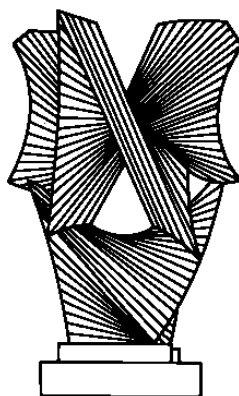


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THE LAW AND ECONOMICS OF CONSUMER FINANCE

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The Law and Economics of Consumer Finance

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Abstract: This survey of the law and economics of consumer finance discusses economic models of consumer lending, and evaluates the major consumer finance laws in light of them. We focus on usury laws, restrictions on creditor remedies such as the ban on expansive security interests, bankruptcy law, limitations on third-party defenses such as the holder in due course doctrine, information disclosure rules including the Truth in Lending Act, and anti-discrimination law. We also discuss the empirical literature.

Introduction

The law regulates consumer credit transactions much more heavily than non-credit transactions like the cash sale of a computer. Nearly anyone can sell computers to the public, but the creditor – bank, finance company, pawnshop, credit card issuer³ – is heavily regulated by federal and state agencies: licensed, inspected, and – less so now than in the recent past – circumscribed by geographic, market, and product restrictions. The computer seller may offer any cash contract acceptable to the market, subject to some light restrictions imposed by federal and state law. The creditor may not choose a price that exceeds the relevant usury ceiling, or remedial terms that are considered too burdensome by the law. Many kinds of attractive collateral – like household goods – will not be used, because the security interest would not be enforceable. The law does not require the computer seller to explain what RAM is, but it does require the creditor

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³ Or an ordinary seller of goods, but to the extent that the seller offers the goods on credit, she is treated like any specialized creditor, and sellers of goods often subcontract to such specialists.

to explain what a finance charge is, and additionally to present information about credit terms in a stylized way that is supposed to ease comparison of the terms offered by different companies.

In this survey of the law and economics of consumer finance, we describe and evaluate the main patterns of consumer finance regulation in the United States. We examine the state and federal laws that regulate loans to consumers, including cash loans and loans that finance the purchase of real estate and consumer goods. We focus on (1) price controls (usury laws); (2) restrictions on creditor remedies; (3) bankruptcy law; (4) limitations on the use of third-party defenses; (5) information disclosure rules; and (6) anti-discrimination law. We do not discuss general doctrines of contract law that are applied to cash sales and credit transactions alike, including the unconscionability doctrine; statutes and regulations that apply to all consumer transactions, not just consumer credit transactions, such as laws that regulate advertising or warranties; and laws that regulate the market as a whole, including licensing requirements for creditors, geographic and activity restrictions, and antitrust enforcement.⁴

The literature on the regulation of consumer credit is not as lively as it once was. Most contributions were written in the 1970s and early 1980s, and there has been little work in the 1990s other than work on personal bankruptcy. Yet consumer credit remains a significant topic of public policy, and it continues to pose difficult questions. For poorly understood reasons, the individual bankruptcy filing rate has risen rapidly and steadily since the 1970s, and bankruptcy reform is a recurrent issue in Congress, generating significant attention in the media. The credit card industry has attracted a great deal of criticism for its aggressive marketing efforts, confusing credit terms, and high interest rates. Major retailers such as Sears are criticized for their efforts to

⁴ We also do not discuss public choice approaches to the law of consumer finance; see, e.g., Boyes (1982), Ekelund, Hebert and Tollison (1989), Letsou (1995), Buckley and Brinig (1996), Posner (1997).

persuade customers to reaffirm debts in bankruptcy. And controversy has swirled around the sale of credit insurance to low-income borrowers, a practice that has generated considerable profits for creditors. These and similar issues deserve more attention from scholars than they have received.

I. Model

A. Lending in a Competitive Market

An individual, Debtor, seeks to borrow money in order to smooth consumption over time. A firm, Creditor, offers to lend money at a certain rate of interest. In a competitive market the interest rate will reflect the time value of money, inflation, and the risk of default. Debtor accepts the offer if the benefit, that is, the transformation of future wealth into current consumption, exceeds the interest rate. If Debtor defaults on the loan, he is legally required to pay Creditor. If in fact Debtor does pay damages as a result of a lawsuit, or forfeits collateral of sufficient value, there is no “default” in an economic sense, as Creditor is fully compensated. The problem for Creditor is that Debtor may be judgment proof as a result of both legal and nonlegal factors. The legal factors, to be discussed more extensively below, include restrictions on the ability of Creditor to seize assets or future income in order to satisfy a judgment. Nonlegal factors include the difficulty of tracing Debtor if he flees the jurisdiction or goes into hiding and collecting from Debtor if he simply does not ever earn enough money to pay off the debt.

Default usually occurs in a bad state of the world in which Debtor loses his job, his health, or a valuable asset. Risk-averse debtors want insurance against such bad states, and in addition to the usual forms of insurance, such as automobile and health, Debtor may purchase credit insurance, which would repay his debt to Creditor if he underwent certain hardships such as unemployment, illness, disability, or destruction of the collateral granted to Creditor. Debtor may also obtain insurance from Creditor himself in the form of a commitment from Creditor to forgive missed payments if certain events

occur.⁵ Nonrecourse loans also reflect this interest in insurance. Debtor allows Creditor to seize certain collateral upon default but Creditor gives up the right to seek repayment from Debtor's other assets.

Consumer loans take many different forms. Simplest is an unsecured loan of cash. Open-end loans like credit card transactions roll over from period to period; closed-end loans terminate after a specified number of payments of principal and interest. Creditors also issue loans secured by goods, contract rights, and other collateral. Both ordinary creditors and retailers often lend money necessary to purchase a particular good, and retain a purchase money security interest in that good. Banks and other creditors issue home equity loans; these are loans secured by real estate.

There is a debate about why secured credit exists.⁶ Creditors should be indifferent between issuing a risky unsecured loan with a high interest rate, and a relatively safe secured loan with a lower interest rate. Debtors should be indifferent between an additional claim on their assets and a higher interest rate. Therefore, because issuing secured rather than unsecured credit involves additional administrative costs greater than zero, secured credit should not exist. Two simple nonefficiency explanations for the existence of secured credit are (1) that security interests are used for transferring risk to tort and other nonadjusting unsecured creditors, and (2) that in the consumer finance context, security interests may be used to circumvent property exemption laws (White, 1984). Efficiency explanations for secured credit are beyond the

⁵ It is likely that some lenders informally commit to forgive loans or at least missed payments through their reputation. For example, Caplovitz (1967) describes a practice of many credit sellers of abstaining from legal action after missed payments after using social networks to verify that their low-income consumers are unable to repay. A commitment to forgive the loan upon the occurrence of certain events is identical to credit insurance underwritten by Creditor.

⁶ For early articles presenting most of the basic arguments, see Scott (1977;1979), Smith and Warner (1979), Jackson and Kronman (1979) and Schwartz (1981). For more recent treatment of the topic, see Hudson (1995), Bebchuck and Fried (1996) or see Volume 80, No. 8, of the Virginia Law Review.

scope of this paper, although we note below where they are relevant to the law of consumer finance.⁷

B. Monopoly Power

Abundant evidence suggests that the credit market is generally competitive (DeMuth, 1986; Pierce, 1991; Elliehausen & Wolken, 1990), but there may be local monopolies in certain areas of the country, perhaps poor neighborhoods, perhaps the result of regulations that raise the cost of entering the credit market. In addition, many laws to be discussed below are defended on the ground that they correct inefficiencies created by creditors' market power, so it is useful to examine the possibility that creditors do have market power.

In an environment with full or symmetric information, a creditor with monopoly power will charge an interest rate that is greater than that available in a competitive market but will generally supply the same nonprice terms as a creditor in a competitive market (Schwartz, 1977). Even if these nonprice terms (such as harsh collection procedures) are otherwise beneficial to the creditor, they will reduce the willingness of well-informed debtors to pay for credit. As long as these terms are inefficient, the creditor would prefer to use its market power to force the debtor to pay a higher interest rate. The creditor would gain more by charging a higher interest rate than by obtaining consent to a contract with inefficient nonprice terms.

The conclusion that the monopolist will use the same terms as a competitive lender requires some technical assumptions. Otherwise, because the monopolist lends less in equilibrium, the optimal terms of the contract may change. Still, there is no reason to believe that the contract terms in the monopolized market would be harsher than the contract terms in the competitive market. And there is no reason to believe

⁷ Some of the other efficiency explanations clearly have relevance in consumer finance. For example, these arguments focus on the ability of secured credit to assign parties to monitor a firm's assets.

that forcing monopolists to supply some of the terms that would prevail in a competitive market would produce a gain. Because the monopoly power remains, further distortions would occur in the unregulated terms. (Schwartz, 1977)

Monopoly power can have other effects as well, but these require asymmetric information and thus will be discussed below.

C. **Asymmetric Information: Consumer Ignorance**

Even if there are numerous lenders in a market, each lender may have some degree of market power because of the inability of consumers to costlessly compare prices and terms. Depending on the source of the information failure, this may result in either an abnormally high price or abnormally harsh terms. Some creditors will lend only to those consumers who are unable to compare the (price or nonprice) terms of the loan offered with the terms available elsewhere in the market.

The problem requires that a large enough number of consumers find it difficult to shop around. The competitive outcome would occur if a significant subset of the consumers become informed and if creditors are unable to discriminate between these creditors and the uninformed by, for example, offering loans with different terms and interest rates with only the informed consumers able to determine the most desirable loans. (Schwartz and Wilde, 1979; 1983). That is, if enough consumers compare loans before borrowing, no lender could make a profit by lending only to those who did not compare. However, by shopping the informed consumers effectively confer a positive externality on the uninformed and thus consumers may have too little incentive to acquire information.

