

# Role of Personal Bankruptcy Exemption Laws on Mortgage Availability

Sumit Agarwal

Federal Reserve Bank of Chicago

Souphala Chomsisengphet

Office of the Comptroller of the Currency

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## Abstract

*This article investigates the relationship between bankruptcy exemption laws and the availability of credit for first and second mortgages (home equity loans and lines). The authors follow a bank-specific approach as advocated by Stengel and Glennon (1999) to test this relationship, using application data from multiple financial institutions. The data sets are unique and include a number of financial and demographic variables that are lacking in other studies on this topic. The article shows that, after controlling for all financial and economic variables, the availability of credit does not fall for first and second mortgages originated in states with higher bankruptcy exemption levels.*

## Introduction

The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 was enacted to reduce a debtor's ability to take advantage of what some considered lenient bankruptcy laws in the United States. For example, the act makes a "fresh start" unavailable for bankruptcy filers unless their household income is below the median level in their state of residence. In addition, given the recent mortgage foreclosures and the subsequent financial crisis, much criticism has been conveyed about the "democratization" of consumer credit, which has resulted in overindebtedness and a dramatic rise in individual bankruptcy filings.

These recent legal and financial developments in the United States have renewed the debate about the availability of credit for mortgages and how it is affected by the exemption level differences in

the bankruptcy law provision (White, 2007).<sup>1</sup> A broader question of whether differences in states' bankruptcy exemption levels affect aggregate household credit (both secured and unsecured) has been studied by Gropp, Scholz, and White (1997); Berkowitz and Hynes (1999); Lin and White (2001); and Chomsisengphet and Elul (2006).<sup>2</sup> Homestead and personal property exemptions provide debtors with relief from creditors in case of formal bankruptcy proceedings, and, in effect, provide them with a chance for a fresh start. Homestead exemptions vary widely, from zero in two states to unlimited in seven states. About one-third of the states allow their residents to choose between federal bankruptcy exemptions and the state's exemptions. In this article, we provide further empirical evidence on the impact of consumer bankruptcy exemption laws on the availability of mortgage credit.

Gropp, Scholz, and White (1997) argued that in states with high rather than low bankruptcy exemptions, the availability of credit falls because debtors are more likely to default and file for bankruptcy. They found empirical support for these predictions. In contrast, Berkowitz and Hynes (1999) have argued that in states with high bankruptcy exemptions, the availability of credit rises. They pointed to the fact that it is necessary to distinguish between different types of debts<sup>3</sup> and different types of exemptions<sup>4</sup> for a thorough understanding of the relationship between personal bankruptcy exemption laws and credit availability for mortgage loans. Their argument is that, when debtors are in financial distress, they can file for bankruptcy, obtain a discharge on their nonmortgage debts, and use the funds that would otherwise go to nonmortgage creditors to repay their mortgages, thereby keeping their homes. The higher the exemption is, the greater the protection of debtors' wealth in bankruptcy (and therefore the lower the probability that they will default on their mortgages).<sup>5</sup>

Furthermore, Lin and White (2001) have developed a theoretical model of debtors' decisions to file for bankruptcy and to default on their mortgages; they derive a positive relationship between personal property exemption levels and the probability of borrowers being denied mortgage loans. They test their model empirically using Home Mortgage Disclosure Act (HMDA) data over the period 1992–97 and find strong and statistically significant support when using data with cross-state variation in bankruptcy exemption levels.

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<sup>1</sup> Some studies have tested this hypothesis; that is, by making bankruptcy more attractive, large exemptions should lead to an increase in the filing rate. White (1987) found a positive relationship between the size of a state's exemption and the number of filings that was statistically significant but weak. Many other studies found either no statistically significant relationship or even a negative relationship between state exemption laws and the number of filings (for example, Buckley and Brinig, 1996; Hynes, 1997; Peterson and Aoki, 1984).

