

Online Appendix to:  
“Debt Collection Agencies and the Supply of Consumer Credit”

## 1. The Debt Collection Process

Creditors turn to third-party debt collectors after a loan has been in default for a certain period of time (usually after 180 days for credit card loans). Most debt collection agencies work on commission, in which case, they return net proceeds to the original creditors. Such debt collection agencies are termed contingency collectors and do not legally own the debt. Contingency collectors receive a commission proportional to the amount they collect, and the average size of this commission was 28% in 2005.<sup>1</sup> Some debt collection firms purchase debt from original creditors, in which case, they obtain a legal title to the debt and retain all collection revenues they can generate on that debt. This activity is termed debt buying. Generally, creditors sell accounts to debt buyers after having tried (unsuccessfully) to collect on these accounts on their own and after hiring contingent debt collectors. This is reflected in the prices of the debt being sold, which average 4 cents on the dollar.<sup>2</sup>

The collection process is a human-intensive effort that requires debt collectors to constantly communicate with borrowers. This communication is usually established over the telephone and by mail. Sometimes collection may require face-to-face contact, but such cases are not common. Effective debt collection requires debt collectors to be familiar with the economic circumstances of the borrower, which is one of the reasons why the debt collection industry is geographically dispersed and consists mostly of small firms, with 90% of debt collection firms having fewer than 50 employees.<sup>3</sup> The overall size of the debt collection industry, however, is significant. According to the latest industry survey available, the total amount collected in 2013 was \$55.2 billion, \$10.4 billion (or 19%) of which was retained as

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<sup>1</sup>Source: Collecting Consumer Debts: The Challenges of Change. Workshop Report, Washington: Federal Trade Commission, February 2009, p.3.

<sup>2</sup>Source: The Structure and Practices of the Debt Buying Industry. Staff Report, Washington: Federal Trade Commission, January 2013, Table B1.

<sup>3</sup>Source: U.S. Census Bureau, Economic Census, 2007.

commissions.<sup>4</sup> As of March 2012, the industry employed 129,392 debt collectors.<sup>5</sup>

Debt collectors play an active role in retail credit markets by enforcing consumer credit contracts (primarily unsecured credit).<sup>6</sup> They contact millions of American consumers every year. In the last quarter of 2014, 13.48% of American consumers had at least one account being processed by debt collectors.<sup>7</sup> Further, third-party debt collectors generate more consumer complaints than any other industry. The Federal Trade Commission, which tracks consumer complaints, received 108,997 complaints about third-party debt collectors in 2010,<sup>8</sup> which represents 21% of all complaints received directly from consumers in 2010.<sup>9</sup> The amount of civil litigation against debt collectors is also significant. In 2009, there were 10,128 lawsuits filed by consumers against debt collection agencies,<sup>10</sup> which represents 5.4% of 185,900 original civil cases filed in the U.S. District Courts in 2009.<sup>11</sup> Thus, debt collectors are a visible presence in the lives of American households.

Debt collectors' compensation is customarily tied to the amount of collections they generate. Therefore, they have incentives to be persistent.<sup>12</sup> The extent to which debt collectors can be persistent is determined by state and federal law and by the way the law is enforced. Actions by federal and state regulators are a major concern and a topic of much discussion

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<sup>4</sup>Source: The Impact of Third-Party Debt Collection on the National and State Economies. Technical Report, Ernst & Young, 2014. The 19% retained as commissions in 2013 is lower than the average commission rate of 28% reported in 2005, possibly due to the effects of the financial crisis.

<sup>5</sup>Source: U.S. Census Bureau, Economic Census, 2012.

<sup>6</sup>In the case of secured debt, the creditor can repossess the underlying collateral after debtors default. Therefore, third-party debt collectors are rarely involved in collecting on secured debt. For example, in the case of auto loans, creditors use repossession agencies ("repo men" as they are known colloquially). Those agencies are separate from debt collectors that are the focus of this paper. County Business Patterns track these two types of establishments in separate categories.

<sup>7</sup>Source: The Quarterly Report on Household Debt and Credit, Federal Reserve Bank of New York, various years.

