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The Myth of the Rational Borrower: Rationality, Behavioralism, and the Misguided “Reform” of Bankruptcy Law

Susan Block-Lieb* and Edward J. Janger**

Legislative debates over bankruptcy and consumer credit are dominated by the myth of the rational borrower. Congress recently enacted legislation¹ motivated by the perception that rational consumers act strategically when they borrow money and file for bankruptcy.² The proponents of this so-called reform complain that the nonbusiness bankruptcy filing rate has skyrocketed over the last twenty years, even (indeed especially) during the flush economic times of the mid-1990s (see Figure 1).³ These reform advocates argue that a decline in the stigma associated with bankruptcy has increased the amount of strategic behavior among borrowers.⁴ This purported crisis of “bankruptcy abuse” is the justification for radically limiting access to (and increasing the cost of obtaining) a bankruptcy discharge.⁵ Opponents of the recently enacted legislation see an entirely different crisis—in the consumer credit markets, rather than in the

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1. Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Pub. L. No. 109-8, 119 Stat. 23 (codified as amended in scattered sections of 11, 12, 15, 18, and 28 U.S.C.).

2. See, e.g., 151 CONG. REC. S1813, S1813 (daily ed. Mar. 1, 2005) (statement of Sen. Frist) (explaining that today people strategically plan their bankruptcies in order to “buy a house or . . . whatever else they need and then file a bankruptcy form . . . [so] they can get the big ticket items upfront, and for everything else they will use cash”).

3. For data on nonbusiness bankruptcy filings over time, see, for example, www.abiworld.org (analyzing filings by chapter, year, and district) and www.uscourts.gov/bnkrpctystats/bankruptcystats.htm (containing statistics compiled by the Administrative Office of the U.S. Courts).

4. See, e.g., 151 CONG. REC. S1813, S1813 (daily ed. Mar. 1, 2005) (statement of Sen. Frist) (contending that “[b]ankruptcy has become so common that it has lost the stigma it had even a short generation ago” and because it’s “just another method [or] tool just to get out of debt[,] [s]ome folks have even been known to plan their bankruptcy”).

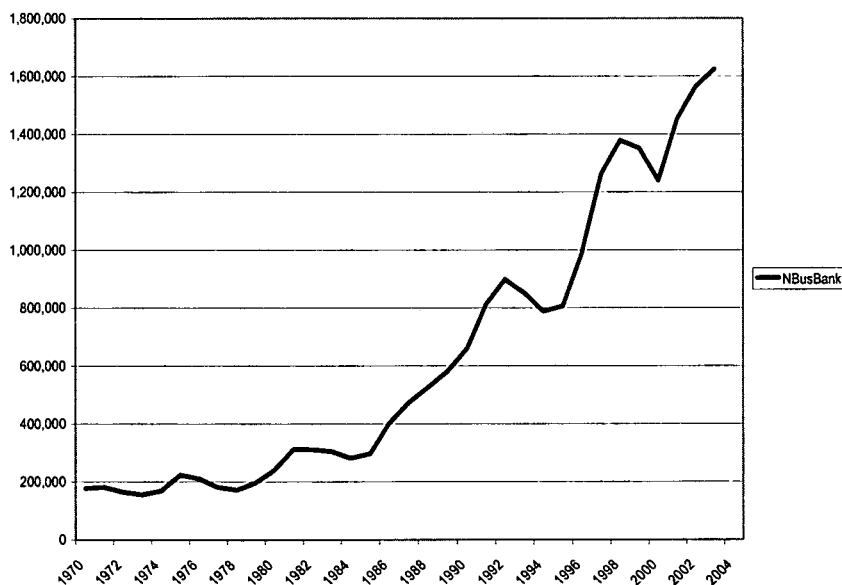
5. See, e.g., *id.* at S1842 (statement of Sen. Frist) (arguing that because “bankruptcy is no longer a last resort” and is instead being used as a “first stop,” the governing principle for the future of bankruptcy should be: “Those who have the means should repay their debts”).

bankruptcy filing rate per se.⁶ Under this view, there was no need to change the bankruptcy laws; a more profitable avenue for reform would have been to regulate the exploding market for consumer credit.⁷

In this Article, we seek to show that the fault line between these two camps rests on competing views about the information available to lenders and, more importantly, on competing views about consumer rationality and consumer opportunism. We argue that the division lies in two competing empirical claims about the paradigmatic borrower and the paradigmatic lender and on competing causal stories about the effects of related legal changes over the last twenty-five years. Neither data story is conclusive, but one, we believe, is considerably more plausible than the other.

Figure 1⁸

Non-Business Bankruptcy Filings: 1970-2003



6. See, e.g., Letter from 92 Law Professors to Senators Arlen Specter and Patrick Leahy 1-2 (Feb. 16, 2005), available at <http://www.abiworld.org/pdfs/LawProfsLetter.pdf> (arguing that increased bankruptcy filings over the past 25 years are explained less by changes in bankruptcy law than by changes in “the way that credit is marketed to consumers”).

7. *Id.*

8. ADMINISTRATIVE OFFICE OF THE U.S. COURTS, JUDICIAL FACTS AND FIGURES tbl.5.2 (2005), available at <http://www.uscourts.gov/judicialfactsfigures/alljfftables.pdf> (covering years 1980 through 2004); ADMINISTRATIVE OFFICE OF THE U.S. COURTS, ANNUAL REPORT OF THE DIRECTOR 17 (1979) (covering years 1970 through 1979).

On one side, law professors and economists⁹ rely on macrodata to theorize about consumer bankruptcy law and policy “from the top down.”¹⁰ They view individual debtors as either honest, but unfortunate, or as opportunistic.¹¹ The honest-but-unfortunate debtor is a rational, law-abiding person who borrows

9. In posing this dichotomy, we are not unmindful that there are exceptions to this generalization about economists. See, e.g., Christopher Harris & David Laibson, *Hyperbolic Discounting and Consumption*, in 1 ADVANCES IN ECONOMICS AND ECONOMETRICS: THEORY AND APPLICATIONS, EIGHTH WORLD CONGRESS 258, 279–80 (Mathias Dewatripont et al. eds., 2003) (utilizing a hyperbolic discount model to characterize available evidence on credit card borrowing, consumption–income co-movement, and liquid and illiquid asset accumulation); David Laibson et al., *A Debt Puzzle*, in KNOWLEDGE, INFORMATION, AND EXPECTATIONS IN MODERN MACROECONOMICS: IN HONOR OF EDMUND S. PHELPS 228, 229 (Philippe Aghion et al. eds., 2003) (explaining credit card borrowing using a standard life cycle model and arguing that the quasi-hyperbolic discount function partially solves the debt puzzle); Lawrence M. Ausubel, *Credit Card Defaults, Credit Card Profits, and Bankruptcy*, 71 AM. BANKR. L.J. 249, 264 (1997) (connecting credit card default rates and bankruptcy filing statistics to trends in the general economy); Oren Bar-Gill, *Seduction by Plastic*, 98 NW. U. L. REV. 1373, 1375–76 (2004) (proposing a theory of credit card borrowing based on behavioral bias in which consumers underestimate future borrowing and under which credit card issuers exploit this bias); David A. Moss & Gibbs A. Johnson, *The Rise of Consumer Bankruptcy: Evolution, Revolution or Both*, 73 AM. BANKR. L.J. 311, 347–48 (1999) (relating the increased number of consumer bankruptcies to changes in the distribution of consumer credit).

10. See, e.g., Barry Adler, Ben Polak & Alan Schwartz, *Regulating Consumer Bankruptcy: A Theoretical Inquiry*, 29 J. LEGAL STUD. 585, 609 (2000) (applying a principal–agent framework to analyze consumer bankruptcy and reach conclusions about bankruptcy exemption levels, reaffirmation agreements, chapter choice, and enforceability of bankruptcy waivers); Edith H. Jones & Todd J. Zywicki, *It’s Time for Means-Testing*, 1999 BYU L. REV. 177, 180 (attributing the rise in consumer bankruptcies to declining social stigma and advocating means-testing to stem opportunistic filings); Eric A. Posner, *Should Debtors Be Forced Into Chapter 13?*, 32 LOY. L.A. L. REV. 965, 966 (1999) (examining means-testing restrictions on availability of chapter 7 “in light of the goals of bankruptcy law” and concluding that it would “rationalize bankruptcy relief” and reduce the cost of credit); Hung-Jen Wang & Michelle J. White, *The Optimal Personal Bankruptcy Procedure and Proposed Reforms*, 29 J. LEGAL STUD. 255, 257 (2000) (proposing reform of U.S. bankruptcy law to combine chapters 7 and 13, so that a debtors’ obligations to repay would be based on ability to pay, thus reducing potential for opportunism); Michelle J. White, *Personal Bankruptcy Under the 1978 Bankruptcy Code: An Economic Analysis*, 63 IND. L.J. 1, 50–51 (1987) [hereinafter White, *Economic Analysis*] (formulating and testing an economic model of consumer borrowing and consumer bankruptcy to assess reasons for increased bankruptcy filings); Michelle J. White, *Why Don’t More Households File for Bankruptcy?*, 14 J.L. ECON. & ORG. 205, 229 (1998) [hereinafter White, *Why Don’t More*] (claiming that 15% of U.S. households would benefit from filing bankruptcy but choose not to do so to preserve the option to file in the future); Michelle J. White, *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 U. CHI. L. REV. 685, 686, 710 (1998) [hereinafter White, *Why It Pays*] (constructing an economic model to demonstrate that consumers’ strategic behavior explains increases in bankruptcy filings and proposing changes to bankruptcy laws “that would appropriately limit the attractiveness of the bankruptcy process”); Todd J. Zywicki, *Bankruptcy Law as Social Legislation*, 5 TEX. REV. L. & POL. 393, 406, 422 (2001) [hereinafter Zywicki, *Social Legislation*] (arguing that increased bankruptcy rates are a natural result of a system that “rewards short-term and irresponsible behavior” and places few restrictions on opportunistic use); Todd J. Zywicki, *The Past, Present, and Future of Bankruptcy Law in America*, 101 MICH. L. REV. 2016, 2021–22 (2003) (book review) [hereinafter Zywicki, *Past, Present, and Future*] (detailing how American bankruptcy law has historically been shaped by competing interests of academics, bankruptcy professionals, and creditors).

11. See, e.g., White, *Why It Pays*, *supra* note 10, at 693 (casting bankrupt households as strategic planners exploiting potential financial benefits).

after informed deliberation but defaults due to an unforeseen and unforeseeable shock to her income. The opportunistic debtor borrows with an eye on the Bankruptcy Code and files for bankruptcy when she has maximized her debt and, consequently, the beneficial effect of the bankruptcy discharge.¹²

The economists' Olympian perspective is exemplified by Richard Posner and Gary Becker.¹³ In a world of rational (and strategic) borrowers any measure that reduces the cost of the discharge increases the incentive for borrower opportunism. Lenders, by contrast, face highly competitive markets¹⁴ that undermine efforts to pass on the costs of default and bankruptcy to high-risk borrowers through price discrimination¹⁵—they lack the ability to determine in advance which borrowers are honest and which opportunistic. As a result, lenders either pass the burden of opportunism on to the marketplace as a whole or ration credit in an effort to maintain underwriting standards.¹⁶ Under this view, the bankruptcy discharge is the cause of the skyrocketing filing rate, which imposes a bankruptcy tax on the consumers of credit. The goal of bankruptcy reform is, thus, a form of tax reduction. As Judge Posner recently said:

I conclude that the new Act, by increasing the rights of creditors in bankruptcy (for remember that chapter 13 enables a creditor to obtain repayment out of the debtor's post-bankruptcy income, not just out of what may be his very limited nonexempt assets at the time of bankruptcy, as under chapter 7), should reduce interest rates and thus make borrowers better off. The most reckless borrowers—those most prone to file repeated chapter 7 bankruptcies—will be made worse off. But there will be fewer of these, precisely because they will be worse off than under the existing system. If bankruptcy is more costly, there will be less of it.¹⁷

12. See *id.* (describing two types of households, one of which “plan[s] in advance to take advantage of the possibility of bankruptcy”).

13. See Posting of Gary Becker to Becker-Posner Blog, <http://www.becker-posner-blog.com> (Mar. 27, 2005, 02:03 PM) (proposing nondischargeable loans secured by human capital); Posting of Richard Posner to Becker-Posner Blog, <http://www.becker-posner-blog.com> (Mar. 27, 2005, 02:20 PM) (“If bankruptcy is more costly, there will be less of it.”).

14. See, e.g., William H. Meckling, *Financial Markets, Default, and Bankruptcy: The Role of the State*, LAW & CONTEMP. PROBS., Autumn 1977, at 13, 21 (arguing that in a competitive lending market, interest rates and loan terms will cover all of a lender's costs).

15. Joseph E. Stiglitz & Andrew Weiss, *Credit Rationing in Markets with Imperfect Information*, 71 AM. ECON. REV. 393, 393 (1981) (noting that the interest rate a borrower is willing to pay may act as a screening device that can impart information to the lender about the borrower's riskiness but that “the interest rate a bank charges may itself affect the riskiness of the pool of loans by either: 1) sorting potential borrowers (adverse selection effect); or 2) affecting the actions of borrowers (the incentive effect”).

16. This is the so-called “bankruptcy tax” that lobbyists claimed lenders would rebate in the event Congress adopted the 2005 bankruptcy amendments. See, e.g., 151 CONG. REC. S1813, S1842 (daily ed. Mar. 1, 2005) (statement of Sen. Hatch) (insisting that there is a “bankruptcy tax” of “\$400-a-year on every household in the country,” which could amount to a “mortgage or a rent payment” for many families).

17. Posner, *supra* note 13.

On the other side, law professors and sociologists have worked together to study the workings of consumer bankruptcy law “on the ground.”¹⁸ They have looked at microdata to develop finely grained information about who files for bankruptcy and why. These scholars review bankruptcy petitions and interview thousands of filers to develop a demographic picture of consumer bankruptcy. They find that debtors come in all shapes and sizes,¹⁹ but tell a consistent, albeit anecdotal, story about their default. Debtors are pushed over the financial edge by personal tragedy—events such as divorce, job loss, and uninsured medical expenses.²⁰ While personal tragedy has always existed, increases in the consumer bankruptcy filing rate have, they believe, been driven by the easy availability and aggressive marketing of (often quite expensive) consumer credit.²¹ Consumer credit places families closer to the financial precipice. When the predictable (although unforeseen) shocks arise, it is no surprise that many more families tumble into bankruptcy than they did several decades ago. These scholars focus more on the marketing of consumer credit than on the motivation for consumer borrowing. For them, the focus of policy should be on consumer protection and on moderating lenders’ incentives to extend increasing amounts of consumer credit to risky borrowers.²²

18. See, e.g., TERESA A. SULLIVAN, ELIZABETH WARREN & JAY LAWRENCE WESTBROOK, AS WE FORGIVE OUR DEBTORS 3 (1999) [hereinafter SULLIVAN, WARREN & WESTBROOK, AS WE FORGIVE] (exploring the pathology of debtors and the consumer credit system); TERESA A. SULLIVAN, ELIZABETH WARREN & JAY LAWRENCE WESTBROOK, THE FRAGILE MIDDLE CLASS: AMERICANS IN DEBT 2 (2000) [hereinafter SULLIVAN, WARREN & WESTBROOK, FRAGILE MIDDLE CLASS] (addressing the question of why families face economic difficulties).

19. See, e.g., SULLIVAN, WARREN & WESTBROOK, FRAGILE MIDDLE CLASS, *supra* note 18, at 27 (“The people who file for bankruptcy are a cross-section of society, and bankruptcy is a middle-class phenomenon.”); David U. Himmelstein et al., *MarketWatch: Illness and Injury as Contributors to Bankruptcy*, HEALTH AFF., Feb. 2, 2005, at W5-63, W5-70, <http://content.healthaffairs.org/cgi/reprint/hlthaff.w5.63v1.pdf> (noting that there are millions of debtors in the U.S. each year and that they are primarily middle class).

20. SULLIVAN, WARREN & WESTBROOK, FRAGILE MIDDLE CLASS, *supra* note 18, at 15–21.

21. See *id.* at 110 (reporting that the end of the twentieth century brought with it a doubling of American credit card debt); Ausubel, *supra* note 9, at 260 (explaining the rise in modern credit card profitability).

22. See, e.g., ROBERT D. MANNING, CREDIT CARD NATION: THE CONSEQUENCES OF AMERICA’S ADDICTION TO CREDIT 16 (2000) (arguing that the view “that individuals must experience a financial revelation that results in modification of their behavior only after suffering the burden of severe debt” ignores the alternative possibility that “credit card companies or financially complicit colleges should offer educational workshops of financial literacy programs before debt problems arise”); SULLIVAN, WARREN & WESTBROOK, FRAGILE MIDDLE CLASS, *supra* note 18, at 140 (“Some people cannot manage credit, and its ready availability puts them at risk for a heady ride of consumer consumption followed by mounting bills and financial juggling that eventually comes tumbling down.”); ELIZABETH WARREN & AMELIA WARREN TYAGI, THE TWO-INCOME TRAP: WHY MIDDLE-CLASS MOTHERS AND FATHERS ARE GOING BROKE 130 (2003) (noting the rise in marketing by credit card companies to the present level of more than five billion preapproved credit card offers per year, an average of over \$350,000 of credit per family); Ausubel, *supra* note 9, at 270 (“The social problem is not so much the rise in personal bankruptcies as the rise in overextended consumers. . . . If changes in the law would be beneficial at all, we need changes directed toward discouraging overextension from occurring in the first place. . . .”); Bar-Gill, *supra* note 9, at 1434 (“In consumer contracts, highly sophisticated corporations will often exploit

While the sociologists emphasize and study the ex post effects of financial distress, the economists focus on the ex ante incentives created by bankruptcy rules.²³ Looking at borrowers from opposite sides of the bankruptcy divide, they each make assumptions about motivation. The sociologists see debtors in grave financial distress and assume honesty. They therefore seek to solve the root causes—healthcare, labor markets, and predatory or subprime lending. Economists, instead, see broken promises and assume opportunism. They worry about how the bankruptcy discharge influences a debtor’s borrowing behavior.²⁴ These commentators argue that the Bankruptcy Code encourages inefficient and opportunistic ex ante decisionmaking,²⁵ and point to increases in the bankruptcy filing rate as a result of that opportunism.

The economic critique of consumer bankruptcy law has been tremendously influential in Congress. On October 17, 2005, sweeping changes in consumer bankruptcy law became effective, enacted as part of the inaptly named Bankruptcy Abuse Prevention and Consumer Protection Act of 2005.²⁶ Although the Act is lengthy and filled with both consumer and business focused provisions, its most controversial provisions are those that impose a new “means test” for chapter 7 liquidation proceedings. The means test is designed to limit

consumers’ behavioral biases. . . . Therefore, legal intervention may well be required to protect consumers and to increase social welfare.”); Ronald J. Mann, *Global Credit Card Use and Debt: Policy Issues and Regulatory Responses* 61 & n.194 (Univ. of Texas Sch. of Law, Law and Econ. Working Paper No. 049, 2005), available at <http://ssrn.com/abstract=509063> (recommending a ban on marketing to minors due to their greater likelihood to use credit cards).

23. See, e.g., Barry E. Adler, *A Theory of Corporate Insolvency*, 72 N.Y.U. L. REV. 343, 344 (1997) (arguing that the ex ante approach is optimal for corporate insolvency); Phillipc Aghion et al., *Improving Bankruptcy Procedure*, 72 WASH. U. L.Q. 849, 852 (1994) (applying an economic perspective to bankruptcy procedure); Robert K. Rasmussen, *The Ex Ante Effects of Bankruptcy Reform on Investment Incentives*, 72 WASH. U. L.Q. 1159, 1163 (1994) (arguing that the importance of the ex ante effects of bankruptcy laws far outweigh the importance of ex post efficiency concerns in business cases); Alan Schwartz, *A Contract Theory Approach to Business Bankruptcy*, 107 YALE L.J. 1807, 1820 (1998) (arguing for greater ex ante efficiency by providing multiple bankruptcy options for business debtors).

24. See Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption From Law and Economics*, 88 CAL. L. REV. 1051, 1054 (2000) (noting that “[t]he seminal insight that economics provides to the analysis of law is that people respond to incentives”). Both factions make unrealistic assumptions about the ability of judges to engage in ex post sorting between opportunistic and honest debtors. The empiricists tend to assume that judges are good sorters. The economists tend to assume judicial incompetence. The effect of bankruptcy law on ex ante incentives turns to some extent on the ability of judges to engage in such sorting, and to an even larger extent on whether they are biased. Ted Janger, *Crystals and Mud in Bankruptcy Law: Judicial Competence and Statutory Design*, 43 ARIZ. L. REV. 559, 598–601 (2001).

25. One thing that should be noted about both “factions” is that they each make unrealistic, stylized decisions about the ability of the judicial decision to distinguish opportunistic from honest but unfortunate debtors. The empiricists tend to assume that judges are capable of weeding opportunistic debtors from the system, without recognizing the costliness of that inquiry. The economists tend to assume that no such sorting exists. The reality is somewhat more complex. See Janger, *supra* note 24 (noting that judicial involvement is only appropriate in a small subset of consumer bankruptcy cases).

26. Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Pub. L. No. 109-8, 119 Stat. 23 (codified as amended in scattered sections of 11, 12, 15, 18, and 28 U.S.C.).

chapter 7 to those individual debtors whose income is presumed insufficient (because it is below the state average) to repay their unsecured obligations over a five-year period.²⁷ Lawmakers²⁸ and lobbyists²⁹ support the need for this radical reworking of consumer bankruptcy law by pointing to increases in nonbusiness bankruptcy filings since enactment of the 1978 Code. They argue, like true incentive analysts, that this trend was the result of bankruptcy reforms—adopted in 1978 to protect consumer debtors—which, they claim, instead created improper incentives for individuals to file for bankruptcy.³⁰

The problem is that the theory about why people file for bankruptcy, and the microdata about why people report that they have filed for bankruptcy, do not connect. We ask, “Is there an *ex ante* story that can simultaneously explain the pain that is observed in bankruptcy and the increase in bankruptcy filings?”

27. *Id.*

28. See *supra* notes 4–5, 16. See also *Bankruptcy Reform Act of 1999 (Part III): Hearing on H.R. 833 Before the Subcomm. on Commercial and Administrative Law of the H. Comm. on the Judiciary*, 106th Cong. 30 (2000) (statement of Rep. Marge Roukema, Chairwoman, H. Subcomm. on Financial Institutions) (“Bankruptcy is fast becoming the first stop financial planning tool rather than a last resort.”); *Bankruptcy Reform Act of 1999 (Part I): Hearing on H.R. 833 Before the Subcomm. on Commercial and Administrative Law of the H. Comm. on the Judiciary*, 106th Cong. 11 (2000) (statement of Rep. Rick Boucher, Member of Congress) (“Bankruptcies of convenience are driving this increase. Bankruptcy was never meant to be used as a financial planning tool, but it is becoming a first stop rather than a last resort . . .”); George W. Gekas, *Statement to the Dickinson Law Review Bankruptcy Symposium*, 102 DICK. L. REV. 859, 861 (1998) (arguing that “bankruptcy has become viewed more as a financial planning tool, a government debt forgiveness program, and a first choice rather than a last resort”); Press Release, Rep. Henry J. Hyde, Chairman, H. Comm. on the Judiciary, Hyde Announces Judiciary Legislative Schedule: Bankruptcy Reform, Juvenile Justice & Civil Asset Forfeiture Top List (Feb. 24, 1999), <http://judiciary.house.gov/legacy/022499.htm> (“Congress must confront the [bankruptcy] issue directly and curb abusive and predatory practices of those who would game the system.”).

29. See, e.g., *Bankruptcy Reform Act of 1999 (Part II): Hearing on H.R. 833 Before the Subcomm. on Commercial and Administrative Law of the H. Comm. on the Judiciary*, 106th Cong. 8 (2000) (statement of George J. Wallace on behalf of the Consumer Bankruptcy Reform Coalition) (“Today, we have a chapter 7 bankruptcy remedy which is fundamentally flawed. At the same time, we have a chapter 13 program which is supposed to encourage consumers to repay their debts, hut instead encourages them all too often to evade their responsibilities. In a well meaning attempt to help those in debt trouble, a major ‘reform’ of bankruptcy was enacted in 1978 which generously provides relief to those who need it—but also to those who do not deserve it.”); *id.* at 123–24 (statement of Michael Moore on behalf of the National Retail Federation) (“I have an increasing number of customers who file for bankruptcy within a short period of time after making a major purchase. . . . Our laws must be tightened to prevent those who are deliberately using the Bankruptcy Code as a tool to load up on merchandise on credit that they have no intention of ever repaying. Finally, some consumers are using chapter 13 to reduce the contract price (and other terms) of purchases they make from dealers who hold a security interest in the merchandise. . . . There should be a reasonable period during which this kind of abuse should not be tolerated.”).

30. For criticism of means testing, see, for example, Leif M. Clark, *The Responsible Borrower Protection Bankruptcy Act: A Not-So-Responsible Effort at Protecting Borrowers*, 28 U. MEM. L. REV. 741 (1998); Gary Klein, *Means Testing Bankruptcy: What Would It Mean?*, 28 U. MEM. L. REV. 711 (1998); Henry J. Sommer, *Causes of the Consumer Bankruptcy Explosion: Debtor Abuse or Easy Credit?*, 27 HOFSTRA L. REV. 33 (1998); Henry J. Sommer, *Trying to Make Sense Out of Nonsense: Representing Consumers Under the “Bankruptcy Abuse Prevention and Consumer Protection Act,”* 79 AM. BANKR. L.J. 191, 193–203 (2005); Eugene R. Wedoff, *Means Testing in the New § 707(b)*, 79 AM. BANKR. L.J. 231 (2005).

This Article examines data on the market for consumer credit and empirical studies of consumer behavior, including studies of consumers who have filed for bankruptcy. It finds that the focus on increased nonbusiness bankruptcy filing rates ignores important data that raise puzzling questions about the locus of rationality; if most borrowers act strategically, lenders should be reluctant to expand the market for consumer credit, and indeed, should lose money by doing so. Yet, consistently since 1978, the market for consumer credit has expanded, especially the market for subprime lending to borrowers with blemished credit records. For this business strategy to work, nonstrategic borrowers must outnumber strategic borrowers and the interest and fees paid by (at least some) nonstrategic borrowers must outweigh the costs of strategic borrowers' defaults. What then accounts for lenders' increased willingness to extend consumer credit in the face of increased bankruptcy filings?

A broader look at changes in the law and in the market for consumer credit since 1978 suggests an alternative story. In this story, 1978 remains a focal point, but not solely because the bankruptcy laws were amended. In 1978, the Supreme Court decided *Marquette National Bank of Minneapolis v. First of Omaha Service Corp.*,³¹ which effectively released consumer credit providers from usury limits, and thereby encouraged the creation of a national, rather than purely local, market for consumer credit. At around the same time, innovations in point-of-purchase technology and risk-based credit scoring models permitted lenders to discriminate successfully between high- and low-risk borrowers, and impose fees and finance charges on high-risk borrowers that would have been viewed as usurious in a pre-*Marquette* world. These legal and technological changes do much to explain lenders' increased willingness to supply consumer credit, particularly into the subprime market: advances in technology increased lenders' access to information; deregulation erased legal barriers that otherwise would have prevented lenders from acting on the newly available information; decreases in the cost of funds ensured that, with all else unchanged, profits from consumer credit would grow. With these edits to the story, it hardly seems surprising that lenders have increased the supply of consumer credit. More importantly, they have increased the riskiness of the credit pool, lending to borrowers who would not have been profitable in a world of informational asymmetries and usury limits—in short, a world where lenders are unable to price discriminate among high- and low-risk borrowers. Under this view, the increased bankruptcy filing rate is not a crisis; it merely represents a shift to a new equilibrium rate of filing.³²

The policy response, if any, to the filing rate thus turns on the extent to which consumers can be viewed as instrumentally rational. Why have consumers been willing to borrow at higher and higher levels, notwithstanding relatively stagnant growth in income and wealth during this period? Incentive

31. 439 U.S. 299 (1978).

32. See Moss & Johnson, *supra* note 9, at 347 (noting that the increase in bankruptcies since 1985 is attributable to changes in the distribution of consumer credit).

analysts contend that these trends are fueled by strategic incentives ostensibly embedded in the Bankruptcy Code (until those incentives were removed by the 2005 amendments). But rationality cannot comfortably coexist on both the borrower and lender sides of the economists' story. In a world of expanding consumer credit and increasing bankruptcy filings (not to mention increasing profitability and relatively constant borrowing terms), somebody must be doing the calculus wrong. Why would rational lenders with state-of-the-art information technology, universal credit reporting, and empirically sound risk-management models knowingly lend to borrowers who are out to game the system? If consumers are rational, why do so many bankruptcy debtors appear to be in such pain?

If one relaxes the assumption of consumer rationality, the pieces of the puzzle fall more comfortably into place. Behavioral decision research assists in understanding the behavior of borrowers as predictable, yet less than rational.³³ This revised theory of the borrower suggests an alternative account for rational lender behavior that is plausible, explanatory, and troubling all at once. Experiments conducted by cognitive psychologists demonstrate that, far from being rational individuals, consumers compensate for their own "bounded rationality" by adopting decisionmaking heuristics—short cuts that help

33. Elizabeth Hoffman & Matthew L. Spitzer, *Experimental Law and Economics: An Introduction*, 85 COLUM. L. REV. 991, 994–95 (1985) (discussing value of using experimental techniques to study economic theory because they offer opportunities to create environments that will best predict human behavior in discrete, defined economic scenarios); Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1488–89 (1998) (asserting that the behavioral approach to economic theory generates better predictions about human behavior than that of conventional economics because it does not rely on the assumption that people are rational actors); Korobkin & Ulen, *supra* note 24, at 1055–59 (anticipating that the "law and behavioral science" movement will gradually displace rational choice theory in the law and economics field because of its ability to explain "behavioral anomalies" in human behavior that cannot be reconciled with the assumptions intrinsic to rational choice theory); Donald C. Langevoort, *Behavioral Theories of Judgment and Decision Making in Legal Scholarship: A Literature Review*, 51 VAND. L. REV. 1499, 1501–02 (1998) (commenting that, because "behavioral decision theory" is capable of explaining "complex and contingent" human behavior that departs from "rational decision-making processes," it can successfully predict and model such behavior where conventional economics cannot); Symposium, *The Legal Implications of Psychology: Human Behavior, Behavioral Economics, and the Law*, 51 VAND. L. REV. 1495 (1998) (discussing the capacity of behavioral research to address and account for deviations from rational actor models espoused by standard economics theories as an indispensable analytic tool in contemporary legal scholarship); Symposium, *Preferences and Rational Choice: New Perspectives and Legal Implications*, 151 U. PA. L. REV. 707 (2003) (critiquing traditional models of normative rationality and exploring the implications of alternative models of rationality for law and policy); Cass R. Sunstein, *Behavioral Law and Economics: A Progress Report*, 1 AM. L. & ECON. REV. 115, 121 (1999) (suggesting that, although the behavioral economics view of rationality in human behavior represents a departure from "standard economic assumptions," it does so in a manner that provides a "legitimate basis for predicting human behavior"); Cass R. Sunstein, *Introduction to BEHAVIORAL LAW & ECONOMICS* 1, 1 (Cass R. Sunstein ed., 2000) (observing that, in applying behavioral economics to the analysis of law and its effect on people, social scientists have discovered that, while "[p]eople are not always 'rational' in the sense that economists suppose . . . it does not follow that people's behavior is unpredictable, systematically irrational, random, rule-free, or elusive").

individuals to make purchasing and borrowing decisions.³⁴ These heuristics, however, also introduce systematic biases into consumers' decisionmaking that cause consumers to buy and borrow more than would a rational, credit-using purchaser, and at a higher interest rate. More troubling yet, rational, profit-maximizing lenders can capitalize on these biases to increase their profits in ways that have significant negative social welfare consequences.³⁵

We outline the implications of behavioral decision research for existing models of consumer borrowing and post-default behavior. This research suggests that excessive consumer borrowing may result from biases in consumer decisionmaking, not from strategic advantages embedded in consumer finance and consumer bankruptcy laws. Under the behavioral view, lenders face market incentives to expand access to credit by exploiting consumer borrowers' biased decisionmaking.³⁶ *Marquette*, coupled with changes in credit reporting and lending technology, facilitates lenders' exploitation of individuals' faulty decisionmaking through aggressive and sophisticated marketing of consumer credit to an increasingly wide swath of the American public.