<sup>2</sup> See also Agarwal, Liu, and Mielnicki (2003) and Agarwal et al. (2005) for empirical evidence on the impact of bankruptcy exemptions on consumer bankruptcy and small business bankruptcy, respectively.

<sup>3</sup> The different types of debts are secured versus unsecured debts. Secured debts—such as mortgages and automobile loans—allow the creditor to reclaim the collateral if the debtor defaults on the loan, while unsecured debts—such as credit card debt and installment loans—have no collateral.

<sup>4</sup> States provide separate exemptions for equity in owner-occupied homes (homestead exemptions) versus other types of property (personal property exemptions).

<sup>5</sup> See also Domovitz and Sartain (1999) and Barron, Elliehausen, and Staten (2000). Chatterjee et al. (2007) incorporated simultaneously the role of household earnings and unsecured debt, as well as shocks to earnings, debt, and preference shocks (for example, divorce) in their theoretical household default/bankruptcy dynamic equilibrium model.

Chomsisengphet and Elul (2006) argued that an important variable in lending decisions—the credit history of the mortgage applicant—is ignored in the models of Gropp, Scholz, and White (1997); Berkowitz and Hynes (1999); and Lin and White (2001). Thus, all of their models suffer from an omitted variable bias. Chomsisengphet and Elul (2006) constructed a model to show that by ignoring the impact of exemptions on credit scores, lenders would tend to overstate the riskiness of borrowers from high-exemption states. Thus, a regression that omits the credit score would indeed find that applicants from high-exemption states are more likely to be denied a mortgage. Empirically, Chomsisengphet and Elul (2006) showed that, once they control for credit scores, exemptions are no longer relevant; the study presented in this article is most closely related to their study.

In this article, the authors reexamine the effect of homestead exemption laws across states on availability of credit for first and second mortgages (home equity loans and lines), using a bank-specific approach as outlined by Stengel and Glennon (1999)—a study from the Office of the Comptroller of the Currency. Unlike the previous studies that have examined this issue using the HMDA data set, this study has also collected other variables that could be critical in evaluating mortgage applications at these financial institutions. To the best of our knowledge, this is the first such study to include bank-specific variables to determine availability of credit for mortgages.

To study the impact of state exemption laws on the availability of credit for first mortgages, we examined a stratified sample of 570 loan files from January to September 1999. We empirically tested whether homestead exemptions across states play any part in the underwriting process for mortgages originated at a large financial institution, using a bank-specific approach. The results indicate that the dummies for homestead exemptions are statistically insignificant. These findings are robust and have withstood a variety of tests for robustness. These findings also show that individual borrower's financial capacity and creditworthiness are the only determinants of being rejected or accepted for a home mortgage at this financial institution.

In addition, we studied the impact of state exemption laws on the availability of credit for second mortgages (home equity loans and lines) by examining a stratified sample of 3,237 loan files between January 2000 and June 2001 from another financial institution. Once again, our results indicate that homestead exemption laws are statistically insignificant in credit availability decisions. In this article, we have focused only on the availability of credit and not on the pricing of credit. Hence, it is possible that exemption laws affect the pricing of credit.

This article is structured as follows: the second section describes the model specification and data, the third section provides the results, and the fourth section offers concluding remarks.

## **Model Specification and Data**

In this section, we discuss the model specification and the data used for our empirical analysis.

### **Model Specification**

This article investigates whether the probability of being denied credit, in the form of a mortgage, is higher for individuals who live in states that have higher homestead exemption levels, using

a bank-specific approach. As discussed in Stengel and Glennon (1999), individual banks follow bank-specific underwriting guidelines to make mortgage lending decisions. Including bank-specific information significantly increased the explanatory power of their model. Furthermore, they conclude that banks maintain an array of bank-specific decision variables considered fundamental to their mortgage lending decision, but not considered—or at least not in the same manner—by other banks. For example, Stengel and Glennon (1999) found that the ability to absorb the closing costs of a home purchase (down payments, various taxes, a fee, and a sufficient cushion of liquid assets to pay for two monthly mortgage payments) was treated differently at different banks. The HMDA data use net wealth as a proxy for this measure. Net wealth, however, may be grossly inaccurate for this purpose. Hence, as discussed by Stengel and Glennon (1999), a bank-specific approach has to be employed in deciding the variables that are critical in the mortgage underwriting process for this financial institution.