<sup>8</sup>Note that while the Federal Trade Commission was administering consumer debt collection complaints during the sample period, the Dodd-Frank Wall Street Reform and Consumer Protection Act transferred this responsibility to the Consumer Financial Protection Bureau, which began accepting and compiling consumer debt collection complaints in July 2013.

<sup>9</sup>Source: Federal Trade Commission. Annual Report 2011: Fair Debt Collection Practices Act. Report to Congress, Washington: Federal Trade Commission, March 2011.

<sup>10</sup>Source: WebRecon, LLC, published by InsideArm.com (<http://www.insidearm.com/daily/debt-collection-news/debt-collection/fdcpa-statistics-provided-by-webrecon/>). Of the 10,128 lawsuits, 8,287 were filed under the Fair Debt Collection Practices Act, 1,174 under the Fair Credit Reporting Act, and 28 under the Telephone Consumer Protection Act. The remaining suits were filed under various other federal acts and state consumer statutes.

<sup>11</sup>Source: Judicial Business of the United States Courts, 2009. The total number of civil filings in 2009 was 276,397, which also includes removals from state courts, remands from courts of appeals, reopens, and transfers.

<sup>12</sup>Being persistent is not illegal, unless debt collectors violate the law.

in the debt collection community.<sup>13</sup> Collection agencies are sued regularly by state attorneys general,<sup>14</sup> and those lawsuits bring high uncertainty owing to the potentially large penalties that can be imposed. In one example, on May 28, 2010, a jury in Texas awarded \$1.5 million in punitive damages against a debt collection agency, in addition to \$50,000 in damages for mental anguish. The initial debt that the agency was trying to collect was only \$200.<sup>15</sup>

Examples of debt collectors using unlawful practices are not uncommon; however, it is hard to establish their frequency relative to the total volume of the debt collection activity. At the same time, the large number of consumer complaints and lawsuits against debt collectors implies that the instance of illegal practices is not trivial. Without taking a stand on how prevalent illegal practices are, I list some of the practices mentioned during congressional hearings:<sup>16</sup>

- Phoning a debtor’s parent, impersonating a government prosecutor, and requesting the parent to get the debtor to call about a criminal investigation regarding the debtor;
- Threatening the debtor and his or her parent with criminal charges for capital gains tax fraud unless the balance of the debt is put on the parent’s credit card;
- Calling five to 15 neighbors in a brief period of time, informing them that the debtor is suspected of receiving stolen goods, and asking them to go to the debtor’s home and request the debtor to call the collector. This is called a “block party.” A variant is to hold an “office party” by calling the debtor’s fellow employees;

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<sup>13</sup>InsideARM.com, a leading online resource for debt collectors, regularly sends newsletters to its subscribers. In the first quarter of 2010, 59 newsletters were distributed, 30 of which discussed issues related to regulation, lawsuits involving collectors, and law enforcement matters.

<sup>14</sup>Former New York attorney general (and now Governor of New York) Andrew M. Cuomo, for example, started a statewide initiative in May 2009 to clean up the debt collection industry. As of May 2010, his office had shut down 14 debt collection companies and required others to reform their deceptive practices. Ten collectors were criminally prosecuted. Other recent actions against debt collectors were initiated by attorneys general in West Virginia and Colorado.

<sup>15</sup>*Allen Jones v. Advanced Call Center Technologies*. Source: InsideArm.com.

<sup>16</sup>The information in the bulleted list comes from the 1992 Congressional Hearings, and it may be the case that industry practices have changed since then.

- Soliciting postdated checks in order to later threaten criminal prosecution for passing bad checks;
- Threatening to report Latinos to immigration authorities and posing as an immigration officer; and
- Encouraging women to engage in prostitution and men to sell drugs to pay off a debt.<sup>17</sup>

It is therefore likely that debt collection laws are binding, at least for some debt collectors.

## 2. Additional Robustness Tests

### *2.1. Robustness to the location of the financial institution*

The relevant jurisdiction for creditor remedies is the state in which the borrower resides (or resided when he or she opened the account), and it is therefore important for the analysis in this paper to accurately measure the outcome variables at the state level. Since financial institutions do not disaggregate their data by jurisdiction, it is possible that an institution located in one state provides credit to consumers residing in another state(s). This, in turn, may potentially introduce a measurement error in the dependent variable.

