland Working Paper.

Deffains, Bruno, and Claudine Desrieux. 2015. "To Litigate or Not to Litigate? The Impacts of Third-Party Financing on Litigation." *International Review of Law and Economics* 43 (2015): 178–89.

DellaVigna, Stefano. 2009. "Psychology and Economics: Evidence from the Field." *Journal of Economic Literature* 47 (2): 315–72.

Dick, Astrid, and Andreas Lehnert. 2010. "Personal Bankruptcy and Credit Market Competition." *Journal of Finance* 65 (2): 655–86.

Dobbie, Will, Paul Goldsmith-Pinkham, and Crystal Yang. 2015. "Consumer Bankruptcy and Financial Health." Working Paper.

Dobbie, Will, and Jae Song. 2015. "Debt Relief and Debtor Outcomes: Measuring the Effects of Consumer Bankruptcy Protection." *American Economic Review* 105 (3): 1272–311.

Dobridge, Christine L. 2016. "For Better and For Worse? Effects of Access to High-Cost Consumer Credit." Federal Reserve Board, Finance and Economics Discussion Series.

Domowitz, Ian, and Robert L. Sartain. 1999. "Determinants of the Consumer Bankruptcy Decision." *Journal of Finance* 54 (1): 403–20.

Edmiston, Kelly D. 2006. "A New Perspective on Rising Nonbusiness Bankruptcy Filing Rates: Analyzing the Regional Factors." *Federal Reserve Bank of Kansas City Economic Review* 91 (2): 55–83.

Ernst, Keith, John Farris, and Uriah King. 2004. "Quantifying the Economic Cost of Predatory Payday Lending." *Center for Responsible Lending*, February 24. http://www.responsiblelending.org/payday-lending/research-analysis/CRLpaydaylendingstudy121803.pdf (last accessed October 2016).

Estevao, Martin J. 2013. "The Litigation Financing Industry: Regulation to Protect and Inform Consumers." *University of Colorado Law Review* 84 (2): 467–96.

Fay, Scott, Erik Hurst, and Michelle J. White. 2002. "The Household Bankruptcy Decision." *American Economic Review* 92 (3): 706–18.

Fesler, James W. 1940. "Independence of State Regulatory Agencies." *American Political Science Review* 34 (5): 935–47.

Fritzdixon, Kathryn. 2015. "Auto Title Lending and Consumer Bankruptcy: Evidence From County Filing Rates." Working Paper.

Fritzdixon, Kathryn, Jim Hawkins, and Paige Marta Skiba. 2014. "Dude, Where's My Car Title?: The Law, Behavior, and Economics of Title Lending Markets." *University of Illinois Law Review* 2014 (4): 1013–58.

Garber, Steven. 2010. "Alternative Litigation Financing in the United States." RAND Institute for Civil Justice (Law, Finance, and Capital Markets Program) Occasional Paper.

Griffis, Kirby. 2011. "Follow the Money: Litigation Funders Back Your Foes." *Metropolitan Corporate Counsel*, July 1. http://www.metrocorpcounsel.com/articles/14606/follow-money-litigation-funders-back-your-foes (last accessed September 2016).

Gross, David B., and Nicholas S. Souleles. 2002. "An Empirical Analysis of Personal Bankruptcy and Delinquency." *Review of Financial Studies* 15 (1): 319–47.

Gross, Tal, Matthew J. Notowidigo, and Jialan Wang. 2014. "Liquidity Constraints and Consumer Bankruptcy: Evidence from Tax Rebates." *Review of Economics and Statistics* 96 (3): 431–43.

Hankins, Scott, Mark Hoekstra, and Paige Marta Skiba. 2011. "The Ticket to Easy Street? The Financial Consequences of Winning the Lottery." *Review of Economics and Statistics* 93 (3): 961–69.

Himmelstein, David U., Deborah Thorne, Elizabeth Warren, and Steffie Woolhandler. 2009. "Medical Bankruptcy in the United States, 2007: Results of a National Study." *American Journal of Medicine* 122 (8): 741–46.

Himmelstein, David U., Elizabeth Warren, Deborah Thorne, and Steffie Woolhandler. 2005. "MarketWatch: Illness and Injury as Contributors to Bankruptcy." *Health Affairs*: W5-63–W5-73.

Hynes, Richard. 2012. "Payday Lending, Bankruptcy, and Insolvency." *Washington and Lee Law Review* 69 (2): 607–48.

Hynes, Richard, Anne Lawton, and Margaret Howard. "National Study of Individual Chapter 11 Bankruptcies." *American Bankruptcy Institute Law Review*, forthcoming.

Insurance Research Council (IRC). 2014. "Study Finds More Auto Injury Claimants Are Hiring Attorneys." *Insurance-Research.org*, July 8. http://www.insurance-research.org/sites/default/files/downloads/AttorneyNewsRelease.pdf (last accessed September 2016).

Kritzer, Herbert M. 2004. *Risks, Reputations, and Rewards: Contingency Fee Legal Practice in the United States*. Stanford, California: Stanford University Press.

Lefgren, Lars, and Frank McIntyre. 2009. "Explaining the Puzzle of Cross-State Differences in Bankruptcy Rates." *Journal of Law and Economics* 52 (2): 367–93.

Lefgren, Lars, Frank L. McIntyre, and Michelle Miller. 2010. "Chapter 7 or 13: Are Client or Lawyer Interests Paramount?" *B.E. Journal of Economic Analysis & Policy* 10 (1): 1–44.

Livshits, Igor, James MacGee, and Michele Tertilt. 2007. "Consumer Bankruptcy: A Fresh Start." *American Economic Review* 97 (1): 402–18.

Mann, Ronald, and Katherine Porter. 2010. "Saving Up for Bankruptcy." *Georgetown Law Journal* 98 (2): 289–339.

Martin, Susan Lorde. 2004. "The Litigation Financing Industry: The Wild West of Finance Should Be Tamed Not Outlawed." *Fordham Journal of Corporate and Financial Law* 10 (1): 55–76.

Martin, Susan Lorde. 2008. "Litigation Financing: Another Subprime Industry that Has a Place in the United States Market." *Villanova Law Review* 53 (1): 83–116.

McLaughlin, Julia H. 2007. "Litigation Funding: Charting a Legal and Ethical Course." *Vermont Law Review* 31 (3): 615–62.

Melzer, Brian T. 2011. "The Real Costs of Credit Access: Evidence From the Payday Lending Market." *Quarterly Journal of Economics* 126 (1): 517–55.

Miller, Michelle M. 2012. "Who Files for Bankruptcy? State Laws and the Characteristics of Bankrupt Households." Loyola Marymount University, Department of Economics Working Paper.

Molot, Jonathan T. 2010. "Litigation Finance: A Market Solution to a Procedural Problem." *Georgetown Law Journal* 99 (1): 65–115.

Morgan, Donald P., and Michael R. Strain. 2008. "Payday Holiday: How Households Fare after Payday Credit Bans." Federal Reserve Bank of New York Staff Reports, no. 309.

Morgan, Donald P., Michael R. Strain, and Ihab Seblani. 2012. "How Payday Credit Access Affects Overdrafts and Other Outcomes." *Journal of Money, Credit and Banking* 44 (2-3): 519–31.

Morrison, Edward, Arpit Gupta, Lenora Olson, Lawrence Cook, and Heather Keenan. 2013. "Health and Financial Fragility: Evidence from Car Crashes and Consumer Bankruptcy." Coase-Sandor Institute for Law and Economics Working Paper.

Morse, Adair. 2011. "Payday Lenders: Heroes or Villains?" *Journal of Financial Economics* 102 (1): 28–44.

National Bureau of Economic Research (NBER). 2010. "Business Cycle Dating Committee." *NBER*, September 20. http://www.nber.org/cycles/sept2010.html (last accessed September 2016).

National Conference of State Legislatures (NCSL). 2016. "Litigation or Lawsuit Funding Transactions 2015 Legislation." *NCSL*, January 1. http://www.ncsl.org/research/financial-services-and-commerce/litigation-or-lawsuit-funding-transactions-2015-legislation.aspx (last accessed September 2016).

Nieuwveld, Lisa Bench, and Victoria Shannon. 2012. *Third-Party Funding in International Arbitration*. The Netherlands: Kluwer Law International.

Parra, Carlos. 2016. "How Does Bankruptcy Protection Impact Household Outcomes?" Working Paper.

Pettit, Carol A., and Vastine D. Platte. 2011. "Homestead Exemptions in Bankruptcy After the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA)." *Congressional Research Service*. http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R40891.pdf.

Porter, Katherine M. 2011. "The Pretend Solution: An Empirical Study of Bankruptcy Outcomes." *Texas Law Review* 90 (1): 103–62.

Prelec, Drazen, and George Loewenstein. 1998. "The Red and the Black: Mental Accounting of Savings and Debt." *Marketing Science* 17 (1): 4–28.

Rabin, Matthew. 1998. "Psychology and Economics." *Journal of Economic Literature* 36 (1): 11–46.

Rodak, Mariel. 2006. “It’s About Time: A Systems Thinking Analysis of the Litigation Finance Industry and Its Effect on Settlement.” *University of Pennsylvania Law Review* 155 (2): 503–35.

Skiba, Paige Marta. 2012. “Regulation of Payday Loans: Misguided?” *Washington and Lee Law Review* 69 (2): 1023–49.

Skiba, Paige Marta, and Jeremy Tobacman. 2008. “Payday Loans, Uncertainty, and Discounting: Explaining Patterns of Borrowing, Repayment, and Default.” Working Paper.

Skiba, Paige Marta, and Jeremy Tobacman. 2015. “Do Payday Loans Cause Bankruptcy?” Working Paper.

Skiba, Paige Marta, and Jean Xiao. 2017. “Consumer Litigation Funding: Just Another Form of Payday Lending?” *Law and Contemporary Problems*, forthcoming.

Sullivan, Teresa A., Elizabeth Warren, and Jay Lawrence Westbrook. 1989. *As We Forgive Our Debtors: Bankruptcy and Consumer Credit in America*. New York: Oxford University Press.

Thaler, Richard. 1999. “Mental Accounting Matters.” *Journal of Behavioral Decision Making* 12 (3): 181–206.

White, Michelle J. 1998. “Why Don’t More Households File for Bankruptcy?” *Journal of Law, Economics, and Organization* 14 (2): 205–31.

White, Michelle J. 2007. “Bankruptcy Reform and Credit Cards.” *Journal of Economic Perspectives* 21 (4): 175–99.

White, Michelle J. 2009. “Bankruptcy: Past Puzzles, Recent Reforms, and the Mortgage Crisis.” *American Law and Economics Review* 11 (1): 1–23.

White, Michelle J., and Ning Zhu. 2010. “Saving Your Home in Chapter 13 Bankruptcy.” *Journal of Legal Studies* 39 (1): 33–61.

Xiao, Jean. 2017. “The Effect of Consumer Litigation Funding on Medical Malpractice Litigation.” Working Paper.

Zhu, Ning. 2011. “Household Consumption and Personal Bankruptcy.” *Journal of Legal Studies* 40 (1): 1–37.

Zinman, Jonathan. 2010. “Restricting Consumer Credit Access: Household Survey Evidence on Effects Around the Oregon Rate Cap.” *Journal of Banking and Finance* 34 (3): 546–56.