The regression methodology used here to measure the probability of being denied credit and its relationship to the homestead exemption level is based on the following model of the mortgage decision:

$$\Pr ob(y = 1 | X, z) = b' X + az + e,$$

where  $y=1$  if the loan application is accepted;  $X$  is a set of borrower, property, and financial covariates,<sup>6</sup> conceptually including all factors used in loan underwriting; and  $z$  is an indicator variable for the presence of attribution for varying homestead exemption levels across states. The variable  $e$  represents an additional unobserved random error term. The parameter of interest, then, is  $a$ , and a negative value significantly different from zero is taken as a measure of credit constraint based on the homestead exemption levels across states.

## Data

In this section, we discuss the data used for the first and second (home equity loans and lines) data sets.

### *First Mortgages*

The data for first mortgages are primarily from a large financial institution (proprietary in nature) that originates loans nationally.<sup>7</sup> A stratified random sample of one- to four-family, conventional, and nonpurchased home mortgage loan applications were drawn from the HMDA Loan Application Register between January and September 1999.<sup>8</sup> We exclude applications that were withdrawn

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<sup>6</sup> In particular, these covariates include excess back-end ratio, excess loan-to-value ratio, credit score, and a prior bankruptcy indicator.

<sup>7</sup> It is true that it is hard to infer about the aggregate impact of exemption laws on credit supply by looking at data from a single bank. A study like this one, however, can show how a large interstate lender takes differences in state law into account. One large lender's practices may both affect and reflect the larger competitive credit market.

<sup>8</sup> See Canner and Passmore (1994) for a general description of the HMDA data set. The data have been used mainly to analyze discrimination in lending to minority households.

and closed for incompleteness. The total sample size is 570 loan files. We randomly selected 284 mortgage applications that were approved and 290 mortgage applications that were denied.<sup>9</sup>

Furthermore, credit and collateral information was also retrieved manually from the underwriting documents. Data collection/entry and the quality assurance process took more than 9 months to complete. More specifically, it took nearly a day to transcribe and verify each file into a usable data set. Experienced internal and external consultants were employed for data transfer from the underwriting documents to electronic spreadsheets. Extensive data validation and data integrity checks were performed to ensure quality control. In total, for each loan file, we collected 91 separate data elements, which consisted of 22 HMDA data elements, 23 loan record identification elements, 18 credit history elements, 11 collateral elements, 11 income elements, and 6 asset elements. The overall sample size was consistent with samples used in bank-specific models estimated in Stengel and Glennon (1999).<sup>10</sup> Because the manual retrieval of the data was expensive, time consuming, and prone to human error, the bank, in consultation with the Office of the Comptroller of the Currency (the regulator), decided to follow a stratification process outlined in Stengel and Glennon (1999) and Dietrich (2000).

Completing the preliminary regression analysis and following the underwriting guidelines of our data provider, we determined that the following variables would be included in our study: (1) excess back-end ratio, or the ratio of debts (including principal, interest, property taxes, and insurance plus other monthly payments) to gross monthly income; (2) excess loan-to-value ratio, or the excess of loan-to-value ratio over the threshold for the loan type and program, set equal to zero if the loan-to-value ratio is below the threshold or if the applicant obtained private mortgage insurance; (3) credit score; (4) previous bankruptcy indicator and previous charge-off indicator; (5) self-employment indicator, implying that the applicant must have been in business for more than 2 years; (6) insufficient cash indicator; (7) individual borrower's years in school; and (8) individual borrower's income and income squared.<sup>11</sup>