To address the issue of financial institutions lending across state lines, this paper uses data on small local lenders (i.e., credit unions) that are likely to provide credit within state borders. Furthermore, the main results in the paper use a subsample of credit unions that have branches in a single state, which should mitigate the measurement error. As an additional robustness check, Table A1 presents the results for the full sample of credit unions (in Panel A) as well as for the sample of only those credit unions that have branches in multiple states (in Panel B). The measurement error, if present, should be more severe in these two samples

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<sup>17</sup>Source: The Fair Debt Collection Practices Act: Hearing before the Subcommittee on Consumer Affairs and Coinage of the Committee on Banking, Finance, and Urban Affairs, House of Representatives, 102nd Congress, second session, September 10, 1992. Washington: U.S. Government Printing Office, 1993.

(because these samples are most likely to include credit unions that could lend across state lines). The results reported in Panel A of Table A1 are very similar to those reported in the main text (in which the sample was limited to credit unions with branches in a single state). One reason for this may be that the vast majority of all credit unions (93.7%) have branches in a single state.

It is worth noting that the results no longer obtain in the sample of credit unions with branches in multiple states, suggesting that institutions with operations in multiple states respond less strongly to law changes in a given state. It appears, therefore, that institutions with operations in multiple states may shift some of their lending across states lines in response to changes in third-party debt collection laws. One should be mindful of two caveats in interpreting these results, however. First, credit unions with branches in multiple states represent a minority of credit unions (6.3%). Second, while the estimates of the effect of third-party debt collection laws on credit card recovery rates in Panel B are much smaller than those in Panel A and are not statistically significant, one cannot reject the statistical hypothesis of their equality at conventional levels.

## *2.2. The effect of third-party debt collection restrictions on recovery rates at small banks*

The sample used in the main text of the paper is limited to credit unions, since they are likely to be local lenders that provide credit within state boundaries. In Table A2, a similar analysis is performed on a sample of small banks (defined as banks with deposits in a single state). While the magnitude of the effect of third-party debt collection restrictions on recovery rates in this sample is in line with the estimates obtained in the sample of credit unions, it is less precisely estimated. One potential reason for this may be that banks are more likely to have sufficient scale to operate in-house debt collection departments and therefore rely less on third-party debt collectors. It may also be that even small banks are more likely to lend

across state lines than credit unions.

### *2.3. Robustness to the exclusion of individual states and years*

This section reports the results of two additional robustness tests. Table A3 shows the estimates of the impact of third-party debt collection laws on the main outcome variables after excluding individual states, while Table A4 shows the estimates of the impact of third-party debt collection laws on the main outcome variables after excluding individual years. In both cases, the estimates remain similar to the baseline specification reported in the paper, which suggests that the results are not driven by individual states or years.

### *2.4. The impact of third-party debt collection restrictions on secured credit*

The analysis so far has focused on the impact of third-party debt collectors on unsecured credit. This is because third-party debt collectors are primarily engaged in collecting unsecured debts, since, in the case of secured credit, lenders can repossess the underlying collateral. Thus, third-party debt collection laws should have little direct effect on secured credit. However, third-party debt collection may have an indirect effect on secured credit because secured and unsecured credit are linked by household behavior. The two types of credit are also linked by their treatment in the bankruptcy system. For example, write-offs of unsecured debt in bankruptcy can improve repayment prospects on mortgages.

The ex ante effect of third-party debt collection laws on secured credit is ambiguous. Mitman (2016) shows that higher bankruptcy exemptions may result in higher interest rates on unsecured debt (because households' propensity to file for bankruptcy increases) and can therefore prompt households to decrease their demand for unsecured credit and increase their demand for secured credit. By a similar logic, more stringent third-party debt collection laws may increase the demand for unsecured credit (because borrowers' disutility from third-

party debt collection goes down) and may reduce the demand for secured credit. However, one might also expect a positive effect of third-party debt collection restrictions on secured credit because borrowers may have difficulty obtaining an unsecured loan when third-party debt collection laws become more stringent. To investigate, Table A5 reports the effect of third-party debt collection laws on the number of new secured auto loans and mortgages. The estimated coefficients are negative but statistically insignificant.