Tables

Table 1. Consumer Litigation Funding State Actions

State Action	State (Time Period)	Citation	Expected Effect on Number of Nonrecourse Loans
Prohibition	Ohio (2003–2008)	*Rancman v. Interim Settlement Funding Corp.*, 789 N.E.2d 217 (Ohio 2003)	Decrease **(–)**
Interest Rate/Fee Cap	Michigan (2004–present)	*Lawsuit Financial, LLC v. Curry*, 683 N.W.2d 233 (Mich. Ct. App. 2004)	Decrease **(–)**
	North Carolina (2008–present)	*Odell v. Legal Bucks, LLC*, 665 S.E.2d 767 (N.C. Ct. App. 2008)	
	Maryland (2009–present)	Maryland Commissioner of Financial Regulation, DFR-EU 2008-241	
	Kansas (2009–present)	Kansas Office of the State Bank Commissioner, Consumer and Mortgage Lending Division, No. 2009-141	
	Colorado (2013–present)	*Oasis Legal Finance Group, LLC v. Suthers*, 369 P.3d 631 (Colo. App. 2013), *aff'd*, 361 P.3d 400 (Colo. 2015)	
	South Carolina (2014–present)	South Carolina Department of Consumer Affairs Formal Administrative Interpretation 37.3.104, 106-1403	
Disclosure Law	New York (2005–present)	Attorney General of the State of New York, Bureau of Consumer Frauds and Protection, Assurance of Discontinuance Pursuant to Executive Law §63(15)	Decrease **(–)**
	Maine (2008–present)	Me. Rev. Stat. Ann. tit. 9–A, § 12-104	
	Ohio (2008–present)	Ohio Rev. Code Ann. § 1349.55	
	Nebraska (2010–present)	Neb. Rev. Stat. Ann. § 25-3303	
	Oklahoma (2013–present)	Okla. Stat. Ann. tit. 14A, §3-807	
	Tennessee (2014–2015)	Tenn. Code Ann. § 47-51-106	
Acknowledgment	Florida (1996–present)	*Kraft v. Mason*, 668 So. 2d 679 (Fla. Dist. Ct. App. 1996)	Increase **(+)**
	Texas (2006–present)	*Anglo-Dutch Petroleum International, Inc. v. Haskell*, 193 S.W.3d 87 (Tex. App. 2006)	

Table 2. Expected Effects of State Actions on Number of Nonrecourse Loans and Bankruptcy Rates

	Expected Effect on Number of Nonrecourse Loans	Expected Effect on Bankruptcy Rates	
		If consumption smoothing effect prevails	If filing cost effect and/or cognitive biases-and-errors effect prevails
Prohibition (β_1)	**(–)**	**(+)**	**(–)**
Interest Rate/Fee Cap (β_2)	**(–)**	**(+)**	**(–)**
Disclosure Law (β_3)	**(–)**	**(+)**	**(–)**
Acknowledgment (β_4)	**(+)**	**(–)**	**(+)**

Table 3. Summary Statistics

Dependent Variables	Mean
Chapter 7 Filings per 10,000 People	27.21
Chapter 13 Filings per 10,000 People	11.42
Chapter 7 & 13 Filings per 10,000 People	38.63
Demographics and Economic Conditions	**Mean**
Percent of Population Female	50.23
Percent of Population Hispanic	7.50
Percent of Population Black	8.73
Percent of Population Asian or Pacific Islander	1.03
Percent of Population 65 Years or Older	15.70
Percent of Population with At Least College Degree	23.66
Income per Capita ($)	30,949.41
Unemployment Rate (%)	6.26
Home Price Index	185.40

Note: N=54,827. Bankruptcy filings are from the Public Access to Court Electronic Records (1998-2012) and U.S. Courts Statistics and Reports (2013-15). Demographics are from the U.S. Census Bureau. Other controls include income per capita from the Bureau of Economic Analysis, unemployment rate from the Bureau of Labor Statistics, and home price index from the Federal Housing Finance Agency.

Table 4. The Effects of Consumer Litigation Funding State Actions on Chapter 7, Chapter 13, and Joint Chapter 7 and 13 Filing Rates

	(1) Basic Specification	(2) Weighted by Population	(3) Lagged Controls	(4) Great Recession	(5) Fixed Effects, Lagged Controls
Ch. 7: Prohibition	4.189***	4.832***	3.907***	4.189***	5.343**
	(0.720)	(1.315)	(0.784)	(0.720)	(2.045)
Ch. 7: Interest/Fee Cap	2.735	2.217	2.224	2.735	2.888
	(2.440)	(2.057)	(2.260)	(2.440)	(5.633)
Ch. 7: Disclosure Law	-0.780	-1.198	-0.746	-0.780	-0.367
	(1.171)	(2.597)	(1.169)	(1.171)	(3.391)
Ch. 7: Acknowledgment	4.855***	3.240**	5.078**	4.855***	2.287
	(1.202)	(1.303)	(2.350)	(1.202)	(2.623)
R-squared	0.619	0.699	0.612	0.619	0.512
Ch. 13: Prohibition	3.202***	3.580***	2.713***	3.202***	1.661***
	(0.582)	(0.686)	(0.493)	(0.582)	(0.604)
Ch. 13: Interest/Fee Cap	0.468	-2.109	0.697	0.468	0.595
	(1.383)	(1.269)	(1.169)	(1.383)	(1.192)
Ch. 13: Disclosure Law	0.0284	-0.327	-0.484	0.0284	-0.849
	(0.682)	(0.992)	(0.687)	(0.682)	(0.955)
Ch. 13: Acknowledgment	-4.010***	-4.246***	-3.119***	-4.010***	-2.632**
	(0.480)	(0.656)	(0.885)	(0.480)	(1.047)
R-squared	0.632	0.596	0.561	0.632	0.147
Ch. 7 & 13: Prohibition	7.391***	8.412***	6.620***	7.391***	7.004***
	(1.047)	(1.792)	(0.991)	(1.047)	(2.526)
Ch. 7 & 13: Interest/Fee Cap	3.203	0.107	2.921	3.203	3.483
	(2.627)	(2.345)	(2.589)	(2.627)	(6.133)
Ch. 7 & 13: Disclosure Law	-0.752	-1.526	-1.230	-0.752	-1.216
	(1.524)	(3.397)	(1.486)	(1.524)	(4.143)
Ch. 7 & 13: Acknowledgment	0.845	-1.007	1.959	0.845	-0.345
	(1.278)	(1.713)	(2.681)	(1.278)	(3.089)
R-squared	0.634	0.680	0.604	0.634	0.502
N (for all dependent vars.)	54,827	54,827	51,762	54,827	3,140 counties

Note: Bankruptcy filings are from the Public Access to Court Electronic Records (1998-2012) and U.S. Courts Statistics and Reports (2013-15). Columns (1) to (5) control for other laws, demographics, and economic conditions. Columns (1) to (4) include state and year fixed effects. Standard errors in parentheses are clustered by state. Controls are from the U.S. Census Bureau (shares of the population that are female, Hispanic, black, Asian or Pacific Islander, 65 years or older, and with at least a college degree), Bureau of Economic Analysis (income per capita), Bureau of Labor Statistics (unemployment rate), and Federal Housing Finance Agency (home price index). *** p<0.01, ** p<0.05, * p<0.1

Table 5. The Effects of Consumer Litigation Funding State Actions on Nonbusiness and Business Bankruptcy Filing Rates

	(1) All Nonbusiness Filings per 10,000	(2) Nonbusiness Ch. 11 Filings per 10,000	(3) All Business Filings per 10,000
Prohibition	7.389***	-0.00165	0.0664
	(1.047)	(0.00512)	(0.112)
Interest Rate/Fee Cap	3.209	0.00621	0.186
	(2.629)	(0.00440)	(0.158)
Disclosure Law	-0.762	-0.0101	-0.133
	(1.525)	(0.00706)	(0.183)
Acknowledgment	0.848	0.00253	0.0302
	(1.279)	(0.00249)	(0.119)
N	54,827	54,827	54,827
R-squared	0.634	0.016	0.122

Note: Bankruptcy filings are from the Public Access to Court Electronic Records (1998-2012) and U.S. Courts Statistics and Reports (2013-15). All regressions include other laws, demographics, economic conditions, and state and year fixed effects. Controls are from the U.S. Census Bureau (shares of the population that are female, Hispanic, black, Asian or Pacific Islander, 65 years or older, and with at least a college degree), Bureau of Economic Analysis (income per capita), Bureau of Labor Statistics (unemployment rate), and Federal Housing Finance Agency (home price index). *** p<0.01, ** p<0.05, * p<0.1

Table 6. Comparison of the Effects of Credit Access on Chapter 7 and 13 Bankruptcy Filing Rates in Different Studies

	Chapter 7 Filing Rate	Chapter 13 Filing Rate
Less Credit Access		
Morgan et al. (2012): payday loan ban	No effect	–31%
This paper: funding ban	20%	15%
This paper: payday loan ban	No effect	–39%
More Credit Access		
Dick and Lehnert (2010): growth in credit card loans	11%	Did not examine
Hynes (2012): payday loan legalization in military communities	–7.1%	No effect
Fritzdixon (2015): car-title loan access	–4.5%	–4.1%
This paper: funding acknowledgment	No effect	–23%

Note: Percent effects reported are relative to the means reported in the respective studies.

Appendix

Table A1. The Effects of Consumer Litigation Funding State Actions on Chapter 7, Chapter 13, and Joint Chapter 7 and 13 Filing Rates – Fixed-Effects, Lagged-Controls Specification Full Results

	Ch. 7 Filings per 10,000	Ch. 13 Filings per 10,000	Ch. 7 & 13 Filings per 10,000
Prohibition	5.343**	1.661***	7.004***
	(2.045)	(0.604)	(2.526)
Interest Rate/Fee Cap	2.888	0.595	3.483
	(5.633)	(1.192)	(6.133)
Disclosure Law	-0.367	-0.849	-1.216
	(3.391)	(0.955)	(4.143)
Acknowledgment	2.287	-2.632**	-0.345
	(2.623)	(1.047)	(3.089)
Champerty and Maintenance Law	–	–	–
Payday Loan Effective Ban	0.974	-4.453*	-3.480
	(2.092)	(2.373)	(2.497)
Home Exemption Greater than $50K	5.017**	2.253	7.270**
	(2.387)	(1.384)	(3.317)
Federal Exemption Allowed	-1.427	4.296**	2.869
	(2.135)	(1.815)	(2.606)
Garnishment Protection at Federal Level	–	–	–
BAPCPA	-26.25***	-3.801***	-30.05***
	(2.218)	(0.938)	(2.396)
Percent Female	-576.9*	-257.9	-834.7**
	(298.3)	(201.1)	(404.0)
Percent Hispanic	128.6	-57.95	70.63
	(87.25)	(47.86)	(111.0)
Percent Black	-133.2	35.07	-98.11
	(185.5)	(104.2)	(181.8)
Percent Asian or Pacific Islander	45.84	-26.80	19.03
	(59.53)	(26.91)	(56.85)
Percent 65 Years or Older	-349.7***	-93.84***	-443.5***
	(77.33)	(25.55)	(82.91)
Percent with At Least a College Degree	58.35	-22.00	36.34
	(49.20)	(17.17)	(49.25)
Income per Capita	-0.000170	0.000221*	5.04e-05
	(0.000196)	(0.000113)	(0.000224)
Unemployment Rate	2.096***	0.381***	2.476***
	(0.336)	(0.0990)	(0.354)
Home Price Index	0.0819***	0.0181*	0.100***
	(0.0297)	(0.0108)	(0.0344)
Constant	348.3**	150.4	498.7**
	(156.8)	(103.1)	(207.3)
N	3,140 counties	3,140 counties	3,140 counties
R-squared	0.512	0.147	0.502

Note: Bankruptcy filings are from the Public Access to Court Electronic Records (1998-2012) and U.S. Courts Statistics and Reports (2013-15). Clustered standard errors are in parentheses. Controls are from the U.S. Census Bureau (demographics), Bureau of Economic Analysis (income per capita), Bureau of Labor Statistics (unemployment rate), and Federal Housing Finance Agency (home price index). *** p<0.01, ** p<0.05, * p<0.1

Table A2. The Effects of State-Level Characteristics on Existence of State Actions

	State Action Indicator	State Action Tiers
Percent Female	0.242	1.294
	(9.535)	(24.56)
Percent Hispanic	-1.098	0.434
	(5.113)	(17.60)
Percent Black	-7.392	-19.51
	(9.242)	(21.09)
Percent Asian or Pacific Islander	0.444	1.214
	(0.488)	(1.443)
Percent 65 Years or Older	-2.049	-9.234
	(4.672)	(12.36)
Percent with At Least a College Degree	1.689	2.669
	(1.762)	(5.325)
Income per Capita	5.84e-06	1.32e-05
	(9.44e-06)	(2.74e-05)
Unemployment Rate	-0.00277	-0.0374
	(0.0205)	(0.0644)
Home Price Index	-0.00109	-0.00270
	(0.00112)	(0.00262)
Financial Institutions Industry Contributions$_{(t-2)}$	-7.56e-09	-1.24e-08
	(1.13e-08)	(3.77e-08)
Health Industry Contributions$_{(t-2)}$	5.88e-09	1.35e-08
	(4.74e-09)	(1.33e-08)
Insurance Industry Contributions$_{(t-2)}$	0.000	-1.26e-08
	(8.19e-09)	(2.13e-08)
Lawyers and Lobbyists Contributions$_{(t-2)}$	-4.26e-10	3.39e-09
	(2.31e-09)	(5.88e-09)
State Governor Democrat	0.0140	0.0413
	(0.0323)	(0.0878)
State Legislature Democrat	-0.0257	-0.0480
	(0.0419)	(0.108)
Constant	-0.110	0.449
	(4.769)	(12.05)
N	850	850
R-squared	0.608	0.673