Creditors would seem to have every incentive to distinguish themselves from their competitors if they offered credit on more attractive terms. However, they cannot overcome consumer ignorance (possibly resulting from misleading claims made by

Likewise, a mortgage may ensure that some creditor monitors the homeowner's insurance purchased by the consumer.

rivals) when that ignorance is severe enough. There is a limit to how much explaining a creditor can do before losing the attention of its customers. Further, in a competitive market each creditor has insufficient incentive to educate consumers because of that creditor's inability to internalize all of the gain from that information. This problem is lessened somewhat if lenders have market power because they capture more of the returns from the information and thus have an incentive to provide information about the entire product, not just the brand. However, a creditor with market power may have an incentive to provide too little information in order to aid in price discrimination (Beales, Craswell, and Salop, 1981a). Furthermore, creditors will have insufficient incentive to explain the economics of the credit market, and the meaning of contract terms, because they cannot prevent people who have benefited from their expectations from seeking loans elsewhere. (Beales, Craswell, and Salop, 1981b).

It is of course possible for third parties such as trade associations or even independent groups such as Consumers Union to provide comparisons or standards for comparison. However, each of these solutions has its own problems. An independent group such as Consumers Union might supply too little information because it would have difficulty preventing consumers from sharing the information with others who do not pay Consumers Union for it. Trade associations may have an incentive to create standards or report information that favors those within the association over other competitors, or, conversely, to avoid creating standards for fear of drawing the attention of antitrust regulators. (Beales, Craswell, and Salop, 1981b; Schwartz and Wilde, 1977).

D. Asymmetric Information: Creditor Ignorance

The simplest form of information asymmetry occurs when Debtor knows his willingness to pay for credit while Creditor does not. If Creditor has a monopoly, he has an incentive to discover Debtor's valuation so that he can price discriminate. It is possible that Creditor can separate higher and lower valuation debtors by offering

contracts with inefficient terms. For example, Creditor might offer a loan with a high interest rate and a loan with a collateral requirement but a lower interest rate if this would help him distinguish between those who are particularly sensitive to the interest rate and those who are not. The efficiency implications of this practice are obscure. As long as the monopoly remains intact, a law that prohibits the inefficient term will both eliminate the cost associated with the term and reduce value by interfering with price discrimination. Creditor will offer an average interest rate that drives low valuation debtors out of the market (Craswell, 1995).

Another form of asymmetric information occurs when Debtor knows the probability of default and Creditor does not. Assume that because of personal characteristics unobservable by creditors, some debtors have a high probability of default (“bad” debtors) and others have a low probability of default (“good” debtors). Harsh remedial terms are more costly for bad debtors than for good debtors because the bad debtors are more likely to default and thus to become subject to the terms. If creditors believe that any debtor who fails to grant a security interest (or agree to some other harsh remedial term such as a *cognovit* clause) is a bad debtor, creditors may offer two contracts: a secured loan with a low interest rate and an unsecured loan with a high interest rate.⁸ The good debtors effectively “signal” their type by choosing the secured loan with the low interest rate while the bad debtors choose the unsecured loan. The creditors’ beliefs are validated in this separating equilibrium. This would be true regardless of whether the market is competitive or monopolistic (Rea, 1984; Aghion and Hermalin, 1990).⁹

⁸ Creditor might also be able to determine the type of the debtor through the size of the loan requested (Freixas and Laffont, 1990).

⁹ If one imposes stronger assumptions, one can show that a monopolist will behave differently than a lender in a competitive market. For example, Besanko and Thakor (1987) show that under certain conditions a monopolist is more likely to prefer credit rationing over collateral.

A rule banning security interests and other harsh remedial terms would be efficient if the total costs of the signaling exceed the total gains. If there is no credit rationing and no effect on the debtor's efforts to avoid default (we discuss both these assumptions below), the reduced interest rate charged to the good debtors should be roughly offset by the increased interest rate charged to the bad debtors. In fact, it is even possible that banning such signaling would benefit the good debtors. The reason is that the good debtors might prefer a contract with no collateral and with an interest rate that reflected the average probability of default in the population, compared to a contract with collateral and a lower interest rate. In the absence of a legal ban on security interests Creditor would not offer the efficient pooling contract because of his belief in equilibrium that good debtors issue security interests and bad debtors refuse to issue security interests.

The fact that security interests and other consensual creditor remedies can be used to signal information about debtors does not necessarily mean that they should be banned because this signaling may play a role in reducing a related problem caused by asymmetric information, credit rationing (Betser, 1985; 1987). Creditor sets the interest rate to reflect the average probability of default in his portfolio. Assume that good debtors are less willing to pay a higher interest rate because they are more likely to repay the loan.¹⁰ If Creditor cannot distinguish among debtors, the expected profit from any particular loan will decline as the interest rate rises beyond some point, because as the interest rate increases the good debtors drop out of the market. Therefore, creditors (monopolistic or competitive) will not raise interest rates above this point and credit will be rationed: the demand by bad debtors for (even high-interest) loans will be unmet (Stiglitz and Weiss, 1981). If there are too many bad debtors in the market, their probability of default is sufficiently high, and the divergence in the probability of

¹⁰ The assumption that the good debtors are more likely to drop out of the market as the interest rate rises is standard, but not universal. For an article assuming the contrary, see Besanko and Thakor (1987).

default is too large, the market unravels leaving only the bad debtors willing to borrow, but creditors unwilling to lend to them. This is the phenomenon of *adverse selection* (Akerlof, 1970). Security interests and related terms may reduce adverse selection by enabling the creditor to distinguish among good and bad debtors. Security interests and similar terms can serve as signals because they are cheaper for debtors who are less likely to default.

Credit rationing can also result if there is asymmetric information about whether or not the debtor “can” repay a loan (Jaffee and Russell, 1976). That is, debtors may have an incentive to claim destitution in order to avoid repayment and it may be difficult for creditors or courts to verify that this is correct. In an extreme case, the only mechanism that the creditor may use to force repayment is to deny future credit (Allen, 1983). Collateral with personal value to the debtor and other forms of creditor remedies ensure that a defaulting debtor cannot in fact repay if the debtor would rather repay the loan than endure the “punishment” of repossession (Rea, 1984; Scott, 1989).

Another kind of asymmetric information problem arises when Debtor has private information about the care with which he avoids default. “Care” can mean a lot of things: (i) working hard, so that he is not fired and deprived of an income to repay the loan; (ii) protecting assets or collateral so that they may be liquidated in case of default; (iii) avoiding physical risks that might result in injury; or (iv) avoiding risky investments. If Creditor cannot observe Debtor’s level of care and penalize Debtor if he takes insufficient care; and if Debtor does not expect to repay the debt in full because of the legal and nonlegal factors mentioned above; then Debtor will take a suboptimal level of care. This is the problem of *moral hazard*.

One response to this moral hazard is to prohibit, by contract, behavior that increases risk. An example is the covenant against using residential property for commercial purposes. But this response really assumes away moral hazard by supposing that conduct is observable: when conduct is unobservable, it cannot be

prohibited by contract. The second response to moral hazard is to require Debtor to bear some of the cost of default, thus converting a debtor who might otherwise be fully judgment-proof into one who is partly judgment-proof. For example, requiring that personally valuable property be collateral reduces the probability that Debtor will be able to protect it at the time of default through judicial process. Alternatively, Creditor might seek to destroy Debtor's reputation by publicizing the default; to cause psychic harm by liquidating a guarantee from a loved one; or, in the case of loan sharks, to break bones. Even though these actions provide no direct benefits to Creditor while conferring costs on Debtor, they may be efficient because they reduce moral hazard (Rea, 1984).

II. Law

A. Price Restrictions: Usury Laws

Description. Every state has laws restricting the interest rate that can be charged for consumer loans. However, although the interest rate ceilings in some states are quite low, their effect on the credit market is likely to be limited. There are many reasons for this. First, federal law preempts state usury laws in a variety of cases, the most important being home equity loans, for which there is no federal interest rate ceiling.¹¹ Further, since the late 1970s, federal law has permitted federally insured state institutions to "export" the high interest rate ceilings of the states in which they are located, thus permitting them to lend at high interest rates to debtors who reside in states with low ceilings.¹² Second, state usury ceilings have long been riddled by exceptions for, among other things, small loans, retail installment loans, and loans issued by favored institutions like credit unions. Third, interest rate ceilings often

¹¹ This was actually an incomplete preemption as the states were given the right to "opt out" and fourteen states did so. (Alperin and Chase 1986)

¹² *Marquette National Bank of Minneapolis v. First of Omaha Service Corporation*, 439 U.S. 299 (1978).

understate their effective limits, the result of special rules for calculating interest rates when lenders compound, charge fees, give discounts, and calculate balances in different ways. Fourth, remedies for violation of usury laws are frequently narrow (Alperin and Chase, 1986). Fifth, usury ceilings may be evaded in many ways, for example, by disguising interest as part of the “price” of the good if sold on credit with a discount for cash transactions, or by disguising a secured transaction as a lease with high rental payments and a low buy-out price (Peterson, 1983). Sixth, many usury ceilings are set at fixed interest rates thereby lessening their importance in periods of low inflation such as the present time. Still, usury ceilings have theoretical interest and historical significance, and they continue to influence many ordinary lending practices.

Effects. Usury laws are simply price controls, and can be predicted to have many of the same effects: queuing, unsatisfied demand, and an illegal market, loansharking. Unlike standard price controls, however, it is doubtful that usury laws lower the price of a loan (the interest rate) paid by any particular borrower. Because there are many alternative uses of capital, a prohibition of high interest rates will simply lead creditors to refuse to lend to high-risk debtors and instead lend to lower-risk debtors at legal rates or to seek other investment options. To the extent that high interest rates are the result of market power enjoyed by lenders, either as a result of monopoly power or search costs (Ordoover and Weiss, 1981), usury laws might be able to lower the rate charged to borrowers. But there is little evidence that creditors have market power or that consumers lack good information about interest rates, especially after the implementation of the Truth in Lending Act described below (Schwartz and Wilde, 1979). Even if lenders did have some monopoly power and the usury ceiling reduced the rates paid by some debtors, these ceilings would cause higher risk debtors to be denied credit as creditors would be unable to charge them higher rates, thus offsetting much, if not all, of the welfare gains. Ausubel (1991) raises the possibility that interest rates on credit cards are artificially high because of the irrationality of consumers. He

argues that low-risk credit card users intend never to borrow and therefore do not consider the interest rate when choosing among credit cards; whereas high-risk credit card users do consider the interest rate. Because creditors cannot distinguish between low-risk and high-risk debtors, no creditor would lower its interest rate as it would disproportionately attract high-risk debtors. A limit on interest rates could therefore be welfare improving. However, Ausubel's thesis is controversial. More recent studies have found that consumers are sensitive to interest rates (Gross and Souleles, 2000) and economists remain nearly unanimous in condemning usury laws.

