

Bankruptcy Lawyers and Credit Recovery

Brian Jonghwan Lee

Emory University and
Federal Reserve Bank of Philadelphia
Consumer Finance Institute

WP 24-10

PUBLISHED

April 2024

REVISED

October 2025



ISSN: 1962-5361

Disclaimer: This Philadelphia Fed working paper represents preliminary research that is being circulated for discussion purposes. The views expressed in these papers are solely those of the authors and do not necessarily reflect the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System. Any errors or omissions are the responsibility of the authors. Philadelphia Fed working papers are free to download at: <https://philadelphiafed.org/research-and-data/publications/working-papers>.

DOI: <https://doi.org/10.21799/frbp.wp.2024.10>

Bankruptcy Lawyers and Credit Recovery*

Brian Jonghwan Lee[†]

This version: October 2025

Abstract

I study how bankruptcy law firm advertisements affect household credit, exploiting the borders of local TV advertisement media markets. I document a significant advertising effect on filing rates and subsequently show that ad exposure is associated with better post-bankruptcy financial outcomes. I then characterize how ad-induced filers are different from existing filers in terms of case, financial, and credit variables. I find that ad-induced filers are more likely to receive a discharge, file with lawyer representation, and be first-time filers. I interpret these findings as evidence that bankruptcy law firm advertisements help mitigate under-information and stigma in bankruptcy.

JEL Classification: G51, K35, M37

Keywords: Personal bankruptcy, lawyers, advertising

*I thank Daniel Wolfenzon, Stephen P. Zeldes, Xavier Giroud, Tomasz Piskorski, Margarita Tsoutsoura, Robert Hunt, Kent Daniel, Paul Tetlock, Suresh Sundaresan, Harry Mamaysky, Boaz Abramson, Stijn Van Nieuwerburgh, Kairong Xiao, Yiming Ma, Pari Sastry, Xuelin Li, Stavros Panageas, Andrew Hertzberg, Nathan Blascak, Wenli Li, Mallick Hossain, Igor Livshits, Edward R. Morrison, Emanuele Colonnelli, Naz Koont, Xiaobo Yu, Edward Shore, Michael Varley, Lukas Fischer, William Mann, Gonzalo Maturana, Marieke Bos, Christoph Herpfer, Bronson Argyle, Karen Pence, Nikhil Paradkar, Frederik Lundtofte, Ryan Sandler, and seminar participants at Columbia Business School, Emory University, Boston College, Harvard Business School, University of Oregon, Korea University, WashU Finance Conference, WFA, SFS Cavalcade, CEPR Workshop on Household Finance, EFA, Young Scholars Finance Consortium, MFA, OFR, and FMA for their helpful discussions and suggestions. I am also grateful to the Consumer Finance Institute of the Federal Reserve Bank of Philadelphia for support and access to the FRBNY Consumer Credit Panel/Equifax (CCP) data.

Disclaimer: The views expressed in this paper are solely those of the author and do not necessarily reflect the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System. Nothing in this text should be construed as an endorsement of any organization or its products or services. No statements here should be treated as legal advice. Any errors or omissions are the responsibility of the author.

[†]Emory University Goizueta Business School and the Federal Reserve Bank of Philadelphia. Email: brian.jonghwan.lee@emory.edu

1 Introduction

Household financial distress is severe and pervasive. In 2019, around 9 percent of consumers in the United States reported some debt in collections, and total delinquent household debt amounted to \$670 billion.¹ Despite significant implications of financial distress on households,² the debate on intervention approaches remains open. The discussion on easing household financial distress spans across topics such as debt forgiveness and forbearance policies, education in financial literacy and personal finance, as well as creditor regulation (e.g., predatory lending).

Personal bankruptcy represents the most significant debt relief option for households in financial distress,³ and debt discharge from bankruptcy generates significant positive effects on households' labor, credit, and health (Dobbie & Song 2015, Dobbie, Goldsmith-Pinkham & Yang 2017). Despite substantial benefits from bankruptcy, prior work has documented the missing bankruptcies "puzzle," an observation that the vast majority of households that could financially gain from bankruptcy do not file (White 1998). Subsequent studies have investigated various potential barriers to bankruptcy, including liquidity constraints (Gross, Notowidigdo & Wang 2014), and information frictions and stigma (Bernstein, Colonnelli, Iverson & Hoffman 2022). However, there currently exists little empirical research on large-scale programs directly intervening in households' bankruptcy decisions. In particular, no studies have offered evidence that reducing information frictions and stigma in bankruptcy can improve household outcomes.

One key but understudied intermediary in the bankruptcy decision is bankruptcy lawyers. Bankruptcy lawyers not only help clients navigate the filing process but also play an important role in informing the public about bankruptcy through advertising and

¹Federal Reserve Bank of New York, *Quarterly Report on Household Debt and Credit*, 2019Q4 (https://www.newyorkfed.org/medialibrary/Interactives/householdcredit/data/pdf/HHDC_2019Q4.pdf).

²Prior work has argued that financial distress can adversely affect households' economic behavior (Haushofer & Fehr 2014, Banerjee, Karlan, Trachtman & Udry 2020, Kaur, Mullainathan, Oh & Schilbach 2021), and health (Bridges & Disney 2010, Sweet, Nandi, Adam & McDade 2013, Olafsson 2016).

³The median debt relief from bankruptcy discharge in 2013–2019 was around \$80,000, according to Federal Judicial Center data.

initial consultations. While these lawyers have a financial incentive to promote filings – they are paid per case filed regardless of client outcomes – their marketing efforts may address real informational gaps and reduce stigma. This dual role has led to a regulatory tension; some view lawyers as opportunistic actors who induce unnecessary filings, prompting restrictions on their ability to advertise and solicit clients.⁴

In this paper, I investigate the effect of bankruptcy law firm advertising on bankruptcy filings and household financial outcomes. I focus on local TV advertisements, which are a key channel through which bankruptcy lawyers reach potential clients. Moreover, the institutional features of local TV advertising provide plausibly exogenous variation in bankruptcy law firm ads, thus offering an ideal empirical laboratory for identifying their causal impact. Specifically, I leverage the feature of local TV advertising that requires ads to be sold at geographic media market units called Designated Market Areas (DMAs). Following [Shapiro \(2018\)](#), I focus on the borders of DMAs, which generally include homogeneous counties in the outskirts of metro areas, and I argue that discontinuity in bankruptcy law firm advertisements is exogenous with respect to economic variables at these borders.

Utilizing these advantages of the local TV advertisement setting, this paper combines credit bureau data with advertisement data to examine how bankruptcy law firm advertisements affect household financial outcomes. Specifically, I test whether ads causally increase bankruptcy filings and subsequently estimate the advertising effect on distressed households' credit recovery. After documenting that ads increase filings and positively affect household credit, I characterize how ad-induced bankruptcy filers are different from existing filers to illuminate the potential explanation for my findings.

Although advertising is theoretically expected to generate more sales, empirical examination has found that advertising is often ineffective ([Shapiro, Hitsch & Tuchman 2021](#)).

⁴See, for example, the recent amendments to the American Bar Association (ABA) Model Rules of Professional Conduct (https://www.americanbar.org/groups/professional_responsibility/committees_commissions/ethicsandprofessionalresponsibility/mrpc_rule71_72_73_74_75/), and the recent increase in penalties for barratry, commonly referred to as “ambulance chasing” (<https://www.krgv.com/news/new-texas-law-would-increase-penalty-for-ambulance-chasers-/>).

I show that bankruptcy law firm advertising is effective; the causal estimate suggests a 0.007 percentage point increase in the bankruptcy filing rate (roughly 3% of the sample median) per 1,000 local TV ads per year. This estimate is not driven by cross-state DMA borders, is robust across time and space, and is unaffected by controlling for ads by other industries. This effect is also economically significant; this magnitude is comparable to the effect of a \$1,000 rise in debt relief generosity of bankruptcy documented in [Indarte \(2023\)](#).

Next, I evaluate the effect of advertisements on distressed households' financial outcomes. For this exercise, I first match bankruptcy filers to a group of non-filers whose probability of bankruptcy filing is similarly high, based on observable credit bureau variables. Assuming that these non-filers serve as the counterfactual non-bankruptcy path of ad-induced filers, augmenting bankruptcy filers with this non-filer sample allows for estimating the overall effect of ads on the population most sensitive to bankruptcy. In the resulting analysis, I find that exposure to ads is broadly associated with better financial outcomes, consistent with bankruptcy being "good" for marginal filers. Ad exposure is positively associated with having a prime Equifax Risk Score,⁵ negatively associated with having delinquent credit, and positively associated with credit access and real consumption. To add further strength to this result, I show that employing an instrumental variable (IV) strategy using ad exposure as an instrument for bankruptcy leads to a similar conclusion, i.e., ad-induced bankruptcies are associated with better credit outcomes.

To better understand the drivers of the positive advertising effect on financial outcomes, I then examine how ad-induced filers (i.e., "compliers") are different from existing filers (i.e., "always-takers"). Specifically, I estimate the effect of ad exposure on the case, financial, and credit profile of the average bankruptcy filer. I find that ad exposure is associated with a higher likelihood of receiving a discharge, filing for Chapter 7, filing with

⁵The Equifax Risk Score (Risk Score) is a proprietary credit score that assesses an individual's default risk using factors including payment history, outstanding debt, credit history length, new account openings, and types of credit used ([Board of Governors of the Federal Reserve System 2007](#)).

lawyer representation, and being a first-time filer. The average filer with higher ad exposure also has fewer assets and liabilities, but ad exposure has no effect on the average filer's income. Additionally, I find no evidence of ads inducing more frivolous bankruptcy cases, which I define using individuals' financial distress status and case dismissal flags.

I collectively interpret these results as evidence for bankruptcy law firm ads addressing under-information and stigma in bankruptcy. To support this interpretation, I first describe how, if (1) substantial under-information and stigma existed in bankruptcy, and (2) bankruptcy lawyers' advertisements informed and/or reduced stigma, advertising would theoretically cause more filings that lead to positive financial outcomes. The characterization of ad-induced filers is broadly consistent with my proposed interpretation. Specifically, filers who are ex ante under-informed and/or averse to bankruptcy stigma are potentially more likely to be first-time filers and receive debt discharge. Additionally, if having fewer assets and less debt indicated lower financial sophistication, ad-induced filers would be even more likely to be under-informed. I argue that this proposed channel is unlikely to be dominated by an alternative channel where advertising increases lawyer over-persuasion or strategic defaults, because ad-induced filers have fewer frivolous cases, lower debt-to-income ratios, and lower likelihood of repeat filing. Finally, to further support my proposed interpretation, I leverage novel text data from publicly available client reviews of bankruptcy law firms. By using word lists acknowledging under-information or stigma, and furthermore the role of lawyers in either informing or reducing stigma, I show a significant presence of these forces in the filer-lawyer environment.

The main contribution of this paper is presenting evidence of under-information and stigma in the personal bankruptcy decision by linking information provision to better household outcomes.⁶ Prior studies have documented that peer effects lead to bankruptcy filings via information spillovers ([Fisher 2020](#), [Kleiner, Stoffman & Yonker 2021](#)), but these

⁶[Bernstein et al. \(2022\)](#) document a significant presence of under-information and stigma in bankruptcy among small business owners, but find that providing information through educational videos has no long-term effect on firm outcomes, including bankruptcy use.

studies do not examine whether such bankruptcies result in better long-term financial outcomes. By leveraging individual-level credit bureau data, I not only expand the scope to a nationally representative sample of individuals with a credit history, I can also track households post-bankruptcy and show that ad-induced filings lead to better outcomes. To my knowledge, this paper is the first to provide evidence of under-information and stigma in bankruptcy, not just that information causes more bankruptcies, by directly showing positive consumer outcomes.

More broadly, information frictions and stigma are emphasized for explaining suboptimal financial decisions including sluggish mortgage refinancing (e.g., [Keys, Pope & Pope 2016](#), [Agarwal, Amromin, Ben-David, Chomsisengphet, Piskorski & Seru 2017](#), [Andersen, Campbell, Nielsen & Ramadorai 2020](#), [Agarwal, Amromin, Chomsisengphet, Landvoigt, Piskorski, Seru & Yao 2020](#)) and low take-up of social programs ([Bhargava & Manoli 2015](#), [Finkelstein & Notowidigdo 2019](#), [Humphries, Neilson & Ulyssea 2020](#), [Celhay, Meyer & Mittag 2022](#), [Custodio, Hansman & Mendes 2022](#), [Gupta, Ponticelli & Tesei 2023](#)). However, it is not ex ante obvious whether information frictions in lower-stakes (e.g., tax benefits, job training) or temporary programs (e.g., Paycheck Protection Program) imply that similar issues would apply to bankruptcy, arguably one of the most high-stakes financial decisions in an individual's life. My findings confirm that they do; under-information remains a significant barrier to take-up, even in a long-standing, high-impact federal program like bankruptcy.

This paper also relates to the large literature on the drivers of the bankruptcy decision, which has investigated strategic versus liquidity motives (e.g., [Fay, Hurst & White 2002](#), [Gross & Souleles 2002](#), [Gross et al. 2014](#), [Mikhed & Scholnick 2016](#), [Indarte 2023](#)),⁷ the role of peer effects ([Agarwal, Mikhed & Scholnick 2020](#), [Kalda 2020](#), [Fisher 2020](#), [Kleiner et al. 2021](#)), race and gender ([Agarwal, He, Sing & Zhang 2018](#), [Morrison, Pang & Uettwiller 2020](#)), health insurance ([Gross & Notowidigdo 2011](#), [Mahoney 2015](#)), and prior experience

⁷Studies on strategic versus liquidity default include [Guiso, Sapienza & Zingales \(2013\)](#), [Mayer, Morrison, Piskorski & Gupta \(2014\)](#), [Ganong & Noel \(2023\)](#).

(Gopalan, Gormley & Kalda 2021). Broadly speaking, this literature’s focus is limited to the filing response, leaving post-bankruptcy financial outcomes largely unaddressed. While debt relief from bankruptcy is shown to have positive effects (Dobbie & Song 2015, Dobbie et al. 2017), these effects are conditional on filing; i.e., estimated from comparing filers receiving successful discharge against dismissed filers as the counterfactual. Given that bankruptcy is not costless, the effect of information-driven bankruptcy filing on the marginal filer is therefore ex ante ambiguous. This paper’s analysis is equipped with credit bureau data, which allows for assessing whether information-driven bankruptcy benefits the marginal filer using marginal non-filers as the counterfactual.

In terms of policy implications, the central takeaway from this paper is that legal advertising positively contributes to the domain of personal bankruptcy. This finding may be somewhat surprising, given the generally negative public perception of lawyers and the strict regulation of legal advertising.⁸ A corresponding skeptical prior is consistent with theory; when expert intermediaries – such as lawyers – are more sophisticated than their clients and face potentially misaligned fee incentives, concerns about distorted advice and principal-agent problems are legitimate. Nevertheless, my results suggest that restricting legal advertising in the context of personal bankruptcy would be counterproductive, and that advertising is possibly a key instrument for providing valuable information and reducing the stigmatization of bankruptcy.

This paper’s policy takeaway speaks to several strands of literature. First is the literature on the infrastructure of personal bankruptcy, which spans policy reforms (Li, White & Zhu 2011, Albanesi & Nosal 2018, Chakrabarti & Pattison 2019, Gross, Kluender, Liu, Notowidigdo & Wang 2021, Severino, Brown & Chakrabarti 2024), bankruptcy court judge leniency (Dobbie & Song 2015, Dobbie et al. 2017, Argyle, Indarte, Iverson & Palmer 2023), credit report impact (Dobbie, Goldsmith-Pinkham, Mahoney & Song 2020), bankruptcy

⁸For example, a Pew Research Center survey found that only 18% of respondents believed lawyers contribute “a lot” to society – the lowest rating among all surveyed occupations (<https://www.pewresearch.org/religion/2013/07/11/public-esteem-for-military-still-high>).

trustees ([Antill 2020](#)), and the geographic variations in these institutional features ([Keys, Mahoney & Yang 2022](#)). I add to this literature by demonstrating that legal advertising can be an effective policy tool in the bankruptcy context. Importantly, unlike legal reforms – which typically involve a long and significant procedure – advertising is easily adjustable across time and transferable across places. This flexibility could have significant implications for policy initiatives intending to influence bankruptcies; e.g., airing more ads during a recession, especially in regions experiencing a worse recession.

My policy takeaway also speaks to the literature on advertising in consumer finance ([Bertrand, Karlan, Mullainathan, Shafir & Zinman 2010](#), [Gurun, Matvos & Seru 2016](#), [Honka, Hortaçsu & Vitorino 2017](#), [Agarwal & Ambrose 2018](#), [Tsai & Honka 2021](#)), which has found positive advertising effects on consumers ([Honka et al. 2017](#)) as well as negative effects ([Gurun et al. 2016](#)), and the literature studying financial intermediaries and experts ([Greenwood & Scharfstein 2013](#), [Piskorski, Seru & Witkin 2015](#), [Gennaioli, Shleifer & Vishny 2015](#), [Agarwal et al. 2017](#), [Egan, Matvos & Seru 2019](#), [Robles-Garcia 2022](#)),⁹ which has primarily focused on how experts' conflicts of interest can harm consumers. My findings suggest that bankruptcy is a domain where even conflicted advice is better than no advice ([Chalmers & Reuter 2020](#)), and moreover, such intermediaries designing and delivering advertisement interventions can improve consumer outcomes. These positive gains to consumers may suggest a significant presence of demand-side constraints ([Reuter & Schoar 2024](#)), which I propose characterizing as under-information and stigma.

Overview. The rest of the paper is organized as follows. Section 2 discusses the institutional background related to personal bankruptcy and local TV advertisements; it also describes the data used in my paper. Section 3 explains my identification strategy. Section 4 documents the effect of bankruptcy law firm ads on bankruptcy filings, and Section 5 estimates the effect of ads on post-bankruptcy credit recovery. Section 6 characterizes how ad-induced filers are different from existing filers, and Section 7 offers an interpretation

⁹Legal literature on bankruptcy lawyers includes [LoPucki \(1989\)](#), [Braucher, Cohen & Lawless \(2012\)](#), and [Foohey, Lawless, Porter & Thorne \(2016\)](#).

of the paper’s findings. Finally, Section 8 concludes.

2 Institutional Background and Data

2.1 Personal Bankruptcy

Around 1 million individuals file for personal bankruptcy in the United States each year.¹⁰ In a Chapter 7 bankruptcy case (liquidation), any non-exempt assets can be surrendered toward the filer’s outstanding debt, and the rest of dischargeable debt is relieved. A Chapter 13 case (reorganization) can also discharge debt and moreover protect the filer’s non-exempt assets, but instead requires a portion of their future income for three to five years. Chapter 7 filings are more common (63.4% during the period 2013–2019),¹¹ but filers must pass a means test (i.e., earn less than the state median income) to qualify for Chapter 7.