Note: Data are from years 1999–2015. State-level characteristics are from the U.S. Census Bureau (demographics), Bureau of Economic Analysis (income per capita), Bureau of Labor Statistics (unemployment rate), and Federal Housing Finance Agency (home price index). Political contributions data come from the National Institute on Money in State Politics, and political affiliation data come from Carl Klarner's open access databases and the National Conference of State Legislatures partisan composition tables. Standard errors in parentheses are clustered at the state level. All regressions include state and year fixed effects. *** p<0.01, ** p<0.05, * p<0.1

Table A3. The Effects of Consumer Litigation Funding State Actions on FTC and CFPB Complaint Rates

	(1) Basic Specification	(2) Weighted by Population	(3) Lagged Controls	(4) Fixed Effects, Lagged Controls
FTC: Interest/Fee Cap	-89.89*	-184.3***	-100.1**	-94.66**
	(47.19)	(59.71)	(44.13)	(38.06)
FTC: Disclosure Law	23.82*	-20.03	30.11	45.31*
	(13.57)	(37.94)	(20.05)	(25.98)
FTC: Acknowledgment	-90.58	-370.7	335.9	–
	(323.0)	(646.3)	(279.5)	
R-squared	0.633	0.726	0.638	0.465
N	250	250	250	50 states
CFPB: Interest/Fee Cap	1.828**	2.417***	1.398*	1.168*
	(0.804)	(0.673)	(0.773)	(0.582)
CFPB: Disclosure Law	1.887**	1.856**	1.840	0.978
	(0.877)	(0.781)	(1.610)	(1.119)
CFPB: Acknowledgment	15.34	34.38	25.68**	–
	(13.35)	(21.19)	(10.64)	
R-squared	0.957	0.970	0.956	0.222
N	200	200	200	50 states

Note: Third-party debt collector complaint data are from the Federal Trade Commission ("FTC") for years 2011-2015 and credit card and mortgage lender complaint data are from the Consumer Financial Protection Bureau ("CFPB") for years 2012-2015. Columns (1) to (4) control for other laws, demographics, and economic conditions. Columns (1) to (3) include state and year fixed effects. Standard errors in parentheses are clustered by state. Controls are from the U.S. Census Bureau (shares of the population that are female, Hispanic, black, Asian or Pacific Islander, 65 years or older, and with at least a college degree), Bureau of Economic Analysis (income per capita), Bureau of Labor Statistics (unemployment rate), and Federal Housing Finance Agency (home price index). *** p<0.01, ** p<0.05, * p<0.1

CHAPTER III. CONSUMER LITIGATION FUNDING AND THE FINANCIER-LAW FIRM RELATIONSHIP

1. Introduction

In the past two decades, consumer litigation funding ("funding")—the financing of tort plaintiffs by third party companies—has grown into a booming industry. In early 2010, the American Legal Finance Association ("ALFA"), a national trade association of consumer litigation financiers, had sixteen members (Garber 2010, p. 11). In late 2016, ALFA had thirty-six members (ALFA 2016). Garber (2010, p. 10 n. 14) and Nieuwveld and Shannon (2012, p. 123) have noted that at least eighty non-ALFA members operate in the funding market. The potential size of the market is quite large. In 2015 alone, approximately 807,000 tort lawsuits were filed in state and federal courts.[39] This number is a lower bound because it does not take into consideration the thousands of automobile claims resolved via informal negotiations before official lawsuits are filed (Engstrom 2009, p. 1502–03).

This paper makes several contributions to the emerging literature on consumer litigation funding.[40] It is the first to analyze financier administrative data.[41] While other sources have offered information on amounts funded (i.e., cash advances given to the plaintiffs) and interest rates from legal industry anecdotes and interviews with financiers

[39] The National Center for State Courts Statistics Project reports the total number of tort filings for twenty-six states and the District of Columbia. See http://www.courtstatistics.org. Using state population data from the Bureau of Economic Analysis, I projected a total number of tort filings for all states. I then added the number of tort claims filed in federal court, which is provided by U.S. Courts Statistics and Reports. See http://www.uscourts.gov/sites/default/files/c02mar15_1.pdf.

[40] See Garber (2010), Beydler (2012), Estevao (2013), Daughety and Reinganum (2014), Avraham and Wickelgren (2014), Xiao (2015), Skiba and Xiao (forthcoming), Xiao (2017a), and Xiao (2017b).

[41] Abrams and Chen (2013) and Chen (2015) were the first to use financier administrative data to analyze commercial litigation funding.

(Carter 2004; Garber 2010; Molot 2010; Griffis 2011; Appelbaum 2011), this work calculates descriptive statistics of transaction-level data from a regional financier. I find that the average amount funded is $1,826, the average interest rate is 8.09 percent per month (or about 97 percent per year), the average funding duration (i.e., the time from the contract date to the date of repayment) is 11.41 months, and the average total owed is $3,604. Further, this study is the first to provide any type of information about the gross return on funding. I find that the average total received by the financier at case resolution is $2,860, the average absolute return (i.e., total received minus amount funded) is $1,034, and the average return ratio (i.e., total received divided by amount funded) is 1.58. The average total received is less than the average total owed by $744.

This paper also examines whether the strength of the relationship between the financier and the plaintiff's law firm is positively or negatively associated with the financier's gross return and interest rate. I explore the financier-law firm relationship instead of the financier-attorney relationship for two main reasons. First, the ethics rules that govern the legal profession state that generally, one attorney's conflict of interest should be imputed to the rest of the attorneys in the law firm. Therefore, the attorney and law firm are frequently treated as the same entity in situations where conflicts of interest involving clients arise. Second, personal injury law firms are increasingly using case managers, secretarial staff, and paralegals to do substantive work in cases (Engstrom 2009, p. 1495–96 n. 44, 1510–14; Parikh 2006, p. 264–65). Thus, the law firm—not just the individual attorney—may be more appropriately considered the legal services provider.

Critics of this industry have voiced concerns that financiers' relationships with legal service providers (i.e., attorneys and law firms) adversely impact the relationships between these providers and their clients (see, e.g., McLaughlin 2007, p. 649–53). Attorneys have a duty to act in their clients' best interests, but having strong relationships with financiers may prevent attorneys from doing so by creating situations in which attorneys and their law firms act to benefit financiers at the expense of their clients (ABA 2011, p. 16–17). Such actions that benefit financiers include recommending settlement when trial is the better option for a plaintiff or referring a plaintiff to a financier when not obtaining funding is better for the plaintiff. The former action may increase the financier's gross return (or revenue), and the latter may give the financier a certain degree of market power to raise the interest rate (or price). Thus, critics would predict that a stronger financier-law firm relationship over time would benefit a financier's gross return and hurt plaintiffs through a higher interest rate.

In contrast, a strand of the "relationship lending" literature offers a different perspective (see Berger and Udell 1995; Boot and Thakor 1994; Petersen and Rajan 1994; Jimenez and Saurina 2004). The papers in this area suggest that relationships allow for a financier to gain knowledge of a law firm's skill level and for trust to grow between the financier and law firm. As a result, the financier may become more willing to fund high-risk cases, thus reducing the financier's gross return. The financier also may increasingly rely on law firm recommendations to fund cases, thus decreasing the financier's case screening expenses and, in turn, the interest rate.

This paper's results do not provide empirical support for critics' concerns. Rather, consistent with the aforementioned relationship lending literature, I find that a stronger

financier-law firm relationship is negatively associated with the financier's absolute return, return ratio, and interest rate. Following studies in the relationship lending literature (e.g., Berger and Udell 1995; Degryse and Cayseele 2000), I measure the strength of the financier-law firm relationship using the duration of the relationship. One more year of relationship is associated with a decrease in the absolute return of $52.01 (or 5.0 percent relative to the mean). Relative to a relationship duration of less than 4 years, a relationship duration of 4–7 years is associated with a $381.40 (or 37 percent relative to the mean) reduction in the absolute return, a 0.104 (or 6.6 percent relative to the mean) decrease in the return ratio, and a 1.28 percentage point (or 16 percent relative to the mean) reduction in the interest rate. Relative to a relationship duration of less than 4 years, a relationship duration of 10 or more years is associated with a $561.00 (or 54 percent relative to the mean) decrease in the absolute return and a 0.200 (or 10 percent relative to the mean) reduction in the return ratio.

Section 2 presents background information on consumer litigation funding. Section 3 describes critics' concerns about the financier-law firm relationship and laws that govern this relationship. Section 4 provides the conceptual framework, which is informed by the relationship lending literature. Section 5 describes the data and empirical specifications. Section 6 reports the results of the empirical analysis. Section 7 discusses the results, and Section 8 concludes.

2. Background on Consumer Litigation Funding

Bar association articles reveal that a liquidity-constrained tort plaintiff with legal representation will often disclose his financial woes to his attorney and press his attorney to settle as soon as possible—often for an amount that the attorney considers "absurdly

low" (Michmerhuizen 2015; Todd 2010). In response, the attorney or another representative of the law firm may inform the plaintiff of the availability of consumer litigation funding (ABA 2011, p. 24). If the plaintiff has seen an advertisement of funding on the television or Internet,[42] then he may directly ask his attorney about this credit product. Alternatively, a plaintiff may see an advertisement and contact a financier before obtaining legal representation. In that situation, the financier would instruct the plaintiff to get an attorney to assess his case.[43]

Once the represented plaintiff learns about funding, he must decide whether or not to apply for an upfront cash advance in return for paying the advance plus fees out of the lawsuit proceeds. Customers primarily apply for funding via online forms and/or telephone interviews (Martin 2002, p. 85–86; Skiba and Xiao, forthcoming). Local financiers may also keep an office open for consumers who would like to apply in person.[44] Financiers support a wide spectrum of case types, including those that involve motor vehicle accidents, wrongful deaths, medical malpractice incidents, premises liability, and products liability.[45] Automobile claims are financiers' bread and butter

[42] *See, e.g.*, *Oasis Legal Finance Direct Response TV (DRTV) Commercial*, YOUTUBE, https://www.youtube.com/watch?v=boFdLxChxrg (last visited Nov. 26, 2016).

[43] *See, e.g.*, *Plaintiff Referrals Program*, NECESSITY FUNDING, http://www.necessityfunding.com/Plaintiff_Referrals_Program.html (last visited Nov. 27, 2016) (offering referrals to attorneys in their network); *Submit a Referral*, PSFINANCE, http://www.psfinance.com/for-attorneys/submit-a-referral.html (last visited Nov. 27, 2016) (asking the attorney to fill out information if the attorney would like to be contacted for client referrals); *For Attorneys*, PLAINTIFF LEGAL FUNDING, http://www.plaintifflegalfunding.com/for-attorneys (last visited Nov. 27, 2016) (asking the attorney to fill out information if the attorney would like to be contacted for client referrals).

[44] *See, e.g.*, *Contact Us*, BROADWAY FUNDING GROUP, http://broadwayfundinggroup.com/contact-us (last visited Nov. 26, 2016) (a New York regional funder advertising their convenient location near the New York courthouses).

[45] *See, e.g.*, *Welcome to Necessity Funding*, NECESSITY FUNDING, http://www.necessityfunding.com (last visited Nov. 26, 2016) (listing the case types that the financier funds); *Types of Cases We Fund*, COVERED BRIDGE CAPITAL, http://www.covbridgecap.com/cases/ (last visited Nov. 26, 2016) (listing the case types that the financier funds); *How It Works*, OASIS FINANCIAL, https://www.oasisfinancial.com/en/pre-settlement-funding (last visited Nov. 26, 2016) (listing the case types that the financier funds); *What We*

(Garber 2010, p. 10). All firms fund car accident claims, but some firms do not fund riskier types of cases such as medical malpractice lawsuits.[46]

In his application, the plaintiff has to disclose basic claim information to the financier. The financier will obtain verification of the plaintiff's facts and gain additional case information through communications with the plaintiff's attorney.[47] If the funder approves the application, then it will advance 10 to 20 percent of the expected case value to the customer (Appelbaum 2011; Garber 2010, p. 12). Commentators have reported cash advances (or amounts funded) ranging from $500 to $100,000 (Carter 2004; Garber 2010, p. 12). Plaintiffs typically use their advances to cover living costs such as utilities, car payments, rent, mortgage, food, and medical expenses (Rodak 2006, p. 514; Martin 2008, p. 84–85; Estevao 2013, p. 476; Garber 2010, p. 12; Skiba and Xiao, forthcoming). Because of this, most commentators surmise that the majority of plaintiffs who seek consumer litigation funding are liquidity-constrained or have low incomes (Rodak 2006, p. 514; Martin 2008, p. 84–85; Skiba and Xiao, forthcoming). Since most tort plaintiffs contract with attorneys to work on a contingency fee basis, plaintiffs usually do not use their advances to pay attorney's fees.

