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BORROWING TO LIVE

Consumer and Mortgage Credit Revisited

NICOLAS P. RETSINAS
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6

Behaviorally Informed Home Mortgage Credit Regulation

MICHAEL S. BARR, SENDHIL MULLAINATHAN, AND ELDAR SHAFIR

Choosing a mortgage is one of the biggest financial decisions an American consumer will make. Yet it can be a complicated one, especially in today's environment, where mortgages vary along several dimensions and on unique features. This complexity has raised regulatory issues. Should some features be regulated? Should product disclosure be regulated? And most basic of all, is there a rationale for regulation or will the market solve the problem? Current regulation of home mortgages is largely stuck in two competing models of regulation—disclosure and usury or product restrictions. This paper uses insights from both psychology and economics to construct a framework for understanding both models and to suggest a fundamentally new perspective.

Disclosure regulation, embodied in the Truth in Lending Act (TILA) of 1968, presumes one market failure: the market will fail to produce a clear and comparable disclosure of all product information needed by consumers. That is, TILA responds to two types of potential problems: First, firms will not reveal all information that borrowers should understand and analyze when taking out a loan. Second, firms will not reveal information in a way to facilitate comparability across products. The first concern speaks to consumer knowledge, solving the problem with information; the second speaks to consumer decisionmaking, solving the problem through coordination of terms and definitions.

Though TILA presumes one form of market failure—the lack of comparable and full disclosure—*homo economicus* is very much the intellectual basis for

disclosure regulation. "Freedom of Contract" is the dominant background assumption for disclosure regulation—and the dominant intellectual paradigm more generally for the last thirty years. It relies on fully rational agents who make intelligent choices about their options. This chapter argues that a more insightful model of human behavior enriches our understanding of disclosure and that neoclassical assumptions are misplaced and in many contexts consequential. Among other topics, we discuss these facts: that the availability of data does not always lead to communication and knowledge, that understanding and intention do not necessarily lead to action, and that contextual nuances can lead to poor choices.

By contrast to disclosure regulation, usury laws, doctrines of substantive unconscionability,[1] and product restrictions start from the idea that certain prices or products are inherently unreasonable and that consumers need to be protected from making bad choices. Moreover, the presumption is that the market will not weed out such products (or may even offer them very easily).

Product regulations and related doctrines of unconscionability appear to build on a model other than *homo economicus,* yet even this framework could benefit from a richer view of human behavior. The central concerns with such laws are threefold. First, we reiterate the traditional economic argument, namely, that product restrictions may diminish access to credit or reduce innovation of financial products. Second, we argue that for certain types of individuals some legal limitations may themselves increase consumer confusion regarding what rules apply to which products and what products may be beneficial or harmful to them. Third, firms will most likely develop ways around such product restrictions, undermining the core rule, increasing costs, and confusing consumers.

At the core of the analysis in this chapter is the interaction between individual psychology and market competition. The classic model works through emphasizing the interaction between rational choice and market competition. Because rational agents choose well, firms compete to offer products that improve welfare. Because rational agents process information well, firms compete to give information that improves decision quality. The introduction of a richer psychology complicates the effect of competition. Now firms compete based on how actual individuals will respond to products in the marketplace, and actual competitive outcomes may not always and in all contexts closely align with increasing consumer welfare.

In the home mortgage market, for example, the standard model assumes that people evaluate options well and that the more options people have, the better. Firms will thus offer more options, people will pick the best ones, and competition will drive out bad options. In reality, people drown in too many options and

1. Claims of unconscionability are relatively rare, and until this decade plaintiff victories based on unconscionability were also relatively rare. The number of these cases and the portion won by plaintiffs have increased in the 2000s (data on file with authors).

make mistakes, often in predictable ways. Borrowers, for example, might pick the most salient dimension (lowest monthly cost) rather than focusing on the long-term cost of credit—or the fact that taxes and insurance will not be escrowed and are not included in the monthly cost. Consequently firms can and will introduce options that reflect these behaviors, and people will pick options that they themselves would find suboptimal upon further reflection and analysis, or as to which the likelihood of personal failure is much higher than they think. Consumers, moreover, are likely misled by false beliefs about regulation itself, such as whether the law requires that mortgage brokers work in the interests of borrowers; it generally does not.[2] These behavioral insights suggest that disclosure of information alone will often be insufficient to give consumers what they need to optimize their understanding, their decisionmaking, and the resulting outcomes.

This work is clearly related to the emerging literature on behaviorally informed policymaking. This literature produces novel considerations about designing and implementing regulations, including features such as framing information, setting defaults or opt-out rules, giving warnings, and explicating other strategies to alter individual behavior.[3] Although we ourselves have written about framing and defaults as policy strategies, the focus in this chapter is to embed this thinking more deeply in the logic of markets. Specifically, we rely on a framework that more directly accounts for firm incentives to respond to behaviorally motivated regulation. We understand outcomes as an equilibrium interaction between individuals with specific psychologies and firms that respond to those psychologies within specific markets. Regulation must then account for failures in this equilibrium.

This perspective produces two dimensions to consider. First, sometimes the psychological biases of individuals either help or hurt the firms they interact with; hence firms' and regulators' interests are sometimes misaligned and sometimes not. Consider the consumer who does not understand the profound effects of the compounding of interest. Such a bias would lead the individual to undersave and overborrow. Society would prefer that the individual did not have such a bias in both contexts. Firms, however, would prefer that the individual not have the bias to undersave but would be perfectly content to see the same individual overborrow. The market response to individual bias can profoundly affect regulation. For example, to boost participation in 401(k) retirement plans, the regulator faces at worst indifferent and at best positively inclined employers seeking to boost employee retention and to comply with federal pension rules. In forcing disclosure of hidden prices of credit, by contrast, the regulator faces noncooperative firms whose interests are to find ways to work around or undo interventions.

2. See Jackson and Burlingame (2007).

3. These strategies have been called variously "asymmetric paternalism," "libertarian paternalism," and "debiasing through law." See, for example, Camerer and others (2003); Jolls and Sunstein (2005); Thaler and Sunstein (2008).

A second implication of our equilibrium model of firms, in particular markets interacting with individuals with specific psychologies, is that the mode of regulation chosen should take account of this interaction. In particular, the regulator holds two different levers, which we describe as changing the rules and changing the scoring. When forcing disclosure of the APR, for example, the regulator effectively changes the rules of the game: what a firm must do or say. When changing liability rules, the regulator changes the way the game is scored. This distinction is important because changing the rules of the game maintains the firms' original incentives to help or hurt consumer bias, yet changing the scoring of the game can alter those incentives.