The main benefit of filing for bankruptcy is the discharge of eligible unsecured debt.¹² In addition, filing for bankruptcy immediately triggers an automatic stay, which suspends all debt collection activities, including wage garnishment. On the cost side, a bankruptcy filing first requires a detailed disclosure of the individual’s finances.¹³ Other costs of bankruptcy include the possibility of surrendering non-exempt assets, a court appearance,¹⁴ court fees of around \$300, and completion of a debtor education course. In terms of longer-term consequences, filing for bankruptcy generates a bankruptcy filer flag on the individual’s credit report, and receiving a bankruptcy discharge also prohibits the debtor

¹⁰Judiciary Data and Analysis Office (JDAO) of the U.S. Courts and the annual Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) report (<https://www.uscourts.gov/news/2018/03/07/just-facts-consumer-bankruptcy-filings-2006-2017>).

¹¹Based on the author’s calculation using FJC data.

¹²Non-dischargeable debt includes student debt, alimony, child support, and unpaid income taxes.

¹³The official bankruptcy filing process requires around 20 forms with legal and financial information related to the household’s property, debt, income, expenses, contracts, and leases (U.S. Courts, <https://www.uscourts.gov/forms/bankruptcy-forms>). Additional paperwork is required if a debtor is filing jointly or self-filing, or has an ongoing eviction case.

¹⁴In the 341 meeting of creditors, the bankruptcy trustee reviews the filer’s “conduct, property, liabilities, financial condition, and any other matter that may affect the administration of the case or the debtor’s right to discharge” in person (The Northern District of California, <https://www.canb.uscourts.gov/faq/general-bankruptcy/what-341a-meeting-creditors>).

from filing again for several years (8 years for Chapter 7, 6 years for Chapter 13). Finally, bankruptcy cases are examined by court officials (i.e., judges and trustees) who can potentially issue a dismissal.¹⁵ In summary, the net expected financial benefits of filing for bankruptcy are substantial, but evaluating the costs of bankruptcy may be complex and overwhelming.

2.2 Bankruptcy Lawyers

An individual can file for bankruptcy *pro se* (i.e., self-file) or with lawyer representation. According to FJC data, around 91% of personal bankruptcy cases were filed with a lawyer during 2013–2019. The main tasks for the lawyer include: consultation, collecting information from the household, preparing the paperwork on their behalf, and representing them in court events. Successful discharge is significantly more likely for cases with lawyer representation. Specifically, FJC data report that the discharge rate with versus without a lawyer was 96% and 68%, respectively, for Chapter 7 cases. For Chapter 13 cases, the corresponding rates were 46% and 2%, respectively.

Bankruptcy lawyers are paid on a per-case basis, regardless of case or client outcome. In 2012, the average Chapter 7 attorney fee was around \$1,200 and \$2,600 for Chapter 13 cases (Lupica 2012). For Chapter 7, the lawyer fee is generally paid upfront, whereas fees are paid out in installments over the course of several years for Chapter 13. Fees can vary across regions due to laws as well as demand and supply. Lawyers may also charge higher fees for aspects that complicate the case (e.g., joint filing, unusual assets, ongoing eviction case, repossession, or creditor lawsuit).

As for advertising, local TV advertisements represent the overwhelming majority of advertising spending in the bankruptcy lawyer industry.¹⁶ However, legal advertising

¹⁵Figure A.1 reports the distribution of dismissal reasons by Chapter.

¹⁶Using Kantar Media data, I calculate that local TV advertising composed 89% of total advertising spending by bankruptcy law firms in 2013–2019. The rest was spent across other forms of TV (e.g., cable, network), radio, magazines, newspaper, outdoor, and internet.

is historically regulated strictly in the United States; it only became permitted after the 1977 Supreme Court decision in *Bates v. State Bar of Arizona*, which overturned the long-standing ban on legal advertising. Currently, Rule 7.1 of the American Bar Association (ABA) Model Rules of Professional Conduct prohibits lawyers from making false or misleading statements about their services, and Rule 7.2 outlines what types of statements are prohibited.¹⁷ Rule 7.3 furthermore prohibits in-person solicitations, commonly referred to as “ambulance chasing.” Debates on these rules are current; a significant amendment to the ABA rules was adopted as recently as 2018.

2.3 Local TV Advertisements

Unlike national TV advertisements, firms purchase advertising airtime from local TV stations at the level of the geographic unit known as the Designated Market Area (DMA). DMA classifications were established in 1955 by the marketing research company AC Nielsen, and the classification scheme was mainly related to the broadcast reach for TV stations. The resulting DMAs were collections of counties generally centered around a major city. Importantly, households within the same DMA receive the same amount of the same local TV advertisements. Regulations prohibit satellite or cable operators from providing broadcast signals from outside a household’s DMA.¹⁸ More technical details of the local TV advertising market can be found in [Shapiro \(2018\)](#).

2.4 Data Sources

FRBNY Consumer Credit Panel/Equifax (CCP). The first main data source is the panel data on household credit from the FRBNY Consumer Credit Panel/Equifax (CCP). The

¹⁷https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/

¹⁸In 2018, only around 14% of households used over-the-air TV, and this proportion is expected to be much smaller at DMA borders where signals are naturally less reliable (The Nielsen Local Watch Report, 2019 <https://www.nielsen.com/us/en/insights/report/2019/nielsen-local-watch-report-the-evolving-ota-home/>).

CCP data report detailed information on household credit for a nationally representative 5 percent random sample of anonymized individuals with a credit history. The credit information in the CCP includes the number of credit accounts, credit balance, delinquency, bankruptcy and foreclosure events, birth year, state/county/zip code residence, and Risk Score, which is derived from the Equifax credit scoring system.

Kantar Media AdSpender. The second main data source for my paper is the advertising data from Kantar Media AdSpender. The Kantar data record every local TV ad in the top 101 DMAs in the United States.¹⁹ The data also record the estimated cost of the ad (i.e., advertising expenditure) for each ad. The category of bankruptcy law firms is available for the period 2013–2019.

Federal Judicial Center (FJC). Publicly available FJC data report detailed snapshot information about each bankruptcy case (e.g., Chapter, case outcome, *pro se* status) and its filer (e.g., assets, liabilities, income) for the universe of bankruptcy filings.

Infogroup. For law firm-level analysis of variables beyond advertising, I obtain the list of bankruptcy law firms and their characteristics (e.g., location, sales, year of establishment, number of employees, number of branches) from Infogroup, which constructs an annual database of businesses from yellow pages' data. I primarily identify bankruptcy law firms using the SIC codes provided by Infogroup.²⁰

Google Reviews. To explore the drivers of the bankruptcy decision among filers and examine the nature of bankruptcy filers' interactions with lawyers, I also manually collect publicly available client reviews (i.e., ratings, text reviews) of bankruptcy law firms on Google.

County-level economic and demographic profile. I use publicly available data on

¹⁹These 101 DMAs cover 1,991 out of 3,108 counties in the CCP data and 87% of the U.S. population (based on the author's calculation).

²⁰I code a firm as a bankruptcy law firm if it reports both SIC codes 7299-53 "Bankruptcy Service" and 8111-03 "Legal Services-Attorneys." I further identify bankruptcy law firms by searching for any law firm name that appears on the list of lawyers or law firms registered on the National Association of Consumer Bankruptcy Attorneys (NACBA) website. For common names, I also use the information on location (e.g., city, state) to match the law firm. I also code any law firm as a bankruptcy law firm if its name appears on the list of advertisers classified as a bankruptcy law firm in Kantar.

the county-year-level unemployment rate from the Local Area Unemployment Statistics (LAUS) program of the Bureau of Labor Statistics (BLS) and additional economic variables (e.g., personal income per capita, population) from the Bureau of Economic Analysis (BEA). Finally, I obtain house price growth data using the Zillow Home Value Index from Zillow.

2.5 Summary Statistics

Table 1 reports the summary statistics for the main data sources in my data at various aggregation levels. Panel A presents the individual-level summary statistics using both the FRBNY Consumer Credit Panel/Equifax (CCP) data and FJC data. The CCP variables are computed for around 270,000 bankruptcy filers in 2013–2019 and additionally for a similarly sized sample of randomly selected non-filers.²¹ FJC data cover a larger sample of filers (around 5.5 million during the same time period). The panel shows that bankruptcy filers' finances are in significantly worse condition compared to randomly selected non-filers. Specifically, the average bankruptcy filer has a Risk Score of 545, significantly lower than the non-filers' average of 701. The average filer has around \$58,000 in current debt and \$43,000 in delinquent debt, compared to \$80,000 and \$4,100 for non-filers, respectively. Both of these variables are right-skewed. Additionally, around 3% of filers report some foreclosure activity; only 0.3% of non-filers report foreclosure. The FJC variables provide further detail on bankruptcy filers' financial profile. It shows that the average filer has around \$96,000 in assets and \$143,000 in liabilities, most of which (i.e., around \$137,000) are dischargeable. Both monthly income and expenses for the average filer is around \$3,000. I also report bankruptcy filer-level summary statistics separately for Chapter 7 filers and Chapter 13 filers in Appendix Table A.1.

Panel B reports the county-level summary statistics separately for the 732 counties at

²¹I focus on the most recent quarter *before* an individual reports bankruptcy.

DMA borders and 997 non-border counties.²² It shows that border counties are smaller in terms of population (by around 20%) and lower income (by around 10%) on average.²³ The average border county also has a higher unemployment rate (5.5%) compared to the average non-border county (5.1%). The 732 border counties form 131 unique DMA border experiments used in my analysis.

Panel C shows that in an average year, the average DMA airs around 1,600 local TV ads by bankruptcy law firms. The corresponding DMA-level average spending on local TV advertising by bankruptcy lawyers is around \$125,000 per year. Both of these variables are right-skewed. The average DMA has a population of around 2.7 million residents. I additionally show how bankruptcy lawyer advertising is geographically distributed in Appendix Figure A.2.

In panel D, I report the summary statistics for the 2,716 bankruptcy law firms in my sample. The median firm resembles a local-focused small business office – it has three employees, \$590,000 in annual sales, and one branch. Bankruptcy law firms in my sample also tend to be old; the median firm age is 26 years. The median firm has an average client rating of 4.8 (out of 5) and 12 reviews. The 95% percentile firm with respect to each variable has 18 employees, \$3 million annual sales, and 127 client reviews. In the Appendix, I also summarize how bankruptcy law firms' advertising relates to market concentration (Figure A.3) and client reviews (Figure A.4). The former figure shows no apparent relationship between advertising and market concentration, and the latter shows that while advertising is positively related to the quantity of reviews, it is not related to the quality of reviews (i.e., ratings).

²²In Section 3.2, I explain the distinction between border and non-border counties in detail.

²³Bang, L'Heude, Postlewaite & Sieg (2023) shows that low-skill and minority individuals face higher exposure to local news.

3 Empirical Strategy

3.1 Endogeneity in Advertisements

The classic endogeneity concern in the advertising literature describes how firms may choose when, where, and how much they advertise based on anticipated sales. As a result, data may not distinguish whether advertising causes more sales or future sales cause advertising. Figure 1, which plots aggregate bankruptcy filings and bankruptcy law firm advertisements over time, provides evidence of such endogeneity. The figure illuminates two key features. First, the figure shows that bankruptcy filings and advertising exhibit highly correlated seasonality patterns within a calendar year. Second (and more important), during the early months of the COVID-19 crisis, bankruptcy law firm advertising rose to an unprecedented level. I interpret this sharp jump as being driven by bankruptcy law firms' anticipation of higher demand. During this period, the economy faced extreme uncertainty that affected many people's health and ability to work, and it is plausible that bankruptcy law firms anticipated a rise in household financial distress and hence additional demand for bankruptcy. However, when bankruptcy filings in fact fell to historically low levels due to mass-scale forbearance policies (Wang, Yang, Iverson & Kluender 2021), bankruptcy law firms responded by cutting back their advertising.

3.2 Identification: DMA Border Discontinuity

To address the endogeneity concern in advertising, my main empirical identification strategy leverages the institutional features of local TV advertisements described in Section 2.3. Specifically, I follow Shapiro (2018) and focus on the discontinuity of bankruptcy law firm advertisements at DMA borders.²⁴

To visually illustrate the features of DMA borders, Figure 2 presents the map of Georgia with its three major DMAs: Atlanta (red), Macon (blue), and Savannah (green). The

²⁴Shapiro (2018) studies the spillover effects of prescription antidepressant advertising on competitors.

darker-shaded counties represent the border counties within these three DMAs. First, the figure shows that border counties are far from major cities. DMA classifications generally place the major city in the center rather than a border of the DMA.²⁵ Given the distance, border counties' underlying economic environment may not exactly reflect the associated major city's environment. Table 1 in Section 2.5 provides summary statistics that support this claim. Figure 2 also shows that border counties tend to form a narrow corridor, potentially implying a low probability of dramatic variations in economic activities and demographics, both in terms of observable and unobservable variables.

Leveraging the empirical facts above, I argue that the DMA border discontinuity identification strategy allows for an isolation of a plausibly exogenous variation in bankruptcy law firm advertisements within border counties that appear otherwise similar. Formally, the identifying assumption is that bankruptcy filings in the two sides of a DMA border would follow parallel trends absent advertisements. Any differential bankruptcy patterns at DMA borders, by assumption, is then due to advertising. This assumption is plausible for two key reasons. First, bankruptcy law firms' advertising decisions are likely based on the major city, which features more salient economic activities and a larger population. Any endogeneity issue with advertising is therefore significantly less likely to apply to the borders, which presumably receives less attention from bankruptcy law firms. Second, besides bankruptcy law firm advertisements, no other economic variable related to bankruptcy is correlated with DMA borders. The overwhelming majority of DMA borders do not overlap with other economically significant borders (e.g., state borders, judicial district borders).

Spatial evidence. Figure 3 visually illustrates how focusing on the borders may help alleviate the endogeneity concern (i.e., the bankruptcy filing environment is different in high-advertisement areas versus low-advertisement areas). Panel A presents the DMA-

²⁵DMAs associated with a coastal major city generally resemble a truncated circle and the main city only borders the ocean.

level advertisements in the Southeastern United States,²⁶ with darker colors denoting more advertising. Panel B, which reports the DMA-level bankruptcy filing rate in 2013 (the beginning of my sample period), shows significant spatial correlation between advertising and the bankruptcy filing rate at the DMA-level, suggesting the presence of endogeneity in advertising exposure at the DMA-level. However, when non-border counties are removed in panel C, I find that border counties have much more similar rates of bankruptcy filings, denoted by closer proximity in the color intensity. In other words, while counties in each border experiment receive significantly different levels of advertising across the DMA border, the initial bankruptcy filing rate is more continuous across that same DMA border.

Covariate balance. To further strengthen the validity claim of the DMA border discontinuity identification strategy, I test for a smooth continuity of economic variables at DMA borders. Even if local TV advertising levels were exogenous, any significant systematic differences in economic and demographic profiles across these borders could potentially inhibit the causal interpretation of the advertising effect on bankruptcy filings. To that end, Table 2 shows the balance of covariates across different levels of bankruptcy law firm advertising for the border counties. The first eight columns report the average bankruptcy filing rate, Chapter 7 share, successful discharge rate, *pro se* filing rate, unemployment rate, income per capita, house price growth rate, and household debt-to-income ratio (DTI) for each of the eight quantiles of advertising. In the final column, Table 2 reports the standard deviation across all border counties in the sample for each variable. The main takeaway is that these variables exhibit a smooth pattern across advertising levels across border counties, indicating that the economic environment does not dramatically differ at DMA borders. In formal statistical tests, Appendix Table A.2 shows that the differences of these economic variables at DMA borders are statistically indistinguishable from zero, and furthermore shows that covariates in border counties do not predict which side receives more

²⁶I focus on the Southeast to allow for enough scope to view across multiple states while keeping the map small enough to view each county.

advertising.

4 Advertising Effect on Bankruptcy Filings

4.1 Econometric Specification

The first main result of the paper documents that bankruptcy law firm advertisements cause more filings. The formal regression estimating the effect of advertisements on bankruptcy filings is written as

$$Bankruptcy_{bmt} = \alpha_{bt} + \beta Ad\ exposure_{mt} + \delta X_{bmt} + \varepsilon_{bmt}, \quad (1)$$

where $Bankruptcy_{bmt}$ is the number of bankruptcy filings per 100 residents in a border-unit (i.e., the m DMA side of border b) in year t , and $Ad\ exposure_{mt}$ is the number of bankruptcy lawyer ads aired in DMA m in year t . X_{bmt} are time-varying economic and demographic controls at the border-unit-level (e.g., unemployment rate, income per capita), and α_{bt} are the crucial border-year fixed effects that account for the effect of any unobservable local economic forces on bankruptcy filings.²⁷ The coefficient β of $Ad\ exposure$ represents the effect of bankruptcy law firm advertisements on the bankruptcy filing rate, my main estimate of interest. I cluster standard errors at the border-level.

4.2 Advertising Effect on Bankruptcy Filings

Baseline effect. Table 3 reports the results from estimating Equation (1), with each column incrementally adding fixed effects and control variables. Importantly, the main estimate of my interest β , which captures the causal impact of advertising on bankruptcy filings, is statistically significant at the 1 percent level. β is furthermore economically sig-

²⁷Appendix Figure A.5 shows that a large variation in $Ad\ exposure$ remains net of border-year fixed effects. Specifically, the standard deviation of residual $Ad\ exposure$ is 1.9, which is around 68% of $Ad\ exposure$'s sample standard deviation 2.8.

nificant. In column 4, the coefficient of *Ad exposure* implies that the effect of airing 1,000 local TV ads in a year (roughly half of the sample standard deviation) in a border-unit is a 0.007 percentage point increase in that region's bankruptcy filing rate. For the average border-unit, this impact corresponds to an increase from 0.24 filings per capita to around 0.247, or an increase from 1,120 annual filings to around 1,153 (equivalent to a 2.9% increase).

To assess how reasonable the estimate of β is, I approximate the cost-benefit analysis for bankruptcy law firm advertisements. Extrapolating this estimate of β to all counties in the DMA and applying the estimates to the average DMA (i.e., 5,000 filings per year), I estimate that the marginal revenue associated with running one ad is around \$240.²⁸ Given the average cost of around \$100 for a bankruptcy law firm local TV ad, this marginal revenue estimate appears reasonable after accounting for lawyers' other costs associated with advertising (e.g., production costs) and filing a case (e.g., labor costs, administrative costs).

Dynamics. In theory, an individual may learn about bankruptcy from an ad but defer any action until later, or an individual may only respond to an ad about bankruptcy if they are in a financially desperate situation in that moment. To understand the dynamic impact of bankruptcy law firm advertisements, I estimate a modified version of Equation (1) with lagged variables and present the results in Table 4. The table shows no evidence of a delayed advertising effect, supporting the theory that an ad about bankruptcy only works on individuals who are already candidates for bankruptcy. Specifically, it shows that bankruptcy filings in year t are only affected by ads in year t . Across all columns, the estimated effect of year t advertising is 0.006 and statistically significant. The corresponding estimates for years $t - 1$ and $t - 2$ are statistically insignificant.