Some of the early empirical literature on usury did find that states with usury laws had lower average interest rates.¹³ But most of the literature found that usury laws result in a significant reduction in the access to credit for high-risk debtors.¹⁴ In fact, Villegas (1982; 1989) finds that the entire decline in the average interest rate is attributable to the exclusion of these debtors from the market; the usury laws do not reduce the interest rate paid by an individual debtor. This result is unsurprising: the supply of loans should not be inelastic if capital can be used for other projects or in other jurisdictions. The only surprising thing about these findings is that because usury laws are so easy to circumvent, it is difficult to believe that they have any impact on behavior in a modern economy with efficient capital markets.

Usury laws have a long and significant history, are still important in many jurisdictions, especially Islamic countries, and continue to resonate with the moral

¹³ See, for example, Greer (1973), Peterson (1979), Peterson and Ginsberg (1981), Shay (1973) and Wolkin and Navratil (1981).

¹⁴ See, for example, Boyes and Roberts (1981), Dunkelberg and DeMagistris (1979), Greer (1975), Kawaja (1969) and Shay (1970). For studies finding no credit rationing, see Eisenbeis and Murphy (1974), Goudzwaard (1968; 1969) and Peterson (1983). This is consistent with studies of the mortgage credit market which typically find that restrictions on usury reduce the number of building permits due to a reduction in home financing. See Austin and Lindsley (1976), Boyes and Roberts (1981), Robins (1974), Ostas (1976), and Crafton (1980). But see Rolnick, Graham, and Dahl (1975) and McNulty (1980) finding no significant effect on building permits but finding a significant effect either on non-price terms or on loan volume.

intuitions of many people. This has led scholars to suggest possible benign explanations for their popularity. First, a usury law may be a crude form of social insurance in a jurisdiction that has poorly developed capital markets closed to the outside world and an inefficient or nonexistent welfare system (Glaeser and Scheinkman, 1998). If usury ceilings depress the price of credit, the poor would be able to borrow more cheaply and this may be efficient if the poor have a sufficiently higher marginal utility of money than the rich. From an *ex ante* perspective, an individual benefits from usury laws if his lower return when he has capital to spare in some future state of the world is offset by his lower borrowing costs when he needs to borrow in some alternative future state of the world. This argument is inconsistent with the mobility of modern capital, and so has no application to modern conditions; significantly, usury laws have been repealed in every industrialized nation except the United States, Belgium, and France (Alperin and Chase, 1986), though a fairly restrictive usury law was enacted in Italy in 1996.

Second, welfare laws create a moral hazard and usury laws may therefore be needed precisely because they restrict access to credit. Because welfare laws reduce the consequences of default for the debtor by providing him with a minimum standard of living after his creditor employs all available remedies, the debtor will be willing to borrow to undertake riskier ventures (Posner, 1995).¹⁵ Usury ceilings prevent these high-risk loans and therefore reduce the negative consequences of the moral hazard. This argument assumes that people benefit from welfare laws, and, unlike the first argument, that an effective welfare system is in place.

There is little statistical evidence for these theories; they are intended to rationalize historical practice and rely mainly on anecdotal historical evidence.

¹⁵ A related argument posits that usury laws prevent low-income debtors with a high discount rate from borrowing against future welfare payments and that this credit rationing permits a society committed to providing a minimum per period welfare to do so at a lower cost. Avio (1973).

B. Restrictions on Creditor Remedies

Description. A confusing array of federal and state laws restrict many of the tools that creditors have traditionally used to force repayment, including the reporting of past consumer behavior¹⁶ and nonlegal mechanisms such as contacting the debtor and third parties to request repayment. Self-help can be effective; debtors repay loans in order to avoid unpleasant phone calls, threatening letters, humiliation in front of friends, employers, and family members, and damage to their credit reputation.¹⁷ Federal and state laws restrict the ability of credit reporting agencies to record information that creditors may find relevant. The Fair Debt Collections Act requires certain kinds of creditors to (1) verify the debt if the consumer challenges it; (2) refrain from threats and harassment; (3) refrain from publishing the names of defaulting debtors; and (4) refrain from misrepresentation of their legal rights, the consequences of nonpayment, and so forth (Alperin & Chase, 1986). While the federal act does not directly apply to the creditor that originated the loan, its restrictions may apply to the creditor's lawyers¹⁸ and some states apply similar regulations to the original creditors as well. Accordingly, we discuss these rules in this section rather than in the section, below, on third party defenses.

When self-help fails, creditors often sue and obtain repayment through prejudgment and postjudgment remedies. Prior to judgment a creditor may be able to obtain a lien on the debtor's assets and to garnish the debtor's wages, and these powers are usually sufficient to obtain repayment. However, prejudgment attachment and garnishment are now regulated in various ways by the state and federal government;

¹⁶ The Fair Credit Reporting Act, 15 U.S.C. § 1681 (2000), limits the reporting of bankruptcies by consumer reporting agencies to ten years and limits the reporting of most other adverse information to seven years.

¹⁷ For example, early in the modern history of consumer credit "small lenders relied on the professional services of the 'bawlerout,' a female employee who was assigned the job of trapping the delinquent borrower before co-workers and family in order to browbeat him publicly for being a sorry deadbeat." Calder (1999); Rea (1984).

¹⁸ *Heintz v. Jenkins*, 514 U.S. 291 (1995).

they are also subject to constitutional due process limitations. Garnishment, both pre-judgment and post-judgment, is heavily restricted by federal law (roughly to 25 percent of wages, but with many exceptions) and some states have even more restrictive limits or prohibit garnishment altogether. There are fewer restrictions on post-judgment remedies; these usually involve the sheriff seizing and auctioning off property, or (again) garnishment of wages, which remains heavily restricted even as a post-judgment remedy. Post-judgment seizure of property is significantly curtailed by state (and federal) exemption laws, which limit the kind and amount of property (home equity, clothing, furniture, pensions and so forth) that can be seized in order to satisfy unpaid debts.

A creditor can improve his ability to collect by bargaining in advance for certain rights. For example, a cognovit note, in which the debtor essentially binds himself to confess judgment if he defaults, relieves the creditor of the trouble of proving his case in court. However, cognovit notes are illegal in many contexts (Alperin and Chase, 1986). By obtaining a security interest a creditor gains priority over unsecured creditors and, if the security interest is perfected, creditors with later in time security interests in the same property. In the context of consumer finance, the power of the security interest to alter the creditor's rights with respect to the debtor is perhaps even more significant. Because a secured creditor can seize much of the property that would otherwise be exempt under state or federal law, debtors and creditors can use security interests to effectively waive many of the exemptions. In addition, the security interest may also allow the creditor to skip some of the steps in the judicial process, and even skip it altogether if he can repossess the collateral without breaching the peace. At one time, creditors would obtain security interests in all the debtor's household goods, even those that were not purchased from the creditors or with the creditors' money.

Today, however, secured consumer credit is heavily regulated. FTC regulations and some state laws forbid creditors to obtain nonpossessory nonpurchase money

security interests in household goods, although there are some exceptions. The bankruptcy code also permits debtors to nullify nonpurchase money liens in many of these same household goods. Some states provide the debtor (and sometimes even junior lien-holders) a right to redeem the collateral for up to a year even if the collateral has been sold to a third party, and require the creditor to obtain a court judgment before repossessing collateral. Finally, a foreclosure on collateral will sometimes preclude the creditor from seeking the remainder of the amount owed through a deficiency judgment. Common law and state statutory rules granting a right of redemption and prohibiting deficiency judgments are important forms of regulation of the home mortgage market.

Many of these restrictions are available in bankruptcy, but we discuss bankruptcy separately, below.

Effects. Critics argue that the strong contractual rights to repossess consumer goods are inefficient because the repossessed property has minimal resale value for the creditor but considerable personal value for the debtor; these remedies are used in order to coerce (Leff, 1970; Whitford, 1986). While there is some evidence that fire sales exist (assets are sometimes sold for less than their wholesale book value),¹⁹ critics argue that the perception that value is lost is based on a misunderstanding of the operation of markets; it is unlikely that value would be destroyed given the characteristics of the debtors and creditors and the ability to renegotiate (Schwartz, 1983) and as long as creditors believe that a reputation for aggressive collection techniques might scare off debtors (Peterson, 1986). As we saw above, however, even collection mechanisms that are inefficient at the time of collection may be efficient *ex ante* precisely because they are “coercive.” They can, in theory, reduce moral hazard by increasing the cost to the

¹⁹ See Schuchman (1969), White (1982), Note (1971), Note (1975). Grau & Whitford (1978) show that repossessions declined after Wisconsin enacted a statute that required creditors to obtain a judgment

debtor from defaulting (Rea, 1984), and adverse selection by enabling the creditor to distinguish among debtors by risk level (Bester, 1985). (See generally Epstein, 1975; Scott, 1989.) Regardless, the restrictions on creditor collections generate costs for creditors and creditors should pass these costs on to debtors in the form of higher interest rates or else deny access to credit, particularly for high risk debtors.

Restrictions on coercive creditor remedies in general,²⁰ and exemptions in particular,²¹ are associated with higher interest rates and increased probabilities of denial of credit. The effects are more pronounced for low-income or low-asset debtors.²²

As noted above, exemptions do not directly affect the ability of the secured creditor to foreclose on the most valuable assets of the debtor (such as the home) and therefore only affect the supply of credit by raising transaction costs, that is, by requiring parties to go through the formality of obtaining a security interest in order to make assets available for collection in case of default. In contrast with the results for general credit found by Gropp, Scholz and White (1997), Berkowitz and Hynes (1999) find that mortgage lenders do not increase the rate of denials or the interest rate in the face of larger exemptions. There is actually a small decrease in these variables. This may occur because as exemptions increase, debtors have more unencumbered wealth with which to pay off secured creditors, and costly foreclosures are less likely to be necessary.

before seizing collateral from a defaulting debtor. This result is entirely predictable, and, as they appear to acknowledge, they do not show that debtors are made better off by the law in an ex ante sense.

