

Overoptimism and Overborrowing

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Abstract: Scholars have long argued that overoptimism causes consumers to overborrow—to borrow more than they would if they accurately perceived the risks they face. Although this argument serves as a central justification for policies designed to reduce consumer borrowing, scholars have not carefully defined overoptimism. This Article demonstrates that the term overoptimism is vague and that different forms of overoptimism yield sharply different implications. Paradoxically, some forms of overoptimism may actually cause consumers to borrow less than they would if they accurately perceived the risks they face. Therefore, generous terms of debt relief that are designed to reduce lending to overly optimistic consumers by making it more difficult for creditors to collect may actually reduce consumer welfare.

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I. INTRODUCTION

Bankruptcy and related laws serve as a form of insurance by providing consumers a benefit—debt relief—when they suffer misfortunes that makes repayment difficult or impossible.¹ If markets functioned perfectly,² we would have no need for such laws. Consumers would simply purchase insurance against risks, such as unemployment, that lead to financial distress. The consumer could purchase this insurance from her creditors, either in the form of credit insurance or in the form of explicit limitations on collections, just as she could negotiate any other term of the credit contract with her lender. Yet well-recognized forms of market failure, such as contracting costs,³ asymmetric information,⁴ externalities,⁵ or cognitive failure,⁶ may prevent consumers from purchasing the

1. Numerous scholars have characterized bankruptcy as a form of insurance. *See, e.g.*, Barry Adler et al., *Regulating Consumer Bankruptcy: A Theoretical Inquiry*, 29 J. LEGAL STUD. 585, 587 (2000) (“As it happens, consumer bankruptcy is best justified as partial wage insurance . . .”); Charles G. Hallinan, *The “Fresh Start” Policy in Consumer Bankruptcy: A Historical Inventory and an Interpretative Theory*, 21 U. RICH. L. REV. 49, 103–25 (1986) (discussing the analogy between the bankruptcy discharge and insurance); Richard M. Hynes, *Optimal Bankruptcy in a Non-optimal World*, 44 B.C. L. REV. 1 (2002) (further exploring the analogy between debt relief and private insurance and the moral hazards that each creates).

2. Even if markets functioned perfectly, consumers may still suffer adverse events like unemployment or illness. However, if consumers understood the risk that these events would occur and there were no other market failures, such as externalities, consumers would purchase appropriate insurance against these risks.

3. *See, e.g.*, William R. Zame, *Efficiency and the Role of Default when Security Markets are Incomplete*, 83 AM. ECON. REV. 1142, 1154–55 (1993) (arguing that limitations on the enforcement of a contract may be efficient if parties are unable to write complete contracts). Note, however, that costly contracting will not justify mandatory terms of debt relief and thus may be better able to explain those terms of debt relief, like homestead exemptions, that can be somewhat waived through security interests.

4. Asymmetric information simply means that consumers know more about their ability to repay than their creditors know. Consumers who know that they are relatively good credit risks may agree to severe forms of debt collection in order to obtain a favorable interest rate by distinguishing themselves from their higher-risk neighbors who will default more often and thus find severe forms of debt collection more costly. It is possible that all consumers, even the good credit risks, would be made better off if the government banned severe forms of debt collection. *See, e.g.*, Samuel A. Rea, Jr., *Arm-Breaking, Consumer Credit and Personal Bankruptcy*, 22 ECON. INQUIRY 188 (1984).

5. *See, e.g.*, Thomas H. Jackson, *The Fresh-Start Policy in Bankruptcy Law*, 98 HARV. L. REV. 1393, 1418–24 (1985).

6. *Id.*

appropriate level of insurance.⁷ As a consequence, the government mandates this insurance by enacting laws that limit the ability of creditors to collect their debts.

Laws mandating debt relief restrict the freedom of contract; consumers are not allowed to bargain for lower interest rates or other desirable terms by waiving their right to relief. While most scholars now accept the need for some debt relief,⁸ some argue that our current laws may unduly raise interest rates or restrict access to credit.⁹ This argument has little normative appeal for those who believe that lenders are currently too eager to lend. Perhaps in part because of this, our nation's bankruptcy law professors overwhelmingly oppose pending bankruptcy reforms designed to make consumer bankruptcy less generous for many consumers.¹⁰ Of course, even an overly eager lender must find consumers willing to borrow, but scholars have long

7. For a general discussion of the market failures that may afflict consumer credit contracts, see Richard Hynes & Eric A. Posner, *The Law and Economics of Consumer Finance*, 4 AM. L. & ECON. REV. 168 (2002).

8. However, some commentators continue to question whether the law should allow consumers to waive some aspects of debt relief. See, e.g., Adler et al., *supra* note 1, at 589–607. However, these articles typically imply that the law should allow consumers to exempt only limited aspects of our debt-relief system. See *id.* (calling for reforms that would allow consumers to waive the use of property exemptions). But the law could effectuate this reform by simply limiting the extent of prebankruptcy planning and allowing consumers to grant security interests in their property. Consumers are largely able to grant such interests except in household goods and certain other property that is likely to have little resale value.

9. See, e.g., *id.* at 591 (“Finally, permitting debtors ex post to choose which bankruptcy chapter to use seems questionable. Because parties can renegotiate in Chapter 7, Chapter 13 cannot increase ex post surplus. Debtors, we show, choose the chapter that minimizes the creditors’ insolvency state payoff. *This worsens ex ante efficiency because interest rates rise and bankruptcy is softer on borrowers. Permitting debtors to choose between Chapters 7 and 13 thus does not enhance ex post efficiency and reduces ex ante efficiency.*” (emphasis added)); Reint Gropp et al., *Personal Bankruptcy and Credit Supply and Demand*, 112 Q.J. ECON. 217 (1997) (finding that consumers who live in states with larger property exemptions pay higher interest rates and have a reduced access to credit); Daniel J. Villegas, *Regulation of Creditor Practices: An Evaluation of the FTC’s Credit Practice Rule*, 42 J. ECON. & BUS. 51 (1990) (testing whether limitations on credit provide a net benefit to consumers and lenders). Some scholars argue that interest rates, particularly credit card interest rates, are somehow “sticky” and do not respond to lenders’ costs. See Lawrence M. Ausubel, *The Failure of Competition in the Credit Card Market*, 81 AM. ECON. REV. 50 (1991). If this were true, it is possible that a change in the terms of debt relief would have no effect on the terms of credit.

10. See Charles Jordan Tabb, *The Death of Consumer Bankruptcy in the United States?*, 18 BANKR. DEV. J. 1, 48 (2001) (“The vast majority of America’s bankruptcy law professors have repeatedly expressed their vehement opposition to the bankruptcy reform bills. About 100 professors have written Congress on four separate occasions imploring Congress not to pass such a bill. Exactly *two* law professors have urged passage.” (emphasis added)(citations omitted)).

argued that consumers suffer from a host of failings that cause them to succumb to the siren song of easy credit.¹¹ The prescription for this overborrowing has remained roughly constant: provide generous debt relief by limiting the enforcement of contracts so that lenders will restrict consumer access to credit by an appropriate amount.¹²

Defenders of the freedom of contract have traditionally rejected these claims of consumer failings as unsupported by evidence.¹³ Over the last few decades, scholars have begun to look to psychology literature to justify their claims of cognitive failure in a variety of contexts.¹⁴ Drawing on this literature, bankruptcy scholars argue that consumers utilize various decision heuristics that make them systematically overly optimistic and lead them to borrow too much.¹⁵ More frequently, scholars advance a less formal version of this claim: consumers borrow too much because they fail to consider the misfortunes that they will face on the trail of life.¹⁶

11. See, e.g., ARCHIBALD ROSSER, CREDIT PERNICIOUS (1823); TERESA A. SULLIVAN, ELIZABETH WARREN & JAY LAWRENCE WESTBROOK, THE FRAGILE MIDDLE CLASS 247–52 (2000). Other scholars have made similar claims in the context of secured credit. See, e.g., Julia Patterson Forrester, *Mortgaging the American Dream: A Critical Evaluation of the Federal Government's Promotion of Home Equity Financing*, 69 TUL. L. REV. 373, 381–87 (1994) (arguing that excessive optimism and related heuristics lead consumers to underestimate the chance of default and foreclosure and to incur too much in home equity loans); Michael H. Schill, *An Economic Analysis of Mortgagor Protection Laws*, 77 VA. L. REV. 489, 526–31 (1991) (same).

12. See, e.g., ROSSER, *supra* note 11, at 31–43 (arguing that courts should not enforce consumer debts as defined by the amount borrowed); SULLIVAN, WARREN & WESTBROOK, *supra* note 11, at 252–61 (arguing against bankruptcy reform designed to make debt relief less generous); Jackson, *supra* note 5, at 1402 (“The availability of a limited, nonwaivable right of discharge in bankruptcy therefore encourages creditors to police extensions of credit . . .”).

13. See, e.g., F.H. Buckley, *The Debtor as Victim*, 87 CORNELL L. REV. 1078, 1087–88 (2002) (arguing that Sullivan, Warren & Westbrook “fail to uncover evidence of substantial consumer irrationality” that would explain why consumers incur too much debt) (reviewing SULLIVAN, WARREN & WESTBROOK, *supra* note 11, at 22).

14. See, e.g., Cass R. Sunstein, *Introduction* to BEHAVIORAL LAW & ECONOMICS 3–5 (Cass R. Sunstein ed., 2000). This literature does not uniformly support the proposition that the government should assume that it knows more about consumers’ needs than consumers themselves. See, e.g., Jeffrey J. Rachlinski, *The Uncertain Psychological Case for Paternalism*, 97 NW. U. L. REV. 1165 (2003).

15. See Jackson, *supra* note 5, at 1411 (defining “heuristics” as “tools that individuals employ in processing and assessing information”); see also Hallinan, *supra* note 1, at 113 (arguing that scholars have long held “strong intuitions that a substantial portion of borrowers tend to discount excessively the risk of financial difficulties”).

16. See, e.g., ROSSER, *supra* note 11, at 15 (“No doubt many [consumers] provide against probable changes [in their income]; but however large we can admit the number of these to be, there are still enough of the improvident, ignorant, and uncalculating description,

Although scholars have challenged the claim of systematic overoptimism,¹⁷ this Article demurs as to the validity of this claim and asks if, by alleging that consumers are overly optimistic, bankruptcy scholars have stated a case for generous debt relief.¹⁸ In brief, the argument that overoptimism implies a need for generous debt relief suffers from the same criticism that has long plagued arguments in favor of paternalistic intervention: the nature of the consumer's irrationality (in this case overoptimism) is not sufficiently defined to support a meaningful policy prescription. Specifically, if the overly optimistic consumer underestimates the likelihood of *moderately* adverse events, she will in fact borrow too much and the government can improve her welfare by adopting policies that discourage borrowing. If, however, the overly optimistic consumer underestimates the likelihood of *severely* adverse events, events that would cause her to default even if she borrows a reasonable amount of debt, she will borrow too little, and the government can improve her welfare by adopting policies that encourage borrowing. While the former effect may dominate the latter, no one has shown this empirically. Moreover, this argument is difficult to reconcile with much of the scholarship favoring generous debt relief.¹⁹

Part II describes the standard argument for why overoptimism leads to excessive borrowing: consumers underestimate the cost of additional debt because they underestimate how difficult it would be to repay this additional debt if they were to suffer some misfortune. This argument assumes that by incurring additional debt the consumer increases the amount that she must repay after she suffers

to deserve the attention of our legislators.”); Elizabeth Warren, *The Bankruptcy Crisis*, 73 IND. L.J. 1079, 1084 (1998) (“Some incur the debt with little thought about how it adds up, perhaps like the grasshopper who never thought about the coming winter.”).

17. See, e.g., Buckley, *supra* note 13, at 1087–88; Alan Schwartz & Louis L. Wilde, *Imperfect Information in Markets for Contract Terms: The Examples of Warranties and Security Interests*, 69 VA. L. REV. 1387, 1446 (1983) (“[T]here is no reason to think that these [estimation] mistakes lead to a systematically optimistic bias, nor is there any way to know how serious they are.”). However, even if these mistakes do not systematically lead to an optimistic bias, one might still argue for intervention if the consequences of overoptimism are more severe than those of excessive pessimism.