Robustness. Across DMA borders, the most obvious discontinuity potentially related to bankruptcy – besides bankruptcy law firm local TV advertisements – is local TV ad-

²⁸This exercise could generate a different result if the advertising effect is substantially different between border and non-border counties.

vertisements of other firms. While the DMA map is irrelevant for other forms of advertising,²⁹ all local TV advertising is governed at the DMA-level, and thus other industries' local TV ads will also be discontinuous at DMA borders. Therefore, the following concern arises: if any other local TV ads affected bankruptcies, and moreover if these ads were not orthogonal to bankruptcy law firm ads, β may capture a spurious statistical relationship. To address this concern, I augment Equation (1) with local TV ads by other industries potentially influential for households' bankruptcy decision (medical doctors, investment managers, mortgages, personal injury lawyers, paycheck services, retirement planning services, and auto loans) to directly control for any discontinuity in exposure to other industries' ads. Table 5 shows that the only statistically significant advertisements for the bankruptcy filing rate are those by bankruptcy law firms, alleviating the concern related to the effects of other advertisers.

Another concern related to the DMA border discontinuity design is cross-state borders. Some DMA borders comprise counties from different states, and given that state borders are economically meaningful, estimations including such border experiments may be contaminated.³⁰ To alleviate this concern, Table 6 estimates Equation (1) exclusively using DMA borders where all counties along the border belong to the same state, thus eliminating the possibility of contamination from differences in state-level bankruptcy policies. It shows that the estimate of β remains robust in this sample of intra-state DMA borders, suggesting the advertising effect on bankruptcies is not driven by state-level variation in bankruptcy policies at cross-state DMA borders.

Finally, I also examine how the advertising effect varies across time, motivated by the recent emergence of digital advertising, and also across regions, motivated by the geographic variation in financial distress and bankruptcy trends documented in [Keys et al. \(2022\)](#). In both tests, I find that the effect of bankruptcy law firm ads on bankruptcy fil-

²⁹Appendix Table A.3 presents the share of advertising spending across forms of advertisement by industry for selected industries.

³⁰Importantly, in the context of bankruptcy, exemption levels are determined at the state level and bankruptcy court leniency may also vary across states.

ings is robust. The former test, reported in panel A of Table A.4, shows that the advertising effect is similar across two subperiods of 2013–2016 and 2017–2019, suggesting that while the composition of the advertising market may have shifted toward digital advertising, the causal impact of local TV ads was not affected. Similarly, the latter test, reported in panel B of Table A.4, shows that the advertising effect is statistically and economically significant for DMA borders in the Northeast, the South, and the Midwest.³¹

5 Advertising Effect on Credit Recovery

Section 4 documents that bankruptcy law firm advertising causes more bankruptcy filings. In this section, I leverage the granularity of the CCP data to examine the advertising effect on credit recovery of distressed households at the individual-level.

5.1 Matched Non-filers

Because bankruptcy filers are rare, I focus the analysis on the individuals most sensitive to bankruptcy law firm ads. Specifically, the ideal analysis for this exercise would include not only bankruptcy filers but also their counterfactual path where they were not exposed to any ads and subsequently did not file. The main challenge to simulating this experiment can be summarized as follows: if an individual files for bankruptcy in the data, by definition, I cannot empirically observe this same person’s counterfactual outcome as a non-filer. To address this challenge, I construct a group of non-filers using CCP variables to derive a predicted probability of bankruptcy filing. Intuitively, I identify the individuals who are statistically most likely to file for bankruptcy based on observable credit variables but nonetheless do not file.

The two main variables I leverage to predict bankruptcy are Risk Score and delinquent

³¹By contrast, ads do not significantly affect bankruptcy filing rates for the DMA borders in the West. This could be due to region-specific factors related to bankruptcy and lawyer advertisements, but it also could be related to the geographic features of DMA borders in the West (e.g., counties are much larger in terms of area, and some DMAs only include a few counties).

debt. Figure 4 plots the statistical relationship between bankruptcy filing rate and Risk Score (panel A) as well as delinquent debt (panel B). Panel A shows that almost no individual with a Risk Score above 700 files for bankruptcy. Filing becomes dramatically more likely in the region below the mid-600s and peaks at around 600.³² Panel B shows that bankruptcy filing rate rises significantly with delinquent debt.

I estimate an individual-quarter-level linear probability regression that employs Risk Score, delinquent debt, and a vector of other CCP variables (number of trade lines by category – credit cards, auto loans, student loans, mortgages, home equity loans, retail trades, consumer finance loans – and each category’s corresponding balance, age, foreclosure flag, mobility flag). This regression additionally includes lags of these variables up to three quarters, interaction effects of these variables, and finally, zip code and quarter fixed effects. Using the predicted probability of bankruptcy based on the estimates from this regression, I classify the individuals who enter into the top 0.25% – and do not file in the next quarter – as matched non-filers. In the following analysis, I estimate the aggregated effects of ads on the filers and these non-filers, i.e., a population that represents the distressed households predicted to be most sensitive to these ads.

5.2 Advertising Effect on Credit Recovery

To formally estimate the effect of ad exposure on distressed households’ credit recovery, I regress future credit variables of bankruptcy filers and matched non-filers on ad exposure. Specifically, I estimate the following equation

$$Y_{icm,t+h} = \alpha_c + \alpha_t + \beta_{t+h} Ad\ exposure_{m,t} + \delta X_{c,t} + \varepsilon_{icm,t}, \quad (2)$$

³²Figure A.6 plots the trajectory of an average filer’s Risk Score around bankruptcy. The figure shows that Risk Score deteriorates in a downward spiral before jumping immediately to its pre-distress level after filing. This increase is related to the immediate effect of debt discharge (Jagtiani & Li 2015).

where $Y_{icm,t+h}$ represents the credit variable Y in year $t+h$ of individual i in border county c in DMA m , and the sample for each year t includes those who file for bankruptcy in year t and those who become classified as a matched non-filer in year t . I focus on the period 2013–2015 to allow for at least 4 years of data after ad exposure, since my sample ends in 2019. This results in 40,826 filers and 41,713 matched non-filers in DMA border counties. $Ad\ exposure_{mt}$ is the number of bankruptcy law firm ads aired in DMA m in year t . I also include county fixed effects α_c and year fixed effects α_t , as well as time-varying county-level controls $X_{c,t}$.³³ For the choice of future horizon h , I consider up to four years.

Figure 5 reports the estimates of β_{t+h} for the following outcome variables: (1) Risk Score, (2) delinquent balance, (3) current balance, and (4) auto loans. Each red circle point estimate denotes the effect of being exposed to 1,000 bankruptcy law firm ads per year on the individual’s credit outcome variable, h years relative to ad exposure. I discuss the findings in detail in the following paragraphs.

Risk Score. The Equifax Risk Score considers a wide range of information relevant for credit health such as payment history, outstanding debt, utilization, new account openings, inquiries, and credit types. Naturally, credit score has significant implications for the cost of credit (Board of Governors of the Federal Reserve System 2007) and credit access (Dobbie et al. 2020). Negative credit information, which is mechanically related to credit score, can moreover generate material impact on labor market outcomes (Bos, Breza & Liberman 2018, Herkenhoff, Phillips & Cohen-Cole 2022). As a result, several papers focus on credit score as the main outcome measure to evaluate consumers’ financial health (Dobbie et al. 2017, Aneja & Avenancio-León 2020), and I also focus on Risk Score as a summary measure for financial health.

Figure 5 shows that in DMA border counties with more advertising exposure, distressed households consistently have a higher probability of reporting prime Risk Score in the following years. Specifically, exposure to 1,000 ads is associated with a 0.63 percent-

³³Note, border fixed effects are subsumed by the more granular county fixed effects.

age point increase in the likelihood of having a prime Risk Score, 4 years after ad exposure. This increase, which corresponds to 1.1% of the sample average, is economically significant. This estimate is also highly statistically significant, i.e., significant at the 0.1% level.

Delinquency. Beyond the credit score, having delinquent credit can directly reflect an individual's state of financial distress. Therefore, I also examine how ad exposure is associated with the probability of having a delinquent credit balance over \$1,000. The estimated coefficient for $h = 1$ can be interpreted as a 0.4 percentage point decrease in the likelihood of having a delinquent balance over \$1,000, which is equivalent to 1.6% of the sample average. The estimate abates slightly over the following years, although it remains statistically and economically significant.

Current balance. Next, to understand how ad exposure relates to credit access, another important aspect of credit health, I also examine current debt balance. Figure 5 shows that ad exposure is positively associated with the log of debt balance, with statistically significant coefficients for 2-3 years after ad exposure. The coefficient estimate for $h = 3$, which corresponds to having 2% more debt 3 years later, suggests a significant increase in credit access for households with higher exposure to ads. In the sample, the median current debt balance 3 years after bankruptcy is around \$19,700.

Auto loans. Finally, it is also important to understand the nature of the debt-financed activity associated with an increase in borrowing. For example, borrowing for human capital investment has very different implications for an individual's underlying economic state compared to borrowing for luxury spending. The above current balance results admittedly cannot distinguish across different types of borrowing, given that it is an aggregate measure. To this end, I also examine how ad exposure is associated with auto loans, a common proxy for real household consumption and financial well-being (e.g., [Di Maggio, Kermani, Keys, Piskorski, Ramcharan, Seru & Yao 2017](#), [Benmelech, Meisenzahl & Ramcharan 2017](#), [Beraja, Fuster, Hurst & Vavra 2019](#)). I find that ad exposure is associated with having more auto loans in the following years. In addition, this statistical relationship

exhibits the same dynamic pattern as the pattern found with current balance.

In summary, the analysis in this section examines the advertising effect on the credit recovery of distressed households and reveals a broad pattern of improved outcomes. Specifically, ad exposure is associated with (1) a higher likelihood of having a prime Risk Score, (2) a lower likelihood of having delinquent credit, (3) higher credit access, and (4) higher real consumption. I interpret these findings as evidence that households are made better off from bankruptcy law firm advertisements.

5.3 Ad-induced Bankruptcies and Credit Recovery

The preceding section estimates the aggregated effect of bankruptcy law firm ads on credit recovery of distressed households, i.e., bankruptcy filers and matched non-filers. While the main focus of this paper is on documenting this overall advertising effect, this specification does not necessarily capture the precise effect of ad-induced bankruptcies on credit recovery. Specifically, the above specification is agnostic about the advertising effect on non-filers and the channels through which ads affect bankruptcy filers.

To speak more directly to ad-induced bankruptcy filers' credit recovery, I employ an instrumental variable (IV) strategy with ad exposure as an instrument for bankruptcy filing. The corresponding two-stage least squares model is written as

$$Filed_{icm,t} = \gamma_c + \gamma_t + \phi Ad\ exposure_{m,t} + \theta X_{c,t} + v_{icm,t}, \quad (3)$$

$$Y_{icm,t+h} = \alpha_c + \alpha_t + \beta_{t+h} Filed_{icm,t} + \delta X_{c,t} + \varepsilon_{icm,t}, \quad (4)$$

where $Filed_{icm,t}$ is an indicator variable for whether individual i filed for bankruptcy in year t . To estimate this model, I construct the sample of potential filers (i.e., those who are most likely to file for bankruptcy) following a similar approach to the preceding analysis. Specifically, I estimate the same linear probability regression from Section 5.1 and classify individuals with the top 0.25% predicted probability of bankruptcy as potential filers.

The identifying assumptions associated with this IV strategy are as follows: (1) ad exposure affects potential filers' bankruptcy filing decision, and (2) ad exposure affects potential filers' credit variables only through bankruptcy. While this paper presents evidence to support the former assumption, the latter assumption may not be valid. First, ads may influence potential filers who do not file. Even if ads did not cause a potential filer to ultimately file for bankruptcy, it is possible that contemplating bankruptcy can lead to alternate financial actions related to credit (e.g., debt renegotiation, debt consolidation).³⁴ Related, even for potential filers who file for bankruptcy, ad exposure may contemporaneously affect their finances in ways other than bankruptcy if ads affected households' financial sophistication more generally.

Because of these potential threats to the exclusion restriction, this paper emphasizes Section 5.2, which focuses on the composite effect of ads on bankruptcy filers and similarly distressed non-filers. Nevertheless, I employ the IV strategy to complement the main analysis, to inform more directly about the effect of an ad-induced bankruptcy on a distressed household's credit recovery. Table 7 reports the results from estimating Equations (3) and (4), which show that the broad takeaway is the same as in Section 5.2; i.e., the instrumented effect of bankruptcy filing on a potential filer's credit recovery is significantly positive. To elaborate, a 10 percentage point increase in the instrumented bankruptcy probability is associated with a 17 percentage point higher likelihood of having a prime Risk Score, a 7.4 percentage point lower likelihood of having delinquent debt over \$1,000, a 27% larger current debt balance, and 0.23 more auto loans, three years after ad exposure.

Moreover, in Table 8, I present additional evidence of positive outcomes associated with ad-induced bankruptcies. Specifically, I first divide the sample of filers and matched non-filers from Section 5.2 into three groups using the number of credit tradelines. After establishing a significant heterogeneity in filing responses across the three groups in panel A, I show that the positive Risk Score result is driven by the group with the strongest filing

³⁴References to such alternate financial options commonly appear in information resources related to bankruptcy, often under a section titled "Is bankruptcy right for you?"

response (i.e., those with 5-9 tradelines). In contrast, in the subsample with the weakest filing response (i.e., those with 10+ tradelines), I find that ad exposure has essentially no statistically significant association with future Risk Score. This result is consistent with filers, rather than non-filers, contributing more to the positive Risk Score result. While these analyses do not completely rule out the possibility that ads can influence distressed households' credit in ways other than inducing bankruptcies, I still interpret this section's findings as validating evidence that the positive effect of ad-induced bankruptcies on credit recovery contributes to the overall effect of advertisements.

6 Ad-induced Filers

6.1 Ad-induced Filers

Section 5 documents the positive effect of advertisements on distressed households' credit recovery. This section considers a natural follow-up question: what are the potential explanations for this finding? To this end, I explore the underlying features of ad-induced filers ("compliers") and characterize how they differ from existing filers, i.e., those who presumably filed for bankruptcy even without ads ("always-takers"). In theory, ad-induced filers may be different from existing filers both in terms of inherent characteristics and choices. I argue that both forces are potentially at play. First, the fact that ad-induced filers required ads before filing must imply that these filers are fundamentally different. If ad-induced filers were no different from existing filers, they also would have filed for bankruptcy before ads. Second, it is also plausible that ads can influence important bankruptcy-related choices of filers.

To formally characterize the features of ad-induced filers, I examine the statistical relationship between ad exposure and characteristics of the average filer and their case. Assuming that changes in the average filer are attributable to ad-induced filers, this analysis can conceptually shed light on how ad-induced filers differ from existing filers. In

individual-level regressions with the sample of bankruptcy filers in DMA border counties, I regress each case, financial, and credit variable on ad exposure as follows:

$$Y_{icmt} = \alpha_c + \alpha_t + \beta Ad\ exposure_{mt} + \delta X_{ct} + \varepsilon_{icmt}, \quad (5)$$

where Y_{icmt} is a variable related to filer i in border county c in DMA m in year t . I interpret β , the effect of ad exposure on the average characteristics of filers, as an estimate that informs the statistical differences between ad-induced filers and existing filers. Figure 6 reports the t -statistic of each estimate from these regressions, and I discuss the findings below.³⁵

Case characteristics. First, I find that ad-induced filers are more likely to file for Chapter 7 over 13, less likely to file *pro se*, and more likely to be first-time filers. Prior studies have explored the role of lawyers on chapter choice (e.g., Braucher et al. 2012), and argued that choosing Chapter 7 is better for filer outcomes because Chapter 13 cases are dismissed at a significantly higher rate. I find that ad exposure, which is associated with positive credit recovery, is associated with the average filer choosing Chapter 7. Ad-induced filers are also statistically less likely to file *pro se*, potentially reflecting the effect of ads on inducing bankruptcy candidates to hire a lawyer. Still, successful discharge is significantly more likely with lawyer representation, as discussed in Section 2.2. Additionally, ad-induced filers are more likely to be first-time filers, which could be due to ads being more effective on individuals who have never filed for bankruptcy. These differences are also economically significant. For instance, the share of first-time filers in the sample is 84.50%, and the implied share of first-time filers among ad-induced filers is 89.49%.

Case outcome. Second, I show that ad-induced filers' cases have better outcomes compared to existing filers. Importantly, I find that ad-induced filers are more likely to receive debt discharge. The coefficient-implied discharge rate of ad-induced filers is 87.60%, which is significantly higher than the sample average discharge rate of 78.73%. Condi-

³⁵Magnitudes of these coefficients, along with the underlying regressions, are reported in Table A.5.

tional on filing for bankruptcy, receiving discharge is viewed as strictly preferable to dismissal. Several studies document the positive effects of debt discharge from bankruptcy (Dobbie & Song 2015, Dobbie et al. 2017), and in a similar spirit, dismissal is used as a negative outcome variable (Argyle et al. 2023).³⁶ My finding adds to the collection of evidence for bankruptcy debt relief’s positive association with credit outcomes. Leveraging the flags for a dismissal reason in the FJC data, I find that ad-induced filers are less likely to have their case dismissed due to (1) some filing mistake (i.e., dismissal for “failure to file information”), potentially reflecting the effect of having a lawyer, as well as (2) failure to pay court fees.

Financial. Third, I examine how ad-induced filers’ financial variables compare to existing filers. Consistent with the finding in Table 8 from Section 5.3 (i.e., the filing response to ads is lowest among consumers with many tradelines), I find that ad-induced filers have fewer assets and liabilities. In terms of different types of liabilities, ad-induced filers have less secured debt but more unsecured debt. If having more assets, especially via secured debt, was associated with financial sophistication, these differences may be interpreted as ad-induced filers being more under-informed ex ante. I do not find statistically significant differences in income between ad-induced filers and existing filers. Accordingly, ad-induced filers have lower debt-to-income ratio; the regression coefficient implies that ad-induced filers’ debt-to-income ratio is approximately 17% lower. If strategic default motive was correlated with higher debt-to-income ratio (i.e., more ex ante borrowing conditional on default), this finding can be interpreted as evidence of less strategic default among ad-induced filers. I explain this proposed interpretation in more detail in Section 7.

Credit. Lastly, I estimate the association between ad exposure and credit bureau variables. I find that ad-induced filers are similar to existing filers in terms of Risk Score, but

³⁶Nonetheless, there is evidence that not all forms of debt forgiveness generate positive credit effects (Kluender, Mahoney, Wong & Yin 2024).

they are likely to be older.³⁷ Ad-induced filers are also significantly less likely to be homeowners, which is in line with the aforementioned finding that they have fewer assets and liabilities, and less secured debt.³⁸ Relatedly, ad-induced filers are less likely to report ongoing foreclosure activity on their property. Finally, advertising-induced filers have less delinquent debt.

To summarize, ad-induced filers are significantly different from existing filers, both in terms of inherent characteristics (e.g., being a first-time filer, age) and choices (e.g., hiring lawyer representation, chapter choice). These differences may help explain: (1) why certain filers require an advertisement intervention for the bankruptcy filing decision, and (2) why such filers would experience positive credit outcomes post-bankruptcy. I defer the formal discussion on interpretation of these findings to Section 7.