²⁰ See, for example, Greer (1974) and Barth, Gotur, Manage and Yezer (1983).

²¹ See Gropp, Scholz and White (1997) (examining the effect of the exemptions on credit markets generally) and Berkowitz and White, (2000) (examining the effects of the exemptions on the market for small business loans). We note that Gropp, Scholz and White (1997) use the same data set used by Villegas (1990) to investigate the effects of usury laws and restrictions on creditor collections other than exemptions. A further study disentangling the effects of each of these restrictions would be useful.

²² That exemption laws have a pronounced effect on debtors with few assets is somewhat of a puzzle as these debtors can exempt all of their assets in almost any regime. For example, Gropp, Scholz and White (1997) find a significant reduction in the access to credit for debtors with assets of less than \$7,885 when

Limitations on creditor remedies do provide some benefits to the debtor. These limits provide some insurance by protecting the debtor's income and assets when he is least well off. As noted above, they may also prevent socially wasteful debt collection practices. But a defense of these laws has two predicates, both of them difficult to establish. First, the law should restrict remedies only if a market failure prevents creditor from supplying remedial terms that debtors would be willing to pay for and prevents the debtor from using alternative form of protection, such as credit insurance.²³ The usual market failure arguments can be made, of course. Perhaps, adverse selection explains why credit contracts rarely limit the creditor's remedial rights. But if the market did fail in this way, it is hard to understand why there is such a robust market in credit insurance.

Second, the defense assumes that the law does reflect debtors' preferences. But the variation of the law across states is too extreme to reflect plausible differences in debtors' preferences. For example, an individual can exempt only a few thousand dollars worth of assets in Alabama but a potentially unlimited amount of home equity in Florida. The variance is too high to reflect risk preferences across the two states or other differences in the states' economies; and indeed a study of exemption laws in all fifty states over a twenty-two year period reveals no correlation between the generosity of exemptions and demand for insurance (Posner, Hynes, and Malani, 2001).

The exemptions and the bankruptcy right to a discharge may address another concern, that of creating a class of people who do not work because they cannot keep their income or the assets they purchase with it; this explanation is also consistent with limitations on the ability of creditors to contact (and annoy) a debtor's employer. Although creditors and debtors have incentives to renegotiate *ex post*, as the history of

the exemptions move from the merely large (exemptions between \$25,400 and \$70,400) to the unlimited exemptions.

debtor prisons shows renegotiations will occasionally fail because creditors want to maintain a reputation for toughness or hope to flush out debtors who have concealed their assets. A class of people immobilized or even imprisoned for debt sits uneasily with mainstream political commitments. Of course, this argument fails to the extent that debtors can “waive” exemptions under state law or through the use of security interests. However, statutory waivers of exemptions are not effective in bankruptcy; nor are nonpurchase money security interests in many forms of personal property. In addition, a debtor cannot waive his right to a discharge.

To the extent that debtors can waive exemptions and other limitations on creditor remedies, these laws merely change the default rule for collections upon default. Rather than contracting for protection through credit insurance, nonrecourse loans and other means, the debtor waives protections through security interests, cognovit notes, etc. A comparison of the merits of the two default rules would require a deeper analysis of the preferences of debtors, the costs of contracting, the enforcement of limitations on default planning and other factors that are beyond the scope of this paper.

Villegas (1990), Peterson (1986), and Barth, Cordes and Yezer (1986) try to determine if restrictions on creditor remedies provide a net benefit or a net cost. Their logic is that if the restrictions are beneficial, the increase in the interest rate demanded by the creditors should be more than offset by the increased willingness to pay by the debtors. One should be able to verify this directly by separately estimating supply and demand or indirectly by observing the total quantity borrowed. The results of these studies are mixed. Barth, Cordes and Yezer (1986) found that while statutes limiting deficiency judgments may provide a net benefit, legal restrictions on confessions of judgment clauses, restrictions on garnishment, and restrictions on security interests in

²³ Supra note [] and accompanying text. We acknowledge the criticisms of this market, where profits appear to be unusually high.

real property created a net cost. Villegas (1990) found that restrictions on security interests in personal property and restrictions on wage garnishment provided a net benefit but that prohibitions on wage assignment created a net cost. Although he did not discuss this normative analysis, Greer (1974) and Peterson and Frew (1977) both found that prohibitions against attorneys' fees and garnishment reduced the total borrowings. Gropp, Scholz and White (1997) also do not conduct an explicit comparison of the costs and benefits of the exemptions. However, they do examine the effect of the exemptions on the total quantity of credit and find that the exemptions increase total borrowings by high-asset debtors but decrease total borrowing by low-asset debtors. Therefore, following the logic of Villegas (1990), larger exemptions seem to provide a net benefit for high-asset debtors but provide net costs for low-asset debtors.²⁵

While these results are interesting, the tests are imperfect. The comparisons assume that lenders and borrowers (or at least some borrowers) are aware of the legal restrictions, can correctly predict their implications at the time of borrowing, and can adjust the contract in light of these factors. This assumption is questionable if the market failure justifying government intervention is that debtors underestimate the probability of default or that debtors lack information about the consequences of default. Moreover, even if debtors are fully informed, a finding that total credit increases is not a necessary condition for determining that the laws are beneficial. Debtors may be willing to accept lower borrowing levels as a price for increased insurance.²⁶ In addition, involuntary creditors such as tort claimants cannot adjust to the laws by charging a high interest rate. Finally, the limits on creditor remedies may

²⁵ Schill (1991) finds that the right of redemption and anti-deficiency judgment rule in the mortgage market raise mortgage interest rates by only a small amount, and argues that this cost may be outweighed by other benefits. He does not examine the effect of these rules on access to credit, however, and he does not empirically evaluate the benefits in addition to the costs.

²⁶ For an example of this, see Appendix.

play a role similar to those of usury laws in discouraging high-risk loans undertaken as a result of the moral hazard created by social welfare laws (Jackson, 1985).

C. Bankruptcy

Description. By filing for bankruptcy under Chapter 7 of the federal bankruptcy code, a debtor can protect all of his future income from his creditors, retain exempt property, preserve certain kinds of trust funds including pensions even when they are not exempt under nonbankruptcy law, and delay the seizure of other assets through the automatic stay. Debtors may not file for bankruptcy seriatim, but the bankruptcy discharge remains a powerful weapon for the defaulting debtor. There is an extensive literature on the structure and effects of this law, and we will not reproduce it here.²⁷ However, a brief overview of some of the empirical literature on bankruptcy is necessary for a proper understanding of the results discussed in Section B.

Effects. While several studies cited above find that restrictions on creditor remedies, including exemptions that apply in bankruptcy, affect the decision to borrow, there is little evidence that these same restrictions affect the decision whether or not to repay. This is surprising because debtors in financial distress should be more aware of the law of collections than debtors applying for a loan, particularly if they have retained an attorney. Likewise, creditors should not change their lending behavior in response to exemptions unless the exemptions have a real effect on their expected losses. Unfortunately, good data on default and collections are not available by state.²⁸ The existing evidence, based on bankruptcy data, suggests that exemptions do not

²⁷ For a recent survey of the consumer bankruptcy literature, see Kowalewski (2000). The law is frequently criticized for being too generous and inflexible. See, e.g., White (1998a; 1998b), Wang and White (2000), Adler, Polak, and Schwartz (2000).

²⁸ Empirical studies of the effects of garnishment restrictions on the filing rate highlight the shortcomings of focusing on bankruptcy filings. These studies generally find that states with laws that are more restrictive of the ability of a creditor to garnish a debtor's wages have higher filing rates. See, for example, Apilado, Dauten, and Smith (1978), Ellis (1998a) and Heck (1981). While this effect could be due to higher repayment rates, it is more plausibly due to the ability of defaulting debtors to protect their future incomes without filing for bankruptcy.

significantly affect the filing rate (see below) and it is unlikely that the exemptions substantially affect repayment rates in bankruptcy given the minimal repayments that unsecured creditors actually receive (White 1987).

Arguing that larger exemptions should make bankruptcy more attractive to debtors, many scholars predicted that larger exemptions should increase bankruptcy filings. While White (1987) found a positive and statistically significant effect, the effect that she found was small and virtually all other published papers have found either no statistically significant effect or even an effect with the “wrong” sign.²⁹ This result has been repeated in more recent studies reexamining the problem with panel data or quasi-experiments.³⁰

Because the literature was forced to compare the exemptions and the bankruptcy filing rate, its failure to find a strong positive correlation is less surprising than it appears. The majority of exemptions available in bankruptcy are also available to a debtor defaulting under state law and therefore while the exemptions should make default relatively more attractive than repayment, they do not necessarily make bankruptcy relatively more attractive than defaulting under state law. One can reestablish a link between the exemptions and the incentive to file for bankruptcy based on transactions costs, though these theories are more tenuous. In addition, if larger exemptions lead to more defaults they should also lead to more bankruptcy filings as long as bankruptcy filings remain a fairly constant fraction of all defaults. (Hynes, 1998).

The failure to find a correlation between exemption levels and bankruptcy filings may also be due to an inappropriate use of aggregate data when testing a hypothesis

²⁹ See, for example, Apilado, Dauten, and Smith (1978) (finding mixed results when testing for a link between exemptions and the filing rate prior to the enactment of the Bankruptcy Reform Act of 1978); Peterson and Aoki (1984); and Shiers and Williamson (1987).

³⁰ See Buckley and Brinig (1998), Weiss, Bhandari and Robins (1996). But see Pomykala (1997) and Hynes (1998) finding significant positive effects.

about individual behavior.³¹ The exemptions may have little effect on aggregate filing rates because they are relatively generous compared to the assets of most Americans, and the reduction in access to credit may mean that debtors in states with large exemptions may be less likely to end up in financial distress.³² While current working papers use individual level data to examine the filing decision, their results cannot readily be interpreted as a test of the impact of exemption levels. These papers test whether debtors respond to the financial incentives of bankruptcy more generally, including the discharge, rather than just the exemptions and therefore examine the effect of the debtor's "benefit" from filing. "Benefit" is defined as the debt that can be discharged less any assets above the exemption that the debtor would lose by filing (Fay, Hurst and White, 1998; Chakravarty and Rhee, 1999). Even if the exemptions have no effect on the filing decision, the coefficient on "benefit" may still be significant because households with more debt file in order to obtain the discharge.