This perspective illustrates that one must be careful when transferring the insights of the most prominent example of behavioral regulation—defaults in 401(k) participation—to other examples. We suggest that changing the rules on retirement saving (introducing defaults) works well because employers' incentives generally align (or do not misalign) with regulatory efforts to guide individual choice. In other words, employers are either unaffected or hurt by an individual's propensity to undersave in 401(k) accounts. They thus will not lean against an attempt to fix that problem. In other applications, for example, where firms' incentives misalign with regulatory intent, changing the rules alone may not work well because firms may have the ability to work creatively around those rule changes. Interestingly, this logic leads to regulations (changing the scoring) that, though deeply motivated by behavioral insights, are not themselves particularly psychological in nature. We discuss specific examples of the proposed framework applied to home mortgage credit markets.

In the next section, we discuss disclosure and product regulation, the two dominant models of consumer protection in credit markets.[4] Next, we explain how behavioral insights might matter for policy, and how such insights are constrained by the realities of industrial organization. In that discussion, we develop our equilibrium model of human behavior and market reaction. Finally, we introduce our alternative, "behaviorally informed" mode of home mortgage regulation, encompassing "sticky" opt-out regimes and other strategies based on behavioral insights and market response.

The Existing Structure of Home Mortgage Credit Market Regulation

Existing home mortgage regulation encompasses disclosure regulation and product regulation, and both models miss the interaction between individual psychology and market structure.

4. Barr (2005).

Two Types of Disclosure Regimes

The two types of disclosure regimes are consumer-oriented disclosures and public-oriented disclosures. Consumer-oriented disclosures are designed to improve consumers' ability to shop for products and services. The theory is that information in credit markets is imperfect, firms lack sufficient incentives to coordinate to reveal comparable information, and disclosures lower the cost of acquiring more information. More information, if comparable, should help consumers negotiate better; that in turn leads to more competition and a more efficient market. TILA embodies this approach. Under the act, creditors have to reveal in a conspicuous and clear manner the APR and other key costs of credit.

A second type of regime, public-oriented disclosure, uses disclosure to reveal information more generally to the market, the general public, the media, and regulators. Such disclosures are not necessarily designed to improve consumer decisionmaking but to further enforcing other laws or to communicate social norms. For example, the Home Mortgage Disclosure Act requires creditors to reveal information publicly regarding the race, ethnicity, gender, and income of borrowers and applicants for a loan who were turned down. The underlying premise is that financial institutions should not base lending decisions on factors other than creditworthiness and that publicly revealing loan decisions helps outsiders evaluate whether creditors have in fact based their lending decisions solely on that criterion. Public disclosure of this type relies on market reactions, media reporting, consumer and community group activism, legislative oversight, engagement of financial regulators, and other public pressures to alter private sector behavior. The effectiveness of a public disclosure strategy rests not only on the ability to enforce the disclosure requirement through public remedy or private sanction but also on the other laws and social norms that the law is meant to reinforce and on the strength of the groups and institutions that informally work toward compliance with those norms.

Limits to the Effectiveness of Consumer-Oriented Disclosure Regimes

Two essential problems emerge with consumer-oriented disclosure regimes such as TILA. First, behavioral research teaches the pitfalls of relying on consumer understanding to influence consumer behavior; second, many transactions in the financial marketplace involve both complicated legal rules and complicated product structures that even financially sophisticated parties do not fully understand. Empirical evidence suggests that consumers have a hard time understanding credit disclosures, and research in behavioral economics confirms that often consumers do not act on available information. If consumers are unlikely to understand a financial transaction and in many cases are unlikely to behave fully rationally even in the face of disclosed information, then relying on disclosure alone to address information asymmetries may be an ineffectual response. Still, disclosure might be improved based on behavioral research.[5]

TILA requires disclosures to consumers regarding the cost of loans.[6] This type of disclosure seeks to remedy asymmetric information and improve market competition and efficiency through price disclosure, which would make it easier to comparison shop.[7] TILA disclosure most likely improves transparency in the market and thus efficiency, even if not all consumers understand the disclosures.[8] Yet we should be concerned not only with an efficient market in the aggregate but also with efficiency within markets serving low- and moderate-income households and with the consequences of inadequate disclosures for affected consumers. Although TILA facilitates consumer comparison shopping, in some cases too much information is given to consumers and in other cases too little. Even outside the subprime market, there is little reason to think that consumers understand most aspects of mortgage transactions.[9] Decision research suggests a need for simplicity: individuals faced with complex problems often simplify them to one or two basic decisions.[10] The need for simplicity conflicts, however, with the goal of producing comprehensive disclosures that permit consumers to comparison shop based on the real price of multiattribute loans.

In addition, borrowers may trust mortgage brokers to give them full and accurate information and to offer them the best loan product. Yet it is in the broker's interest to offer the borrower the highest rate loan that the broker can convince the borrower to accept. Brokers can earn higher yield spread premiums for placing borrowers into more expensive loans even if the borrower qualifies for a lower cost alternative. Even in competitive retail consumer markets for simple products, price dispersion can persist.[11] In home mortgage transactions, borrower understanding of complicated home mortgage terms is likely to be much lower.

5. See, for example, Jolls, Sunstein, and Thaler (1998); Camerer and others (2003, p. 1211, 1230–237).

6. See, for example, 12 *C.F.R.* pt. 226.17 (2001).

7. See 15 U.S.C. § 1601 (2000), which states "The Congress finds that . . . competition among the various financial institutions and other firms engaged in the extension of consumer credit would be strengthened through informed use of credit. [Furthermore, i]t is the purpose of this subchapter to assure a meaningful disclosure of credit terms so that the consumer will be able to compare more readily the various credit terms available to him. . . ." Engel and McCoy (2002, pp. 1255, 1280–281), who describe opportunities that information asymmetries provide for predatory lenders and brokers; Schwartz and Wilde (1979, pp. 630, 635): "Because more consumers will become informed if information acquisition costs are decreased, reducing these costs is thought to be the preferable response to the problem of imperfect information" (footnote omitted).

8. Schwartz and Wilde (1979, p. 630).

9. Board of Governors of the Federal Reserve System and the Department of Housing and Urban Development (1998), which notes consumers' difficulty in understanding mortgage terms with or without disclosure.

10. See, for example, Hogarth (1980, pp. 4–6); Plous (1993, pp. 107–88); Baron (2000, pp. 43–68).

11. Carlton and Perloff (2000, pp. 437–41).

Transactions for home mortgages present an even greater possibility for price differentials based on race, sophistication, willingness, and ability to shop for better terms or other factors.[12] Moreover, with credit scoring, creditors know whether borrowers qualify for less expensive loans under the lender's pricing schedules, but most borrowers do not realize this about themselves.[13]

Unfortunately, TILA is extraordinarily complex.[14] The efficacy of disclosures is diminished by inadequacies in the nature and timing of disclosures,[15] their limited effect on consumer behavior, and consumers' cognitive, emotional, and behavioral limitations. In fact, TILA disclosures may not actually be noticed, read, or understood.[16] TILA disclosures may also inundate the consumer with too much information to process.[17] Moreover, low-income and minority buyers are the least likely to shop for alternative financing arrangements,[18] and these problems are exacerbated in the subprime market.