We divide the Article into four parts. Part I describes the ex ante incentive analysis of consumer bankruptcy law. Part II contrasts incentive models of consumer behavior with empirical studies of consumer bankruptcy filings. Part III looks for alternative explanations for consumer borrowing and lending behavior, specifically in the experimental research conducted by cognitive psychologists and behavioral economists. It relates this expanding body of scholarship to empirical research on consumer bankruptcy, and finds that the consumer bankruptcy data corroborate the results of behavioral decision research in refuting many of the assumptions that underlie the rational actor model of consumer borrowing. Part IV accepts consumers as making borrowing decisions based on biased heuristics and argues that behavioral decision research provides theoretical backing for two claims frequently derided by economic analyses of consumer bankruptcy law: that rational lending decisions are at the root of

34. See, e.g., Avishalom Tor, *The Fable of Entry: Bounded Rationality, Market Discipline, and Legal Policy*, 101 MICH. L. REV. 482, 484 n.3 (2002) (describing the results of research in the area of heuristics and biases).

35. See Bar-Gill, *supra* note 9, at 1376 (portraying "the credit card contract as a tool designed to exploit consumers' underestimation bias"); see also Cass R. Sunstein, *Boundedly Rational Borrowing: A Consumer's Guide 1-3* (Univ. of Chi., Olin Law & Econ. Program, Research Paper Series, Working Paper No. 253, 2006), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=772186 (listing reasons why consumers might be susceptible to borrowing money excessively and discussing the social welfare implications of such excessive borrowing, specifically on those consumers).

36. See Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: The Problem of Market Manipulation*, 74 N.Y.U. L. REV. 630, 722 (1999) [hereinafter Hanson & Kysar, *Taking Behavioralism Seriously*] (arguing that the consumers' "cognitive anomalies" create market incentives that "no profit maximizing manufacturer can ignore"); Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: Some Evidence of Market Manipulation*, 112 HARV. L. REV. 1420, 1427 (1999) [hereinafter Hanson & Kysar, *Evidence of Market Manipulation*] (explaining that market forces drive manufacturers to exploit consumer beliefs even if manufacturers are not actually aware of these beliefs).

increases in borrowing and consumer default; and that behavioral decision research may justify policymakers turning their attention to the costly results of distorted consumption decisions and externalized costs of overborrowing. Consumer protection, rather than bankruptcy reform, should, therefore, have been the preferred policy response to the increased bankruptcy filing rate.³⁷

I. The Ex Ante Incentive Analysis of Consumer Bankruptcy Law

Consumer credit transactions start with the proposition that they are two-party transactions. According to economists, in a world of perfect information, low transaction costs, and no externalities, rational actors will contract to maximize their own welfare. Consumer credit contracts, therefore, presumptively maximize social welfare. Mandatory, legally implied contract terms, like the bankruptcy discharge, have no place in such a world.³⁸ To justify a deviation from the free-market default, advocates of a rule mandating a discharge in bankruptcy must identify an imperfection in the bargaining process or an externality that justifies inserting the mandatory term into the contract.³⁹

Strategic incentive analysis of consumer bankruptcy law proceeds from this starting point, and, finding insufficient justification, largely ends there. If one assumes both rational lenders and rational borrowers, the bankruptcy discharge will increase demand for credit (by reducing the cost of default), but will also, and more importantly, lead to a restriction of supply. Credit contracts will be riskier, interest rates will rise, and supply will fall. Thus, the ex ante incentive analysis of consumer bankruptcy law leads to a set of powerful and testable predictions: the discharge in bankruptcy encourages consumers to overborrow and then default free of cost; there will be too many bankruptcy filings; this will lead to an undersupply of credit at too high a price. As Posner said, “increasing the rights of creditors . . . should reduce interest rates and thus make borrowers better off.”⁴⁰ Bankruptcy law is bad for consumers.

There is no way around the fact that the increasing bankruptcy filing rate is a powerful datum in support of the economists’ conclusion. If only the world were so simple. The filing rate is only one fact in a much more complex story.

37. See, e.g., Colin Camerer et al., *Regulation for Conservatives: Behavioral Economics and the Case for “Asymmetric Paternalism,”* 151 U. PA. L. REV. 1211, 1224–37 (2003) (discussing less “heavy-handed” consumer protection policies, such as creating default rules or mandating that certain information be provided, that fall short of limiting consumer choices entirely); Cass R. Sunstein & Richard H. Thaler, *Libertarian Paternalism Is Not an Oxymoron,* 70 U. CHI. L. REV. 1159, 1160 (2003) (proposing a form of paternalism that “should be acceptable to those who are firmly committed to freedom of choice”).

38. See, e.g., Adler et al., *supra* note 10, at 589 (questioning wisdom of consumer protection laws that invalidate contractual bankruptcy waivers or reaffirmation agreements).

39. Eric A. Posner, *Contract Law in the Welfare State: A Defense of the Unconscionability Doctrine, Usury Laws, and Related Limitations on the Freedom to Contract,* 24 J. LEGAL STUD. 283, 284–87 (1995) (suggesting that debtors become wards of the state and rejecting, on economic grounds, the claim that all voluntary contracts should be enforced and concluding that restrictive contract doctrines are appropriate means for deterring socially costly behavior).

40. Posner, *supra* note 13.

In this Part, we review the literature on borrowers' and lenders' incentives, and seek to show that the recent history of consumer credit casts considerable doubt on economists' simple story and resulting policy prescription. Later, we propose an alternative.

A. Borrowers' Incentives

The economic analysis of consumer bankruptcy law posits the consumer as a Nietzschean superman—instrumentally rational, fully informed, and able to perform complex arithmetic calculations unfettered by cognitive and other limitations. In this view, law has no normative content, only a price tag. Consumers are assumed to try to game the legal system; legal rules should be calculated to inhibit consumers' supposed opportunism.

1. *Economic Analysis of Consumer Borrowing: Downward-Sloping Demand Curve and Intertemporal Substitution.*—“The economic theory of the consumer is very simple: economists assume that consumers choose the best bundle of goods they can afford.”⁴¹ Consumers are assumed to be rational utility maximizers with complete information and stable preferences.⁴² The less something costs, the more of it they will buy.⁴³ The more it costs the less they will purchase, or they will substitute to other lower cost alternatives.⁴⁴ They

41. HAL R. VARIAN, *INTERMEDIATE MICROECONOMICS: A MODERN APPROACH* 20 (5th ed. 1999). Individuals choose among bundles of consumption goods based upon their preferences, the price at which these goods are available in the market, and income constraints. *Id.* at 20–21. See also ROBERT L. HEILBRONER & LESTER C. THUROW, *UNDERSTANDING MICROECONOMICS* 109–11 (6th ed. 1984) (noting that individuals allocate spending to achieve the greatest utility within constraints set by their incomes).

42. GARY S. BECKER, *THE ECONOMIC APPROACH TO HUMAN BEHAVIOR* 14 (1976) (positing that all human behavior can be viewed as involving people who “maximize their utility from a stable set of preferences and accumulate an optimal amount of information and other inputs in a variety of markets”); see also HEILBRONER & THUROW, *supra* note 41, at 45–47 (observing that economists rely on the assumption that human beings are rational maximizers engaged in the “calculated pursuit of pleasurable wealth”).

43. Algebraically, this budget line can be modeled as $Y = p_1x_1 + p_2x_2$, where Y represents the consumer's money income, x_1 and x_2 refer to two different goods or bundles of goods, and p_1 and p_2 refer to the price of x_1 and x_2 respectively. Microeconomic models are typically framed in terms of two bundles of goods in order to facilitate graphical depictions of the budget function, but too much should not be made of this simplification. The variable x_1 can be said to represent some specific good, while x_2 can refer to “a composite good that stands for everything else that the consumer might want to consume other than good 1.” VARIAN, *supra* note 41, at 21 (“When we adopt this interpretation, it is convenient to think of good 2 as being the dollars that the consumer can use to spend on other goods.”).

44. Although generally these consumption functions give little thought to borrowing decisions, some texts note that a consumer's money income, Y , could be understood to include not only wages and the like, but also the amount of money that a consumer can borrow. In this event, p_1 or p_2 would be understood to include the cost of borrowing if x_1 or x_2 were purchased on credit. EDWIN MANSFIELD & GARY YOHE, *MICROECONOMICS: THEORY AND APPLICATIONS* 44 n.3 (11th ed. 2003). Moreover, some models account for an individual's preferences for saving rather than spending income. Consumers' decisions to save can be modeled by denoting savings as among the goods and services that they can decide to “purchase” within their budget constraints. *Id.* at 44 n.4.

have downward-sloping demand curves. Preferences are endogenous, arising solely from within the consumer. Economists leave the question of preference formation to psychologists, sociologists, and other social scientists. Changes in the relative prices of goods are viewed as having a “substitution effect”—if the price of pens increases, consumers increase their demand for lower priced pencils.⁴⁵

In consumer credit models, the substitution effect is temporal—consumers substitute present consumption for future consumption.⁴⁶ If the consumer is a borrower in the first period, she will consume an amount that exceeds her income for that period;⁴⁷ the cost of this loan is the principal and interest she will repay in the second period.⁴⁸ This model assumes that debt will be paid out of income earned in the second period, and that consumption in the second period will reflect this repayment.⁴⁹ It suggests that there are only two relevant variables—the interest rate and the consumer’s preference for debt versus savings. Rational consumers might also borrow where they expect income in the second period to increase over that earned in the first period, but prefer to equalize consumption levels over time.⁵⁰ Here, too, the substitution between present and future consumption will be driven by the interest rate.

2. *Ex Ante Incentive Analysis of Consumer Default.*—None of these analyses, however, factor in the costs and benefits of default. In a 1977 article, William Meckling relaxed the assumption that the debt a borrower incurs in the

45. VARIAN, *supra* note 41, at 38–40.

46. See, e.g., ANGUS DEATON, UNDERSTANDING CONSUMPTION 2–3 (1992) (recognizing the difference in consumption over two time periods); VARIAN, *supra* note 41, at 180–99 (examining consumer behavior by looking at the consumer’s intertemporal choices).

47. Consumption in the first period would equal the cost of the goods and services purchased in that period, including the cost of credit, and would exceed the income earned during this first period. Algebraically, we could describe this inequality as follows: $c^a = (p^1x^1 + p^2x^2) > Y^a$.

48. Algebraically, the cost of the loan can be represented as follows: $(c^a - Y^a) + r(c^a - Y^a)$.

49. VARIAN, *supra* note 41, at 182 (describing this inequality as follows: $c^a = m^a - r(c^a - m^a) - (c^a - m^a)$, with r representing the cost of the loan, the interest rate at which the loan was extended). Note that Varian does not present a strategic analysis of borrowers’ incentives to borrow—he presumes that the borrower will repay the loan on time and in full and makes no judgment about an individual’s preference for paying for current consumption with current income, savings, or borrowed funds. See *id.* at 184 (discussing consumer preferences for the payment of current consumption without exploring the potential consequences of choosing certain kinds of payments over others). For him, the taste for debt depends upon a balance of the desire for current consumption against the constraints presented by limited income. *Id.* at 185. He declines to include any effect the law may or may not have on behavior in his models. See *id.* at 183–85 (presenting various models for evaluating consumer consumption without any reference to the possibility of the law as a restraint).

50. Life-cycle theories of individual economic activity posit that consumers who are beginning their economic lives will save income in preparation for later retirement. See Albert Ando & Franco Modigliani, *The “Life Cycle” Hypothesis of Saving: Aggregate Implications and Tests*, 53 AM. ECON. REV. 55, 56 (1963) (describing an individual’s consumption pattern in relation to expected current and future income and returns). Upon retirement, these models presume that consumers earn less and pay for expenditures primarily out of savings. *Id.* at 76.

first period will be repaid in the second.⁵¹ He modeled individual borrowers as strategic actors, motivated to repay debt only where repayment would lead to financial advantage.⁵² Even in a simple two-period model “[t]he debtor will have an incentive to seek out income in forms that are exempt from repayment [Debtors] will repay only if default is on balance less attractive than repayment.”⁵³ Thus, consumers should be expected to breach their loan contracts whenever default is less costly than repayment.⁵⁴ He argues that the primary benefit of bankruptcy “consists of a complete discharge of interest and princip[al] payments on outstanding debt.”⁵⁵ Meckling asserts that the costs of bankruptcy to an individual debtor include the following: assets made available for distribution to creditors; the costs of the bankruptcy filing, such as the attorney’s fees and filing fees incurred in prosecuting the case; the “adverse effects on future borrowing; and [the] psychological or other costs that the individual might suffer because of his failure to fulfill a contract.”⁵⁶ Not surprisingly, he concludes that “[c]hanges in bankruptcy law which lower the costs or raise the benefits to debtors . . . will without question increase both the number of debtors who elect” to file for bankruptcy rather than repay their obligations and the proportion of debtors who choose a chapter 7 liquidation rather than a chapter 13 repayment plan.⁵⁷

Strategic incentive analysis of consumer bankruptcy caught fire in the late 1990s and early years of the new millennium, with articles published by commentators who had a policy axe to grind.⁵⁸ These commentators used the assumption of rationality as a tool to support proposed revisions to U.S. consumer bankruptcy law⁵⁹ and to critique reforms proposed by the National Bankruptcy Review Commission.⁶⁰ Like Meckling, this scholarship characterizes an individual’s decision to file for bankruptcy as a function of the benefits⁶¹ and the costs⁶² of a filing. Also like Meckling, this scholarship tends

51. Meckling, *supra* note 14, at 14.

52. *Id.* at 14–16.

53. *Id.* at 15–16.

54. *Id.*

55. *Id.* at 25.

56. *Id.*

57. *Id.* at 27.

58. For a list of such articles, see *supra* note 10.

59. See Posner, *supra* note 10, at 972–73 (arguing that the bankruptcy reform dissuades opportunistic behavior); Wang & White, *supra* note 10, at 286 (noting that under proposed bankruptcy reform, strategic risk-taking behavior would no longer work to debtors’ advantage). Jones and Zywicki also focus on how means testing would alter a debtor’s incentives in a chapter 7 liquidation versus a chapter 13 repayment plan, but do not otherwise model debtors’ bankruptcy decisionmaking. Jones & Zywicki, *supra* note 10.

60. See Adler et al., *supra* note 10, at 601–05 (arguing against the proposed reaffirmation regulations).

61. Like Meckling, recent incentive models view the discharge as an important benefit of bankruptcy—a benefit that varies depending on the size of the loan amount forgiven in bankruptcy and on the chapter under which bankruptcy relief is sought. Modern-day incentive analysts provide a lengthier list of the benefits of bankruptcy than did Meckling, however. One additional benefit of

to emphasize the benefits, and understate the costs, of filing, and concludes that the lure of the discharge proves irresistible to strategically minded consumer borrowers.

B. Lenders' Incentives

Standing alone, the effect of the bankruptcy discharge on lender behavior should be to extend less credit at a higher price and, therefore, shift the supply curve to the left. This solution is undermined, according to economists, by an information asymmetry. Borrowers know whether they are likely to default; lenders do not. This means that lenders will be unable to distinguish between low- and high-risk borrowers and, thus, to price discriminate successfully. The supply of credit will be even further constrained, as a result, and the bankruptcy discharge will lead to significant deadweight loss.

a chapter 7 bankruptcy filing, according to these models, is the ability to protect exempt assets from the reaches of creditors. *See id.* at 599 (positing that “an exemption waiver reduces the amount of insurance the borrower has but increases the amount of surplus the deal yields him”); Jones & Zywicki, *supra* note 10, at 211 (“Another significant benefit of bankruptcy is that debtors may retain exempt property free of most creditors’ claims.”); White, *Economic Analysis*, *supra* note 10, at 10–18 (factoring asset exemptions into her economic model). Chapter 13 protects both the exempt and the non-exempt assets of the consumer–debtor. *See* Posner, *supra* note 10, at 968 (“Under Chapter 13 the debtor may sometimes keep some non-exempt property, but must pay debts out of future income, over three to five years.”); White, *Economic Analysis*, *supra* note 10, at 18–23 (noting that certain debts protected under chapter 13, such as student loans or debts acquired by fraud, are not protected under chapter 7). As a result, these commentators emphasize consumers’ freedom to choose between chapter 7 and chapter 13 as an important benefit of the current system. *See* Posner, *supra* note 10, at 976 (offering explanations as to how the choice between chapter 7 and chapter 13 can benefit debtors); Wang & White, *supra* note 10, at 256 (noting that because of this choice, “few debtors in bankruptcy are required to use either their assets or their future income to repay debts”). Some also mention the automatic stay as a benefit of bankruptcy, and the ability to end “‘annoying’ phone calls by creditors seeking to recover assets and money.” Jones & Zywicki, *supra* note 10, at 210. Adler and his co-authors count the ability to reaffirm, or renegotiate, debts as a benefit of a chapter 7 filing. Adler et al., *supra* note 10, at 605–07.

62. Modern-day incentive analysis varies somewhat in terms of what it counts as bankruptcy costs but finds inspiration in the list of bankruptcy costs originally identified by Meckling. Michelle White focuses on the costs of bankruptcy to an individual and defines these costs to include the bankruptcy-filing fee, the expense incurred in hiring a bankruptcy lawyer, and the cost of reduced access to credit. White, *Economic Analysis*, *supra* note 10, at 11. Jones and Zywicki argue that certain costs the individual incurs, including decreased access to credit and search costs, have diminished over time. Jones & Zywicki, *supra* note 10, at 212–13. Specifically, they contend that today there is less stigma associated with the bankruptcy filing than there was in the past. *Id.* at 215–21 (citing several unpublished manuscripts in support). Adler, Polak, and Schwartz provide no detailed accounting of the cost of bankruptcy to an individual consumer; instead, they focus on the costs of bankruptcy to the marketplace, contending that in a perfectly competitive market, increased bankruptcy filings both enhance the cost and reduce the availability of consumer credit. Adler et al., *supra* note 10, at 601–03. They argue that reaffirmation agreements “have good *ex ante* incentive effects” because in a competitive credit market “[c]reditors who anticipate getting reaffirmations will reduce the interest rate” *Id.* at 603 n.33. Although this accounting of the detriments of bankruptcy differs slightly among these modern commentators, none adds to the list of costs that Meckling provided in his earlier article.

1. *Meckling on Lenders' Incentives: Information Asymmetry.*—In a competitive market, lenders price loans based on their cost of funds, administrative costs, and delinquency costs. Where bankruptcy laws such as the discharge injunction protect consumer borrowers from their creditors,⁶³ Meckling saw an increased incentive for consumer borrowers to file for bankruptcy.⁶⁴ In turn, he concluded, lenders would increase the cost of credit (and constrict supply).⁶⁵ These increases would be borne by all borrowers.⁶⁶ Meckling warned that liberalized bankruptcy laws would actually be bad for consumers, because they would increase the cost of consumer credit to the marketplace as a whole.⁶⁷

Meckling criticized then-current bankruptcy reform proposals aimed at protecting consumers from supposedly rapacious lenders who “harass and take undue advantage” of innocent and unsophisticated consumer debtors.⁶⁸ He viewed this approach as wrongheaded because it ignored borrowers’ strategic incentives to file for bankruptcy and the effect that increased default would have on the cost of consumer credit.⁶⁹ In a competitive market, “all increases in lending costs as perceived by lenders will in the long run be borne by potential borrowers.”⁷⁰ For most borrowers, Meckling argued, these costs would be passed on in the form of higher interest rates.⁷¹ Others would find “that the total amount of credit available to them as individuals is reduced,” while “some potential borrowers will be forced out of the market entirely by higher interest or more stringent screening.”⁷²

A key assumption of Meckling’s model is that lenders cannot effectively distinguish low- from high-risk borrowers and engage in risk-based lending to all consumers.⁷³

63. This criticism would also apply to outlawing reaffirmation agreements as had been proposed by the first Bankruptcy Review Commission. COMM’N ON THE BANKR. LAWS OF THE U.S., REPORT OF THE COMMISSION ON THE BANKRUPTCY LAWS OF THE U.S., H.R. DOC. NO. 93-137, pt. 1, at 169 (1st Sess. 1973).

64. Meckling, *supra* note 14, at 27.

65. *Id.* at 23.

66. *Id.*

67. *Id.*

68. Meckling, *supra* note 14, at 18. Specifically, Meckling criticizes two proposals made by the Bankruptcy Review Commission in its report to Congress in the mid-1970s. *Id.* at 18. The Commission recommended, first, that Congress narrow or repeal the statute excepting from discharge debts incurred through fraud and, second, that it invalidate contracts in which debtors reaffirm contracts otherwise subject to the bankruptcy discharge. *Id.*; see also H.R. DOC. NO. 93-137, pt. 1, at 12. The Commission made these proposals on the grounds that predatory consumer financiers often brought complaints alleging such fraud, knowing that consumer debtors, unable to afford legal representation, would be all too eager to agree to lenders’ offers to settle this litigation in exchange for a debtor’s reaffirmation of the debt. H.R. DOC. NO. 93-137, pt. 1, at 10–11.

69. Meckling, *supra* note 14, at 17–18.

70. *Id.* at 23.

71. *Id.*

72. *Id.*

73. *Id.* at 24–27. Meckling states, “The cheaper it is to identify potential bankrupts, the narrower the base will be on which the increased costs of bankruptcy are imposed.” *Id.* at 24.

2. *Stiglitz and Weiss: Information Asymmetry and Adverse Selection.*—Joseph E. Stiglitz and Andrew Weiss retain Meckling's assumption that consumer lenders can only charge one uniform market price for consumer credit, and add in the problem of adverse selection. Stiglitz and Weiss argue that lenders cannot pass on the cost of borrowers' defaults by increasing the interest rate for the marketplace as a whole.⁷⁴ In their view, high-risk borrowers' demand for credit is inelastic (in that it does not decline as interest rates increase) both because they have fewer credit alternatives and because they discount their own likelihood of repayment.⁷⁵ Low-risk borrowers' demand for credit, by contrast, is highly elastic because they have credit alternatives, a reputation for creditworthiness to protect, and an intent to repay.

According to Stiglitz and Weiss, a lender's best reaction to this confluence of incentives is not to increase the cost of credit, but to tighten underwriting standards and selectively lend only to those whose credit histories demonstrate a willingness and ability to repay.⁷⁶ If a lender were to increase its interest rate, adverse selection would result because the high cost of credit will more likely deter low-risk borrowers (who are price sensitive) than high-risk borrowers (who are price insensitive).⁷⁷ The increased riskiness of the borrowing pool would swamp the increased price of credit; increasing interest rates will not, therefore, increase the lender's profits.⁷⁸ And, as a result, competitive credit markets will ration credit in reaction to increased bankruptcy costs.

Meckling argued that lenders would increase the cost of credit, but did not explain why lenders would not pass on these increased costs to those most responsible for the costs—he did not explain why lenders could not simply pass on these costs to those with poor credit histories.⁷⁹ Stiglitz and Weiss seek to provide a twofold explanation: (1) information asymmetry and (2) adverse selection. Lenders cannot identify borrowers by type (high- or low-risk, honest or opportunistic), and marketwide increases in the cost of credit are more likely to drive out price-sensitive creditworthy borrowers, further undercutting lenders' ability to recover default costs. Under Stiglitz and Weiss's model, the bankruptcy discharge not only increases the cost of credit, it also disproportionately reduces its supply and increases deadweight loss. Note,

74. Stiglitz & Weiss, *supra* note 15, at 393.

75. *Cf. id.* (arguing that because "borrowers have different probabilities of repaying their loans," higher interest rates may attract those borrowers with a low probability of repaying their loans because they are willing to pay higher prices for the same loan as borrowers with a high probability of repaying their loans).

76. *See id.* at 402, 408–09 (noting that in certain situations an increase in collateral requirements will result only in an increase in lending to high-risk borrowers, and suggesting that lenders will simply limit the availability of credit rather than increase the cost of borrowing).

77. *Id.* at 403 (suggesting that "since wealthier individuals are likely to be less risk-averse, we would expect that those who could put up the most capital would also be willing to take the greatest risk").

78. *Id.* at 393 (stating that "raising the interest rate decreases the return on projects which succeed").

79. *See supra* note 73 and accompanying text.

however, that if either the assumption of information asymmetry or borrower rationality (and resulting price elasticities) breaks down, the Stiglitz and Weiss model loses its predictive force.

3. *Competitive Credit Markets.*—Modern day incentive analysis thus assumes that lenders and borrowers are both rational, but that all of the informational advantages lie on the side of the borrower. The borrower knows whether he intends to repay, and the lender needs to guess. If credit markets are competitive and consumers are rational, lenders' incentives can safely be ignored.⁸⁰ The three key assumptions of the incentive analysts—information asymmetry, adverse selection, and competitive markets—shift the focus away from lender behavior and toward the problem of borrower opportunism.

C. *Reconciling Borrowers' and Lenders' Incentives*

There is elegance, internal consistency, and logic to these economic predictions. Part II of this Article asks whether this view jibes with reality and shows that a quarter century after the dual legal shocks of the Bankruptcy Code and the *Marquette* decision, the prediction has turned out to be only half true. On one hand, the number of bankruptcies has increased just as strategic incentive analysis predicted. On the other hand, the absolute dollar amount of consumer credit has increased even faster than the rate of bankruptcy filings, family savings rates have declined, family debt loads have increased, and lenders have reached out to extend credit to ever riskier groups of borrowers. Even so, the interest rate spread charged by consumer lenders has not increased. While debtors *do* seem willing to overleverage, creditors have not responded by credit rationing or by significantly raising the risk premium they charge.

These additional data points significantly complicate the economists' story. Is the bankruptcy discharge the culprit that has led to the skyrocketing filing rate or is something else going on? If legal intervention is required, should it be through reform of bankruptcy law or by regulating consumer credit? The answers turn on whether, after looking at the data, one believes the picture of rational consumers painted by economists. We turn to this data in Part II.

II. What is Wrong with This Picture?

This Part looks critically at the predictions of the economic model described in Part I. On the lender side, the combined effect of competitive markets, information asymmetry, and adverse selection should lead to credit constraint. If the increased bankruptcy filing rate is driven by the 1978 changes to the bankruptcy law coupled with a reduction of bankruptcy stigma, the result should be credit rationing, creditors charging an increased risk premium, or both.

80. See White, *Economic Analysis*, *supra* note 10, at 25–28 (discussing lenders' incentives with reference to Stiglitz and Weiss, but otherwise ignoring lenders' incentives).

Subpart II(A) starts with lenders' behavior in light of the predictions of the economic model. These models assume that lenders are unable to determine a borrowers' propensity to default. Stiglitz and Weiss developed their model at the very beginning of the development of modern credit reporting and credit scoring,⁸¹ just as credit cards were becoming widely dispersed.⁸² They contend that lenders cannot predict *ex ante* the riskiness of their credit pool and, therefore, cannot effectively price default risk.⁸³ As a result, they predict that any increase in the prevalence of consumer bankruptcy will cause lenders to increase the cost and reduce the supply of consumer credit.⁸⁴ In short, the economic models predict that the existence of the bankruptcy discharge and strategic borrowers should lead to a socially *suboptimal* supply of consumer credit and *artificially* low levels of consumer debt.⁸⁵ Our examination of data on the pricing of consumer credit does not support the view that the rising rate of bankruptcy filings is driving the cost of consumer credit upward to any significant degree. The supply of consumer credit has never been higher, the cost of credit in gross terms has never been lower, and the credit card lenders charge over their cost of funds does not appear to have increased. Meanwhile, consumer lenders' profits are at or near record levels.

Subpart II(B) next examines empirical support for the claim that rising nonbusiness bankruptcy filings are the result of consumer debtors' strategic response to the bankruptcy discharge. Here, we find a plethora of studies reaching inconsistent results by means that have been criticized by economists, government officials, and law professors alike. Our own analysis of the data finds no clear picture of consumers' incentives in seeking bankruptcy relief. While there is strong corroboration for the intuition that increases in outstanding consumer credit are correlated to increases in consumer bankruptcy filings, there is no simple explanation for the increase in consumer credit.

In both subparts II(A) and II(B), the failure of data to support strategic analysts' predictions about lenders' and borrowers' behavior raises new questions, questions for which a strategic incentive analysis of the market for consumer finance does not provide ready response. We leave our explanation of this puzzle to Part III, however.

81. The Fair Credit Reporting Act of 1970 imposes requirements on the collection, use, and dissemination of consumer credit information. Fair Credit Reporting Act of 1970, Pub. L. No. 91-508, Title VI, 84 Stat. 1127-36 (codified as amended at 15 U.S.C. § 1681(2000)).

82. See LEWIS MANDELL, *THE CREDIT CARD INDUSTRY: A HISTORY* 51 (1990) ("The growth of the bank card industry in the 1970s was phenomenal. . . . Once reserved for businesspeople and the wealthy, credit cards were now carried by nearly half of all American consumers.").

83. Stiglitz & Weiss, *supra* note 15, at 393 (noting the difficulty in identifying "good" borrowers).

84. *Id.* at 408-09 (suggesting that because an increase in the cost of borrowing may drive out low-risk borrowers, lenders will restrict the availability of loans, thereby creating credit rationing).

85. This prediction is not necessarily inconsistent with a high bankruptcy filing rate. Opportunistic borrowers are likely to ignore high interest rates, precisely because they expect to file for bankruptcy. It is, however, inconsistent with increasing consumer debt levels across the board.

A. Lenders' Incentives

1. *Questionable Predictions Generated by the Model.*—“[T]heory is to be judged by its predictive power.”⁸⁶ On this ground, incentive analysis of lender and consumer decisionmaking has, in our view, failed. The world is a complicated place, and economic models are built holding many things equal that do not stay equal in the real world. Strategic incentive analysts, like Todd Zywicki and Michelle White, argue that the increased number of bankruptcy filings is a function of the legal changes instituted by the 1978 reform of the Bankruptcy Code.⁸⁷ This is a simple story and it explains some of the facts.

We offer a counter-story, which in our view explains more of the observed facts. We focus on a different legal change—the deregulation of interest rates charged to consumers after the *Marquette* decision, also in 1978. We also account for technological changes that have given creditors much better information about the riskiness of particular borrowers. Under our story, credit constraint did exist, but it peaked in 1978 when interest rate caps, coupled with historically high market rates of interest, severely limited the supply of consumer credit.

As soon as the *Marquette* decision and market forces lifted those constraints, four things sequentially followed: credit supply increased; interest rates (i.e., the cost of credit) decreased for most consumers, but not until lenders succeeded in discriminating between high- and low-risk borrowers and began charging the former much higher interest rates than the latter; family leverage increased with the proliferation of consumer credit, especially for the lowest income households; and consumer bankruptcy rates soared. Throughout this period, however, the consumer credit industry was profitable, and the spread between commercial lending rates and the interest rate charged on consumer credit, especially credit card debt, remained quite sticky.

According to the story told by strategic incentive analysts, the motor behind the increased filing rate is the discharge. According to our story, it is the deregulation of consumer credit coupled with advances in consumer lending technology, which led to higher levels of consumer leverage and a riskier credit pool.