18. This Article is similar to works by other scholars showing that assumptions of consumer irrationality lead to ambiguous normative implications for other areas of the law. See, e.g., ERIC A. POSNER, PROBABILITY ERRORS: SOME POSITIVE AND NORMATIVE IMPLICATIONS FOR TORT AND CONTRACT LAW (Univ. of Chi. Law Sch., John M. Olin Law & Econ., Working Paper No. 161, 2002).

19. See *infra* notes 101–02 and accompanying text.

some misfortune. Part III demonstrates that this assumption is not always true; once the consumer defaults, the amount that she owes will not affect the amount that she must repay. Part IV demonstrates that overoptimism, or the underestimation of the likelihood of adverse events, can lead to either over- or underborrowing and discusses the implications for bankruptcy reform. Part V concludes that until further study can prove that one effect of overoptimism dominates the other, normative arguments for generous debt relief should rely on other forms of alleged market failure.

II. THE STANDARD OVERBORROWING ARGUMENT

Scholars on both sides of the debate over bankruptcy reform claim that some consumers incur too much debt. Those favoring less generous debt relief suggest that some consumers opportunistically increase their debts once they realize that they are likely to file for bankruptcy and therefore will not have to repay the full amount of their loans.²⁰ For example, a consumer who realizes that bankruptcy is inevitable may go on one last spending binge at the expense of lenders who do not learn of the consumer's precarious financial condition in time to adjust her credit limit. Once default becomes inevitable, this additional spending costs the consumer nothing because she will never have to repay the additional debt;²¹ once default becomes inevitable, additional loans amount to "free money" from the consumer's perspective.

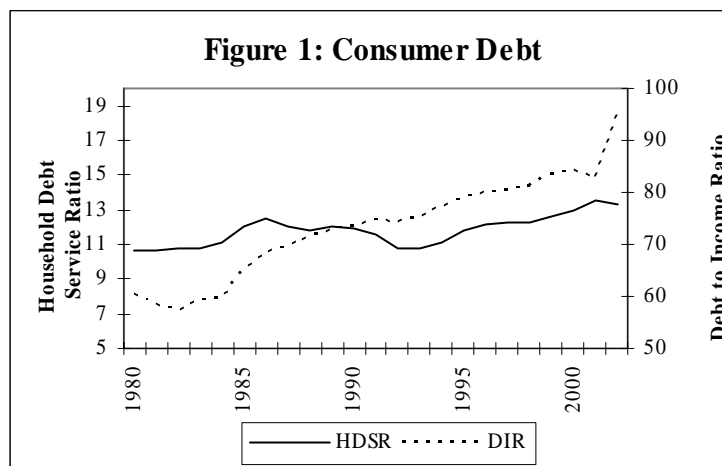
Those who favor more generous debt relief argue that overly aggressive marketing causes more systematic overborrowing.²²

20. See, e.g., Michelle J. White, *Economic Versus Sociological Approaches to Legal Research: The Case of Bankruptcy*, 25 L. & SOC'Y REV. 685, 694 (1991) ("Further, once it becomes likely that an individual will file for bankruptcy, she has an incentive to borrow more, for both her new and old debts will be discharged in bankruptcy."). However, if the lender can prove that the consumer incurred the debt with no intent to repay, the court may exempt the lender's debt from discharge. See, e.g., *Anastas v. Am. Sav. Bank*, 94 F.3d 1280, 1285 (9th Cir. 1996) ("[T]he central inquiry in determining whether there was a fraudulent representation is whether the card holder lacked an intent to repay at the time he made the charge. We emphasize that the representation . . . is not that he has an *ability* to repay the debt[, but] an *intention* to repay."). For a more thorough exploration of this issue, see *infra* note 75 and accompanying text.

21. See *infra* Part III.B (explaining that once a consumer defaults, the amount of her obligations becomes irrelevant). Of course, this assumes that a bankruptcy court will not rule that these additional debts are nondischargeable. See cases cited *infra* note 75.

22. See, e.g., Jean Braucher, *Increasing Uniformity in Consumer Bankruptcy: Means Testing as a Distraction and the National Bankruptcy Review Commission's Proposals as a*

Although the identity of the villains has changed, the argument that lenders extend too much credit in pursuit of excessive profits has endured for centuries. Today this argument is framed in terms of credit card companies that pursue abnormally large profits, which are in turn caused by “sticky” credit card interest rates that do not fall as the cost of lending declines.²³ A generation ago the culprits were consumer finance companies and installment lenders.²⁴ Generations before that the culprits were retailers who sold goods on credit and thereby charged rates that earned them an “undue profit.”²⁵



The argument that today’s consumers borrow too much has greater force to the extent that the consumer debt burden has risen

Starting Point, 6 AM. BANKR. INST. L. REV. 1, 7 (1998) (“It would be hard for anyone to disagree with the proposition that Americans have too much debt . . .”); Elizabeth Warren, *The Market for Data: The Changing Role of Social Sciences in Shaping the Law*, 2002 WIS. L. REV. 1, 8 (“In the early 1990s, the industry went on the offensive again. Consumer credit was highly profitable, and banks were engaged in a marketing frenzy. But as debt levels rose, so rose the number of bankruptcies.”).

23. See, e.g., SULLIVAN, WARREN & WESTBROOK, *supra* note 11, at 134–40; Lawrence M. Ausubel, *Credit Card Defaults, Credit Card Profits, and Bankruptcy*, 71 AM. BANKR. L.J. 249, 251 (1997) (“The profit margins of credit card issuers substantially increased beginning in 1982, as a result of the functional deregulation of credit card interest rates . . .”). Note, however, that some scholars argue that credit card issuers do not earn abnormal profits. See, e.g., Todd J. Zywicki, *The Economics of Credit Cards*, 3 CHAP. L. REV. 79, 128–46 (2000). This Article does not address the relevance of this debate.

24. See generally Vern Countryman, *Imprudent Credit Extension: A New Legal Concept Aborning?*, 27 ME. L. REV. 1 (1975).

25. See, e.g., ROSSER, *supra* note 11, at 26–28.

significantly. However, the evidence of a rising consumer debt burden is decidedly mixed. As shown in Figure 1,²⁶ the amount of consumer debt has risen significantly, even as a percentage of income. However, Figure 1 also shows that the percentage of a consumer's income that she must dedicate to making payments on her outstanding loans (the household debt service ratio) has not risen as markedly in the last twenty-three years because of a decline in interest rates and an increase in the duration of loans.²⁷ While the debate over the proper measure of consumer indebtedness may have important implications for whether consumers are being forced into bankruptcy by crushing levels of debt, its resolution cannot answer the question of whether consumers are borrowing *too much* without defining the amount that a consumer *should* borrow.²⁸

If markets functioned perfectly,²⁹ the consumer would choose the efficient level of debt. This does not necessarily mean that consumers would never default; given the severity of misfortune that can befall a consumer, a world with no default would be possible only in a world with no debt. Rather the consumer would choose the level of debt that is best for her given the debt-relief laws that the government has enacted. Those who argue that debt levels are currently too high must identify the market failure that makes consumers incapable of making borrowing decisions for themselves. Often the market failures are only loosely defined, but over the last few decades scholars have begun to formalize these theories and tie

26. The household debt service ratio can be found at: Federal Reserve Board, Household Debt-Service Burden: Release Data, <http://www.federalreserve.gov/releases/housedebt/default.htm> (last visited Oct. 13, 2003). The debt-to-income ratio is derived from statistics found at: Federal Reserve Statistical Release, Consumer Credit Outstanding, http://federalreserve.gov/releases/g19/hist/cc_hist_mt.html (last visited Oct. 13, 2003); Federal Reserve Statistical Release, Flow of Funds Accounts of the United States, fig.L10, <http://www.federalreserve.gov/releases/z1/current/Coded/coded.pdf> (last visited Oct. 13, 2003); Bureau of Economic Analysis, Regional Economic Accounts: Annual State Personal Income, <http://www.bea.gov/bea/regional/spi/> (last visited Oct. 13, 2003).

27. For example, in calculating the debt-service burden, the Federal Reserve includes only that portion of credit card debt likely to be included in the minimum monthly payment. Federal Reserve Board, Household Debt-Service Burden: About the Release, <http://www.federalreserve.gov/releases/housedebt/about.htm> (last visited Oct. 13, 2003).

28. See *infra* pp. 111–13 for a discussion of the optimal level of borrowing. Note, however, that no one really knows, as an objective matter, what the optimal level of borrowing really is because the level depends on the characteristics of the individual consumer: her expected income, tolerance of risk, etc.

29. A number of market failures can afflict consumer credit markets. For a general discussion, see Hynes & Posner, *supra* note 7.

some of these theories to the evidence of cognitive failure found by psychologists. The fear that financial distress will harm the consumer's family and perhaps even lead to social unrest has been recast in terms of externalities.³⁰ The argument that consumers are impulsive or do not sufficiently consider their future has been recast in terms of hyperbolic discounting.³¹ The argument that consumers do not sufficiently consider the possibility that they will suffer some hardship that will make repayment difficult or impossible is recast as an argument that consumers are systematically overly optimistic and therefore borrow too much.³² This Article engages this last argument.

A common version of the argument that overoptimism leads to overborrowing is that consumers may underestimate the chance that they will suffer some setback, such as unemployment, divorce, or illness, that will make repayment difficult or impossible.³³ This causes consumers to underestimate the real cost of borrowing and to borrow more than they would if they knew the risks they face. In such a world, debt relief may improve social welfare by forcing the lender to absorb the loss associated with the adverse event. Because lenders can estimate the probability of loss more accurately than consumers,³⁴ lenders will ration credit by charging a higher interest rate that more accurately reflects the cost of borrowing.³⁵ The higher cost of credit will induce consumers to use less of it.

Overoptimism is sometimes offered as an explanation for the existence of the bankruptcy discharge option, or more specifically, the prohibition on voluntary consumer waiver of the right to seek this discharge.³⁶ However, this explanation ignores a more fundamental question. This explanation emphasizes why consumers cannot waive debt relief, but fails to identify why this debt relief

30. See, e.g., Jackson, *supra* note 5, at 1418–24.

31. See generally David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 Q.J. ECON. 443 (1997).

32. See, e.g., Jackson, *supra* note 5, at 1414.

33. See, e.g., Warren, *supra* note 16, at 1084.

34. This assumption is somewhat inconsistent with the argument that credit markets may suffer from asymmetric information because the consumer knows more about the likelihood of her default than does the lender. See *supra* note 4 and accompanying text.

35. See, e.g., Jackson, *supra* note 5, at 1426.

36. See, e.g., *id.* at 1410–14; Hallinan, *supra* note 1, at 113 (arguing that scholars have long held “strong intuitions that a substantial portion of borrowers tend to discount excessively the risk of financial difficulties”).

must take the form of a bankruptcy discharge.³⁷ This distinction is important because even if Congress were to repeal the bankruptcy code, a host of federal and state laws would still allow consumers to keep some of their assets and income after default.³⁸ Of course, these laws could be repealed or made waivable as well, but no one has made this argument in the political arena. For that matter, no one has seriously called for repeal of the Bankruptcy Code in over a century.³⁹ Over the last few years, Congress has considered various versions of legislation designed to make bankruptcy less generous, and limit the ability of a small number⁴⁰ of high-income consumers to obtain an immediate discharge of their debts.⁴¹ In short, the debate over bankruptcy reform focuses on how generous debt relief should be rather than on whether we need it at all.

Advocates of generous debt relief sometimes argue that recent efforts designed to make consumer bankruptcy less generous will exacerbate the overborrowing problem, as illustrated in Figure 2A.⁴² A reduction in the generosity of debt relief will substantially increase the supply of credit (from S to S') because lenders believe that they are more likely to be repaid.⁴³ However, this change in the law will not have an appreciable effect on the demand for credit (demand for

37. See Richard M. Hynes, *Why (Consumer) Bankruptcy?* (Feb. 10, 2004) (unpublished manuscript, on file with author) (demonstrating that society could mimic bankruptcy's "fresh start" through slight modifications to existing federal and state nonbankruptcy limitations on debt collection).