Several studies investigate whether the Bankruptcy Reform Act of 1978 increased the filing rate and related actions.³³ That statute instituted several reforms that could have made bankruptcy more attractive (Domowitz and Eovaldi, 1993), and the bankruptcy filing rate increased markedly in the years that followed. Using time series econometrics techniques, scholars have tried to disentangle the effects of this act from the significant macroeconomic effects of this time period. The majority of the early studies addressing this question did, in fact, estimate that the code played a significant

³¹ Early scholars attributed this "failure" to possible simultaneity bias; legislatures might adopt smaller exemptions in response to higher filing rates. Peterson and Aoki (1984), Shiers and Williamson (1987). However, it is unclear why this same bias would not have a significant effect on the studies of the credit market. While we lack a good explanation for a state's choice of exemptions, one might be able to test this theory by using historical exemptions as an instrumental variable.

³² It is possible to collect data on loans made by lending institutions in each state. However, the importance of national lenders in the mortgage and credit card industry makes it unlikely that such a variable would be highly correlated with the debt issued by residents of each state.

³³ While we will discuss those articles discussing the decision to file, the interested reader may wish to consult those articles discussing the effect of the act on the choice between Chapters 7 and 13. See, for example, Domowitz and Sartain (1999a; 1999b).

role in increasing the bankruptcy filing rate.³⁴ One difficulty with this literature, however, is that it requires a controversial assumption regarding the treatment of married couples filing jointly, which was not permitted prior to the Bankruptcy Reform Act of 1978. Domowitz and Eovaldi (1993) examine summary statistics presented in studies of actual filings to determine a range of values for the proper adjustment to the postact filing rate. When they use the lowest value of this range, they estimate that the Bankruptcy Reform Act of 1978 increased the filing rate by twenty-two percent. However, the standard errors in their regression are so large that this estimate is not statistically significant; one does not find a statistically significant result until one uses a value near the upper end of this range. One solution to the problem highlighted by Domowitz and Eovaldi (1993) would be to measure the effect on defaults (as measured by loans charged off by banks) rather than bankruptcies.

Another difficulty with examining the effect of the Bankruptcy Reform Act of 1978 is that there were three other major legal changes that occurred at about the same time. In 1977 the Supreme Court ruled that restrictions on advertisements by lawyers are an unconstitutional restriction of free speech,³⁵ thus increasing the spread of information about the advantages of filing for bankruptcy. In 1978 the Supreme Court ruled that the interest rate paid by a borrower on a loan from an out of state bank would be governed by the usury ceiling of the state in which that bank was located.³⁶ This reduced the ability of a state to set effective interest rate ceilings and increased the number of high-interest, high-risk loans.³⁷ Both of these events could have stimulated bankruptcy filings independent of the effect of the 1978 Act. Finally, the Fair Debt

³⁴ See, for example, Shepard (1984), Peterson and Aoki (1984) and Boyes and Faith (1986). But see Bhandari and Weiss (1993).

³⁵ *Bates v. State Bar of Arizona*, 434 U.S. 881 (1977).

³⁶ *Marquette Nat'l Bank of Minneapolis v. First of Omaha Serv. Corp.*, 439 U.S. 299 (1978).

³⁷ Ellis (1998b) does discuss the relative importance of interest rate ceilings and the Bankruptcy Reform Act of 1978. However, by using state usury rates prior to 1978, a more rigorous attempt at disentangling the effects might be possible.

Collections Act, discussed above, was passed in 1977. While this act may have increased the default rate, it should have decreased the bankruptcy rate by enhancing the ability of debtors to avoid repayment without filing for bankruptcy. The fact that the Fair Debt Collections Act may have had an effect on the bankruptcy rate that would have conflicted with the presumed effects of the Bankruptcy Reform Act and the other laws is yet another reason to examine the default rate rather than the bankruptcy rate.

D. Third-Party Defenses

Description. When retailers sell products on credit, they frequently resell the debt to a third party creditor. After this sale, the buyer is obligated to make payments directly to the third party creditor. Historically, this was true even if the contract between the buyer and the retail seller was vulnerable to legal challenge. If, for example, the buyer purchases defective goods from a subsequently judgment-proof seller, the buyer would not be able to use the seller's breach as a defense against the third-party creditor's claim for repayment of the loan, and would have no remedy against the original seller. This outcome was compelled by the holder in due course doctrine when the buyer signed a negotiable instrument, but could easily be obtained contractually by adding a waiver-of-defense clause to a nonnegotiable instrument. The usefulness of these doctrines for third-party creditors is now severely restricted by federal and state law. (Alperin and Chase, 1986)

Effects. The division of labor between seller and third-party creditor clearly has advantages. Each party can specialize in developing expertise in its own market. The third-party doctrines also enhance the ability of creditors to reduce region or seller specific risk by reselling the debt, sometimes in large pools as "securitized" assets. The existence of these advantages is supported by studies showing a reduction in the ability of retailers to obtain financing and in the ability of consumers to obtain credit in jurisdictions that were the first to ban the third-party doctrines (Rohner, 1975).

Opponents of the holder in due course and negotiability doctrines argue that the deep-pocketed financier can more cheaply bear the risk of breach by the seller than the buyer can, and further that it can more cheaply monitor sellers and prevent them from breaching in the first place. When financiers have a continuing relationship with the seller, these conditions may be met. But if these conditions are met and the market is competitive, then all three parties will voluntarily place the risk on the financier. It is not necessary for the law to prohibit the parties from choosing alternative relationships, and indeed such a prohibition would reduce social welfare.

The regulations appear to be based on the assumption that the market fails, perhaps because of pervasive consumer ignorance, and that the regulations compel the outcome that the parties would want. This argument assumes that consumers irrationally fail to update their beliefs about credit practices, even though they appear to do so in cash sale contexts, where sellers supply warranties (for example) in order to attract buyers. Although this is possible, it seems just as likely that consumers take advantage of the cost savings permitted by specialization and diversification.

E. Information disclosure

Description. The Truth in Lending Act and related state and federal laws require creditors to provide credit information in a clear and consistent way. These laws apply not just to the credit contract itself, but to all communications such as advertisements, bills, responses to billing inquiries, and credit reports. Although the Truth in Lending Act and the associated regulations are complex and impose a number of obligations on creditors,³⁸ we will discuss two of the primary elements of this act. First, this law requires lenders to clearly present the “amount financed,” “finance charges,” and “annual percentage rate” as calculated in a standardized manner. Second, the law

³⁸ For example, the Truth in Lending Act regulates the process of correcting billing errors, the credit card customer’s liability for unauthorized use of the card, and so forth. For reasons of space, we do not deal with these and other restrictions.

requires creditors taking a security interest in the debtor's home to provide an explicit disclosure of such security interest and the debtor's right to rescind the contract within three days (this right may be extended to three years if certain disclosure requirements are not met). The Truth in Lending Act provides for enforcement both by regulatory agencies and by borrowers who are given a private right of action (Alperin and Chase, 1986).

Effects. The stated goals of the Truth in Lending Act are to increase economic stability, to enhance the ability of consumers to shop for attractive loan terms, and to prevent inaccurate and unfair billing. The first of these goals cannot be evaluated empirically and the last of these goals is similar to the prevention of fraud and hence beyond the scope of this paper. The second goal is largely consistent with the discussion of information failure presented above. The standardized calculations required by the act, the amount financed, the finance charge, and the interest rate, are classic examples of scoring systems and there is some evidence that the Truth in Lending Act increased consumer awareness of the terms covered by the act, particularly the annual percentage rate.³⁹

Unfortunately, there is also some evidence that the beneficial effects of these laws in enabling consumers to better shop for attractive loans may have been limited to well-educated, affluent borrowers.⁴⁰ Moreover, a problem common to all scoring systems is that firms are driven to emphasize the measured attribute at the expense of hard-to-measure attributes (Beales, Craswell, and Salop, 1981a; 1981b). If consumers focus disproportionately on the interest rate, lenders have an incentive to compete over this term and provide less attractive collection terms or cut back on customer service. There is some evidence of this phenomenon: borrower awareness of terms not covered by the

³⁹ Mandell (1971), Brandt and Day (1974), Day and Brandt (1973), Shay and Schrober (1973).

⁴⁰ Brandt and Day (1974), Day and Brandt (1973), Deutcher (1973), Mandell (1971), Shay and Schober (1973), White and Munger (1971).

Truth in Lending Act, such as the dollar amount of the finance charges, actually fell after its passage (Brandt and Day, 1973).

The required disclosure of the scores created by the Truth-in-Lending Act is more controversial. These scores are brand specific information and creditors should have sufficient incentive to disclose this information in order to gain a competitive advantage. Government regulation may overcome a collective action problem if no single creditor would have the incentive to invest the resources to establish a credible standard. While a period of mandatory disclosure may be helpful in establishing the government sponsored scoring system ((Beales, Craswell and Salop 1981b), any further period of mandatory disclosure would seem unnecessary as typical stories of collective action problems stemming from brand specific information are inapplicable.⁴² Of course, we noted above that creditors with market power may wish to conceal private information in order to engage in price discrimination, but there is little evidence that they have such market power.

The requirement that creditors provide special disclosure (accompanied by a right of rescission) of any security interest taken in the home is a better example of mandated disclosure. Creditor obviously has no incentive to inform Debtor of the legal consequences of a security interest and to disclose the right of rescission, and his competitors may have insufficient incentive to disclose them as well (see above). We note, however, that the traditional argument for mandated disclosure would seem to encompass much broader disclosure of the legal consequences of failing to pay a debt than what is required by the Act. If debtors do not know about the effects of security interests, they are not likely to know about the holder in due course doctrine or the

⁴¹ Beales, Craswell and Salop (1981b) do concede that such required disclosure may be necessary for an introductory period.