We also added information concerning the homestead exemptions in each consumer's state of residence (see exhibits 1 and 2). Homestead exemptions vary widely—from zero in two states to unlimited in seven states. About one-third of the states also allow their residents to choose between federal bankruptcy exemptions and the state's exemptions. For those states, we have assigned the highest of the two exemption levels. Many states also allow married couples that file for bankruptcy to take higher exemptions, usually double. We have also collected individual application data on the marital status of the applicant. Consistent with prior literature, we model the state property, homestead, and garnishment levels as continuous variables (see Berkowitz and Hynes, 1999; Chomsisengphet and Elul, 2006; Lin and White, 2001).

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<sup>9</sup> Dietrich (2000) has shown that this sampling procedure can offer substantial efficiency gains over random sampling or stratification based on the outcome variables alone.

<sup>10</sup> In Stengel and Glennon (1999), their sample consisted of 766, 729, and 522 loan applications from three different banks.

<sup>11</sup> Other variables were modeled but were found to be not significant. They included borrower's age, census tract income levels, loan amounts, and excess front-end ratio. Variables that were seen in other studies and that have been included in this study for consistency include income, income squared, and years of schooling.

**Exhibit 1**

**Homestead and Property Exemption Levels**

State	Home (\$)	Property (\$)	State	Home (\$)	Property (\$)
AK	54,000	8,000	MT	60,000	5,700
AL	5,000	6,925	NC	10,000	5,000
AR	1,000,000	1,400	ND	80,000	7,425
AZ	100,000	9,250	NE	12,500	2,400
CA	50,000	5,000	NH	30,000	11,350
CO	30,000	4,800	NJ	15,000	10,700
CT	75,000	7,100	NM	30,000	8,050
DE	0	5,000	NV	125,000	4,500
FL	1,000,000	2,000	NY	10,000	7,400
GA	5,000	5,400	OH	5,000	2,900
HI	20,000	2,000	OK	1,000,000	10,925
IA	1,000,000	10,600	OR	25,000	9,150
ID	50,000	5,750	PA	15,000	10,700
IL	7,500	7,125	RI	15,000	10,700
IN	7,500	4,000	SC	15,000	10,700
KS	1,000,000	24,650	SD	1,000,000	3,250
KY	5,000	6,500	TN	5,000	7,925
LA	15,000	15,125	TX	1,000,000	30,000
MA	15,000	12,200	UT	10,000	2,500
MD	0	6,000	VA	5,000	14,750
ME	12,500	2,900	VT	75,000	9,400
MI	15,000	10,700	WA	30,000	12,675
MN	200,000	13,000	WI	40,000	7,200
MO	8,000	3,000	WV	15,000	3,200
MS	75,000	10,000	WY	15,000	2,400

Source: Agarwal, Liu, and Mielnicki (2003)

**Exhibit 2**

**State Bankruptcy Exemptions—Changes Over the Years**

Year	State	Homestead Exemptions (\$)	Property Exemptions (\$)
1994	MI	7,500 to 15,000	5,350 to 10,700
1994	NJ	7,500 to 15,000	5,350 to 10,700
1994	PA	7,500 to 15,000	5,350 to 10,700
1994	RI	7,500 to 15,000	5,350 to 10,700
1994	SC	7,500 to 15,000	5,350 to 10,700
1995	ME	7,500 to 12,500	1,600 to 2,900
1995	VT	30,000 to 75,000	
1996	CA		2,500 to 5,000
1996	MN	1,000,000 to 200,000	
1997	MT	40,000 to 60,000	
1997	NE	10,000 to 12,500	1,500 to 2,400
1997	NV	95,000 to 125,000	1,500 to 4,500
1997	UT	8,000 to 10,000	1,500 to 2,500
1997	WV	7,500 to 15,000	1,600 to 3,200
1997	WY		2,000 to 2,400