38. See *infra* notes 48–59 and accompanying text.

39. During the 19th century, Congress enacted and then repealed three different bankruptcy acts. Congress repealed the Bankruptcy Act of 1800 in 1803, 2 Stat. 248 (1803), the Bankruptcy Act of 1841 in 1843, Act of Mar. 3, 1843, 5 Stat. 614 (1843), and the Bankruptcy Act of 1867 in 1878, Act of June 7, 1878, 20 Stat. 99 (1878). For a history of bankruptcy in the United States, see Charles Jordan Tabb, *The History of the Bankruptcy Laws in the United States*, 3 AM. BANKR. INST. L. REV. 5 (1995).

40. See, e.g., Marianne B. Culhane & Michaela 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 that proposed legislation would prevent only 3.6% of current Chapter 7 debtors from receiving an immediate discharge). Some scholars strongly criticize the methodology used by Culhane & White, *supra*, but even these scholars acknowledge that the reforms are unlikely to bar more than 10-15% of currently bankrupt debtors from filing under Chapter 7. See, e.g., Judge Edith H. Jones & Todd J. Zywicki, *It's Time for Means-Testing*, 1999 BYU L. REV. 177, 188–91.

41. For a highly critical overview of this legislation, see Tabb, *supra* note 10, at 1 (suggesting that consumer bankruptcy may "be on death row").

42. See, e.g., Ausubel, *supra* note 23, at 268–69.

43. *Id.*

credit will only move from D to D') because consumers underestimate the probability that they will use debt relief and thus underestimate the importance of the change in this term of the credit contract.⁴⁴ As a result, the total amount of borrowing increases from B to B' .

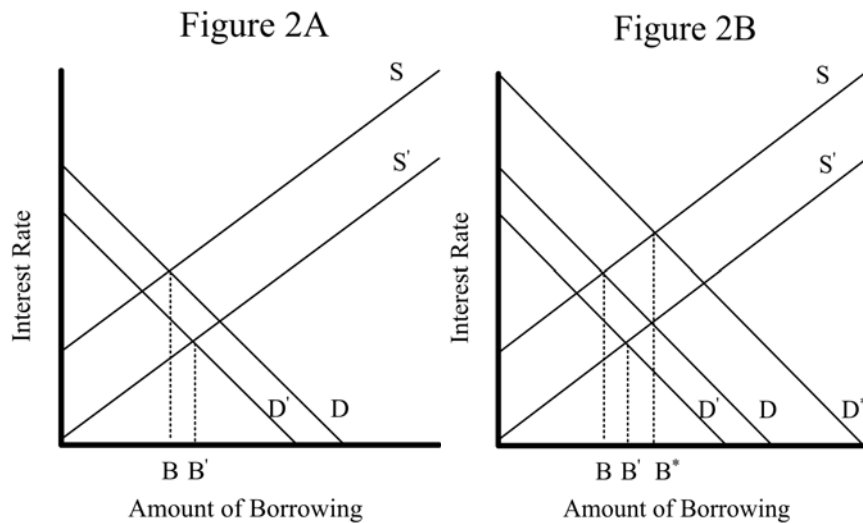


Figure 2A illustrates a positive claim (less generous debt relief will lead to more borrowing) used to support the normative claim that debt-relief laws should remain generous. However, the link between the positive analysis and the normative conclusion rests on the assumption that current levels of borrowing are too high (or at least not too low), and therefore further increases in borrowing would reduce consumer welfare.

Assume, for the sake of argument, that if consumers were rational, the demand for credit would be given by D^* (Figure 2B), and therefore the optimal level of borrowing is given by $B^* > B$. Because less generous debt relief causes overly optimistic consumers to borrow an amount closer to the optimal level of borrowing, $B^* > B' > B$, it is *possible* that less generous debt relief improves social welfare, though there are offsetting effects. Though less generous debt relief moves the level of borrowing closer to the optimal level of

44. *Id.* Indeed, consumers may not even bother to learn of changes in the law because they are confident that the law will not apply to them. *Id.* at 269.

borrowing, it does so at the cost of reducing the insurance the consumer receives when she defaults. Therefore, the appropriate level of debt relief will result in some level of borrowing that is slightly less than the optimal amount of borrowing, or the amount of debt that consumers would incur if they understood the government's debt-relief policy and were fully rational.

Of course, one cannot just assume that the optimal level of debt would equal B^* , and, as discussed above, there are a host of reasons why consumers may in fact borrow too much, such that the optimal level of borrowing is actually less than B' or even B .⁴⁵ However, this Article demonstrates a rather counter-intuitive result. If the only market failure present is that consumers underestimate the likelihood of adverse events, it is entirely possible that they will borrow too little, not too much.⁴⁶

III. AFTER DEFAULT, THE CONSUMER WHO OWES MORE NEED NOT PAY MORE

The standard overborrowing argument is that consumers underestimate the cost of repaying an additional dollar of debt because they underestimate the chance that they will have to repay this additional debt after they have suffered some misfortune that leaves them relatively impoverished. However, an additional dollar of debt may not increase the total amount that the consumer must repay after suffering this misfortune. This Article assumes that once a consumer decides to default, the amount that of repayment does not increase with the total amount owed to unsecured creditors—the required repayment depends only on the consumer's remaining assets and income. Part III.A demonstrates that this assumption is generally valid in the nonbankruptcy context, and Part III.B illustrates that it is generally valid in the bankruptcy context as well.⁴⁷

45. See *supra* notes 30–32 and accompanying text.

46. See *infra* Part IV and the Appendix. As more fully explained below, a consumer who underestimates severely adverse events that would cause her to default even if she borrowed a reasonable amount of debt will overestimate the probability of repayment and hence overestimate the cost of borrowing.

47. Of course, the consumer's total obligations do place a ceiling on her repayment in that no court would require her to repay more than the amount she owes. However, in the United States, bankrupt consumers rarely, if ever, repay all of their lenders in full. In fact, general unsecured creditors receive no payments in about 95% of all Chapter 7 bankruptcy cases. See Executive Office for United States Trustees, United States Trustee Program:

A. Nonbankruptcy Debtor-Creditor Law

Although consumer bankruptcy has dominated the recent consumer finance scholarship, most consumers who default on their loans probably do not file for bankruptcy.⁴⁸ Rather, they make use of an informal bankruptcy system⁴⁹ created by federal and state limitations on nonbankruptcy collections. Creditors will typically begin the collections process by writing or calling the consumer to ask for payment,⁵⁰ and may simply abandon their efforts if these prove unsuccessful. Some creditors will take the additional step of seeking a court judgment to either attach assets or garnish wages.

Federal and state laws place limits on a creditor's ability to garnish a consumer's wages. Federal law allows general creditors to garnish no more than 25% of the consumer's take-home earnings.⁵¹ The aggregate amount of a consumer's obligations may affect how much a particular creditor will receive, but will have no bearing on the total amount that all creditors can garnish, and thus no effect on the total amount that the consumer must repay.⁵² Although state

Preliminary Report on Chapter 7 Asset Cases 1994 to 2000, at 7 (2001) (on file with author) ("Historically, the vast majority (about 95 to 97 percent) of chapter 7 cases yield no assets."). In addition, if the consumer does repay in full, there has been no real default, at least in the economic sense, because the creditor has lost nothing.

48. *See, e.g.*, Am. Bankers Ass'n, 1997 Installment Credit Report, at 109 (9th ed. 1997) (reporting that approximately 70% of all bank consumer credit losses occur outside of bankruptcy). Of course, this is a percentage of the dollar amount of outstanding obligations rather than individuals, and it is possible that some individuals file for bankruptcy long after their creditors have accounted for their debts as unlikely to be repaid. However, this figure clearly implies that a large number of consumers who refuse to repay their loans do not file for bankruptcy.

49. *See* AMANDA E. DAWSEY & LAWRENCE M. AUSUBEL, INFORMAL BANKRUPTCY (Soc. Sci. Research Network, Working Paper 2002), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=332161 (last visited Feb. 9, 2004).

50. Collection efforts sometimes border on harassment or intimidation, though both federal and state laws provide consumers with some protection. *See* Fair Debt Collection Practices Act, Pub. L. No. 95-109, 91 Stat. 874 (current version at 15 U.S.C. §§ 1692-1692o); 2 HOWARD J. ALPERIN & ROLAND F. CHASE, CONSUMER LAW: SALES PRACTICES AND CREDIT REGULATION § 633, at 356 (1986) (describing state laws). Some believe that these laws are currently insufficient, but that is outside the scope of this analysis.

51. Consumer Credit Protection Act, 15 U.S.C. § 1673 (2000) (restricting garnishment in favor of general creditors to no more than the lesser of 25% of the consumer's "disposable earnings" or the amount by which her disposable income exceeds thirty times the federal minimum wage). "Disposable earnings" is defined in this context to mean earnings less any amount required by law to be withheld. *Id.* § 1672(b).

52. Of course the aggregate amount of the consumer's debt may affect how *long* her wages are garnished because the consumer's wages will be used to pay off the first priority

garnishment laws sometimes provide further protection of the consumer's future income,⁵³ no state statute instructs a judge to consider the aggregate amount of the consumer's obligations,⁵⁴ and it is highly unlikely that judges consider this factor in the more open-ended analysis called for by some statutes.⁵⁵

Just as limitations on garnishment allow the consumer to retain some of her income after default, state property exemptions allow her to retain some of her assets as well. Like limitations on garnishment, property exemptions do not consider the aggregate amount of the consumer's obligations. Property exemptions allow the consumer to exempt certain types of assets, such as home equity, clothing, or insurance policies, from attachment by judgment creditors. These exemptions vary greatly from state to state; sometimes they provide explicit limits on the amount of wealth the consumer may retain, and sometimes they do not.⁵⁶ No state statute, however, instructs a court to consider the consumer's aggregate obligations when determining the amount of property the consumer may exempt.⁵⁷

creditor in full before being applied to satisfy the judgments of other creditors. However, if a creditor is ultimately repaid in full, there has been no default in an economic sense, because the creditor has lost nothing.

53. *See, e.g.*, TEX. PROP. CODE ANN. § 42.001(b)(1) (Vernon 2000) (prohibiting garnishment of earned but unpaid wages).

54. For a compilation of state garnishment laws, see BARBARA S. MOORE, THE COMPLETE GUIDE TO GARNISHMENT: STATE & FEDERAL LAWS, FORMS AND PRACTICAL GUIDANCE 28-61 (2002).

55. *See, e.g.*, COLO. REV. STAT. § 13-54-104(3)(b)(III) (1999) (authorizing the judge to provide for garnishment in an amount less than such maximum amounts when a debtor is totally and permanently disabled and establishes that at least 75% of his income comes from disability income or benefits).

56. For example, Texas allows a consumer to exempt her home equity as long as her home is on a lot of less than ten acres in a town, village, or city or on a lot less than one hundred acres (200 for a family) elsewhere. *See* TEX. PROP. CODE ANN. §§ 41.001-.002 (Vernon 2000). By contrast, a family of four in Virginia may only protect \$11,000 in home equity. VA. CODE ANN. § 34-4 (Michie 2002); *see also In re Snellings*, 10 B.R. 949 (Bankr. W.D. Va. 1981) (allowing husband and wife to each claim a \$5,000 exemption). That is, of course, unless the home is held in the form of tenancy by the entirety and none of the married couple's obligations are owed jointly. *See Rogers v. Rogers*, 512 S.E.2d 821 (Va. 1999) (refusing to allow creditors to foreclose on real estate held in the form of tenancy by the entirety even though creditors obtained judgments against each spouse individually); *Price v. Harris (In re Harris)*, 155 B.R. 948 (Bankr. E.D. Va. 1993) (allowing the sale of home for the benefit of the creditors of both spouses).

57. For a compilation of state property exemptions, see 9 COLLIER ON BANKRUPTCY ¶ 4003 (Alan N. Resnick & Henry J. Sommer eds., 15th ed. 2003).