6.2 Frivolous Cases

Because bankruptcy lawyers are paid on a per-case basis regardless of case outcome, one might be concerned whether lawyers would induce filings from individuals without a legitimate case for bankruptcy. Motivated by this premise, I examine whether lawyer advertising is associated with frivolous bankruptcy filings.

While there is no standard definition for frivolous bankruptcy cases, I assume an individual is less likely to be an appropriate candidate for bankruptcy if (1) they are not experiencing financial distress (e.g., high income, high Risk Score, no delinquent credit), (2) they are not eligible for debt relief (e.g., zero liabilities, having student loans as their only type of credit product),³⁹ and (3) their case was dismissed by the judge citing bankruptcy abuse. Employing both FJC and CCP data to construct variables related to these assumptions, I examine whether ad-induced filers are more likely to have frivolous cases com-

³⁷Age is defined as year minus the birth year of the consumer.

³⁸The homeowner flag is derived using existence of mortgage, home equity loan, or home equity line of credit.

³⁹Student loans are non-dischargeable from a standard bankruptcy proceeding; discharging a student loan requires an extra process to demonstrate that the loan causes an “undue hardship.”

pared to existing filers.

The results in Table 9 collectively suggest that ad-induced filers are in fact less likely to file frivolous cases. In panel A, I test whether ad exposure is significantly related to three outcome variables: (1) having the case dismissed by the judge citing bankruptcy abuse, (2) filing a case with no liabilities reported, and (3) having monthly income greater than \$10,000. In all columns, I find no evidence of ad-induced filers having more frivolous cases. Specifically, ad-induced filers are not any more likely than existing filers to have their case dismissed due to bankruptcy abuse or have monthly income greater than \$10,000. In fact, they are significantly less likely to report zero liabilities than existing filers. The results in panel B complement these findings. Ad-induced filers are not any more likely to have a prime Risk Score or have student loans as their only credit product. Moreover, they are significantly less likely to have a zero delinquent balance. I elaborate on how these findings potentially relate to the advertising effect on credit recovery in the following section.

7 Interpretation

I document three key facts in this paper: (1) bankruptcy law firm advertisements cause more filings, (2) there is a positive credit recovery effect of advertising, and (3) ad-induced filers are significantly different from existing filers. In this section, I discuss how these results can be interpreted as advertisements reducing under-information and stigma among bankruptcy filers.

Under-information and stigma in bankruptcy. As mentioned in the introduction, studies have documented the role of under-information in suboptimal financial decisions in various contexts.⁴⁰ Given the complexity involved in both assessing the value of bankruptcy and filing for bankruptcy, it is possible that information frictions also lead to suboptimal bankruptcy decisions. Moreover, unlike most consumer finance products

⁴⁰For more examples of household financial mistakes, see [Campbell \(2016\)](#).

(e.g., housing, auto, investment products) or legal settings (e.g., property law, personal injury), bankruptcy is also associated with stigma.⁴¹ Bankruptcy choice with stigma, a deadweight utility cost, would theoretically lead to underutilization of bankruptcy compared to an environment without stigma. In theory, both of these forces could give rise to a bankruptcy candidate population (i.e., households whose financially optimal choice is bankruptcy) that requires information intervention or stigma reduction.⁴² Assuming that individually optimal bankruptcy choice results in better credit outcomes, if advertisements informed or reduced stigma, one would expect to find the results documented in this paper, i.e., that advertising causes filings by individuals who are subsequently made observably better off from bankruptcy.⁴³

Ad-induced filers. Moreover, I argue that the findings on the differences between ad-induced filers and existing filers in Section 6 broadly align with the proposed interpretation. In terms of case characteristics, under-informed individuals are theoretically more likely to be first-time filers. Repeat filers, who presumably already know about bankruptcy from prior experience, are less likely to require ads for their decision to file. It is also plausible that having secured debt may be correlated with being more informed. This could be due to general financial sophistication required for owning an asset such as a house, or also because the risk of losing such an asset in a distress period mobilizes the individual to learn about their debt relief options. If this were the case, we would expect filers with less secured debt to be less informed with respect to bankruptcy. Lastly, if individuals who

⁴¹The stigma of bankruptcy may be furthermore related to culture and religion. In line with how culture and religion affect households' attitude toward financial products (e.g., [Guiso, Sapienza & Zingales 2006](#), [D'Acunto, Prokopczuk & Weber 2019](#)), there exist examples of religious attitudes concerning the morality of repaying your creditors.

⁴²One domain involving both under-information and stigma is examined in [Cheng, Severino & Townsend \(2021\)](#), which studies households' decisions with out-of-court settlements with debt collectors and finds that individuals are both (1) ill-informed about the costs of going through the court system and (2) concerned about the stigma associated with court judgment.

⁴³I aggregate the discussion on under-information and stigma in this paper, because the two concepts are closely related in the bankruptcy context. For example, an individual who perceives bankruptcy with stigma may choose to ignore information about bankruptcy, resulting in under-information. Similarly, in a purely informative consultation with a bankruptcy lawyer, learning the history of bankruptcy (i.e., bankruptcy was established to offer insurance against excessive debt) could result in stigma reduction.

perceive less bankruptcy stigma were: (1) less likely to require ads before filing, and (2) more likely to file a frivolous bankruptcy case, we would expect to find that ad-induced filers are less likely to file such cases.

Two alternative channels of bankruptcy lawyer advertising merit discussion. First, one view in the advertising literature characterizes advertisements as persuasive rather than informative (e.g., [Braithwaite 1928](#), [Becker & Murphy 1993](#), [Mullainathan, Schwartzstein & Shleifer 2008](#)).⁴⁴ In this paper's setting, if uninformative persuasion was the prevailing channel of bankruptcy law firm advertising, we would expect more ad-induced filings by those who either do not measurably benefit or do not have a legitimate bankruptcy case in the first place. Under these assumptions, I interpret my finding of positive credit recovery and fewer frivolous cases as evidence against pure persuasion in bankruptcy lawyer advertising.

Second, ads may excessively encourage strategic default motive in bankruptcies. While even such bankruptcies could be individually rational, making this channel not mutually exclusive with under-information and stigma, it is nevertheless important to evaluate this channel from the perspective of social efficiency. Although the analyses in this paper cannot directly measure strategic default motive of bankruptcy filers, the characterization of ad-induced filers allows for a relative comparison between ad-induced filers and existing filers. Specifically, if we assume that strategic default motive corresponds to more ex ante debt accumulation relative to income, I can interpret ad-induced filers' lower debt-to-income ratio as evidence against the hypothesis of higher strategic default motive among these filers. Additionally, if strategic filers have a higher likelihood of repeat filing, my finding of a higher first-time filer share among ad-induced filers also goes against this channel.

Client reviews of bankruptcy law firms. Next, to empirically illuminate the presence of under-information and stigma in the filer-lawyer environment, I manually collect public

⁴⁴For empirical evidence supporting this view, see e.g., [DellaVigna & Gentzkow \(2010\)](#), [Gurun et al. \(2016\)](#).

client reviews of bankruptcy law firms on Google. Specifically, I collect 58,335 unique reviews for the 2,716 bankruptcy law firms in the Infogroup data. I leverage this text information as well as the accompanying ratings for the following exercises.

First, I show that words and phrases that (1) admit being under-informed (e.g., “did not know,” “wrong idea”) or (2) acknowledging the role of stigma (e.g., “ashamed,” “hard to swallow”) are common in client reviews.⁴⁵ Specifically, among long client reviews (i.e., top quartile by character count), I find that 25 percent use such a word or phrase. Next, I find that a significant share of reviews also reference lawyers either informing or reducing stigma. Specifically, 56 percent of client reviews include some word or phrase that acknowledges the lawyer playing such role. These include “informative,” “answered my questions,” “eased my mind,” and “made me feel comfortable.”⁴⁶

The above exercise documents the presence of under-information and stigma, but it does not directly reveal whether the affected clients were made better off from bankruptcy. Therefore, using client review ratings as a proxy for post-bankruptcy outcomes, I explore the empirical relationship between word occurrences and review ratings. I follow the approach in [Taddy \(2013\)](#) and employ Multinomial Inverse Regression (MNIR), which estimates the loading of each word on ratings in a multinomial logistic regression. Appendix Table [A.7](#) reports the regression coefficients for selected words related to under-information and stigma. The table shows that all coefficients are positive, indicating that clients with under-information and stigma are more likely to assign a better rating for their law firm. Put differently, bankruptcy filers who acknowledge being under-informed or having stigma report being better off from bankruptcy.

Additionally, I show that the positive advertising effect on credit outcomes is concentrated in regions where bankruptcy law firms have higher client ratings. To test this, I split the sample of distressed households based on whether they reside in a region with low average client ratings of bankruptcy law firms, classifying the bottom 25% as “low” given

⁴⁵Panel A of Table [A.6](#) reports all the words and phrases used for identifying such reviews.

⁴⁶Panel B of Table [A.6](#) reports the rest of the words and phrases on the list.

the left-skewed distribution of client ratings. Re-estimating Equation (2) by subsample, Figure A.7 shows that the credit recovery results documented in Section 5.2 are driven entirely by regions with highly rated law firms. I interpret this as suggestive evidence that higher-rated bankruptcy law firms – presumably those more effective at addressing information frictions and stigma – are key to generating positive outcomes.

In summary, this section discusses how under-information and stigma can explain the results in this paper. Specifically, I argue that the characterization of ad-induced filers is consistent with this proposed interpretation. Moreover, using client reviews of bankruptcy firms, I demonstrate the presence of under-information and stigma in bankruptcy filers, as well as the role of lawyers in informing and reducing stigma. This interpretation is strengthened by the MNIR exercise, which suggests occurrences of words reflecting under-information and stigma are positively associated with review ratings. Finally, I show that bankruptcy law firms with higher client ratings drive the advertising effect on credit outcomes.

8 Conclusion

In this paper, I study the effects of bankruptcy law firm advertisements on household credit. Specifically, I merge advertisement data with credit bureau data and leverage the borders between media markets to isolate a plausibly exogenous variation in exposure to local TV advertisements by bankruptcy law firms. Using this variation, I document a significant causal effect of advertising on filings and show that distressed households with more exposure to ads have better credit outcomes. Finally, to better understand the potential explanations for these findings, I characterize how ad-induced filers differ from existing filers in terms of their case, financial, and credit profile.

I argue that the findings in this paper can be interpreted as evidence for the under-utilization of bankruptcy due to under-information and stigma. Additionally, this paper

demonstrates that bankruptcy law firm advertisements can help with reducing these frictions. This finding may be surprising given the historical context of legal advertising, which was prohibited until 1977, and moreover bankruptcy lawyers' fee incentives, which are unrelated to client outcomes.

Considering the significant debt relief available to bankruptcy filers, underutilization of bankruptcy could be tremendously costly to households in financial distress. How to assist those who can benefit from bankruptcy with the bankruptcy decision represents an important policy question. This paper informs future policies not only related to bankruptcy law firm advertisements but also more broadly related to underutilization in financial decisions and the role of advertisement interventions.

References

- Sumit Agarwal and Brent W Ambrose. The effect of advertising on home equity credit choices. *Research Handbook on Behavioral Law and Economics*, 2018.
- Sumit Agarwal, Gene Amromin, Itzhak Ben-David, Souphala Chomsisengphet, Tomasz Piskorski, and Amit Seru. Policy intervention in debt renegotiation: Evidence from the home affordable modification program. *Journal of Political Economy*, 125(3):654–712, 2017.
- Sumit Agarwal, Jia He, Tien Foo Sing, and Jian Zhang. Gender gap in personal bankruptcy risks: Empirical evidence from Singapore. *Review of Finance*, 22(2):813–847, 2018.
- Sumit Agarwal, Gene Amromin, Souphala Chomsisengphet, Tim Landvoigt, Tomasz Piskorski, Amit Seru, and Vincent Yao. Mortgage refinancing, consumer spending, and competition: Evidence from the home affordable refinancing program. *NBER Working Paper*, 2020a.
- Sumit Agarwal, Vyacheslav Mikhed, and Barry Scholnick. Peers’ income and financial distress: Evidence from lottery winners and neighboring bankruptcies. *Review of Financial Studies*, 33(1):433–472, 2020b.
- Stefania Albanesi and Jaromir Nosal. Insolvency after the 2005 bankruptcy reform. *NBER Working Paper*, 2018.
- Steffen Andersen, John Y Campbell, Kasper Meisner Nielsen, and Tarun Ramadorai. Sources of inaction in household finance: Evidence from the Danish mortgage market. *American Economic Review*, 110(10):3184–3230, 2020.
- Abhay P Aneja and Carlos F Avenancio-León. No credit for time served? Incarceration and credit-driven crime cycles. *Working Paper*, 2020.
- Samuel Antill. Are bankruptcy professional fees excessively high? *Working Paper*, 2020.
- Bronson Argyle, Sasha Indarte, Benjamin Iverson, and Christopher Palmer. Explaining racial disparities in personal bankruptcy outcomes. *Working Paper*, 2023.
- Abhijit Banerjee, Dean Karlan, Hannah Trachtman, and Christopher R Udry. Does poverty change labor supply? Evidence from multiple income effects and 115,579 bags. *Working Paper*, 2020.
- Minji Bang, Lucie L’Heude, Andrew Postlewaite, and Holger Sieg. Access and Exposure to Local News Media in the Digital Era: Evidence from US Media Markets. *Working Paper*, 2023.
- Gary S Becker and Kevin M Murphy. A simple theory of advertising as a good or bad. *Quarterly Journal of Economics*, 108(4):941–964, 1993.

- Efraim Benmelech, Ralf R Meisenzahl, and Rodney Ramcharan. The real effects of liquidity during the financial crisis: Evidence from automobiles. *Quarterly Journal of Economics*, 132(1):317–365, 2017.
- Martin Beraja, Andreas Fuster, Erik Hurst, and Joseph Vavra. Regional heterogeneity and the refinancing channel of monetary policy. *Quarterly Journal of Economics*, 134(1):109–183, 2019.
- Shai Bernstein, Emanuele Colonnelli, Benjamin Charles Iverson, and Mitchell Hoffman. Life after death: A field experiment with small businesses on information frictions, stigma, and bankruptcy. *Working Paper*, 2022.
- Marianne Bertrand, Dean Karlan, Sendhil Mullainathan, Eldar Shafir, and Jonathan Zinman. What’s advertising content worth? Evidence from a consumer credit marketing field experiment. *Quarterly Journal of Economics*, 125(1):263–306, 2010.
- Saurabh Bhargava and Dayanand Manoli. Psychological frictions and the incomplete take-up of social benefits: Evidence from an IRS field experiment. *American Economic Review*, 105(11):3489–3529, 2015.
- Board of Governors of the Federal Reserve System. Report to the Congress on credit scoring and its effects on the availability and affordability of credit. 2007.
- Marieke Bos, Emily Breza, and Andres Liberman. The labor market effects of credit market information. *Review of Financial Studies*, 31(6):2005–2037, 2018.
- Dorothea Braithwaite. The economic effects of advertisement. *Economic Journal*, 38(149):16–37, 1928.
- Jean Braucher, Dov Cohen, and Robert M Lawless. Race, attorney influence, and bankruptcy chapter choice. *Journal of Empirical Legal Studies*, 9(3):393–429, 2012.
- Sarah Bridges and Richard Disney. Debt and depression. *Journal of Health Economics*, 29(3):388–403, 2010.
- John Y Campbell. Restoring rational choice: The challenge of consumer financial regulation. *American Economic Review*, 106(5):1–30, 2016.
- Pablo Celhay, Bruce Meyer, and Nikolas Mittag. Stigma in welfare programs. *Working Paper*, 2022.
- Rajashri Chakrabarti and Nathaniel Pattison. Auto credit and the 2005 bankruptcy reform: The impact of eliminating cramdowns. *Review of Financial Studies*, 32(12):4734–4766, 2019.
- John Chalmers and Jonathan Reuter. Is conflicted investment advice better than no advice? *Journal of Financial Economics*, 138(2):366–387, 2020.

- Ing-Haw Cheng, Felipe Severino, and Richard R Townsend. How do consumers fare when dealing with debt collectors? evidence from out-of-court settlements. *Review of Financial Studies*, 34(4):1617–1660, 2021.
- Claudia Custodio, Christopher Hansman, and Diogo Mendes. Information frictions and firm take up of government support: A randomised controlled experiment. *Swedish House of Finance Research Paper*, (21-15), 2022.
- Francesco D’Acunto, Marcel Prokopczuk, and Michael Weber. Historical antisemitism, ethnic specialization, and financial development. *Review of Economic Studies*, 86(3):1170–1206, 2019.
- Stefano DellaVigna and Matthew Gentzkow. Persuasion: empirical evidence. *Annual Review of Economics*, 2(1):643–669, 2010.
- Marco Di Maggio, Amir Kermani, Benjamin J Keys, Tomasz Piskorski, Rodney Ramcharan, Amit Seru, and Vincent Yao. Interest rate pass-through: Mortgage rates, household consumption, and voluntary deleveraging. *American Economic Review*, 107(11):3550–3588, 2017.
- Will Dobbie and Jae Song. Debt relief and debtor outcomes: Measuring the effects of consumer bankruptcy protection. *American Economic Review*, 105(3):1272–1311, 2015.
- Will Dobbie, Paul Goldsmith-Pinkham, and Crystal S Yang. Consumer bankruptcy and financial health. *Review of Economics and Statistics*, 99(5):853–869, 2017.
- Will Dobbie, Paul Goldsmith-Pinkham, Neale Mahoney, and Jae Song. Bad credit, no problem? Credit and labor market consequences of bad credit reports. *Journal of Finance*, 75(5):2377–2419, 2020.
- Mark Egan, Gregor Matvos, and Amit Seru. The market for financial adviser misconduct. *Journal of Political Economy*, 127(1):233–295, 2019.
- Scott Fay, Erik Hurst, and Michelle J White. The household bankruptcy decision. *American Economic Review*, 92(3):706–718, 2002.
- Amy Finkelstein and Matthew J Notowidigdo. Take-up and targeting: Experimental evidence from SNAP. *Quarterly Journal of Economics*, 134(3):1505–1556, 2019.
- Jonathan D Fisher. Social influence and the consumer bankruptcy decision. *Contemporary Economic Policy*, 38(3):474–482, 2020.
- Pamela Foohey, Robert M Lawless, Katherine Porter, and Deborah Thorne. “No money down” bankruptcy. *Southern California Law Review*, 90:1055, 2016.
- Peter Ganong and Pascal Noel. Why do borrowers default on mortgages? *Quarterly Journal of Economics*, 138(2):1001–1065, 2023.
- Nicola Gennaioli, Andrei Shleifer, and Robert Vishny. Money doctors. *Journal of Finance*, 70(1):91–114, 2015.