⁴² Securities law, for example, requires issuers of securities to reveal a great deal of financial and business information. A popular explanation for this requirement is that issuers fear that if they provided

right of redemption. The difficulty is that too much disclosure of technical information may overwhelm debtors and cause them to ignore it (cf. Beales, Craswell, and Salop, 1981b).

The most forceful complaints about the Truth in Lending Act have centered on the cost of compliance. In addition to the administrative costs of compliance, the Truth in Lending Act may have reduced the ability of creditors to collect on bad loans since a determined debtor can almost certainly find some fault with the disclosure by the creditor (Rubin, 1991). The act has been amended several times, most recently in 1995, in part to address this complaint. While there is limited survey evidence that the difficulty in compliance reduced creditors' willingness to advertise and risk violation (Angell, 1971), we know of no papers assessing the effect of this law on creditors' willingness to lend.

F. Antidiscrimination laws

Description. The Fair Housing Act, as amended (*FHA*), forbids creditors to discriminate against applicants for home mortgage loans on the basis of race, color, religion, sex, national origin or handicap or family status. The Equal Credit Opportunity Act, as amended (*ECOA*), forbids them to discriminate against applicants for credit generally on similar, though not identical grounds. Although not technically an antidiscrimination statute, the Home Mortgage Disclosure Act, as amended, enhances the ability to test for discrimination by requiring financial institutions to report data on all of their applicants for home mortgages, including the race of the applicant.

Perhaps the most significant antidiscrimination statute is, by its express terms, not an antidiscrimination statute at all. The Community Reinvestment Act (*CRA*)

adequate information to their investors, this information would also be revealed to their competitors, but all investors and issuers would be better off if adequate information were revealed (Mahoney, 2001).

requires the appropriate federal banking regulators to "encourage . . . institutions to help meet the credit needs of the local communities in which they are chartered consistent with the safe and sound operation of such institutions." However, the *CRA* was largely justified on the grounds of perceived discrimination and interpretations by regulatory agencies refer to minority groups (Hylton and Rougeau, 1996).

Effects. There is an extensive literature on the role of discrimination in lending markets and a full review is beyond the scope of this paper.⁴⁴ There is clear evidence of historical discrimination in lending markets, often supported by overt government policy, but there is no consensus as to whether discrimination still plays a significant role in credit markets, whether it plays a role in some credit markets like the mortgage market but not others,⁴⁵ and whether such discrimination that exists is based on animus or the use of race as a statistical proxy for credit risk (Hylton and Rougeau, 1996; 1999; Swire, 1995). To understand the difficulty of evaluating the laws against discrimination, suppose that discrimination is due to the use of proxies. On the one hand, a prohibition of the use of statistical discrimination may force creditors to expend resources to try to distinguish between debtors and may exacerbate asymmetric information problems. On the other hand, statistical discrimination may cause minorities to underinvest in human capital and the development of a credit history, in anticipation of being denied credit on account of their race (Hylton and Rougeau, 1996).

There have been few successful suits brought under either the *FHA* or the *ECOA* (Swire, 1995), and therefore there has not been much academic debate concerning these laws. By contrast, the *CRA* has been controversial: many have argued that it is costly, possibly self-defeating, and at best ineffective. The *CRA* generates significant compliance costs only for those banks that have branches in low income areas and thus

⁴⁴ Good surveys can be found in Hylton and Rougeau (1996) and Swire (1995).

⁴⁵ Partly because of the data generated by the Home Mortgage Discrimination Act, empirical studies of discriminatory lending focus on the mortgage market rather than other segments of the credit market.

may discourage large banks from serving low-income areas (Macey and Miller, 1995) and discourage the development of small banks to serve low-income debtors (Hylton and Rougeau, 1999). Hylton and Rougeau (1996; 1999) argue that the current enforcement approach encourages hollow compliance in the form of loans to wealthy developers operating in low-income neighborhoods or agreements designed solely to appease politicians and political activists, and rent seeking behavior by politicians, interest groups, and even rival banks trying to block bank mergers. Finally, Schill and Wachter (1995) argue that by targeting the location of the investment, the *CRA* and related laws may encourage concentration of poverty in urban areas.

In the end, there are plausible arguments for and against the *CRA* and its net effect remains unresolved. Commentators agree that the *CRA* needs substantial reform, but they disagree strongly as to the direction this reform should take with some calling for safe harbor provisions or a switch to a subsidy system and others calling for more vigorous enforcement.

Conclusion

Regulation of the market for consumer credit provides a number of benefits to consumers. It gives them information about the terms and consequences of the credit transaction, it provides them insurance against shocks, and it protects them from discrimination. But a proper defense of consumer credit regulation must explain why the market would not supply these benefits if consumers are willing to pay for them. The availability of credit insurance, the many ways in which typical credit transactions trade off between interest rate and risk, and the existence of information intermediaries all suggest that the market does respond to some degree to consumer demand for credit protections.

Models that incorporate information asymmetry and market power have ambiguous implications for consumer credit regulation. Information problems do prevent markets from achieving the first best, and laws regulating the credit market can

in theory increase social welfare. But it is difficult to determine whether the premises of the models are met in reality. Complicating the analysis, it is not clear how sensitive consumers and creditors are to the law, whether because of irrationality or “rational ignorance.” And it is not clear how much the law would influence the behavior of even a rational, well-informed consumer, given the many loopholes, the limited penalty structures, and the many ways in which creditors can evade the law and creditors and debtors can contract around it.

APPENDIX

This appendix sets forth a simple example of how a law that solves a failure of the credit market could, in theory, result in a decline in total borrowing.

Assume that there is a debtor with per period utility $U()$ where $U' > 0$ and $U'' < 0$ and a creditor that is risk neutral. Assume that the debtor makes a take-it-or-leave-it offer to the creditor to borrow some amount B . Assume further that the debtor has no first period income and will have a second period income of L with probability p and a second period income of H with probability $(1-p)$. Assume that the debtor defaults if and only if second period income equals L (the marginal dollar borrowed does not affect the probability of default) and that he is entitled to retain an amount E in default. Finally, in order to make the example as simple as possible, assume that neither the creditor nor the debtor discount future values.

The creditor must charge an interest rate (R) such that:

$$B = (1 - p)(BR) + p(L - E), \text{ or}$$

$$R = \frac{B - p(L - E)}{(1 - p)B}$$

The debtor will therefore maximize:

$$U(B) + (1 - p)U(H - BR) + pU(E), \text{ or}$$

$$U(B) + pU(E) + (1-p)U\left(H - \left(\frac{B - p(L - E)}{1-p}\right)\right)$$

or, the debtor will set

$$U'(B) = U'\left(H - \left(\frac{B - p(L - E)}{1-p}\right)\right)$$

In this very simple example, the amount borrowed is always decreasing in the exemption. The reason is that the debtor seeks two things: low cost credit, and insurance. The lower exemption – which in this example is set by contract rather than by statute – reduces the cost of credit but also reduces the amount of insurance. If the latter effect dominates (as in this example), an optimal exemption results in less bargaining than a less generous exemption. This example is deliberately contrived; it assumes that the probability of default is independent of the amount borrowed, and only considers how the exemptions affect borrowing through a change in the interest rate. If a debtor is reluctant to borrow a certain amount because he may end up in a very painful default, the exemptions could increase borrowing by lessening that fear. This effect is not present here because a marginal change in borrowing has no effect on the probability of default and never reduces consumption when the marginal utility of consumption is higher than it is in period one. A more general model would show that if both factors are considered, an increase in total borrowing is sufficient to show that a law is efficient but is not necessary.

References

Adler, Barry, Ben Polak, and Alan Schwartz. 2000. "Regulating Consumer Bankruptcy: A Theoretical Inquiry," 29 *Journal of Legal Studies* 585-614.

Aghion, Phillippe, and Benjamin Hermalin. 1990. "Legal Restrictions on Private Contracts Can Enhance Efficiency," 6 *Journal of Law, Economics, & Organization* 381-409.

Akerlof, George A. 1970. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," 84 *Quarterly Journal of Economics* 488-500.

Allen, Franklin. 1983. "Credit Rationing and Payment Incentives," 50 *Review of Economic Studies* 639-46.

Alperin, Howard J., and Roland F. Chase. 1986 and 2000 Supplement. *Consumer Law: Sales Practice and Credit Regulation*. St. Paul, MN: West Publishing Company.

Angell, Frank J. 1971. "Some Effects of the Truth-In-Lending Legislation," 44 *Journal of Business* 78-85.

Apilado, Vincent P., Joel J. Dauten, and Douglas E. Smith. 1978. "Personal Bankruptcies," 7 *Journal of Legal Studies* 371-92.

Austin, Douglas V., and David A. Lindsley. 1976. "Ohio Usury Ceiling and Residential Real Estate Development," 4(1) *American Real Estate and Urban Economics Association Journal* 83-95.

Ausubel, Lawrence M. 1991. "The Failure of Competition in the Credit Card Market," 81 *American Economic Review* 50-81.

Avio, Kenneth L. 1973. "An Economic Rationale for Statutory Interest Rate Ceilings," 13(3) *Quarterly Review of Economics and Business* 61-72.

Barth, James R., Padma Gotur, Neela Manage, and Anthony M. J. Yezer. 1983. "The Effects of Government Regulations on Personal Loan Markets: A Tobit Estimation of a Microeconomic Model," 38 *Journal of Finance* 1233-51.

Barth, James R., Joseph J. Cordes, and Anthony M. J. Yezer. 1986. "Benefits and Costs of Legal Restrictions on Personal Loan Markets," 29 *Journal of Law and Economics* 357-80.

Beales, Howard, Richard Craswell, and Steven C. Salop. 1981a. "Information Remedies for Consumer Protection," 71 *American Economic Review* 410-13.

Beales, Howard, Richard Craswell, and Steven Salop. 1981b. "The Efficient Regulation of Consumer Information," 24 *Journal of Law and Economics* 491-539.

Bebchuck, Lucian Arye, and Jesse M. Fried. 1996. "The Uneasy Case for the Priority of Secured Claims in Bankruptcy," 105 *Yale Law Journal* 857-934.