TILA plays an important role in improving credit markets, and reforms would most likely contribute to improvements in credit markets. But the current structure of the home mortgage market, at least for those borrowing from subprime lenders, suggests that disclosure will not be enough. In addition, financial education can play a role in helping consumers understand disclosures better; however, expenditures for financial education lead to strong externalities, so it is quite difficult to induce private market participants to offer financial education to the borrowing public at anything close to the scale it would take to make a difference. Furthermore, most empirical research on financial education concludes that its effect on real outcomes is typically quite modest.[19] This may be caused by at least in part a behavioral tension, pitting intention against action, which we discuss in the section on Psychology and Industrial Organization.

Product Regulation

Alongside disclosure, governments historically have delineated the terms and conditions of some financial service products. Usury laws are the most common form

12. Jackson and Burlingame (2007, p. 63). Ayres (2001, p. 19–44) has documented similar price discrimination in automobile sales and other markets.

13. Credit reports and credit scores are now available to borrowers on request. See Fair and Accurate Credit Transactions Act of 2003, Pub. L. 108-159, §§ 211–12, 117 Stat. 1952, (2003): 1968–969, codified as amended at 15 U.S.C. (2003), § 1681.

14. See, for example, *Emery* v. *Am. Gen. Fin., Inc.*, 71 F. 3d 1343, 1346 (7th Cir. 1995), which describes the ineffectiveness of TILA in conveying relevant information and concludes, "so much for the Truth in Lending Act as a protection for borrowers." See also Durkin (2002, p. 201, p. 208, and table 9), who found that 75 percent of respondents either agreed somewhat or agreed strongly that TILA credit card disclosures are complicated.

15. Eskridge (1984, pp. 1128–130).

16. Renuart (2003, pp. 421, 432).

17. Landers and Rohner (1979, p. 722–25); Eskridge (1984, pp. 1133–135).

18. See, for example, Hogarth and Lee (2000).

19. Caskey (2006).

of such restrictions. In economic terms, one might argue in favor of usury laws to block the granting of credit at high interest rates because the implied default rates would pose unacceptable social externalities. The concern with usury laws is that they often result in credit constraints on poor (or even middle-income) households that could otherwise afford and benefit from credit. Usury laws may also drive lending underground to loan sharks, precluding the possibility of effective consumer protection regulation.

Another type of product regulation excludes certain types of loan terms or sales practices. Such restrictions often have two intertwined motivations. On one hand, restrictions on loan terms can enhance price disclosure and competition by focusing borrowers and creditors on the price of credit rather than on other features of the loan that consumers may ill understand. On the other hand, product restrictions may be thought of as a substantive judgment that certain loan terms are inherently unreasonable. In either event, product restrictions are based on the notion that consumers cannot fully understand or act in their own best interests in the face of confusing terms or transactions or deceptive sales practices to promote these unreasonable terms; moreover, in this view, competition alone is insufficient to drive out such practices.

For example, Congress enacted the Home Ownership Equity Protection Act (HOEPA) in 1994 to respond to unscrupulous lending practices in the subprime home equity mortgage market.[20] For some high-cost loans, HOEPA imposes restrictions on certain contract provisions, requires enhanced disclosures, and enhances remedies for violations. In addition to product regulation, HOEPA requires, directly and indirectly, enhanced disclosures for borrowers facing high-cost loans. Directly, HOEPA enhances disclosure by requiring creditors to disclose mortgage terms three days before closing. Indirectly, HOEPA product restrictions ought to drive more of the cost of the loan into the APR because lenders cannot use the prohibited mortgage terms to cover costs. With more of the cost of the mortgage reflected in the APR, it should be easier for consumers to understand the costs of the loan and go through effective comparison shopping. Creditors would then tend to compete more on price and less on other factors, which consumers have difficulty evaluating. Product regulation could, then, under some circumstances, enhance the effectiveness of disclosure regimes.

HOEPA, however, is decidedly underinclusive: it is designed to curb abusive practices at the fringe of lending rather than overcome broader failures. Moreover, as a practical matter, HOEPA's record has been mixed at best.[21] In response, a HUD-Treasury report proposed a four-part approach to curbing predatory lending in June 2000.[22] Quite recently, the Federal Reserve Board unveiled major

20. Home Ownership and Equity Protection Act of 1994, Pub. L. 103-325, § 151, 108 Stat. 2190 (1994): codified at 15 U.S.C. (2000), § 1601.

21. See, for example, HUD-Treasury Report (2000).

22. See HUD-Treasury Report (2000). See also Barr (2005).

changes to its HOEPA and TILA rules.[23] Many other improvements to abusive practice regulation are desirable, and may now be forthcoming given the fallout from the subprime mortgage lending crisis. Congress is currently considering antipredatory lending legislation.[24]

In addition to the federal regulatory landscape, many states have passed new antipredatory lending laws or enhanced existing ones.[25] Many of these laws are modeled on the federal HOEPA legislation, but increase coverage, enhance restrictions, or bolster enforcement.[26] A vigorous debate exists about whether these state laws diminish access to credit and harm consumers or diminish access to credit that ought not to have been provided and thus increase consumer welfare. Bostic and others (2007) find that the broader coverage of these laws tends to increase subprime origination, but increased restrictions and enforcement tend to diminish such originations. The empirical debate about the scope and effectiveness of these provisions is likely to continue.

In principle, overly prescriptive product regulations can diminish financial access and harm product competition and innovation that might serve low-income households. Governments may easily err by restricting products that would be advantageous or creating new consumer confusion through complicated rules regarding product regulation. Financial markets change rapidly, and firms can easily innovate in ways that are not anticipated by government regulators. Such innovations could better serve consumers than government-imposed product regulations, or conversely such innovations could help firms evade government regulations to the detriment of consumers. It is difficult to know in advance how market innovations will interrelate with product regulations, but for many reasons government regulators may not be able to keep up with these changes. The trade-offs inherent in product regulation ought to be considered, as should alternative forms of regulation.

Psychology and Industrial Organization

With the background on home mortgage regulation having been established, the chapter turns next to the particular dynamic between individual behavior and industrial organization in that market. Recent behavioral research promises to enrich our understanding of the tensions outlined above, by providing a more nuanced and faithful rendition of the psychological and organizational facts that characterize people's relevant behaviors. We first proceed briefly to consider some

23. See Federal Reserve Board, Final Rule Amending Regulation Z, 12 CFR Part 226 (July 14, 2008); Summary of Findings: Consumer Testing of Mortgage Broker Disclosures, submitted to the Board of Governors of the Federal Reserve System, July 10, 2008; Federal Reserve Board, Proposed Rule Amending Regulation Z, 12 CFR Part 226 (June 14, 2007), Federal Register 72, No. 114: 32948; Design and Testing of Effective Truth in Lending Disclosures, Submitted to the Board of Governors of the Federal Reserve System, May 16, 2007.