### *2.5. Further sensitivity analysis*

Figures 3 and 4 of the paper present graphical evidence on the validity of the parallel trends assumption for the three main outcome variables. Similarly, Figures A1 and A2 present graphical evidence on the validity of the parallel trends assumption for the other outcome variables. Finally, Table A6 reports a sensitivity analysis for these variables.

**Table A1**

Impact of credit union location.

This table reports the effect of third-party debt collection restrictions on different types of credit unions. The sample in Panel A includes credit unions with branches in multiple states as well as credit unions with branches in a single state. The sample in Panel B includes only those credit unions that have branches in multiple states. In both panels, in columns 1 and 2 the dependent variable is the average recovery rate on charged-off unsecured credit card loans by credit unions; in columns 3 and 4, the dependent variable is the average interest rate charged by credit unions on unsecured credit card loans. Standard errors clustered by state are reported in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively.

<b>Panel A: Unrestricted sample of credit unions</b>				
Variable	Recovery rate		Interest rate	
	(1)	(2)	(3)	(4)
Index	-1.544*** (0.498)	-1.168** (0.488)	-0.011 (0.039)	-0.022 (0.038)
Control variables	No	Yes	No	Yes
Frequency	Annual	Annual	Annual	Annual
State fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	656	656	656	656
Adjusted R-squared	0.582	0.606	0.837	0.841
<b>Panel B: Sample of credit unions with branches in multiple states</b>				
Variable	Recovery rate		Interest rate	
	(1)	(2)	(3)	(4)
Index	-0.231 (0.977)	-0.870 (1.004)	-0.066 (0.132)	-0.054 (0.137)
Control variables	No	Yes	No	Yes
Frequency	Annual	Annual	Annual	Annual
State fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	600	600	600	600
Adjusted R-squared	0.334	0.344	0.528	0.540

**Table A2**

Effect of third-party debt collection restrictions on recovery rates at small banks.

This table shows the effect of third-party debt collection restrictions on recovery rates at small banks (i.e., banks that have deposits in a single state). The dependent variable is the average recovery rate on charged-off unsecured credit card loans by banks with deposits in a single state. Standard errors clustered by state are reported in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively.

Variable	Recovery rate	
	(1)	(2)
Index	-1.871 (2.732)	-2.081 (2.694)
Unemployment rate		-1.081 (1.370)
Personal income		-1.700* (1.002)
Income growth		0.486 (0.750)
Garnishment		-2.230** (0.878)
Exemption		-0.093
Frequency	Annual	Annual
State fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Observations	646	646
Adjusted R-squared	0.213	0.214

**Table A3**

Sensitivity of the effect of third-party debt collection restrictions to excluding individual states.

This table reports regression estimates from the baseline specifications reported in the paper, after excluding individual states as indicated. For Third-party debt collector density and Recovery rate, the regressions are estimated using the main annual sample of 656 observations, excluding the state specified in the corresponding row. For New revolving lines, the regressions are estimated using the main quarterly sample of 2,624 observations, excluding the state specified in the corresponding row. Columns 1, 3, and 5 report point estimates of the coefficient on the index of third-party debt collection restrictions. The corresponding standard errors, clustered by state, are reported in parentheses in columns 2, 4, and 6. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively.