Berkowitz, Jeremy, and Richard Hynes. 1999. "Bankruptcy Exemptions and the Market for Mortgage Loans," 42 *Journal of Law and Economics* 809-30.

Berkowitz, Jeremy, and Michelle J. White. 2000. "Bankruptcy and Small Firms' Access to Credit," Working Paper, No. 00-005. Ann Arbor, MI: Law School, University of Michigan.

Besanko, David and Anjan V. Thakor. 1987. "Collateral and Rationing: Sorting Equilibria in Monopolistic And Competitive Credit Markets," 28 *International Economic Review* 671-689.

Bester, Helmut. 1985. "Screening vs. Rationing in Credit Markets with Imperfect Information," 75 *American Economic Review* 850-855.

Bester, Helmut. 1987. "The Role of Collateral in Credit Markets with Imperfect Information," 31 *European Economic Review* 887-99.

Bhandari, Jagdeep S. and Lawrence A. Weiss. 1993. "The Increasing Bankruptcy Filing Rate, An Historical Analysis," 67 *American Bankruptcy Law Journal* 1-15.

Boyes, William J. 1982. "In Defense of the Downtrodden, Usury Laws?," 39 *Public Choice* 269-76.

Boyes, William J. and Roger L. Faith. 1986. "Some Effects of the Bankruptcy Reform Act of 1978," 29 *Journal of Law and Economics* 139-49.

Boyes, William J. and Nancy Roberts. 1981. "Economic effects of usury laws in Arizona," 1981 *Arizona State Law Journal* 27-59.

Brandt, William K. and George S. Day. 1974. "Information Disclosure and Consumer Behavior: An Empirical Evaluation of Truth-in-Lending," 7 *University of Michigan Journal of Law Reform* 297-328.

Buckley, F.H., and Margaret F. Brinig. 1996. "The Market for Deadbeats," 25 *Journal of Legal Studies* 201-32.

Buckley, F.H., and Margaret F. Brinig. 1998. "The Bankruptcy Puzzle," 27 *Journal of Legal Studies* 187-207.

Calder, Lendol. 1999. *Financing the American Dream: A Cultural History of Consumer Credit*. Princeton, NJ: Princeton University Press.

Caplovitz, David. 1967. *The Poor Pay More; Consumer Practices of Low-Income Families*. New York: Free Press of Glencoe.

Chakravarty, Sugato, and Eun-Young Rhee. 1999. "Factors Affecting an Individual's Bankruptcy Filing Decision," Working Paper. West Lafayette, IN: Purdue University.

Crafton, Steven.M. 1980. "An Empirical Test of the Effect of Usury Laws," 23 *Journal of Law and Economics* 135-46.

Craswell, Richard. 1995. "Freedom of Contract," in *Chicago Working Papers in Law and Economics (Second Series)*. Chicago, IL: Law School, University of Chicago.

Day, George S., and William K. Brandt. 1973. "A Study on Consumer Credit Decisions: Implications of Present and Prospective Legislation," in 1 *National Commission on Consumer Finance., Technical Studies*. Washington, D.C.: U.S. Government Printing Office.

DeMuth, Christopher C. 1986. "The Case Against Credit Card Interest Rate Regulation," 3 *Yale Journal on Regulation* 201-42.

Deutcher, Terry. 1973. "Credit Legislation Two Years Out: Awareness Changes and Behavior Effects on Different Awareness Levels," in 1 *National Commission on Consumer Finance, Technical Studies*. Washington, D.C.: U.S. Government Printing Office.

Domowitz, Ian, and Thomas Eovaldi. 1993. "The Impact of the Bankruptcy Reform Act of 1978 on Consumer Bankruptcy," 36 *Journal of Law and Economics* 803-35.

- Domowitz, Ian, and Robert L. Sartin. 1999a. "Determinants of the Consumer Bankruptcy Decision," 54 *Journal of Finance* 403-20.
- Domowitz, Ian, and Robert L. Sartin. 1999b. "Incentives and Bankruptcy Chapter Choice: Evidence from the Reform Act of 1978," 28 *Journal of Legal Studies* 461 –87.
- Dunkelberg, William C., and Robin De Magistris. 1979. "Measuring the Impact of Credit Regulation on Consumers," in *The Regulation of Financial Institutions, Conference Series No. 21*. Boston: Federal Reserve Bank of Boston.
- Eisenbeis, Robert A., and Neil B. Murphy. 1974. "Interest Rate Ceilings and Consumer Credit Rationing: A Multivariate Analysis of a Survey of Borrowers," 41 *Southern Economic Journal* 115-23.
- Ekelund, Robert B., Jr., Robert F. Hebert and Robert D. Tollison. 1989. "An Economic Model of the Medieval Church: Usury as a Form of Rent-Seeking," 5 *Journal of Law, Economics, & Organization* 307-31.
- Elliehausen, Gregory E., and John D. Wolken. 1990. "Market Definition and Product Segmentation for Household Credit," 4 *Journal of Financial Services Research* 21-35.
- Ellis, Diane. 1998a. "The Influence of Legal Factors on Personal Bankruptcy Filings," in *Bank Trends*, 98-03. Washington D.C.: Division of Insurance, Federal Deposit Insurance Corporation.
- Ellis, Diane. 1998b. "The Effect of Consumer Interest Rate Deregulation on Credit Card Volumes, Charge-Offs, and the Personal Bankruptcy Rate," in *Bank Trends*, 98-05. Washington D.C.: Division of Insurance, Federal Deposit Insurance Corporation.
- Epstein, Richard A. 1975. "Unconscionability: A Critical Reappraisal," 18 *Journal of Law & Economics* 293-315.
- Fay, Scott, Erik Hurst, and Michelle J. White. 1998. "The Bankruptcy Decision: Does Stigma Matter," Working Paper. Ann Arbor, MI: Department of Economics, University of Michigan.
- Freixas, Xavier, and Jean-Jacques Laffont. 1990. "Optimal Banking Contracts," in *Essays in Honor of Edmond Malinvaud: Volume 2: Macroeconomics*. Cambridge, MA: The MIT Press.

Freixas, Xavier, and Jean-Charles Rochet. 1997. *Microeconomics of Banking*. Cambridge, MA: The MIT Press.

Glaeser, Edward L., and Jose Scheinkman. 1998. "Neither a Borrower Nor a Lender Be: An Economic Analysis of Interest Rate Restrictions and Usury Laws," 41 *Journal Law and Economics* 1-36.

Goudzwaard, Maurice B. 1968. "Rate Ceilings, Loan Turndowns and Credit Opportunity," 6 *Western Economic Journal* 404-12.

Goudzwaard, Maurice B. 1969. "Consumer Credit Charges and Credit Availability," 35 *Southern Economic Journal* 214-23.

Grau, Charles W., and William C. Whitford. 1978. "The Impact of Judicializing Repossession: The Wisconsin Consumer Act Revisited," 1978 *Wisconsin Law Review* 983-96.

Greer, Douglas F. 1973. "An Economic Analysis of the Personal Loan Credit Market," in 4 *National Commission on Consumer Finance, Technical Studies*. Washington, D.C.: U.S. Government Printing Office.

Greer, Douglas F. 1974. "Creditors' Remedies and Contract Provisions: An Economic and Legal Analysis of Consumer Credit Collection," in 5 *National Commission on Consumer Finance, Technical Studies*. Washington, D.C.: U.S. Government Printing Office.

Greer, Douglas F. 1975. "Rate Ceilings and Loan Turndowns," 30 *Journal of Finance* 1376-83.

Gropp, Reint, John Karl Scholz, and Michelle J. White. 1997. "Personal Bankruptcy and Credit Supply and Demand," 112 *Quarterly Journal of Law and Economics* 217-51.

Gross, David B., and Nicholas S. Souleles. 2000. "Consumer Response to Changes in Credit Supply: Evidence from Credit Card Data," Wharton Financial Institutions Center Working Paper No. 00-04. Philadelphia, PA: Wharton School, University of Pennsylvania.

Heck, Romona K. Z. 1981. "An Econometric Analysis of Interstate Differences in Non-business Bankruptcy and Chapter Thirteen Rates," 15 *Journal of Consumer Affairs* 13-31.

Hudson, John. 1995. "The Case Against Secured Lending," 15 *International Review of Law and Economics* 47-63.

Hynes, Richard. 1998. "Three Essays on Consumer Bankruptcy and Exemptions," Dissertation in Economics, University of Pennsylvania. Ann Arbor, MI: UMI Dissertation Services.

Hylton, Keith N., and Vincent D. Rougeau. 1996. "Lending Discrimination: Economic Theory, Econometric Evidence, and the Community Reinvestment Act," 85 *Georgetown Law Journal* 237-94.

Hylton, Keith N., and Vincent D. Rougeau. 1999. "The Community Reinvestment Act: Questionable Premises and Per Verse Incentives," 18 *Annual Review of Banking Law* 163-96.

Jackson, Thomas H. 1985. "The Fresh-Start Policy In Bankruptcy Law," 98 *Harvard Law Review* 1393-448.

Jackson, Thomas H., and Anthony T. Kronman. 1979. "Secured Financing and Priorities Among Creditors," 88 *Yale Law Journal* 1143-82.

Jaffee, Dwight M., and Thomas Russell. 1976. "Imperfect Information, Uncertainty and Credit Rationing," 90 *Quarterly Journal of Economics* 651-66.

Kawaja, Michael. 1969. "The Economic Affects of Regulation: A Case Study of the Consumer Finance Industry," 36 *Southern Economic Journal* 231-8.

Kowalewski, Kim. 2000. *Personal Bankruptcy, A Literature Review – CBO Paper*. Washington, D.C.: Congressional Budget Office.

Leff, Arthur A. 1970. "Injury, Ignorance and Spite –The Dynamics of Coercive Collection," 80 *Yale Law Journal* 1-46.

Letsou, Peter V. 1995. "The Political Economy of Consumer Credit Regulation," 44 *Emory Law Journal* 587-677.

Macey, Jonathan R., and Geoffrey P. Miller. 1993. "The Community Reinvestment Act: An Economic Analysis," 79 *Virginia. Law Review* 291-348.