The discussion thus far deals with unsecured credit. Of course, the amount of the consumer's secured credit may limit the property she can retain because, with limited exceptions,⁵⁸ property exemptions do not prevent a secured creditor from seizing her collateral. As a result, this Article does not question the link between overoptimism and overborrowing when made in the context of secured loans such as home mortgage loans.⁵⁹

B. Bankruptcy Law

For the most part, bankruptcy law also refuses to consider the amount of the consumer's total obligations when setting her required repayment. About 70% of consumer bankruptcy filings are Chapter 7 filings,⁶⁰ and virtually all other consumers who file for bankruptcy choose Chapter 13.⁶¹

1. Chapter 7 bankruptcy

Chapter 7 grants the consumer a complete discharge of her loans,⁶² thereby freeing all of her future income from attachment. Chapter 7 also allows the consumer to exempt roughly the same property that she would be able to exempt outside of bankruptcy under applicable state law.⁶³ Therefore, the total amount the

58. For example, if the consumer files for bankruptcy, she may be able to avoid some security interests in items such as household goods. *See* 11 U.S.C. § 522(f) (2000) (allowing consumers to avoid a lien on certain furnishings, goods, clothing, etc., held for personal use, provided that the security interest is not securing the purchase money).

59. *See, e.g.*, Forrester, *supra* note 11, at 381–87 (arguing that excessive optimism and related heuristics lead consumers to underestimate the chance of default and foreclosure and to incur too much debt in home equity loans); Schill, *supra* note 11, at 526–30 (arguing that similar heuristics lead consumers to demand insufficient protections after underestimating the chance of default and foreclosure).

60. *See* ABI World, Non-business Bankruptcy Filings by Chapter, 1990–2003, per Quarter, <http://www.abiworld.org/stats/1990nonbuschapter.html> (last visited Feb. 9, 2004) [hereinafter Non-business Bankruptcy Filings].

61. Consumers can also file under Chapter 11 of the Bankruptcy Code. *Toibb v. Radloff*, 501 U.S. 157, 166 (1991). However, in 2001, less than six out of ten thousand nonbusiness filings were Chapter 11 filings (789 out of 1,451,789). *See* Non-business Bankruptcy Filings, *supra* note 60.

62. Some debts, such as tax obligations or debts resulting from willful and malicious injury, are excepted from the Chapter 7 discharge. 11 U.S.C. § 523 (2000).

63. The consumer is always allowed to use the same exemptions that were available to her in a state collections proceeding, and she may be able to use certain federal, bankruptcy-only exemptions as well. *See* 11 U.S.C. § 522 (2000). However, the bankruptcy code also gives

consumer owes does not affect how much, if anything, she must repay in Chapter 7.

Under existing case law, the total amount of the consumer's obligations may affect her ability to choose Chapter 7 in the first place. That is, some courts are more likely to dismiss a consumer's filing as a "substantial abuse" of the Bankruptcy Code⁶⁴ if the consumer can repay her debts in full⁶⁵ or in significant part⁶⁶ over three years.⁶⁷ If courts focus on the percentage of debts repaid instead of the value repaid, a consumer who borrows more may be more likely to qualify for Chapter 7 relief because it is less likely that she will be able to repay a significant percentage of her debt. Although this interpretation of substantial abuse is consistent with the assumption that an increase in debt does not *increase* the required repayment after default, it adds a technical complication that could provide an additional argument for why overoptimism could lead a consumer to borrow too little.⁶⁸

states the right to deny their consumers the use of these federal, bankruptcy-only exemptions, and the vast majority of states have done so. *See, e.g.*, Richard M. Hynes, Anup Malani & Eric A. Posner, *The Political Economy of Property Exemption Laws*, 47 J.L. & ECON. (forthcoming 2004) (listing the year in which each state enacted legislation to deny their consumers the right to use the federal, bankruptcy-only exemptions). Yet in doing so, some states have enacted property exemptions that apply only in bankruptcy. *See, e.g.*, CAL. CIV. PROC. CODE §§ 703.130, .140 (West 2001).

64. 11 U.S.C. § 707(b) (2000).

65. *See, e.g.*, Zolg v. Kelly (*In re Kelly*), 841 F.2d 908, 915 (9th Cir. 1997) ("[A] finding that a debtor is able to pay his debts, standing alone, supports a conclusion of substantial abuse."); First USA v. Lamanna (*In re Lamanna*), 153 F.3d 1, 4 (1st Cir. 1998) (holding that a debtor's ability to repay her debts is the most important consideration in the substantial abuse analysis); *see also*, 6 COLLIER ON BANKRUPTCY ¶ 707.04[4] (Alan N. Resnick & Henry J. Sommer eds., 15th ed. 2003) [hereinafter 6 COLLIER].

66. *See, e.g.*, Fonder v. United States, 974 F.2d 996, 1000 (8th Cir. 1992) (finding that petitioner was able to repay 89% of unsecured debts over thirty-six months and repay in full over sixty months); *In re Walton*, 866 F.2d 981, 985 (8th Cir. 1989) (finding that petitioner was able to repay over two-thirds of unsecured debts over thirty-six months and repay in full over sixty months); *In re Woodward*, 265 B.R. 179, 195 (Bankr. S.D. Iowa 2001) (dismissing Chapter 7 petition because debtor was able to repay 37.2% of unsecured debts over thirty-six months and 62% of that debt over sixty months). *See also* 6 COLLIER, *supra* note 65, ¶ 707.04 [4].

67. Courts typically evaluate the ability to repay over a three-to-five-year period because a debtor in Chapter 13 must typically propose a plan that will last for three years, though a court can order a five-year plan for cause. 11 U.S.C. § 1322(d) (2000).

68. *See infra* note 78 and accompanying text.

2. Chapter 13 bankruptcy

The other major form of consumer bankruptcy, Chapter 13, requires that a consumer repay her creditors over a period of three to five years pursuant to a plan proposed by the consumer and approved by the bankruptcy court. There are two major tests for determining how much the consumer must promise to repay in her Chapter 13 plan,⁶⁹ and neither test explicitly considers the aggregate amount of her debt.

The best-interests-of-the-creditors test effectively requires that a consumer's creditors receive at least as much in Chapter 13 as they would have received in Chapter 7.⁷⁰ As outlined above, the total amount of the consumer's obligations does not affect her aggregate repayment in Chapter 7 and therefore does not affect how much she must repay pursuant to the best-interests-of-the-creditors test.

The other major repayment test of Chapter 13, the disposable-income test, requires that the consumer promise to repay an amount equal to her projected income over three years, less some court-determined allowance for "reasonably necessary expenses."⁷¹ Unless the aggregate amount of the consumer's obligations somehow has an effect on her income or her "reasonably necessary expenses," it will have no effect on her "projected disposable income" or her required repayment.

Scholars allege that the practice of bankruptcy diverges from the above theory and that in some jurisdictions, bankruptcy judges insist that plans propose the repayment of a "floor percentage," or a minimum percentage of total outstanding debts.⁷² To the extent that this is true, consumers who owe more may have to pay more after

69. These tests refer to how much the consumer must pay her unsecured creditors. Her secured creditors may object if they will not receive an amount equal to the value of their collateral. 11 U.S.C. § 1325(a)(5) (2000).

70. *Id.* § 1325(a)(4).

71. *Id.* § 1325(b).

72. *See, e.g.*, Jean Braucher, *Lawyers and Consumer Bankruptcy: One Code, Many Cultures*, 67 AM. BANKR. L.J. 501, 532 (1993) ("The reality is that chapter 13 trustees and judges in the four cities [studied] effectively deter 0% plans and keep most plans above a floor percent that is known to local practitioners."). This impression is shared by those who advise consumers on how to file for bankruptcy. *See, e.g.*, ROBIN LEONARD, CHAPTER 13 BANKRUPTCY: REPAY YOUR DEBTS, at 7/2 (3rd ed. 1998) ("In some courts, the judge will not approve your plan unless you propose paying your unsecured creditors a significant portion of what you owe them, usually at least 70%."). "The lawyers then respond by rarely or never submitting plans with less than the specified percentage." Braucher, *supra*, at 532.

default. However, this complication is not fatal to this analysis for several reasons. First, it is unclear how frequently courts require a floor percentage. Second, these floor percentages appear to serve as a screening device, and courts do confirm plans that promise less than the floor percentage if the consumer can establish an inability to pay more.⁷³ Third, even if a consumer is unable to file under Chapter 13, she can still make use of nonbankruptcy debt-relief laws, and she may be able to file under Chapter 7.

Finally, one might object to the claim that additional borrowing is costless as long as the consumer will default before repaying because a court may deny the discharge of these debts on the theory that the debtor never intended to repay the debts, and thus they were incurred by fraud.⁷⁴ However, most courts require the creditor to do more than merely demonstrate that the debtor could not have reasonably expected to repay her debts; the creditor must also show that the debtor did not subjectively believe that she could repay the debts.⁷⁵ Here, the consumer's overoptimism may protect her. As long as the consumer's overoptimism is honest (but unreasonable) she will still receive a discharge of her additional debts.⁷⁶

73. See, e.g., Braucher, *supra* note 72, at 532.

74. See 11 U.S.C. § 523(a)(2) (2000) (making a debt nondischargeable if it is obtained through fraud or false pretenses). This provision is often used by credit card issuers who claim that the debtor makes an implied representation of her intent to repay her loan when she uses her credit card. *AT&T Universal Card Servs. v. Mercer (In re Mercer)*, 246 F.3d 391, 425 (5th Cir. 2001) (holding that with each use of a credit card, a debtor implied her intent to repay the loan); *Am. Express Travel Related Servs. Co. v. Hashemi (In re Hashemi)*, 104 F.3d 1122, 1126 (9th Cir. 1996) (holding that with each use of a credit card, a debtor implied her intent to repay the loan). Numerous articles address the ability of credit card issuers to use § 523 to make their loans nondischargeable. See, e.g., Richard H. Gibson, *Credit Card Dischargeability: Two Cheers for the Common Law and Some Modest Proposals for Legislative Reform*, 74 AM. BANKR. L.J. 129 (2000).

75. See *Chase Manhattan Bank v. Carpenter (In re Carpenter)*, 53 B.R. 724, 732 (Bankr. N.D. Ga. 1985); *Montgomery Ward & Co. v. Blackburn (In re Blackburn)*, 68 B.R. 870, 877 (Bankr. N.D. Ind. 1987).

76. See *Ga. Bank & Trust Co. v. McKinney (In re McKinney)*, 18 B.R. 607 (Bankr. M.D. Ga. 1982); 4 COLLIER ON BANKRUPTCY ¶ 523.08[1][d] (Alan N. Resnick & Henry J. Sommer eds., 15th ed. 2003) ("A debtor's honest belief that a debt would be repaid in the future, even if in hindsight found to have been very unrealistic, negates any fraudulent intent.").

IV. THE AMBIGUOUS IMPLICATIONS OF OVEROPTIMISM

This Article argues principally that overoptimism may lead to underborrowing as well as overborrowing. The reasons for this can be readily explained with verbal-analytic arguments and a simple numerical example; those who desire a more formal treatment should consult the Appendix. Part IV argues that an overly optimistic consumer may underestimate two different types of adverse events: severely adverse events that would have caused her to default even if she had borrowed a reasonable amount and more moderately adverse events that would only cause default if she borrowed too much. Part IV.A will show that if the consumer underestimates the likelihood of severely adverse events that would cause her to default even if she borrowed a reasonable amount, she will likely borrow too little because she will overestimate the likelihood that she will have to repay her loan and thus overestimate her average repayment. By contrast, Part IV.B will show that if she underestimates the likelihood of moderately adverse events she will borrow too much because she will underestimate the likelihood that she will be forced to repay her debts when it is difficult for her to do so. Part IV.C looks to the literature to determine whether one form of overoptimism is likely to dominate the other, and Part IV.D examines the implications for bankruptcy policy.

To understand the distinction between severely adverse events and moderately adverse events, imagine a consumer who borrows some amount today and promises to repay tomorrow out of her disposable income. Assume further that the consumer faces a variety of risks such as unemployment and illness so that tomorrow's disposable income will be anywhere between \$0 and \$100,000. Assume that the consumer's debt level does not affect her future income.