24. See, for example, Mortgage Reform and Anti-Predatory Lending Act of 2007, H.R. 3915, 110 Cong. 1 sess.

25. Ho and Pennington-Cross (2006); Li and Ernst (2006); Bostic and others (2007).

26. Bostic and others (2007).

of the major insights and then turn to the industrial organization of the mortgage market as it relates to these behavioral patterns. We then develop a model of the interaction, and illustrate how it should affect regulatory choice.

A Deeper Look at Insights from Behavioral Research

How firms will respond to regulation is bound to depend on people's perceptions and behaviors that firms react to in marketing and in offering products and services. Understanding such behaviors promises to give a clearer picture of the contour of market forces and of the problems regulation is attempting to solve.

Behavioral research paints a picture of the average citizen quite different from that typically envisioned in economic policy circles, with significant implications for policy design and implementation. The classical, rational agent model assumes actors with well-ordered preferences and calibrated judgments who are well informed, maximize their self-interested well-being via tangible rewards, and make coherent and insightful plans, which they pursue with efficiency and self-control. In contrast, behavioral research finds people are quite different: their preferences are malleable, their judgment prone to predictable heuristics and biases, their interests often neither selfish nor material, and their plans and behaviors often more context dependent than planned and calculating. What is notable about the emerging behavioral picture is that it paints people as not merely often confused and error-prone but driven by tendencies that are systematic and predictable, yet profoundly different from those typically envisioned by the rational model. A better understanding of such tendencies, appropriately applied, promises to yield more successful policies. In the words of John Maurice Clark almost 100 years ago, "The economist [policy analyst] may attempt to ignore psychology, but it is sheer impossibility for him to ignore human nature. . . . If the economist [policy analyst] borrows his conception of man from the psychologist, his constructive work may have some chance of remaining purely economic in character. But if he does not, he will not thereby avoid psychology. Rather, he will force himself to make his own, and it will be bad psychology."

Consider, for example, such central notions as decisional conflict, information, learning, and planning. Each plays an important role in influencing behavior but deviates in important ways from what is typically assumed by the normative account.

DECISIONAL CONFLICT. People's preferences are typically constructed, not merely revealed, during the decisionmaking process, and the construction of preferences is influenced by the nature and the context of the decision, with important implications. Consider, for example, the role of decisional conflict. Because preferences need to be constructed, choices can be hard to make. People often look for a good reason, a compelling rationale, for choosing one option over another. At times, compelling rationales are easy to articulate; at other times no easy rationale presents itself, which can make the conflict between options hard to resolve. This can prove aversive, and can lead people to postpone decisions or to choose a default option, generating preference patterns that are fundamentally different from those predicted by classical accounts based on value maximization. According to the classical analysis, each option is assigned a subjective value, or utility, and the decisionmaker proceeds to choose the option assigned the highest utility. Such analysis does not anticipate decisional conflict, and it assumes that having more alternatives is a good thing since the more options there are, the more likely the consumer is to find one that satisfies her utility function.

Instead, a proliferation of alternatives can dissuade consumers from making what might otherwise be a favorable choice. As choice becomes difficult, decisions are deferred, often indefinitely.[27] This has been documented in decisions ranging from the choice of jams in upscale grocery stores[28] to decisions to apply for loans equal to roughly a third of one's income,[29] to participation in retirement savings plans, which drops as the number of fund options offered increases.[30] Furthermore, the tendency to refrain from making a choice gives an uncanny advantage to the default, or the perceived status quo. This has been observed in several naturally occurring "experiments," for example, in the context of insurance decisions, when New Jersey and Pennsylvania both introduced the option of a limited right to sue, entitling automobile drivers to lower insurance rates. The two states differed in what was offered as the default option: New Jersey motorists needed to acquire the full right to sue (transaction costs were minimal: a signature), whereas in Pennsylvania the full right to sue was the default, which could then be forfeited in favor of the limited alternative. Only about 20 percent of New Jersey drivers chose to acquire the full right to sue, whereas approximately 75 percent of Pennsylvania drivers chose to retain it, which had substantial financial repercussions.[31] A second naturally occurring experiment was recently observed in Europeans' decisions regarding being potential organ donors.[32] In some European nations drivers are by default organ donors unless they elect not to be; in other, comparable European nations they are by default not donors unless they choose to be. Observed rates of organ donors are almost 98 percent in the former nations and about 15 percent in the latter, a remarkable difference given the low transaction costs and the significance of the decision.

Such patterns suggests that minor contextual changes can alter what consumers choose in ways that are unlikely to relate to their ultimate utility. Of course, the fact that consumers are influenced by conflict and context need not immediately imply that choices ought to be taken away or even that the number of available alternatives ought to be restricted. It does suggest, however, that a proliferation of alternatives needs to be considered with care rather than seen as an obvious advantage. It also suggests that the choice of a default outcome, for example, rather than a mere formality that can be effortlessly changed, needs to be chosen thoughtfully because it acquires a privileged status. In effect, when a large array of options, or the status quo, is inappropriately handled (intentionally or not), this can lead to substantial decrement in consumers' welfare. A proliferation of complicated decisions in the mortgage market, for example, can lead to quite bad outcomes for borrowers.

27. Tversky and Shafir (1992); Shafir, Simonson, and Tversky (1993); Iyengar and Lepper (2000).
28. Iyengar and Lepper (2000).
29. Bertrand and others (2007).
30. Iyengar, Huberman, and Jiang (2004).
31. Johnson and others (1993).
32. Johnson and Goldstein (2003).

OTHER CONTEXTUAL FACTORS: IDENTITIES AND ACCOUNTS. A variety of contextual factors can influence decisionmaking, among them identity salience and mental accounts. People derive their identity in large part from the social groups to which they belong,[33] and identity salience and stereotyping have been shown to affect various behaviors, including resistance to persuasion,[34] reactions to advertisements,[35] hypothetical choices between items,[36] and the rating of consumer products,[37] and it thus has implications for consumers' decisions. In particular, people targeted by negative stereotypes are more likely to mistrust other people's motives,[38] fear rejection, and experience stereotype threat—the fear of confirming a negative stereotype about their own group.[39] Adkins and Ozanne (2005) argue that when low-literacy consumers accept the low-literacy stigma, they perceive market interactions as more risky, engage in less extended problem solving, limit their social exposure, and experience greater stress. In one study, low-socioeconomic-status students performed worse than high-status students when the test was presented as a measure of intellectual ability, but performance was comparable when the test was not seen as pertaining to intellectual measures.[40]