Consumers are obligated to repay the advance with fees out of the lawsuit proceeds. The fees are quite steep and can range from 2 to 15 percent per month, and annual percentage rates ("APRs") are commonly over 100 percent (Carter 2004;

Fund, US CLAIMS, http://www.usclaims.com/what-we-fund (last visited Nov. 26, 2016) (listing the case types that the financier funds).

[46] *See, e.g.*, *Cash Advances for Victims of Auto Accidents*, INSURADVANCE, http://www.insuradvance.com (last visited Nov. 26, 2016) (funding only legal claims related to automobile accidents).

[47] *See, e.g.*, *Read About Our Process*, PEACHTREE FINANCIAL SOLUTIONS, http://www.peachtreefinancial.com/our-solutions/pre-settlement-funding.aspx (last visited Dec. 22, 2016) (describing the funding process).

Griffis 2011; Appelbaum 2011). When a case is resolved, the law firm will first disburse contingency fees to itself and then pay debts to the plaintiff's higher-priority creditors (e.g., an ex-spouse who is owed child support) before paying the funder out of the remaining case proceeds.[48] If the total owed to the funder exceeds these remaining proceeds, the law firm gives all of the remaining proceeds to the funder. The plaintiff owes the financier nothing beyond these remaining proceeds; thus, funding is referred to as a nonrecourse loan.[49]

3. Conflicts of Interest and Related Laws

Critics have expressed concerns that relationships between legal services providers (i.e., attorneys and law firms) and financiers may negatively impact plaintiffs (see, e.g., McLaughlin 2007, p. 649–53). Lawyers have a duty to render honest, independent legal advice to their clients and act in their clients' best interests (see Model Rules of Professional Conduct 2.1, 1.1–1.3). By implicating lawyers' (or law firms') financial interests, legal finance may create situations in which lawyers (or law firms) are tempted to behave in a manner that is inconsistent with their clients' best interests.

One of the largest conflicts of interest arises due to the benefits of funding. Tort attorneys often face extremely cash-constrained plaintiffs; these plaintiffs likely suffered financial shocks after the incidents (e.g., car crashes, medical errors) that led to their legal

[48] *See, e.g.*, *Lawsuit Loans and Other Common Liens*, SMP ADVANCE FUNDING, LLC, http://www.smpadvance.com/blog/2011/04/14/lawsuit-loans-and-other-common-liens/ (last visited Dec. 22, 2016) (describing potential liens against case proceeds); *Liens—Lawsuit Funding Concerns*, FAIR RATE FUNDING, http://www.fairratefunding.com/lawsuit-funding-blog/item/liens-lawsuit-funding-concerns (last visited Dec. 22, 2016) (describing potential liens against case proceeds); *Liens Against a Lawsuit Settlement*, BRIDGEWAY LEGAL FUNDING, http://www.bridgewaylf.com/blog/liens-against-lawsuit-settlement (last visited Dec. 22, 2016) (describing potential liens against case proceeds).

[49] Depending on the state, a funding advance may or may not be considered a "loan" for legal purposes. For example, Michigan, North Carolina, Maryland, Kansas, Colorado, and South Carolina treat funding advances as loans. In contrast, Texas treats funding advances as investments.

claims (Chodes 2007; Todd 2010; Michmerhuizen 2015). These plaintiffs often request that their attorneys accept low offers that the attorneys believe to not be reflective of true case values. Nonrecourse loans may reduce these plaintiffs' risk premiums and discount rates so that they hold out for higher settlements or survive until the end of trial (Xiao 2017a; Rodak 2006, p. 522–23). The availability of nonrecourse loans may also change plaintiffs' filing calculus so that the expected benefits of litigation are greater than the expected costs (Xiao 2017a). Because funding can increase attorneys' (or law firms') returns on their portfolio of cases, attorneys (or law firms) may act in ways that benefit financiers, instead of current clients, so that the financiers will supply capital to future clients. Such actions may occur in the form of recommending the acceptance of a settlement offer to a funded client when trial is in the client's best interests or referring an unfunded client to a financier when obtaining a nonrecourse loan is not in the client's best interests.

Potential conflicts of interest can also occur when a financier is an attorney's (or law firm's) past or current client, when an attorney (or law firm) owns a stake in a financier, when a financier is paying for litigation costs including attorney's fees or financing a law firm in addition to funding that law firm's tort plaintiff, and when a financier and attorney (or law firm) have formally or informally agreed to refer clients to each other (ABA 2011, p. 16–17; Shannon 2015, p. 905–06; Nieuwveld and Shannon 2012, p. 136). Conflicts involving financier payment of litigation costs will be rare because tort lawyers typically take clients on a contingency fee basis, which means that the lawyers front the litigation expenses. However, financiers could fund individual plaintiffs' cases, as well as law firms' case portfolios (Engstrom 2013); that is, a financier

could concurrently supply capital to a particular personal injury plaintiff and that plaintiff's law firm.[50]

In 2011, the American Bar Association Commission on Ethics 20/20 issued a report that stated attorneys should evaluate conflicts of interest concerning third-party financiers using the Rules of Professional Conduct, which are the ethics rules that govern the legal profession.[51] In regard to conflicts involving a financier's explicit influence on case decisions, Rule 1.2(a) states that plaintiffs have authority over settlement decisions. There are no express rules against plaintiffs delegating revocable settlement authority to financiers, but delegations of irrevocable authority are likely invalid (ABA 2011, p. 26–27). With respect to conflicts involving an attorney's own financial interests or a financier as a concurrent or former client, Rule 1.7(a)(2) states that if a "significant risk" exists that the representation of a plaintiff will be limited by "another client," "a former client," or "a personal interest of the lawyer" (including a financial one), then the attorney has a conflict of interest and cannot take that plaintiff's case unless he can satisfy the requirements of Rule 1.7(b)(2) (including informed consent). In regard to the financier as a former client, Rule 1.9 presents additional criteria for the attorney to evaluate in deciding whether the attorney can represent the plaintiff. Rule 1.10 states that one attorney's conflict generally should be imputed to the rest of the attorneys in the law firm.

If an attorney (or law firm) owns a stake in a financier, then the financial conflict implicates Rule 1.8(a) regarding requirements that attorneys must meet in conducting business transactions with clients and Rule 1.8(e) regarding the prohibition of attorneys

[50] The regional financier from which I obtain data does not fund law firms in addition to individual plaintiffs.

[51] The specific language of the Rules of Professional Conduct varies by state. In this Section, "Rule" refers to the formulation of the rule in the Model Rules of Professional Conduct.

giving financial assistance to clients. If a financier is paying for litigation costs, then the attorney must comply with the requirements of Rule 1.8(f) regarding third-party compensation of attorneys. With regard to formal referral agreements, Rule 7.2(b) prohibits lawyers from giving "anything of value to a person" for referrals. Although informal referral agreements are not explicitly banned, they may violate Rule 1.7(a)(2), especially in markets with few financiers. For example, an attorney may be concerned that if he does not recommend certain settlements to funded clients or refer unfunded clients to the financier who is dominant in the market, then the financier will not refer any future consumers, with potential legal claims, to the attorney (see Xiao 2016, p. 65).

As of 2016, eight states—Arkansas, Indiana, Maine, Nebraska, Ohio, Oklahoma, Tennessee, and Vermont—have passed statutes to regulate consumer litigation funding. Almost all of these statutes include provisions that mitigate conflicts of interest. Table 1 lists these provisions with their citations, organized by the conflict of interest that they address. With respect to conflicts involving a financier's explicit influence on case decisions, all of the eight states except Arkansas have a provision that requires the financier to expressly disclaim case control in the plaintiff-financier contract. While such a provision can prevent the financier from expressly usurping the plaintiff's role in making the settlement decision or dictating the attorney's actions, it does not address the attorney's own incentives (e.g., higher returns on his case portfolio from plaintiffs obtaining funding) to act in ways that benefit the financier. Rule 1.7, referenced in the preceding paragraph, is still the rule that most directly addresses conflicts involving the lawyer's own financial interests.

In regard to the concern that an attorney's, or law firm's, financial stake in the funder will influence the attorney's, or law firm's, judgment, Vermont prohibits the attorney and law firm of the consumer from possessing financial interests in the financier. With respect to the concern that a financier will control an attorney by paying litigation costs, Indiana, Oklahoma, and Vermont prohibit the financier from paying for "court costs, filing fees, or attorney's fees." Indiana, Nebraska, and Ohio require the attorney to represent the consumer on a contingency fee basis; this ensures that the financier does not pay attorney's fees.

Finally, in regard to referrals between an attorney, or law firm, and a financier, Indiana, Nebraska, Oklahoma, Tennessee, and Vermont have anti-referral fee provisions that ban the *financier* from paying or accepting referral fees to or from the attorney or law firm. Indiana, Nebraska, and Tennessee also have provisions that prohibit the *attorney* from either paying or accepting referral fees to or from the financier. Further, Indiana, Oklahoma, Tennessee, and Vermont have a categorical ban on financier referrals of consumers, even without fees, to a specific attorney or law firm; the statutes of the former three states include an additional phrase that permits financier referral to a "local or state bar referral service operated by a bar association or a nonprofit organization."

4. Conceptual Framework

In this Section, I present a framework for thinking about how the strength of the financier-law firm relationship is associated with the gross return on funding and interest rate. My discussion is informed by the relationship lending literature. Relationship lending occurs when a lender gathers borrower-specific information over multiple transactions with the same borrower and benefits from this informational advantage (see

surveys Boot 2000 and Elyasiani and Goldberg 2004). While studies in this literature focus on banks continuously making standard loans (not nonrecourse loans) to small businesses for different investment projects, the findings of these studies can shed light on how the strength of the financier-law firm relationship is associated with the gross return on funding and interest rate. The financier is analogous to a bank, and the law firm is analogous to a small business. Each case, which comes with a different plaintiff, is comparable to a new investment project. As papers in this literature have used duration of the lender-borrower relationship as a measure of relationship strength (e.g., Berger and Udell 1995; Degryse and Cayseele 2000), I use the financier-law firm relationship duration as a measure of relationship strength.

4.1 The Financier-Law Firm Relationship and Gross Return on Funding

A stronger financier-law firm relationship (i.e., a relationship with a longer duration) may be associated with a higher or lower gross return on funding. If a law firm is acting in ways that benefit the financier in order to, for example, secure funding of future clients or obtain future financier referrals of consumers—consistent with critics' concerns—then the gross return on funding should increase over the course of the relationship ("financier-benefit effect"). On the other hand, as a law firm's trustworthiness grows over the span of the relationship, the financier may increase its willingness to provide funds, particularly for riskier cases ("riskier-cases effect") (see Petersen and Rajan 1994, p. 5–6; Jimenez and Saurina 2004, p. 2195–96). Table 2 summarizes the predicted direction of the association between the duration of the financier-law firm relationship and the gross return on funding.

4.2 The Financier-Law Firm Relationship and Interest Rate

A stronger financier-law firm relationship (i.e., a relationship with a longer duration) may be associated with a higher or lower interest rate. Berger and Udell (1995) found that the interest rate is decreasing in the lender-borrower relationship duration. Their findings are consistent with the theoretical results of Boot and Thakor (1994) and suggest that repeat interactions between the lender and borrower can reduce costly measures of screening ("cost-savings effect"). Lenders may offer higher rates at first, because borrower quality is initially unknown and adverse selection and moral hazard may exist. As borrower quality is revealed via repeat transactions, lenders reduce screening tactics that they had previously used to mitigate adverse selection and moral hazard (see Petersen and Rajan 1994, p. 3; Jimenez and Saurina 2004, p. 2195–96). Cost-savings from screening may be passed on to borrowers in the form of lower prices.