- Radhakrishnan Gopalan, Todd A Gormley, and Ankit Kalda. It's not so bad: Director bankruptcy experience and corporate risk-taking. *Journal of Financial Economics*, 142(1): 261–292, 2021.
- Robin Greenwood and David Scharfstein. The growth of finance. *Journal of Economic Perspectives*, 27(2):3–28, 2013.
- David B Gross and Nicholas S Souleles. An empirical analysis of personal bankruptcy and delinquency. *Review of Financial Studies*, 15(1):319–347, 2002.
- Tal Gross and Matthew J Notowidigdo. Health insurance and the consumer bankruptcy decision: Evidence from expansions of Medicaid. *Journal of Public Economics*, 95(7-8): 767–778, 2011.
- Tal Gross, Matthew J Notowidigdo, and Jialan Wang. Liquidity constraints and consumer bankruptcy: Evidence from tax rebates. *Review of Economics and Statistics*, 96(3):431–443, 2014.
- Tal Gross, Raymond Kluender, Feng Liu, Matthew J. Notowidigdo, and Jialan Wang. The economic consequences of bankruptcy reform. *American Economic Review*, 111(7):2309–41, July 2021.
- Luigi Guiso, Paola Sapienza, and Luigi Zingales. Does culture affect economic outcomes? *Journal of Economic Perspectives*, 20(2):23–48, 2006.
- Luigi Guiso, Paola Sapienza, and Luigi Zingales. The determinants of attitudes toward strategic default on mortgages. *Journal of Finance*, 68(4):1473–1515, 2013.
- Apoorv Gupta, Jacopo Ponticelli, and Andrea Tesei. Information frictions and take-up of government credit programs. *Working Paper*, 2023.
- Umit G Gurun, Gregor Matvos, and Amit Seru. Advertising expensive mortgages. *Journal of Finance*, 71(5):2371–2416, 2016.
- Johannes Haushofer and Ernst Fehr. On the psychology of poverty. *Science*, 344(6186): 862–867, 2014.
- Kyle Herkenhoff, Gordon Phillips, and Ethan Cohen-Cole. How credit constraints impact job finding rates, sorting & aggregate output. *Working Paper*, 2022.
- Elisabeth Honka, Ali Hortaçsu, and Maria Ana Vitorino. Advertising, consumer awareness, and choice: Evidence from the US banking industry. *The RAND Journal of Economics*, 48(3):611–646, 2017.
- John Eric Humphries, Christopher A Neilson, and Gabriel Ulyssea. Information frictions and access to the paycheck protection program. *Journal of Public Economics*, 190:104244, 2020.
- Sasha Indarte. Moral hazard versus liquidity in household bankruptcy. *Journal of Finance*, 78(5):2421–2464, 2023.

- Julapa Jagtiani and Wenli Li. Credit access after consumer bankruptcy filing: new evidence. *American Bankruptcy Law Journal*, 89:327, 2015.
- Ankit Kalda. Peer financial distress and individual leverage. *Review of Financial Studies*, 33(7):3348–3390, 2020.
- Supreet Kaur, Sendhil Mullainathan, Suanna Oh, and Frank Schilbach. Do financial concerns make workers less productive? *Working Paper*, 2021.
- Benjamin J Keys, Devin G Pope, and Jaren C Pope. Failure to refinance. *Journal of Financial Economics*, 122(3):482–499, 2016.
- Benjamin J Keys, Neale Mahoney, and Hanbin Yang. What determines consumer financial distress? Place- and person-based factors. *Review of Financial Studies*, 2022.
- Kristoph Kleiner, Noah Stoffman, and Scott E Yonker. Friends with bankruptcy protection benefits. *Journal of Financial Economics*, 139(2):578–605, 2021.
- Raymond Kluender, Neale Mahoney, Francis Wong, and Wesley Yin. The effects of medical debt relief: Evidence from two randomized experiments. *Working Paper*, 2024.
- Wenli Li, Michelle J White, and Ning Zhu. Did bankruptcy reform cause mortgage defaults to rise? *American Economic Journal: Economic Policy*, 3(4):123–47, 2011.
- Lynn M LoPucki. The demographics of bankruptcy practice. *American Bankruptcy Law Journal*, 63:289, 1989.
- Lois R Lupica. The consumer bankruptcy fee study. *American Bankruptcy Institute Law Review*, 20:17, 2012.
- Neale Mahoney. Bankruptcy as implicit health insurance. *American Economic Review*, 105(2):710–46, 2015.
- Christopher Mayer, Edward Morrison, Tomasz Piskorski, and Arpit Gupta. Mortgage modification and strategic behavior: Evidence from a legal settlement with Country-wide. *American Economic Review*, 104(9):2830–57, 2014.
- Vyacheslav Mikhed and Barry Scholnick. The causes of household bankruptcy: The interaction of income shocks and balance sheets. *Federal Reserve Bank of Philadelphia Working Paper 16-19*, 2016.
- Edward R Morrison, Belisa Pang, and Antoine Uettwiller. Race and bankruptcy: Explaining racial disparities in consumer bankruptcy. *Journal of Law and Economics*, 63(2):269–295, 2020.
- Sendhil Mullainathan, Joshua Schwartzstein, and Andrei Shleifer. Coarse thinking and persuasion. *Quarterly Journal of Economics*, 123(2):577–619, 2008.
- Arna Olafsson. Household financial distress and initial endowments: Evidence from the 2008 financial crisis. *Health Economics*, 25:43–56, 2016.

- Tomasz Piskorski, Amit Seru, and James Witkin. Asset quality misrepresentation by financial intermediaries: Evidence from the RMBS market. *Journal of Finance*, 70(6):2635–2678, 2015.
- Jonathan Reuter and Antoinette Schoar. Demand-side and supply-side constraints in the market for financial advice. *Annual Review of Financial Economics*, 16(1):391–411, 2024.
- Claudia Robles-Garcia. Competition and incentives in mortgage markets: The role of brokers. *Working Paper*, 2022.
- Felipe Severino, Meta Brown, and Rajashri Chakrabarti. Personal bankruptcy protection and household debt. *Working Paper*, 2024.
- Bradley T Shapiro. Positive spillovers and free riding in advertising of prescription pharmaceuticals: The case of antidepressants. *Journal of Political Economy*, 126(1):381–437, 2018.
- Bradley T Shapiro, Günter J Hitsch, and Anna E Tuchman. Tv advertising effectiveness and profitability: Generalizable results from 288 brands. *Econometrica*, 89(4):1855–1879, 2021.
- Elizabeth Sweet, Arijit Nandi, Emma K Adam, and Thomas W McDade. The high price of debt: Household financial debt and its impact on mental and physical health. *Social Science & Medicine*, 91:94–100, 2013.
- Matt Taddy. Multinomial inverse regression for text analysis. *Journal of the American Statistical Association*, 108(503):755–770, 2013.
- Yi-Lin Tsai and Elisabeth Honka. Informational and noninformational advertising content. *Marketing Science*, 40(6):1030–1058, 2021.
- Jialan Wang, Jeyul Yang, Benjamin Charles Iverson, and Raymond Kluender. Bankruptcy and the COVID-19 Crisis. *Working Paper*, 2021.
- Michelle White. Why don't more households file for bankruptcy? *Journal of Law, Economics and Organization*, 14:205–205, 1998.

Figure 1: Aggregate Advertising and Bankruptcy Filings

The following figure plots aggregate bankruptcy filings (brown) with aggregate advertisements by bankruptcy law firms (orange) per month. The gray dashed line represents 2020 March, when COVID-19 lockdown policies were first announced in the United States.

Sources: Federal Judicial Center (FJC) and Kantar

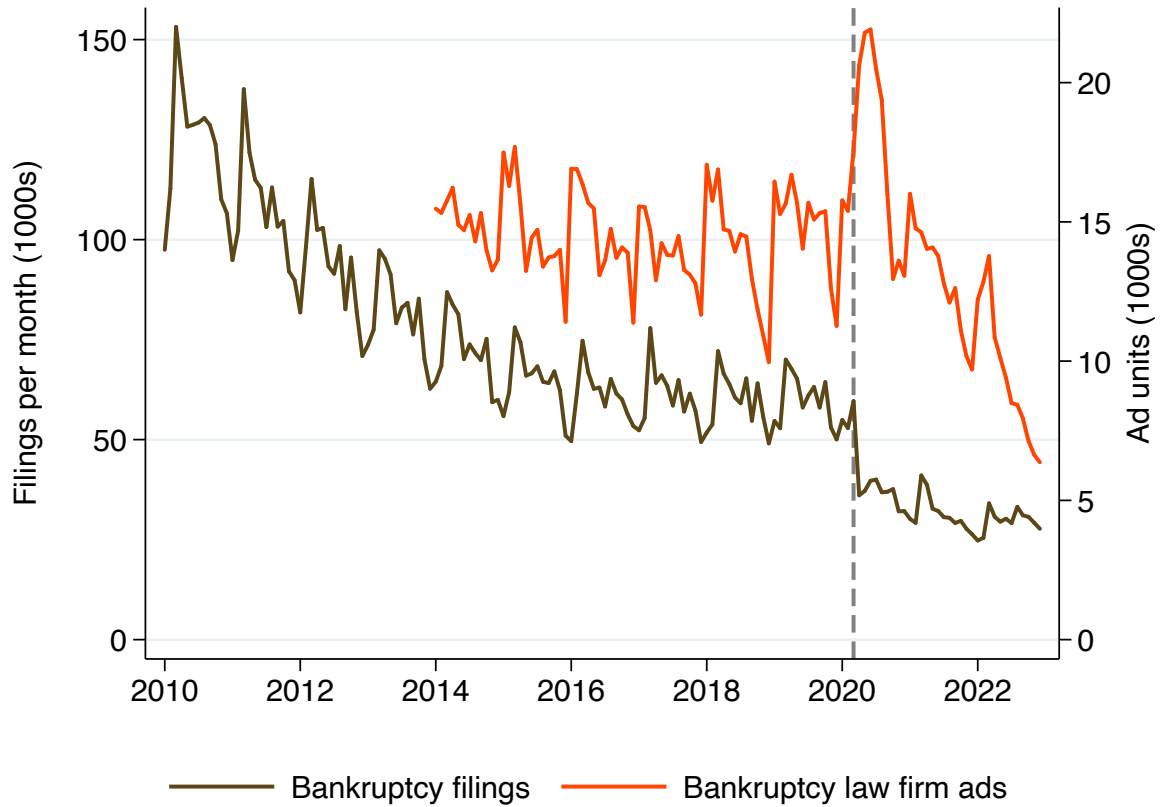


Figure 2: Georgia DMA Borders

The following figure illustrates the three major Designated Market Areas (DMAs) in Georgia. The red counties belong to the Atlanta DMA, the blue counties belong to the Macon DMA, and the green counties belong to the Savannah DMA. The border counties are shaded in darker colors. Each major city associated with the DMA is denoted in a dot.

Sources: Author's illustration based on DMA maps

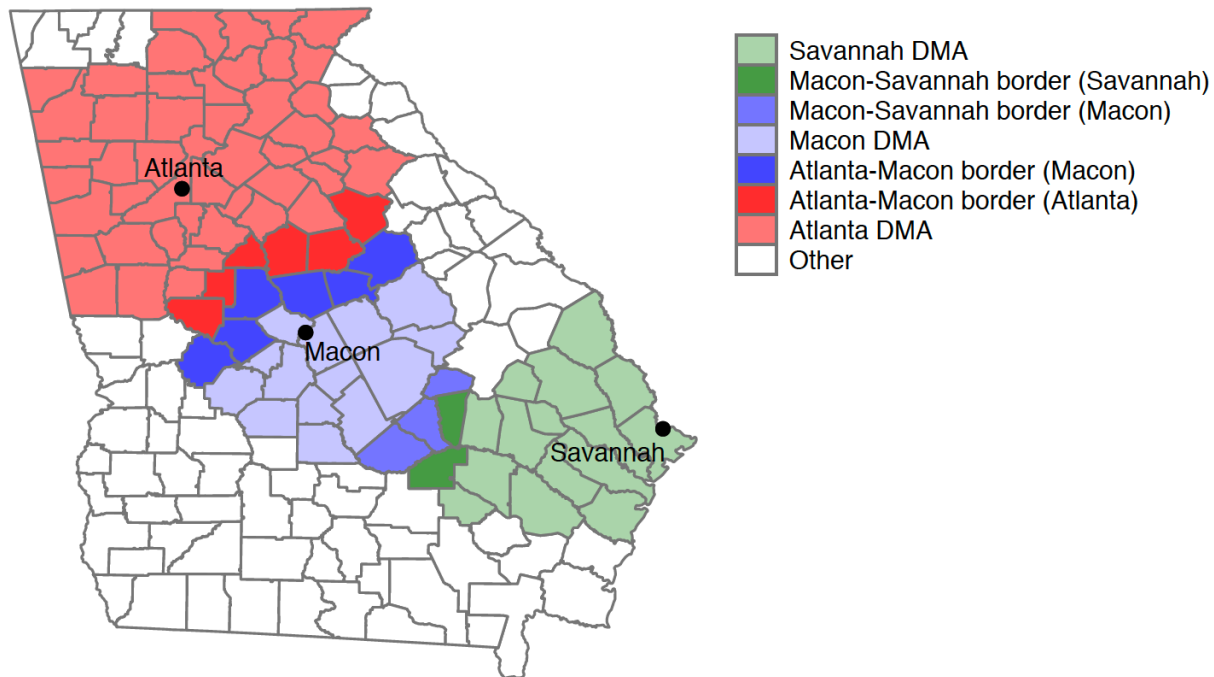


Figure 3: Advertising and Bankruptcy Filings

The following figure illustrates bankruptcy filing rates and bankruptcy lawyer advertisements for the Southeastern United States. Panel A shows the average annual DMA-level advertisements (in thousands), with darker red corresponding to higher spending. Panel B reports the DMA-level average bankruptcy filing rate in 2013 with darker red also corresponding to higher filing rate. Panel C omits the non-border counties and reports the average bankruptcy filing rates for border counties only.

Sources: FJC and Kantar

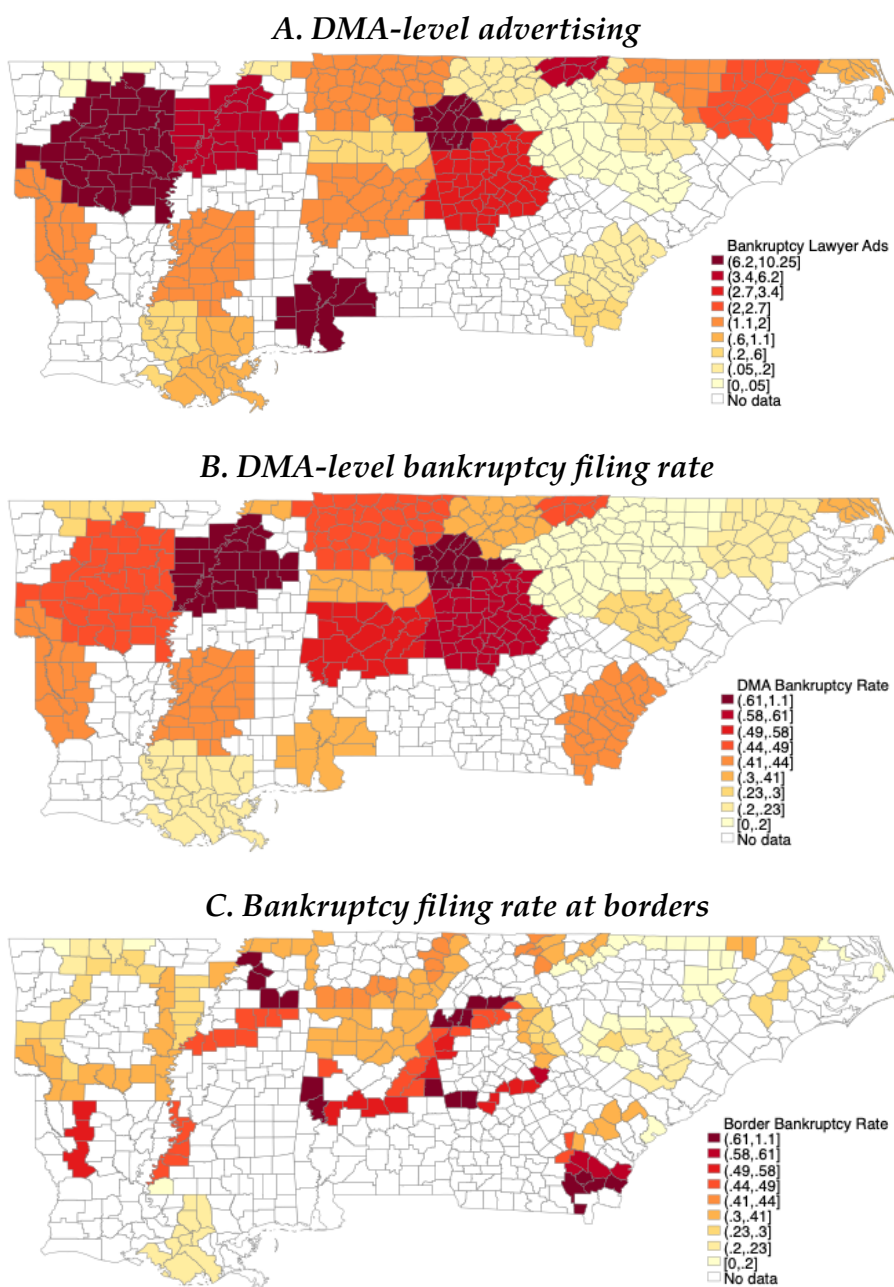


Figure 4: Filing Rate by Risk Score and Delinquent Debt

The following figure illustrates bankruptcy filing rates across Risk Score (panel A) and log(delinquent debt) (panel B). For each panel, households are sorted into bins according to the X -axis variable, and each bin's corresponding dot reports the quarterly filing rate for the associated households.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP)