Several other behavioral factors can influence the outcome of consumer decisions in ways that standard analysis is likely to miss. People often are weak at predicting their future tastes or at learning from past experience,[41] and their choices can be influenced by anticipated regret,[42] by costs already incurred,[43] and by effects of sequencing and of temporal separation, where high discount rates for future as compared to present outcomes can yield dynamically inconsistent preferences.[44] Contrary to standard assumptions, the psychological carriers of value are perceived

33. Turner (1987).
34. Kelley (1955).
35. Forehand, Deshpandé, and Reed (2002).
36. Benjamin, Choi, and Strickland (2006); LeBoeuf, Shafir, and Belyavsky (2008).
37. Reed (2004).
38. Crocker and others (1991); Mendoza-Denton and others (2002); Shelton and Richeson (2005); see also Cohen, Steele, and Ross (1999).
39. Steele (1997); Aronson (2002); Walton and Cohen (2007).
40. Croizet and Claire (1998).
41. Kahneman (1994).
42. Bell (1982).
43. Arkes and Blumer (1985); Gourville and Soman (1998).
44. Loewenstein and Elster (1992); Loewenstein and Thaler (1989).

gains and losses rather than anticipated final states of wealth, and attitudes toward risk tend to shift from risk aversion in the face of gains to risk seeking for what appear as losses.[45] Moreover, people are loss averse; that is, the loss associated with giving up a good is substantially greater than the utility associated with obtaining it.[46] This, in turn, leads to reluctance to depart from the status quo because things to be renounced are valued more highly than comparable gains.[47]

People use intuitive mental accounting schemes in which they compartmentalize wealth and spending into distinct budget categories such as savings, rent, and entertainment, and into separate mental accounts such as current income, assets, and future income.[48] Contrary to standard fungibility assumptions, people exhibit different degrees of willingness to spend from various accounts, yielding consumption patterns that are sensitive to labels, overly dependent on current income, and often problematic, such as saving at a low interest rate while borrowing at a higher rate at the same time.[49]

Common to these patterns is the highly "local" and context-dependent nature of consumer decisions. Standard thinking envisions preferences that are largely impervious to minor contextual nuances. In contrast, people's choices are heavily context-dependent, with the option chosen not infrequently being one that would have been forgone had the context differed by just a little, and often in rather trivial ways. What this means is that people's choices are often at the mercy of chance forces as well as of intentional manipulation, which merits careful consideration particularly in contexts with potentially serious consequences.

KNOWLEDGE, ATTENTION, AND INTENTION. A standard assumption is that consumers are attentive, knowledgeable, and typically able to avail themselves of important information. Instead, consumers across a wide range of income and education levels often do not understand or are unaware of options, program rules, benefits, and opportunities. Surveys show that fewer than one-fifth of investors (in stocks, bonds, funds, or other securities) can be considered financially literate,[50] and similar findings describe the understanding shown by pension plan participants.[51] Indeed, even older beneficiaries often do not know what kind of pension they are set to receive or what mix of stocks and bonds they own.

Cognitive load, the amount of information attended to, has been shown to affect performance in a great variety of tasks. To the extent that consumers find themselves in situations that are unfamiliar, distracting, tense, or even stigmatizing (say, applying for a loan), all of which tend to consume cognitive and emo-

45. Kahneman and Tversky (1979).
46. Tversky and Kahneman (1991).
47. Samuelson and Zeckhauser (1988); Knetsch (1989).
48. Thaler (1985, 1992).
49. Ausubel (1991).
50. Alexander, Jones, and Nigro (1998).
51. Schultz (1995).

tional resources, fewer resources will remain available to process information relevant to the decision at hand. As a result, decisions may become even more dependent on situational cues and irrelevant considerations. This is observed, for example, in studies of low-literacy consumers, who apparently struggle with trade-offs between effort and accuracy, are overly dependent on peripheral cues in product advertising and packaging, and show systematic withdrawal from market interactions.[52]

More generally, information cannot be equated with knowledge. People often do not fully process imminently available data because of limitations in attention, understanding, perceived relevance, or misremembering. Program designers often do not appreciate this, having been trained to think that people will know what is important and knowable.

An important theme in behavioral research with profound consequences for thinking about policy is the systematic discrepancy between intention and action, which is essentially assumed away in analyses of rational behavior. Knowing what is the right thing to do, even intending to do it, often does not bring about the intended action. Even when intentions are genuine and strong, self-control problems, poor planning, lack of attention, and forgetting can all intervene. On the flip side and for similar reasons, actions may be taken that were genuinely unintended, thus violating the notion of revealed preference. A degree of self-knowledge in turn leads people to take precautions against such tendencies, which can lead to unintended consequences when policies are designed with different creatures in mind.

CHANNEL FACTORS. The pressures exerted by situational factors can constitute restraining forces hard to overcome or can create inducing forces that can be harnessed to great effect. In contrast with massive interventions that often prove ineffectual, seemingly minor situational changes can have a large impact. Kurt Lewin, who coined the term "channel factors,"[53] suggests that certain behaviors can be facilitated by opening a channel, whereas other behaviors can be blocked by closing a channel. Leventhal, Singer, and Jones (1965) document an illustrative example of a channel factor: their subjects received persuasive communications about the risks of tetanus and the value of inoculation, and were then invited to go to the campus infirmary for a tetanus shot. Follow-up surveys showed that the communication was effective in changing beliefs and attitudes. Nonetheless, only 3 percent actually took the step of getting themselves inoculated compared with 28 percent of those who received the same communication but were also given a map of the campus with the infirmary circled and urged to decide on a particular time and route to get them there. Along these lines, Koehler and Poon (2005) argue that people's predictions of their future behavior overweight the

52. Adkins and Ozanne (2005).
53. Lewin (1951).

strength of their current intentions and underweight contextual factors that influence the likelihood that those intentions will translate into action. This can generate systematically misguided plans among consumers who, reassured by their good intentions, proceed to put themselves in situations that are powerful enough to make them act and choose otherwise.

Behavioral research highlights a simple fact that is both terribly trivial and extremely profound: people choose between, act toward, and exercise judgment about not things in the world but those things as they are mentally represented. And the relationship between extensional outcome and internal representation is rarely one to one. Instead, options are construed, elaborated, and contextually interpreted in ways that are both systematic and consequential.

Framing, context effects, and channel factors are some of the features of the construal process with important policy implications. The take-up of a program, for example, will depend on whether it is construed as the default or as a departure from the status quo, whether others are thought to have adopted it, or whether it requires what is perceived as a difficult choice from among an array of alternatives or, instead, appears like an easy choice.