Source: Agarwal, Liu, and Mielnicki (2003)

## **Second Mortgages**

The data for second mortgages are from a large financial institution (proprietary in nature) that originates home equity loans and lines (to reiterate, these data are drawn from a different organization than the one from which data for first mortgages are drawn). Our sample consists of 3,237 home equity loans and lines issued to owner-occupants and originated from January 2000 to June 2001. In this sample, 1,611 mortgages were approved and 1,626 were denied. Data collection/entry and the quality assurance process took more than 6 months. Extensive data validation and data integrity checks were performed to ensure quality control. We also added all the non-HMDA fields that we collected for the first mortgages.

## **Results**

Exhibits 3 and 4 provide some summary statistics for first and second mortgages, respectively. They provide some interesting differences between the credit behavioral characteristics of the applicants who were accepted for mortgages and those who were declined for mortgages.

The statistics in exhibits 3 and 4 suggest that, on the average, the excess back-end ratio (debt-to-income ratio) for the applicants who are accepted for a mortgage is lower than for the applicants who are denied. Furthermore, the collateral index shows that applicants who are accepted for a mortgage have higher collateral than those who are denied. Other statistics suggest similar differences among the accepted and denied applicants. Other informative variables are (1) credit score, (2) a prior bankruptcy indicator, and (3) a prior charge-off indicator. All these variables also show that applicants who are accepted for a mortgage have favorable credit behavioral characteristics. Meanwhile, age, number of years at a job, loan amount, and years of schooling do not show clear trends that differentiate the accepted applicants from those who were denied.

## **Regression Results**

The regression results are presented in exhibits 5 and 6 for the first and second mortgages, respectively. We treat different ethnic minorities individually. The results show that the most important variables in the decision process of an applicant being accepted for a mortgage loan include excess back-end ratio (debt-to-income ratio), excess loan-to-value ratio, credit (FICO—Fair Isaac Corporation [credit scoring model]) bureau score, prior bankruptcy indicator, prior charge-off indicator, self-employment indicator, collateral indicator, and income. Income squared and years of schooling are statistically insignificant. The results also show that the *p* values for the minority dummies were statistically insignificant. As documented in the previous literature (Agarwal, Li, and Mielnicki, 2003; Stengel and Glennon, 1999), once one controls for the bank-specific variables, race and demographic variables usually turn out to be statistically insignificant in the credit availability decision, even when race and other demographics appear to be significant in the absence of those controls.<sup>12</sup>

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<sup>12</sup> Agarwal, Li, and Mielnicki (2003) used the same data to test for discrimination in the mortgage market. Essentially, they used only the variables in the HMDA data set. Our results are fairly comparable to theirs for the HMDA variables.

### Exhibit 3

#### Summary Statistics for First Mortgages

Variable	Accepted		Denied	
	Mean	Std	Mean	Std
Excess debt-to-income	3.18	1.38	7.86	5.93
Excess loan-to-value	0.05	0.03	0.87	0.52
Credit score	702	58	662	70.24
Prior bankruptcy	0.04%	0.02%	0.09%	0.05%
Prior charge-off	0.13%	0.07%	0.27%	0.13%
Self-employed	9%	7%	17%	8%
Collateral	1.55	1.21	1.34	0.94
Years in school	14.79	4.44	14.18	5.93
Income	\$68,396	\$32,284	\$55,204	\$15,835
Loan amount	\$126,533	\$50,383	\$142,906	\$60,239
Employed	90%	27%	72%	18%
Age	44	16	43	14.39
Minority	52%	28%	47%	22%
Cash reserves	\$84,939	\$38,439	\$31,047	\$12,218
Homestead exemptions	\$203,283	\$348,918	\$205,048	\$351,921
Property exemptions	\$9,482	\$6,592	\$9,591	\$6,945
Number of states in data set	50		50	