The cost-savings effect may result in a lower interest rate over the course of the financier-law firm relationship. The financier initially does not know law firm quality.[52] The skill levels of the law firm's attorneys and staff members determine law firm quality. These skills are crucial to case selection, management, and outcomes (see Harris et al. 2005, p. 246; Shinall 2010, p. 270–78; Abrams and Yoon 2007; Trautner 2007; Kritzer 1997). Therefore, law firm quality greatly contributes to the success of a case. As law firm quality is initially unknown, adverse selection may exist when the financier funds plaintiffs represented by low quality law firms; low quality law

[52] The market for legal services is very opaque. A majority of Americans have expressed an inability to compare information about legal services, intimidation or confusion regarding the legal representation selection process, or a lack of resources to obtain the relevant information (Berenson 2001, p. 648). Further, legal services are credence goods, which means that buyers cannot verify the quality of the services even after consuming them. Mistreatment of consumers and fraud may exist in markets for credence goods (Darby and Karni 1973; Dulleck and Kerschbamer 2006; Hilger 2016).

firms may be more likely to encourage plaintiffs to obtain nonrecourse loans. In order to mitigate adverse selection, the financier screens cases, though barriers such as the potential waiver of attorney-client privilege and work-product doctrine protection prevent the unfettered flow of information.[53] After repeat interactions with a law firm, the financier learns law firm quality. Over time, screening costs are reduced, as the financier depends on the law firm's recommendations to fund cases without seeking case-specific information. The financier's cost-savings from less screening may pass to plaintiffs in the form of lower interest rates.

In contrast, Degryse and Cayseele (2000) found that the interest rate is increasing in the lender-borrower relationship duration. Their results are consistent with the theoretical findings of Greenbaum et al. (1989), Sharpe (1990), and von Thadden (2004) and suggest that borrowers become locked into the lending relationship over time due to the lender's private information and the borrower's search costs ("lock-in effect"). Lenders may offer lower rates at first because they expect borrowers to become informationally captured over time (see Sharpe 1990, p. 1070; von Thadden 2004, p. 12; Greenbaum et al. 1989, p. 223). The private information that a lender gathers is hard to credibly transfer to another lender. Further, borrowers may have non-trivial costs in searching for another lender (see Greenbaum et al. 1989, p. 223). Thus, the informational advantage from the relationship and the borrower's search costs give the lender a certain degree of market power or a limited ability to raise the price. The magnitude of the lock-

[53] Voluntary revelation of the information in attorney-client communications and the attorney's written materials can waive attorney-client privilege and work-product doctrine protection. Currently, very few state courts and legislatures have addressed whether disclosure to a third-party funder results in waiver, and the policy approaches are not all consistent (ABA 2011, p. 32–36; Giesel 2012, p. 1085; Giesel 2014, p. 101; Shannon 2015, p. 900–01; Nieuwveld and Shannon 2012, p. 142; Glover 2016, p. 923–26; Xiao 2016, p. 60–64).

in effect depends on the level of competition in the lender market (see Petersen and Rajan 1995, p. 408).

The lock-in effect may result in an interest rate increase over the course of the financier-law firm relationship. A law firm is incentivized to build relationships with financiers because funding may increase the law firm's returns on its case portfolio. For a law firm, building a relationship with a financier takes time and energy. The information conveyed to one financier about law firm skills and trustworthiness is likely not transferable to another financier. Additionally, the costs of searching for another financier that would consistently extend credit to the law firm's plaintiffs are nontrivial. In order to minimize the costs of relationship building and searching for financiers, the law firm will likely choose to interact with at most a few financiers. Thus, each financier has a level of market power over the law firm and may choose to raise prices accordingly. The lock-in effect is consistent with critics' view that a stronger financier-law firm relationship hurts plaintiffs.

Table 2 summarizes the predicted direction of the association between the duration of the financier-law firm relationship and the interest rate. Whether the interest rate increases or decreases over the course of the financier-law firm relationship depends on whether the cost-savings effect or the lock-in effect dominates. Plaintiffs benefit if the cost-savings effect prevails.

5. Data and Empirical Specifications

5.1 Description of the Data

This work is the first to analyze administrative data from a regional financier and to provide descriptive statistics of funding transactions. The data include the offered

interest rate, the date the funding occurred (i.e., the contract date), the date the payment was received, the amount funded, and the total received for the years 2002–2013.[54] From the data, I construct the following variables: indicators for amounts funded of less than $1,000, $1,000–$1,500, $1,500–$2,000, and over $2,000; funding duration (i.e., the time from the contract date to the date of repayment); interest owed; total owed; absolute return (i.e., the total received above the amount funded); return ratio (i.e., total received divided by amount funded); an indicator that equals one if the amount funded was paid in full; an indicator that equals one if the total owed was paid in full; and an indicator that equals one if the financier received no repayment.

Previously, no study has examined financier administrative data on amounts funded or interest rates. Commentators have reported average amounts funded and interest rates based on anecdotal evidence from the legal industry or interviews with financiers. Carter (2004) stated that amounts funded range from $500 to $100,000 and that interest rates range from 2 to 15 percent per month (and over 200 percent annually). Garber (2010, p. 12) explained that average amounts funded vary from $1,750 to $4,500. Molot (2010, p. 93) reported that interest rates vary from 3 to 5 percent per month or higher. Griffis (2011) stated that interest rates fluctuate from 36 to 150 percent per year. Appelbaum (2011) noted that interest rates often exceed 100 percent per year.

Table 3 reports summary statistics of the data. The average amount funded is $1,826, which is consistent with Garber (2010). The average interest rate is 8.09 percent

[54] The total received was not recorded for some transactions. I drop these transactions from the sample. The data also include transactions for part of 2001. I include these transactions in creating the relationship duration variables but drop them from the sample for descriptive statistics and regressions. Inclusion of these transactions does not make a difference in the results. Finally, some transactions were under contracts with an interest rate schedule. For these, I used the average funding duration for that group of cases to generate and impute a monthly interest rate. The results of the interest rate regressions without these imputed values are very similar to the results in Table 6.

per month (or 97 percent per year since the rate is generally additive for this financier). Since interest rates have often been reported to exceed 100 percent annually, this financier's average interest rate lies on the lower end of the spectrum. The average funding duration is 11.41 months. The average interest owed is $1,778, which is 97 percent of the average amount funded. The average total owed is $3,604.

This is the first study to provide any information on the gross return on funding. The average total received is $2,860, making the average absolute return $1,034 (about 58 percent of the average amount funded). Thus, the average return ratio is 1.58. Taking into consideration the average funding duration, the financier earns about $90.62 per claim per month. The average total received ($2,860) is less than the average total owed ($3,604) by about $744; that is, on average, about 79 percent of the total owed is paid. In approximately 92 percent of all the financier's transactions, the amount funded is paid in full, and in about 53 percent of all transactions, the total owed is paid in full. The financier gets no repayment in about 7.8 percent of all transactions. Because I cannot observe litigation outcomes, no repayment can indicate either that the plaintiff lost or that the case proceeds remaining after paying attorney's fees and other higher-priority liens were $0.

In order to examine how relationship strength is associated with the gross return on funding and interest rate, I create relationship duration variables, which serve as measures for relationship strength. First, I form a continuous variable that captures the duration of the financier-law firm relationship (i.e., the date of the law firm's most recent transaction minus the date of that law firm's first funding). Second, I create indicators for relationship durations of less than 4 years, 4–7 years, 7–10 years, and 10 or more years;

each relationship duration indicator accounts for approximately a quartile of relationship lengths in the data.

In order to capture differences in law firm skill levels, I construct indicators for the six law firms most frequently associated with funding transactions and a separate indicator for all other firms.[55] Table 4 reports some law firm statistics. Column (1) shows the total number of transactions for the six most often affiliated law firms and the average number of transactions of the law firms in the other-firms category. Column (2) depicts the percent of total transactions that each law firm category takes. Interestingly, firm 1 represents the plaintiffs for more than half of all the financier's transactions; this suggests that the financier's strongest law firm relationship is with firm 1. In the last column, the table shows the duration of the financier-law firm relationship at the time of the last transaction with the law firm in this time period. Firms 1–6 have all had relationships with the financier for over 12 years, but the firms in the others category have had an average relationship duration of only 3.88 years.

Next, I provide some graphs to further shed light on the data. Figures 1–3 display the average absolute return, average return ratio, and average interest rate by year, over the 2002–2013 time period. Each figure includes a vertical bar at year 2008, which marks the approximate beginning of the Great Recession (NBER 2010). As a result of the economic crisis, hedge funds and other investors put their capital into legal finance because investments in litigation are assets not correlated with the stock market

[55] Because the data only include identifiers (not names) of the law firms, I cannot do research on the law firms and match the data to actual law firm characteristics, such as firm age or average consumer rating. Further, each law firm indicator should capture average case portfolio profitability associated with that law firm since I cannot observe lawsuit characteristics, such as case type. The financier stated that most of the cases were automobile tort cases. This is consistent with Garber (2010, p. 10), which reported that most of the lawsuits underlying funding transactions were connected with motor vehicle accidents.

(Steinitz 2011, p. 1283–84). Thus, in the post-2007 period, competition in the funding market rapidly increased. Figure 1 demonstrates that the average absolute return decreased from about $1,400 in 2004 to $875 in 2009. Figure 2 shows that the average return ratio steadily decreased from 2002 to 2005 and stayed between 1.54 and 1.61 from 2005 to 2013. Figure 3 depicts the average interest rate, which fell from 11.4 percent in 2002 to 7.5 percent in 2013. Generally, the average absolute return, average return ratio, and average interest rate were lower in the post-2007 period.

Figures 4–6 present the average absolute return, average return ratio, and average interest rate over four categories of financier-law firm relationship duration. Figure 4 shows that the average absolute return for a relationship duration of less than 4 years ($1,234) is higher than the averages for relationship durations of 4–7 years ($988), 7–10 years ($945), and 10 or more years ($982). Figure 5 demonstrates that the average return ratio for a relationship duration of less than 4 years (1.59) is slightly higher than the averages for relationship durations of 4–7 years (1.57) and 10 or more years (1.57); the average return ratio is the same for a relationship duration of 7–10 years. Figure 6 shows that the average interest rate for a relationship duration of less than 4 years (0.090) is higher than the averages for relationship durations of 4–7 years (0.084), 7–10 years (0.075), and 10 or more years (0.075).

5.2 Empirical Specifications

In this paper, I explore the associations between the financier-law firm relationship duration and two outcomes: the gross return on funding and interest rate. In order to examine the gross return, I run ordinary least squares regressions of the following form:

(1) $\textit{Gross Return Variable}_{ait} = \alpha + \Sigma_j \beta_j \textit{Transaction Characteristics}_i + \Sigma_s \theta_s \textit{Economic Conditions}_{(t-1)} + \Sigma_k \pi_k \textit{Relationship Duration Measure}_{a(i-1)} + \Sigma_c \tau_c \textit{Law Firm Indicators}_a + \Sigma_t \delta_t \textit{Year}_t + \varepsilon_{ait}$,

in which the *gross return variable* for law firm *a*, transaction *i*, and year *t* is either the absolute return (i.e., total received minus amount funded) or return ratio (i.e., total received divided by amount funded). In order to examine the interest rate, I run ordinary least squares regressions of the following form:

(2) $\textit{Interest Rate}_{ait} = \alpha + \Sigma_j \beta_j \textit{Transaction Characteristics}_i + \Sigma_s \theta_s \textit{Economic Conditions}_{(t-1)} + \Sigma_k \pi_k \textit{Relationship Duration Measure}_{a(i-1)} + \Sigma_c \tau_c \textit{Law Firm Indicators}_a + \varepsilon_{ait}$.

In all of the regressions, *transaction characteristics* include funding duration, which is the term of the nonrecourse loan. In equation (1), *transaction characteristics* also include interest rate; regressions in which the dependent variable is the absolute return or interest rate also control for amount funded. In all of the regressions, *economic conditions* are for the year prior to the current transaction (*t*–1) and include the three-month treasury-bill return rate (NYU 2016) to account for the underlying cost of capital in the economy and a post-2007 indicator to capture the increase in funding competition as a result of the Great Recession. In order to control for law firm-specific effects, I incorporate the law firm indicators (described in Section 5.1) into the regressions; I also cluster standard errors by law firm. Further, in equation (1), I account for year fixed effects.[56]

[56] In equation (2), I do not incorporate year fixed effects because they are extremely collinear with the return rate on a three-month treasury bill. In equations (1) and (2), I do not include state fixed effects because they are highly collinear with the law firm indicators.