For now, assume that the consumer knows the distribution of values that her future disposable income can take as well as the system of debt relief that the government has put in place. This does not mean that the consumer knows exactly how much money she will have tomorrow, only that she does not underestimate any possible value that this income can take. If there is no other form of

market failure,⁷⁷ the consumer will borrow an efficient amount that reflects the true cost of borrowing. Assume that this amount would require her to repay \$30,000 tomorrow. Although this value is chosen arbitrarily, its precise amount is not critical for the analysis that follows. Rather, the analysis will focus on the consumer's incentive to borrow an additional dollar on top of the amount that she would have borrowed if she could accurately assess the risks she faces.

For the sake of simplicity, assume that society enacts a system of debt relief that allows a consumer to exempt \$20,000 from her creditors if she defaults on her loan.⁷⁸ Assume further that the consumer defaults whenever she can increase her consumption by doing so, that is, whenever the exemption exceeds the difference between her disposable income and the amount that she must repay.⁷⁹ If the consumer borrowed the efficient amount initially, she will default whenever her disposable income falls below \$50,000 when repayment is required because by doing so she can consume \$20,000. This is more than she could have consumed if she repaid her debts in full.

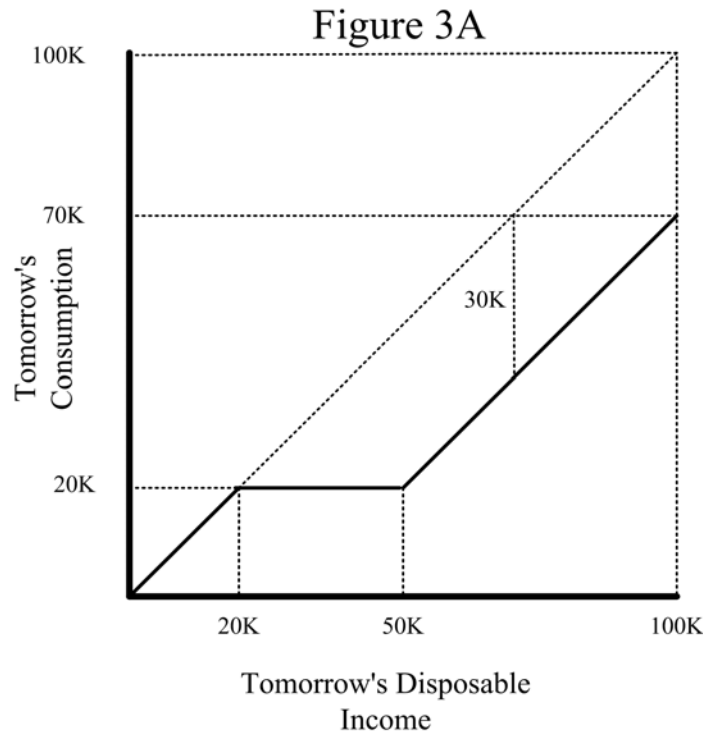
Figure 3A plots the consumer's consumption tomorrow against her disposable income tomorrow; if the consumer owed nothing and she earned the maximum of \$100,000 she would consume \$100,000. However, we have assumed that the consumer is asked to make a \$30,000 repayment so that if she earned \$100,000 she can consume only \$70,000. If the consumer's disposable income is between \$0 and \$20,000, she will default and then use the \$20,000 exemption to consume what little amount that she has. If she earns between \$20,000 and \$50,000 she will always consume \$20,000 because she will default and make full use of the \$20,000 exemption.

77. For example, the consumer may fail to consider the externalities of borrowing or may act impulsively. *See supra* notes 30–32 and accompanying text.

78. The results of this Article do not depend on this specific assumption, but rather on the assumption that the law will not require the defaulting consumer to repay more if she has borrowed more. A general proof of this result is presented in the Appendix.

79. As discussed above, this assumption may not hold if courts deny a consumer access to Chapter 7 if she is able to repay some percentage of her debt. *See supra* text accompanying note 68. If this is the case, the consumer's required repayment may vary with her debt burden. Paradoxically, her required repayment may decline as her debt burden increases. This may provide yet another reason why the consumer may borrow too little if she underestimates the probability of adverse events; she may underestimate the chance that an additional dollar of debt may grant her access to Chapter 7. This issue is treated more formally in the Appendix.

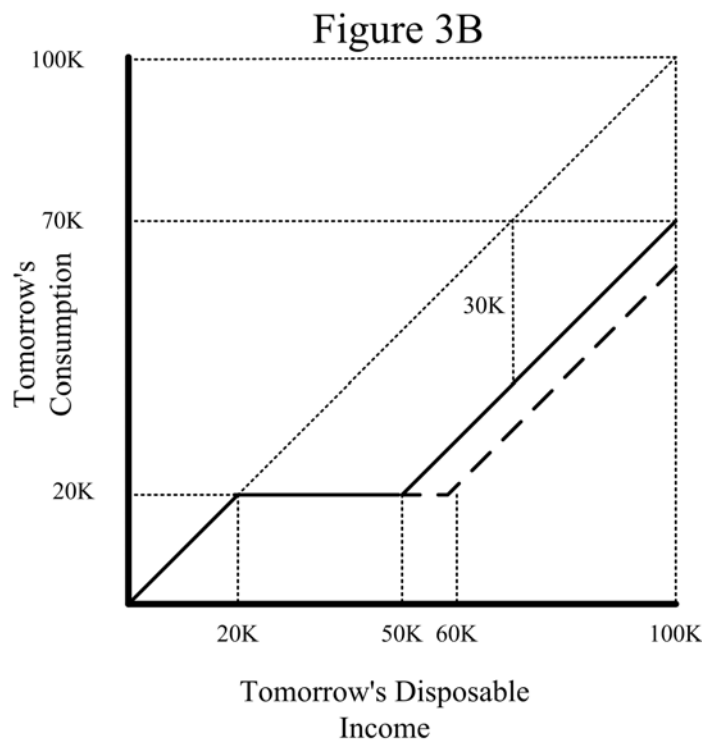
If she earns more than \$50,000 she will repay the loan in full and consume whatever disposable income she has left.



A. Overoptimism that Cannot Lead to Overborrowing

A consumer who underestimates the likelihood of severely adverse events that would cause her to default even if she borrowed a reasonable amount will borrow too little, not too much. The consumer will overborrow if she underestimates the likely cost of repaying her loans. To illustrate such overborrowing, assume that the consumer in Figure 3A borrows more today and therefore must promise to repay an additional \$10,000 on top of the \$30,000 that she would have had to promise to repay if she borrowed only the efficient amount.⁸⁰ The dashed line in Figure 3B presents the consumer's consumption tomorrow if she does this.

⁸⁰ The amount of the extra borrowing will be somewhat less than \$10,000 because the full repayment in the second period includes interest.



As observed above, once the consumer chooses to default, the aggregate amount of her debt will not affect the amount that she must repay;⁸¹ even if the consumer promised to repay an additional \$10,000, she will consume the same \$20,000 of exempt income when she suffers a severely adverse event that leaves her with less than \$50,000 because she would have defaulted whether or not she borrowed this additional amount. The consumer cannot possibly underestimate the cost the additional debt imposes on her when severely adverse events occur (when her disposable income falls below \$50,000) because this additional debt costs nothing when these events occur. The additional debt does not increase her repayment when she suffers a severely adverse event. As shown by the dashed line in Figure 3B, it is only when she does not suffer this severely adverse event (when her disposable income exceeds \$50,000) that the additional dollar of debt will reduce her consumption at all. Therefore, by underestimating the likelihood of a

81. *See supra* Part III.

severely adverse event, or in other words, by overestimating the likelihood that this adverse event will not occur, the consumer overestimates the likelihood of repayment, and overestimates the average amount that she will actually repay. This will cause her to borrow too little, not too much, because she perceives the interest rate to be higher than it really is. Thus, she fails to continue borrowing until the value to her of an additional dollar of consumption in the first period is equal to the value to her of the consumption that she must forego in the second period if she borrows the additional dollar.

The explanation for why the underestimation of severely adverse events may lead to *underborrowing* is similar to the standard explanation for why opportunistic consumers borrow on the eve of default.⁸² If an opportunistic consumer *knows* for certain that she will default tomorrow, borrowing and consuming more today costs nothing because the additional loan will never be repaid. For overly optimistic consumers, borrowing and consuming today seems costly because they believe (wrongly) that they will *not* default tomorrow. Thus, overly optimistic consumers overestimate how much, on average, they will have to repay.

This effect can also be explained as a standard application of the impact that an increase in price has on the consumption of a good. By overestimating the average repayment, the consumer overestimates the effective interest rate or price of borrowing, at least in nominal terms. When the price of a good goes up, consumers tend to substitute away from this good (this is called the “substitution effect”);⁸³ when the *perceived* price of borrowing increases due to an overestimation of the likelihood of repayment, the consumer will borrow less. One might think that this overoptimism would cause the consumer to feel more wealthy and thus to borrow more; one might think that there would be an “income effect.”⁸⁴ However, no income effect results when the

82. *See supra* note 20 and accompanying text. Though one might think it dishonest to borrow when one knows that she will not repay, it is not necessarily dishonest to borrow when one knows that there is some chance that he will not repay. If so, virtually all borrowing would be dishonest.

83. *See, e.g.*, RICHARD G. LIPSEY ET AL., MICROECONOMICS 128–32 (9th ed. 1990).

84. *Id.* (explaining that the income effect, sometimes called a wealth effect, refers to the fact that as the individual’s wealth changes her demand for a particular good will change and will typically increase).

consumer only underestimates severely adverse events because the consumer is not asked to repay any of the marginal dollar borrowed when these events occur. As discussed below, the income effect may play an important role when the consumer experiences more moderately adverse events.

Perhaps an even more basic example will illustrate the possibility of underborrowing. Assume that the consumer will have a fifty percent chance of receiving \$100,000 in income tomorrow and a fifty percent chance of receiving nothing. Assume further that the consumer is indifferent between consuming money today and consuming it tomorrow, and that for each dollar she consumes up to \$50,000, she receives one unit of happiness. Additionally, she receives only 0.8 units of happiness for each dollar that she consumes beyond \$50,000, because she will use her first \$50,000 to meet her most basic needs, and any additional dollar will be spent on items that are of less importance to her.⁸⁵ If the consumer applies for a \$50,000 loan, the lender will demand that she promise to repay \$100,000 because the lender will receive this payment only fifty percent of the time. If the consumer is overly optimistic and believes that she will earn \$100,000 with certainty, she will not take the loan. If she borrows this amount, she will have 50,000 units of happiness today; but if she does not borrow, she *believes* that she will have 90,000 units of happiness tomorrow from consuming the full \$100,000.⁸⁶ In fact, however, she will receive the 90,000 units of happiness only half of the time and thus, on average, she will have only 45,000 units of happiness. If she knew the true probability of hardship, she would have taken the loan.

While the above examples do not include financial or emotional costs associated with bankruptcy or default, such costs would not change the prediction that the underestimation of severely adverse events cannot lead to overborrowing.⁸⁷ By definition, the consumer

85. Economists typically assume that the incremental happiness, or marginal utility, that an individual derives from an additional dollar of consumption falls as the consumer consumes more. *See, e.g., id.* at 151.

86. The first \$50,000 would provide her with 50,000 units of happiness. The next \$50,000 would provide her with 40,000 units of happiness ($\$50,000 \times 0.8$).

87. These emotional costs may affect the likelihood of a severely adverse event by changing the optimal level of debt. That is, if default itself causes severe financial and emotional harm to the consumer, she will wish to minimize the likelihood of this default and may do so by borrowing less.

will default when a severely adverse event occurs even if she borrows the efficient amount, and therefore the consumer will incur the costs of default regardless of whether she borrows another dollar. The costs would have to increase as the consumer becomes more indebted in order to alter the analysis. Although possible,⁸⁸ such an assumption is far less compelling than a statement that consumers face substantial out of pocket expenses, emotional pain, and damage to their credit reputations as a result of default.