Two facts make us think that our counter-story is more plausible. First, while the 1978 Bankruptcy Reform Act made major changes to the law, the changes did not, by and large, enhance consumer debtors' access to a discharge under chapter 7—most consumer bankruptcy law reforms adopted in 1978

86. MILTON FRIEDMAN, *The Methodology of Positive Economics*, in *ESSAYS IN POSITIVE ECONOMICS* 3, 8 (1953).

87. See, e.g., White, *Economic Analysis*, *supra* note 10 (asserting that the Bankruptcy Reform Act of 1978 made bankruptcy “potentially much more attractive from the viewpoint of debtors”); Zywicki, *Past, Present, and Future*, *supra* note 10 (“The 1978 Bankruptcy Code profoundly changed the bankruptcy system and its importance in society and the economy. By making bankruptcy more attractive to individuals, personal bankruptcies rose from less than 300,000 in 1980 to over 1.5 million in 2002.”).

simply ratified rules that had already evolved under the common law or been implemented pursuant to the Federal Bankruptcy Rules.⁸⁸ The major consumer protection amendments had been made in the late 1960s and early 1970s and did not at that time precipitate a steep increase in filings.⁸⁹ Second, the major changes occurred not in consumer bankruptcy law, but in the law governing consumer credit and in the consumer credit markets themselves.⁹⁰

However, if the motor behind the increased default rate is not borrower opportunism, then there is something else that is troubling about the increase in bankruptcy filings. If bankruptcy filers are not predominantly opportunists, and if nonlegal sanctions on filing are significant, then what we are seeing is a significant increase in the number of borrowers (and families) that are in financial *extremis*. In the next Part we take the discussion one step further. Stiglitz, Weiss, and Meckling all assume that the information asymmetry runs in favor of the borrower. We take the view that technology has diminished, if not eliminated the asymmetry, and that systematic cognitive biases in consumer behavior actually shift the burden of opportunism from the borrowers to the lenders.

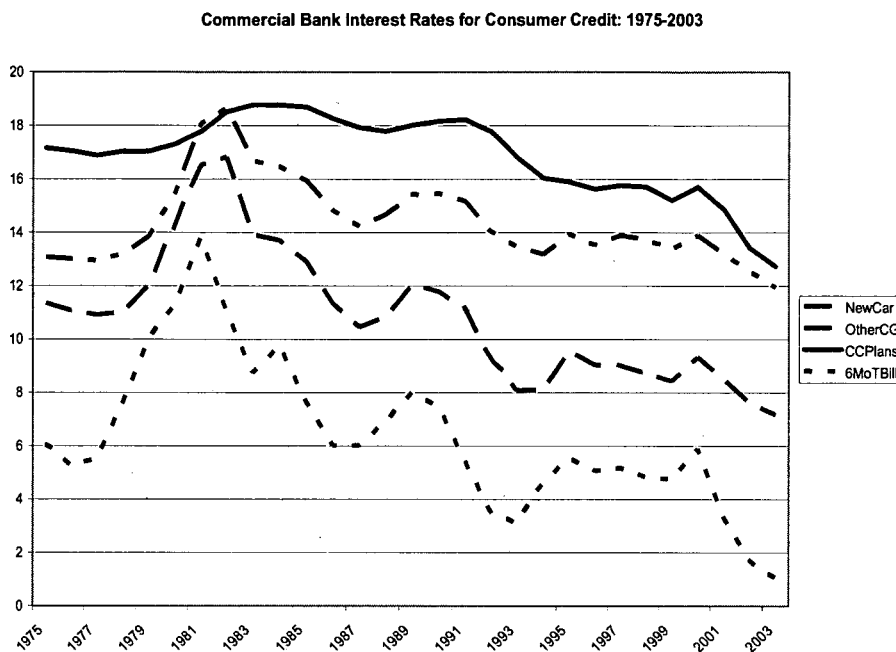
a. Interest Rates.—Meckling, Posner, and others predict that lenders will pass on bankruptcy costs to the market for consumer credit. Implicit in this prediction is the expectation that, other things being equal, consumer interest rates should increase during a period in which bankruptcy filings steadily increase.

But, as Figure 2 graphically depicts, changes in the cost of various types of consumer credit between 1978 and 2003 actually declined.

88. ELIZABETH WARREN & JAY LAWRENCE WESTBROOK, *THE LAW OF DEBTORS AND CREDITORS* 110 (5th ed. 2006) (stating that the Bankruptcy Rules, adopted in 1973, “contained many of the reforms that would later be included in the Bankruptcy Reform Act of 1978”).

89. Susan Block-Lieb, *Legislating Financial Responsibility* (unpublished manuscript, on file with the authors).

90. Indeed, an increase in the supply of consumer credit coupled with an expansion into riskier credit pools looks more like a response to relaxation of price regulation than the predicted market response to reducing the cost of default. The increased filing rate would simply be a secondary effect of a market response to the elimination of a regulatory distortion. No additional regulatory response would be called for, and that is where we will leave the discussion at the conclusion of this Part.

Figure 2⁹¹

The line at the top of the graph represents the interest rate charged on credit cards. The lower-middle line represents new car loans, and the upper-middle line represents other miscellaneous types of consumer debt. Finally, the line at the bottom of the graph represents the interest rate on six-month United States Treasury bills.

While interest rates did increase for a short period following 1978, it is important to note that this interest rate spike was most pronounced among U.S. Treasury bills and new car loans, neither of which are affected by changes in the bankruptcy law—treasuries, because the United States is not eligible for bankruptcy, and car loans, because they are secured. The increase in credit card interest rates was actually quite modest. Moreover, the interest rates for all types of consumer credit have declined since 1980.

Of course, interest rates have steadily fallen across the board since 1990, but, again, this is principally because of a decline in the lenders' cost of funds. We do

91. Figure 2 is based on data collected by the Federal Reserve Board. FED. RESERVE BD., FEDERAL RESERVE STATISTICAL RELEASE G.19: CONSUMER CREDIT, available at <http://www.federalreserve.gov/releases/g19> [hereinafter FED. RESERVE, G.19]; FED. RESERVE BD., FEDERAL RESERVE STATISTICAL RELEASE H.15: SELECTED INTEREST RATES, available at <http://www.federalreserve.gov/releases/H15/> (showing, among other data, historical U.S. Treasury bill interest rates).

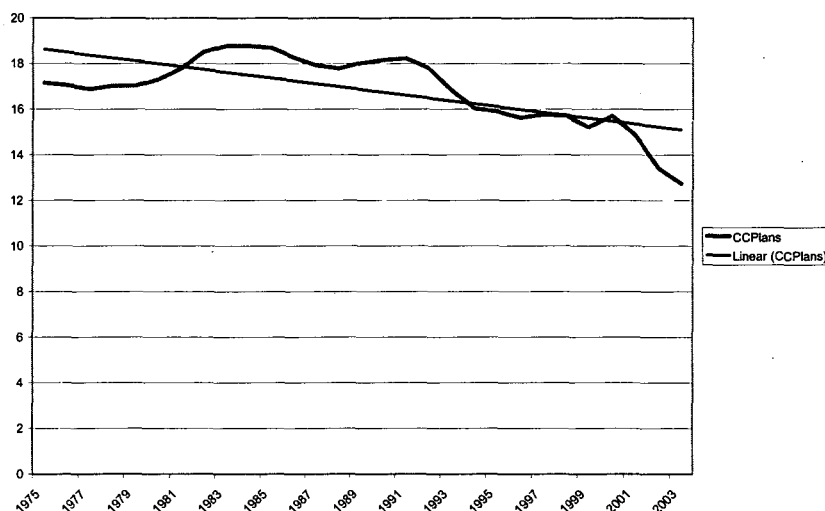
not have access to information about lenders' borrowing costs. However, the T-bill rate can be used as a proxy for the cost of funds to the financial institutions that issue consumer credit.⁹² For the most part, credit card issuers are extremely creditworthy banks, so the T-bill rate should be a close approximation. Since we are not looking at the absolute size of the spread, but the changes in the spread, the difference should not matter.

The factors that influence the size of the spread are likely to be the cost of funds (i.e., the risk-free rate), the cost of underwriting loans (i.e., administrative costs), and the riskiness of the portfolio of loans (i.e., the default rate). Now, if the rate of bankruptcy filings significantly increased default costs suffered by credit card issuers, we would expect to see the spread increase significantly during a time when bankruptcy filing rates were increased. As shown above in Figure 1, the filing rate went from 170,000 filings per year to 310,000 filings per year, between 1978 and 1983. Then, after 1983, the filing rate skyrocketed to 1,600,000 filings per year in 2003.

It is possible to distinguish the decline in the market interest rates generally from the decline in the cost of credit card debt. This difference can be seen graphically in a number of ways. First, if one plots the decline in the T-bill rate and reduces it to a trendline through the use of an ordinary least squares regression, the decline in credit card interest has a much less pronounced downward slope (Figure 3) than the decline in the T-bill rate (Figure 4).

Figure 3

Credit Card Interest Rate 1975-2003

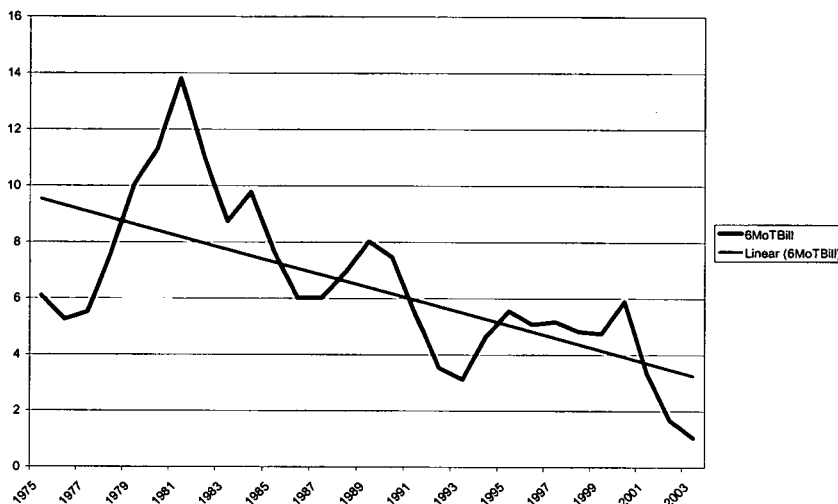


92. Mark J. Furletti, *Credit Card Pricing Developments and their Disclosure 2* (Fed. Reserve Bank of Phila. Payment Cards Ctr., Working Paper No. 03-02, 2003), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=572585.

The stickiness of credit card rates can be seen in the difference between the slope in Figure 3 and the slope in Figure 4.

Figure 4

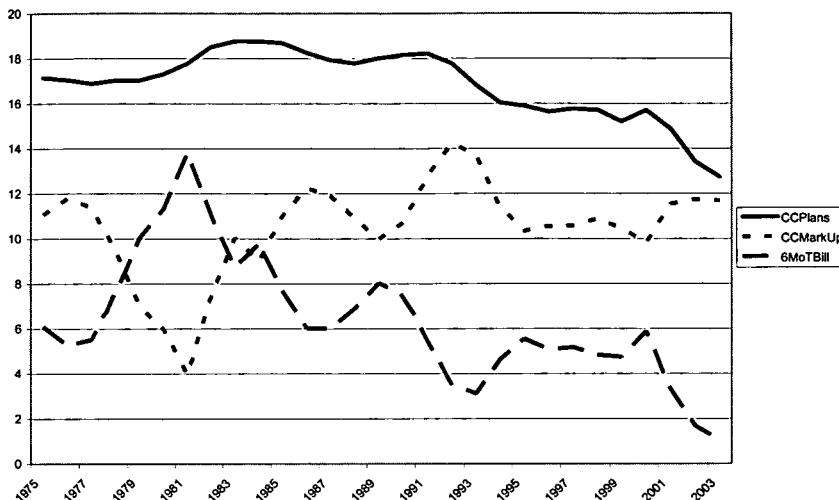
6Month Treasury Bill Rate: 1975-2003



Another way to show the extent to which credit card rates have not been responsive to changes in the lenders' costs is to look at what we call the "credit card markup rate." The markup (represented by the middle line in Figure 5) is simply the difference between the risk-free rate and the credit card rate. This graphic representation of consumer credit interest rates significantly undercuts the predictive value of the economic models of consumer credit.

Figure 5

Credit Card Rate and Credit Card/T-bill Spread: 1975-2003



Because credit card interest rates changed very little between 1978 and the mid-1990s, the markup varies in almost direct negative relationship to changes in the interest rate. Increasing bankruptcy filings would be expected to add to the lenders' costs, and should have led to the markup increasing over time.

Curiously, this is not what happened. Instead of increasing over the same period, the interest rate spread remained almost completely flat.⁹³ If one plots an ordinary least-squares trendline for the period (see Figure 6), the predicted interest rate rises from about 11.1% to 11.4%, over a period of twenty years. This is hardly an astronomical increase, or one that suggests a system that is broken, particularly if one recognizes that this blended rate of interest also reflects the increased market penetration of credit cards and the expansion of subprime credit markets. Expansion of subprime credit markets should cause the creditworthiness of the pool of borrowers, on average, to decrease and the default risk associated with the pool to increase. With increases in the default risk of the credit pool and other factors remaining equal, one would expect an increase in the markup over time.

Indeed, if one looks at the credit card markup from 2001 to 2003, an interesting thing appears to be happening. During this period, the T-bill rate fell to historic lows. Given the historic stickiness of the credit card rate and increases

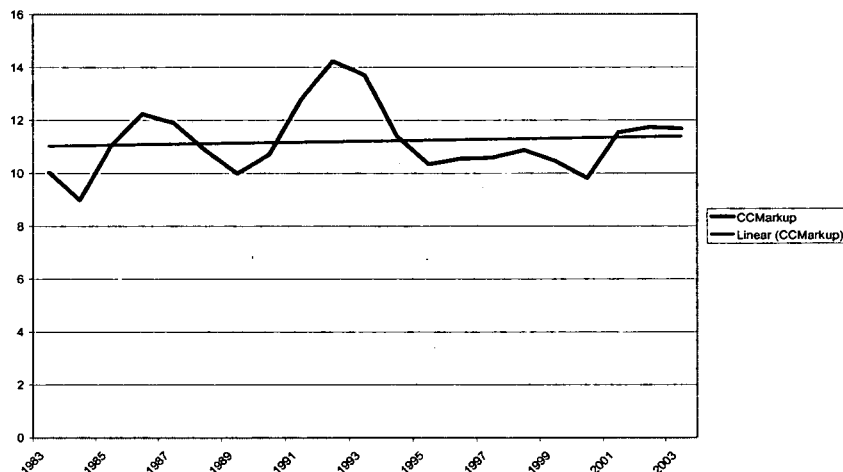
93. By contrast, the spread between new car loan interest rates and the T-bill rate remained much more constant. The credit card markup varied between 4% and 14%, while the new car markup varied between 2% and 6%.

in bankruptcy filings during the same period, one would expect to see the markup increase considerably. Instead, just the opposite occurred.⁹⁴ The credit card rate fell and the markup remained nearly flat at a rate very close to its historic average (Figure 6).

There are a number of reasons why this might have happened. It may be a function of a shift from fixed-rate cards to floating-rate cards. The credit card issuing market may have become more competitive, leading some lenders to offer very low introductory teaser rates, for example. Improvements in credit scoring may have made it possible to price consumer credit risk more accurately. Or, the administrative costs associated with issuing and servicing consumer credit may have declined.⁹⁵

Figure 6

Credit Card T-Bill Spread 1983-2003



What is most interesting about this data is that it does not support Meckling's prediction,⁹⁶ echoed by Posner,⁹⁷ that the cost of consumer credit would increase if consumer bankruptcy filings increased. Paradoxically, during this period filing rates went up, while interest rates mostly went down. This surprised us, as lobbyists likened the 2005 Bankruptcy Amendments to a "tax" rebate for

94. The change in markup during the same period for new car loans followed a very similar trend. In short, however much the bankruptcy filing rate has increased, it has not significantly increased the cost of underwriting consumer loans.

95. One interesting coincidence is that the flattening of the curve in 2001 coincides with the passing of the Gramm-Leach-Bliley Act, which permits and facilitates certain types of information sharing among affiliates of financial institutions. 15 U.S.C. §§ 6801-6809 (2000).

96. Meckling, *supra* note 14, at 23 ("[I]ncreases in lending costs as perceived by lenders will in the long run be borne by potential borrowers. No doubt much of the market adjustment will take the direct form of higher interest rates . . .").

97. Posner, *supra* note 13.

consumer borrowers.⁹⁸ Lobbyists told Congress that bankruptcy reforms enacted in 1978 imposed a “tax” on honest users of consumer credit who were forced to pay higher interest rates because of the millions of borrowers out to game the system.⁹⁹ But evidence of this tax is sparse to nonexistent. Before explaining why this tax failed to materialize, we turn to the next prediction made by strategic analysts.

b. The Supply and Rationing of Consumer Credit.—Stiglitz and Weiss argued that lenders would be reluctant to increase interest rates in reaction to increases in default rates on the grounds that honest borrowers, whose demand for consumer credit is elastic and thus price sensitive, would borrow less and that strategic borrowers, whose demand for consumer credit does not depend on the cost of credit, would borrow more. They claimed that increasing interest rates might, contrary to lenders’ interests, increase the riskiness of the borrowing pool.¹⁰⁰ They predicted that lenders would instead ration credit in the face of increased bankruptcy losses.¹⁰¹

On the face of it, the data appear to support this prediction. Empirical studies seeking to estimate credit constraints faced by U.S. households consistently find indicia that many consumers face liquidity constraints. Drawing data from the Federal Reserve Board’s 1983 Survey of Consumer Finances,¹⁰² Tullio Jappelli concludes that the total number of liquidity constrained households is 19.0% of the sample.¹⁰³ Other commentators have reached similar conclusions based on indirect criteria of liquidity constraint, such as net worth, liquid assets, and savings.¹⁰⁴ However, liquidity constraint may not indicate credit rationing.

98. See Elizabeth Warren, *The Phantom \$400*, 13 J. BANKR. L. & PRAC. 77, 83 (2004) (stating that lobbyist George Wallace’s testimony before Congress found that there is a hidden \$400 “tax” for consumers due to bankruptcy losses for creditors).

99. *Id.*

100. Stiglitz & Weiss, *supra* note 15, at 401–02, 409.

101. *Id.*

102. The Survey of Consumer Finances (SCF) is a triennial survey conducted through the Federal Reserve Board. It assesses the balance sheet, pension, income, and other demographic characteristics of U.S. households. Federal Reserve Board, Survey of Consumer Finances, <http://www.federalreserve.gov/pubs/oss/oss2/scfindex.html>. Data from the 1983 SCF, and hyperlinks to articles discussing the implications of this data, are available at <http://www.federalreserve.gov/pubs/oss/oss2/83/scf83home.html>.

103. Tullio Jappelli, *Who Is Credit Constrained in the U.S. Economy?*, 105 Q.J. ECON. 219, 221 (1990). See generally *id.* at 230–32 (“Current income, wealth, and age are the most important determinants of the probability that a consumer is denied loans.”).

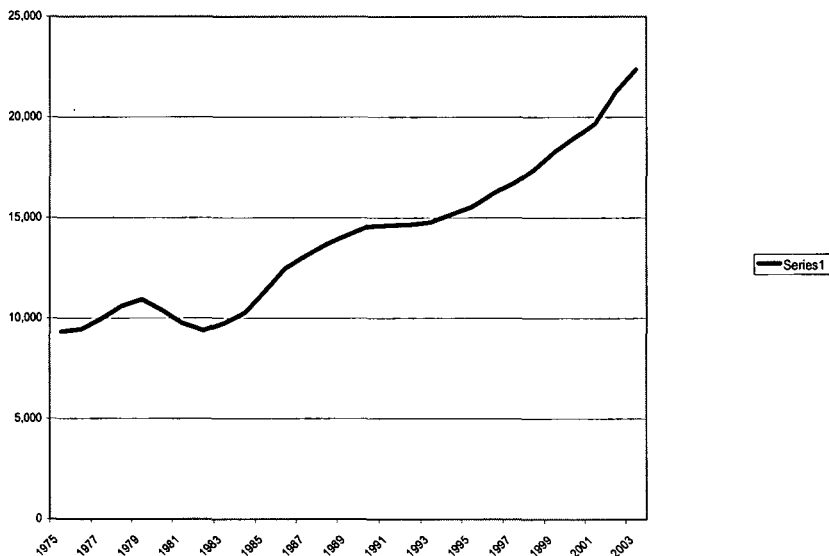
104. See *id.* at 219 (discussing multiple studies that address liquidity constraints and noting the studies’ conclusions); see also RANDALL P. MARIGER, CONSUMPTION BEHAVIOR AND THE EFFECTS OF GOVERNMENT FISCAL POLICIES 130–31 (1986) (estimating liquidity-constrained families at 19.4% of the U.S. population); Donald Cox & Tullio Jappelli, *The Effect of Borrowing Constraints on Consumer Liabilities*, 25 J. MONEY, CREDIT & BANKING 197, 198 (1993) (“Desired debt predicted from the characteristics of the liquidity-constrained group is 75 percent higher than their actual debt, which implies that removal of liquidity constraints would raise aggregate debt holdings by 9 percent.”); Charles Grant, *Estimating Credit Constraints Among U.S. Households 1* (EUI Working Paper ECO No. 2003/14, 2003), available at <http://cadmus.iue.it/dspace/bitstream/1814/1835/1/ECO2003-14.pdf> (analyzing data from a consumer expenditure survey conducted by the Bureau of Labor Statistics to estimate that between

Liquidity constraint suggests that individual consumers may wish to borrow more. It does not necessarily indicate that credit is being undersupplied, however, or that the price is artificially high. Indeed, it is reasonable to assume that many of the families who are credit constrained are simply not creditworthy. Even in a perfectly competitive market, there are likely to be people who would like to borrow money, because they do not have enough to satisfy their consumption preferences, but are unable to demonstrate an ability to repay.

Lenders appear not to have constricted the supply of consumer credit during this period, despite changes in the rate at which individuals filed nonbusiness bankruptcy cases. Instead, as shown in Figure 7, the per capita amount of consumer credit (adjusted for inflation) has more than doubled since 1975.

Figure 7

Per Capita Consumer Debt (including mortgage debt) 1975-2003



While an increase in the amount of outstanding consumer credit does not unequivocally refute the claim that credit rationing is occurring, or occurring at a policy-relevant level, a more detailed examination of the data gives us pause.¹⁰⁵ We turn to developments in the market for consumer credit in an effort to make sense of this data.

26% and 31% of households are credit constrained and that “poorly educated, ethnic minority, low income, men and older households are less often constrained”).

105. This data does not itself refute the prediction that lenders will ration credit in the face of increased bankruptcy filings. First, the simple fact that the supply of credit increased does not mean that credit is no longer rationed. Credit rationing exists where lenders supply less credit than borrowers demand. A sharp increase in the supply of consumer credit over time might mean that supply now equals demand, but it might not. If credit had been severely rationed in the past, an

2. *Chinks in the Model.*—The economic models describe lenders as participants in a competitive market but suffering from asymmetries in information about borrowers' willingness to repay loans. This section finds the claim of information asymmetry selection to be largely inaccurate in today's market for consumer credit. While the assumptions that underlie their predictions might have been accurate in the late 1970s and early 1980s when Meckling, Stiglitz, and Weiss first constructed their models of lenders' behavior, these depictions no longer fit today's market. Credit reporting, credit scoring, securitization, and modern data capture and marketing technologies have changed everything.

a. *Asymmetries in Lenders' Information? The Role of Credit Reporting.*—From approximately 1900 to 1950 the U.S. consumer finance industry was largely local.¹⁰⁶ Retailers extended credit to their regular customers. Lenders' decisions to extend consumer credit were based on the experience and intuitions of retailers' credit departments and of loan officers working at local banks, credit unions, savings associations, and finance companies. Even then, however, it was not possible for lenders to "know" every customer. The United States is a big place; a borrower's commercial reputation may not have been known personally to a prospective lender. As early as the late nineteenth century, lenders looked to reports issued by local consumer credit bureaus for information about an individual borrower's credit history.¹⁰⁷

increase in supply might only cause it to approach, but not clear, demand. Moreover, credit rationing might still result following an increase in supply if borrowers' demand correspondingly increased during this period. When interest rates fall, we would normally assume that borrowers' demand for credit would increase and so increases in outstanding consumer credit might partly reflect the influence of diminished borrowing costs. Second, economists also predict that usury regulation results in credit rationing. The Supreme Court's decision in *Marquette* should have increased creditors' willingness to supply consumer credit, assuming no changes in the bankruptcy filing rate. Thus, it is difficult to disaggregate the effect of interest rate deregulation from the discharge rate. Credit supply could increase because interest rate deregulation allowed creditors to move to a different (previously nonexistent) place on the supply curve, while at the same time providing less credit at higher cost than they would in the absence of the bankruptcy discharge.

106. See Robert M. Hunt, *A Century of Consumer Credit Reporting in America* 11–13 (Research Dep't, Fed. Reserve Bank of Phila., Working Paper No. 05-13, 2005), available at <http://www.phil.frb.org/files/wps/2005/wp05-13.pdf> (describing the changes in the consumer finance industry from the first to the second half of the twentieth century).

107. *Id.* at 10–11 (noting that consumer credit bureaus, which emerged in the late nineteenth century, generally "were cooperatives or nonprofit ventures set up by local merchants to pool the credit histories of their customers and to assist in collections activities"); see also ROBERT COLE & LON MISHLER, *CONSUMER AND BUSINESS CREDIT MANAGEMENT* 188 (10th ed. 1995) (discussing the history and organization of credit bureaus); Tullio Jappelli & Marco Pagano, *Information Sharing, Lending and Defaults: Cross-Country Evidence*, 26 J. BANKING & FIN. 2017, 2025 (2002) (reporting the existence of credit bureaus in the U.S. and Sweden as early as 1890). Commentators explain that consumer credit reports typically contain four types of information: (i) identifying information, such as name, address, and social security number; (ii) credit information that includes accounts at banks, retailers, and other lenders; (iii) information from public documents, such as

The information held by these reporting agencies was incomplete, however. First, their access to information was geographically limited (but so was the lending market). Second, information processing was not automated. Information trickled in from private and public sources and was filed in cabinets arranged alphabetically. A defaulting debtor who was strategic enough could escape a bad credit history by simply crossing state lines.

Over time, the credit reporting industry slowly became automated and national in scope in order to meet the demands of an increasingly national market for consumer credit. Beginning in the late 1950s and early 1960s, bank-issued credit cards started to replace a preexisting system of credit through which major retailers offered their own payment plans directly to consumers seeking to buy goods on credit.¹⁰⁸ This shift accelerated by the late 1970s. As a practical matter, the Supreme Court's 1978 decision in *Marquette National Bank of Minneapolis v. First of Omaha Service Corp.*,¹⁰⁹ freed credit card issuers from state usury regulations. So long as the lender had the wherewithal to incorporate a subsidiary in an unregulated state, such as South Dakota or Delaware, they could lend free of usury limits. This allowed lenders to charge higher interest rates and added further impetus for the nationalization of the market for credit card credit.¹¹⁰ On its face, this

judgments and bankruptcy filings; and (iv) a count of the number of inquiries authorized by the consumer. See Hunt, *supra* note 106, at 1.

108. DAVID S. EVANS & RICHARD SCHMALENSEE, PAYING WITH PLASTIC: THE DIGITAL REVOLUTION IN BUYING AND BORROWING 63 (1999); JOSEPH NOCERA, A PIECE OF THE ACTION: HOW THE MIDDLE CLASS JOINED THE MONEY CLASS 20-33 (1994); Hunt, *supra* note 106, at 13-14.

109. 439 U.S. 299 (1978). In this case, Marquette National Bank of Minneapolis questioned the ability of First National Bank of Omaha to charge credit card customers residing in Minnesota an interest rate that was usurious under Minnesota law but permissible under Nebraska's more generous usury laws. *Id.* at 301-04. The Supreme Court held that section 85 of the National Bank Act of 1863 permitted a national bank to "charge interest 'on any loan' at the rate allowed by the laws of the State where the bank is 'located.'" *Id.* at 308. Moreover, the Court held that a bank is "located" in the states in which the bank is chartered regardless of the location of its customers. *Id.* at 310-11.

110. *Marquette* led to several important market developments: First, by placing its imprimatur on the export of state interest rate regulation, *Marquette* permitted national banks to relocate their credit card operations in states with favorable usury laws such as South Dakota and Delaware. Relocation spurred a race among state legislatures seeking to encourage nationally chartered financial institutions to locate in their "usury haven." By 1988, many states had increased permissible interest rates or otherwise modified or repealed their usury laws. EVANS & SCHMALENSEE, *supra* note 108, at 72. Finally, although *Marquette* did not hold that the Banking Act in any way preempted state usury laws, in practical effect it allowed national banks to charge their customers a single credit card interest rate, no matter where they resided, thus permitting banks to engage in national efforts to market credit card and other consumer credit. Before *Marquette*, credit card issuers, whether nationally or locally chartered financial institutions, might have been required to market credit cards to customers one state at a time; after *Marquette*, issuers could market credit cards to customers nationwide. By facilitating the nationwide marketing of consumer credit, industry analysts conclude that "*Marquette* probably enabled issuers to realize scale economies in marketing and processing costs, and thus to make payment cards more readily available to consumers across the country." *Id.*

seems to undercut the assumption that credit markets were competitive at the time. The ability to raise prices and nonetheless increase supply (as occurred between 1978 and 1985¹¹¹) suggests that the source of credit constraint in the 1970s was credit limits rather than information asymmetry. Similarly, the inability to price discriminate was likely imposed by usury limits, not by an adverse selection problem. Following *Marquette*, national banks and other lending institutions avoided the reach of local usury laws by issuing credit cards, car loans, home equity loans, and other forms of consumer credit from unregulated states.¹¹²

To facilitate lenders' creation of a national rather than a local market for consumer credit, "credit bureaus had to automate and they had to get larger."¹¹³ This improvement in credit reporting further improved the ability of lenders to price discriminate. By the 1980s, the three largest U.S. credit reporting agencies claimed to attain "universal coverage"¹¹⁴—comprehensive information on every individual loan transaction incurred in the nation.¹¹⁵ According to industry sources, each of the three national credit reporting agencies currently holds records on nearly 1.5 billion credit transactions involving more than 190 million consumer borrowers;¹¹⁶ credit reporting companies receive more than 2 billion items of information each month and issue approximately 2 million consumer credit reports each day.¹¹⁷

Credit scoring models further refine lenders' predictions of default risk.¹¹⁸ These models compare the payment histories of borrowers who have timely repaid their loans in full with those of borrowers who have defaulted on past loans, and then compile a numerical profile or "credit score" for both groups.¹¹⁹ The best credit scoring models are developed based on lenders' own past practices to permit them to create a transparent and predictable indicator of loan approval. Because scoring models are used both to assess current customers and to determine the creditworthiness of potential

111. In February of 1978, the average interest rate for credit cards was 16.9%. In February of 1985, the rate peaked at 18.85%. Federal Reserve Release G-19, available at http://www.federalreserve.gov/releases/g19/hist/cc_hist_tc.html. During the same period, the supply of revolving consumer credit rose from \$13.6 billion to \$105 billion. *Id.* The level is now (January 2006) at \$814 billion. *Id.*

112. See James J. White, *The Usury Trompe L'Oeil*, 51 S.C. L. REV. 445, 455–66 (2000) (discussing this strategy and its effects).

113. Hunt, *supra* note 106, at 15.

114. *Id.* (referring to TransUnion, Experian, and Equifax).

115. Robert B. Avery et al., *An Overview of Consumer Data and Credit Reporting*, 89 FED. RES. BULL. 47, 49 (2003).

116. *Id.*

117. *Id.* at 47, 48–49.

118. See Loretta J. Mester, *What's the Point of Credit Scoring?*, FED. RESERVE BANK OF PHILA. BUS. REV., Sept.–Oct. 1997, at 3, 3, 5–7, available at <http://www.phil.frb.org/files/br/brso97lm.pdf> ("Credit scoring is a statistical method used to predict the probability that a loan applicant or existing borrower will default or become delinquent.").

119. *Id.* at 4 ("Using historical data and statistical techniques, credit scoring tries to isolate the effects of various applicant characteristics on delinquencies and defaults.").

borrowers, they also frequently make use of publicly available data. The most commonly used credit scoring models¹²⁰ rely on a consumer's current borrowing and payment behavior, as well as information from credit inquiries, public records of collection actions, judgments, and bankruptcy filings.¹²¹

Lenders rely on these credit scoring models in a number of contexts.¹²² First, credit scoring assists lenders when the consumer credit transaction is initiated.¹²³ Credit scoring models help lenders determine the credit score cut-off beyond which they will not lend.¹²⁴ Second, credit scoring models help lenders to price and service credit accounts after they are opened, sometimes raising interest rates based on a change in a customer's credit score.¹²⁵ Lenders also use credit scores to determine whether "account closure" is warranted.¹²⁶

Lenders generally view customers who respond to solicitations as safer risks than borrowers who seek out the lender themselves. Credit scoring models help lenders to counteract this potential for adverse selection by assessing applicants' risk of default, and by identifying potential fraud through cross-checking basic information on the application. Credit scoring models can also help lenders identify low-risk borrowers for targeted marketing such as preapproved credit cards. Marketing models can be calibrated to predict likelihood of response, risk of default, and revenue potential in an effort to minimize the risk of default and maximize response rates and revenue potential.