- Mahoney, Paul. 2001. "The Political Economy of the Securities Act of 1933," 30 *Journal of Legal Studies* 1-31.
- Mandell, Lewis. 1971. "Consumer Perception of Incurred Interest Rates: An Empirical Test of the Efficacy of the Truth in Lending Law," 26 *Journal of Finance* 1143-53.
- McNulty, James E. 1980. "A Reexamination of the Problem of State Usury Ceilings: the Impact in the Mortgage Market," 20 *Quarterly Review of Economics and Business* 16-29.
- Note. 1971. "Business as Usual: an Empirical Study of Automobile Deficiency Judgment Suits in the District of Columbia," 3 *Connecticut Law Review* 511-38.
- Note. 1975. "I Can Get It for You Wholesale: the Lingering Problem of Automobile Deficiency Judgments," 27 *Stanford Law Review* 1081-107.
- Ordoover, Janusz, and Andrew Weiss. 1981. "Information and the Law: Evaluating Legal Restrictions on Competitive Contracts," 71 *The American Economic Review* 399-404.
- Ostas, James R. 1976. "Effects of Usury Ceilings in the Mortgage Market," 31 *Journal of Finance* 821-34.
- Peterson, Richard L. 1979. "Effects of Creditor Remedies and Rate Restrictions, in *The Regulation of Financial Institutions, Conference Series No. 21*. Boston: Federal Reserve Bank of Boston.
- Peterson, Richard L. 1983. "Usury Laws and Consumer Credit: A Note," 38 *Journal of Finance* 1299-1304.
- Peterson, Richard L. 1986. "Creditors' Use of Collection Remedies," 9 *Journal of Financial Research* 71-86.
- Peterson, Richard L., and Kyomi Aoki. 1984. "Bankruptcy Filings Before and After Implementation of the Bankruptcy Reform Act," 36 *Journal of Economics and Business* 95-105.
- Peterson, Richard L., and James R. Frew. 1977. "Creditor Remedy Restrictions and Interstate Differences in Personal Loan Rates and Availability: a Supplementary Analysis," Working Paper, No. 14. West Lafayette, IN: Purdue University.

- Peterson, Richard L. and Michael D. Ginsberg. 1981. "Determinants of Commercial Bank Automobile Loan Rates," 1981 *Journal of Bank Research* 46-55.
- Pierce, James L. 1991. *The Future of Banking*. Binghamton, NY: Vail-Ballou Press.
- Pomykala, Joseph. 1997. "Bankruptcy Reform, Principles and Guidelines," 20(4) *Regulation* 41-8.
- Posner, Eric A. 1995. "Contract Law in the Welfare State: A Defense of the Unconscionability Doctrine, Usury Laws, and Related Limitations on the Freedom of Contract," 24 *Journal of Legal Studies* 283-319.
- Posner, Eric A. 1997. "The Political Economy of the Bankruptcy Reform Act of 1978," 96 *Michigan Law Review* 47.
- Posner, Eric A., Richard Hynes, and Anup Malani. 2001. "The Political Economy of State Property Exemptions," Working Paper.
- Rea, Samuel A., Jr. 1984. "Arm-Breaking, Consumer Credit and Personal Bankruptcy," 22 *Economic Inquiry* 188-208.
- Robins, Philip K. 1974. "The Effects of State Usury Ceilings on Single Family Homebuilding," 29 *Journal of Finance* 227-35.
- Rohner, Ralph J. 1975. "Holder in Due Course In Consumer Transactions: Requiem, Revival, or Reformation?," 60 *Cornell Law Review* 503-68.
- Rolnick, Arthur J., Graham, S.L., and Dahl, D.S. 1975. "Minnesota's Usury Law: an Evaluation," 2 *Ninth District Quarterly* XXX.
- Rubin, Edward L. 1991. "Legislative Methodology: Some Lessons From the Truth-in-Lending Act," 80 *Georgetown Law Journal* 233-307.
- Schill, Michael H. 1991. "An Economic Analysis of Mortgagor Protection Laws," 77 *Virginia Law Review* 489-538.
- Schill, Michael H., and Susan M. Wachter. 1995. "The Spatial Bias of Federal Housing Law and Policy: Concentrated Poverty in Urban America," 143 *University of Pennsylvania Law Review* 1285-1342.

- Schuchman, Philip. 1969. "Profit on Default: An Archival Study of Automobile Repossession and Resale," 22 *Stanford Law Review* 20-66.
- Schwartz, Alan. 1977. "A Reexamination of Nonsubstantive Unconscionability," 63 *Virginia Law Review* 1053-83.
- Schwartz, Alan. 1981. "Security Interests and Bankruptcy Priorities: A Review of Current Theories," 10 *Journal of Legal Studies* 1-37.
- Schwartz, Alan. 1983. "The Enforceability of Security Interests in Consumer Goods," 26 *Journal of Law and Economics* 117-62
- Schwartz, Alan, and Louis L. Wilde. 1979. "Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis," 127 *University of Pennsylvania Law Review* 630-82.
- Schwartz, Alan, and Louis L. Wilde 1983. "Imperfect Information in Markets for Contract Terms: The Examples of Warranties and Security Interests," 69 *Virginia Law Review* 1387-485.
- Scott, James H., Jr. 1977. "Bankruptcy, Secured Debt, and Optimal Capital Structure," 32 *Journal of Finance* 1-19.
- Scott, James H. Jr. 1979. "Bankruptcy, Secured Debt, and Optimal Capital Structure: Reply," 34 *Journal of Finance* 253-60.
- Scott, Robert E. 1989. "Rethinking the Regulation of Coercive Creditor Remedies," 89 *Columbia Law Review* 730-88.
- Scott, Robert E., et. al. 1994. "Symposium on the Revision of Article 9 of the Uniform Commercial Code," 80 *Virginia Law Review* 1783-2311.
- Shay, Robert P. 1967. "State Regulation and the Provision of Small Loans," in J. Chapman and Robert P. Shay, eds., *The Consumer Finance Industry: Its Costs and Regulation*. New York: Columbia University Press.
- Shay, Robert P. 1970. "Factors Affecting Price, Volume and Credit Risk in the Consumer Finance Industry," 25 *Journal of Finance* 503-15.

Shay, Robert P. 1973. "The Impact of State Legal Rate Ceilings Upon the Availability and Price of Credit," in 4 *National Commission on Consumer Finance, Technical Studies*. Washington, D.C.: U.S. Government Printing Office.

Shay, Robert P., and Milton W. Schober. 1973. "Consumer Awareness of Annual Percentage Rates Charge in Consumer Installment Credit: Before and After Truth-in-Lending Became Effective," in 1 *National Commission on Consumer Finance, Technical Studies*. Washington, D.C.: U.S. Government Printing Office.

Shepard, Lawrence. 1984. "Personal Failures and the Bankruptcy Reform Act of 1978," 27 *Journal of Law and Economics* 419-37.

Shiers, Alden F., and Daniel P. Williamson. 1987. "Nonbusiness Bankruptcies and the Law: Some Empirical Results," 21(2) *Journal of Consumer Affairs* 277-92.

Smith, Jr., Clifford W., and Jerold B. Warner. 1979. "Bankruptcy, Secured Debt, and Optimal Capital Structure: Comment," 34 *Journal of Finance* 247-51.

Stiglitz, Joseph E., and L. Weiss. 1981. "Credit Rationing in Markets with Imperfect Information," 71 *American Economic Review* 393-410

Swire, Peter P. 1995. "The Persistent Problem of Lending Discrimination: A Law and Economics Analysis," 73 *Texas Law Review* 787-869.

Villegas, Daniel J. 1989. "The Impact of Usury Ceilings on Consumer Credit," 56 *Southern Economic Journal* 126-41.

Villegas, Daniel J. 1982. "An Analysis of the Impact of Interest Rate Ceilings," 37 *Journal of Finance* 941-54.

Villegas, Daniel J. 1990. "Regulation of Creditor Practices: An Evaluation of the FTC's Credit Practice Rule," 42 *Journal of Economics and Business* 51-67.

Weiss, Lawrence A., J.S. Bhandari, and Russell P. Robins. 1996. "An Analysis of State-Wide Variation in Bankruptcy Rates in the United States," Working Paper, INSEAD, No. 96/56/AC.. Fontainebleau, France: INSEAD.

White, James J. 1984. "Efficiency Justifications for Personal Property Security," 37 *Vanderbilt Law Review* 473-508.

White, James J., and Frank W. Munger, Jr. 1971. "Consumer Sensitivity to Interest Rates: an Empirical Study of New-Car Buyers and Auto Loans," 69 *Michigan Law Review* 1207-41.

White, Martin B. 1982. "Consumer Repossessions and Deficiencies: New Perspectives From New Data," 23 *Boston College Law Review* 385-418.

White, Michelle J. 1987. "Personal Bankruptcy Under the 1978 Bankruptcy Code: An Economic Analysis," 63 *Indiana Law Journal* 1-53.

White, Michelle J. 1998a. "Why It Pays to File for Bankruptcy: A Critical Look at the Incentives Under U.S. Personal Bankruptcy Law and a Proposal for Change," 65 *University of Chicago Law Review* 685-732.

White, Michelle J. 1998b. "Why Don't More Households File for Bankruptcy," 14 *Journal of Law, Economics & Organization* 205-31.

Wang, Hung-Jen, and Michelle J. White. 2000. "An Optimal Personal Bankruptcy Procedure and Proposed Reforms," 29 *Journal of Legal Studies* 255-86.

Whitford, William C. 1986. "The Appropriate Role of Security Interests in Consumer Transactions," 7 *Cardozo Law Review* 959-99.

Whitford, William C. 1979. "A Critique of the Consumer Credit Collection System, 1979" *Wisconsin Law Review* 1047-143.

Wolkin, John D., and Frank J. Navratil. 1981. "The Economic Impact of the Federal Credit Union Usury Ceiling," 36 *Journal of Finance* 1157-68.

Case References

Bates v. State Bar of Arizona, 434 U.S. 881 (1977).

Heintz v. Jenkins, 514 U.S. 291 (1995).

Marquette National Bank of Minneapolis v. First of Omaha Service Corporation, 439 U.S. 299 (1978).

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