### Exhibit 4

#### Summary Statistics for Second Mortgages

Variable	Accepted		Denied	
	Mean	Std	Mean	Std
Excess debt-to-income	2.55	1.58	9.73	4.73
Excess loan-to-value	0.06	0.01	0.36	0.48
Credit score	728	57	653	106
Prior bankruptcy	0.10%	0.32%	0.86%	2.81%
Prior charge-off	0.02%	0.01%	0.09%	0.11%
Self-employed	12%	8%	19%	10%
Collateral	1.84	1.29	1.62	1.00
Years in school	13.14	4.55	12.20	7.16
Income	\$71,148	\$37,053	\$71,741	\$19,546
Loan amount	\$52,602	\$62,642	\$68,947	\$69,543
Employed	84%	34%	72%	19%
Age	51.77	17.48	53.62	17.22
Minority	19%	29%	24%	43%
Cash reserves	\$76,496	\$45,836	\$34,580	\$14,694
Homestead exemptions	\$201,965	\$369,922	\$204,083	\$370,583
Property exemptions	\$9,773	\$6,293	\$9,781	\$6,822
Number of states in data set	50		50	



### Exhibit 5

#### Regression Results for First Mortgage Approval

Variable	Estimate	Std-Error	t-stat
Intercept	- 8.8560	1.5899	- 5.57
Homestead exemptions	- 0.1545	0.1870	- 0.83
Property exemptions	- 0.4799	0.3908	- 1.23
No-recourse state dummy	- 0.2826	0.3770	- 0.75
Garnishment exemptions	0.4790	0.3674	1.30
African American	- 0.1063	0.3134	- 0.34
Asian American	0.4977	0.2980	1.67
Hispanic American	0.5775	0.2840	2.03
Excess debt-to-income	- 0.0461	0.0136	- 3.39
Excess loan-to-value	- 0.1363	0.0317	-4.30
Credit score	0.0096	0.0019	4.95
Prior bankruptcy	- 1.3782	0.6009	- 2.29
Prior charge-off	- 0.6529	0.2812	- 2.32
Self-employed	- 0.8140	0.3215	- 2.53
Collateral	1.5810	0.3393	4.66
Income	0.0012	0.0005	2.35
Income-squared	- 0.0010	0.0001	- 9.82
Schooling	0.0144	0.0403	0.36
Number of observations	570		
Pseudo R-squared	0.29		

### Exhibit 6

#### Regression Results for Second Mortgage Approval

Variable	Estimate	Std-Error	t-stat
Intercept	- 7.0411	1.3314	- 5.29
Homestead exemptions	- 0.2838	0.3927	- 0.72
Property exemptions	- 0.3928	0.3817	- 1.03
No-recourse state dummy	- 0.1094	- 0.1048	1.04
Garnishment exemptions	0.4783	0.8382	0.57
African American	- 0.0956	0.1002	- 0.95
Asian American	0.1943	0.1772	1.10
Hispanic American	0.0660	0.0467	1.41
Excess debt-to-income	0.5462	0.0800	6.83
Excess loan-to-value	- 0.3350	0.1649	- 2.03
Credit score	0.4125	0.1586	2.60
Prior bankruptcy	- 0.2824	0.1183	- 2.39
Prior charge-off	- 0.5133	0.1029	- 4.99
Self-employed	- 0.4633	0.1060	- 4.37
Collateral	0.5356	0.2427	2.21
Income	0.0022	0.0014	1.52
Income-squared	- 0.0007	0.0003	- 2.42
Schooling	0.0892	0.0312	2.86
Number of observations	3237		
Pseudo R-squared	0.19		