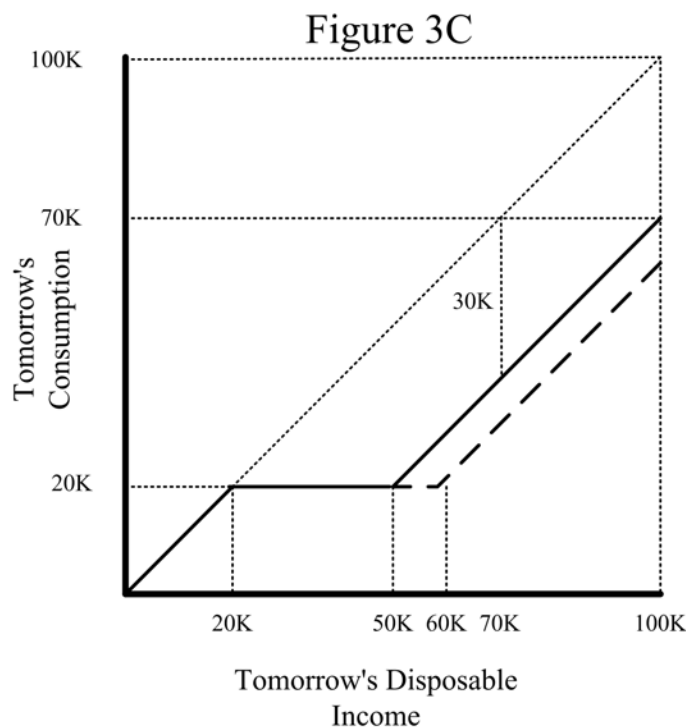
Finally, this explanation for why the underestimation of adverse events may lead to underborrowing does not depend on any strong assumptions about the degree of the consumer's risk aversion or the form of debt relief. It does depend, however, on the precise nature of the risk that the consumer underestimates. By altering the assumptions about the nature of the consumer's overoptimism, it is possible to reach the standard result that overoptimism leads to overborrowing.

B. Overoptimism that Can Lead to Overborrowing

A consumer who underestimates the likelihood of some adverse events may underestimate the cost of borrowing and thus borrow too much. For this to be the case, the consumer must underestimate the likelihood of more moderately adverse events, such as short-term unemployment, that would not have caused her to default had she borrowed the efficient amount; she must underestimate the likelihood of adverse events that still leave her with an income in excess of \$50,000. This underestimation will not cause her to underestimate the dollar amount that she will repay tomorrow; thus there will be no substitution effect. However, this underestimation may further cause her to underestimate the likelihood that an adverse event will reduce her disposable income tomorrow, thus making it more costly, in terms of lost happiness, to repay an extra dollar of debt; the result will be an income effect. For example, if the consumer earns \$100,000 a year, an additional \$10,000 of debt may mean that she must reduce her entertainment budget or plan a less expensive vacation. If she earns just \$60,000 a year, an additional \$10,000 of debt may mean that she cannot afford a vacation at all or must cut some other expense that is much more important to her.

88. One may, for example, argue that the consumer experiences a much greater sense of failure when she defaults on a \$40,000 obligation than when she defaults on a \$20,000 obligation.

If consumers underestimate the likelihood that their income will fall in some range, they must overestimate the likelihood that their income will fall in some other range. If one posits that consumers underestimate the likelihood of *moderately* adverse events that would not have caused a default at the efficient level of debt and correspondingly overestimate the likelihood of *severely* adverse events that would have caused a default even at this amount, then the underestimation will unambiguously lead to overborrowing. However, under these assumptions the underestimation hypothesis is really a story of excessive pessimism, not overoptimism, and is just a special case of the effect described in the previous section.



Therefore, if one is to argue that overoptimism leads to overborrowing, one must argue, first, that consumers underestimate the probability of moderately adverse events that would not have led to default had the consumer borrowed a reasonable amount, and, second, that they overestimate the likelihood that they will be very well-off. For example, as shown in Figure 3C, one might choose some arbitrary value, say \$70,000, and assume that the consumer

underestimates the likelihood of each event that would leave her with less than \$70,000 and overestimates the likelihood of each event that will leave her with more than \$70,000.

Even this assumption is not enough to ensure that overoptimism will lead to overborrowing because it is possible that the substitution effect (which tends to cause the consumer to borrow too little) will offset the income effect (which tends to cause the consumer to borrow too much). Assume instead that consumers underestimate *only* the likelihood of moderately adverse events, events that would not have caused them to default had they borrowed the efficient amount but that do leave them with disposable income of less than \$70,000. That is, consumers underestimate the likelihood of events that leave them with an income between \$50,000 and \$70,000, and consumers correctly estimate the likelihood of severely adverse events that leave them with less than \$50,000. Because consumers underestimate only moderately adverse events, they correctly estimate the probability of repayment had they borrowed the efficient amount and promised to repay \$30,000. Thus, because they do not underestimate the expected value of the amount that they must repay, there is no substitution effect. However, consumers think that it is disproportionately likely that they will be asked to repay when they are wealthy and can easily afford to repay the debt; they perceive themselves to be wealthier than they really are and thus the income effect will cause them to borrow more. This matches the common intuition that overly optimistic consumers underestimate the probability that they will suffer some event that will make repayment difficult and painful.

It follows that if one takes an expansive view of overoptimism and assumes that consumers underestimate the likelihood of severely adverse events (events that would cause default at the efficient level of borrowing) as well as moderately adverse events (events that would not cause a default at the efficient level of borrowing but still leave the consumer relatively poor), the results become theoretically ambiguous. The underestimation of severely adverse events will cause underborrowing because of the substitution effect; this form of overoptimism causes the consumer to overestimate the required repayment for a given amount of borrowing. The underestimation of moderately adverse events will cause overborrowing because of the income effect; this form of overoptimism causes the consumer to perceive the cost of repaying a given amount as less painful than it

really is. Which effect will dominate is an empirical matter that will depend on the precise nature of the overoptimism, the optimal level of debt, the degree of the consumer's risk aversion, and the debt-relief laws that society has adopted.

C. Competing Theories of Optimism

To reach the conclusion that overoptimism leads consumers to borrow too much, one must do more than merely assume that consumers are overly optimistic. Rather, one must either allege other forms of market failure or carefully specify the nature of this overoptimism. That is, are consumers more likely to underestimate the probability of severely adverse events that will inevitably result in default or are they more likely to underestimate the probability of moderately adverse events that will leave them with enough disposable income to repay their loans (but not enough to maintain an acceptable standard of living)?

The likelihood of a severely adverse event depends in large part on how much a consumer *should* borrow, or how much a consumer would borrow in the absence of market failure. If the ideal level of indebtedness is quite low or even zero,⁸⁹ severely adverse events would be quite rare because consumers would be financially able to withstand even long periods of unemployment without defaulting on their loans; if one does not owe any debt, one cannot default. For example, one might argue that the financial and emotional costs of financial distress are so severe that consumers should never borrow an amount that would result in default with a positive probability. However, many economists have argued that debt can improve consumer welfare by allowing consumers to smooth their consumption over their life cycle and the inevitable peaks and valleys that they encounter.⁹⁰ Moreover, while bankruptcy and default are certainly costly, they may not be

89. See, e.g., ROSSER, *supra* note 11, at 13 (“I cannot imagine any plausible reason why [a large proportion of the population of England] should pay at a future time rather than at the present . . .”).

90. See, e.g., Buckley, *supra* note 13, at 1081 (“[P]ersonal debt offers benefits to consumers in four ways: (1) as a consumption smoothing device . . .”). For a discussion of income smoothing, see generally MILTON FRIEDMAN, A THEORY OF THE CONSUMPTION FUNCTION (1957); Albert Ando & Franco Modigliani, *The “Life Cycle” Hypothesis of Saving: Aggregate Implications and Tests*, 53 AM. ECON. REV. 55, 66–67 (1963); Franco Modigliani & Richard Brumberg, *Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data*, in POST KEYNESIAN ECONOMICS 388 (Kenneth K. Kurihara ed., 1954).

prohibitively costly. Though the consumer must pay filing fees⁹¹ and may feel compelled to hire a lawyer to guide her through the process, competition between routinized “bankruptcy mills” puts downward pressure on attorney’s fees. Though a bankruptcy or a default may damage a consumer’s credit rating, consumer bankruptcy scholars provide anecdotal evidence that bankrupt consumers are able to reenter the credit market soon after their filing.⁹² Though consumers may continue to suffer some shame or stigma following default, we no longer live in a world in which the bankrupt debtor is made to endure punishments that “savoured of nursery wit.”⁹³ In any case, the debate over the most efficient level of consumer debt has gone on for centuries and is unlikely to be resolved anytime soon.

If we assume that the socially optimal level of debt is sufficient to cause consumers to default some of the time, how do we determine whether consumers are more likely to underestimate severely adverse events, or more likely to underestimate moderately adverse events? Unfortunately the psychological research does not provide a definitive answer. Some empirical psychology literature suggests that overoptimism leads to overborrowing,⁹⁴ but this research looks only at overoptimism that causes consumers to overestimate their average income or underestimate the time that it will take to repay their debts.⁹⁵ To capture an underestimation of severely adverse events, a

91. As of November 1, 2003, the total fee for filing for Chapter 7 bankruptcy was \$200, \$155 of which is the filing fee. STEPHEN ELIAS ET AL., HOW TO FILE FOR CHAPTER 7 BANKRUPTCY, at 3/2 (10th ed. 2002). See also United States Bankruptcy Court, Statutory Filing Fees and Miscellaneous Fees, <http://www.innb.uscourts.gov/pdfs/increase.pdf> (last modified Apr. 29, 2002).

92. See Jean Braucher, *Counseling Consumer Debtors to Make Their Own Informed Choices—A Question of Professional Responsibility*, 5 AM. BANKR. INST. L. REV. 165, 165 (1997) (“Frequently, if the debtor had chosen Chapter 7 bankruptcy, he would be on his way to re-establishing credit within a year or two of the case being discharged.” (quoting David M. Howe, *How Can Debtors Be Motivated to Complete 100% Chapter 13 Plans*, CHAPTER 13 TRUSTEE MESSENGER, S. DIST. OF OHIO, E. DIV., Feb. 1996, at 1 (publication from the office of Chapter 13 Trustee Frank M. Pees); Braucher, *supra* note 72, at 538 (“Many lawyers said that it is common for debtors to obtain credit within a year or two of a chapter 7 filing. . . . Car loans and credit cards can often be obtained quickly after filing a chapter 7 case . . .”).

93. See Garrard Glenn, *Essentials of Bankruptcy: Prevention of Fraud, and Control of Debtor*, 23 VA. L. REV. 373, 387 (1937).

94. See, e.g., Hamish G.W. Seaward & Simon Kemp, *Optimism Bias and Student Debt*, 29 N.Z. J. PSYCHOL. 17, 18 (2000) (finding that students who owed more debt tended to have higher estimates of their own income and the income of the average student ten years after graduation and lower estimates of the time that it would take to repay their debt).

95. *Id.*

study would need to ask consumers to estimate the chance that they would suffer some hardship that would prevent them from repaying their debts at all.

The large number of heuristics found in the literature demonstrates that plausible arguments exist to support both the underestimation of severely adverse events and the underestimation of moderately adverse events. For example, the availability heuristic suggests that people tend to overestimate the likelihood of events that are readily called to mind or available.⁹⁶ This causes individuals to overestimate the likelihood of particularly vivid adverse events, such as airplane crashes, and to underestimate the likelihood of harm from other activities such as obesity or smoking.⁹⁷ If one believes severely adverse events are generally vivid and that moderately adverse events are not, one may believe that consumers are more likely to underestimate the likelihood of moderately adverse events. However, to qualify as a severely adverse event, the harm need only be sufficient to cause a consumer with a *reasonable* amount of debt to default. Many events, such as an extended period of unemployment, almost surely qualify as severely adverse events and yet do not seem particularly vivid.

The literature also contains arguments that suggest that consumers are more likely to underestimate severely adverse events. For example, one common argument is that individuals tend to completely ignore events that occur with a probability falling below some threshold level.⁹⁸ Moderately adverse events may occur far more frequently than severely adverse events, and it is possible that only the probability of severely adverse events falls below the threshold level and thus is completely ignored.