120. Satyajit Chatterjee et al., *Credit Scoring and Competitive Pricing of Default Risk 1* (Apr. 2005) (unpublished manuscript), available at <http://raven.cc.ku.edu/~econsem/Friday/chatterjee.pdf> ("The credit scores most commonly used are produced by a single company, the Fair Isaac and Company, and are known as FICO scores. These scores range between 300 and 850, where a higher score signals a lower probability of default.").

121. *Id.* at 2 (noting that credit scoring models often rely on information from borrowers' loan applications and from credit bureaus).

122. *See, e.g.*, Mester, *supra* note 118, at 5–6 (noting that "over the past 25 years, credit scoring has become widely used in issuing credit cards and in other types of consumer lending, such as auto loans and home equity loans," and also noting that credit scoring is, of late, increasingly relied on in consumer mortgage lending and small business lending); Chiwon Yom, *Limited-Purpose Banks: Their Specialties, Performance, and Prospects*, 17 FDIC BANKING REV. 19, 20 (2005), available at <http://www.fdic.gov/bank/analytical/banking/2005apr/article2.pdf> (discussing briefly the derivation and use of credit scores).

123. *See* Mester, *supra* note 118, at 8 (discussing the efficiency and time-saving benefits of credit scoring in loan approval).

124. *See id.* at 4 ("In most . . . scoring systems, . . . a lender sets a cutoff score based on the amount of risk it is willing to accept. . . . [T]he lender would approve applicants with scores above the cutoff and deny applicants with scores below.").

125. *See* Yom, *supra* note 122, at 20 (discussing how credit scoring is utilized by banks "to price loans, to constitute input in automated underwriting processes, . . . to price the default risk of asset backed securities in secondary markets, . . . to monitor accounts" and to "manage customers' accounts").

126. *Id.*

Credit scoring models are also used to set the cost of consumer credit—the so-called risk-based pricing models¹²⁷—as well as its terms, such as credit limits and minimum payment amounts for revolving credit accounts, and choice of down payment, collateral amounts, and repayment periods for installment loans.¹²⁸ Pricing models may be applied at the time the credit decision is made, when the loan is securitized, and later as changed circumstances, including default, may justify changes in the charge for credit.

There is broad agreement that credit scoring models are at least partially responsible for increases in the availability of consumer credit.¹²⁹ While the growth of the credit reporting and credit scoring industries does not show that lenders possess perfect information about consumer borrowers, there is widespread agreement among industry experts that these developments have substantially improved underwriting decisions. For example, Peter McCorkell contends that credit scoring and credit reporting result in “20 to 30 percent improvements—either in reduced delinquency rates or increased acceptance rates—compared with judgmental evaluation.”¹³⁰ Others note that the use of credit scoring models enables lenders to increase the number of applications they accept while leaving their default risk constant.¹³¹ For this reason, then Federal Reserve Board Chairman Alan Greenspan lauded the benefits of credit scoring models for both reducing the costs of evaluating borrowers’ creditworthiness, and increasing access to consumer credit for a broader swath of Americans.¹³²

127. Maria T. Pincetich & Kristin M. Tobin, *Using Consumer Credit Information*, in CREDIT RISK MODELING: DESIGN AND APPLICATION 23, 32 (Elizabeth Mays ed., 1998) (“Risk-based pricing helps identify more accounts to approve, thus increasing the size of the portfolio, while controlling risk and profitability by charging higher rates for higher risks.”).

128. *Id.*

129. See John M. Barron & Michael Staten, *The Value of Comprehensive Credit Reports: Lessons from the U.S. Experience*, in CREDIT REPORTING SYSTEMS AND THE INTERNATIONAL ECONOMY 273, 273 (Margaret J. Miller ed., 2003) (“[C]redit bureau data has made a wide range of credit products available to millions of households who would have been turned down as too risky just a generation ago.”).

130. Peter L. McCorkell, *The Impact of Credit Scoring and Automated Underwriting on Credit Availability*, in THE IMPACT OF PUBLIC POLICY ON CONSUMER CREDIT 209, 213 (Thomas A. Durkin & Michael E. Staten eds., 2002); see also Hunt, *supra* note 106, at 10 (estimating that the use of consumer credit bureaus saves lenders \$5 billion a year).

131. See Barron & Staten, *supra* note 129, at 276 (“Low-risk borrowers are offered more attractive prices, which stimulates the quantity of loans demanded, and fewer high-risk borrowers are rationed out of the market because lenders can offer them an appropriate price to accommodate them rather than turn them away.”); Gary G. Chandler & Robert W. Johnson, *The Benefit to Consumers from Generic Scoring Models Based on Credit Reports*, 4 IMA J. MATHEMATICS APPLIED BUS. & INDUSTRY 61 (1992); Gary G. Chandler & Lee E. Parker, *Predictive Value of Credit Bureau Reports*, J. RETAIL BANKING, Winter 1989, at 47, 49–50 (outlining how credit scoring models allow banks to more accurately predict default rates by increasing the level of detail incorporated into their assessment).

132. Alan Greenspan, Chairman, Fed. Reserve Bd., Consumer Finance, Remarks at the Federal Reserve System’s Fourth Annual Community Affairs Research Conference, Washington, D.C. (Apr. 8, 2005), available at <http://www.federalreserve.gov/boarddocs/speeches/2005/20050408/default.htm> (“Where once

In sum, credit scoring models have reduced the informational asymmetries between borrowers and lenders who are complete strangers to each other.¹³³ As a result, credit scoring has helped create national, rather than local, markets for consumer credit. Credit scoring models have also enabled lenders in a diverse range of consumer credit transactions to sell their loan portfolios in secondary markets and, by securitizing these payment streams, to keep their cost of funds down and expand the source of funds made available to consumer borrowers.

The growth of securitization also facilitated expansion in the market for consumer credit by allowing lenders to fine tune the amount of risk they were willing to take on in their lending portfolios.¹³⁴ By June 2002, more than \$400 billion in credit card receivables had been securitized.¹³⁵ At present, securitized credit card debt accounts for roughly three-fifths of the market for revolving consumer credit.¹³⁶ Indeed, there is even a market for securitized pools of defaulted, and more surprisingly, discharged consumer debt.¹³⁷

b. Data on the Subprime Lending Market.—In both their articles, Meckling, as well as Stiglitz and Weiss, assumed that consumer lenders could not effectively price discriminate or engage in risk-based lending to all consumers,¹³⁸ but the new market for consumer credit is based on the fact that lenders can. Credit scoring and risk-based pricing have permitted financial institutions and other consumer lenders to open up entirely new markets for their products, including the market for subprime lending.

Subprime lenders extend credit to borrowers characterized by one of the following: “(1) a FICO credit score of 660 or below; (2) two or more 30-day delinquencies during the past year; (3) bankruptcy within the last five years;

more-marginal applicants would simply have been denied credit, lenders are now able to quite efficiently judge the risk posed by individual applicants and to price that risk appropriately.”)

133. But see, for example, the November 1996 Senior Loan Officer Opinion Survey, which reports that “56 percent of the 33 banks that used credit scoring in their credit card operations reported that their models failed to accurately predict loan-quality problems by being too optimistic.” MESTER, *supra* note 118, at 11.

134. Yom, *supra* note 122, at 21 (“Since its introduction in 1987, credit card securitization has been a primary source of funding and is integral to the growth of the credit card industry.” (citations omitted)).

135. MARK FURLETTI, FED. RESERVE BANK OF PHILA., AN OVERVIEW OF CREDIT CARD ASSET-BACKED SECURITIES 1–2 (2002), <http://www.philadelphiafed.org/pcc/workshops/workshop11.pdf>.

136. *Id.* at 2 n.3.

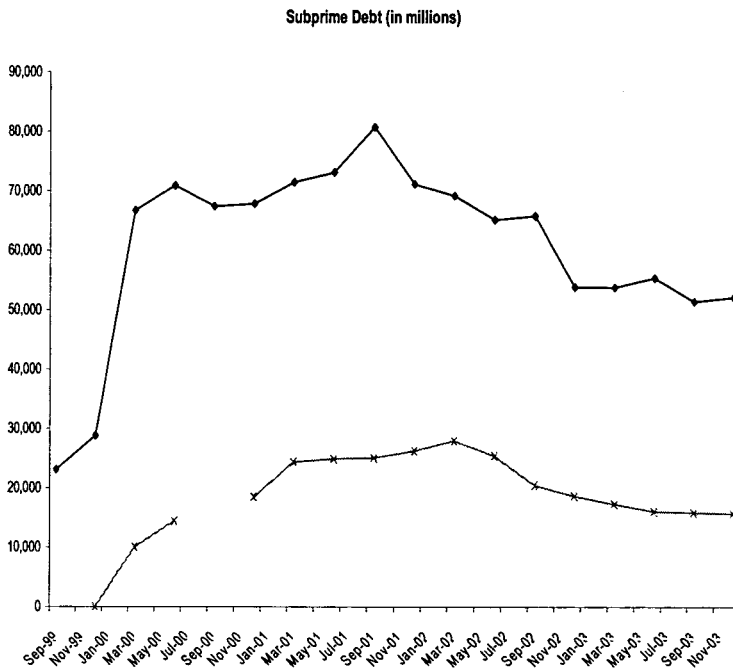
137. For example, a company called Portfolio Recovery Associates describes its business on its webpage, stating that it “purchases, collects and manages portfolios of defaulted consumer receivables.” Portfolio Recovery Associates, <http://www.portfoliorecovery.com>.

138. See *supra* note 73 and accompanying text; cf. Stiglitz & Weiss, *supra* note 15, at 393 (“We have presented a model of credit rationing in which among observationally identical borrowers some receive loans and others do not.”).

(4) judgment, foreclosure, repossession, or charge-offs in the prior 24 months; or (5) debt service-to-income ratio of 50 percent or greater.”¹³⁹

Although figures on subprime lending are sketchy, they reveal significant growth in this industry over the past ten to fifteen years. The Federal Deposit Insurance Corporation, vested with jurisdiction over most federal banks, reports a steady increase in subprime debt since 1999:

Figure 8



The bold trendline at the top shows the total subprime debt held by insured financial institutions.¹⁴⁰ It shows total subprime debt growing through the third quarter in 2001, then declining slightly to just below its 1999 level. Although the bulk of subprime debt is supported by residential mortgages, the FDIC also reports increases in subprime car loans, credit card debt, and payday loans during this period. The trendline at the bottom of Figure 8 depicts credit card subprime debt, the second largest component of subprime debt following subprime mortgage debt. Figure 8 demonstrates

139. Yom, *supra* note 122, at 25 n.4 (relating possible indications of subprime borrowers).

140. This obviously excludes subprime debt held by finance companies, payday lenders, and other lending institutions that are not regulated by the FDIC. See generally <http://www.fdic.gov/bank/analytical/regional/ro20041q/na/IFChart03.html>.

that while overall subprime debt has fallen since 2001, subprime credit card debt levels, which plateaued in 2002, have decreased less than other forms of subprime debt during this same period.

It is crucial to note that this graph does not capture the whole subprime picture. While the FDIC began reporting data on subprime lending in 1999, it is not such a new phenomenon. There has always been “subprime debt.” Indeed, it is one of the oldest professions; pawnshops, finance companies, rent-to-own, and other fringe lenders have been marketing high-cost credit to high-risk borrowers, in various forms, forever. This “subprime” market was principally local, face-to-face, and somewhat unsavory. With the advent of credit scoring and securitization, national financial institutions, including insured banks, discovered this profit center and entered the market with a bang. So have other lenders who are not regulated by the FDIC (or anyone else).

The market for subprime lending has grown because subprime lending is highly profitable. Studies show, not surprisingly, that lenders charge much higher rates of interest for subprime loans than for loans extended to consumer borrowers with unblemished credit histories. While default rates on subprime loans are nine times higher than default rates on loans extended to those with the best credit ratings,¹⁴¹ lenders can and do compensate for this risk by charging higher interest rates. On average, subprime lending rates are 800 basis points (8%) higher than interest charged on prime loans in comparable transactions.¹⁴² Therefore, despite the increased risk, industry experts report that subprime lending is highly profitable. A recent FDIC report on insured institutions’ subprime lending activities indicates that, between September 1999 and December 2003, “subprime lenders had the average annual net interest income-to-assets ratio of 5.8 percent, compared with 3.9 percent for the industry.”¹⁴³ Similarly, subprime lenders had an average return on equity of 10.9%, compared to 10.8% for the industry.¹⁴⁴

c. Circling Back to Data on the Cost of Credit and Its Prevalence.—Incentive analysis would not have predicted recent developments in the market for consumer finance. Between 1978 and 2004,

141. Yom, *supra* note 122, at 21.

142. Furletti, *supra* note 92, at 7–8.

143. Yom, *supra* note 122, at 28. Net interest income-to-assets ratios measure an institution’s income from interest (net of cost of funds) as a percentage of its total loan portfolio. It should be noted that subprime lenders also spend more to administer loans than do prime lenders. *See id.* at 28 (“[L]oans to subprime borrowers usually require intensive levels of servicing and collection efforts to ensure timely payment . . .”). Thus, much of the interest premium is eaten up. As such, these lenders may not earn supercompetitive profits. *See id.* (“[H]igh charge-offs and loan-loss provisions deplete the earnings of these institutions.”).

144. *Id.* at 28. This is consistent with the common assertion that credit markets are competitive, but it also demonstrates the profitability of subprime lending.

nonbusiness bankruptcy filings doubled and then doubled again, while—at least from 1992 to 2001—both the cost of consumer credit¹⁴⁵ and the credit card markup¹⁴⁶ decreased. These figures would be significant on their own, but they take on heightened significance when considered in light of data detailing increases in the amount of subprime lending in the market for consumer credit generally, and in the market for credit card debt specifically. Risk-based pricing of consumer credit, thus, complicates discussions about the cost of credit. Before advances in credit scoring technology, low-risk borrowers paid for consumer credit at the same rate as high risk borrowers; now, the lowest risk borrowers may pay as much as 800 basis points less than subprime borrowers.¹⁴⁷ Sophisticated analysis of the cost of credit over time no longer permits examination of a single line graph. Prime and subprime debt need to be considered separately.

Risk-based pricing also complicates discussions about the relative supply and demand of consumer credit and its possible rationing. As with conversations about the cost of credit, data on growth in the supply of consumer credit should be viewed with an understanding of market changes that have occurred during the past twenty-five years.

First, industry experts report the saturation of the market for consumer credit, especially the market for credit card credit, and the data supports this characterization.¹⁴⁸ The Payment Cards Center at the Federal Reserve Bank of Philadelphia reports that the number of credit card solicitations increased 500% between 1991 and 2001, from less than a billion to more than 5 billion mailings.¹⁴⁹ And this just counts the mail sent by credit card solicitors—increasingly, these marketing efforts also include telephone, event, and Internet campaigns. Lenders' widespread efforts to extend more credit to existing borrowers and additional credit to new borrowers are inconsistent with the claim that lenders continue to ration consumer credit.

Second, if credit rationing occurs through tightened underwriting standards, improvements in credit risk management and credit scoring models might be viewed as evidence that consumer credit continues to be rationed. But that would misconstrue the practical effect of credit scoring and risk-based pricing on the marketplace. Lenders have improved their

145. See Furletti, *supra* note 92, at 2 (“From 1992 to 2001 . . . the average interest rate that issuers charged revolving customers fell 320 basis points, from 17.4 percent to 14.2 percent.”).

146. See *id.* at 2, 29 fig.3 (“Issuer markup, a metric that normalizes for funding costs by subtracting the six-month Treasury bill rate from the average APR, decreased 330 basis points during the same period [1992–2001].”).

147. *Id.* at 7–8.

148. See, e.g., DAVID S. EVANS & RICHARD L. SCHMALENSEE, *THE ECONOMICS OF THE PAYMENT CARD INDUSTRY* 76–79 (1993) (describing growth in the credit card market); EVANS & SCHMALENSEE, *supra* note 108, at 85–100 (detailing growth in the market for credit card credit between 1970 and 1995).

149. Furletti, *supra* note 92, at 1, 27 fig.1. Furletti relies on industry experts, BAI Global, to note that “these solicitations in 2001 reached 79 percent of U.S. households, which, on average, received five offers each month.” *Id.* at 1.

ability to identify credit risks in advance of a loan initiation, but not solely so that they can turn down the high-risk borrower. Instead, high-risk subprime borrowers are actively courted by lenders, who extend credit to this group at substantially higher rates of interest than “prime” customers. Lenders can earn sufficient returns both from high-risk borrowers who “beat the odds” and do not default or who transfer their balances to another lender before defaulting, and from those who do default, but only after they have paid interest at much higher default rates, as well as paid late charges and other fees over time.

For example, imagine a debtor who is carrying a \$1,000 balance at an effective annual interest rate of 25%. Such a rate is not unusual in the subprime market. If the balance is carried for five years, and the debtor pays interest only, the payments would be \$1,250 over the five-year period. If a discount rate of 5% is applied to the payment stream, the present value of those payments would be approximately \$1,000. In other words, even if the debtor defaults and discharges the entire principal balance on the loan, the creditor will still have a positive rate of return on the invested funds.¹⁵⁰

Thus, not only is more consumer credit outstanding today than at any point in history, lenders have also increasingly extended consumer credit to lower income borrowers and borrowers with imperfect credit histories, including borrowers who previously filed for bankruptcy. The market is now characterized not by credit rationing, but by price discrimination and market saturation.

3. *Puzzles that Remain.*—What explains this expanding market for consumer credit in the face of increased nonbusiness bankruptcy filings? In prior sections, we pointed to the demise of state usury laws and the deregulation of the banking industry to explain the growth in the consumer credit market. Securitization and improvements in credit verification and credit risk assessment also play a significant part in explaining this expansion.

The data on the consumer credit market seems, in many important respects, to undercut the assumptions and to falsify the predictions that economists make. Information asymmetries may not be as strong as suspected—credit scoring has allowed creditors to segment the market into prime and subprime markets and to charge different interest rates accordingly. The evidence of “credit rationing” is weak. The supply of consumer credit seems to be constantly increasing, and most importantly, since 1978, the amount of debt carried by consumers has increased rather than fallen, while the spread between the risk-free rate and consumer credit rate has not increased significantly. While the bankruptcy rate has climbed, as have charge-off numbers, consumer lending remains a profitable business,

150. In the real world, the consumer will have made some payments toward principal and may even have paid some late fees, enhancing the profitability of the consumer finance transaction.

and rational lenders seem willing to absorb these higher charge-off and default rates without significantly increasing interest rates.¹⁵¹

But the question remains: If consumer borrowers are strategic actors, why have lenders expanded into subprime markets for consumer credit?

B. Borrowers' Incentives

1. *Data.*—Notwithstanding the puzzles in the data described above, strategic incentive analysts and legislators have fixated on the fact that nonbusiness bankruptcy filings have increased steadily regardless of the rate of inflation, joblessness, and other macroeconomic factors. Despite the apparent foresight of strategic incentive analysis, econometric and other empirical studies seeking to explain the causes of increased bankruptcy filings find no simple correlation between consumer debtors' strategic incentives and the number of bankruptcy petitions filed annually. Studies have attempted to explain the increase in nonbusiness bankruptcy filings since 1978,¹⁵² but in the end bring no clarity or consistency to the question posed.¹⁵³

The studies reach inconsistent conclusions, in part, because they face difficult statistical complications.¹⁵⁴ Looking for correlations among dozens of macroeconomic and social factors and the number of bankruptcy petitions filed over time, a handful of these studies do conclude that the increase was

151. The year 2003 was the third most profitable year for credit card banks ever. See BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, THE PROFITABILITY OF CREDIT CARD OPERATIONS OF DEPOSITORY INSTITUTIONS (June 2004), available at <http://www.federalreserve.gov/boarddocs/rptcongress/creditcard/2004/ccprofit.pdf>.

152. See, e.g., U.S. GEN. ACCOUNTING OFFICE, BANKRUPTCY REFORM ACT OF 1978—A BEFORE AND AFTER LOOK 20 (1983) (finding that for fiscal year 1982, in addition to social and economic factors, “the implementation of the [bankruptcy] code may have contributed no more than 6 percent of the total adjusted [bankruptcy] filings”); Jagdeep S. Bhandari & Lawrence A. Weiss, *The Increasing Bankruptcy Filing Rate: An Historical Analysis*, 67 AM. BANKR. L.J. 1, 2 (1993) (finding that “the increase in the number of bankruptcy filings is primarily due to the increased level of debt as a percentage of income, and not to the [introduction of the Bankruptcy Code]”).

153. Richard Hynes & Eric A. Posner, *The Law and Economics of Consumer Finance*, 4 AM. L. & ECON. REV. 168, 190–92 (2002) (describing studies that found an increase in bankruptcy filing rates since 1978 and discussing those studies' weak conclusions as to what caused the increase).

154. CONG. BUDGET OFFICE, PERSONAL BANKRUPTCY: A LITERATURE REVIEW 17–18 (2000), available at <http://www.cbo.gov/ftpdocs/24xx/doc2421/Bankruptcy.pdf> (finding several factors to explain the studies' limitations: (1) “[t]he difficulty of measuring the magnitude of the changes in incentives to file for bankruptcy”; (2) the lack of data for key variables; (3) shifts in data collection following the 1978 Code's enactment, such as the introduction of joint filings; and (4) inconsistent and inadequate treatment of macroeconomic factors); Hynes & Posner, *supra* note 153, at 190–92 (discussing studies and noting difficulties with empirical analysis, including shifts in data collection on joint filing in 1978 and the fact that there were at least three other major legal changes that occurred simultaneously with reform of the Bankruptcy Code in 1978—the Supreme Court's decision in *Marquette*, another Supreme Court decision holding that restrictions on attorney advertisement violated the First Amendment, and the enactment of the Fair Debt Collection Practices Act).

the result of the change in the law.¹⁵⁵ But in reaching this conclusion, the studies perform a bit of econometric sleight of hand—assuming that any increase in bankruptcy filings that does not correlate to factors such as changes in the employment rate, the cost of funds, or other specified variables must have been due to changes to the bankruptcy law made in 1978.¹⁵⁶ As one report notes, the problem with this approach is that its accuracy depends upon how well the model otherwise identifies potentially explanatory variables and applies reliable data to the model.¹⁵⁷ But, again, 1978 saw more than one legal change with the potential to influence consumer bankruptcy filings: in that same year, the Supreme Court decided both *Marquette National Bank of Minneapolis v. First of Omaha Service Corp.*,¹⁵⁸ which in practical effect freed consumer credit providers from state usury laws and instigated national markets for credit card and other consumer credit, and *Bates v. State Bar of Arizona*,¹⁵⁹ which struck down regulations on attorney advertisements as violative of the First Amendment, changing the practice of consumer bankruptcy law.¹⁶⁰ And many of these models neglect key macroeconomic and social factors, either because data cannot be found to insert into the model or for other reasons.¹⁶¹

The correlation between bankruptcy filings and macroeconomic factors, particularly unemployment, has also not been definitively established,¹⁶²

155. CONG. BUDGET OFFICE, *supra* note 154, at 15 (“The results of studies of how BRA-78 affected the personal filing rate range from no effect to a substantial one . . .”).

156. *Id.* at 18 (“The studies typically assumed that any increase in the personal filing rate that their models could not explain was due to BRA-78.”).

157. *Id.* at 18–19 (“The problem with that approach is its sensitivity to the specification of the models: the effects of an error in choosing the explanatory variables or in the relationship between those variables and the personal filing rate may be mistakenly attributed to BRA-78.”).

158. 439 U.S. 299 (1978).

159. 433 U.S. 350 (1977).

160. Hynes & Posner, *supra* note 153, at 191.

161. CONG. BUDGET OFFICE, *supra* note 154, at 19. A handful of studies have attempted to study empirically the diminishing influence of social stigma on consumers’ bankruptcy filings and, in doing so, rely on proxy variables to stand in for the effect of stigma. *See, e.g.*, F. H. Buckley & Margaret F. Brinig, *The Bankruptcy Puzzle*, 27 J. LEGAL STUD. 187, 200 (1998) (using a divorce “variable as a proxy for the social stigma of promise-breaking”); Scott Fay et al., *The Bankruptcy Decision: Does Stigma Matter?* 2 (Univ. Mich., Working Paper No. 98-01, 1998), available at <http://ssrn.com/abstract=70915> (“We use the aggregate bankruptcy filing rate in the debtor’s state of residence over the past three years, controlling for state fixed effects, as an inverse proxy for the level of bankruptcy stigma.”); David B. Gross & Nicholas S. Souleles, *Explaining the Increase in Bankruptcy and Delinquency: Stigma Versus Risk-Composition* 1–2 (1998) (Wharton, Fin. Insts. Ctr., Paper No. 98-28-B), available at <http://knowledge.wharton.upenn.edu/papers/53.pdf> (using a hazard function to find that the increase in bankruptcy filings is consistent with the stigma effect); VISA U.S.A., INC., CONSUMER BANKRUPTCY: CAUSES AND IMPLICATIONS 16 (1996), available at govinfo.library.unt.edu/nbr/report/g2a.pdf (using a trend term as a proxy for “social factors”). Commentators have criticized the use of proxy variables on a variety of grounds. *See, e.g.*, CONG. BUDGET OFFICE, *supra* note 154, at 21–23, 45–46 (“A critical problem with . . . stigma variables is that they appear to incorporate other effects besides stigma.”).

162. *See* CONG. BUDGET OFFICE, *supra* note 154, at 11 (“[E]mpirical studies do not consistently find that macroeconomic factors significantly affected the filing rate.”). *Compare*

although survey data consistently show that debtors frequently cite unemployment as an important factor in their decision to file.¹⁶³ Other studies tentatively suggest a correlation between bankruptcy filings and the rate at which lenders charge off indebtedness,¹⁶⁴ and a correlation between bankruptcy filings and the debt-to-income ratio and debt-service burden suffered by consumers over time.¹⁶⁵ Ronald Mann contends that bankruptcy filings increase one or more years after an increase in credit card usage.¹⁶⁶ He concludes that debtors are *not* loading up in anticipation of bankruptcy; if debtors were behaving strategically, they wouldn't wait so long to file.¹⁶⁷

We dug into the data ourselves to compare the nonbusiness bankruptcy filing rate to a number of macroeconomic variables between 1994 and 2004. While our conclusions are still very tentative, we too found a strong relationship between the bankruptcy filing rate and the financial-obligations ratio or "FOR" for that period. The FOR is a measure compiled by the Federal Reserve Bank that consists of a consumer's mortgage debt, car

Sumit Agarwal & Chunlin Liu, *Determinants of Credit Card Delinquency and Bankruptcy: Macroeconomic Factors*, 27 J. ECON. & FIN. 75, 75 (2003) (showing that county unemployment rates significantly influence consumers' delinquency behavior), with Ronel Elul & Narayanan Subramanian, *Forum-Shopping and Personal Bankruptcy*, 21 J. FIN. SERVICES RES. 233, 247 (2002) (demonstrating that county unemployment rates have statistically insignificant effects on bankruptcy filings), and Scott Fay et al., *The Household Bankruptcy Decision*, 92 AM. ECON. REV. 706, 714 (2002) (same). For studies finding a correlation between related delinquency measures and macroeconomic factors, see the following: Yongheng Deng et al., *Mortgage Terminations, Heterogeneity and the Exercise of Mortgage Options*, 68 ECONOMETRICA 275, 303 (2000) (finding that "unemployment . . . rates have significant effects on [mortgage] default"); Patric H. Hendershott & William R. Schultz, *Equity and Nonequity Determinants of FHA Single-Family Mortgage Foreclosures in the 1980s*, 21 J. AM. REAL ESTATE & URBAN ECON. ASS'N 405, 429 (1993) (finding the same).

163. See, e.g., SULLIVAN, WARREN & WESTBROOK, *FRAGILE MIDDLE CLASS*, *supra* note 18, at 77-78 (relating that 68% of the bankruptcy filers in the Western District of Texas reported job problems in 1991, and the same proportion of filers reported job problems in the study developed by the authors).

164. See, e.g., Diane Ellis, *The Effect of Consumer Interest Rate Deregulation on Credit Card Volumes, Charge-Offs, and the Personal Bankruptcy Rate*, BANK TRENDS, Mar. 1998, http://www.fdic.gov/bank/analytical/bank/bt_9805.html (showing "the close relationship between the rising U.S. personal bankruptcy rate and the consumer charge-off rate for commercial banks, which is being driven by charge-offs on credit card loans").

165. CONG. BUDGET OFFICE, *supra* note 154, at 5-10 (finding a strong, although imperfect, correlation between both the debt-to-income ratio and the debt-service burden suffered by consumers and increases in the bankruptcy filing rate); see also SULLIVAN, WARREN & WESTBROOK, *FRAGILE MIDDLE CLASS*, *supra* note 18, at 70-72 (finding a strong correlation between high debt-to-income ratio and consumer bankruptcy filing); Ellis, *supra* note 164 (arguing that interest rate deregulation triggered, among other effects, an increase in consumer credit card debt, which caused higher debt-to-income ratios and resulted in increased bankruptcy filings).

166. See Ronald J. Mann, *Credit Cards, Consumer Credit, and Bankruptcy* 23 (Univ. of Texas Sch. of Law, Law & Economics Working Paper No. 044, 2005), available at <http://ssrn.com/abstract=690701> (noting that "bankruptcy rates rise one or more years after [an] increase in credit card borrowing").

167. *Id.*

payment, consumer debt payments, and residential and nonresidential lease obligations as a ratio of his monthly disposable income.¹⁶⁸

The strongest correlation between FOR and the bankruptcy filing rate appeared when we lagged the filing rate by six months.¹⁶⁹ Most other variables we examined, such as unemployment rate, consumer price index, savings rate, mortgage default rate, and GDP growth rate, had much weaker effects or even behaved perversely. Also, while lags of six months to a year produced correlations that were almost as strong, the correlation fell off significantly as the lag approached two years. It should be noted that this relationship is much weaker if one includes the ten years prior to 1994. Indeed, for that period, the correlation is negative. Robert Lawless has noted that a similar anomaly appears when one looks at the Debt Service Ratio, a related statistic compiled by the Federal Reserve, which compares a household's monthly consumer debt payments to household income. Lawless noted, however, that when he, like Mann, looked at aggregate debt loads, the correlation with the nonbusiness bankruptcy filing rate was almost perfect; he concludes that the anomalous results are likely a result of problems in the way the Federal Reserve estimates debt load.¹⁷⁰

High debt loads prior to bankruptcy do not necessarily undercut the contention that borrowers are borrowing opportunistically. However, reconciling our data and Mann's and Lawless's may tell a different story. A spike in debt load can result from either an increase in debt or a loss of income. Therefore, the different lags between credit card use (or absolute debt level) and the FOR (debt-to-income ratio) may suggest that increased borrowing occurs first, followed by a decline in income or other event that triggers the filing.¹⁷¹

Strategic incentive analysts also contend that legislative provisions adopted in 1978 to identify exempt property are responsible for increased

168. For definitions of and data on the changing household debt service and financial obligations ratios, see Karen Dynan et al., *Recent Changes to a Measure of U.S. Household Debt Service*, 89 FED. RES. BULL. 417 (2003).

169. Our regression analysis produced the following results:

Regression Analysis: rate lagged six months versus FOR

The regression equation is

rate lagged 6 months = - 9.62 + 0.719 FOR

39 cases used, 2 cases contain missing values

Predictor Coef SE Coef T P

Constant -9.6241 1.176 -8.18 0.000

FOR 0.71911 0.06641 10.83 0.000

S = 0.254001 R-Sq = 76.0% R-Sq(adj) = 75.4%

170. Robert M. Lawless, *The Relationship Between Nonbusiness Bankruptcy Filings and Various Basic Measures of Consumer Debt* (unpublished manuscript), available at <http://www.law.unlv.edu/faculty/rlawless/busbkr/filings.htm>.