The Promise of Behavioral Regulation

Recent work on savings has shown the promise of behavioral regulation—regulation that is motivated directly by specific psychological insights. Research suggests that individual choices regarding saving are profoundly affected by psychology: mental accounting, anchoring, endowment effects, and other psychological constructs and frames make a big difference to outcomes. Recent policy innovations have exploited the power of defaults. Default rules, for example, are critical in determining whether and how much individuals will save. By using default rules, governments might encourage welfare-enhancing behavior without prohibiting other market choices. If employers are required to enroll workers in automatic retirement plans unless the worker affirmatively opts out of participating, enrollment rates will be higher and net savings may increase.

Behavioral principles have figured prominently in recent attempts at constructive policy applications. Save More Tomorrow (SMaRT), a program intended to increase retirement savings, deposits money into savings out of future salary raises rather than out of current income, with the added proviso that one can withdraw from the program at any time. It has relied on fundamental behavioral insights—future discounting, nominal loss aversion, and status quo bias—to generate substantial increases in retirement savings and has been adopted by many employers, affecting the lives of millions in the United States and abroad. Attention has been focused on the ways in which retirement savings plans can be made automatic to increase participation and savings rates.[54]

54. Thaler and Benartzi (2004); Benartzi and Thaler (forthcoming); Iwry and John (2006).

Similar types of policies can be pursued across a range of financial products and services that reach low-income households. By further extension from the retirement literature, employers could be required to deposit worker income checks directly into a low-cost bank account with an automatic savings plan unless the employee opts out of the arrangement. Governments could make tax refund and benefit payments through direct deposit into a safe and affordable bank account with savings features, again unless the beneficiary opts out.[55]

Our starting point, however, is that opt-out rules and other such examples seem to be limited in their scope of application. Consider the common opt-out experience of signing a rental car contract. Individuals actively opt out of many features of a rental contract but do so almost automatically: "Initial here, here, and here." Although opting out may be effective in the lack of a strong market pressure, it is far too easily overcome by the firm that interacts directly with the consumer. This raises the more basic question: what would behavioral regulation look like in a richer context, where we consider the ability of the firm to respond to this regulation (and potentially undo or magnify it)?

Industrial Organization: How Market Forces Can Undermine or Reinforce Behaviorally Informed Regulation

In principle, market forces help push private sector actors to offer the best products at the lowest prices. The theory, however, depends crucially on assumptions of rationality. In the classic economic model, the setup is this: free competition for the provision of goods and services to consumers who obtain full information, understand the information they receive, and act based on that full information. Market actors are restrained from peddling welfare-reducing products by consumers who will demand better. In practice, as we have seen, in some contexts the market has produced products and services that are suboptimal. It is easier to see why market forces may sometimes not produce optimal products and services once one relaxes the assumptions underlying the classic model.

Returning to the opt-out regulation, the presumption is that individuals fail to maximize their own utility because of temporal inconsistency—they would like to save but fail to do so. Opt-out regulation eases this problem by facilitating savings even among those who do nothing (perhaps because of procrastination). What are firm (employer) incentives in this case? Employers appear to be largely indifferent or perhaps even motivated to decrease the bias against savings.[56] This incentive is crucial.

55. Barr (2007).

56. This is largely because of the existing regulatory framework—pension regulation gives employers at least some incentive to enroll lower-income individuals in 401(k) programs. Absent this, it is likely that firms would be happy to discourage enrollment because they often must pay the match for these individuals. Even with the incentive the pension structure creates far from perfect alignment of public and private interests in enrolling workers. This point is interesting because it suggests that even defaults in savings work only because some other regulation changed the scoring of the game.

Table 6-1. *The Firm and the Individual*

Behavioral fallibility	*Market-neutral or wants to overcome consumer fallibility*	*Market exploits consumer fallibility*
Consumers misunderstand compounding	Consumers misunderstand compounding in *savings* → Banks would like to *reduce* this to increase savings base	Consumers misunderstand compounding in *borrowing* → Banks would like to *exploit* this to increase borrowing
Consumers procrastinate	Consumers procrastinate in signing up for EITC → Tax filing companies would like to *reduce* this so as to increase number of customers	Consumers procrastinate in returning rebates → Retailers would like to *exploit* this to increase revenues

EITC = earned income tax credit.

Consider another case. As has been argued elsewhere,[57] in some markets firms have incentives to confound consumers. In posting prices, for example, firms have strong market and private incentives to hide certain prices. If consumers sort into those who understand complicated offers and those who do not, it is difficult for firms to compete by offering the most transparent products if such products are less profitable; consumers who understand bad deals already avoid them and will shun the new offer and consumers who do not understand them and go for the new, better offer will just lower profits for the firm.[58] This result—that transparency does not always pay off for firms once one recognizes that people are fallible and easily misled—illustrates how firms sometimes have strong incentives to exacerbate psychological biases. Regulation in this case faces a much more difficult challenge than in the savings situation.

This distinction is central to our framework and is illustrated in table 6-1. In some cases, the market is either neutral or wants to overcome consumer fallibility. In other cases, the market would like to exploit or exaggerate consumer fallibility. For example, when consumers misunderstand compounding of interest in the context of saving, banks have incentives to reduce this misunderstanding so that they can increase their deposits. When consumers misunderstand compounding in the context of borrowing, lenders have little incentive to remove this misunderstanding. It could decrease the debts they are able to issue.[59] When consumers procrastinate in signing up for the earned income tax credit (EITC) and hence in filing at all for taxes, private tax preparation firms have incentives to help remove this procrastination to increase their customer base. When consumers

57. Laibson, Repetto, and Tobacman (1998).
58. Laibson, Repetto, and Tobacman (1998).
59. This stylized example abstracts from collection issues.

Table 6-2. *Changing the Game*

Rules	Set the defaults in 401(k) savings Opt-out rule for organ donation
Scoring	Penalties for 401(k) enrollment, top heavy with high-salary employees Grants to states that enroll organ donors

procrastinate in returning rebates (but make retail purchases as if they are going to get a rebate), retailers benefit. Note the parallelism here in the examples: firm incentives to alleviate or exploit a bias are not an intrinsic feature of the bias itself. Instead, they are a feature of how the bias plays itself out in that particular market structure.

In the consumer credit market, one worries that many firm-individual interactions are in the second category: firms seeking to exploit rather than alleviate bias. If true, this raises the concern of overextrapolating from the 401(k) defaults example to credit products. To the extent that 401(k) defaults work because optimal behavior is largely aligned with market incentives, other areas such as credit markets might be more difficult to regulate with mere defaults. Furthermore, if the credit market is dominated by "low-road" firms offering opaque products that prey on human weakness, it is more likely that regulators of such a market will be captured by the regulated entities and permit the bad behavior to continue, that market forces will defeat any positive defaults set, and that low-road players will continue to dominate. Many observers believe that the credit markets today are in fact dominated by such low-road firms[60] and that formerly "high-road" players have come to adopt the sharp practices of their low-road competitors. If government policymakers want to use defaults in such contexts, they might need to deploy "stickier" defaults or more aggressive policy options.