Unfortunately, the consumer bankruptcy literature does not resolve these matters either because one can again find support for both the underestimation of moderately adverse events and the

96. See, e.g., Sunstein, *supra* note 14, at 5.

97. See, e.g., Robert Eisner & Robert H. Strotz, *Flight Insurance and the Theory of Choice*, 69 J. POL. ECON. 355, 365 (1961).

98. See Paul Slovic et al., *Preference for Insuring Against Probable Small Losses: Insurance Implications*, 44 J. RISK & INS. 237, 254 (1977) (“[P]eople may refuse to worry about losses whose probability is below some threshold. Probabilities below the threshold are treated as though they were zero.”). See also Wesley A. Magat et al., *Risk-Dollar Tradeoffs, Risk Perceptions, and Consumer Behavior*, in LEARNING ABOUT RISK: CONSUMER AND WORKER RESPONSES TO HAZARD INFORMATION 83, 90–93 (W. Kip Viscusi & Wesley A. Magat eds., 1987).

underestimation of severely adverse events. Consumer bankruptcy scholars suggest that many bankrupt consumers have suffered some adverse event that would not have resulted in default had the consumer borrowed only a reasonable amount;⁹⁹ by definition these consumers have suffered a moderately adverse event. However, these same scholars suggest that a great many consumers file for bankruptcy because they have suffered some crushing event that makes even reasonable repayment impossible;¹⁰⁰ by definition these consumers have suffered a severely adverse event.

If one believes that consumers are more likely to underestimate moderately adverse events than severely adverse events, however, one might also expect that more consumers in bankruptcy would have suffered moderately adverse events than severely adverse events.¹⁰¹ This belief is somewhat inconsistent with the standard argument in the bankruptcy literature that society cannot reasonably expect consumers in bankruptcy to make any repayment to their general creditors¹⁰² because, by definition, consumers who have suffered only a moderately adverse event are able to repay at least the reasonable amount of debt that they should have borrowed.

D. Implications for Bankruptcy Policy

If consumers borrow too much, the government may wish to take steps to discourage borrowing; if consumers borrow too little, the government may wish to take steps to encourage borrowing. Because the government may affect the level of borrowing by

99. See, e.g., Warren, *supra* note 16, at 1080–81 (suggesting that many consumers arrive in bankruptcy because they have borrowed too much to allow them to survive setbacks that would not bankrupt less indebted individuals).

100. See, e.g., TERESA A. SULLIVAN, ELIZABETH WARREN & JAY LAWRENCE WESTBROOK, *AS WE FORGIVE OUR DEBTORS: BANKRUPTCY AND CONSUMER CREDIT IN AMERICA* 333 (1989) (noting that nearly half of the consumers surveyed suffered a large income shock within the two years prior to filing for bankruptcy); Elizabeth Warren, *What is a Women's Issue? Bankruptcy, Commercial Law, and Other Gender-Neutral Topics*, 25 HARV. WOMEN'S L.J. 19, 24–26 (2002) (noting that nearly 40% of bankruptcy filings in 1999 were filed by divorced or single women, and that most of these involved a serious interruption in income; nearly half cited serious medical problems).

101. However, consumers may underestimate moderately adverse events that do not cause them to default on their loans.

102. See *supra* note 100 and accompanying text; Warren, *supra* note 16, at 1100 (citing an unpublished study which concluded that only a very small proportion of Chapter 7 debtors are able to make any substantial repayment).

changing the terms of debt relief (either inside or outside of bankruptcy), this Article has important implications for how generous debt relief should be. However, this Article does not question the need for some laws that provide debt relief. Consumers may fail to purchase insurance against risks they underestimate, and the government can improve consumer welfare by providing or requiring this insurance. Of course, the government need not use debt relief to provide this insurance. The U.S. government can, and does, provide at least limited insurance against many of the risks that lead to financial distress such as unemployment (unemployment insurance) and illness (Medicare and Medicaid); other nations provide a much stronger social safety net against these risks.¹⁰³ If the government fully insured the consumer against these risks, the consumer's overoptimism would have no effect because these events would never impact the consumer's financial well-being.

Insurance programs rarely provide full insurance against a loss, however, either because they are imperfect or because the insurer is concerned that such full insurance will reduce the consumer's incentive to avoid the loss. For example, unemployment insurance typically replaces about half of the consumer's lost earnings,¹⁰⁴ and even if a health insurance program covers all of the consumer's medical bills, it may not cover incidental costs and expenses such as time lost at work. To the extent that the consumer underestimates these risks and default is impossible, the conventional wisdom holds true and the consumer will borrow too much because she will underestimate the cost of repaying.

The government may try to limit borrowing directly either through usury laws or otherwise. However, society may wish to use a system of debt relief to discourage borrowing for two reasons. First, scholars have long suspected that the market is able to find ways around even draconian credit limitations such as usury limits.¹⁰⁵ Second, even if these credit limits are effective, they require relatively

103. See, e.g., SULLIVAN, WARREN & WESTBROOK, *supra* note 11, at 257–61 (comparing the European and American social safety nets).

104. MARK A. ROTHSTEIN ET AL., EMPLOYMENT LAW § 9.16, at 416 (2d ed. 1999) (“States usually set weekly benefit amounts as 1/23, 1/24, 1/25, or 1/26 of the earnings obtained by applicants during the relevant calendar quarters, resulting in benefit amounts ranging from fifty to fifty-six percent of average weekly earnings.”).

105. See generally Richard L. Peterson, *Usury Laws and Consumer Credit: A Note*, 38 J. FIN. 1299 (1983).

heavy-handed government intervention, and scholars have long argued that it is better to place the decision to extend credit in the hands of creditors.¹⁰⁶ By shifting some of the risk of financial distress to the creditors, these scholars hope to encourage the creditors to monitor the consumer's borrowing.¹⁰⁷

It is unclear how much monitoring takes place in practice, however. For example, Professor Jackson suggests that lenders might use covenants to limit the consumer's total borrowing or activities that could generate tort liability.¹⁰⁸ However, although common in the corporate world such covenants are virtually unknown in the world of consumer finance. Moreover, generations of scholars have argued that consumer lenders provide very little monitoring at the time of lending because the credit reports and other information that creditors rely on are inadequate.¹⁰⁹ One is left with the distinct impression that a consumer can always get more credit, though this credit will come at a higher and higher price. If denied a personal loan, the consumer can get a credit card advance. If denied a credit card advance, the consumer can get a payday loan.

Even if lenders do not deny credit outright, the increased price of credit may deter some consumers from borrowing. Debt relief makes credit more expensive by requiring the credit contract to include an insurance policy that protects the consumer against various risks that may lead to financial distress. Because the consumer underestimates the risks that this insurance policy insures against, she underestimates its value, and an increased level of debt relief will cause her to perceive the credit contract to be more expensive and thus, to borrow less. For example, assume that there is a five percent chance that a consumer will default on a \$1,000 unsecured loan.¹¹⁰ If the consumer ignores the chance that she may default, she ignores

106. *See, e.g.*, Jackson, *supra* note 5, at 1424–26.

107. *Id.*

108. *Id.* at 1426.

109. *See, e.g.*, SULLIVAN, WARREN & WESTBROOK, *supra* note 11, at 246 (discussing large amounts of credit card solicitations and the scant information on which such solicitations are issued); Countryman, *supra* note 24, at 2–7 (describing what Professor Countryman believes to be an inaccurate method of gauging a consumer's ability to repay a loan).

110. The charge-off rate (or the percentage of a bank's loans that it decides are unlikely to be repaid and therefore removes from its books) for credit card loans issued by commercial banks in the first quarter of 2003 was approximately 5.58%. *See* Charge-Off Rates, All Banks, NSA, http://www.federalreserve.gov/releases/chargeoff/chg_all_nsa.txt (last visited Oct. 13, 2003).

the \$50 of debt relief that she will receive and perceives the loan package as less valuable than it really is. In other words, the consumer borrows too little because she underestimates the likelihood of a severely adverse event that could force her to default on her loans and rely on the available debt-relief system.

The benefits of shifting the risk of loss to a contracting party better able to estimate the loss are similar to the standard result in the products liability literature that holds that if consumers misperceive the risks associated with the use of a product, the manufacturer of that product should be held strictly liable for the harms that result from the use of the product.¹¹¹ For example, assume that in a competitive market a pair of roller skates would cost \$100. In addition, assume that there is a 5% chance that a consumer will suffer a \$1,000 injury while skating,¹¹² but that the law would not hold the seller liable. The true expected cost to the consumer from buying the skates and skating is therefore \$150: \$100 for the skates, and \$50 for the expected injury.

If a consumer overestimates the risk of skating—if she believes that the risk is 10%—she will perceive the total cost from skating to be \$200, and if the happiness she would derive from skating is just \$175 she will fail to buy the skates even though it would be efficient for her to do so. If she underestimates the risk—if she believes it to be zero—she will estimate the cost of skating to be \$100 and will buy the skates even if the happiness that she derives from skating is less than the true \$150 cost. Now assume that the seller is held liable for the injury. The seller will raise the price of the skates by \$50 to reflect the expected liability and the consumer will not care about the risk of injury because she is fully compensated. Because the risk of skating is now reflected in the price, she will purchase the skates if, and only if, she receives at least \$150 of happiness from skating and it is efficient for her to do so.

However, the products liability model provides only an imperfect analogy for the study of debt relief. Generous debt relief does not make the consumer's estimation of the risk of an adverse event irrelevant because debt relief is not narrowly tailored to insure the consumer against the harms created by the lender's product, the

111. *See, e.g.*, STEVEN SHAVELL, ECONOMIC ANALYSIS OF ACCIDENT LAW 53–56 (1987).

112. Assume that this \$1,000 represents her pecuniary and nonpecuniary loss from the injury.

loan. That is, when analyzing who should bear the risk of loss, bankruptcy scholars often speak of the risk of bankruptcy or the risk of default.¹¹³ Yet, the actual bankruptcy filing or default is a choice made by the consumer, and is not the underlying exogenous shock that created the hardship. Rather, the risks central to the analysis of debtor-creditor law are those risks that lead the consumer to default or file for bankruptcy, risks such as unemployment, divorce or illness.¹¹⁴ If the consumer does not buy the roller skates, she cannot suffer the injury that products liability insures her against. Even if the consumer does not borrow any money, however, she still may lose her job. As a result, a consumer's subjective estimation of probabilities of loss remains relevant, but to analyze the impact of the consumer's beliefs, one needs to be more precise than merely alleging that the consumer is overly optimistic.

In short, a consumer's overoptimism may cause her to borrow either too little or too much, depending on the nature of the misfortunes that she underestimates. If this overoptimism causes the consumer to borrow too much, generous debt relief may discourage overborrowing by making credit appear expensive. However, if overoptimism causes the consumer to borrow too little, society may wish to make debt relief less generous than it otherwise would so that the consumer will borrow more.

V. CONCLUSION

Scholars have argued for centuries that the government must regulate the credit market in order to protect consumers from their own ignorance. Economists have generally received this reasoning with hostility, often noting the lack of a specific model of consumer behavior that is preferable to the standard economic assumption of consumer rationality. In recent decades, some scholars have accepted this challenge by positing more specific forms of cognitive failure. One popular hypothesis to emerge from this literature is that consumers employ various heuristics that lead them to systematic

113. See, e.g., Margaret Howard, *A Theory of Discharge in Consumer Bankruptcy*, 48 OHIO ST. L.J. 1047, 1063-68 (1987) (analyzing consumer bankruptcy as an allocation of the risk of default).

114. See, e.g., SULLIVAN, WARREN & WESTBROOK, *supra* note 11, at 243-52 (describing hardships that lead consumers into bankruptcy).

overoptimism. Bankruptcy scholars have embraced this overoptimism hypothesis in an effort to support their calls for generous debt relief.