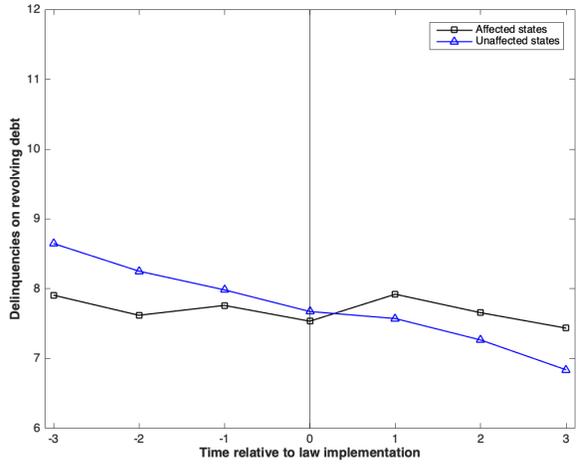
Excluded state	Coefficient on the index of third-party debt collection restrictions when the dependent variable is					
	Third-party debt collector density		Recovery rate		New revolving lines	
	(1)	(2)	(3)	(4)	(5)	(6)
Arkansas	-63.948***	(20.568)	-1.588***	(0.478)	-2.179***	(0.637)
Colorado	-58.074***	(20.929)	-1.248**	(0.505)	-1.771***	(0.635)
Connecticut	-63.599***	(21.205)	-1.196**	(0.516)	-1.793***	(0.644)
Florida	-64.557***	(20.772)	-1.151**	(0.499)	-2.215***	(0.626)
Georgia	-62.081***	(20.474)	-1.262**	(0.502)	-1.809***	(0.629)
Hawaii	-63.632***	(20.375)	-1.287***	(0.492)	-1.927***	(0.626)
Idaho	-61.185***	(21.532)	-1.037**	(0.523)	-1.826***	(0.638)
Illinois	-65.248***	(20.857)	-1.162**	(0.515)	-2.090***	(0.643)
Indiana	-65.557***	(20.149)	-1.284**	(0.501)	-1.985***	(0.634)
Louisiana	-67.069***	(21.394)	-1.021**	(0.512)	-1.904***	(0.655)
Maine	-64.817***	(20.741)	-1.101**	(0.494)	-1.706***	(0.584)
Maryland	-60.786***	(20.624)	-0.896*	(0.487)	-1.626***	(0.627)
Minnesota	-51.614***	(18.578)	-0.991*	(0.524)	-1.314**	(0.623)
Nevada	-62.655***	(20.710)	-1.331***	(0.460)	-1.932***	(0.619)
North Carolina	-64.733***	(20.653)	-1.135**	(0.505)	-2.400***	(0.619)
North Dakota	-74.440***	(20.271)	-1.222**	(0.509)	-2.214***	(0.642)
Oregon	-63.573***	(20.594)	-1.199**	(0.502)	-1.877***	(0.639)
Pennsylvania	-64.432***	(20.182)	-1.193**	(0.489)	-1.861***	(0.619)
Rhode Island	-64.250***	(20.544)	-0.985**	(0.450)	-1.833***	(0.616)
Tennessee	-51.843**	(19.904)	-1.383***	(0.529)	-1.863***	(0.681)
Utah	-63.548***	(20.414)	-1.142**	(0.485)	-1.895***	(0.617)
Washington	-63.494***	(20.597)	-1.128**	(0.497)	-1.965***	(0.628)

**Table A4**

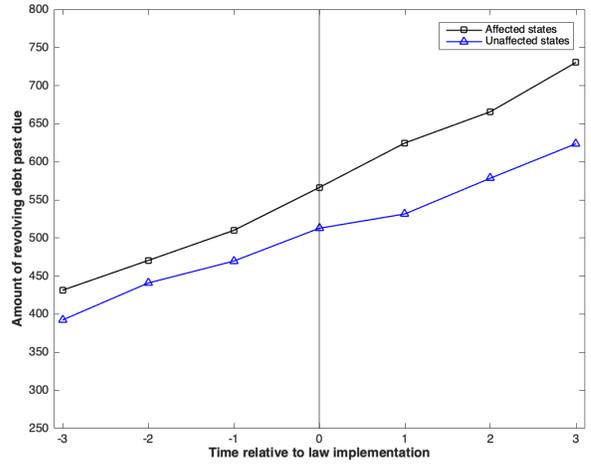
Sensitivity of the effect of collector debt collection restrictions to excluding individual years.

This table reports regression estimates from the baseline specification reported in the paper, after excluding individual years as indicated. For Third-party debt collector density and Recovery rate, the regressions are estimated using the main annual sample of 656 observations, excluding the year specified in the corresponding row. For New revolving lines, the regressions are estimated using the main quarterly sample of 2,624 observations, excluding the year specified in the corresponding row. Columns 1, 3, and 5 report point estimates of the coefficient on the index of third-party debt collection restrictions. The corresponding standard errors, clustered by state, are reported in parentheses in columns 2, 4, and 6. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively.