171. However, the negative correlation in the DSR and FOR data prior to 1994 suggests that these suppositions can only be viewed as suggestive, and certainly not as conclusive.

consumer bankruptcy filings.¹⁷² Here again, however, studies of the correlation between exemption law and personal filing rates have produced conflicting and confusing results.¹⁷³ Moreover, Sullivan, Warren, and Westbrook found that variations within states (where state exemption laws were obviously uniform) were greater than variations among states where exemption laws differed substantially.¹⁷⁴

In part, this confusion results from complexities in this area of the law.¹⁷⁵ Exemption law is complicated because it can involve either state or federal law, or, if the state desires, only state exemption law.¹⁷⁶ Since 1978, about two-thirds of states have indicated legislatively their desire to opt out of the federal exemption scheme set forth in the Bankruptcy Code.¹⁷⁷ But if

172. See U.S. GEN. ACCOUNTING OFFICE, *supra* note 152, at 16–17, 34–35 (declining to make a definitive assessment, although data suggested that states opting out of the federal exemption scheme seemed to have slower growth in the chapter 7 filing rate); Ian Domowitz & Robert L. Sartain, *Incentives and Chapter Choice: Evidence from the Reform Act of 1978*, 28 J. LEGAL STUD. 461, 467–69, 482–85 (1999) (finding a correlation between increase in exemptions and increased bankruptcy filings in a small sample); cf. Vincent P. Apilado et al., *Personal Bankruptcies*, 7 J. LEGAL STUD. 371, 390–91 (1978) (finding mixed results); Joseph Pomykala, *Bankruptcy Reform: Principals and Guidelines*, REGULATION, Fall 1997, at 41, 47 (concluding that the bankruptcy filing rate grew at a slower rate in opt-out states); White, *Economic Analysis*, *supra* note 10, at 45–47 (finding a weak but statistically significant correlation for data counted at the county level). *But see* Alden F. Shiers & Daniel P. Williamson, *Nonbusiness Bankruptcies and the Law: Some Empirical Results*, 21 J. CONSUMER AFF. 277, 289–91 (1987) (arguing that increased exemptions did not lead to increased bankruptcy filings); William J. Woodward & Richard S. Woodward, *Exemptions as an Incentive to Voluntary Bankruptcy: An Empirical Study*, 57 AM. BANKR. L.J. 53, 66–70 (1983) (concluding that altering federal exemptions probably has no significant effect on bankruptcy filing rates). *But cf.* Buckley & Brinig, *supra* note 161, at 204–06 (arguing that there is no correlation between changes in the exemption law and increased bankruptcy filings); Ellis, *supra* note 164 (same); Teresa A. Sullivan et al., *Consumer Bankruptcy in the United States: A Study of Alleged Abuse and of Local Legal Culture*, 20 J. CONSUMER POL'Y 223, 255–56 (1997) (same); Teresa A. Sullivan et al., *Consumer Debtors Ten Years Later: A Financial Comparison of Consumer Bankrupts 1981–1991*, 68 AM. BANKR. L.J. 121, 147 (1994) (same); Michael Bork & Susan D. Tuck, *Bankruptcy Statistical Trends, Chapter 13 Adjustment of Debts of an Individual with Regular Income* (Admin. Office of the U.S. Courts, Working Paper No. 1994) (same). See generally Ian Domowitz & Robert L. Sartain, *Determinants of the Consumer Bankruptcy Decision*, 54 J. FIN. 403, 404 (1999) (describing the relationship between exemption law and choice of bankruptcy).

173. See CONG. BUDGET OFFICE, *supra* note 154, at 20–21 (noting that “[s]tudies of the relationship between asset exemptions and personal filing rates at the state level have yielded conflicting results”); Hynes & Posner, *supra* note 153, at 188 (“While several studies cited 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.”).

174. SULLIVAN, WARREN & WESTBROOK, AS WE FORGIVE, *supra* note 18, at 240–42.

175. See Philip Shuchman & Thomas L. Rhorer, *Personal Bankruptcy Data for Opt-Out Hearings and Other Purposes*, 56 AM. BANKR. L.J. 1, 3–4, 14–15 (1982) (limiting the discussion to addressing “the complexity of the problem of analyzing trends in bankruptcy”); William C. Whitford, *Changing Definitions of Fresh Start in U.S. Bankruptcy Law*, 20 J. CONSUMER POL'Y 179, 190–91 (1997) (detailing how changes to U.S. bankruptcy law since 1978 have put limitations on developing the concept of a fresh start for consumer debtors).

176. 11 U.S.C. § 522(b) (2000) (allowing states to opt out of the federal exemption scheme).

177. Richard M. Hynes et al., *The Political Economy of Property Exemption Laws*, 47 J.L. & ECON. 19, 24 (2004).

state law exclusively governs the list of property that individual debtors can exempt from the reaches of creditors, then consumer debtors face little practical incentive to file for bankruptcy in order to take advantage of generous exemption laws or the bankruptcy discharge.¹⁷⁸

Additional studies have attempted to corroborate the assertion that chapter 7 filers, if they only chose, could repay the bulk of their debts in a chapter 13 repayment plan over time.¹⁷⁹ Although they disagree on the details, none of these studies indicates widespread abuse of the bankruptcy system.¹⁸⁰ The studies suggest that a small proportion of those who file for chapter 7 liquidation could repay a substantial portion of their nonpriority, unsecured debt through a chapter 13 plan, and that a very small fraction of chapter 7 filers (less than 5%) could repay all of their debt in this way; these studies also suggest that a larger percentage of chapter 7 filers (about 15%) could repay between 20% and 25% of this debt over a five-year period.¹⁸¹ In addition, Sullivan, Warren, and Westbrook found that debtors—who, according to the economic incentive model, are supposed to respond to exemption levels—in the high-, medium-, and low-exemption districts were essentially indistinguishable on economic grounds, making the respond-to-incentives argument much harder to sustain.¹⁸² In a later study, they showed that the filing rates tend to persist over time—that is, that high-13 districts tend to remain high-13 districts and low-13 districts tend to remain low-13 districts—suggesting more influence from local legal culture than from an incentive model.¹⁸³

2. *Continuing Questions About Consumers' Incentives to Borrow.*—

Much paper has been consumed in trying to determine why consumer debtors have filed for bankruptcy at rates that seem to increase each year—study after study demonstrates little more than that the question of causation is

178. See Hynes & Posner, *supra* note 153, at 189 (explaining the lack of correlation between exemptions and bankruptcy filing rates).

179. See, e.g., Marianne B. Culhane & Michelle M. White, *Taking the New Consumer Bankruptcy Model for a Test Drive: Means-Testing Real Chapter 7 Debtors*, 7 AM. BANKR. INST. L. REV. 27, 31 (1999) (finding abuse of chapter 7 by debtors who could repay under the H.R. 3150 formula to be minimal); GORDON BERMANT & ED FLYNN, EXECUTIVE OFFICE FOR U.S. TRUSTEES, INCOMES, DEBTS, AND REPAYMENT CAPACITIES OF RECENTLY DISCHARGED CHAPTER 7 DEBTORS 7 (1999), http://www.usdoj.gov/ust/eo/public_affairs/articles/docs/ch7trends-01.pdf (studying the characteristics of those who file for chapter 7 and finding that only a small percentage have sufficient income to repay any unsecured debts).

180. CONG. BUDGET OFFICE, *supra* note 154, at 26–27.

181. *Id.* at 24.

182. SULLIVAN, WARREN & WESTBROOK, AS WE FORGIVE, *supra* note 18, at 240–41.

183. Teresa A. Sullivan et al., *The Persistence of Local Legal Culture: Twenty Years of Evidence from the Federal Bankruptcy Courts*, 17 HARV. J.L. & PUB. POL'Y 801, 828–30 (1994) (noting “that a district that was high in Chapter 13 filings in one year tended to be high in later years” and reasoning that “districts and states tend to replicate predictable patterns in their relative balance of Chapter 7 versus Chapter 13 filings; that is, their preferences as between the two procedures persist over time”).

complex, both multifaceted and the result of factors that defy precise empirical prediction. In our view, consumer motives in borrowing and filing for bankruptcy are not really germane to the policy debate. It is implausible that rational lenders would extend ever-increasing amounts of consumer credit to a population that was, to any significant degree, intent on fleecing banks, credit card issuers, credit unions, finance companies, and other providers of consumer credit. We remain convinced, and view the data as convincingly demonstrating, that while strategic borrowers may exist, they likely exist only on the margin. Moreover, recent developments in the law and in improvements in the technology and practices governing consumer credit have made it easier than ever for lenders to identify these high-risk borrowers.

The data thus suggest an alternative story that goes something like this: Legal and technological developments explain lenders' increased willingness to extend consumer credit. As a result of these developments, consumer credit, especially credit card credit, has been immensely profitable for the consumer finance industry. From this perspective, it is easy to explain lenders' willingness to extend consumer credit in increasing amounts at a time when consumer bankruptcy filings have increased. Increases in bankruptcy filings might be explained, from this perspective, as the natural consequence of increasingly leveraged consumer borrowers, who, from time to time, face unexpected shocks to income—job loss or wage reduction, divorce, uninsured medical expenses, and other expenses of life in general.

Neither incentive analysis nor this counter-story adequately explains why consumers borrow in the first place. While it is clear that consumers are more indebted than ever before and that bankruptcy filings are driven by the underlying level of consumer indebtedness, the source of this overleverage remains a puzzle. Strategic incentive analysts would tie this indebtedness to consumer opportunism. But this conclusion is a product of the assumption of the instrumentally rational consumer. It is not driven by the data.

In our view, a more plausible picture of consumer credit posits a rational lender and a quasi-rational borrower. For reasons we discuss in Part III, the current bankruptcy filing explosion is better explained not by strategic borrowers exploiting unwitting lenders, but by rational lenders exploiting predictable cognitive weaknesses in consumers.

III. Are Consumer Borrowers Rational Actors?

Up to this point we have assumed, as do economists, that both consumers and lenders act rationally. While the theoretical literature points in one direction (the bankruptcy discharge will lead to credit constraint and increased interest rates), factual observations (expanding consumer credit and steady interest rate spreads in the face of an increasing bankruptcy and default rate) confound the prediction. This led us to ask whether there might be something wrong with the theory, or at least some of its assumptions.

To help answer this question, we look to the growing body of experimental evidence that suggests individuals are not reliably and instrumentally rational.¹⁸⁴ Relaxing the assumption of consumer rationality has considerable relevance to the policy debate surrounding bankruptcy reform. Or, to put it more forcefully, if consumers are not rational decisionmakers, tinkering with ex ante incentives by increasing the cost of default to deter overborrowing is likely to be noisy at best, and counterproductive at worst. Indeed, to take it yet a step further, if there are systematic biases in consumer decisionmaking that consumer lenders can exploit, the focus of regulation would shift entirely from altering consumers' incentives to borrow (or default) to altering lenders' incentives to lend. The focus of consumer bankruptcy reform would shift from consumer opportunism (lender protection) to consumer protection (lender regulation).

Rational choice theory presumes that individuals possess the intellectual capacity to identify their preferences, to maximize their utility when possible, and to act rationally under conditions of uncertainty when necessary.¹⁸⁵ Cognitive psychologists have used a variety of behavioral experiments to cast doubt on each of these assumptions. According to a vast body of psychological literature dating back to the early 1980s, rationality appears to be "bounded" at best, and systematically biased at worst.¹⁸⁶ Preferences are not fixed and unchanging.¹⁸⁷ Instead, cognitive experiments show that an individual's preferences change depending on how choices are framed.¹⁸⁸

184. See, e.g., Langevoort, *supra* note 33, at 1501 ("Work by researchers such as Amos Tversky, Daniel Kahneman, Hillel Einhorn, Robin Hogarth, Aric Kruglanski, Lee Ross, Richard Thaler, and many others suggested that there are heuristics, biases, and other departures from rational decision-making processes that are systematic and predictable and can thus be modeled and tested with a fair degree of rigor. The challenge to orthodox economic theory was plain, and a debate between the disciplines quickly began."). However, the questions that these cognitive experiments raise about the assumptions that underlie rational choice theory do not indicate that individuals behave "irrationally." Sunstein, *supra* note 33, at 121 (noting that cognitive experiments are "not best taken to demonstrate that people are 'irrational' or that their behavior is unpredictable and arbitrary" but rather to "suggest departures from standard economic assumptions, but departures that are systematic and predictable, and thus a legitimate basis for predicting human behavior").

185. See BECKER, *supra* note 42, at 14 (asserting that "all human behavior can be viewed as involving participants who maximize their utility from a stable set of preferences and accumulate an optimal amount of information and other inputs in a variety of markets").

186. Herbert A. Simon, *Rational Choice and the Structure of the Environment*, in *MODELS OF MAN: SOCIAL AND RATIONAL* 261, 270-71 (1957) ("Since the organism . . . has neither the senses nor the wits to discover an 'optimal' path . . . we are concerned only with finding a choice mechanism that will lead it to pursue a 'satisficing' path, a path that will permit satisfaction at some specified level of all its needs.").

187. See BECKER, *supra* note 42, at 133, 160 (describing how an individual's utility function is dependent upon preferences that change according to variables such as time of the year or aging of the individual).

188. See Korobkin & Ulen, *supra* note 24, at 1102-26 (discussing the assertion that "despite rational choice theory's implicit prediction to the contrary, context matters in decision making"); Langevoort, *supra* note 33, at 1503-05 (stating that there is a "large body of work that suggests that whether decisions are 'framed' in terms of potential gains or losses affects decisions even though

Decisions are not made coolly and rationally. Instead, individuals take mental shortcuts that often lead them astray. Worse yet, individuals will not always act upon their utility-maximizing determinations.¹⁸⁹ People often lack self-control. The clear-sighted planner only imperfectly restrains the impulses of the myopic doer.¹⁹⁰ Although this literature has had considerable impact on the legal theoretical literature,¹⁹¹ it has not had much, if any influence on the legislative debates over bankruptcy policy.¹⁹² It should have.

This Part argues that behavioral decision research casts doubt upon whether rational actor models of consumer behavior should be relied upon to set consumer bankruptcy policy. It divides household consumption decisions chronologically: beginning with purchasing decisions; next considering a consumer's decision whether to pay for these purchases with cash, savings, or borrowed funds; and concluding with the consumer's assessment of post-default options, including the decision to file for bankruptcy and under what chapter. At each stage, we consider the implications of behavioral decision research for bankruptcy policy. More specifically, we consider how the policy prescriptions would differ from those generated by a model of rational consumer behavior. We conclude this Part with a borrower who behaves much like the economist's bankruptcy opportunist, but for very different reasons.

the framing may be completely arbitrary and manipulable"); Sunstein, *supra* note 33, at 122–24 (discussing the difference in preferences for losses versus gains and stating that “people are risk seeking for losses . . . and risk averse for gains”).

189. See, e.g., Daniel Kahneman & Amos Tversky, *Choices, Values, and Frames*, in CHOICES, VALUES, AND FRAMES 1–17 (Daniel Kahneman & Amos Tversky eds., 2000) (demonstrating that individuals will change their choice between options A and B when the decision is framed in terms of gains instead of losses, even though the objective utility value of each option remains the same).

190. See RICHARD H. THALER, THE WINNER'S CURSE: PARADOXES AND ANOMALIES OF ECONOMIC LIFE 98 (1992) (describing scenarios where the “far-sighted self takes actions which constrain or alter the behavior of the myopic self”); Hersh M. Shefrin & Richard H. Thaler, *The Behavioral Life-Cycle Hypothesis*, in QUASI-RATIONAL ECONOMICS 91, 92 (Richard H. Thaler ed., 1991) (discussing imperfections in self-control that should be modeled when considering consumer behavior); Richard H. Thaler, *An Economic Theory of Self-Control*, in QUASI-RATIONAL ECONOMICS, *supra*, at 77, 88 [hereinafter Thaler, *Economic Theory*] (comparing the problems of the restraints that a planner imposes on himself to the problems in an agent–principal relationship).

191. Cognitive psychology and behavioral decision research have spawned new areas of inquiry in both the fields of economics (behavioral economics) and law and economics (behavioral law and economics). For a short list of this literature, see *supra* note 33.

192. A recent exchange between Professor Elizabeth Warren and Senator Joseph Biden during the February 10th Judiciary Committee Hearings on S. 256, the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, is an exception. Senator Biden accused Professor Warren, an opponent of the bill, of seeking to use bankruptcy law to bring back usury restrictions (i.e., to regulate consumer lending). Professor Warren conceded the point but noted that lender regulation would be a political nonstarter. An audio recording of the exchange can be found at: <http://www.npr.org/templates/story/story.php?storyId=4515876>. Even this exchange is instructive, in that Biden (who is the Senator from Delaware) appeared to find the idea of bankruptcy law as “consumer protection” ridiculous.

The policy implications of those differences are considerable. Behavioral decision research suggests both that consumers will purchase more than rational actors would and that these purchases will be paid for with borrowed money more frequently than their idealized counterparts would find rational. Further, it predicts that individuals' post-default strategies will differ from those that rational actors would be expected to adopt.

What is different about the behavioralist's consumer is that this overborrowing will persist regardless of the post-default remedial regime. Consumers will overborrow *with* the bankruptcy discharge in place or *without* it. Because of the effects of various decisionmaking biases, consumers would, in our view, overborrow even if we were to bring back a modern equivalent of *debt peonage*. Perhaps more importantly, lenders will profit from consumers' overborrowing under either regime (the lenders' profit will be greater, however, under debt peonage).

A. *Purchasing Decisions*

Rational actor models presume that individuals make consumption decisions based on complete information and stable preferences. Behavioral decision research questions consumer rationality at a number of levels. First, it raises a cognitive objection, suggesting that many individuals do not possess the ability to process complex market information. Second, it raises a temporal objection, questioning whether individual preferences are stable, as presumed in rational actor models.

1. *Bounded Rationality*.—The decision to make household purchases under a budget constraint is a complex enterprise that involves decisionmaking over time. Classical microeconomic theories of consumer behavior present simplified models that involve decisions among a handful of widgets over a limited number of time periods.¹⁹³ Although economists appreciate that the real world is more complex than this,¹⁹⁴ they defend rational actor models as elegant and robust theories that successfully predict consumer behavior.¹⁹⁵ Consumers may not possess perfect information, but

193. DEATON, *supra* note 46, at 1 (“The simplest possible version is that found in the elementary textbooks, where the consumer, living in a two-period world of complete certainty, chooses how much to spend today and how much to spend tomorrow.”).

194. See HEILBRONER & THURLOW, *supra* note 41, at 46–47 (expanding upon the statement that “economists do not believe that men and women are solely rational, acquisitive creatures” and that “[t]hey are fully aware that a hundred motivations impel people”).

195. Milton Friedman is best known for his defense of such models. He remonstrates against the search for greater “reality” in modeling by arguing that “[c]omplete ‘realism’ is clearly unattainable, and the question whether a theory is realistic ‘enough’ can be settled only by seeing whether it yields predictions that are good enough *for the purpose in hand* or that are better than predictions from alternative theories.” MILTON FRIEDMAN, *ESSAYS IN POSITIVE ECONOMICS* 41 (1953) (emphasis added).

they can acquire information over time and learn from their mistakes.¹⁹⁶ Even within the economic community, however, critics question the reliability of rational actor models as applied to individuals and their household purchasing decisions.

Specifically, Nobel Prize-winning economist Herbert Simon focused on the difficulties faced by an individual who must make choices in a marketplace awash with information.¹⁹⁷ The rationality of Simon's consumers was "bounded." They would expend a limited amount of time and effort in making consumption decisions.¹⁹⁸ They would exert just enough effort to acquire a "satisfactory" amount of information about options available in the marketplace.¹⁹⁹ He called this "satisficing."²⁰⁰ While satisficing admittedly falls short of full and perfect information,²⁰¹ he did not view it as undermining the strength of microeconomic models of consumer activity.²⁰² Through satisficing, Simon argued, individuals reveal their preferences for both the consumption of goods and the effort needed to search for information about those goods.²⁰³ Thus, satisficing may be viewed

196. See Becker, *supra* note 42, at 6–7 ("The economic approach does not assume all participants have complete information . . . [But it] has developed a theory of the optimal or rational accumulation of costly information that implies, for example, greater investment in information when undertaking major [rather] than minor decisions . . .").

197. Herbert A. Simon, *Rational Decision Making in Business Organizations*, 69 AM. ECON. REV. 493, 503 (1979) (reprinting a lecture delivered by Simon when he received the Nobel Prize in Economic Science in 1978 in which he traced the development of his theories of bounded rationality, satisficing, and the relevance of psychological and sociological influences on decisionmaking).

198. See Herbert A. Simon, *Theories of Decision Making in Economics and Behavioral Science*, 49 AM. ECON. REV. 253, 269–70 (1959) (arguing that economic theory should apply the rules of marginal analysis to information-gathering with the result that information is only gathered to the point when the incremental cost of additional information equals any incremental profit derived from the additional information).

199. *Id.* ("Information, says price theory, should be gathered up to the point where the incremental cost of additional information is equal to the incremental profit that can be earned by having it. Such an approach can lead to propositions about optimal amounts of information-gathering activity and about the relative merits of alternative information-gathering and estimating schemes.").

200. HERBERT SIMON, *MODELS OF THOUGHT* 3 (1979) (defining "satisficing" as "aiming for the good when the best is incalculable" and arguing that satisficing provides a method of searching for and analyzing essentially infinite alternatives until a "good-enough alternative is found").

201. See Herbert A. Simon, *Theories of Bounded Rationality*, in *DECISION AND ORGANIZATION* 161, 168 (C.B. McGuire & R. Radner eds., 2d ed. 1986) ("In satisficing procedures, the existence of a satisfactory alternative is made likely by dynamic mechanisms that adjust the aspiration levels to reality on the basis of information about the environment.").

202. Simon, *supra* note 198, at 263 ("Models of satisficing behavior are richer than models of maximizing behavior, because they treat not only of equilibrium but of the method of reaching it as well.").

203. Simon, *supra* note 197, at 503 (suggesting, as an alternative to utility maximization, the "satisficing" mode of selection and arguing that "one could postulate that the decision maker had formed some *aspiration* as to how good an alternative he should find," and "[a]s he discovered an alternative for choice meeting his level of aspiration, he would terminate the search and choose that alternative").

as a response to bounded rationality. The question is not whether people sacrifice or take shortcuts, but whether the shortcuts create systematic biases and, if so, whether these biases have policy implications. Behavioral decision researchers' experiments raise just this question, and their results provide an empirical basis for questioning whether consumer satisficing is an adequate substitute for rational behavior.²⁰⁴

For example, experiments start by confirming Simon's intuition that individuals face practical limitations on the amount of information they can access and recall, and question whether more information is even helpful. These experiments explore whether individuals suffer from information overload where they have only a limited amount of time to assess the significance of information.²⁰⁵ Although the details of these experiments vary, they all ask individuals to make decisions when confronted with multiple choices. Based on these experiments, commentators, such as Jacob Jacoby, initially concluded that "[t]here appear to be definite limits to the amount of information that can be accommodated and effectively processed during a limited time span by consumers in arriving at purchase decisions."²⁰⁶ If even a small amount of complexity overloads and, thus, confuses consumers, then it may be counterproductive to provide consumers enhanced access to information, but critics disagree both with the design of these experiments²⁰⁷ and the policy prescriptions offered by these commentators,²⁰⁸ with Jacoby, at times, acting as his own worst critic.²⁰⁹

204. See, e.g., Jacob Jacoby, *Is It Rational To Assume Consumer Rationality? Some Consumer Psychological Perspectives on Rational Choice Theory*, 6 ROGER WILLIAMS U. L. REV. 83, 124–25 (2000) (enumerating various implications of problematic satisficing); Korobkin & Ulen, *supra* note 24, at 1075–1102 (explaining how satisficing techniques such as the availability heuristic, self-serving bias, and hindsight bias can affect policy decisions in the fields of tort, health care, and securities law).

205. See Lise Héroux et al., *Consumer Product Label Information Processing: An Experiment Involving Time Pressure and Distraction*, 9 J. ECON. PSYCHOL. 195, 211 (1988) (finding that the amount of product label information recalled by subjects decreased as the quantity of information contained in the product labels increased); Jacob Jacoby et al., *Brand Choice Behavior as a Function of Information Load*, 11 J. MARKETING RES. 63, 67 (1974) (finding that as the amount of grocery package label information increased, college students made poorer brand selections even though they felt more satisfied with their decisions); Jacob Jacoby et al., *Brand Choice Behavior as a Function of Information Load: Replication and Extension*, 1 J. CONSUMER RES. 33, 40 (1974) (finding that subjects—here, labeled “housewives”—started “tuning out” when too much package label information was provided about grocery store brands); Naresh K. Malhotra, *Information Load and Consumer Decision Making*, 8 J. CONSUMER RES. 419, 422–23 (1982) (finding that subjects felt dysfunctional effects when too much information was provided when deciding which house to buy); Debra L. Scammon, *“Information Load” and Consumers*, 3 J. CONSUMER RES. 148, 153–54 (1977) (finding that although television commercials successfully conveyed brand information to consumers, consumers were nonetheless not influenced by this information in brand decision-making).

206. Jacob Jacoby, *Information Load and Decision Quality: Some Contested Issues*, 14 J. MARKETING RES. 569, 570 (1977).

207. See, e.g., Kevin Lane Keller & Richard Staelin, *Assessing Biases in Measuring Decision Effectiveness and Information Overload*, 15 J. CONSUMER RES. 504, 508 (1989) (addressing and minimizing the impact of potential bias flaws identified by critics of their research); Naresh K.

In this regard, behavioral research supports the prediction of satisficing, but undercuts Simon's benign view of its consequences. Cognitive experiments demonstrate that individuals adopt time-saving strategies in order to simplify complex decisionmaking.²¹⁰ Unfortunately, this is where the wheels come off the cart. Some of these shortcuts systematically color and bias the decisions that individuals reach and undercut the notion that consumers should be modeled as rational actors. Worse, these biases may be exploited.

2. *Mental Shortcuts and Decisional Biases.*—Rational choice theory treats preferences as endogenous—generated internally by the needs and desires of each individual. Madison Avenue relies, however, on the inaccuracy of this premise. Advertisers operate on the assumption that preferences can be shaped, and that there are profits to be made by exploiting consumers' decisional biases. Cognitive research corroborates the street-wise insights of marketing success stories. The heuristics, once identified, can be manipulated and capitalized upon by sophisticated marketers. They include, among others, "framing" and "anchoring and adjustment."

Malhotra et al., *The Information Overload Controversy: An Alternative Viewpoint*, 46 J. MARKETING 27, 29–30 (1982) (remarking how market researchers have rejected the conclusions of information overload experiments because of several common analytical flaws); Naresh K. Malhotra, *Reflections on the Information Overload Paradigm in Consumer Decision Making*, 10 J. CONSUMER RES. 436, 439 (1984) (noting that although consumers can be overloaded with information, many prior experiments did not demonstrate this phenomenon due to ambiguous experimental results); John O. Summers, *Less Information is Better?*, 11 J. MARKETING RES. 467, 467–68 (1974) (questioning the accuracy of Jacoby's study of college students because of experimental procedure and evaluation issues).

208. See, e.g., David M. Grether et al., *The Irrelevance of Information Overload: An Analysis of Search and Disclosure*, 59 S. CAL. L. REV. 277, 278–79 (1986) (rejecting any notion of regulatory market response to consumer information overload because consumers adequately satisfice, rather than become "overloaded," when confronted with large amounts of information).

209. See, e.g., Jacob Jacoby, *Perspectives on Information Overload*, 10 J. CONSUMER RES. 432, 435 (1984) (concluding that although consumers can be overloaded, they generally will not be because they stop looking for additional information short of overload; "[t]he issue is thus considerably more subtle and complex than might be suggested by the relatively simplistic information overload paradigm").

210. See Grether et al., *supra* note 208, at 279 (reaching a similar conclusion that "when the information environment becomes very rich or the decision task becomes very complex relative to the consumer's available time or expertise, the consumer satisfices"); see also JOHN W. PAYNE ET AL., *THE ADAPTIVE DECISION MAKER* (1993) (constructing a theory of decisionmaking in which actors balance effort and accuracy); James R. Bettman et al., *Constructive Consumer Choice Processes*, 25 J. CONSUMER RES. 187, 189 (1998) (detailing decisionmaking heuristics); Melvin Aron Eisenberg, *The Limits of Cognition and the Limits of Contract*, 47 STAN. L. REV. 211, 213–25 (1995) (discussing the limits of human cognition); Korobkin & Ulen, *supra* note 24, at 1078 ("As the problem becomes more complex, either because there are more options from which to select or because each option has more attributes associated with it, actors might attempt to minimize effort by adopting simplified strategies, thus violating the procedural predictions of rational choice theory."); Herbert A. Simon, *Invariants of Human Behavior*, 41 ANN. REV. PSYCHOL. 1, 7 (1990) (noting that human behavior is "shaped by a scissors whose two blades are the structure of task environments and the computational capabilities of the actor"); Simon, *supra* note 201, at 165–74 (describing the effectiveness of "satisficing" in chess, engineering, and management science).

a. Framing.—Contrary to economic assumptions regarding the internal stability of preferences, behavioral experiments suggest that perceptions and preferences shift depending upon context.²¹¹

Observed preferences are not simply read off one master list; they are actually constructed during the elicitation process. . . . Different elicitation procedures highlight different aspects of options and suggest alternative heuristics, which give rise to inconsistent responses.²¹²

In a series of experiments, Amos Tversky and Daniel Kahneman demonstrated that the choices that individuals make depend upon how information is framed.²¹³ The same choice can elicit different responses from individuals depending upon how the problem is described.²¹⁴

The classic example of a framed decision involves two groups of people.²¹⁵ One is given a coffee mug then asked how much they would charge to give up the mug. The others are not given a coffee mug but are instead shown the same mug as the first group and asked how much they would pay to purchase such a mug. The first group consistently priced the mug higher than the second,²¹⁶ suggesting what has been termed an “endowment effect.”²¹⁷ Losses are felt more intensely than gains.

Other studies have framed equivalent choices in both negative and positive terms, and found that individuals are more likely to react positively to choices framed in terms that appear to minimize the risk of an event. For example, labeling hamburger as 75% lean evoked more favorable evaluations from potential consumers than labeling the meat in negative terms as

211. See Sunstein, *supra* note 33, at 1 (echoing a primary claim of behavioral economics that “[h]uman preferences and values are constructed rather than elicited by social situations”).

212. Amos Tversky, *Rational Theory and Constructive Choice*, in THE RATIONAL FOUNDATIONS OF ECONOMIC BEHAVIOUR 185, 186 (Kenneth J. Arrow et al. eds., 1996).

213. Amos Tversky and Daniel Kahneman coined the concept of “framing.” See Amos Tversky & Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 SCIENCE 453, 453 (1981). According to Tversky and Kahneman, “the term ‘decision frame’ . . . refer[s] to the decision-maker’s conception of the acts, outcomes, and contingencies associated with a particular choice.” *Id.*

214. See Amos Tversky & Daniel Kahneman, *Rational Choice and the Framing of Decisions*, 59 J. BUS. (BEHAV. FOUND. ECON. THEORY) S251, S257 (1986) (“Framing is controlled by the manner in which the choice problem is presented as well as by norms, habits, and expectancies of the decision maker.”).

215. Daniel Kahneman et al., *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. POL. ECON. 1325, 1329–33 (1990) (explaining how the well-known coffee mug experiment was set up by dividing college students into two groups); see also Russell Korobkin, *Behavioral Economics, Contract Formation, and Contract Law*, in BEHAVIORAL LAW & ECONOMICS, *supra* note 33, at 116, 118 (referring to the “well-known” coffee mug experiment that questioned the assumptions of rational choice theory).