This Article has demonstrated that claims of systematic overoptimism are still not sufficiently defined to allow for meaningful policy analysis, at least in the area of consumer finance. Overoptimism does justify some mandatory debt relief, but the more critical question is whether overoptimism requires the government to adopt *generous* debt relief. If the consumer's overoptimism causes her to underestimate the likelihood of *moderately adverse events* that would not have led to default had she borrowed the efficient amount, this overoptimism may lead to overborrowing, and the government may improve her welfare by adopting more generous debt relief or otherwise discouraging borrowing.¹¹⁵ However, if her overoptimism leads her to underestimate the likelihood of *severely adverse events* that would have led to default even if she had borrowed the efficient amount, this overoptimism will lead to underborrowing, and the government may actually improve her welfare by adopting less generous debt relief or otherwise encouraging borrowing. Perhaps the relative importance of these two forms of overoptimism can be resolved as an empirical matter. Such an answer must come from further study, since neither the behavioral economics literature nor the consumer bankruptcy literature suggests a strong preference for one form of overoptimism over the other. Until such answers are forthcoming, normative arguments for generous debt relief should rely on other forms of market failure.

115. See *supra* discussion accompanying Figures 2A and 2B.

APPENDIX

*A. The General Model*¹¹⁶

The verbal-analytic argument presented in the body of this Article assumes a highly stylized form of debt relief. This Appendix presents a model that allows for a more general analysis. Imagine a two-period world in which a single consumer borrows some endogenously determined amount, B , in the first period, and promises to repay some amount, R , in the second. The consumer has no money in the first period, and in the second period she will have some uncertain amount of wealth, w , with which to repay this loan; w is distributed $f(w)$ between w_{min} and w_{max} . Assume that lenders are risk neutral and that the consumer is risk averse in that her per period utility is given by the strictly concave function, $U(C_i)$, where C_i denotes the consumer's consumption in period i . The consumer discounts future values at a rate δ .

Society has enacted a system of debt relief that allows a defaulting debtor to retain some amount of wealth, $D(g, w)$, for her own consumption, where g is some measure of the generosity of the debt relief such that for all w , $dD(g, w)/dg \geq 0$. The consumer's second-period wealth never reduces her consumption after default, but never increases her consumption by more than one dollar either, $1 \geq dD(g, w)/dg \geq 0$. A central assumption of this Article is that a debtor's consumption after default will not vary with the amount of debt she has incurred, $dD(g, w)/dB = 0$, while this assumption may appear controversial, Section II demonstrates that it is largely consistent with American debtor-creditor law. Assume further that the consumer defaults whenever she can increase her consumption by doing so, whenever $w - R < D(w, g)$ —or whenever $w < w_D$ where w_D is defined as $w_D \equiv D(w_D, g) + R(B, g)$. Finally, assume that the lender must pay some transaction costs, T , whenever the debtor defaults.¹¹⁷

116. This section of the Appendix corresponds to Figure 3A and to notes 77–80 and the accompanying text.

117. Because the lender is risk neutral and the consumer is risk averse, the optimal contract would fully insure the consumer by providing her the same consumption regardless of the realization of w . Because a debt contract specifies a fixed repayment, the debtor must always default in order to achieve this insurance. This assumption of transaction costs,

Assume that the consumer has all of the bargaining power in that she is able to make a take-it-or-leave-it offer to a lender.¹¹⁸ All lenders have some other opportunity so that they also discount future values at a rate δ . Therefore, the consumer need only propose loans that give an equivalent expected rate of return, or loans that satisfy Equation 1. Equation 1 implicitly defines R as a function of the amount borrowed and the generosity of debt relief, or $R(B, g)$ where, for a given level of debt relief, an increase in borrowing will increase the promised repayment that the lender demands ($dR(B, g)/dB > 0$), and for a given level of borrowing, an increase in the generosity of debt relief will increase the promised repayment that the lender demands ($dR(B, g)/dg > 0$).

Equation 1:

$$B = \delta \left(\int_{w=w_D(g,B)}^{w_{max}} Rf(w)dw + \int_{w=w_{min}}^{w_D(g,B)} (w - D(g,w) - T)f(w)dw \right)$$

The consumer takes the system of debt relief as given and will choose the level of borrowing that solves the following unconstrained maximization problem:

Equation 2:

$$\text{Max}\{B\}: U(B) + \delta \left(\int_{w=w_D(g,B)}^{w_{max}} U(w - R(B,g))f(w)dw + \int_{w=w_{min}}^{w_D(g,B)} U(D(w,g))f(w)dw \right)$$

Assuming, for now, that there are no market failures, and excluding possible corner solutions such as an optimal level of borrowing equal to zero, the optimal level of borrowing, B^* , is defined by the consumer's first order condition:

borrowed from the costly state verification literature, assures that the consumer and lender will choose a contract that will require the consumer to repay her debts in full for at least some realizations of w . See generally Douglas Gale & Martin Hellwig, *Incentive-Compatible Debt Contracts: The One-Period Problem*, 52 REV. ECON. STUD. 647 (1985).

118. The results of this Article do not depend on the lack of market power.

Equation 3:

$$U'(B^*) = \delta \int_{w=w_D(B^*, g)}^{w_{\max}} U'(w - R(B^*, g)) f(w) dw \frac{dR(B^*, g)}{dB}$$

In other words, the consumer borrows until the marginal utility of consumption in the first period equals the expected cost of repayment, in terms of lost utility, in the second period. Note, however, that she will only make this repayment when her wealth is sufficiently large that she will not default, that is, when $w > w_D(B^*, g)$. Finally, note that because the consumer takes the existing system of debt relief as given, Equation 3 defines the optimal level of borrowing as a function of the generosity of debt relief. Therefore, one can solve for the optimal level of debt relief, g^* , by choosing the level of generosity that maximizes the consumer's utility. Assuming the consumer cannot purchase insurance from a third party, $g^* > 0$ because the lender is risk neutral and the consumer is risk averse.

*B. Underborrowing*¹¹⁹

Now assume that the consumer is excessively optimistic in that she underestimates the likelihood of severely adverse events, events that would cause her to default even if she borrowed the efficient amount, B^* . Specifically, assume that the consumer erroneously believes that her second-period wealth is distributed $s(w)$ where $s(w) < f(w)$ for $w < w_D(B^*, g)$ and $s(w) \geq f(w)$ for all $w \geq w_D(B^*, g)$.¹²⁰

Assume that the lender still knows the true distribution of w and that the consumer learns how the amount of borrowing affects the required repayment by consulting a schedule provided by the lender.¹²¹ The consumer will now borrow an amount B_s^* that solves:

119. This section of the Appendix corresponds to Figure 3B and to Part IV.A.

120. This assumption is made to isolate the effects of underestimating severely adverse events.

121. A rational consumer could infer the correct distribution of w from this schedule, but the overoptimism hypothesis presumes an irrational consumer. In effect, the consumer assumes that the lender is overestimating the probability of an adverse event occurring.

Equation 4:

$$U'(B_s^\wedge) = \delta \left(\int_{w=w_D(g, B_s^\wedge)}^{w_{\max}} U'(w - R(B_s^\wedge, g))s(w)dw \frac{dR(B_s^\wedge, g)}{dB} \right)$$

Equation 4 is identical to Equation 3 except that the consumer's overly optimistic estimation of the distribution of second-period wealth, $s(w)$, replaces the correct distribution, $f(w)$. For any level of borrowing, the right-hand side of Equation 4 (when the consumer is overly optimistic) is greater than the right-hand side of Equation 3 (when the consumer knows the true distribution), and thus the consumer will borrow less, not more, as each dollar borrowed yields less and less utility in the first period ($B^* \geq B_s^\wedge$). The right-hand side of Equation 4 is greater than the right-hand side of Equation 3 because we have assumed that $s(w) \geq f(w)$ for all $w \geq w_D(B^*, g)$. This means that the consumer overestimates the probability that she must repay her debt and thus overestimates the dollar value of her expected repayment.

C. Overborrowing¹²²

Now assume that the consumer underestimates the likelihood of more moderately adverse events that leave her with $w > w_D(B^*, g)$ but does not underestimate the probability of severely adverse events. Specifically, assume that for all $w < w_D(B^*, g)$, $m(w) = f(w)$, and that there is some arbitrary point, $Z > w_D(B^*, g)$, such that for all $w_D(B^*, g) < w < Z$, $m(w) < f(w)$, and for all $w > Z$, $m(w) \geq f(w)$. The individual will borrow an amount B_M^\wedge that solves:

Equation 5:

$$U'(B_M^\wedge) = \delta \left(\int_{w=Z}^{w_{\max}} U'(w - R(B_M^\wedge, g))m(w)dw \frac{dR(B_M^\wedge, g)}{dB} + \int_{w=w_D(g, B_M^\wedge)}^Z U'(w - R(B_M^\wedge, g))m(w)dw \frac{dR(B_M^\wedge, g)}{dB} \right)$$

Equation 5 is identical to Equations 3 and 4 except that the consumer now assumes a distribution of $m(w)$, and we have artificially split the maximization in two parts to highlight the effect

122. This section of the Appendix corresponds to Figure 3C and to Part IV.B.

of the under- and overestimation. The right-hand side of Equation 5 is now less than the right-hand side of Equation 3, meaning the consumer will keep borrowing beyond B^* until her marginal utility of borrowing equals this lesser amount, $B_M^A > B^*$. Because the consumer underestimates only moderately adverse events, she correctly estimates the probability of repayment at B^* and thus does not underestimate the expected value of the amount that she must repay. However, she thinks that it is disproportionately likely that she will be asked to repay when she is wealthy and her marginal utility of consumption is low. This matches the common intuition that overly optimistic consumers underestimate the probability that they will suffer some event that will make repayment difficult and painful, and thus overborrow.

Note that if one takes an expansive view of overoptimism and assumes that consumers underestimate the likelihood of severely adverse events (events that leave the consumer with $w < w_D(B^*, g)$) as well as moderately adverse events (events that leave the consumer with $w_D(B^*, g) < w < Z$), the results become theoretically ambiguous. The underestimation of severely adverse events will cause underborrowing. The underestimation of moderately adverse events will cause overborrowing. Which effect will dominate is an empirical matter that will depend on the precise nature of the overoptimism, the degree of the consumer's risk aversion, and the debt-relief laws that society has adopted.

D. Addressing a Technical Complication

The above analysis assumes the amount of the consumer's debts have no effect on her consumption after default. Although this assumption allows for the exploration of the basic intuition behind the results of this Article, it appears that, at least in some jurisdictions, some consumers may receive more generous debt relief (a Chapter 7 discharge) than others solely because they have borrowed more and are thus less able to repay their debts.¹²³

The possibility that debtors may increase their consumption after default by increasing their level of borrowing provides yet one more reason why overoptimism may not lead to overborrowing. To simplify the analysis, assume that a court will deny all relief to a

123. *See supra* note 65 and accompanying text.

consumer if it feels that the consumer does not have enough debt to warrant relief; if the consumer is denied relief she will repay her debt in full. A consumer will still default if and only if her wealth falls below some critical amount, $w < w_D(B, g)$, but now she may be better off if her wealth is slightly below this value than if her wealth is slightly above this level. Mathematically, $U(w_D(B, g) - R(B, g)) < U(D(w_D, g))$. Because of this, the consumer's first order condition must now be written as:

Equation 3a:

$$U'(B) = \int_{w=w_D(B, g)}^{w_{\max}} U'(w - R(B, g)) f(w) dw \frac{dR(B, g)}{dB} + \frac{dw_D(B, g)}{dB} f(w_D(B, g)) [U(w_D(B, g) - R) - U(D(w_D(B, g), g))]$$

The new term is negative and represents the chance that a marginal increase in debt could allow the debtor to receive fairly generous debt relief rather than be forced by the courts to repay her debt in full. Of course, the first term will include an offsetting effect (embedded in $dR(B, g)/dB$) because the lender will charge the debtor for this possibility. However, we need not worry about the precise nature of $dR(B, g)/dB$ because we assume that it is the same regardless of the degree of the consumer's excess optimism.

If the adverse events that the debtor underestimates include those that are just severe enough to result in default if the debtor incurs the amount of debt that she is considering, then this underestimation may cause the consumer to borrow less than the ideal amount. That is, if the consumer is considering an additional amount of debt, and underestimates the likelihood that this additional amount of debt will result in a default that will actually increase her consumption, then she will undervalue this second (negative) term, and she will believe that the right-hand side of Equation 3a is larger than it really is. As a consequence, she will borrow less so that the marginal utility of consumption in the first period is greater.