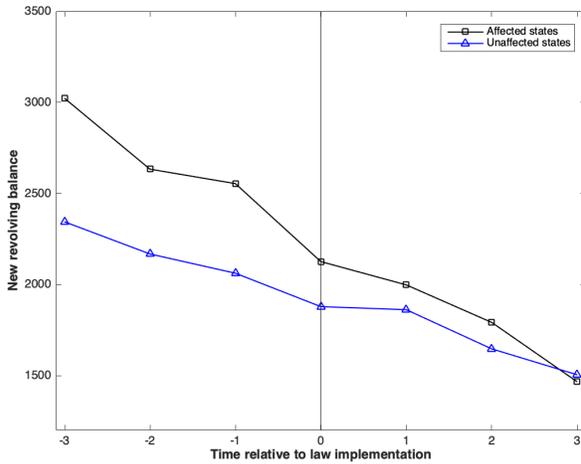
Excluded year	Coefficient on the index of third-party debt collection restrictions when the dependent variable is					
	Third-party debt collector density		Recovery rate		New revolving lines	
	(1)	(2)	(3)	(4)	(5)	(6)
2000	-66.193***	(22.572)	-1.597***	(0.520)	-1.862***	(0.613)
2001	-60.087***	(21.526)	-0.997*	(0.521)	-1.976***	(0.663)
2002	-55.976***	(20.354)	-1.123**	(0.536)	-1.688***	(0.650)
2003	-58.012***	(18.810)	-1.198**	(0.518)	-1.751***	(0.639)
2004	-62.251***	(18.942)	-1.034**	(0.480)	-1.723***	(0.607)
2005	-64.844***	(20.807)	-1.062**	(0.485)	-1.855***	(0.614)
2006	-63.224***	(20.539)	-1.042**	(0.479)	-1.818***	(0.612)
2007	-65.965***	(20.537)	-1.177**	(0.496)	-1.879***	(0.629)
2008	-63.108***	(20.187)	-1.101**	(0.488)	-1.623***	(0.586)
2009	-61.492***	(20.021)	-1.149**	(0.496)	-1.879***	(0.618)
2010	-61.406***	(20.718)	-1.217**	(0.510)	-1.824***	(0.626)
2011	-65.004***	(20.792)	-1.180**	(0.505)	-1.845***	(0.633)
2012	-63.936***	(19.202)	-1.095**	(0.525)	-2.024***	(0.645)
2013	-61.160***	(20.075)	-1.265**	(0.516)	-1.875***	(0.644)
2014	-71.931***	(22.091)	-1.339***	(0.493)	-2.133***	(0.669)