The *relationship duration measure* is the variable of interest and can take the form of a continuous variable or indicators for relationship durations of 4–7 years, 7–10 years, and 10 or more years (with a relationship duration of less than 4 years as the omitted category). This measure captures the strength of the relationship up to the point of a specific funding transaction (*i*) that is associated with a particular law firm (*a*). While accounting for all types of endogeneity is infeasible with the available data, I do address reverse causality by measuring the length of the relationship up to the previous funding transaction (*i*–1), not the current transaction (*i*), associated with that law firm (*a*); the gross return and interest rate for transaction *i* cannot determine the relationship length for transaction *i*–1. The gross return may increase or decrease in relationship duration, depending on whether the financier-benefit effect or riskier-cases effect dominates (see Table 2). The interest rate may also increase or decrease in relationship duration, depending on whether the cost-savings effect or lock-in effect prevails (see Table 2). Thus, $\Sigma_k \pi_k$ may be positive or negative in equations (1) and (2).

6. Results

In Table 5, columns (1) and (2) report the results of regressions in which the dependent variable is the absolute return. A 0.01 increase in the interest rate is associated with an increase in the absolute return by $58.79 (or 5.7 percent relative to the mean). Relative to an amount funded of less than $1,000, higher amounts funded are associated with higher absolute returns. Next, an additional year of relationship is associated with a decrease in the absolute return of $52.01 (or 5.0 percent relative to the mean). The relationship duration indicators demonstrate that relative to a relationship duration of less than 4 years, a relationship duration of 4–7 years is associated with a $381.40 (or a

37 percent relative to the mean) reduction in the absolute return, and a relationship duration of 10 or more years is associated with a $561.00 (or a 54 percent relative to the mean) reduction in the absolute return.

In Table 5, columns (3) and (4) report the results of regressions in which the dependent variable is the return ratio. A 0.01 increase in the interest rate is associated with a 0.026 (or a 1.6 percent relative to the mean) increase in the return ratio. Relative to a relationship duration of less than 4 years, a relationship duration of 4–7 years is associated with a 0.104 (or a 6.6 percent relative to the mean) decrease in the return ratio, and a relationship duration of 10 or more years is associated with a 0.200 (or a 13 percent relative to the mean) decrease in the return ratio. Further, in column (4), the post-2007 indicator is associated with a 0.162 (or a 10 percent relative to the mean) reduction in the return ratio.

Table 6 reports the results of regressions in which the dependent variable is the interest rate. An additional month in funding duration is associated with a 0.04 percentage point (or 0.5 percent relative to the mean) increase in the interest rate. Relative to an amount funded of less than $1,000, an amount funded of over $2,000 is associated with a 0.92 percentage point (or a 11 percent relative to the mean) decrease in the interest rate. The post-2007 indicator is associated with a 1.44–1.68 percentage point (or a 18–21 percent relative to the mean) reduction in the interest rate. Relative to a relationship duration of less than 4 years, a relationship duration of 4–7 years is associated with a 1.28 percentage point (or a 16 percent relative to the mean) decrease in the interest rate. Finally, in column (4), a 0.01 increase in the three-month treasury-bill

return rate is associated with a 0.20 percentage point (or a 2.5 percent relative to the mean) increase in the interest rate.

7. Discussion

Overall, this paper provides some evidence that a longer financier-law firm relationship duration is associated with a lower absolute return, a lower return ratio, and a lower interest rate. One more year of relationship is associated with a decrease in the absolute return of $52.01. Relative to a relationship duration of less than 4 years, a relationship duration of 4–7 years is associated with a $381.40 reduction in the absolute return, a 0.104 decrease in the return ratio, and a 1.28 percentage point reduction in the interest rate. Relative to a relationship duration of less than 4 years, a relationship duration of 10 or more years is associated with a $561.00 decrease in the absolute return and a 0.200 reduction in the return ratio.

This study suggests that the financier-law firm relationship does not unilaterally benefit financiers at the expense of plaintiffs. The results show that over the course of the financier-law firm relationship, measures of gross return (i.e., the absolute return and return ratio) decrease. This finding is consistent with the theory that as the financier-law firm relationship grows stronger, the financier funds riskier cases. This may benefit certain plaintiffs with high-risk lawsuits. Additionally, the lower interest rate in relationship years 4–7 suggests that the financier reduces screening during this time as it relies on law firm funding recommendations. Such a decrease in the interest rate benefits all plaintiffs receiving litigation funding. Further, if a stronger financier-law firm relationship results in lower screening expenses, then the financier's net return (or profit) may have increased (or remained steady) even though the gross return fell. In fact, this

may be one of the reasons the financier is willing to fund riskier cases. Unfortunately, because the data do not include information on the financier's costs of operation, I cannot directly examine the net return.

Neither the statutory regulation of the financier-law firm relationship described in Section 3 nor express contracts between the financier and law firms can explain the significance of the relationship duration variables. During this time period, the only rules that governed the financier-law firm relationship were the Rules of Professional Responsibility. Moreover, the financier stated that it did not have any express contracts with the law firms.

This paper also provides some evidence that greater competition in the legal finance market, as a result of the Great Recession, might have decreased the gross return on funding and interest rate. The post-2007 indicator is associated with a 0.162 reduction in the return ratio and a 1.44–1.68 percentage point reduction in the interest rate. Since I have data for only one financier and do not have measures of competition for the regional funding market, I cannot directly control for competition.[57] To the extent that the post-2007 indicator does not account for the (potential) increase in competition, there would be an upward bias in the findings; that is, without direct controls for competition, the current relationship duration results would be underestimates of the true effects. Although Boot and Thakor's (2000) model predicted that inter-lender competition could increase relationship lending, empirical papers since then have demonstrated that competition actually decreases relationship lending (see Memmel et al. 2007; Degryse and Ongena 2007; Elsas 2005; Presbitero and Zazzaro 2011). Thus, controlling for

[57] Most states do not require consumer litigation funders to be registered in the states that they provide funding. Further, most funders do not list the states in which they operate on their websites.

competition would account for the decrease in relationship lending and would increase the effect of relationship duration.

Finally, with the available data, I am unable to address joint determination or selection. In regard to joint determination, the financier concurrently makes decisions with regard to all the contract terms, such as interest rate and amount funded. With respect to selection, information revelation over the course of the financier-law firm relationship may result in the financier's refusal to advance cash to plaintiffs affiliated with low skill, untrustworthy law firms.[58] Also, the law firms that the financier continues to work with may advocate for better financier-plaintiff contract terms, such as a lower interest rate. As a result of joint determination and selection, the relationship duration variables should not be interpreted to have a causal effect. However, the results are still informative. Further, these issues do not appear to be major concerns in the literature. For example, in regard to selection, Berger and Udell (1995) note that all of the lender's actions, such as terminating a lending relationship, are considered a valid part of relationship lending.

8. Conclusion

In sum, this paper is the first to analyze financier administrative data and provides evidence that a stronger (i.e., longer) financier-law firm relationship is associated with a lower gross return on funding and a lower interest rate. Critics of legal finance have voiced concerns that a stronger financier-law firm relationship may result in the attorney, or law firm, acting in ways that benefit the financier at the expense of the law firm's current clients. The findings of this study do not provide empirical support for these

[58] The magnitude of any potential selection effect may not be very large because approximately 78 percent of the transactions in the data are associated with law firms that have had relationships with the financier for over twelve years (see Table 4).

concerns. Instead, they show that a stronger financier-law firm relationship may produce benefits for plaintiffs. Some plaintiffs affiliated with trustworthy and high skill law firms may benefit from the financier funding their high-risk cases. Other plaintiffs may benefit from price decreases.

References

Abrams, David S., and Daniel L. Chen. 2013. "A Market for Justice: A First Empirical Look at Third Party Litigation Funding." *University of Pennsylvania Journal of Business Law* 15 (4): 1075–109.

Abrams, David S., and Albert H. Yoon. 2007. "The Luck of the Draw: Using Random Case Assignment to Investigate Attorney Ability." *University Chicago Law Review* 74 (4): 1145–77.

American Bar Association Committee on Ethics 20/20 (ABA). 2011. "White Paper on Alternative Litigation Finance." http://www.americanbar.org/content/dam/aba/administrative/ethics_2020/20111019_draft_alf_white_paper_posting.authcheckdam.pdf (last accessed December 2016).

American Legal Finance Association (ALFA). 2016. "ALFA Member Companies." https://americanlegalfin.com/alfa-membership/alfa-member-companies/ (last accessed October 2016).

Appelbaum, Binyamin. 2011. "Lawsuit Loans Add New Risk for the Injured." *N.Y. Times*, January 16. http://www.nytimes.com/2011/01/17/business/17lawsuit.html?pagewanted=all&_r=0 (last accessed September 2016).

Avraham, Ronen, and Abraham Wickelgren. 2014. "Third-Party Litigation Funding – A Signaling Model." *DePaul Law Review* 63 (2): 233–64.

Berenson, Steven K. 2001. "Is It Time for Lawyer Profiles?" *Fordham Law Review* 70 (3): 645–90.

Berger, Allen N., and Gregory F. Udell. 1995. "Relationship Lending and Lines of Credit in Small Firm Finance." *Journal of Business* 68 (3): 351–81.

Beydler, Nicholas. 2012. "Risky Business: Examining Approaches to Regulating Consumer Litigation Funding." *University of Missouri Kansas City Law Review* 80 (4): 1159–86.

Boot, Arnoud W. A. 2000. "Relationship Banking: What Do We Know?" *Journal of Financial Intermediation* 9 (1): 7–25.

Boot, Arnoud W. A., and Anjan V. Thakor. 1994. "Moral Hazard and Secured Lending in an Infinitely Repeated Credit Market Game." *International Economic Review* 35 (4): 899–920.

Boot, Arnoud W. A., and Anjan V. Thakor. 2000. "Can Relationship Banking Survive Competition?" *Journal of Finance* 55 (2): 679–713.

Carter, Terry. 2004. "Cash Up Front: New Funding Sources Ease Financial Strains on Plaintiffs' Lawyers." *American Bar Association Journal*, October 8. http://www.abajournal.com/magazine/article/cash_up_front (last accessed September 2016).

Chen, Daniel L. 2015. "Can Markets Stimulate Rights? On the Alienability of Legal Claims." *RAND Journal of Economics* 46 (1): 23–65.

Chodes, Gary. 2007. "The Advantages of Legal Funding." *FindLaw.com*, October. http://practice.findlaw.com/financing-a-law-firm/the-advantages-of-legal-funding.html (last accessed December 2016).

Darby, Michael R., and Edi Karni. 1973. "Free Competition and the Optimal Amount of Fraud." *Journal of Law and Economics* 16 (1): 67–88.

Daughety, Andrew F., and Jennifer F. Reinganum. 2014. "The Effect of Third-Party Funding of Plaintiffs on Settlement." *American Economic Review* 104 (8): 2552–66.

Degryse, Hans, and Patrick Van Cayseele. 2000. "Relationship Lending within a Bank-Based System: Evidence from European Small Business Data." *Journal of Financial Intermediation* 9 (1): 90–109.

Degryse, Hans, and Steven Ongena. 2007. "The Impact of Competition on Bank Orientation." *Journal of Financial Intermediation* 16 (3): 399–424.

Dulleck, Uwe, and Rudolf Kerschbamer. 2006. "On Doctors, Mechanics, and Computer Specialists: The Economics of Credence Goods." *Journal of Economic Literature* 44 (1): 5–42.

Elsas, Ralf. 2005. "Empirical Determinants of Relationship Lending." *Journal of Financial Intermediation* 14 (1): 32–57.

Elyasiani, Elyas, and Lawrence G. Goldberg. 2004. "Relationship Lending: A Survey of the Literature." *Journal of Economics and Business* 56 (4): 315–30.

Engstrom, Nora Freeman. 2009. "Run-of-the-Mill Justice." *Georgetown Journal of Legal Ethics* 22 (4): 1485–547.

Engstrom, Nora Freeman. 2013. "Re-Re-Financing Civil Litigation: How Lawyer Lending Might Remake the American Litigation Landscape, Again." *UCLA Law Review Discourse* 61: 110–25.

Estevao, Martin J. 2013. "The Litigation Financing Industry: Regulation to Protect and Inform Consumers." *University of Colorado Law Review* 84 (2): 467–96.