216. Kahneman et al., *supra* note 215, at 1331.

217. See Amos Tversky & Daniel Kahneman, *Loss Aversion in Riskless Choice: A Reference-Dependent Model*, 106 Q.J. ECON. 1039, 1041 (1991) (explaining that the term “endowment effect,” which was coined by Richard Thaler, captures how the value of a good “appears to change when [that] good is incorporated into one’s endowment”).

containing 25% fat.²¹⁸ Similarly, framing a computer advertisement in terms of “percent of students who improved their grade” was viewed by participants as more persuasive than framing it in terms of students who did not improve their grade.²¹⁹

Pricing strategies also frame purchases for consumers.²²⁰ Sale-priced items are more desirable than identically priced items at an “everyday low price.”²²¹ Multiple-unit prices (e.g., prices that are presented as “4 cans for \$2” instead of “50¢ per can”), and purchase quantity limits (involving restricted offers of goods that set “limits of 6 per customer”) impel consumers to buy more than they otherwise would.²²² Costly product options are also more likely to be purchased when consumers are invited to remove them from the package presented than when they are offered as add-ons.

b. Anchoring and Adjustment.—Framing often works hand-in-hand with an anchoring effect: individuals tend to focus on an obvious or convenient number or event; although individuals adjust their perceptions upward or downward, they continue to skew their estimates toward the anchor.²²³ Indeed, some researchers argue that the bundle pricing effect described above may arise as a consequence of anchoring effects,²²⁴ much in the same way that consumers are lulled into viewing a product offered at \$3.99 as “about \$3.00,” and car manufacturers package models in “economy”

218. Irwin P. Levin & Gary J. Gaeth, *How Consumers Are Affected by the Framing of Attribute Information Before and After Consuming the Product*, 15 J. CONSUMER RES. 374, 376 (1988).

219. Gary J. Gaeth et al., *Framing of Attribute Information in Product Description*, in 17 ADVANCES IN CONSUMER RESEARCH 531, 532 (Marvin E. Goldberg et al. eds., 1990).

220. See Gerald E. Smith, *Framing in Advertising and the Moderating Impact of Consumer Education*, 36 J. ADVERTISING RES. 49, 53 (1996) (stating that consumers “may infer better quality” products because of their “higher prices”).

221. Gail Tom & Susan Ruiz, *Everyday Low Price or Sale Price*, 131 J. PSYCHOL. 401, 402–03 (1997) (“The failure of the everyday low price strategy when compared with the traditional marketing strategy for the department store . . . suggests that an everyday low price presentation frames a price as an expenditure, whereas a sales price presentation frames a price as a savings.”).

222. See John T. Gourville, *Pennies a Day: The Effect of Temporal Reframing on Transaction Evaluation*, 24 J. CONSUMER RES. 395, 395 (1998) (discussing the “widespread use” of the pricing strategy that reframes aggregate pricing to “a series of small daily expenses”); Brian Wansink et al., *An Anchoring and Adjustment Model of Purchase Quantity Decisions*, 35 J. MARKETING RES. 71, 72 (1998) (“Multiple-unit promotion pricing led to a 35% increase in sales compared to single-unit pricing.”).

223. See Itamar Simonson & Aimee Drolet, *Anchoring Effects on Consumers’ Willingness-to-Pay and Willingness-to-Accept*, 31 J. CONSUMER RES. 681, 688–89 (2004) (concluding that four studies reveal that willingness-to-pay and willingness-to-accept formulations are at some degree dependent on anchors pervasive in the consumer’s environment).

224. See Dipankar Chakravarti et al., *Partitioned Presentation of Multicomponent Bundle Prices: Evaluation, Choice and Underlying Processing Effects*, 12 J. CONSUMER PSYCHOL. 215, 216 (2002) (stating that anchoring may influence how bundle components are processed); Dilip Soman & John T. Gourville, *Transaction Decoupling: How Price Bundling Affects the Decision to Consume*, 38 J. MARKETING RES. 30, 42 (2001) (stating that the bundling effect on consumers of forgoing consumption when an individual benefit is part of a bundle results from the dissociation of a product’s costs and benefits).

and “luxury” versions. Others contend that branding succeeds because consumers anchor their attention on a retailer’s readily recognizable brand name, thus saving them additional search costs.²²⁵ Cognitive research also finds that individuals are reluctant to walk away from sunk costs, irrationally ignoring the marginal costs and benefits of additional action.²²⁶ Again, anchoring effects provide an explanation for individuals’ overemphasis on sunk costs.²²⁷ Researchers find that sunk cost biases influence consumers’ purchasing decisions.²²⁸ Automobile trade-ins are an example; sunk cost biases influence consumers deciding whether to replace an existing car for a newer model.²²⁹

B. Borrowing Decisions

Modern day consumers do not just purchase household realty, goods, and services; they purchase them with borrowed funds. They take out mortgages, home equity loans, and car loans; they borrow from credit unions and local finance companies; they pay off credit card debt over time, sometimes making only minimum payments. In the first quarter of 1978, there was a total of \$263,358,830,000 in consumer credit outstanding.²³⁰ In the first quarter of 2005, the total was \$2,129,200,000,000—an eightfold increase, unadjusted for inflation.²³¹ By way of comparison, consumer prices increased approximately three times,²³² and the United States population grew by about 30%²³³ during the same period. Behavioral decision research supports the suspicion that consumers borrow more than models predict rational consumer borrowers would have, and provides some explanation for this propensity.

225. Steven S. Posavac et al., *The Brand Positivity Effect: When Evaluation Confers Preference*, 31 J. CONSUMER RES. 643, 650 (2004).

226. See, e.g., Carl A. Kogut, *Consumer Search Behavior and Sunk Costs*, 14 J. ECON. BEHAV. & ORG. 381, 389–91 (1990) (highlighting study results demonstrating that study participants did not fully consider marginal costs and benefits due to the effects of sunk costs).

227. Shefrin & Thaler, *supra* note 190, at 148–52.

228. Hal R. Arkes & Catherine Blumer, *The Psychology of Sunk Cost*, 35 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 124, 129 (1985); Chip Heath, *Escalation and De-escalation of Commitment in Response to Sunk Costs: The Role of Budgeting in Mental Accounting*, 62 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 38, 40 (1995).

229. See Erica Mina Okada, *Trade-ins, Mental Accounting, and Product Replacement Decisions*, 27 J. CONSUMER RES. 433, 435 (2001) (explaining how the sunk cost effect relates to and influences replacement purchasing decisions).

230. FED. RESERVE, G.19, *supra* note 91.

231. *Id.*

232. See Bureau of Labor Statistics, Inflation Calculator, <http://data.bls.gov/cgi-bin/cpicalc.pl> (demonstrating that \$1.00 in 1978 would have the buying power of \$3.03 in 2005).

233. Compare U.S. CENSUS BUREAU, TABLE 1: ANNUAL ESTIMATES OF THE POPULATION FOR THE UNITED STATES AND STATES, AND FOR PUERTO RICO: APRIL 1, 2000 TO JULY 1, 2004 (Dec. 22, 2004), <http://www.census.gov/popest/states/tables/NST-EST2004-01.pdf> (containing population estimates for 2004), with U.S. CENSUS BUREAU, HISTORICAL NATIONAL POPULATION ESTIMATES: JULY 1, 1900 TO JULY 1, 1999 (June 28, 2000), <http://www.census.gov/popest/archives/1990s/popclockest.txt> (including population estimates for 1978).

The decision to finance household purchases involves complex comparisons and calculations. Because current expenditures rarely match current income, individuals may choose to pay for household purchases with accumulated cash or by incurring debt. Deciding whether to purchase property or services with cash or borrowed funds complicates the budgeting process. Consumers must compare the relative costs and benefits of credit and cash, while simultaneously comparing products and their acquisition prices. Consumer credit transactions are costly to the borrower because they add interest charges and other fees to the underlying price of the purchase. Consumption must be balanced against investing the funds and delaying consumption to a later period. Each of these costs and benefits requires consideration of the time value of money, the annual percentage rate associated with the interest charges, the relative merits of incurring secured versus unsecured credit, and other complex legal and arithmetic issues. Needless to say, individuals often miscalculate the cost of debt and the amount of debt that they can afford.²³⁴

Ultimately, a rational consumer–borrower decides both whether she can afford the item and whether she prefers to finance the purchase over time, rather than pay with cash or savings. The decision to borrow requires the debtor to assess at least four sub-issues:²³⁵ (i) How much do I owe already? (ii) What is the cost of the new credit transaction? (iii) What is the likelihood that my income will remain constant, increase, or decrease in the next period? (iv) Which is stronger, my preference for current consumption or my preference for consumption in the future?

Rational actor models of consumer borrowing purport to provide ready answers to these questions. They presume that borrowers possess full information, have the complete ability to assess debt levels and credit costs, and can make comparisons among various borrowing and savings options. Moreover, economists presume that individuals' intertemporal choices—their decisions about tradeoffs among costs and benefits occurring at different points in time—are a function of only one thing: the discount rate.²³⁶ Policymakers applying common sense and practical experience have long

234. See Shefrin & Thaler, *supra* note 190, at 91 (noting that it is “trite to point out that few consumers are capable of making the present value calculations implicit” in rational actor models of consumption and savings decisions over time).

235. According to incentive analysts, the decision also involves an assessment of the relative costs and benefits of a bankruptcy filing.

236. See Paul A. Samuelson, *A Note on Measurement of Utility*, 4 REV. ECON. STUD. 155, 156–59 (1937) (proposing a discounted-utility model of intertemporal choice); see also Shane Frederick et al., *Time Discounting and Time Preference: A Critical Review*, 40 J. ECON. LITERATURE 351, 351 (2002) (describing Samuelson's discounted-utility model and concluding that its “central assumption . . . is that all of the disparate motives underlying intertemporal choice can be condensed into a single parameter—the discount rate”).

questioned the accuracy of these assumptions. Cognitive psychologists support these suspicions with behavioral decision research.²³⁷

1. *Cognitive Dissonance in Credit Card Transactions: How Much Have I Borrowed?*—Researchers observe that consumers who use credit cards are willing to spend more in otherwise identical purchasing situations than those who use cash or checks,²³⁸ and that those who predominantly use credit cards spend more overall than those who do not.²³⁹ Theorists have developed various explanations for this propensity. While a number of rational explanations for credit card use exist²⁴⁰—for instance, convenience and retailer acceptability²⁴¹—some commentators offer less benign explanations for consumers' propensity to spend more when using a credit card than when paying by cash or check.²⁴² For example, some commentators question consumers' abilities to integrate pending purchasing decisions into past purchasing practices.²⁴³

237. Although a plethora of experiments confirm the presence of decisional biases when individuals decide to purchase goods and services, little behavioral decision research sets out to test the presence and nature of biases in consumers' decisions to borrow. We hope this Article sheds light on the need for cognitive research on borrowing decisions.

238. See, e.g., Richard A. Feinberg, *Credit Cards as Spending Facilitating Stimuli: A Conditioning Interpretation*, 13 J. CONSUMER RES. 348, 348 (1986) (citing studies where consumers reported spending greater amounts when purchasing with a credit card); Elizabeth C. Hirschman, *Differences in Consumer Purchase Behavior by Credit Card Payment System*, 6 J. CONSUMER RES. 58, 64 (1979) (reporting study results indicating that consumers that paid with a credit card spent more than consumers that paid with cash); Dražen Prelec & Duncan Simester, *Always Leave Home Without It: A Further Investigation of the Credit-Card Effect on Willingness to Pay*, 12 MARKETING LETTERS 5, 8 (2001) (reporting that study participants were willing to pay much higher values for sporting tickets if given the opportunity to pay with a credit card).

239. See Dilip Soman, *Effects of Payment Mechanism on Spending Behavior*, in MARKETING AND PUBLIC POLICY CONFERENCE PROCEEDINGS 12, 12 (Alan Andreasen et al. eds., 1998) (providing that credit card use reduces memory of individual payments resulting in an overstatement of available budgets for credit card users); see also Howard Tokunaga, *The Use and Abuse of Consumer Credit: Application of Psychological Theory and Research*, 14 J. ECON. PSYCHOL. 285, 288–89 (1993) (referring to studies that found that use of credit cards was correlated to the number of purchases made and the amount spent).

240. Dražen Prelec & George Loewenstein, *The Red and the Black: Mental Accounting of Savings and Debt*, 17 MARKETING SCI. 4 (1998).

241. See Dilip Soman, *Effects of Payment Mechanism on Spending Behavior: The Role of Rehearsal and Immediacy of Payments*, 27 J. CONSUMER RES. 460, 460 (2001) (noting that research indicates “the choice of a payment mechanism is often . . . driven by simple[] considerations like convenience . . . , acceptability . . . , accessibility . . . , and habit”).

242. See Feinberg, *supra* note 238, at 354 (summarizing results of several experiments indicating that the presence of credit cards acts as a stimulus for spending); Hirschman, *supra* note 238, at 64 (reporting results of a study that supports the hypothesis that total dollars spent and average transaction size were higher for credit card transactions).

243. Frederick et al., *supra* note 236, at 356 (“While integration seems normatively compelling, it may be too difficult to actually do. A person may not have well-formed plans about future consumption streams, or be unable (or unwilling) to recompute the new optimal plan every time she makes an intertemporal choice.”).

Sociologist Ronald Manning describes credit card purchases as creating cognitive dissonance for consumers.²⁴⁴ With cash, consumers find tangible limits to their purchasing power—when the currency runs out in my pocketbook, so does my purchasing power. By contrast, a credit-card-wielding consumer can incur credit obligations without cash outlays at the point of purchase. Bills arrive days or weeks later, and even then may not demand repayment of the entire purchase price. With credit card obligations, borrowers may be required to make only a minimum payment that covers very little principal.

Lawrence Ausubel, an economist, agrees that some credit card users may be confused at the point of purchase about the likely extent of their borrowing. He hypothesizes that consumers underestimate the extent of their current and future credit card borrowing,²⁴⁵ and as a result argues that consumers “make suboptimal decisions regarding the choice and usage of credit cards.”²⁴⁶ He bases this underestimation hypothesis, in part, on his finding that nearly three-quarters of active credit card accounts incur finance charges although survey research indicates that 47% of responding credit card users report that they “nearly always pay in full,” 26% “sometimes pay in full,” and only 27% report “hardly ever paying in full.”²⁴⁷

Experiments support the proposition that cognitive dissonance may cause credit card users to spend more than those who pay in cash.²⁴⁸ Behavioral research indicates that purchasing decisions differ depending on the payment mechanism used.²⁴⁹ Experiments indicate that certain means of payment, especially credit card transactions, lead consumers to underestimate past expenditures and thus inflate their perceived ability to afford the

244. MANNING, *supra* note 22, at 292 (“[I]t is clear that bank credit cards have fractured the culturally conditioned ‘cognitive connect’ between earnings and consumption. In the process, they have profoundly changed the determinative role of work in defining one’s consumption or even employment decisions.”).

245. Lawrence M. Ausubel, *The Failure of Competition in the Credit Card Market*, 81 AM. ECON. REV. 50, 70–72 (1991).

246. Lawrence M. Ausubel, *Credit Card Defaults, Credit Card Profits, and Bankruptcy*, 71 AM. BANKR. L.J. 249, 261 (1997).

247. Ausubel, *supra* note 245, at 71–72. Ausubel also notes that high search and switch costs might play a part in explaining why consumers remain captive to their credit card companies. *Id.* at 69. Other studies corroborate the high search and switch costs consumers face. See, e.g., Paul S. Calem & Loretta J. Mcster, *Consumer Behavior and the Stickiness of Credit-Card Interest Rates*, 85 AM. ECON. REV. 1327, 1333, 1335 (1995) (providing empirical support for the contention that cardholders face search and switch costs).

248. See Soman, *supra* note 241, at 472–73 (finding that past payments strongly reduce the intention to purchase when the payment mechanism requires the consumer to write down the amount paid and when the consumer’s wealth is depleted immediately rather than with delay); Joydeep Srivastava & Priya Ragbubir, *Debiasing Using Decomposition: The Case of Memory-Based Credit Card Expense Estimates*, 12 J. CONSUMER PSYCHOL. 253, 254–55 (2002) (developing a framework for examining how consumers incorporate memory-based and context-based cues in estimating past and future credit card expenses).

249. See *supra* text accompanying notes 238–243.

additional purchase.²⁵⁰ Some of these experiments suggest that credit card customers have a more difficult time recalling past purchases than do cash customers and, as a result, find it difficult to rehearse the consequences of added credit transactions.²⁵¹ By contrast, research shows that cash and check transactions enjoy an immediacy of payment that permits greater recall.²⁵² Others find that consumers' credit card spending is influenced by credit limits, which consumers rely on as a signal of their future earnings potential.²⁵³

2. *What is the Cost of Credit?*—In assessing whether a consumer credit obligation is affordable, individuals need to be able to assess its costs and terms. The federal Truth in Lending Act (TILA) requiring lenders to disclose the Annual Percentage Rate (APR) and other terms assists consumers in this process,²⁵⁴ but it is not clear that this sort of disclosure is sufficient to overcome individuals' bounded rationality.

Disclosure regimes are premised upon consumers' abilities to comprehend basic arithmetic and financial terms, but empirical studies of adult literacy skills, including financial literacy, in the United States raise substantial doubts on this score.²⁵⁵ When thousands of adults from across the country were given tests of basic math and basic literacy, a significant portion of the population was unable to make the comparisons necessary to assess the cost of credit card debt.²⁵⁶ And while education may assist some

250. See Dilip Soman & Amar Cheema, *The Effect of Credit on Spending Decisions: The Role of Credit Limit and Credibility*, 21 *MARKETING SCI.* 32, 34 (2002) (noting that studies suggest that overspending by credit card users occurs because credit card purchases are "more easily forgotten and painless"); Soman, *supra* note 241, at 463 (reporting findings that the weaker associations with past purchases displayed by credit card users commonly resulted in miscalculations by those consumers as to the amount of income actually remaining for additional purchases).

251. Soman, *supra* note 241, at 463.

252. See *id.* (describing the results of experiments indicating that, when consumers exiting a store were asked how much they had just spent, 66.7% of those who used cash or check were able to recall the actual amount spent, while only 8% of those who used credit were able to do so); Srivastava & Raghubir, *supra* note 248, at 254 (observing that for those consumers who pay cash "there is an 'immediate pain' of paying that provides a natural check for those in danger of overspending").

253. Soman & Cheema, *supra* note 250, at 32 (explaining that consumers are often "unable to correctly value their future incomes" and tend to rely on credit limits to indicate those values).

254. Truth in Lending Act, 15 U.S.C. § 1637 (2000).

255. See, e.g., IRWIN S. KIRSCH ET AL., NAT'L CTR. FOR EDUC. STATISTICS, *ADULT LITERACY IN AMERICA: A FIRST LOOK AT THE FINDINGS OF THE NATIONAL ADULT LITERACY SURVEY*, at xvi–xvii (1993), available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=93275> (reporting findings that some 90 million Americans were unable to perform quantitative calculations beyond simple addition and subtraction operations). For a discussion of the NALS study and its implications for consumer bankruptcy policy and financial literacy education, see Susan Block-Lieb, *Mandatory Protections as Veiled Punishments: Debtor Education in H.R. 975, the Bankruptcy Abuse and Consumer Protection Act of 2003*, 69 *BROOK. L. REV.* 425, 430–40 (2004).

256. See Block-Lieb, *supra* note 255, at 438–39 (observing that the documented financial illiteracy of many Americans "ill prepare[s]" them to navigate our increasingly credit-driven economy).

consumers in raising the level of their financial literacy skills,²⁵⁷ financial literacy training is not widely available today, even for those still in school.²⁵⁸

Perhaps as a result of the anchoring heuristic, the basic rule of thumb for borrowing seems to be: “Can I afford the monthly payment?” This requires minimal calculation, but it also avoids any calculation or awareness of the cost of credit. It also obscures any comparison between the cost of credit and the cost of paying for a household purchase out of savings, and any comparison of competing credit offers. Most importantly, it renders disclosure of APR and related credit terms interesting but irrelevant.

A variety of credit practices seem designed to obscure the overall cost of credit and encourage consumers to make borrowing decisions based on the affordability of the monthly payment. Credit card bills inform consumers about total outstanding indebtedness, finance charges, and minimum monthly payments. Consumers then anchor on the minimum monthly payment figure to conclude that their credit card obligations present affordable credit terms. They are not likely to perform any more complex calculations regarding the overall cost of credit and term of the loan. Existing data on consumer borrowing behavior, although limited, tends to support this hypothesis. While there is some evidence suggesting that TILA may have increased consumer borrowers’ awareness of some credit terms, such as the annual percentage rate,²⁵⁹ this “may have been limited to well-educated, affluent borrowers.”²⁶⁰ There is also evidence to suggest that borrower awareness of terms not covered by TILA, like the dollar amount of finance charges in open-end credit transactions, has fallen since passage of the Act.²⁶¹

Many predatory credit schemes are premised upon convincing borrowers that their high-priced transactions are affordable. These schemes often couple low monthly payments with hidden or unexpected terms, including high default rates and other fees, which invite borrowers to ignore

257. Richard L. Wiener et al., *Debtor Education, Financial Literacy, and Pending Bankruptcy Legislation*, 23 BEHAV. SCI. & L. 347, 363 (2005) (finding that a three-hour long financial literacy course significantly improved knowledge of bankruptcy debtors).

258. In addition to means-testing access to chapter 7 bankruptcy for individuals whose income exceeds local median levels, the 2005 Bankruptcy Code amendments require individual debtors to attend an approved “personal financial management course” as a condition to obtaining a discharge in either a chapter 7 or chapter 13 case. While we have doubts about the wisdom of mandating debtors’ financial education, see Block-Lieb, *supra* note 255, at 427–28, and while we are certain that it will take some time before suitable providers of personal financial courses can be approved in every federal district, we do agree that the requirement should increase the availability of such education for debtors in bankruptcy.

259. See, e.g., Lewis Mandell, *Consumer Perception of Incurred Interest Rates: An Empirical Test of the Efficacy of the Truth-in-Lending Law*, 26 J. FIN. 1143, 1153 (1971) (finding increased awareness of interest rates on consumer installment loans after the Truth-in-Lending Act was passed).

260. Hynes & Posner, *supra* note 153, at 194.

261. *Id.*

both the high aggregate cost of credit and the risk of a loss of equity in the collateral.

Additional practical support for the proposition that consumers focus more on their monthly payments than the overall cost of the transaction can be found in studies of consumers' decisions to lease rather than finance new car purchases. The decision to lease versus buy involves a complex calculus of financial and other considerations. Some commentators wondered whether consumers preferred lease transactions because they misunderstood the terms,²⁶² and effective 1997, the Federal Reserve Board promulgated revisions to Regulation M of the Consumer Leasing Act requiring clearer and more uniform disclosure of the terms of lease transactions.²⁶³ A recent study that looked at data collected in the Survey of Consumer Finances (SCF) found that "[f]or much of the 1990s, leasing a given vehicle often involved a smaller upfront payment and lower monthly payment than taking out a loan."²⁶⁴ Considering SCF data, the authors found little to support the contention that less creditworthy households favored leasing transactions, but did find that, for those in the twenty-fifth to forty-ninth percentiles of income distribution, "the median ratio of payments to income is now higher for households with leases than for households with loans."²⁶⁵ Moreover, they found strong support for the proposition that "within income groups, values of vehicles financed by leasing tended to be notably more expensive than those financed by loans."²⁶⁶

3. *Overconfidence: Will I Have Sufficient Income in the Next Period?*—To rationally determine whether to incur debt in a consumer finance transaction, a borrower must know what her income and other expenses are likely to be during the period over which the loan will be repaid. But consumers have difficulty assessing the likelihood that they will lose their job, have an additional child, get divorced, or incur a substantial uninsured

262. See Stephen E. Miller, *Economics of Automobile Leasing: The Call Option Value*, 29 J. CONSUMER AFF. 199, 213 (1995) (attributing the upswing in automobile leasing in part to consumers' false belief that leasing is cheaper than buying); Bennie H. Nunnally, Jr. & D. Anthony Plath, *Leasing Versus Borrowing: Evaluating Alternative Forms of Consumer Credit*, 23 J. CONSUMER AFF. 383, 383–84 (1989) (offering several reasons why consumers mistakenly believe that automobile leasing is cheaper than purchasing).

263. 61 Fed. Reg. 52246-01, 52246 (Oct. 7, 1996). The Consumer Leasing Act, 15 U.S.C. §§ 1667–1667e (2000), was enacted in 1976 as an amendment to the Truth-in-Lending Act, 15 U.S.C. §§ 1601–1667f (2000). *Id.* In 2005, pursuant to its general rulemaking authority, the Federal Reserve Board adopted Regulation M. 12 C.F.R. § 213.1 (2005).

264. Ana Aizcorbe et al., *The Replacement Demand for Motor Vehicles: Evidence from the Survey of Consumer Finances* 6 (Fed. Reserve Bd. Fin. & Econ. Discussion Series, Working Paper No. 2003-44, 2003), available at <http://www.federalreserve.gov/pubs/feds/2003/200344/200344pap.pdf>.

265. *Id.* at 8.

266. *Id.* at 9.

medical expense.²⁶⁷ Depending upon whether the individual over- or undercalculates the risk of income interruptions, she may borrow less or more than a rational consumer borrower. In the absence of a systematic bias, this should not affect the overall efficiency of the system. If individuals overestimate with about the same frequency that they underestimate, economists are not troubled.

Unfortunately, individual decisionmakers suffer what behaviorists term an “overconfidence bias”—“the belief that good things are more likely than average to happen to us and bad things are less likely than average to happen to us.”²⁶⁸ Potential borrowers are more likely to underestimate than overestimate the risks associated with uncertainty, particularly when they believe themselves to have control over these events. For example, Lynn Baker and Robert Emery conducted a survey of Virginia residents applying for marriage licenses.²⁶⁹ They found that, although most participants knew that close to half of all marriages end in divorce, none of them predicted that their own marriage might end in divorce.²⁷⁰

Neil Weinstein corroborated this result more generally.²⁷¹ He asked college students to estimate whether an event was more or less likely to happen to them than to their classmates, and found that, on the average, respondents answered that good things (such as the possibility of owning their own homes or avoiding a hospital stay) were more likely to happen to them than fellow students and that bad things (such as divorce, job loss, or debilitating disease) were more likely to happen to others than to

267. See Korobkin & Ulen, *supra* note 24, at 1083 (describing, in the language of rational choice theory, the uncertainty involved in making decisions where the consumer is unsure of or unable to ascertain the likelihood of certain alternatives occurring, thereby making it difficult to make “optimal” choices). Korobkin and Ulen provide the following example of ambiguity regarding the content of a decision alternative:

Consider, for example, the purchaser of home insurance who must decide whether to pay an additional annual sum for a rider that would protect him in case of earthquake damage. If the purchaser could estimate the probability that an earthquake will destroy his home, he could maximize his utility by comparing the cost of the added insurance to the expected benefit it would provide. But if the purchaser can neither estimate the likelihood of earthquake damage nor obtain information that would allow him to do so, it becomes impossible for him to make the type of optimizing decision that rational choice theory predicts.

Id. at 1083.

268. *Id.* at 1091.

269. Lynn A. Baker & Robert E. Emery, *When Every Relationship is Above Average: Perceptions and Expectations of Divorce at the Time of Marriage*, 17 L. & HUM. BEHAV. 439, 440 (1993).

270. See *id.* at 443 (“Respondents’ predictions for the permanence of their own marriages . . . were much more optimistic than their perceptions of the likelihood . . . of divorce for others. For example, although their median response was an accurate estimate that 50% of U.S. couples who marry will divorce, the *median* response of the marriage license applicants was 0% when assessing the likelihood that they personally would divorce.”).

271. Neil D. Weinstein, *Unrealistic Optimism About Future Life Events*, 39 J. PERSONALITY & SOC. PSYCHOL. 806, 818–19 (1980).

themselves.²⁷² In addition, Weinstein found that respondents were much more likely to be overconfident of their chances of avoiding a negative event when the negative event was perceived as within their control, such as getting into a car accident.²⁷³ More recently, Stefano DellaVigna and Ulrike Malmendier reviewed data from three U.S. health clubs with information on the contract choices and day-to-day attendance decisions of nearly 8,000 health club members over a three-year period. They compared customer choices among two flat rate contracts (monthly and annual) and a pay-per-visit option. They found that members who chose the flat rate option often chose incorrectly, overestimating their future usage by more than 100 percent.²⁷⁴

Research demonstrating an overconfidence bias suggests that consumer borrowers will underestimate the likelihood that negative events will create interruptions in their future income. People who underestimate the possibility of future reversals will incur more indebtedness than an unbiased, instrumentally rational consumer would have. Because individuals may be unable to estimate the probability of job loss or substantial reduction in income, it is questionable that they will maximize utility when determining whether and how much to borrow.

Lenders' pricing practices seem designed to take advantage of this overconfidence bias in consumer credit transactions. A focus on the market-wide reduction in the annual charges imposed by consumer credit providers, particularly credit card lenders, since the mid-1990s does not tell the complete story of the cost of consumer credit. Consumer lenders also started to offer teaser rates, which last only for a limited time at the initiation of a new credit card relationship. Moreover, industry experts note the emergence of differential pricing between prime and subprime borrowers,²⁷⁵ and a growth in the use of transaction triggered fees and charges.²⁷⁶ While lenders have generally abandoned annual fees, they have increasingly imposed charges that are triggered by late payments. Industry experts also report the

272. *Id.* at 813–14. Subsequent work by Weinstein tends to suggest that the overconfidence bias is not limited to young college-aged students. Neil D. Weinstein, *Unrealistic Optimism About Susceptibility to Health Problems: Conclusions from a Community-Wide Sample*, 10 J. BEHAV. MED. 481, 487–89 (1987).

273. Weinstein, *supra* note 271, at 814.

274. Stefano DellaVigna & Ulrike Malmendier, *Overestimating Self-Control: Evidence from the Health Club Industry 2* (Nat'l Bureau of Econ. Research, Working Paper No. 10819, 2004), available at <http://www.nber.org/papers/w10819> [hereinafter DellaVigna & Malmendier, *Overestimating*]; see also Stefano DellaVigna & Ulrike Malmendier, *Contract Design and Self-Control: Theory and Evidence*, 119 Q.J. Econ. 353 (2004) [hereinafter DellaVigna & Malmendier, *Theory and Evidence*] (showing that contracts in industries such as health clubs, credit cards, and mobile phones are designed to take advantage of consumers' overconfidence bias).

275. See Furletti, *supra* note 92, at 7–8 (“The lowest risk customers, who once paid the same price as high-risk customers, now enjoy rate discounts . . .”).

276. See *id.* at 10–12 (discussing lenders' increasing reliance on risk-based fees such as “late fees, over-limit fees, and bounced-check fees”).

imposition of “over-draft” or “over-limit” charges that apply in the event the card user makes a purchase in excess of the credit card limit. Credit agreements increasingly include “universal default” clauses, which permit the imposition of default interest rates, not only where the consumer borrower defaults to that lender, but also if there is a “cross default” on any other transaction, even with another lender. They also have included provisions that allow them to change the terms of the credit card seemingly “at will”—that is, the lender can increase the rate or change the events that trigger default, for any reason or for no reason at all.

These techniques are used by more marginal lenders, as well. Experts at the FDIC report that subprime lenders (at least those under the jurisdiction of the FDIC) earn considerable amounts from these noninterest charges.²⁷⁷ Payday lenders are infamous for their effective APRs, between 400 percent and 900 percent per year, which borrowers encounter when they “roll over” a short-term loan to subsequent periods.²⁷⁸

Each of these contract terms is made more profitable by consumer borrowers’ overconfidence that they, unlike countless other Americans, will both remember to pay their bills on time and have sufficient income to do so. And while we would be the first to admit that these noninterest charges may have assisted lenders in keeping down the cost of credit for consumers who religiously pay their bills on time and putting the costs of default squarely on defaulting consumers, both goals we fully support, we worry that consumers are unlikely to price the expected cost of these terms at the initiation of the credit card transaction (even if they were able to negotiate with their credit card and other consumer credit providers on this basis) precisely because their overconfidence blinds them to the full potential for these costs. The fact that neither the TILA nor other disclosure requirements oblige lenders to reveal all noninterest charges²⁷⁹ exacerbates consumer borrowers’ blind spots.