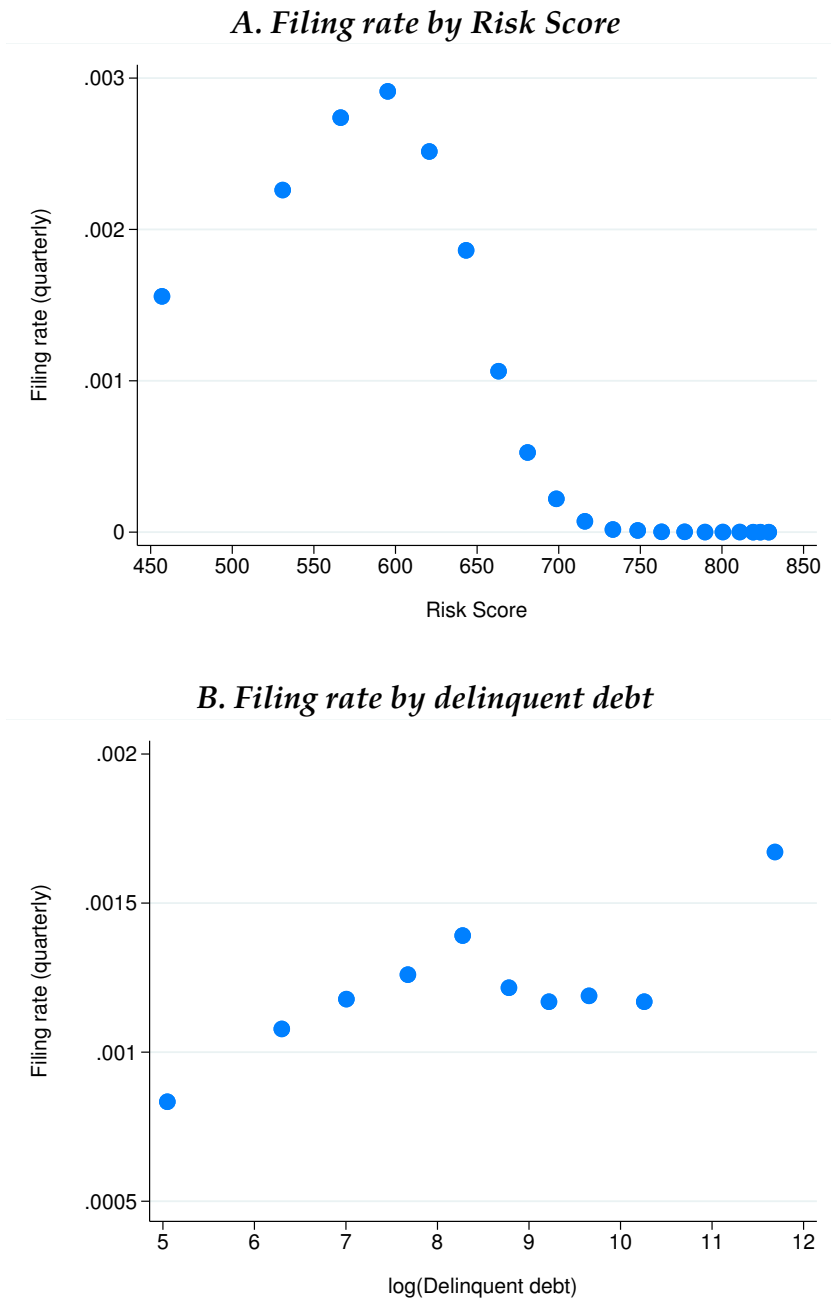


Figure 5: Credit Recovery

This figure reports the results from estimating Equation (2). The outcome variables include: (1) having a prime Risk Score, (2) having a delinquent balance over \$1000, (3) log(current debt balance), and (4) number of auto loans. All regressions include county fixed effects and year fixed effects, and additionally control for county unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the county-level. The bands denote the 90% confidence interval.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), Bureau of Labor Statistics (BLS), Bureau of Economic Analysis (BEA), Zillow, and Kantar

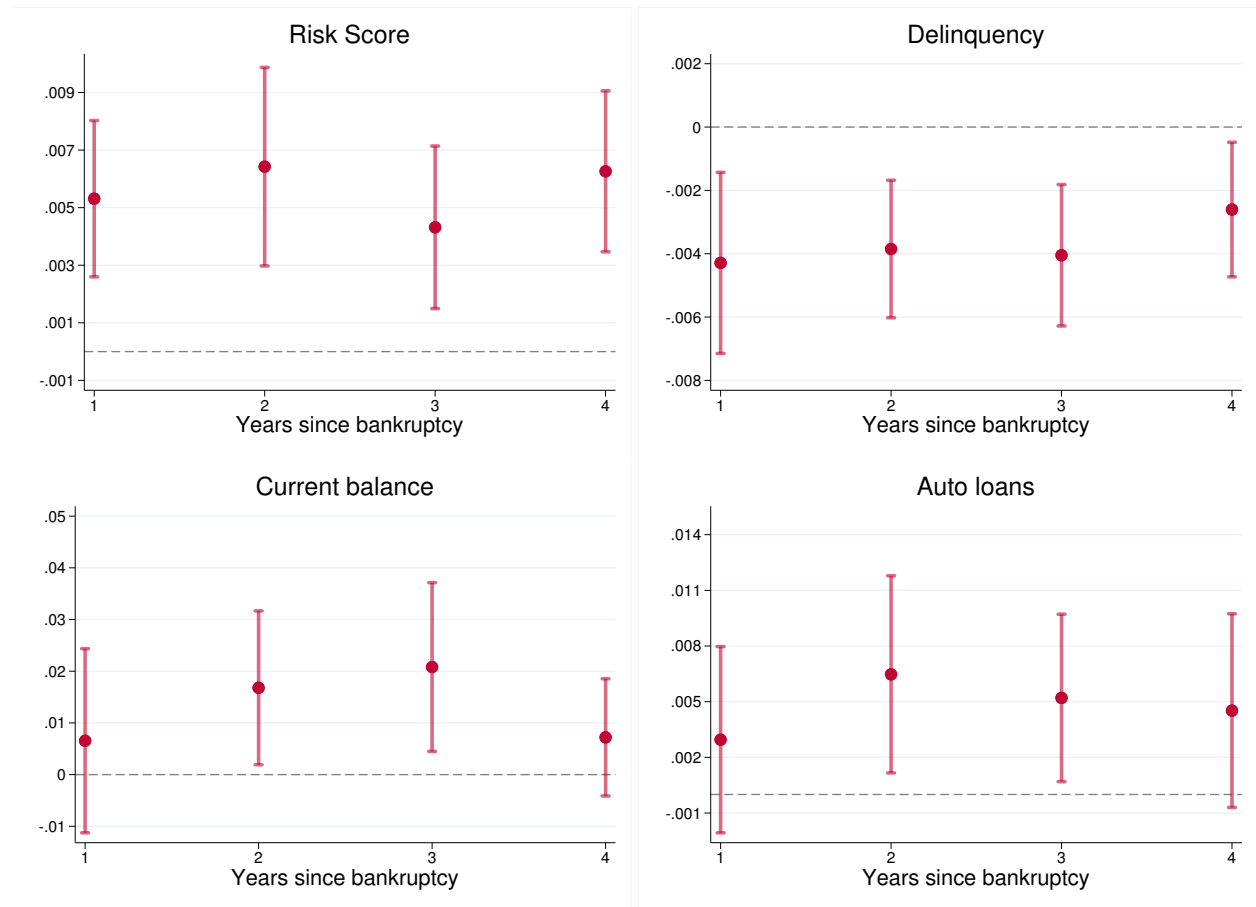


Figure 6: Advertisement-induced Filers

This figure reports the results from estimating Equation (5), which examines how bankruptcy filers' characteristics are associated with ad exposure. Each line reports the *t*-statistic of the coefficient from regressing ad exposure on the corresponding outcome variable. All regressions include county fixed effects and year fixed effects, and additionally control for county unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the county-level, and the bands denote the 90% confidence interval.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), FJC, BLS, BEA, Zillow, and Kantar

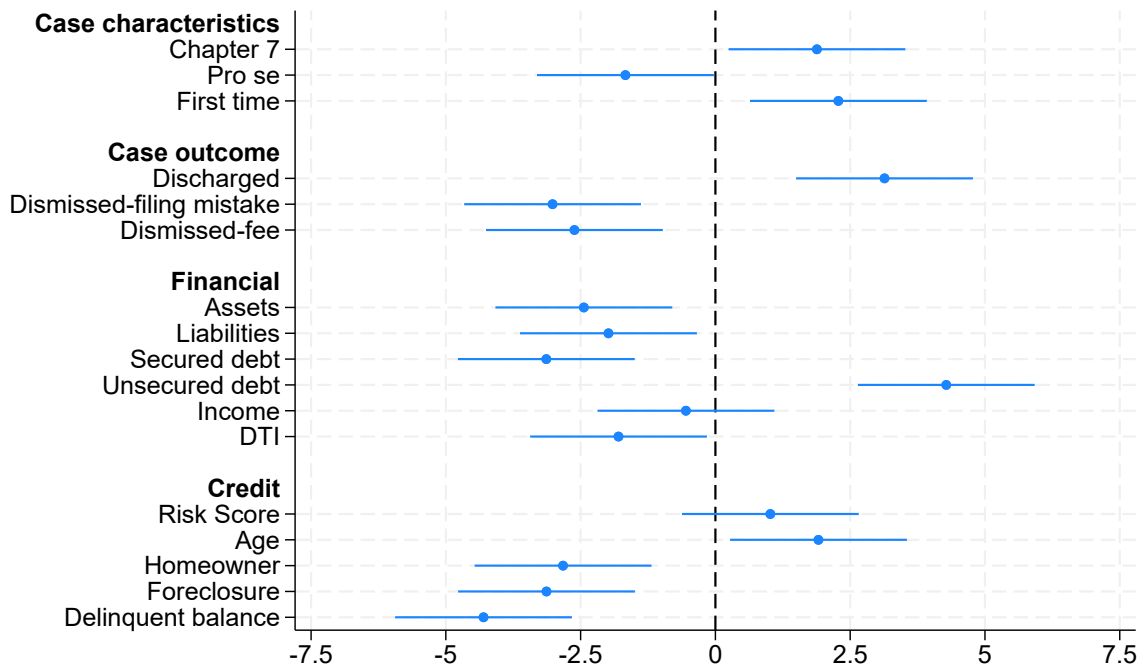


Table 1: Summary Statistics

The following table reports the summary statistics for my data. The sample period covers 2013–2019 for panels A, B, and C, and 2019 for panel D. The “rest of sample” population in panel A is defined as a random sample of similar size to filers from the non-filer population. The dollar variables in panel A are reported in thousands. For the FJC variables in panel A, I exclude the top 0.1% of filers by each variable.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), FJC, BLS, BEA, Kantar, In-fogroup, and Google Reviews

| <i>A. Individuals</i> | | | | | | | | |
|-----------------------------|-------------------|--------|--------|-------|---------------------|--------|--------|--------|
| | Bankruptcy filers | | | | Rest of sample | | | |
| | N | Mean | St Dev | P50 | N | Mean | St Dev | P50 |
| CCP variables: | | | | | | | | |
| Risk Score | 268,036 | 545 | 96 | 546 | 264,812 | 701 | 102 | 720 |
| Age | 271,225 | 48 | 14 | 46 | 299,901 | 52 | 20 | 50 |
| Tradelines | 267,446 | 7.0 | 5.5 | 6.0 | 267,260 | 4.6 | 4.2 | 3.5 |
| Current debt (\$) | 253,825 | 58.1 | 100.1 | 18.3 | 237,097 | 80.3 | 159.1 | 16.9 |
| Delinquent debt (\$) | 253,826 | 42.8 | 109.7 | 8.1 | 237,099 | 4.1 | 27.2 | 0.0 |
| Has mortgage | 267,446 | 0.38 | 0.49 | 0.00 | 267,260 | 0.34 | 0.48 | 0.00 |
| Foreclosure | 269,292 | 0.03 | 0.17 | 0.00 | 272,208 | 0.00 | 0.06 | 0.00 |
| FJC variables: | | | | | | | | |
| Total assets (\$) | 5,516,055 | 95.9 | 158.2 | 28.4 | - | - | - | - |
| Total liabilities (\$) | 5,516,055 | 142.7 | 208.5 | 81.1 | - | - | - | - |
| Dischargeable debt (\$) | 5,109,396 | 136.8 | 203.3 | 72.9 | - | - | - | - |
| Avg monthly income (\$) | 5,219,815 | 3.1 | 1.9 | 2.7 | - | - | - | - |
| Avg monthly expenses (\$) | 5,216,997 | 2.9 | 1.7 | 2.6 | - | - | - | - |
| <i>B. Counties</i> | | | | | | | | |
| | Border counties | | | | Non-border counties | | | |
| | N | Mean | St Dev | P50 | N | Mean | St Dev | P50 |
| Bankruptcy filings per 100 | 713 | 0.28 | 0.16 | 0.26 | 958 | 0.30 | 0.17 | 0.27 |
| Population (1000s) | 724 | 131.17 | 352.23 | 35.47 | 987 | 165.21 | 477.85 | 37.12 |
| Unemployment rate (%) | 732 | 5.47 | 1.47 | 5.37 | 997 | 5.08 | 1.60 | 4.84 |
| Income per capita (\$1000s) | 724 | 40.22 | 10.37 | 37.75 | 987 | 43.62 | 12.27 | 41.48 |
| <i>C. DMAs</i> | | | | | | | | |
| | N | Mean | St Dev | P5 | P25 | P50 | P75 | P95 |
| Population (1000s) | 100 | 2749 | 3158 | 743 | 1078 | 1755 | 3187 | 7604 |
| N. ads | 100 | 1599 | 2696 | 0 | 68 | 524 | 1991 | 6761 |
| Ad spending (\$1000s) | 100 | 124.73 | 292.28 | 0.00 | 6.76 | 36.24 | 121.91 | 449.07 |
| <i>D. Law Firms</i> | | | | | | | | |
| | N | Mean | St Dev | P5 | P25 | P50 | P75 | P95 |
| Employees | 2716 | 6.57 | 23.88 | 1.00 | 2.00 | 3.00 | 5.00 | 18.00 |
| Sales (\$1000s) | 2716 | 1110 | 4546 | 141 | 357 | 590 | 974 | 2983 |
| N. branches | 2716 | 1.66 | 2.01 | 1.00 | 1.00 | 1.00 | 2.00 | 4.00 |
| Age | 815 | 29.68 | 23.34 | 4.00 | 13.00 | 26.00 | 39.00 | 73.00 |
| Rating | 2716 | 4.47 | 0.74 | 3.00 | 4.30 | 4.80 | 5.00 | 5.00 |
| Review count | 2716 | 31.70 | 63.35 | 1.00 | 4.00 | 12.00 | 32.00 | 127.00 |

Table 2: Balance of Covariates

The following table reports the average of variables related to bankruptcy and the local economy across eight quantiles of bankruptcy lawyer advertising spending at the border-unit-year-level. The rate and share variables are expressed in percentage points, and Income per capita is expressed in dollars. The final column shows the standard deviation for the corresponding variable across all observations in the sample. The sample period spans 2013–2019 except for discharge rate, which spans 2013–2016 in order to exclude Chapter 13 cases still in payment period.

Sources: FJC, BLS, BEA, Zillow, and Kantar

| | Quantile of bankruptcy law firm advertising | | | | | | | | St. Dev. |
|--------------------|---|-------|-------|-------|-------|-------|-------|-------|----------|
| | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | |
| Filing rate | 0.16 | 0.21 | 0.20 | 0.24 | 0.25 | 0.26 | 0.26 | 0.28 | 0.12 |
| Chapter 7 share | 69.86 | 73.27 | 69.49 | 62.72 | 71.36 | 72.07 | 75.02 | 67.28 | 15.84 |
| Discharge rate | 80.46 | 84.87 | 81.41 | 80.81 | 84.95 | 84.87 | 83.78 | 78.64 | 9.20 |
| Pro se rate | 11.42 | 4.05 | 5.77 | 4.76 | 4.81 | 4.17 | 7.70 | 8.39 | 11.81 |
| Unemployment rate | 6.17 | 5.23 | 5.19 | 5.03 | 5.89 | 4.99 | 5.82 | 6.21 | 1.36 |
| Income per capita | 40728 | 43621 | 42601 | 44785 | 40469 | 43152 | 40759 | 38511 | 10258 |
| House price growth | 5.01 | 3.87 | 3.95 | 4.32 | 4.25 | 4.35 | 4.77 | 6.04 | 2.59 |
| Household DTI | 1.72 | 1.91 | 1.90 | 2.04 | 1.69 | 1.77 | 1.54 | 1.97 | 0.55 |

Table 3: Advertising Effect on Bankruptcy Filings

This table reports the results from estimating Equation (1). The outcome variable is bankruptcy filing rate in all columns. Ad exposure denotes the number of ads in thousands, Unemployment rate and House price growth are in percentage points, and Income per capita and Population are in logs. Standard errors are clustered at the border-level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), BLS, BEA, Zillow, and Kantar

| | (1) | (2) | (3) | (4) |
|--------------------|---------------------|---------------------|---------------------|----------------------|
| Ad exposure | 0.011*** (0.002) | 0.012*** (0.002) | 0.008*** (0.002) | 0.007*** (0.001) |
| Unemployment rate | | | | 0.001 (0.005) |
| Income per capita | | | | -0.123*** (0.033) |
| Population | | | | 0.012 (0.009) |
| House price growth | | | | 0.123 (0.112) |
| Household DTI | | | | -0.014 (0.014) |
| Observations | 1,834 | 1,834 | 1,834 | 1,834 |
| R^2 | 0.038 | 0.164 | 0.777 | 0.787 |
| Year FE | No | Yes | No | No |
| Border-Year FE | No | No | Yes | Yes |

Table 4: Advertising Effect Dynamics

This table reports the results from estimating an augmented version of Equation (1) with lags of Ad exposure. Specifically, Ad exposure_{*t*-1} represents the number of ads (in thousands) in the previous year, and Ad exposure_{*t*-2} corresponds to the equivalent figure from two years prior. The outcome variable is bankruptcy filing rate in all columns. Controls include unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the border-level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), BLS, BEA, Zillow, and Kantar

| | (1) | (2) | (3) | (4) |
|-----------------------------------|--------------------|--------------------|--------------------|--------------------|
| Ad exposure | 0.006** (0.003) | 0.006** (0.003) | 0.006** (0.003) | 0.006** (0.003) |
| Ad exposure _{<i>t</i>-1} | 0.001 (0.002) | 0.003 (0.003) | 0.002 (0.002) | 0.003 (0.003) |
| Ad exposure _{<i>t</i>-2} | | -0.002 (0.003) | | -0.002 (0.003) |
| Observations | 1,572 | 1,310 | 1,572 | 1,310 |
| <i>R</i> ² | 0.767 | 0.750 | 0.778 | 0.763 |
| Controls | No | No | Yes | Yes |
| Border-Year FE | Yes | Yes | Yes | Yes |

Table 5: Advertising Effect of Other Industries on Bankruptcy Filings

This table estimates Equation (1) with local TV advertisements of other industries as additional controls. The outcome variable is bankruptcy filing rate in all columns. Each industry's row corresponds to a variable that denotes the number of their ads in thousands. Controls include unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the border-level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), BLS, BEA, Zillow, and Kantar

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|----------------|------------------|------------------|------------------|-------------------|------------------|-------------------|------------------|---------------------|
| Bankruptcy | | | | | | | | 0.007*** (0.001) |
| Doctor | 0.009 (0.006) | | | | | | | 0.006 (0.006) |
| Investment | | 0.012 (0.013) | | | | | | 0.010 (0.012) |
| Mortgage | | | 0.002 (0.002) | | | | | 0.002 (0.002) |
| Injury | | | | -0.000 (0.000) | | | | -0.000 (0.000) |
| Paycheck | | | | | 0.001 (0.002) | | | 0.001 (0.002) |
| Retirement | | | | | | -0.009 (0.008) | | -0.014* (0.007) |
| Auto | | | | | | | 0.000 (0.005) | 0.000 (0.005) |
| Observations | 1,834 | 1,834 | 1,834 | 1,834 | 1,834 | 1,834 | 1,834 | 1,834 |
| R ² | 0.780 | 0.779 | 0.779 | 0.778 | 0.779 | 0.779 | 0.778 | 0.789 |
| Border-Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Table 6: Advertising Effect: Intra-state Borders Only