Garber, Steven. 2010. "Alternative Litigation Financing in the United States." RAND Institute for Civil Justice (Law, Finance, and Capital Markets Program) Occasional Paper.

Giesel, Grace M. 2012. "Alternative Litigation Finance and the Work-Product Doctrine." *Wake Forest Law Review* 47 (5): 1083–140.

Giesel, Grace M. 2014. "Alternative Litigation Finance and the Attorney-Client Privilege." *Denver University Law Review* 92 (1): 95–143.

Glover, J. Maria. 2016. "Alternative Litigation Finance and the Limits of the Work-Product Doctrine." *New York University Journal of Law and Business* 12 (3): 911–42.

Greenbaum, Stuart I., George Kanatas, and Itzhak Venezia. 1988. "Equilibrium Loan Pricing Under the Bank-Client Relationship." *Journal of Banking and Finance* 13 (2): 221–35.

Griffis, Kirby. 2011. "Follow the Money: Litigation Funders Back Your Foes." *Metropolitan Corporate Counsel*, July 1. http://www.metrocorpcounsel.com/articles/14606/follow-money-litigation-funders-back-your-foes (last accessed September 2016).

Harris, Catherine T., Ralph Peeples, and Thomas B. Metzloff. 2005. "Who Are Those Guys? An Empirical Examination of Medical Malpractice Plaintiffs' Attorneys." *Southern Methodist University Law Review* 58 (2): 225–58.

Hilger, Nathaniel G. "Why Don't People Trust Experts?" *Journal of Law and Economics* 59 (2): 293–311.

Jimenez, Gabriel, and Jesus Saurina. 2004. "Collateral, Type of Lender and Relationship Banking as Determinants of Credit Risk." *Journal of Banking and Finance* 28 (2): 2191–212.

Kritzer, Herbert M. 2007. "Contingency Fee Lawyers as Gatekeepers in the Civil Justice System." *Judicature* 81 (1): 22–29.

Martin, Susan Lorde. 2002. "Financing Litigation On-Line: Usury and Other Obstacles." *DePaul Business and Commercial Law Journal* 1 (1): 85–102.

Martin, Susan Lorde. 2008. "Litigation Financing: Another Subprime Industry that Has a Place in the United States Market." *Villanova Law Review* 53 (1): 83–116.

McLaughlin, Julia H. 2007. "Litigation Funding: Charting a Legal and Ethical Course." *Vermont Law Review* 31 (3): 615–62.

Memmel, Christoph, Christian Schmieder, and Ingrid Stein. 2007. "Relationship Lending: Empirical Evidence for Germany." Discussion Paper Series 2: Banking and Financial Studies 14, Deutsche Bundesbank.

Michmerhuizen, Susan. 2015. "Ethics Tip: Financial Assistance to Clients." *ABA Center for Professional Responsibility*, September. http://www.americanbar.org/groups/professional_responsibility/services/ethicssearch/ethicstipseptember2015.html (last accessed December 2016).

Molot, Jonathan T. 2010. "Litigation Finance: A Market Solution to a Procedural Problem." *Georgetown Law Journal* 99 (1): 65–115.

National Bureau of Economic Research (NBER). 2010. "Business Cycle Dating Committee." *NBER*, September 20. http://www.nber.org/cycles/sept2010.html (last accessed December 2016).

New York University (NYU). 2016. "Annual Returns on Stock, T.Bonds and T.Bills: 1928 – Current." http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html (last accessed October 2016).

Nieuwveld, Lisa Bench, and Victoria Shannon. 2012. *Third-Party Funding in International Arbitration*. The Netherlands: Kluwer Law International.

Parikh, Sara. 2006. "How the Spider Catches the Fly: Referral Networks in the Plaintiffs' Personal Injury Bar." *New York Law School Law Review* 51 (2): 243–83.

Petersen, Mitchell A., and Raghuram G. Rajan. 1994. "The Benefits of Lending Relationships: Evidence from Small Business Data." *Journal of Finance* 49 (1): 3–37.

Petersen, Mitchell A., and Raghuram G. Rajan. 1995. "The Effect of Credit Market Competition on Lending Relationships." *Quarterly Journal of Economics* 110 (2): 407–43.

Presbitero, Andrea, and Alberto Zazzaro. 2011. "Competition and Relationship Lending: Friends or Foes?" *Journal of Financial Intermediation* 20 (3): 387–413.

Rodak, Mariel. 2006. "It's About Time: A Systems Thinking Analysis of the Litigation Finance Industry and Its Effect on Settlement." *University of Pennsylvania Law Review* 155 (2): 503–35.

Shannon, Victoria A. 2015. "Harmonizing Third-Party Litigation Funding Regulation." *Cardozo Law Review* 36 (3): 861–912.

Sharpe, Steven A. 1990. "Asymmetric Information, Bank Lending, and Implicit Contracts: A Stylized Model of Customer Relationships." *Journal of Finance* 45 (4): 1069–87.

Shinall, Jennifer Bennett. 2010. "Slipping Away from Justice: The Effect of Attorney Skill on Trial Outcomes." *Vanderbilt Law Review* 63 (1): 267–306.

Skiba, Paige Marta, and Jean Xiao. 2017. "Consumer Litigation Funding: Just Another Form of Payday Lending?" *Law and Contemporary Problems*, forthcoming.

Steinitz, Maya. 2011. "Whose Claim Is This Anyway? Third-Party Litigation Funding." *Minnesota Law Review* 95 (4): 1268–338.

Todd, Hope C. 2010. "Helping the Indigent Client: A Threat to lawyer Independence?" *Washington Lawyer*, November. https://www.dcbar.org/bar-resources/publications/washington-lawyer/articles/november-2010-speaking-of-ethics.cfm (last accessed December 2016).

Trautner, Mary Nell. 2007. "How Social Hierarchies Within the Personal Injury Bar Affect Case Screening Decisions." *New York Law School Law Review* 51 (2): 215–40.

von Thadden, Ernst-Ludwig. 2004. "Asymmetric Information, Bank Lending and Implicit Contracts: The Winner's Curse." *Finance Research Letters* 1 (1): 11–23.

Xiao, Jean. 2015. "Heuristics, Biases, and Consumer Litigation Funding at the Bargaining Table." *Vanderbilt Law Review* 68 (1): 261–96.

Xiao, Jean. 2016. "In Defense of Patent Trolls: Patent Assertion Entities as Commercial Litigation Funders." *Chicago-Kent Journal of Intellectual Property Law* 16 (1): 36–66.

Xiao, Jean. 2017a. "The Effect of Consumer Litigation Funding on Medical Malpractice Litigation." Working Paper.

Xiao, Jean. 2017b. "The Effect of Consumer Litigation Funding on Bankruptcy." Working Paper.

Tables and Figures

Table 1. Consumer Litigation Funding Statute Provisions that Mitigate Conflicts of Interest

Conflicts of Interest	Funding Statute Provisions	Citations
Financier explicitly influences case decisions	Mandatory inclusion of text disclaiming case control in the funding contract	Ind. Code Ann. § 24-12-4-1(3) Me. Rev. Stat. Ann. tit. 9–A, § 12-104(7) Neb. Rev. Stat. Ann. § 25-3303(1)(c) Ohio Rev. Code Ann. § 1349.55(B)(3) Okla. Stat. Ann. tit. 14A, §3-814(7) Tenn. Code Ann. § 47-51-106(b)(2) Vt. Stat. Ann. tit. 8, § 2253(b)(10)
Attorney or law firm owns stake in financier	Attorney and law firm shall not have financial interest in financier	Vt. Stat. Ann. tit. 8, § 2254(b)
Financier pays for litigation costs (including attorney's fees)	Financier shall not pay for litigation costs	Ind. Code Ann. § 24-12-3-1(7) Okla. Stat. Ann. tit. 14A, §3-814(8) Vt. Stat. Ann. tit. 8, § 2254(a)(5)
	Attorney must be paid on a contingency fee basis	Ind. Code Ann. § 24-12-2-1(4)(B) Neb. Rev. Stat. Ann. § 25-3303(1)(f)(ii) Ohio Rev. Code Ann. § 1349.55(B)(6)(b)
Informal/formal referral agreement	Financier shall not *pay* referral fees to attorney or law firm	Ind. Code Ann. § 24-12-3-1(1) Neb. Rev. Stat. Ann. § 25-3304(1) Okla. Stat. Ann. tit. 14A, §3-814(1) Tenn. Code Ann. § 47-51-105(1) Vt. Stat. Ann. tit. 8, § 2254(a)(1)
	Financier shall not *accept* referral fees from attorney or law firm	Ind. Code Ann. § 24-12-3-1(2) Neb. Rev. Stat. Ann. § 25-3304(2) Okla. Stat. Ann. tit. 14A, §3-814(2) Tenn. Code Ann. § 47-51-105(2) Vt. Stat. Ann. tit. 8, § 2254(a)(2)
	Attorney shall not *pay* referral fees to financier	Tenn. Code Ann. § 47-51-104(4)(E)
	Attorney shall not *accept* referral fees from financier	Ind. Code Ann. § 24-12-2-1(4)(E) Neb. Rev. Stat. Ann. § 25-3303(1)(f)(v) Tenn. Code Ann. § 47-51-104(4)(E)
	Financier shall not *refer* consumer to specific attorney or law firm	Ind. Code Ann. § 24-12-3-1(4) Okla. Stat. Ann. tit. 14A, §3-814(4) Tenn. Code Ann. § 47-51-105(4) Vt. Stat. Ann. tit. 8, § 2254(a)(6)

Table 2. Predictions on How the Duration of the Financier-Law Firm Relationship Is Associated with Gross Return and Interest Rate

	Association with Gross Return
Law firms act in ways that benefit the financier in order to further the law firms' own interests ("financier-benefit effect")	**(+)**
As the financier learns more about the law firms and trusts the law firms more, the financier becomes more willing to fund riskier cases ("riskier-cases effect")	**(–)**
	Association with Interest Rate
The financier charges a higher interest rate due to market power, resulting from an informational advantage and law firms' search costs ("lock-in effect")	**(+)**
The financier passes on cost-savings to consumers from reductions in case screening measures ("cost-savings effect")	**(–)**

Table 3. Summary Statistics

	Mean
Amount funded ($)	1,826
Total received ($)	2,860
Interest rate (% per month)	8.09
Funding duration (months)	11.41
Interest owed ($)	1,778
Total owed ($)	3,604
Absolute return (total received minus amount funded) ($)	1,034
Return ratio (total received/amount funded)	1.58
Percent paid of total owed (total received/total owed)	79.37
Percent of transactions in which amount funded is paid in full	91.71
Percent of transactions in which total owed is paid in full	52.87
Percent of transactions in which financier gets no repayment	7.79

N=4,403. Author's calculations are from administrative data of a regional consumer litigation funder for years 2002–2013.

Table 4. Law Firm Statistics

	(1) Total number of transactions	(2) Percent of total transactions	(3) Duration of relationship with financier at the last transaction (years)
Firm 1	2,214	50.28	12.73
Firm 2	401	9.11	12.21
Firm 3	261	5.93	12.50
Firm 4	219	4.97	12.55
Firm 5	188	4.27	12.33
Firm 6	169	3.84	12.58
All other firms	26 (average)	21.60 (sum)	3.88 (average)

N=4,403. Author's calculations are from administrative data of a regional consumer litigation funder for years 2002–2013.

Figure 1. Average Absolute Return by Year

N=4,403. Author created the figure from administrative data of a regional consumer litigation funder for years 2002–2013.