4. *Current Consumption Versus Delayed Gratification?*—Rational consumers must choose between present and future consumption. This intertemporal choice depends on the consistency of the relative weight attached to prospective well-being as compared to present consumption—the consumer’s discount rate.²⁸⁰ This may not be true. In reality, few individuals

277. Yom, *supra* note 122, at 35 tbl.2. While net noninterest income does not exceed net interest income, that result follows only because subprime lenders’ interest expenses (i.e., cost of funds) pale in comparison to their noninterest expenses (i.e., all other costs of subprime lending, including administration, collection, and charge-offs). *Id.* at 20.

278. John Caskey, *Fringe Banking and the Rise of Payday Lending*, in *CREDIT MARKETS FOR THE POOR* (Patrick Bolton & Howard Rosenthal eds., 2005).

279. See Furletti, *supra* note 92, at 13–14 (discussing disclosure requirements for various fees in the credit card industry).

280. Samuelson, *supra* note 236; see also VARIAN, *supra* note 41, at 187–89 (describing the role of inflation in the choices people make between present and future consumption); Frederick et

exercise the self-control that is required for rational delayed gratification.²⁸¹ The impulse for immediate gratification is often irresistible, notwithstanding the long-term consequences of such action.²⁸²

Behavioral decision research confirms that consumers may have inconsistent intertemporal preferences.²⁸³ Experimental data suggests that individuals are more likely to finance purchases with debt than delay consumption until the purchase can be made out of savings, and that individuals are willing to pay higher rates of interest on small purchases than big-ticket items. This systematically biased decisionmaking is the result of a number of behavioral dynamics.

a. Hyperbolic Discounting.—Individuals do not apply a single discount rate over their lifetime.²⁸⁴ Richard Thaler asked respondents to specify the amount of money they would require in one month, one year, and

al., *supra* note 236, at 356 (stating a central assumption in most models of intertemporal choice—that people evaluate new alternatives by integrating them with existing plans—and suggesting that it is too difficult to do in most cases).

281. See, e.g., IRVING FISHER, *THE THEORY OF INTEREST* 61–98 (1930) (describing the role of “time preference,” or “human impatience,” in an economic theory of interest); MILTON FRIEDMAN, *A THEORY OF THE CONSUMPTION FUNCTION* 4, 222 (1957) (arguing that consumers adjust consumption based on expected future income, as opposed to current income, and other factors affecting consumers’ desires for current consumption); Samuelson, *supra* note 236, at 156 (including the assumption that people discount future utility in a model for measuring the marginal utility of income).

282. See Sunstein, *supra* note 33, at 122 (noting that “people are myopic, at least some of the time” in that they “overemphasize the short term and care less about the future than conventional theory would predict”).

283. Frederick, Loewenstein, and O’Donoghue summarize the results of this research succinctly as follows:

Over the last two decades, empirical research on intertemporal choice has documented various inadequacies of the DU model as a descriptive model of behavior. First, empirically observed discount rates are not constant over time, but appear to decline—a pattern often referred to as hyperbolic discounting. Furthermore, even for a given delay, discount rates vary across different types of intertemporal choices: gains are discounted more than losses, small amounts more than large amounts, and explicit sequences of multiple outcomes are discounted differently than outcomes considered singly.

Frederick et al., *supra* note 236, at 360.

284. Korobkin & Ulen, *supra* note 24, at 1120 (“For example, an individual who would prefer \$10 today to \$11 in exactly one year should also prefer \$10 five years from now to \$11 six years from now. The interest rate in both cases is 10% per year, and any individual should have a stable preference for earning that rate of return or enjoying earlier consumption.”); see, e.g., Uri Benzion et al., *Discount Rates Inferred From Decisions: An Experimental Study*, 35 *MGMT. SCI.* 270, 282–83 (1989) (reporting experimental research finding varying discount rates, even when the subjects of the experiment were financially sophisticated); George Loewenstein & Richard H. Thaler, *Anomalies: Intertemporal Choice*, 3 *J. ECON. PERSP.* 181, 182, 191–92 (1989) (“[R]esearch shows that depending on the context examined, the implied discount rates of observed behavior can vary from negative to several hundred percent per year.”); Richard Thaler, *Some Empirical Evidence on Dynamic Inconsistency*, 8 *ECON. LETTERS* 201, 205–06 (1981) (presenting experimental research finding that the subjects’ individual discount rates varied depending on various factors).

ten years to make them indifferent to receiving \$15 now.²⁸⁵ The responses—\$20, \$50, and \$100 respectively—imply a wildly divergent range of average implicit annual discount rates—345%, 120%, and 9%—over the three periods.²⁸⁶ Other studies report similar “hyperbolic discounting” among respondents.²⁸⁷ Indeed, after extensively reviewing this literature, Shane Frederick, George Loewenstein, and Ted O’Donoghue contend that hyperbolic discounting “is also evident *across* studies.”²⁸⁸ They argue that the only remaining question is the precise shape of the inconstant discount rate,²⁸⁹ rather than the fact of its inconstancy.²⁹⁰

285. Thaler, *supra* note 284, at 203–04.

286. *Id.* at 204.

287. See, e.g., Uri Benzion et al., *supra* note 284, at 282 (finding that the discount rate applied by subjects declined as the waiting time increased); Gretchen B. Chapman, *Temporal Discounting and Utility for Health and Money*, 22 J. EXPERIMENTAL PSYCHOL.: LEARNING, MEMORY, & COGNITION 771, 787 (1996) (finding that delay influences both health and money discount rates); Gretchen B. Chapman & Arthur S. Elstein, *Valuing the Future: Temporal Discounting of Health and Money*, 15 MED. DECISION MAKING 373, 383–85 (1995) (discussing the impact of temporally bounded events on discount rates as an explanation as to why discount rates are generally higher for health than for money); DellaVigna & Malmendier, *supra* note 274, at 30 (reporting findings regarding health club contract choice and usage that “are difficult to reconcile with the standard assumptions of time-consistent preferences and rational expectations”); John L. Pender, *Discount Rates and Credit Markets: Theory and Evidence from Rural India*, 50 J. DEV. ECON. 257, 285–88 (1996) (attempting to explain why higher discount rates resulted from experiments involving a shorter time frame and why discount rates were lower in experiments involving larger rewards); Donald A. Redelmeier & Daniel N. Heller, *Time Preference in Medical Decision Making and Cost-Effectiveness Analysis*, 13 MED. DECISION MAKING 212, 214–16 (1993) (challenging the assumption of discount rate constancy with findings of smaller discount rates for more distant time intervals). Experimenters also observe preference reversals—situations in which respondents prefer, for example, \$110 in 31 days over \$100 in 30 days, but also prefer \$100 now over \$110 tomorrow. See Leonard Green et al., *Temporal Discounting and Preference Reversals in Choice Between Delayed Outcomes*, 1 PSYCHONOMIC BULL. REV. 383, 387 (1994) (finding that increases of equal amounts of time before the receipt of smaller and larger rewards results in preference reversals from the smaller award to the larger reward); Kris N. Kirby & R.J. Herrnstein, *Preference Reversals Due to Myopic Discounting of Delayed Reward*, 6 PSYCHOL. SCI. 83, 88 (1995) (challenging the constancy of discount rates assumed by economic theory with experimental data showing that subjects consistently reversed their preference from a smaller, earlier reward to a larger, later reward as the delays to both rewards were decreased by constant amounts of time); Andrew Millar & Douglas J. Navarick, *Self-Control and Choice in Humans: Effects of Video Game Playing as a Positive Reinforcer*, 15 LEARNING & MOTIVATION 203, 215–16 (1984) (finding that the extension of unequal delays of reinforcement by equal intervals while keeping the amounts of reinforcement equal decreased the preference for shorter delays); Jay Solnick et al., *An Experimental Analysis of Impulsivity and Impulse Control in Humans*, 11 LEARNING & MOTIVATION 61, 74–75 (1980) (discussing evidence of preference reversal in experiments involving noise termination reinforcement).

288. Frederick et al., *supra* note 236, at 361.

289. One commentator has proposed a different explanation for the wealth of experimental results supporting hyperbolic discounting. Daniel Read has suggested that the observed results may be due to “subadditive time discounting,” meaning that the time discounting reported over a delay is greater when the delay is divided into subintervals. See Daniel Read, *Is Time-Discounting Hyperbolic or Subadditive?*, 23 J. RISK & UNCERTAINTY 5 (2001) (presenting results of experimental research suggesting that subadditive time discounting presents a plausible account of time preference).

This conclusion has obvious implications for consumer credit decisions. Credit cards create an opportunity for present consumption, in return for future payments. If one is indifferent between \$15 now and \$20 in a year, perhaps one would also be willing to pay \$20 in a year for \$15 now. If the implicit discount rate is 345% for a one-year loan, that creates a significant opportunity for the marketers of payday loans. It suggests a perverse willingness to pay high interest for short-term loans, and an insistence on lower interest rates for long-term loans. In short, "people will always consume more in the present than called for by their previous plans."²⁹¹ To enable this present consumption, consumers will borrow more than would maximize utility in the long run.²⁹²

b. Other Anomalies in the Discount Rate.—Consumers' implicit discount rates also vary depending upon the overall size of the benefit or cost at issue.²⁹³ Individuals do not equate the choice between \$100 today and \$150 in a year with the choice between \$10 today and \$15 in a year, implicitly assigning a higher discount rate to smaller-sized transactions. Studies varying outcome size consistently find that large outcomes are discounted at lower rates than small ones.²⁹⁴ They are therefore more likely

290. Frederick et al., *supra* note 236, at 393 (noting that "there is no reason to expect that discount rates *should* be consistent across different choices" due in part to "the diversity of considerations that are relevant in intertemporal choices").

291. THALER, *THE WINNER'S CURSE*, *supra* note 190, at 98; *see also* R.H. Strotz, *Myopia and Inconsistency in Dynamic Utility Maximization*, 23 *REV. ECON. STUD.* 165, 177–78 (1955) (recognizing that an individual's present behavior will be inconsistent with past optimal plans).

292. Harris & Laibson, *supra* note 9; Laibson et al., *supra* note 9.

293. *See* Korobkin & Ulen, *supra* note 24, at 1121–22 (arguing that the opportunity costs of waiting for a small benefit will be foregone consumption whereas the opportunity costs of waiting for a large benefit will be foregone interest or investment); Loewenstein & Thaler, *supra* note 284, at 187 (observing that "the cost of waiting for a small windfall may be foregone consumption, while in contrast, the opportunity cost of waiting for a large windfall is perceived as simply foregone interest"); Shefrin & Thaler, *supra* note 190, at 117–18 (arguing that small windfalls are thought of as current income while larger windfalls are thought of as assets that may produce greater future value).

294. *See, e.g.*, Benzion et al., *supra* note 284 (finding that discount rates decrease as cashflow increases); Green et al., *supra* note 287, at 385 (finding that subjects elected the larger reward as the length of time of the smaller reward was lengthened); James H. Holcomb & Paul S. Nelson, *Another Experimental Look at Individual Time Preference*, 4 *RATIONALITY & SOC'Y* 199, 212 (1992) (finding that discount rates are diminished as the delay to reward increases); Kris N. Kirby, *Bidding on the Future: Evidence Against Normative Discounting of Delayed Rewards*, 126 *J. EXPERIMENTAL PSYCHOL.: GEN.* 54, 68 (1997) (recognizing that the discounting weight is a function of the magnitude of the outcome); Kris N. Kirby & Nino N. Maraković, *Modeling Myopic Decisions: Evidence for Hyperbolic Delay-Discounting Within Subjects and Amounts*, 64 *ORG. BEHAV. & HUM. DECISION PROCESSES* 22, 28–29 (1995) (finding a small decrease in discount rate as the reward size increased); George Loewenstein, *Anticipation and the Valuation of Delayed Consumption*, 97 *ECON. J.* 666, 677–78 (1987) (recognizing that individuals will defer consumption for the purpose of "savouring"); Andres Raineri & Howard Rachlin, *The Effect of Temporal Constraints on the Value of Money and Other Commodities*, 6 *J. BEHAV. DECISION MAKING* 77, 92 (1993) (finding that large amounts of money are discounted at smaller rates than small amounts); Marjorie K. Shelley, *Outcome Signs, Question Frames and Discount Rates*, 39 *MGMT. SCI.* 806,

to put off consumption decisions perceived as large (i.e., buying a home), but engage in lots of incremental borrowing for present consumption in small amounts (i.e., spending \$50 a week at the local drugstore on greeting cards, cigarettes, and candy bars).

Framing shows up here, as well. Individuals' discount rates vary when the choice is framed as a decision to consume rather than save.²⁹⁵ George Loewenstein and Richard Thaler provided a sample group with vouchers that could be redeemed at a local record store on several specified future dates, and asked participants how the value of the certificate would change if they were asked to agree to wait longer to redeem it.²⁹⁶ Loewenstein and Thaler found that the participants demanded more than twice as much to delay the date than they were willing to give up to accelerate the redemption date. In another article, Loewenstein found that respondents' discount rates differ depending upon whether the change in delivery time of an outcome is framed as acceleration or delay from a temporal reference point.²⁹⁷ Numerous studies corroborate this result, finding that respondents discount gains at a higher rate than losses.²⁹⁸ Moreover, when researchers compare respondents' preferences to a series of outcomes, they typically find that individuals strongly prefer improving sequences to declining sequences.²⁹⁹

814 (1993) (finding that the discount rate varies with the magnitude of the outcome); Richard H. Thaler, *Some Empirical Evidence on Dynamic Inconsistency*, in *QUASI RATIONAL ECONOMICS*, *supra* note 190, at 127, 131 (finding that implicit discount rates fall as size of reward increases).

295. See Korobkin & Ulen, *supra* note 24, at 1122 (observing as an instance of "status quo bias" the results of a study showing that individuals demand nearly twice as much in value to delay redeeming a gift certificate over what they would to speed up the redemption).

296. Loewenstein & Thaler, *supra* note 284, at 187–88 tbl.1.

297. George F. Loewenstein, *Frames of Mind in Intertemporal Choice*, 34 *MGMT. SCI.* 200, 212 (1988); see also Ben Zion et al., *supra* note 284, at 282–83 (confirming that discount rates decline as waiting time increases, decrease as size of cashflow increases, and are smaller for losses than for gains); Shelley, *supra* note 294, at 814 (suggesting that decisionmakers can adapt to an outcome by imagining it, and once adapted, they experience a reference point shift that will determine how any change in the timing of that outcome will be interpreted).

298. See, e.g., Ben Zion et al., *supra* note 284, at 282 (finding that discount rates are smaller for losses than for gains); Loewenstein, *supra* note 294, at 679–80 (examining the behavioral consequences that result from the feelings of well-being and despair generated by anticipation); Walter Mischel et al., *Effects of Expected Delay Time on the Subjective Value of Rewards and Punishments*, 11 *J. PERSONALITY & SOC. PSYCHOL.* 363, 371–72 (1969) (finding that as length of an anticipated delay for reward increases its subjective value decreases, while any anticipated delay for punishment affects the punishment's aversiveness for adults); Thaler, *supra* note 284, at 205–06 (finding discount rates for gains vary inversely with the size of the reward and the length of time to be waited, and that discount rates are much smaller for losses than for gains); J. Frank Yates & Royce A. Watts, *Preferences for Deferred Losses*, 13 *ORGANIZATIONAL BEHAV. & HUM. PERFORMANCE* 294, 304 (1975) (challenging the hypothesis that people overwhelmingly prefer aversive consequences be experienced sooner rather than later and arguing that when subjects perceive the outcome as truly aversive, they will often prefer deferred outcomes to more immediate ones).

299. See, e.g., Gretchen B. Chapman, *Preferences for Improving and Declining Sequences of Health Outcomes*, 13 *J. BEHAV. DECISION MAKING* 203 (2000) (posing a variety of sequences of headache pain and finding that the vast majority preferred a decreasing sequence of pain); Christopher Hsee et al., *The Relative Weighting of Position and Velocity in Satisfaction*, 2

In the consumer finance context, the problem of amount-inconsistent discount rates may explain why consumers are willing to pay large interest rates on relatively small amounts of money so long as the monthly payment remains affordable, and so long as they are not forced to focus on the length of time that it will take them to repay the debt. Payday loans are a classic example, in that people are willing to pay annualized interest rates of close to 400% or more for small loans with a stated due date of two weeks or so (though the loans are often rolled and kept outstanding for longer periods). This may also explain the credit card industry's resistance to measures that would call attention to the length of time it will take to repay a credit card balance when only the minimum balance is paid.

C. *Post-default Conduct*

Default can be instrumentally rational when it is the result of either strategic borrowers' gamesmanship or unanticipated and unanticipatable shocks to income that preclude law-abiding borrowers from meeting their credit obligations on time. Economists would reasonably predict that law-abiding, rational borrowers would react to shifts in income to minimize default by downsizing consumption in future periods, as well as by selling collateral and other assets in order to raise funds to pay off outstanding obligations. But cognitive psychology contributes an alternative prediction of consumer borrowers' behavior in a near-default setting. Because of the cognitive biases detailed above, consumers buy more and borrow more than rational actors would have; overextended, quasi-rational borrowers will default more frequently than rational individuals would have. Because they are more highly leveraged, smaller shifts in income can push these borrowers into default. Behavioral decision research also suggests that consumer borrowers will not react to near-default situations as quickly or decisively as rational borrowers for several reasons.

Consumer borrowers will be slow to reduce consumption from current levels because of the optimism bias. Because of the endowment effect, they may hold on to collateral although a rational actor would sell it, pay off the debt with the proceeds, and buy a cheaper substitute. Finally, because of their perceived sunk cost, they will be more willing to engage in riskier behavior to avoid a loss than they would to realize a commensurate gain.

PSYCHOL. SCI. 263 (1991) (finding that an increasing wage profile was rated as highly as a decreasing sequence that conferred much more money); George Loewenstein & Nachum Sicherman, *Do Workers Prefer Increasing Wage Profiles?*, 9 J. LABOR ECON. 67 (1991) (finding that, as relates to otherwise identical jobs, most respondents prefer an increasing wage profile to a declining or flat one); George F. Loewenstein & Dražen Prelec, *Preferences for Sequences of Outcomes*, 100 PSYCHOL. REV. 91 (1993); Carol Varey & Daniel Kahneman, *Experiences Extended Across Time: Evaluation of Moments and Episodes*, 5 J. BEHAV. DECISION MAKING 169 (1992) (finding that subjects strongly preferred sequences involving decreasing discomfort as compared to increasing discomfort levels, even when overall sum of discomfort was otherwise identical).

Each of these predictions is supported by empirical and anecdotal evidence of consumers who have filed for bankruptcy.

1. *Shifts from a Reference Point.*—Consumers, being human, are slow to move off the dime. They judge their well-being, not in absolute terms, but instead in terms of a frame of reference. Based on these insights, Tversky and Kahneman propose a model of reference-dependent utility called prospect theory.³⁰⁰ According to prospect theory, intertemporal choices depend upon departures from a reference point—past consumption, expectations, social comparisons, status quo, and so on. And while individuals are assumed to be risk averse, prospect theory also presumes that they exhibit a diminishing sensitivity to gains and losses.³⁰¹

Prospect theory suggests that consumers will be slow to change savings and borrowing decisions when faced with changes in their income, and this prediction has been corroborated with experimental results. For example, David Bowman, Deborah Minehart, and Matthew Rabin offer a model predicting that individuals will be reluctant to alter their current consumption in reaction to shocks to income.³⁰² Frederick, Loewenstein, and O'Donoghue agree, arguing that “loss aversion reinforces time discounting,” which creates a “powerful aversion” to reductions of consumption levels.³⁰³ John Shea supports this prediction using both aggregate data³⁰⁴ and data from unions (in which union contracts differ by the possibility of workers receiving a change in wages in a set period).³⁰⁵ He found that consumption growth responds more strongly to future wage decreases than future wage increases.³⁰⁶ Jeffrey Fuhrer reaches similar conclusions by modeling consumer decisionmaking in terms of habit formation.³⁰⁷ He argues that habit formation explains

300. See Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *ECONOMETRICA* 263, 274 (1979) (proposing prospect theory as an alternative theory of decisionmaking under risk); Tversky & Kahneman, *supra* note 217, at 1046–48 (arguing that individual choice is reference dependent, that individuals are risk averse, and that individuals have diminishing sensitivity to gains and losses).

301. Tversky & Kahneman, *supra* note 217, at 1046–48.

302. David Bowman et al., *Loss Aversion in a Consumption-Savings Model*, 38 *J. ECON. BEHAV. & ORG.* 155, 156 (1999).

303. Frederick et al., *supra* note 236, at 380. Loewenstein expands on this thesis in a subsequent work co-authored with Dražen Prelec. George Loewenstein & Dražen Prelec, *Anomalies in Intertemporal Choice: Evidence and an Interpretation*, 107 *Q. J. ECON.* 573 (1992) (discussing anomalies in intertemporal choice and their implications for borrower behavior).

304. See John Shea, *Myopia, Liquidity Constraints, and Aggregate Consumption: A Simple Test*, 27 *J. MONEY, CREDIT & BANKING* 798, 804 (1995) (using aggregate data to show that “consumption is more sensitive to predictable income declines than to predictable income increases”).

305. John Shea, *Union Contracts and the Life-Cycle/Permanent-Income Hypothesis*, 85 *AM. ECON. REV.* 186, 188–90 (1995).

306. *Id.* at 196.

307. See Jeffrey C. Fuhrer, *Habit Formation in Consumption and Its Implications for Monetary-Policy Models*, 90 *AM. ECON. REV.* 367, 368 (2000) (including data on habit formation to

“humped-shaped” responses to shifts in income—that is, adjustments to consumption that are sluggish in the short, but not in the long, run.³⁰⁸

2. *Sunk Costs*.—Another reason consumer borrowers may be slow to adjust their expenditures to react to a decrease in income is their reluctance to walk away from sunk costs. Richard Thaler describes this heuristic by asking who is more likely to attend a basketball game notwithstanding a snowstorm: A, who paid \$40 cash for the ticket, or B, who obtained the ticket from a colleague for free.³⁰⁹ Consistent with intuitions, behavioral decision research supports the notion that actors have a “greater tendency to continue an endeavor once an investment in money, effort, or time has been made.”³¹⁰

Rent-to-own, home appliance, consumer electronics, and car dealers capitalize on this heuristic all the time. When a consumer rents a television, or a room full of furniture, the principal due on the financing (or the implicit principal if it is a lease) declines much more slowly than the value of the item. Often, at the time the consumer is faced with default, it would be cheaper to abandon the large screen television to the lender and purchase a comparable replacement than to complete the payments on the existing television. The same thing may happen with car loans and other secured consumer transactions. In the near default context, sunk costs might influence consumer borrowers’ decisions to hang on to collateral far longer than a rational actor would.

3. *Endowment Effect*.—Behavioral science literature demonstrates that individuals place a higher dollar value on the property that they own than other people’s property—the so-called endowment effect.³¹¹ As a result,

develop a monetary-policy model, which “allows the model to match the response of real spending to monetary-policy shocks”).

308. *Id.* at 368–69.

309. Richard Thaler, *Toward a Positive Theory of Consumer Choice*, 1 J. ECON. BEHAV. & ORG. 39, 47 (1980).

310. Hal R. Arkes & Catherine Blumer, *The Psychology of Sunk Cost*, 35 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 124, 124 (1985). For studies finding sunk costs, see *id.* at 126–36; Howard Garland & Stephanie Newport, *Effects of Absolute and Relative Sunk Costs on the Decision to Persist with a Course of Action*, 48 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 55, 65–67 (1991); John T. Gourville & Dilip Soman, *Payment Depreciation: The Behavioral Effects of Temporally Separating Payments from Consumption*, 25 J. CONSUMER RES. 160, 160–64 (1998); Barry M. Staw, *Knee-Deep in the Big Muddy: A Study of Escalating Commitment to a Chosen Course of Action*, 16 ORGANIZATIONAL BEHAV. & HUM. PERFORMANCE 27 (1976); Thaler, *supra* note 309, at 47–50.

311. See, e.g., Jennifer Arlen et al., *Endowment Effects Within Corporate Agency Relationships*, 31 J. LEGAL STUD. 1, 4–6 (2002) (presenting experimental tests and results finding that the endowment effect is significantly dampened in the presence of agency relationships); Russell Korobkin, *The Endowment Effect and Legal Analysis*, 97 NW. U. L. REV. 1227, 1228 (2003) (“The much studied ‘endowment effect’ stands for the principal [sic] that people tend to value goods more when they own them than when they do not.”).

people tend to place a higher value on losses than equivalent gains,³¹² and exhibit a preference for avoiding the loss of property that exceeds their desire to acquire property of an equal value.³¹³

Repeated experiments confirm the existence of this endowment effect in research settings.³¹⁴ Market data also confirm significant differences

312. Loss aversion is the most widely accepted explanation for the endowment effect. Thaler, *supra* note 309, at 44–47. However, alternative theories exist. *See, e.g.*, Brett Inder & Terry O'Brien, *The Endowment Effect and the Role of Uncertainty*, 55 BULL. ECON. RES. 289, 290–92 (2003) (theorizing that endowment effects pertain more to uncertainty than to loss aversion); Korobkin, *supra* note 311, at 1247–56 (reviewing literature and discussing several potential causes, including wealth effects, loss aversion, and regret avoidance); Simonson & Drolet, *supra* note 223, at 682, 688–89 (testing the relationship between anchoring and endowment effects).

313. Korobkin & Ulen, *supra* note 24, at 1108.

314. *See, e.g.*, Wiktor L. Adamowicz et al., *Experiments on the Difference Between Willingness to Pay and Willingness to Accept*, 69 LAND ECON. 416, 416 (1993) (finding that, although the existence of a substitute for the good being evaluated reduces the difference between willingness to pay and willingness to accept, the difference remains significant); Ian Bateman et al., *A Test of the Theory of Reference-Dependent Preferences*, 112 Q. J. ECON. 479, 503 (1997) (stating that, in light of their evidence, “the influence of loss aversion is a robust effect”); R.R. Boyce et al., *An Experimental Examination of Intrinsic Values as a Source of the WTA–WTP Disparity*, 82 AM. ECON. REV. 1366 (1992) (presenting findings that demonstrate that intrinsic value, property rights, and moral responsibility play important roles in the endowment effect); Don L. Coursey et al., *The Disparity Between Willingness to Accept and Willingness to Pay Measure of Value*, 102 Q. J. ECON. 679, 679–80 (1987) (discussing several experiments and surveys confirming the endowment effect, but presenting data that show that such effects may be overstated); D.W. Harless, *More Laboratory Evidence on the Disparity Between Willingness to Pay and Compensation Demanded*, 11 J. ECON. BEHAV. & ORG. 359, 375–76 (1989) (presenting findings that confirm the existence of an endowment effect in relation to an auction of lottery tickets); Daniel Kahneman et al., *The Endowment Effect, Loss Aversion and Status Quo Bias*, 5 J. ECON. PERSP. 193, 195–97 (1993) (examining the endowment effect in a coffee mug market for Cornell undergraduate economics students); Daniel Kahneman et al., *supra* note 215, at 1325 (reporting “several experiments that demonstrate that this ‘endowment effect’ persists”); Jack L. Knetsch, *The Endowment Effect and Evidence of Nonreversible Indifference Curves*, 79 AM. ECON. REV. 1277 (1989) (discussing three tests that seem to refute the complete reversibility of indifference); Jack L. Knetsch & J.A. Sinden, *Willingness to Pay and Compensation Demand: Experimental Evidence of an Unexpected Disparity in Measure of Value*, 99 Q. J. ECON. 507, 516 (1984) (suggesting that the income effect provides an incomplete explanation of individual choice preferences, and that the endowment effect accounts for loss aversion); John A. List, *Neoclassical Theory Versus Prospect Theory: Evidence from the Marketplace*, 72 ECONOMETRICA 615, 616 (2004) (limiting confirmation of the endowment effect to less experienced consumers and concluding that more experienced consumers behave consistently with neoclassical predictions); Michal A. Strahilevitz & George Loewenstein, *The Effect of Ownership History on the Valuation of Objects*, 25 J. CONSUMER RES. 276, 276 (1998) (presenting four studies extending “prior research on the endowment effect by demonstrating that object valuation is affected by both past and present ownership status”); Eric van Dijk & Daan van Knippenberg, *Buying and Selling Exchange Goods: Loss Aversion and the Endowment Effect*, 17 J. ECON. PSYCHOL. 517, 522 (1996) (noting the presence of the endowment effect in the trading of exchange goods when there is uncertainty about future exchange prices); Eric van Dijk & Daan van Knippenberg, *Trading Wine: On the Endowment Effect, Loss Aversion, and the Comparability of Consumer Goods*, 19 J. ECON. PSYCHOL. 485, 488–94 (1998) (finding support for the endowment effect in a research experiment where participants expressed reluctance to trade bottles of wine in their possession for similar bottles in the possession of other participants).

between actors' willingness to pay for a good and willingness to accept offers to buy,³¹⁵ even in geographically and culturally distinct markets.³¹⁶

4. *Consumer Bankruptcy, Sunk Costs, and the Endowment Effect.*—Survey and other empirical studies of consumer debtors in bankruptcy provide sobering reminders of the influence of sunk costs and endowment effects. Over the past twenty years, Sullivan, Warren, and Westbrook have studied thousands of bankruptcy filings in a number of states,³¹⁷ and found that, for a “persistent subgroup of Americans . . . the home itself may be the debtors' financial ruin, with its relentless demands for mortgage payments, maintenance, and taxes. For some, the refusal to abandon a home that is no longer affordable brings them to collapse.”³¹⁸

They emphasize the force of their empirical findings with an anecdote from one respondent's questionnaire, a debtor they call “Don Wilson.”³¹⁹ When Don filed his bankruptcy petition, he owned a home in Havertown, Pennsylvania.³²⁰ Despite an income of less than \$25,000, Don owed a whopping \$85,000 in mortgage debt on his home.³²¹ Sullivan, Warren, and Westbrook note that “[a] financial planner would have told Don not to file bankruptcy.”³²² The financial planner would have advised Don simply to sell the house for its reported \$160,000 value; Don could then pay off his \$85,000 mortgage debt and \$5,000 in other secured and unsecured debts,

315. See Jason F. Shogren et al., *Resolving Differences in Willingness to Pay and Willingness to Accept*, 84 AM. ECON. REV. 255, 264–66 (1994) (noting that incentive-compatible bidding systems do not eliminate the endowment effect for nonmarket goods). *But see* Jack L. Knetsch et al., *The Endowment Effect and Repeated Market Trials: Is the Vickrey Auction Demand Revealing?*, 4 EXPERIMENTAL ECON. 257, 262–65 (2001) (concluding that some Vickrey auctions cause disparity between WTP and WTA to decrease or even disappear over repeated trials); Jason F. Shogren & Dermot J. Hayes, *Resolving Differences in Willingness to Pay and Willingness to Accept: Reply*, 87 AM. ECON. REV. 241, 243 (1997) (affirming that the endowment effect disappears under normal market circumstances, but may be a factor in thin or nonexistent markets).

316. Steven J. Kachelmeier & Mohamed Shehata, *Examining Risk Preferences Under High Monetary Incentives: Experimental Evidence from the People's Republic of China*, 82 AM. ECON. REV. 1120, 1132 (1992) (comparing risk preferences in the U.S., Canada, and the People's Republic of China, and concluding that the effect of “cultural differences, if any, were not strong”); *see generally* Melanie Wallendorf & Eric J. Arnould, “My Favorite Things”: *A Cross-Cultural Inquiry into Object Attachment, Possessiveness, and Social Linkage*, 14 J. CONSUMER RES. 531, 537 (1988) (comparing data from America and Nigeria, and concluding that in both cultures, certain objects become “decommodified” as a “web of semiotic and symbolic associations” making that object priceless for its owner).

317. These states include the following: Illinois; Pennsylvania; Texas; California; and Tennessee. *See* SULLIVAN, WARREN & WESTBROOK, *FRAGILE MIDDLE CLASS*, *supra* note 18, at 265. This work builds on their earlier studies. *See* SULLIVAN, WARREN & WESTBROOK, *AS WE FORGIVE*, *supra* note 18. Subsequent work further refines their empirical look at consumer bankruptcy and its policy implications. *E.g.*, WARREN & TYAGI, *supra* note 22.

318. SULLIVAN, WARREN & WESTBROOK, *FRAGILE MIDDLE CLASS*, *supra* note 18, at 200.

319. *Id.* at 202–04.