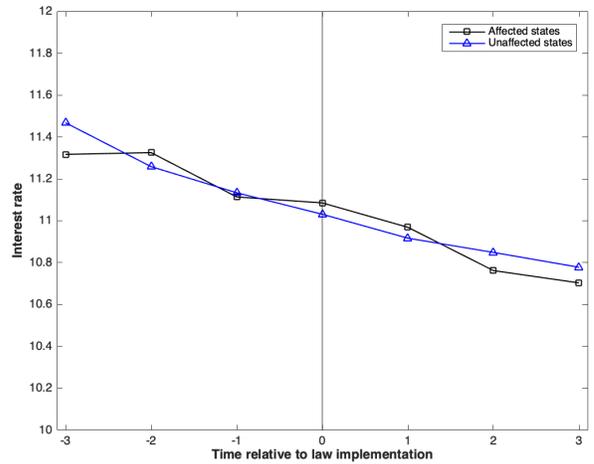
(a) Delinquencies on revolving debt



(b) Amount of revolving debt past due



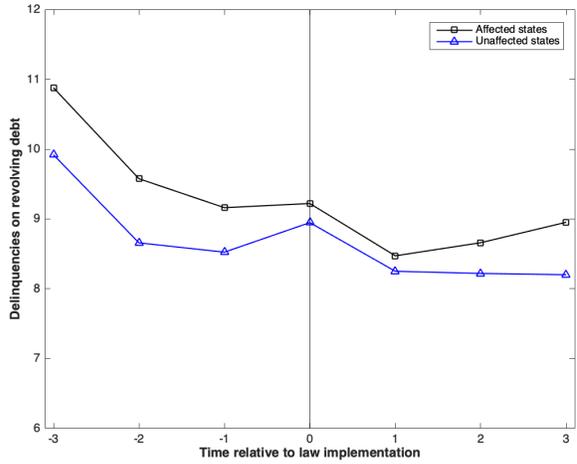
(c) New revolving balance



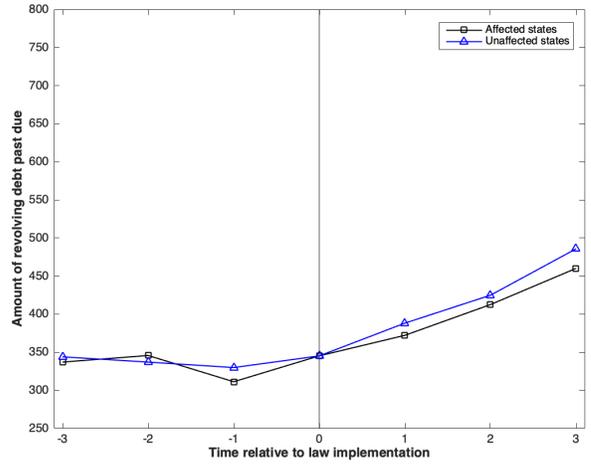
(d) Interest rate

**Fig. A1.** Evolution of outcome variables around tightenings of third-party debt collection laws.

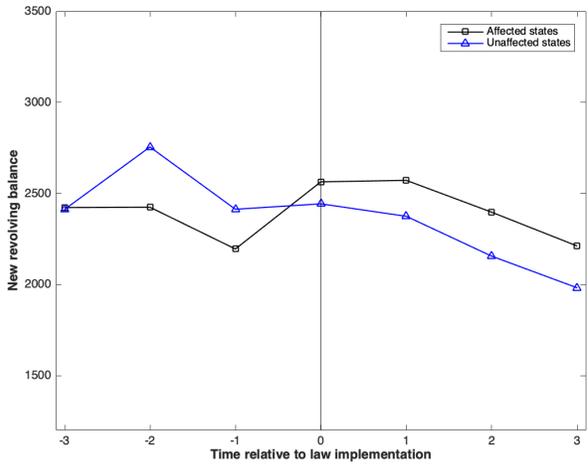
This figure depicts the evolution of Delinquencies on revolving debt, Amount of revolving debt past due, New revolving balance, and Interest rate variables three years prior and three years after tightenings of third-party debt collection laws. For affected states, 14 law tightenings that do not overlap with other law changes in the same state and have no missing data in the three years before and three years after the change are included. Twenty-three unaffected states that did not change their third-party debt collection laws during the sample period and have no missing data in the years when affected states changed their laws are included. See text for details. The graphs depict average values of the outcome variables in event time. Vertical lines indicate the date when the law change became effective. Values for affected states are marked with black squares; values for unaffected states are marked with blue triangles.



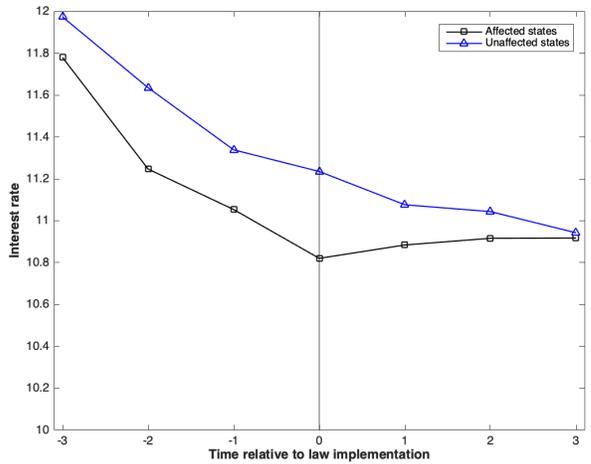
(a) Delinquencies on revolving debt



(b) Amount of revolving debt past due



(c) New revolving balance



(d) Interest rate

**Fig. A2.** Evolution of outcome variables around loosening of third-party debt collection laws.

This figure depicts the evolution of Delinquencies on revolving debt, Amount of revolving debt past due, New revolving balance, and Interest rate variables three years prior and three years after loosening of third-party debt collection laws. For affected states, 2 law loosening events that do not overlap with other law changes in the same state and have no missing data in the three years before and three years after the change are included. Twenty-three unaffected states that did not change their third-party debt collection laws during the sample period and have no missing data in the years when affected states changed their laws are included. See text for details. The graphs depict average values of the outcome variables in event time. Vertical lines indicate the date when the law change became effective. Values for affected states are marked with black squares; values for unaffected states are marked with blue triangles.