This table reports the results from estimating Equation (1) using only the sample of intra-state DMA borders. The outcome variable is bankruptcy filing rate in all columns. Ad exposure denotes the number of ads in thousands. Controls include unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the border-level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), BLS, BEA, Zillow, and Kantar

| | (1) | (2) |
|----------------|---------------------|---------------------|
| Ad exposure | 0.009*** (0.001) | 0.008*** (0.001) |
| Observations | 1,176 | 1,176 |
| R^2 | 0.821 | 0.829 |
| Controls | No | Yes |
| Border-Year FE | Yes | Yes |

Table 7: Ad-induced Bankruptcies and Credit Recovery

This table reports the results from estimating two-stage least squares regressions specified in Equations (3) and (4). The outcome variable in column 1 is an indicator variable denoting whether the individual filed for bankruptcy. In columns 2-5, the outcome variables are: having prime Risk Score, having delinquent balance over \$1,000, log of current debt balance, and number of auto loans, 3 years after ad exposure. Controls include county unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the county-level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), BLS, BEA, Zillow, and Kantar

| | First-stage | Second-stage | | | |
|----------------|---------------------|---------------------|--------------------|------------------------|---------------------|
| | (1) Filed | (2) Risk Score | (3) Delinquency | (4) Current balance | (5) Auto loans |
| Ad exposure | 0.009*** (0.002) | | | | |
| Filed | | 1.740*** (0.435) | -0.740* (0.394) | 2.740* (1.545) | 2.334*** (0.781) |
| Observations | 31,559 | 31,559 | 31,559 | 31,559 | 31,559 |
| <i>F</i> -stat | 14.30 | | | | |
| County FE | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes |

Table 8: Filing Responses and Risk Score by Number of Tradelines

This table reports the filing responses and Risk Score separately for three groups by number of credit tradelines: (1) 1-4, (2) 5-9, and (3) 10+ tradelines. Panel A estimates Equation (3) separately for the three groups. Panels B-D estimate Equation (2), where the outcome variable is an indicator variable for having prime Risk Score $t + h$ years after ad exposure, separately for each group. All regressions include county fixed effects and year fixed effects, and additionally control for county unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the county-level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), BLS, BEA, Zillow, and Kantar

| <i>A. Filings by number of tradelines</i> | | | |
|---|------------|------------|------------|
| | (1) | (2) | (3) |
| | 1-4 trades | 5-9 trades | 10+ trades |
| Ad exposure | 0.009* | 0.011*** | 0.002 |
| | (0.005) | (0.004) | (0.003) |
| Observations | 11,339 | 15,169 | 13,434 |
| R^2 | 0.050 | 0.045 | 0.061 |

| <i>B. 1-4 tradelines</i> | | | | |
|--------------------------|---------|---------|---------|----------|
| | (1) | (2) | (3) | (4) |
| | $t + 1$ | $t + 2$ | $t + 3$ | $t + 4$ |
| Ad exposure | 0.004 | 0.011* | 0.010** | 0.017*** |
| | (0.005) | (0.006) | (0.005) | (0.005) |
| Observations | 11,290 | 11,236 | 11,115 | 10,998 |
| R^2 | 0.074 | 0.078 | 0.090 | 0.092 |

| <i>C. 5-9 tradelines</i> | | | | |
|--------------------------|---------|----------|----------|----------|
| | (1) | (2) | (3) | (4) |
| | $t + 1$ | $t + 2$ | $t + 3$ | $t + 4$ |
| Ad exposure | 0.004 | 0.013*** | 0.013*** | 0.012*** |
| | (0.004) | (0.004) | (0.004) | (0.004) |
| Observations | 15,086 | 15,011 | 14,913 | 14,803 |
| R^2 | 0.070 | 0.081 | 0.091 | 0.089 |

| <i>D. 10+ tradelines</i> | | | | |
|--------------------------|---------|---------|---------|---------|
| | (1) | (2) | (3) | (4) |
| | $t + 1$ | $t + 2$ | $t + 3$ | $t + 4$ |
| Ad exposure | 0.001 | 0.008 | 0.012* | 0.009 |
| | (0.005) | (0.005) | (0.007) | (0.007) |
| Observations | 13,307 | 13,210 | 13,124 | 13,012 |
| R^2 | 0.050 | 0.053 | 0.061 | 0.064 |

Table 9: Frivolous Cases

This table reports how ad exposure is associated with frivolous bankruptcy filings, using FJC data (panel A) and CCP data (panel B). The binary outcome variables in panel A are: (1) dismissal for bankruptcy abuse, (2) case reports no liabilities, and (3) filer has monthly income above \$10,000. The binary outcome variables in panel B are: (1) filer has no delinquency, (2) filer has prime Risk Score, and (3) filer's only trade lines are student loans. Controls include county unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the county-level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), FJC, BLS, BEA, Zillow, and Kantar

| <i>A. Case characteristics</i> | | | |
|--------------------------------|---------------------|----------------------|-------------------|
| | (1) | (2) | (3) |
| | Dismissed-abuse | No liabilities | Income>10k |
| Ad exposure | 0.000 (0.000) | -0.005*** (0.001) | -0.000 (0.000) |
| Observations | 1,425,699 | 1,476,432 | 1,383,849 |
| R^2 | 0.005 | 0.044 | 0.007 |
| County FE | Yes | Yes | Yes |
| Year FE | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes |
| <i>B. Credit variables</i> | | | |
| | (1) | (2) | (3) |
| | No delinquency | Prime Risk Score | Student loan only |
| Ad exposure | -0.003** (0.001) | 0.000 (0.001) | 0.001 (0.001) |
| Observations | 68,842 | 77,727 | 77,549 |
| R^2 | 0.015 | 0.014 | 0.017 |
| County FE | Yes | Yes | Yes |
| Year FE | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes |

A Appendix

A.1 Additional Figures and Tables

Figure A.1: Dismissal Reasons

This figure reports the distribution of dismissal reasons for dismissed cases. The reasons include: filing mistake (i.e., dismissal for “failure to file information”), failure to pay court fees, bankruptcy abuse, failure to complete the financial management course, failure to make monthly payment, and other. The blue (red) bars denote each dismissal reason’s respective share for Chapter 7 (Chapter 13) cases.

Sources: FJC

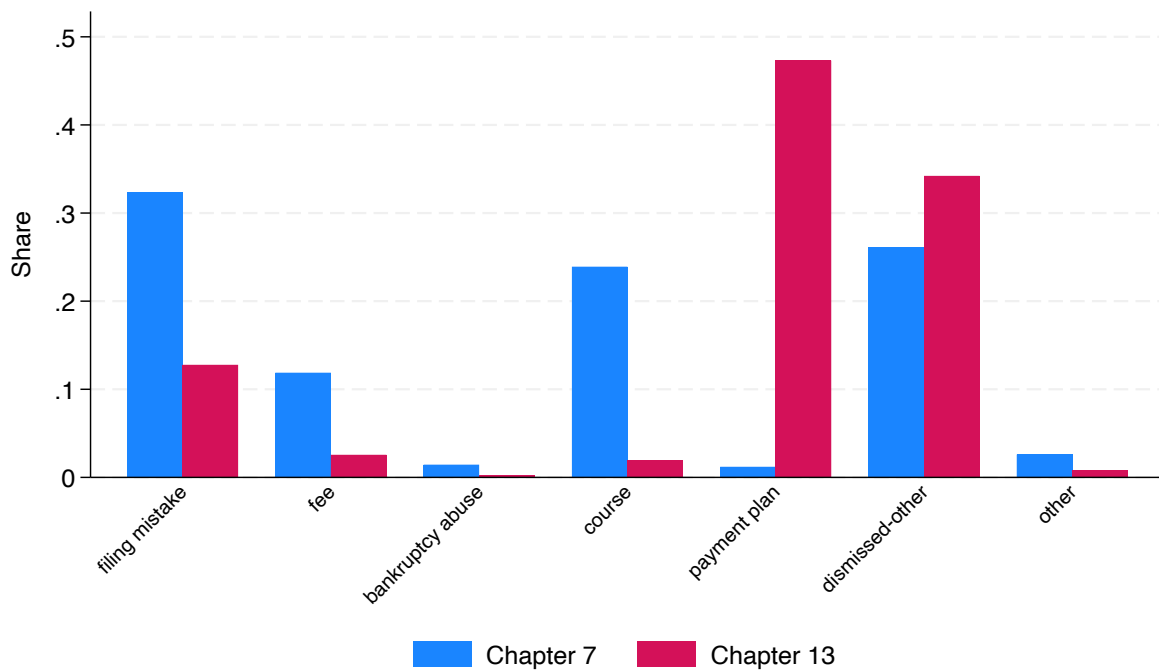


Figure A.2: Geographic Variation in Advertising

The following figure shows the average annual DMA-level advertisements (in thousands) by bankruptcy law firms.

Sources: Kantar

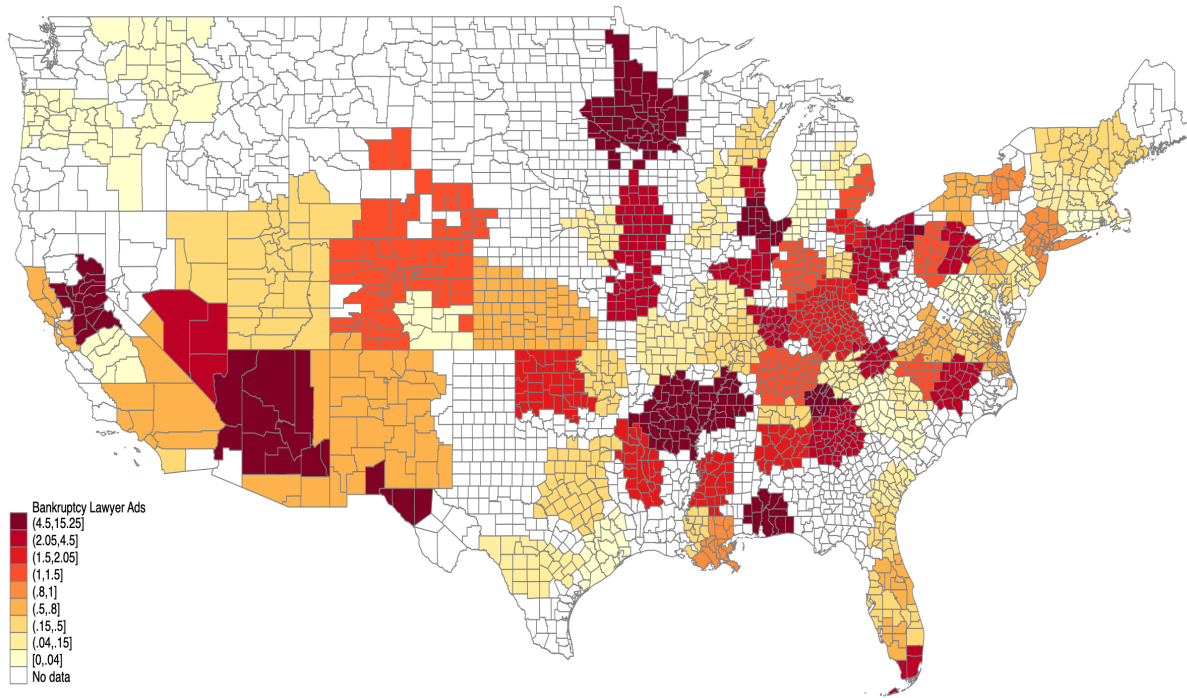
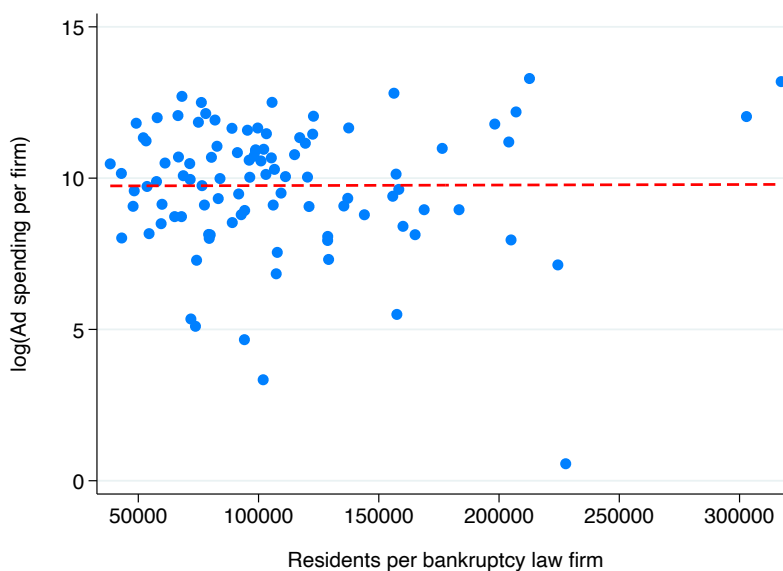


Figure A.3: Market Concentration and Advertising

The following figure illustrates the relationship between advertising and concentration for bankruptcy law firms. In panel A, each DMA's log(annual ad spending per firm) is plotted against the number of residents per bankruptcy law firm in the DMA. Panel B repeats the same scatter plot with each DMA's Herfindahl-Hirschman Index (HHI) derived using annual sales of firms. In both panels, the red dashed line denotes the OLS-fitted line.

Sources: BEA and Kantar

A. Residents per firm and advertising



B. HHI and advertising

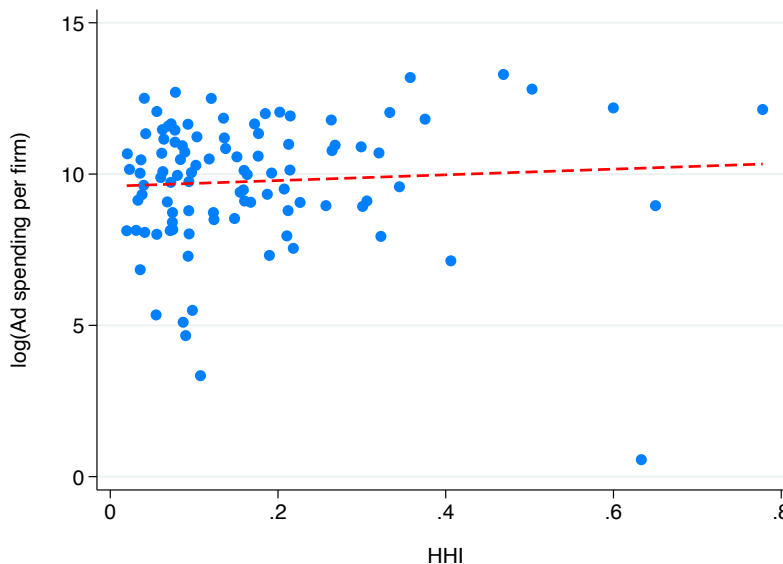


Figure A.4: Ratings and Review Count Distribution by Advertiser Status

This figure illustrates the distribution of Google Review ratings in panel A and log(review count) in panel B, separately for bankruptcy law firms that advertise (orange) versus never advertise (blue).

Sources: Kantar and Google Reviews

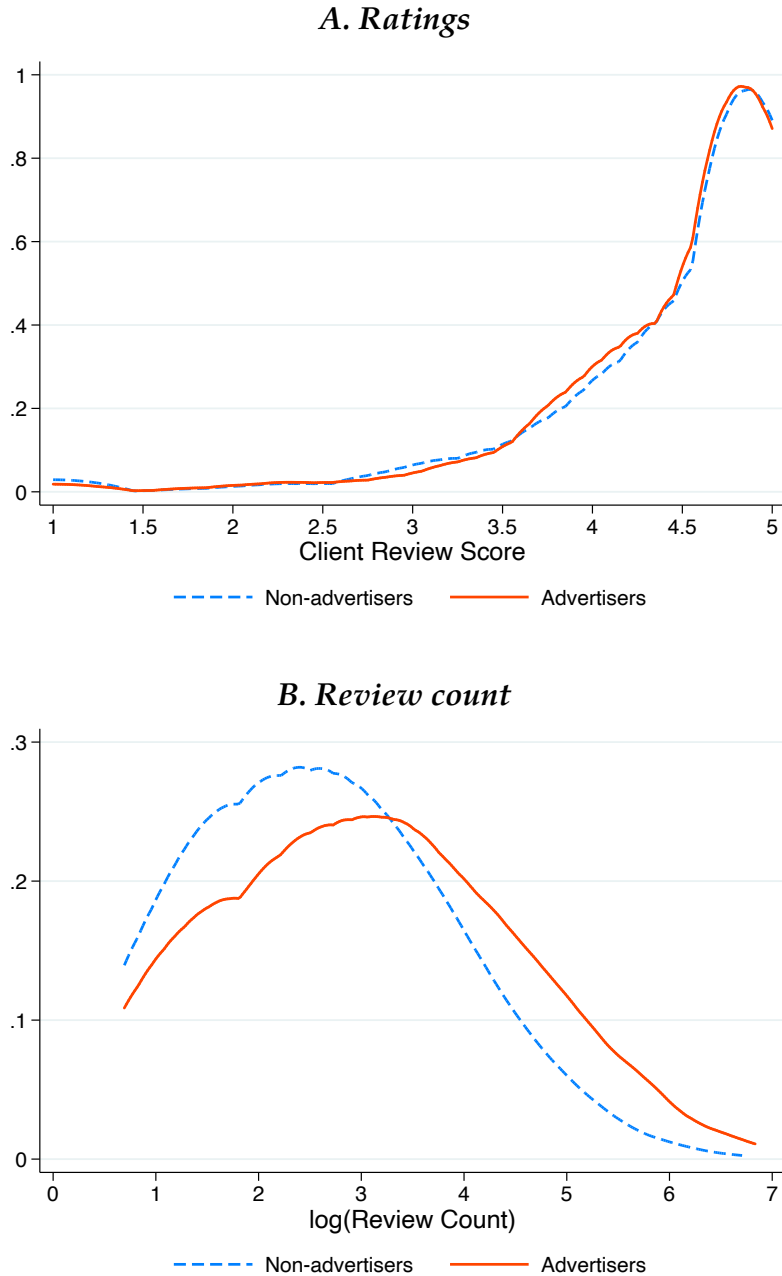


Figure A.5: Variation in Advertisements Net of Border-Year Fixed Effects

The following figure shows the residual variation in *Ad exposure* net of border-year fixed effects in Equation (1).