320. *Id.* at 202.

321. *Id.*

322. *Id.* at 202–03.

with plenty of money left over to purchase a new home.³²³ The endowment effect may explain Don's desire to hang on to his home, whatever the cost and whatever the chances of success—a desire that contradicts a rational actor model of homeownership.

Empirical studies suggest that the influence of the endowment effect in consumer bankruptcy cases extends beyond isolated anecdotes like Don Wilson. Indeed, the influence of the endowment effect upon consumers' post-default conduct is pervasive. Sullivan, Warren, and Westbrook show that “[a]bout half of all the debtors who file for bankruptcy own homes when they file,”³²⁴ and are burdened with a median mortgage debt of \$44,000.³²⁵ When they compare the income, mortgage debt, and nonmortgage debt for homeowners in bankruptcy with that of homeowners in the general population, Sullivan, Warren, and Westbrook find that homeowners in bankruptcy “carry similar mortgage debts and higher nonmortgage debts than their homeowner counterparts in the general population, and they do so on substantially lower incomes.”³²⁶

Their findings also contradict the claims of strategic incentive analysis that individuals increasingly have filed for bankruptcy in order to take advantage of the generous federal homestead exemption.³²⁷ The median consumer debtor studied by Sullivan, Warren, and Westbrook carried mortgages that constituted 87.3% of the value of their homes.³²⁸ Nearly one quarter of these debtors had no home equity when they filed for bankruptcy.³²⁹ Their median home equity was only \$5,500.³³⁰ These bankruptcy figures compare unfavorably with those of the general homeownership population. The Census Bureau reports that in 1991, the year in which Sullivan, Warren, and Westbrook studied bankruptcy files, Americans' mortgage debts averaged only 57.4% of the value of their homes³³¹ and that the national median home equity was an impressive \$43,078.³³²

Moreover, decisional biases influence more than just consumer debtors' efforts to save their homes in bankruptcy; they may also influence consumer debtors' efforts to hang on to their cars and other personal property following

323. *Id.* at 203.

324. *Id.* at 204 & n.24.

325. *Id.* at 218.

326. *Id.* at 219.

327. *See supra* text accompanying notes 172–178.

328. SULLIVAN, WARREN & WESTBROOK, *FRAGILE MIDDLE CLASS*, *supra* note 18, at 221.

329. *Id.* at 221 & n.76.

330. *Id.* at 221 & n.73.

331. BUREAU OF THE CENSUS, *AMERICAN HOUSING SURVEY FOR THE UNITED STATES IN 1991*, at 124 tbl.3-15 (1993).

332. T.J. ELLER, BUREAU OF THE CENSUS, *STATISTICAL BRIEF: HOUSEHOLD WEALTH AND ASSET OWNERSHIP: 1991*, at ix tbl.C (1994), available at <http://www.sipp.census.gov/sipp/p70-34.pdf>.

bankruptcy. The Bankruptcy Code offers chapter 7 debtors several options relating to the treatment of their collateral: debtors can redeem their secured property by paying a lump sum amount equal to the value of the collateral;³³³ they can reaffirm their security agreement,³³⁴ or they can surrender the collateral to the secured creditor.³³⁵

Reaffirming a security agreement may not be rational.³³⁶ The rationality of the decision turns on a comparison of the cost of the reaffirmed debt and the cost of a replacement obligation. But data show that many consumer debtors reaffirm secured debt, whether the affected collateral could have been replaced for a lesser amount.³³⁷ For example, a rational debtor would not reaffirm a debt securing the purchase price of a car where public transportation or a cheaper used car was instead available. A rational consumer might also be unlikely to reaffirm a security agreement where the reaffirmed debt amount exceeds the collateral value because creditors generally insist that the debtor reaffirm the entire debt balance regardless of collateral value. Pre-default payments constitute significant sunk costs, while ownership of collateral creates a powerful endowment effect, both of which may push consumer debtors toward reaffirmation of their secured debt.

Empirical research on reaffirmation agreements in bankruptcy supports insights from cognitive research.³³⁸ In their preliminary study of more than a thousand chapter 7 cases filed in 1995 in seven judicial circuits located across the nation, Marianne B. Culhane and Michaela M. White found secured reaffirmation agreements to exist in surprising numbers.³³⁹ They

333. 11 U.S.C. § 722 (2000).

334. *Id.* § 524(c)–(d).

335. Prior to the 2005 bankruptcy amendments, consumers in some circuits were able to retain their collateral if they were not in default before the case and kept current on their monthly payments during the case. *Compare* *In re Burr*, 160 F.3d 843 (1st Cir. 1998), *with* *In re Boodrow*, 126 F.3d 43 (2d Cir. 1997). Recent bankruptcy legislation resolved this circuit split in lenders' favor. See Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Pub. L. No. 109-8, 119 Stat. 23 (codified as amended in scattered sections of 11, 12, 15, 18, and 28 U.S.C.) (amending 11 U.S.C. §§ 362(h), 521(a)(6)).

336. *But see* Adler et al., *supra* note 10, at 590 (discussing the argument that reaffirmation agreements constitute rational behavior).

337. Bankruptcy courts have, from time to time, noted the irrationality of some of the reaffirmation agreements that debtors have executed. See, e.g., *In re Bruzzese*, 214 B.R. 444, 449 (Bankr. E.D.N.Y. 1997) (noting that a debtor would pay an aggregate amount of \$3,269.02 under the reaffirmation agreement, of which \$1,469.02 constituted interest and asking, "[E]ven if the debtor could afford to . . . , would . . . a rational decision-maker have agreed to carry this debt for seven years . . . when other credit card issuers charge a far lower actual annual percentage rate . . . even to persons who have received a recent discharge in . . . bankruptcy?").

338. Marianne B. Culhane & Michaela M. White, *Debt After Discharge: An Empirical Study of Reaffirmation*, 73 AM. BANKR. L.J. 709 (1999).

339. Culhane and White found several things surprising about the secured reaffirmations they found. See *id.* at 712–13 (summarizing the findings of their study). For example, they were surprised to find that "the claims most often reaffirmed were those secured by household goods," rather than by cars or homes. *Id.* at 713. They found this surprising since "repossession of this type

report that more than 60% of the reaffirmation agreements they studied were debts scheduled as secured. Moreover, they report that, in a substantial portion of the studied reaffirmations, the reaffirmed debt exceeded the value of the related collateral:

In 38% (49 of 129) of the motor vehicle reaffirmations, the amount reaffirmed exceeded the stated value of the car. Ten percent of the motor vehicle reaffirmations were for amounts 200% or more of scheduled collateral value. In 37% (17 of the 46) of reaffirmations of debt secured by homes, the debtors reaffirmed an amount greater than scheduled value [A]lmost 40% of the reaffirmations of homes and cars were at least partly unsecured.³⁴⁰

And these statistics relate to reaffirmations involving high-value collateral. With agreements to reaffirm debt secured by household goods, Culhane and White cannot refer to valuations of the collateral in the court records. Nonetheless, they say, “it seems likely that most of the household goods reaffirmations are less than fully secured, given the quick depreciation and low residual value of most such collateral.”³⁴¹

Culhane and White raise substantial questions about debtors’ abilities to afford their reaffirmed obligations. When they computed reaffirming debtors’ net disposable income available to cover reaffirmation costs, they found an average monthly deficit of -\$80.³⁴² Indeed, 39% of the reaffirming debtors had no (zero) disposable income available for reaffirmation payments.³⁴³

5. *Conclusion.*—Economists conclude that default on consumer credit obligations occurs for one of two reasons: unforeseen (or foreseen but rationally ignored) events and opportunism resulting from the law’s failure to force debtors to internalize the full consequences of their default. The first form of default is efficient—a product of rational borrowing decisions and efficient decisions to breach. The second form of default is problematic, and should be prevented through legal reform aimed at these opportunistic

of collateral was less likely than for homes or cars,” but suggest that debtors reaffirmed “to obtain postbankruptcy credit.” *Id.*

340. *Id.* at 730.

341. *Id.* at 731.

342. *Id.* at 761.

343. *Id.* Culhane and White considered the affordability of reaffirmed debt obligations according to several other indicators. *Id.* at 758–64. They calculated ratios of reaffirmed debt to income and of reaffirmation payment to monthly income. *Id.* at 762–63. They also considered nondischargeable debt as an additional burden on debtors’ fresh start. *Id.* at 763–64. With each of these alternative measures for assessing the affordability of the reaffirmed debt they studied, Culhane and White reached the same conclusions: they did not think that the debtors were financially able to make the payments to which the reaffirmation agreement committed them. *Id.* at 758–64.

borrowers. Under current legislation, the solution is to limit access to the bankruptcy discharge.

Behavioralists, by contrast, conclude that there is a third reason for consumer overborrowing and default: biases in decisionmaking that arise through predictable and consistent cognitive error. Under this view, the locus of responsibility shifts from the borrowers themselves to the lenders who market debt and encourage borrowing that, while profitable, may not be socially desirable.

We think the shift to a behavioral model of consumer finance transaction does more than explain increases in nonbusiness bankruptcy filings and consumer debt loads. We think that the policy prescription differs greatly depending upon whether the lawmaker applies a strategic incentive or a behavioral model of consumer borrowing and default. We turn to the implications of our model in Part IV.

IV. Rational Lenders and Quasi-Rational Consumer Borrowers: A Behavioral Model of Consumer Credit and Consumer Bankruptcy Law

What implications follow from the conclusion that consumers are not rational, strategic actors? We note several, albeit briefly. Subpart IV(A) focuses on the market implications of a behavioral model and concludes that rational lenders face incentives to exploit these cognitive limitations in a competitive market for consumer credit. Subpart IV(B) focuses on the regulatory implications, and looks at the issue from both the lenders' and borrowers' sides. We raise questions as to the relative importance of focusing on consumer borrowers' ex ante incentives when addressing the consequences of ex post default, and conclude that regulation that aims to alter consumer incentives is unlikely to alter the ex ante biases that lead to consumer overborrowing. Taking behavioral realities into account suggests that legislation should focus on the protection of consumer borrowers and the regulation of lenders' marketing practices. As such, recent bankruptcy legislation would appear to be entirely wrongheaded. Other forms of consumer protection regulation are also examined. Finally, subpart IV(C) considers the research implications of a behavioral model. We note that experimental research has, to date, concentrated on consumers' purchasing decisions and suggests that future experiments should consider decisions to borrow and choices made in the context of a loan default. Beyond identifying the need for further research, we outline the contours of a research agenda.

A. Market Implications: Incentives to Exploit Biases in Decisionmaking

Borrowing and lending present complimentary perspectives on the same transaction. It is senseless to look at consumers' incentives to borrow without also considering lenders' incentives to extend credit. Thus,

consumer bankruptcy law (and, indeed, all consumer law) should be crafted with an understanding of both sides of a consumer finance transaction.³⁴⁴

Behavioral decision research raises questions as to whether rational actor models should govern both sides of a consumer finance transaction. We have no doubts about the propriety of applying a rational actor model to explain lenders' behavior in these markets. To lenders in the consumer finance industry, the decision to extend consumer credit is a business decision in a very big and very profitable industry.³⁴⁵ While there may be lenders with faulty decisionmaking processes, competitive markets punish these errors. By contrast, those who borrow are individuals, flesh-and-blood human beings. Behavioral decision research raises substantial questions about the predictive fit of a rational actor model to describe borrower behavior, and the data we detailed in Part II do not disconfirm our doubts in this regard.

Others have noted that troubling market failures result when rational sellers or lenders market to quasi-rational customers: rational actors face every incentive in a competitive marketplace to seek to exploit consumer cognitive biases. Jon D. Hanson and Douglas A. Kysar first observed the market incentives implicit in behavioral models of consumer conduct,³⁴⁶ and applied their insights to the marketing of cigarettes and other tobacco products (despite the correlation between smoking and cancer, emphysema, and other diseases).³⁴⁷ Recently, Oren Bar-Gill applied the insights of Hanson and Kysar to describe a similar failure in the market for credit card credit. He "portrays the credit card contract as a tool designed to exploit consumers' underestimation bias."³⁴⁸ Bar-Gill pointed to minimum payment schedules and teaser rates as the consequences of this market failure. Similarly, Stefano DellaVigna and Ulrike Malmendier recently studied thousands of health club transactions and found evidence that health club owners capitalized on members' time-inconsistent preferences with regard to exercise (while members do not want to exercise now, they are confident that they will wish to do so later).³⁴⁹ While DellaVigna and Malmendier's empirical study focused on health clubs, they were quick to note the

344. Because of this interdependence, factors that create incentives for debtors' borrowing might at the same time create counter-incentives for creditors' lending. Similarly, remedies that protect borrowers impose costs on lenders, while remedies that protect lenders impose costs on their borrowers.

345. See *supra* note 151 (illustrating the recent profitability of credit card banks).

346. See Hanson & Kysar, *Taking Behavioralism Seriously*, *supra* note 36, at 721-44 (outlining their theory that, under the behavioralist approach, market forces will drive manufacturers to exploit consumer biases in decision making).

347. Hanson & Kysar, *Evidence of Market Manipulation*, *supra* note 36, at 1467-1552.

348. Bar-Gill, *supra* note 9, at 1376. Sunstein, too, sees consumers' cognitive biases as creating an opportunity for exploitation by lenders. Sunstein, *supra* note 35, at 6. He explores whether the appropriate response is through strong paternalism (such as usury limits), or weak paternalism (such as bias correction or notice). *Id.* at 6-12, 19-22.

349. DellaVigna & Malmendier, *Theory and Evidence*, *supra* note 274, at 373-77.

applicability of their research to cell phone contracts³⁵⁰ and credit card transactions.³⁵¹ Like Bar-Gill, DellaVigna and Malmendier point to credit card issuers' incentives to exploit credit card users' overconfidence about how little they will borrow.³⁵²

In Part III, we noted other consumer credit contract terms implicated by this same analysis: not just teaser rates and minimum payment options, but also high-interest charges for apparently short-term payday loans and high-noninterest charges triggered by a consumer's default or overlimit borrowing. We also drew a connection between purchasing and borrowing to contend that a behavioral model suggests that quasi-rational consumers will purchase more than rational actors. Thus, quasi-rational consumers who purchase on credit, especially those using their credit cards, will owe more than a rational borrower. This leads to welfare losses, because the overborrowing, coupled with underestimation of interest charges, will significantly constrain future consumption decisions.

Nor do we think that the implications of a behavioral model of consumer finance are limited to explaining consumers' purchasing and borrowing; a behavior model also holds important implications for explaining consumers' conduct in the event of default. Because quasi-rational borrowers are unwilling to leave behind sunk costs in the form of down payments and installment payments, and because quasi-rational debtors value their collateral more highly than does the marketplace, they may reaffirm debt they cannot afford, and they may file for bankruptcy rather than sell their home and pay off debt with the equity. Indeed, the work of Sullivan, Warren, and Westbrook shows that debtors will often go to absurd lengths to hold onto houses that are worth less than the outstanding mortgage balance.³⁵³ Culhane and White made similar observations about debtors' seemingly irrational willingness to reaffirm car and mobile home loans, as well as fully dischargeable credit card debt.³⁵⁴

B. Regulatory Implications: Ex Ante Incentives versus Ex Post Effects

Behavioral decision research also holds implications for the shape and content of consumer bankruptcy and consumer finance law.

Incentive analysts assume that consumer overleverage derives from strategic behavior, and on this basis support recent bankruptcy amendments that reduce the benefits of a bankruptcy filing and increase the cost of

350. *Id.* at 380–81.

351. *Id.* at 377–79.

352. *Id.*

353. *See supra* text accompanying notes 317–332.

354. *See supra* text accompanying notes 338–343.

obtaining a bankruptcy discharge.³⁵⁵ They worry that the bankruptcy discharge creates an incentive for individuals to declare bankruptcy, and claim that bankruptcy reform will eliminate consumer overleverage by properly limiting their improper incentives for filing.

Behavioral decision research, by contrast, questions not only whether proposed changes to the Bankruptcy Code are necessary, but also whether they will have the desired effect on consumer debtors. It suggests that means testing eligibility for chapter 7 liquidation bankruptcy cases will have little effect on consumers' ex ante borrowing and post-default decision processes. Because changes in bankruptcy law are not likely to cause consumers to borrow less, this focus on consumers' ex ante incentives is misguided and likely to be harmful. Limiting access to the bankruptcy discharge is only likely to increase the harm suffered as a result of erroneous decisionmaking. The bankruptcy discharge, in this view, serves a salutary purpose by limiting the power, and hence the excesses, of consumer lenders.

In a behavioral world, there are no adverse consequences to mercy. If financial distress is real, unforeseen, and unavoidable, then solely addressing consumers' ex ante incentives to file a bankruptcy petition cannot prevent it. To the extent that individual debtors' decisions to borrow are made without reference to the consequences of default and bankruptcy, the only effect of the new bankruptcy reform will be to increase the amount of pain suffered after the fact. If consumer bankruptcy law cannot prevent financial failure, it should seek to soften the blow. Moreover, softening the blow will not have the effect of distorting ex ante incentives. This means that consumer bankruptcy law can address the ex post effects of insolvency on lenders by fashioning legal rules to resolve creditors' conflicting claims to the debtor's assets without worry about adverse consequences.³⁵⁶

While the desire of incentive analysts to influence behavior through ex ante incentives may be laudable, they focus on the wrong actor. Incentive analysts operate on the assumption that consumers are rational, and that lenders are rational but labor under an information asymmetry. We have demonstrated that when post-1978 changes in credit markets and information technology are linked to a behavioral model of consumer decisionmaking, the model is flipped on its head. The model that we propose envisions rational lenders and quasi-rational, or heuristic, borrowers. Under this model, overleverage results from creditor exploitation of heuristic biases and regulation should focus on consumer (rather than lender) protection.

355. BAPCPA alters strategic incentives in several ways, by including the following costs: means-testing; credit counseling; debtor education; attorney liability provisions; heightened standards for confirmation of chapter 13 plan; and schedule and filing requirements.

356. It should also address the ex post effects of insolvency on consumer debtors through legal rules that, for example, identify assets that should be free from the reaches of creditors and prepetition transactions that the debtor can avoid or reaffirm.

The difficult question that should be the focus of future research and legislative action is how best to protect consumers from their own biases (and from lender exploitation of those biases). This regulation might take a number of forms. It could be disclosure-based or it could focus on debtor education—two approaches that emphasize improving consumers' decisionmaking processes. Alternatively, regulation could focus on the creditors, regulating certain practices as unfair or deceptive or setting limits on charges such as interest rates, fees, and penalties. We discuss each of these options briefly below.

1. Disclosure.—Disclosure is often helpful, but behavioral decision research raises questions as to the efficacy of provisions to enhance disclosure about the terms of borrowing (before bankruptcy) and reaffirming (after bankruptcy).³⁵⁷ There is some data to support the notion that disclosure of credit terms has improved consumer borrowers' knowledge of the APR that applies to their credit card.³⁵⁸ But because disclosure works best if consumers are underinformed but otherwise fully rational, disclosure regulations on their own may be insufficient to overcome decisionmaking biases. For example, framing and anchoring effects may undermine the effectiveness of disclosure regulations.³⁵⁹ More research is needed, but we suspect that if consumers focus more on the affordability of their monthly payment than the overall cost of credit, disclosure (and knowledge) of APR may not influence borrowing behavior. If disclosure is to work, the notices must be crafted with an express awareness and a desire to overcome predictable decisionmaking biases.

Moreover, we suspect that disclosure regulations create incentives for lenders to draft contract terms that evade current disclosure regulation and continue to obscure the actual contract terms.³⁶⁰ Mark Furletti, a researcher

357. See, e.g., Jolls et al., *supra* note 33, at 1533–37 (discussing the importance of how the disclosed information is presented).

358. See Thomas A. Durkin, *Consumers and Credit Disclosures: Credit Cards and Credit Insurance*, 88 FED. RES. BULL. 201, 206 (2002) (“A question in [a] survey of credit card users in 2000 indicated that consumer awareness of annual percentage rates associated with credit card accounts . . . has increased dramatically in the three decades since the implementation of the [Truth-in-Lending Act].”). Furletti notes, however, that Durkin’s study may apply an overly broad definition of the word “aware.” Furletti, *supra* note 92, at 3. Indeed, given the number of noninterest charges and subsequent events that may influence the cost of borrowing with a credit card, improved awareness should not be equated with actual knowledge of the effective interest rate being paid or the overall cost of credit.

359. Richard L. Wiener et al., *Unwrapping Assumptions: Applying Social Analytic Jurisprudence to Consumer Bankruptcy Education Requirements and Policy*, 79 AM. BANKR. L.J. 453, 455–63 (2005) (arguing that psychosocial factors explaining differences among individual debtors might need to be taken into account before implementing effective changes to consumer credit disclosure regulations).

360. Cf. Edward J. Janger & Paul M. Schwartz, *The Gramm-Leach-Bliley Act, Information Privacy, and the Limits of Default Rules*, 86 MINN. L. REV. 1219, 1258 (2002) (discussing the limitations of current “opt-out” disclosure information and proposing instead a plain-English disclosure that consumers will be more likely to understand and respond to).

at the Philadelphia Federal Reserve Bank, explains that lenders are required to disclose some but not all of these terms.³⁶¹ He argues that disclosure rules should be updated to include these terms within their scope.³⁶² While we agree with Furletti that current disclosure requirements may be ineffective, we fear that expanding the list of required disclosures is not the answer. First, a laundry list may overload consumers and render the notice counterproductive. Furthermore, lenders may simply amend contractual terms to keep one step ahead of regulatory requirements. Thus, prohibition of egregious terms and practices may be required.

2. *Debtor Education.*—Another avenue for consumer protection involves the provision of financial literacy education to consumers. Education might occur in high schools, prior to obtaining a mortgage or credit card, in the context of a first or second default, or even as a debtor embarks on her fresh start in bankruptcy. Critics of a behavioral model complain that decisional biases provide, at best, a short-term model of consumer behavior. For example, they argue that even if credit card users initially underestimate the amount of credit card debt, they will learn over time from their mistakes.³⁶³ We agree that debtor education can be useful in some instances, but suspect that courses that focus on credit terms and budget planning may not provide a universal solution. The content and timing of the course matters. We also question the efficacy of mandatory counseling on the eve of bankruptcy, as required by the 2005 amendments to the Bankruptcy Code.³⁶⁴

3. *Other Regulation.*—Regulation need not follow the weak paternalism outlined above.³⁶⁵ State or federal legislatures or courts could limit or even prohibit the most egregious practices. Cooling off periods could be

361. See Furletti, *supra* note 92, at 9, 13–14, 17 (describing the main components of the costs to consumers for use of credit cards and the associated disclosure requirements).

362. *Id.* at 18–20.

363. See, e.g., Glenn B. Canner & Charles A. Lockett, *Developments in the Pricing of Credit Card Services*, 78 FED. RES. BULL. 652, 665 (1992) (contending that Ausubel's model implies that households persistently err in predicting credit card use, without learning from past experience); Todd J. Zywicki, *The Economics of Credit Cards*, 3 CHAP. L. REV. 79, 140–42 (2000) (critiquing Ausubel's model because it "assumes a remarkable degree of consumer irrationality . . . month after month and year after year" and because it assumes that "consumers never become more intelligent about their options, despite billions spent by credit card companies to inform consumers of the different product options that are available to them").

364. See *supra* note 258.

365. See Camerer et al., *supra* note 37, at 1224 (presenting regulatory programs that balance the desire to correct decisionmaking errors while trying to prevent costly interference with rational individuals); Sunstein & Thaler, *supra* note 37, at 1166 (arguing that although paternalism is inevitable, decisions can still be made over the form in which "choice-influencing options" are undertaken).

expanded to cover a greater range of transactions.³⁶⁶ Some contract terms could be outlawed, or the doctrine of unconscionability revitalized.³⁶⁷ At the very least, predatory creditor practices, and particularly deceptive marketing techniques, might be scrutinized or even prohibited. Resuscitation of usury laws is another option. This sort of strong regulation has the advantage of discouraging lenders from making loans to those most likely to default. On the flip side, it may limit credit to those perhaps most in need. The relative costs and benefits, however, certainly bear further study in light of behavioral decision research.

C. *Research Implications*

We commented earlier on the dearth of experimental literature on the implications of a behavior model on consumers' decisions to borrow, default, or file for bankruptcy. While the results of laboratory experiments on decisionmaking present strong implications for the market for consumer credit, focused research is needed. We lay out these implications as a basis for future research.

Passage of the 2005 bankruptcy amendments creates natural opportunities for testing whether a rational actor model or a behavior model better explains consumers' borrowing and default behavior. Incentive analysts advocated enactment of the new law on the grounds that it was needed to reduce the cost of consumer credit—the so-called bankruptcy tax.³⁶⁸ We suspect that lobbyists sold Congress a bill of goods when they promised that enactment would result in a rebate of this “bankruptcy tax” on the cost of consumer credit. Although passage of the new law was touted as necessary on the grounds that the former law enabled high-risk borrowers to externalize their bankruptcy costs across the marketplace, we think that legal and technological changes since 1978 (other than the enactment of the Bankruptcy Reform Act) created a sea change in lenders' abilities to price discriminate between high- and low-risk borrowers. As a result, we suspect that consumer lenders already provided a rebate of the bankruptcy tax; we predict there will be no discernible change in the cost of consumer credit that correlates with the effective date of the 2005 amendments. We also predict that the rate at which lenders charge off (that is, record on their internal

366. For federal legislation providing a “cooling off” period for certain subprime mortgages, see 15 U.S.C. § 1639(b)(1) (2000), requiring a three-day cooling off period for certain home mortgage transactions. Although we mention cooling off periods as a possibility, we suspect they are less effective than other forms of regulation because they only apply if buyers are knowledgeable about their existence and a change in intertemporal preferences happens to coincide with the regulatory period.

367. See, e.g., Russell Korobkin, *Bounded Rationality, Standard Form Contracts, and Unconscionability*, 70 U. CHI. L. REV. 1203, 1290 (2003) (arguing for a modified unconscionability doctrine for form contracts).

368. Noticeably absent from the legislative debate was any claim that the new law would reduce incentives to borrow, a goal contrary to the interests of the consumer finance industry who financially backed its passage with contributions to key lawmakers.

records an inability to collect) consumer credit obligations will not be affected by changes in the Bankruptcy Code.³⁶⁹

As this Article goes to press, it is still too early to tell. The charge-off and delinquency numbers are only available for the fourth quarter of 2005, which includes the effective date of the 2005 amendments. The charge-off rate is up, but this reflects the increased number of bankruptcy filings which occurred in anticipation of the new law's effective date. Delinquency is down slightly, but this likely reflects a similar distortion, as loans move from the delinquent category to the charged off category as a result of hurry-up filings prior to the October 17 effective date of the Act.³⁷⁰ Judging the effect of the new bill will take some time, as bankruptcy lawyers, judges, and debtors internalize its new rules. We predict that its effect on bankruptcy filing rates may be significant, but that its effect on charge-off and delinquency (in other words, on the amount of debt that will actually be repaid) will be minimal.

In our view consumers have increased their debt loads over the past thirty years because lenders have become more skilled at exploiting the biases in their decisionmaking, and not because of the details of consumer bankruptcy law. Accordingly, changes in the law will not affect consumers' decisions to borrow. Overleverage is here to stay.

We hope that behavioral decision research will shift its gaze from consumers' purchasing toward consumers' borrowing and default behaviors. The regulation of consumer credit transactions is premised on a model that posits rational, but less than perfectly informed, consumer actors; in this view, regulators need only provide consumers additional information (by means of disclosure regulations) in order to correct for failures in the marketplace. A behavioral model of consumer behavior contends that consumers suffer more than informational asymmetries and on this ground questions whether disclosure regulations, standing alone, will be sufficient. Behavioral models contend that consumers face biases in their decisionmaking that affect their decisions to borrow in predictable ways. Laboratory experiments suggest the accuracy of a behavioral model, but this cognitive research should be supplemented with experiments designed to

369. We are not alone in doubting the existence (or at least the magnitude) of the bankruptcy tax. See Elizabeth Warren, *The Market for Data: The Changing Role of Social Sciences in Shaping the Law*, 2002 WIS. L. REV. 1, 13–20 (explaining the fallacy of the claim that bankruptcy costs every American family \$400 each year); Elizabeth Warren, *The Phantom \$400*, 13 J. BANKR. L. & PRAC. 77, 77–80 (2004) (describing the unsubstantiated \$400 “tax” as a creation of credit industry lobbyists, who derived the figure from dubious calculations and employed the \$400 “fact” as a sound-bite to garner support for bankruptcy reform legislation in Congress); Bruce A. Markell, *Sorting and Sifting Fact From Fiction: Empirical Research and The Face of Bankruptcy*, 75 AM. BANKR. L.J. 145, 152–53 (2001) (book review).

370. Federal Reserve Bank, *Charge-off and Delinquency Rates on Loans and Leases at Commercial Banks*, available at <http://www.federalreserve.gov/releases/chargeoff>.

assess the accuracy of the model as applied to consumers' borrowing decisions and their decisionmaking in a near-default setting.

One set of experiments could test participants' judgment in the context of simulated borrowing exercises. For example, experiments could test whether participants express a greater or lesser willingness to borrow depending on changes in the financial terms and other information disclosed in the experimental setting. Experiments should also assess decisions made in near-default settings. How willing would borrowers be to change their spending habits in the face of changes in income? How willing would they be to sell assets? Another experiment could compare the decisionmaking processes followed by consumer debtors who recently filed for bankruptcy to that of consumers who have not. Do those who did not file for bankruptcy engage in systematic decisionmaking, while those who filed for bankruptcy make choices based on heuristics? Experiments might also be designed to test whether biases in decisionmaking are affected if disclosure information or a financial literacy course is provided. If consumers can learn to ignore their decisional biases, regulation should focus on providing education and notice. If learning is unhelpful, stronger regulation may be the only way to correct the inefficiencies occurring in markets where decisionmaking biases infect consumer behavior.

V. Conclusion

The logic of strategic incentive analysis is intuitively appealing. Whether we are lawyers, economists, or neither, all of us want to believe that the law influences individuals and entities in predictable ways. Where penalties attach, we hope that the law deters improper conduct. Where benefits are offered, we think incentives will prompt action that merits reward. And where lawmakers somehow get it wrong and unintentionally encourage undesirable conduct, we believe that lawmakers should return to craft a legal rule that better accomplishes the intended result.

Notwithstanding its intuitive appeal, strategic incentive analysis should not dictate consumer bankruptcy policymaking. The conclusion that individuals strategically act on incentives follows from a school of law and economics that views all market participants as rational actors who weigh the cost of compliance against the benefits of a breach of contract. This view of "law as price" may have merit in some commercial contexts, but it is particularly strained when used to describe the economic actions of consumers.

Empirical tests of human behavior conducted by cognitive psychologists and behavioral economists contradict the notion that decisionmaking is guided solely by this sort of cost-benefit analysis. Behavioral decision research instead suggests a behavioral model of consumer decisionmaking—a model in which individuals make decisions based on shortcuts that lead them astray in predictable ways.

A behavioral model of consumer bankruptcy law provides an alternate explanation for consumer debt levels and nonbusiness bankruptcy filings. It suggests that consumers will purchase and borrow more than rational consumers would have, and that they will be slower to react to a default situation. It also suggests that rational lenders face market incentives to design consumer finance products and contract terms to exploit these decisional biases. Legal and technological changes since 1978 have allowed lenders to implement market incentives for exploitation on a scale unimaginable in earlier periods. The demise of usury laws and the development of national credit reporting and credit scoring systems and mass marketing techniques permitted lenders to create a national market for consumer credit available to even the least credit-worthy members of society—at a price. Until recently, the harm caused by overborrowing has been offset to some extent by the ability of overleveraged consumer borrowers to find relief from their debts by filing for bankruptcy. But enactment of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 severely limits consumer access to the bankruptcy lifeboat, and, in effect, rewards consumer lenders for taking advantage of consumer limitations.

We find the reform's focus on incentivizing rational consumer borrowers to be particularly wrongheaded. To the extent that rationality and opportunism exist in consumer credit transactions, they both appear to exist on the lender, not the borrower, side of the equation. Those who would seek to reduce the bankruptcy filing rate should focus there as well.

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