It is important to discuss the sign of the coefficients on the variables. On the one hand, the coefficients on the debt-to-income ratio, loan-to-value ratio, prior bankruptcy indicator, prior charge-off indicator, and self-employment indicator all are negative correlated to mortgage origination, implying the higher the values of these variables are, the higher the probability of being denied for a mortgage is. On the other hand, the coefficients on credit score, collateral, and income all are positive and statistically significantly correlated to mortgage origination, implying that consumers with higher income, collateral, and less riskiness are more likely to be approved for a loan. Finally, we have a dummy for “no recourse.” Essentially, the no-recourse dummy implies that a borrower relinquishes the house to the lender and the lender cannot go after the borrower for any additional assets or income; only the house secures the loan—that is, the lender has no recourse on the loan beyond the house. This policy allows borrowers in no-recourse states to walk away from their mortgages without declaring bankruptcy.<sup>13</sup>

Previously, our discussion has examined only the estimates for the control variables, but now we look at the variable of interest. The bankruptcy exemption level variable is statistically insignificant. This result suggests that credit availability does not vary with the homestead exemption levels across states. These results are very robust, and they have withstood a variety of tests. We subsampled the data and conducted similar analyses, but the results did not change qualitatively. Moreover, the results are consistent in both versions of the model—that is, where we control for all the racial/ethnic minorities with a single dummy variable or with multiple dummy variables. The goodness-of-fit measures are consistent with the empirical literature.

Hence, following a bank-specific approach, we find that bankruptcy exemption laws across states in the United States do not have any statistically significant impact on the credit availability for mortgage loans.

## Conclusion

In this study, we looked at a random sample of 570 first mortgages and 3,237 second mortgages (home equity loans and lines) to empirically test whether homestead exemptions across states play any part in the underwriting process for mortgages originated at two large financial institutions. We used a bank-specific approach in our analysis. The results indicate that the dummies for homestead exemptions are statistically insignificant. Our findings are robust and have withstood a variety of stress tests. Our findings also show that an individual borrower’s financial worthiness and creditworthiness are the only determinants of being accepted or declined for a home mortgage (both first and second mortgages) at these financial institutions. As we outlined in the introduction, the literature on the impact of homestead exemption laws on credit availability has been mixed. Although Gropp, Scholz, and White (1997) and Lin and White (2001) found that exemption laws negatively impact credit availability, Berkowitz and Hynes (1999) found that

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<sup>13</sup> Some of the eight no-recourse states in the United States—Alabama, Arkansas, California, Minnesota, Montana, North Dakota, Oregon, and Washington—overlap with the high or unlimited homestead exemptions. Hence, the no-recourse effect will go in the opposite direction of the homestead exemptions, providing additional power to our test.

exemption laws positively impact credit availability. Finally, Chomsisengphet and Elul (2006) found that exemption laws do not have any impact on credit availability. Chomsisengphet and Elul showed that, after controlling for credit scores (even at the ZIP Code level), the exemption levels are statistically insignificant. Chomsisengphet and Elul did not mimic the loan underwriting process, however, and we have built on that contribution by following the bank-specific approach outlined by Stengel and Glennon (1999). We find that after controlling for the credit scores and other underwriting variables, the exemption levels are statistically insignificant.

Although we did not find that the exemption laws have any impact on credit availability, it is possible that exemption laws may impact the pricing of credit. Although mortgage pricing is not the focus of our article, this is an open question for future research. We believe that more research is also necessary to determine the effects of homestead and property exemption laws on credit *demand* as opposed to credit *supply* for both the secured and unsecured credit markets. Such research is particularly needed in light of the recent law that standardizes federal bankruptcy exemptions. Despite the apparent need for research on personal bankruptcy laws, the number of academic papers on this topic is quite limited, especially compared with the literature on its more seductive cousin, the Chapter 11 reorganization.

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## **Authors**

Sumit Agarwal is a senior financial economist in the Research Department at the Federal Reserve Bank of Chicago.

Souphala Chomsisengphet is a senior financial economist in the Risk Analysis Division at the Office of the Comptroller of the Currency.

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