Sources: Kantar

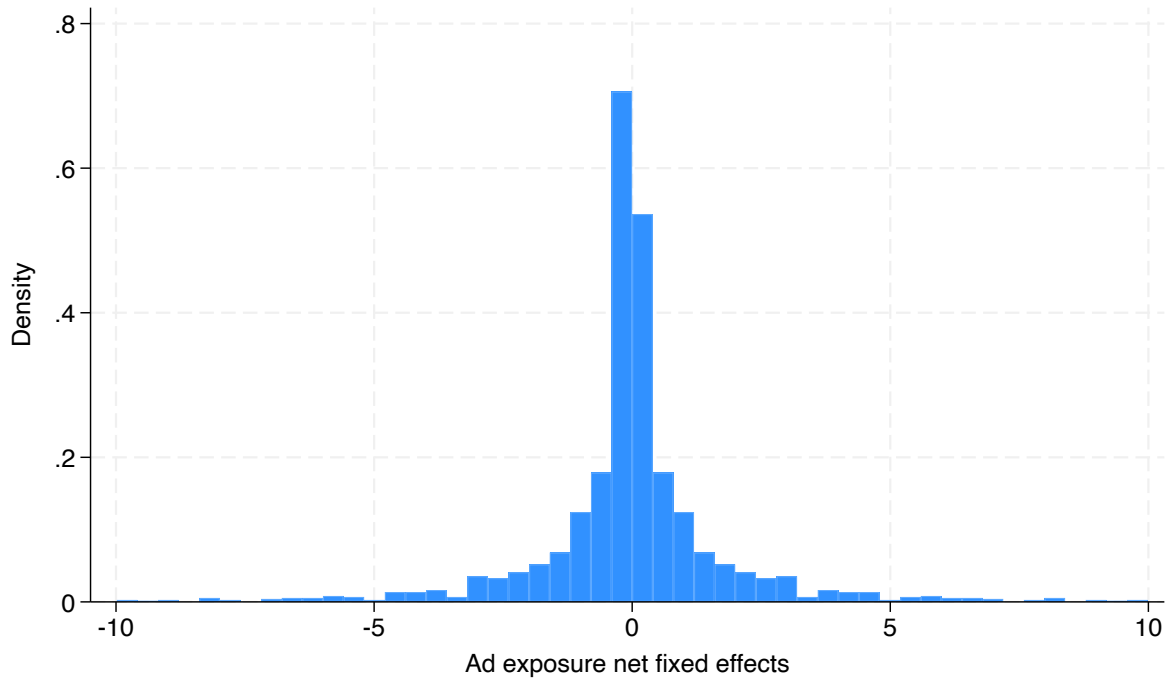


Figure A.6: Risk Score Trajectory around Bankruptcy

The following figure illustrates the average Risk Score trajectory of bankruptcy filers. The X-axis denotes the year relative to the bankruptcy filing quarter.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP)

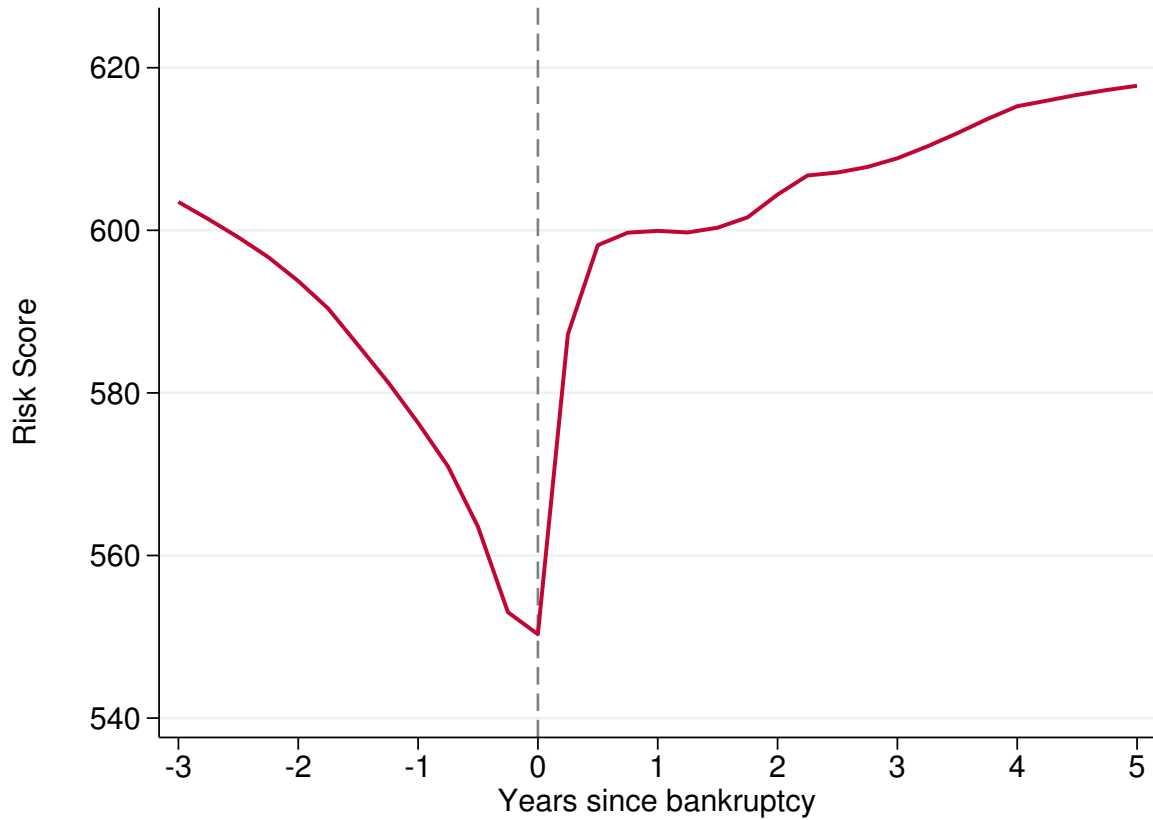


Figure A.7: Credit Recovery by Client Ratings of Bankruptcy Law Firms

This figure reports the results from estimating Equation (2) separately for regions with low client ratings of bankruptcy law firms (red) and regions with high client ratings (blue). The outcome variable is an indicator variable for having prime Risk Score $t + h$ years after ad exposure. All regressions include county fixed effects and year fixed effects, and additionally control for county unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the county-level. The bands denote the 90% confidence interval.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), BLS, BEA, Zillow, and Kantar

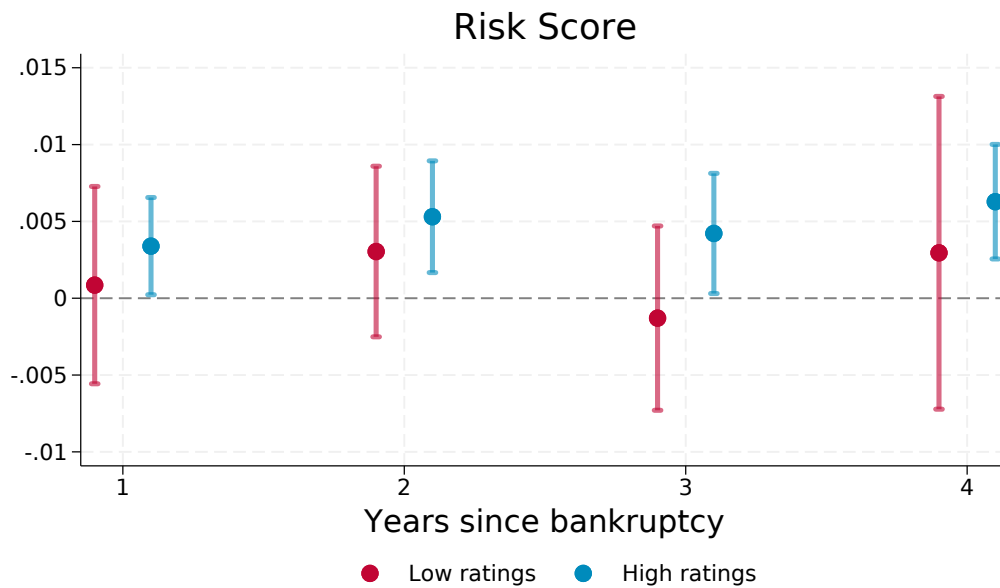


Table A.1: Filer-level Summary Statistics by Chapter

The following table presents the summary statistics for the FJC variables in panel A of Table 1 separately by Chapter. All variables are reported in thousands.

Sources: FJC

A. Chapter 7

| | N | Mean | St Dev | P25 | P50 | P75 |
|----------------------|---------|--------|--------|-------|-------|--------|
| Total assets | 3494266 | 76.54 | 129.35 | 6.34 | 20.31 | 104.50 |
| Total liabilities | 3494266 | 134.02 | 211.32 | 34.91 | 74.13 | 168.07 |
| Dischargeable debt | 3314017 | 126.25 | 206.13 | 31.90 | 64.17 | 157.49 |
| Avg monthly income | 3379773 | 2.71 | 1.58 | 1.67 | 2.47 | 3.50 |
| Avg monthly expenses | 3377273 | 2.93 | 1.63 | 1.86 | 2.65 | 3.71 |

B. Chapter 13

| | N | Mean | St Dev | P25 | P50 | P75 |
|----------------------|---------|--------|--------|-------|-------|--------|
| Total assets | 2021789 | 129.42 | 193.84 | 12.09 | 64.90 | 177.44 |
| Total liabilities | 2021789 | 157.71 | 202.74 | 34.21 | 97.41 | 213.03 |
| Dischargeable debt | 1795379 | 156.25 | 196.56 | 36.77 | 96.20 | 207.30 |
| Avg monthly income | 1840042 | 3.75 | 2.27 | 2.22 | 3.27 | 4.74 |
| Avg monthly expenses | 1839724 | 3.01 | 1.87 | 1.76 | 2.64 | 3.85 |

Table A.2: Differences of Covariates at DMA Borders

This table reports how variables related to bankruptcy and the local economy vary among border counties. For each of the 131 DMA borders, the side with more bankruptcy law firm advertisements is classified as “High” and the other side is classified as “Low.” In panel A, the first two columns show the average of each variable for “High” and “Low” sides, respectively. The third column reports the difference between the two, and the final column reports the p-value associated with testing whether these differences are statistically significantly different from zero. Panel B reports the results from a border-unit-level regression with the “High” indicator variable as the dependent variable.

Sources: FJC, BLS, BEA, Zillow, and Kantar

| <i>A. Cross-border differences</i> | | | | |
|------------------------------------|-------|-------|------------|---------|
| | High | Low | Difference | P-value |
| Filing rate | 0.24 | 0.23 | 0.01 | 0.48 |
| Chapter 7 share | 69.96 | 70.33 | -0.37 | 0.85 |
| Discharge rate | 82.40 | 82.49 | -0.09 | 0.93 |
| Pro se rate | 6.34 | 6.65 | -0.31 | 0.83 |
| Unemployment rate | 5.53 | 5.64 | -0.11 | 0.51 |
| Income per capita | 42351 | 41218 | 1133 | 0.37 |
| House price growth | 4.62 | 4.53 | 0.09 | 0.78 |
| Household DTI | 1.80 | 1.82 | -0.03 | 0.70 |

B. “High” ad exposure and covariates

| | (1) |
|--------------------|-------------------|
| Filing rate | 0.269 (0.301) |
| Chapter 7 share | -0.001 (0.004) |
| Discharge rate | 0.002 (0.008) |
| Pro se rate | 0.000 (0.004) |
| Unemployment rate | -0.011 (0.031) |
| Income per capita | 0.000 (0.000) |
| House price growth | 0.007 (0.015) |
| Household DTI | -0.043 (0.061) |
| Observations | 262 |
| R^2 | 0.009 |

Table A.3: Media Category Share by Industry

This table reports the share of 2013–2019 advertising spending (in percentage points) across media categories for the following industries: medical doctors, investment managers, mortgages, personal injury lawyers, paycheck services, retirement planning service, and auto loans.

Sources: Kantar

| | Bankruptcy | Doctor | Investment | Mortgages | Injury | Paycheck | Retirement | Auto |
|---------------------|------------|--------|------------|-----------|--------|----------|------------|------|
| B-to-B Magazines | 0 | .1 | 2.7 | .1 | 0 | 0 | 1.3 | 1 |
| Cable TV | .3 | 0 | 20.5 | 22.5 | .2 | 24.1 | 18.6 | 16.5 |
| Hispanic Magazines | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hispanic Newspapers | .3 | .8 | 0 | .1 | .3 | 0 | 0 | .3 |
| Internet - Display | 1.7 | 7 | 21 | 16 | .4 | 4.2 | 21.5 | 11.3 |
| Local Magazines | 0 | 13.5 | .4 | .2 | 0 | 0 | .1 | 0 |
| Local Radio | 2.8 | 7.7 | 4.2 | 7.5 | .8 | 8.3 | 1.3 | 9.6 |
| Magazines | 0 | 1.1 | 14.3 | 2.1 | 0 | 0 | 17.2 | 2.5 |
| Natl Spot Radio | 0 | .9 | 2.5 | .9 | 0 | 6.1 | 0 | .8 |
| Network Radio | 0 | 0 | 1.2 | .9 | 0 | 1.7 | 0 | 0 |
| Network TV | 0 | 0 | 18.5 | 21.2 | 0 | 1.7 | 26.1 | 17.2 |
| Newspapers | 4.5 | 44.7 | 10 | 12.9 | .5 | .4 | 6.6 | 21.8 |
| Outdoor | .6 | 9.5 | 2.1 | .6 | 2.4 | 3.2 | .2 | .9 |
| Span Lang Net TV | .3 | 0 | 0 | .4 | 3.6 | 0 | 0 | 0 |
| Spot TV | 89.4 | 14.7 | 1.7 | 6.7 | 91.5 | 31.3 | 4.9 | 17.7 |
| Sunday Magazines | 0 | 0 | .5 | 0 | 0 | 0 | .3 | 0 |
| Syndication | .2 | .1 | .5 | 8 | .1 | 18.9 | 2 | .4 |

Table A.4: Advertising Effects by Subperiod and Census Region

This table reports the results from estimating Equation (1) separately across subperiods and Census Regions. Panel A reports two separate subperiods, 2013–2016 in column 1 and 2017–2019 in column 2. Panel B separately reports the estimates across four Census Regions. The outcome variable is bankruptcy filing rate in all columns. Ad exposure denotes the number of ads in thousands. Controls include unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the border-level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), BLS, BEA, Zillow, and Kantar

| <i>A. Subperiods</i> | | | | |
|--------------------------|---------------------|---------------------|---------------------|------------------|
| | (1) | (2) | | |
| | 2013-2016 | 2017-2019 | | |
| Ad exposure | 0.007*** (0.002) | 0.008*** (0.001) | | |
| Observations | 1,048 | 786 | | |
| R^2 | 0.773 | 0.775 | | |
| Border-Year FE | Yes | Yes | | |
| Controls | Yes | Yes | | |
| <i>B. Census Regions</i> | | | | |
| | (1) | (2) | (3) | (4) |
| | Northeast | South | Midwest | West |
| Ad exposure | 0.022** (0.009) | 0.011** (0.004) | 0.007*** (0.001) | 0.002 (0.003) |
| Observations | 308 | 742 | 448 | 336 |
| R^2 | 0.795 | 0.784 | 0.738 | 0.795 |
| Border-Year FE | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes |

Table A.5: Ad-induced Filers

This table reports the results from estimating Equation (5). All regressions include county fixed effects and year fixed effects, and additionally control for county unemployment rate, income per capita, population, house price growth, and household DTI. Standard errors are clustered at the county-level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Sources: FRBNY Consumer Credit Panel/Equifax (CCP), FJC, BLS, BEA, Zillow, and Kantar

| <i>A. Case characteristics</i> | | | | | | |
|--------------------------------|-----------|-----------|------------|--|--|--|
| | (1) | (2) | (3) | | | |
| | Chapter 7 | Pro se | First time | | | |
| Ad exposure | 0.002* | -0.002* | 0.002** | | | |
| | (0.001) | (0.001) | (0.001) | | | |
| Observations | 1,476,432 | 1,476,432 | 1,476,432 | | | |
| R^2 | 0.092 | 0.116 | 0.025 | | | |

| <i>B. Case outcome</i> | | | | | | |
|------------------------|------------|----------------|---------------|--|--|--|
| | (1) | (2) | (3) | | | |
| | Discharged | Dismissed-file | Dismissed-fee | | | |
| Ad exposure | 0.003*** | -0.003*** | -0.000*** | | | |
| | (0.001) | (0.001) | (0.000) | | | |
| Observations | 913,033 | 1,425,699 | 1,425,699 | | | |
| R^2 | 0.051 | 0.049 | 0.008 | | | |

| <i>C. Financial</i> | | | | | | |
|---------------------|-----------|-------------|--------------|----------------|-----------|----------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Assets | Liabilities | Secured debt | Unsecured debt | Income | Debt-to-income |
| Ad exposure | -0.007** | -0.005** | -0.014*** | 0.007*** | -0.000 | -0.005* |
| | (0.003) | (0.003) | (0.004) | (0.002) | (0.001) | (0.003) |
| Observations | 1,375,415 | 1,376,970 | 1,036,572 | 1,351,743 | 1,346,842 | 1,343,160 |
| R^2 | 0.046 | 0.073 | 0.097 | 0.043 | 0.041 | 0.056 |

| <i>D. Credit</i> | | | | | |
|------------------|------------|---------|-----------|-------------|--------------------|
| | (1) | (2) | (3) | (4) | (5) |
| | Risk Score | Age | Homeowner | Foreclosure | Delinquent balance |
| Ad exposure | 0.000 | 0.056* | -0.003*** | -0.001*** | -0.026*** |
| | (0.000) | (0.030) | (0.001) | (0.000) | (0.006) |
| Observations | 77,727 | 78,518 | 77,549 | 78,025 | 53,043 |
| R^2 | 0.036 | 0.032 | 0.048 | 0.012 | 0.052 |

Table A.6: Word List for Under-information and Stigma

This table presents the list of words and phrases used to identify client reviews that potentially conveys under-information or stigma (panel A) and the lawyer’s role in informing or reducing stigma (panel B). The full list also includes variations of each word below (e.g., present tense, adjective) and close synonyms.

A. Under-information or stigma

| | | | | |
|-----------------|------------------|--------------------|--------------------|-----------------|
| did not know | did not realize | did not understand | wrong idea | misunderstood |
| underinformed | underestimated | underappreciated | surprised to learn | confused |
| stigma | ashamed | embarrassed | guilt | humiliated |
| afraid | anxious | apprehensive | hesitant | reluctant |
| last option | last resort | only option | no choice | waited too long |
| hard to swallow | could not accept | difficult decision | | |

B. Informing or reducing stigma

| | | | |
|---------------|-------------------------|-------------------------|--------------------------|
| informative | knowledgeable | helped me understand | cleared misunderstanding |
| simplified | answered my questions | walked me through | explained bankruptcy |
| eased my mind | empathy | alleviated | reassured |
| did not judge | treated me with dignity | treated me with respect | comforted |
| compassion | consoled | emotional support | |

Table A.7: Word Coefficients on Review Rating

This table presents the coefficients for selected words related to under-information and stigma from a Multinomial Inverse Regression (MNIR) using review ratings as the outcome variable. The coefficients of 4,315 words in the corpus are standardized such that the median coefficient is zero, with standard deviation is 0.819 and maximum of 1.989.

Sources: Google Reviews

| Word | Coefficient |
|---------------|--------------------|
| well-informed | 1.989 |
| uncomplicated | 1.989 |
| knowledgeable | 1.989 |
| afraid | 0.314 |
| anxieties | 0.597 |
| apprehensive | 0.620 |
| ashamed | 1.989 |
| embarrassed | 0.208 |
| guilty | 0.804 |
| stigma | 0.880 |