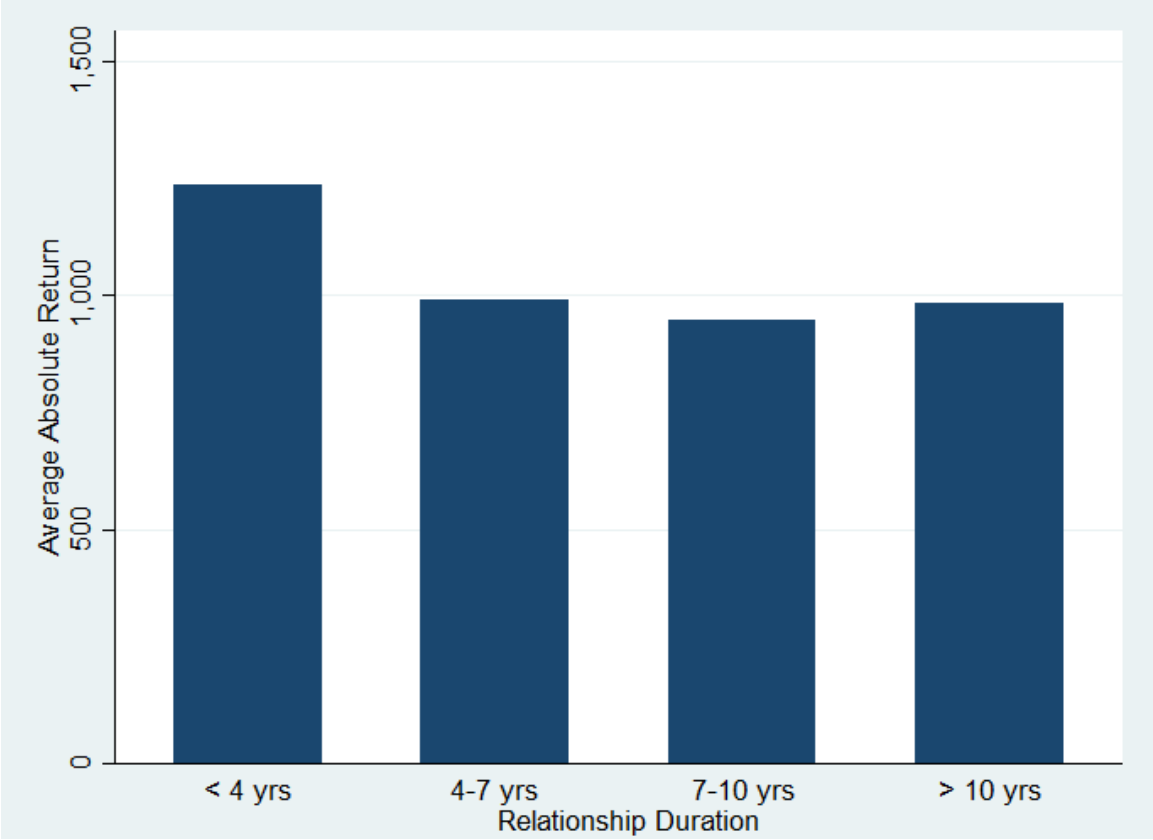
Figure 2. Average Return Ratio by Year

N=4,403. Author created the figure from administrative data of a regional consumer litigation funder for years 2002–2013.

Figure 3. Average Interest Rate by Year

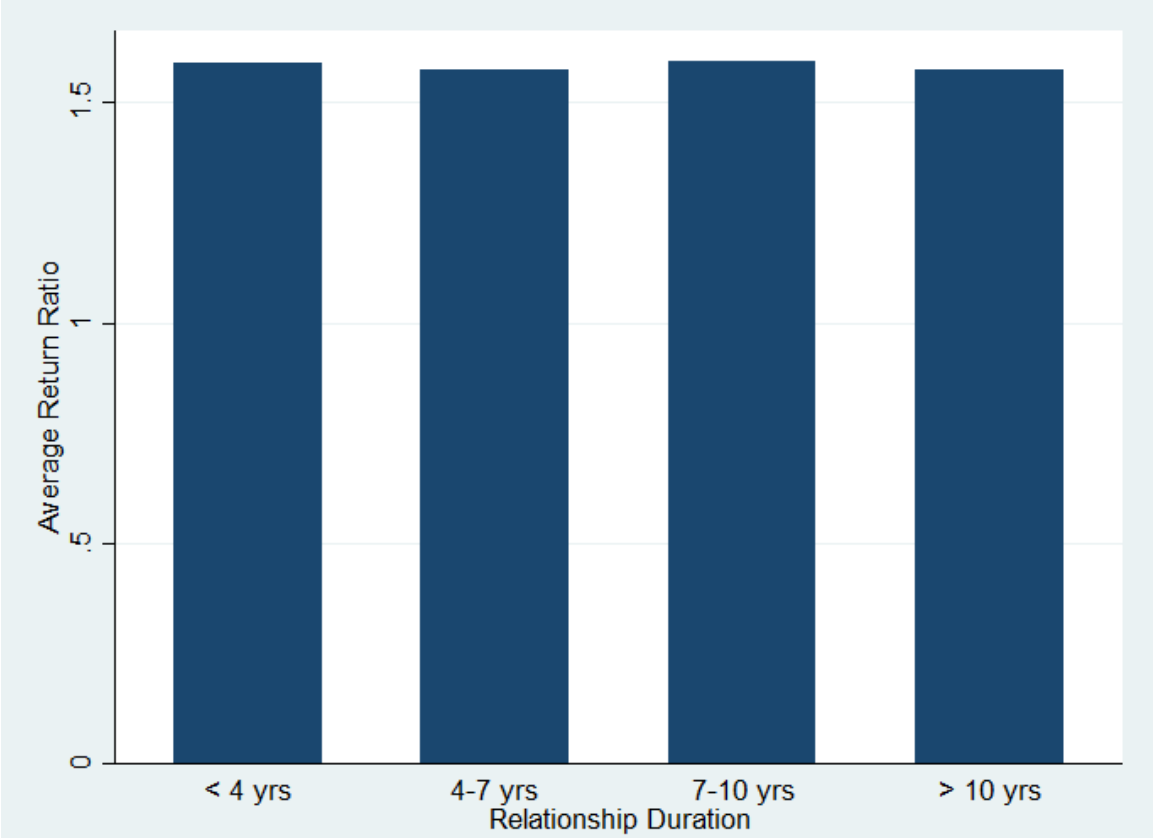
N=4,403. Author created the figure from administrative data of a regional consumer litigation funder for years 2002–2013.

Figure 4. Financier-Law Firm Relationship Duration and Average Absolute Return



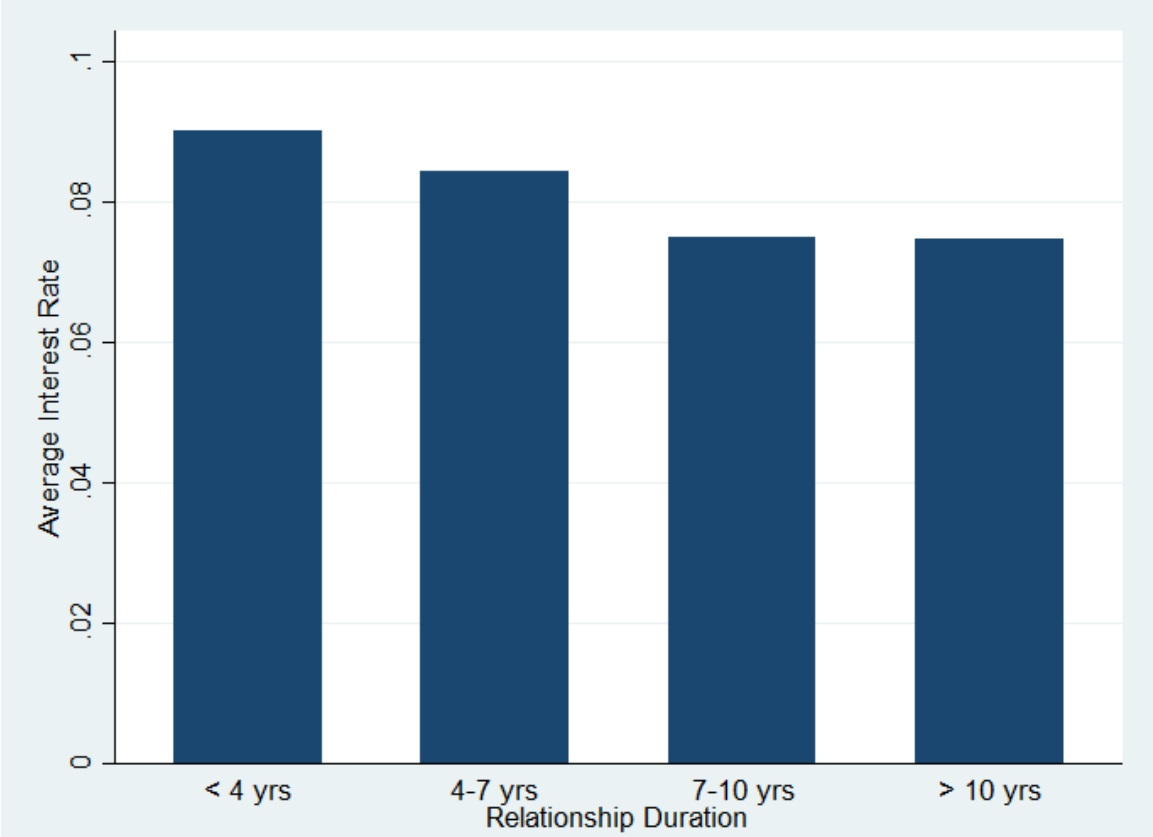
N=4,403. Author created the figure from administrative data of a regional consumer litigation funder for years 2002–2013.

Figure 5. Financier-Law Firm Relationship Duration and Average Return Ratio



N=4,403. Author created the figure from administrative data of a regional consumer litigation funder for years 2002–2013.

Figure 6. Financier-Law Firm Relationship Duration and Average Interest Rate



N=4,403. Author created the figure from administrative data of a regional consumer litigation funder for years 2002–2013.

Table 5. Gross Return Regressions

	(1) Absolute return	(2) Absolute return	(3) Return ratio	(4) Return ratio
Interest rate	5,879**	5,782**	2.625**	2.619**
	(1,614)	(1,619)	(0.872)	(0.852)
Funding duration$_i$ (months)	-10.47	-12.08	-0.00272	-0.00358
	(9.788)	(11.15)	(0.00306)	(0.00330)
Amount funded$_i$ $1,000-$1,500	254.2***	254.3***	–	–
	(31.93)	(31.82)		
Amount funded$_i$ $1,500-$2,000	643.8***	642.1***	–	–
	(61.24)	(63.71)		
Amount funded$_i$ $2,000+	1,491***	1,493***	–	–
	(62.15)	(60.03)		
Three-month treasury-bill return rate$_{(t-1)}$	35.84	2,672	2.532	3.374
	(5,875)	(5,545)	(2.435)	(2.301)
Post-2007 indicator	-271.7	-415.6	-0.108	-0.162*
	(215.0)	(310.3)	(0.0580)	(0.0668)
Relationship duration$_{a(i-1)}$ (years)	-52.01**	–	-0.0162	–
	(19.74)		(0.0125)	
Relationship duration$_{a(i-1)}$ 4-7 yrs	–	-381.4**	–	-0.104*
		(127.8)		(0.0492)
Relationship duration$_{a(i-1)}$ 7-10 yrs	–	-240.4	–	-0.0516
		(200.9)		(0.0859)
Relationship duration$_{a(i-1)}$ 10+ yrs	–	-561.0***	–	-0.200**
		(131.3)		(0.0796)
N	4,403	4,403	4,403	4,403
R Squared	0.131	0.132	0.042	0.045

Author's calculations are from administrative data of a regional consumer litigation funder for years 2002–2013. All regressions include law firm indicators and payment year fixed effects. Standard errors clustered by law firm are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 6. Interest Rate Regressions

	(1)	(2)
Funding duration$_i$ (months)	0.000359***	0.000361***
	(0.000041)	(0.000042)
Amount funded$_i$ $1,000-$1,500	-0.000545	-0.000708
	(0.003581)	(0.003195)
Amount funded$_i$ $1,500-$2,000	-0.001722	-0.001632
	(0.004210)	(0.003623)
Amount funded$_i$ $2,000+	-0.009159*	-0.009179**
	(0.003810)	(0.003226)
Three-month treasury-bill return rate$_{(t-1)}$	0.063275	0.200500***
	(0.065707)	(0.048689)
Post-2007 indicator	-0.014373*	-0.016811**
	(0.006446)	(0.006135)
Relationship duration$_{a(i-1)}$ (years)	-0.000442	–
	(0.000693)	
Relationship duration$_{a(i-1)}$ 4-7 yrs	–	-0.012823***
		(0.002555)
Relationship duration$_{a(i-1)}$ 7-10 yrs	–	-0.005060
		(0.005584)
Relationship duration$_{a(i-1)}$ 10+ yrs	–	-0.002847
		(0.006141)
N	4,403	4,403
R Squared	0.258	0.273

Author's calculations are from administrative data of a regional consumer litigation funder for years 2002–2013. All regressions include law firm indicators. Standard errors clustered by law firm are in parentheses. *** p<0.01, ** p<0.05, * p<0.1