Table 6-2 illustrates a conceptual approach to the issue of regulatory choice. The regulator can either change the rules of the game or change the scoring of the game.[61] Setting a default is an example of changing the rules of the game. Disclosure regulation also fits this case as well. Specifically, regulators change the rules of the game when they attempt to change the nature of firm–individual interactions, when the regulation attempts to affect what can be said, offered, or done. Changing the scoring of the game, by contrast, changes the payoffs a firm will receive for particular outcomes. Pension regulation that penalizes firms whose 401(k) plan enrollment is top-heavy with high-paid executives is an example of how firms are given incentives to enroll low-income individuals without setting particular rules on how this is done.

60. See, for example, Bar-Gill (2004); Mann (2007).
61. We do not mean to suggest that this binary framework encompasses all possible regulatory solutions. We merely deploy the binary model to illustrate how individual psychology and firm incentives interact with regulatory choice.

Table 6-3. *Behaviorally Informed Regulation*

Item	*Market-neutral or wants to overcome consumer fallibility*	*Market exploits consumer fallibility*
Rules	Public education on saving Direct deposit and auto-save Licensing	Opt-out mortgage system Information debiasing on debt
Scoring	Tax incentives for savings vehicles for the poor	Penalties to make the opt-out system sticky Ex post liability standard for truth in lending Broker fiduciary duty or changing compensation (yield spread premiums)

Table 6-3 puts these two different dimensions together, illustrating that regulatory choice should be analyzed according to the market's stance toward human fallibility. As the discussion that follows illustrates, policies in the top-right-hand corner face a particular challenge. Changing the rules of the game alone will be difficult when firms are highly motivated to find work-arounds and to exploit human fallibility. As such, when we suggest opt-out policies in mortgages, the challenge will be to find ways to make these starting positions sticky, so that firms do not simply undo their default nature. In our judgment, both achieving a good default and figuring out how to make it work require separating low-road from high-road firms and making it profitable for high-road firms to offer the default product.[62] For that to work, the default must be sufficiently attractive to consumers based on behavioral research and sufficiently profitable for high-road firms to succeed in offering it; further, penalties for deviations from the default must be sufficiently costly that the default is sticky even in the face of market pressures from low-road firms. It may be that in some credit markets low-road firms have become so dominant that sticky defaults will be ineffectual. Moreover, achieving such a default is likely to be more costly than making defaults work when market incentives align, not least because the costs associated with the stickiness of the default involve deadweight losses given that there will be those for whom deviating from the default is optimal. These losses would need to be weighed against the losses from the current system as well as against losses from alternative approaches such as disclosure or product regulation. Nonetheless, we believe it is worth exploring whether such sticky defaults can help to alter the underlying dynamics of the home mortgage market.

Behaviorally Informed Home Mortgage Regulation

In what follows, we discuss the specific application of these forces of individual psychology and firm incentives to mortgage markets. The default example is just one of a set of examples of potential regulatory interventions based on our conceptual framework. In this chapter, we explore four ideas: an ex post standard for truth in lending, a requirement of full information disclosure to borrowers, a "sticky" opt-out mortgage system, and restructuring the relationship between borrowers and brokers. Given the complexities involved, this chapter does not champion specific policies. Instead, it illustrates how a behaviorally informed regulatory analysis would lead to a deeper understanding of the costs and benefits of each policy.

62. For a related concept, see Kennedy (2005).

Ex Post Standards-Based Truth in Lending

Optimal disclosure will not occur in all markets simply through competition alone. Competition under a range of plausible scenarios will not necessarily generate psychologically informative and actionable disclosure[63] as the current crisis in the subprime mortgage sector suggests may have occurred. If competition does not produce informative disclosure, disclosure regulation might be necessary. But simply because disclosure regulation is needed does not mean it will work. Regulating disclosure appropriately is difficult and requires substantial psychological sophistication by regulators.

A behavioral perspective could focus on improving disclosures themselves. For example, such a perspective would suggest that simply adding information is unlikely to work. The goal of disclosure should be to improve the quality of information about contract terms in meaningful ways. The goal of disclosure, furthermore, probably ought not to be to improve the quality of decisions solely by changing the intentionality of the consumer, as tempting as that might seem at first glance. But there is much evidence that focusing on intentionality may be misplaced. For example, if people are overconfident about their ability to repay, disclosure policy should probably not require firms to tell people about their overconfidence and try to convince them to take a smaller loan because such policies will generally fail. Disclosure policies that are effective depend on presenting a frame that is well understood and actually conveys salient information that would help the decisionmaker act optimally. It is possible, for example, that information about the frequency of losses from a particular product might help ("2 out of 10 borrowers who take this kind of loan default"), but proper framing is quite difficult to achieve.

Even if regulators were sophisticated, it is difficult to determine what constitutes neutral, purely informative regulation and difficult to enforce that frame given that it may vary across situations. It is too difficult to determine all the ways in which frames can confound consumers. What is confusing in a frame is highly context specific, depending on subtle nuances of presentation and what other information is being presented. It is difficult to gauge what the inferred

63. Contrast Laibson, Repetto, and Tobacman (1998) with Grossman and Hart (1980).

underlying messages are. The goals of disclosure rules, moreover, are easily evaded. Sellers can undermine whatever regulatory disclosure regime is established, in some contexts simply by complying with it: "Here's the disclosure form I'm supposed to give you; just sign here." In addition, with rules-based ex ante disclosure requirements such as TILA, firms (the discloser) move last, after the rule is set up, and whatever gave the discloser incentives to confuse consumers remains in the face of the regulation.

We propose that policymakers consider shifting from relying solely on a rules-based, ex ante regulatory structure for disclosure embodied in TILA toward integrating an ex post, standards-based disclosure requirement as well. This type of policy intervention would correspond to a change in scoring, in the lower right of table 6-3. In essence, courts, or an expert agency, would determine whether the disclosure would, under common understanding, effectively communicate the key terms of the mortgage to the typical borrower. This approach would be similar to ex post determinations of reasonableness of disclaimers of warranties in sales contracts under Uniform Commercial Code (UCC) 2-316.[64]

The debate over whether standards or rules should be preferred is long-standing.[65] Law and economics scholars have used transaction-cost economics to argue that the higher cost of articulating rules ex ante is worthwhile when many people engage in the activity being regulated, multiplying the transaction costs of ex post determinations.[66] Kaplow suggests that the cost of rulemaking will be higher ex ante than the cost of developing a standard, but that standards generate higher ex post costs because of uncertainty and other factors.[67] A standard might have advantages over a rule if the rule is easy to evade, however, and a rule can become stale over time because it is not easily adapted to changing market conditions. Yet translating transaction-cost theory into application is difficult because it is hard to measure the costs and benefits of alternative rules and standards formulations.