**Table A5**

Effect of third-party debt collection restrictions on secured credit.

In columns 1 and 2, the dependent variable is the number of new auto loans per 1,000 consumers. In columns 3 and 4, the dependent variable is the number of new mortgage loans per 1,000 consumers. All variables are as described in the text and in Table ???. All regressions are estimated using the main quarterly sample of 2,624 observations. Standard errors clustered by state are reported in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively.

Variable	New auto loans		New mortgage loans	
	(1)	(2)	(3)	(4)
Index	-0.318 (0.429)	-0.269 (0.396)	-0.600 (0.416)	-0.321 (0.349)
Unemployment rate		0.033 (0.177)		-0.372*** (0.120)
Personal income		0.316*** (0.090)		0.314*** (0.065)
Income growth		0.006 (0.037)		-0.020 (0.053)
Garnishment		-0.190*** (0.035)		-0.168*** (0.035)
Exemption		0.009 (0.022)		-0.027 (0.028)
Frequency	Quarterly	Quarterly	Quarterly	Quarterly
State fixed effects	Yes	Yes	Yes	Yes
Year×quarter fixed effects	Yes	Yes	Yes	Yes
Observations	2,624	2,624	2,624	2,624
Adjusted R-squared	0.782	0.803	0.832	0.852

**Table A6**

Further sensitivity analysis.

This table reports variations on the baseline specification as indicated. All variables are as described in the text and in Table ???. Regressions for Interest rate are estimated at annual frequency; regressions for all other variables are estimated at quarterly frequency. The number of observations in each specification is as follows: Panel A (1) 2,624 observations; Panel A (2) 2,624 observations; Panel A (3) 2,096 observations; Panel A (4) 2,736 observations; Panel A (5) 2,760 observations; Panel A (6) 2,740 observations; Panel B (1) 2,624 for the quarterly regression, 656 for the annual regression; Panel B (2) 2,624 for the quarterly regression, 656 for the annual regression; Panel B (3) 2,096 for the quarterly regression, 524 for the annual regression; Panel B (4) 2,736 for the quarterly regression, 684 for the annual regression; Panel B (5) 2,760 for the quarterly regression, 690 for the annual regression; Panel B (6) 2,740 for the quarterly regression, 685 for the annual regression. Standard errors clustered by state are reported in parentheses next to the coefficients. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively.

<b>Panel A: Sensitivity to alternative samples and specifications</b>				
Specification	Coefficient on the index of third-party debt collection restrictions when the dependent variable is			
	Delinquencies on revolving debt		Amount of revolving debt past due	
	(1)	(2)	(3)	(4)
(1) Baseline specification	0.199***	(0.074)	44.655*	(23.420)
(2) Incl. state×time trends	0.016	(0.107)	47.562	(54.661)
(3) Excl. 2007–2009	0.196***	(0.076)	45.815*	(25.580)
(4) Incl. Delaware and South Dakota	0.193***	(0.073)	47.787**	(23.417)
(5) Incl. years in which laws changed	0.157**	(0.068)	50.451**	(20.151)
(6) Extrapolate missing debt coll. data	0.157**	(0.075)	43.004*	(22.411)

<b>Panel B: Sensitivity to alternative samples and specifications, continued</b>				
Specification	Coefficient on the index of third-party debt collection restrictions when the dependent variable is			
	New revolving balance		Interest rate	
	(1)	(2)	(3)	(4)
(1) Baseline specification	-57.042	(38.005)	-0.023	(0.049)
(2) Incl. state×time trends	-4.074	(68.934)	-0.055	(0.079)
(3) Excl. 2007–2009	-81.833**	(39.441)	-0.021	(0.051)
(4) Incl. Delaware and South Dakota	-64.661*	(37.774)	-0.026	(0.049)
(5) Incl. years in which laws changed	-61.617*	(33.222)	-0.024	(0.040)
(6) Extrapolate missing debt coll. data	-47.197	(37.803)	0.031	(0.055)

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