In our judgment, establishing a new ex post version of truth in lending based on the reasonable-person standard rather than relying solely on fixed disclosure rules might permit innovation—both in products themselves and in strategies of disclosure—while minimizing rule evasion. An ex post standard with sufficient teeth could change the incentives of firms to confuse; such a standard would also make it difficult to evade. Under the current approach, creditors can easily evade TILA, not by failing to comply with its actual terms but by making the required disclosures regarding the terms effectively useless in the context of the borrowing decision. Given the malleability of people's decisions and the myriad ways in

64. See White and Summers (1995).
65. See, for example, Kennedy (1976, pp. 1685, 1688); Schlag (1985, p. 379, pp. 382–83); Rose (1988, p. 577); Radin (1989, p. 781); Schauer (1991, pp. 149–55); Kaplow (1992, p. 557); Posner (1997, pp. 101–07).
66. See, for example, Kaplow (1992, p. 562–63). But see also Rose (1988); Posner (1997).
67. Kaplow (1992, p. 562–63).

which specific details of how a loan is presented can affect consumer decisions, there is enough freedom, given any ex ante rules, to present loan information in a way that alters consumer decisionmaking. TILA does not block a creditor, for example, from introducing a more salient term ("lower monthly cost!") to compete with the APR for borrowers' attention. Under a standards approach, lenders could not plead compliance with TILA as a defense; rather, the question would be one of objective reasonableness: whether the lender meaningfully conveyed the information required for a typical consumer to make a reasonable judgment about the loan. Standards would also lower the cost of specification ex ante. Clarity of contract is hard to specify ex ante but much easier to verify ex post.

Although TILA has significant shortcomings, we do not propose abandoning it. Rather, TILA would remain, with whatever useful modifications to it might be gleaned from understanding consumers' emotions, thought processes, and behaviors.[68] A modified and improved TILA would still be important in permitting comparison shopping among mortgage products, one of its two central goals. But some of the pressure on TILA to induce firms to reveal information that would promote better consumer understanding would be shifted to the ex post standard proposed here.

Of course, such an approach would have significant costs. These costs vary significantly depending on how the concept is implemented. For example, introducing an important role for the generalist courts in assessing compliance with this new ex post disclosure standard—a much more open-ended analysis than currently conducted by the courts in assessing compliance with TILA—might conflict with the role of specialist bank regulators in developing disclosure policies. Moreover, litigation over the reasonableness standard is likely to be costly, at least in the first instance. To limit the costs associated with our approach, the liability exposure associated with the ex post determination of reasonableness could be significantly confined. For example, one could provide that the ex post standard for reasonableness of disclosure might provide a (partial) defense to payment in foreclosure or bankruptcy, rather than permitting affirmative suits for rescission or cure based on violations of the standard, or tort suits based on gross deviations from it.[69] One might further minimize such costs by turning to the banking agencies to articulate the standard, develop safe harbors, provide "no action" letters regarding reasonable disclosures, and enforce the provision through agency actions or fines, rather than relying on courts and private suits.

Regardless of the particular form of enforcement, the uncertainty in enforcing the standard ex post would itself impose costs regarding the appropriate form of

68. See Federal Reserve Board, Final Rule Amending Regulation Z, 12 CFR Part 226 (July 14, 2008); Summary of Findings: Consumer Testing of Mortgage Broker Disclosures, submitted to the Board of Governors of the Federal Reserve System, July 10, 2008; Federal Reserve Board, Proposed Rule Amending Regulation Z, 12 CFR Part 226 (June 14, 2007), Federal Register 72, No. 114: 32948; Design and Testing of Effective Truth in Lending Disclosures, Submitted to the Board of Governors of the Federal Reserve System, May 16, 2007.
69. For a related concept, see Pottow (2007), who suggests ex post liability for substantively "reckless lending."

disclosure. Perhaps more seriously uncertainty regarding how to disclose novel or innovative mortgage products might deter innovation in developing the mortgage products themselves, not just the disclosures. The additional costs of compliance with a disclosure standard might reduce lenders' willingness to develop new mortgage products designed to reach lower-income or minority borrowers who might not be served by the firms' "plain vanilla" products. The lack of clear rules might also increase consumer confusion about how to compare innovative mortgage products to each other even while it increases consumer understanding of the particular mortgage products. Even if one couples the advantages of TILA for mortgage comparisons with the advantages of an ex post standard for disclosure in promoting clarity, the net result may simply be greater confusion for everyone with respect to cross-loan comparisons, given market complexity. That is, if consumer confusion results mostly from firm obfuscation, then our proposal will most likely help a good deal; by contrast, if consumer confusion results mostly from market complexity in product innovation, then our proposal is unlikely to make a major difference.

Despite the shortcomings of an ex post standard for truth in lending, we believe that such an approach is worth pursuing. The limits of the existing ex ante rules have become all too apparent, and we believe that an ex post standard may help to correct for many of these deficiencies. The precise contours of liability for failure to disclose reasonably are not essential to the design, and weighing the costs and benefits of different methods of implementation is beyond the scope of what we hope to do in introducing the idea in this chapter.

Full Information Disclosure

Although further research and experimentation are appropriate, it may be that consumers have false background assumptions regarding what brokers and creditors reveal to them about their borrowing status and about regulation of the mortgage market itself. What if consumers believe the following:

> Creditors reveal all information about me and the loan products I am qualified to receive. Brokers work for me in finding me the best loan for my purposes, and lenders offer me the best loans for which I qualify. I must be qualified for the loan I have been offered, or the lender would not have validated the choice by offering me the loan. Being qualified for a loan means that the lender thinks that I can repay the loan. Why else would they lend me the money? Moreover, the government tightly regulates home mortgages; they make the lender give me all these legal forms. Surely the government must regulate all aspects of this transaction.

In reality, the government does not regulate as the borrower believes and the lender does not necessarily behave as the borrower hopes. Moreover, with the advent of nationwide credit reporting systems and refinement of credit scoring

and modeling, the creditor and broker know information about the borrower that the borrower does not necessarily know about himself, including not just his credit score but also his likely performance regarding a particular set of loan products. Creditors will know whether the borrower could qualify for a better, cheaper loan as well as the likelihood that the borrower will meet his obligations under the existing mortgage or become delinquent, refinance, default, or go into foreclosure.

Given the consumer's probably false background assumptions and the reality of asymmetric information favoring the lender and broker, we suggest that creditors be required to reveal favorable information to the borrower at the time of the mortgage loan offer, including disclosure of the borrower's credit score and the borrower's qualifications for the lender's products. Brokers would be required to reveal the wholesale rate sheet pricing for loans for which the applicant qualifies. Such an approach corresponds to using the debiasing information given in the top right of table 6-3.

The goal of these disclosures would be to put pressure on creditors and brokers to be honest in their dealings with applicants. The additional information might improve comparison shopping and perhaps outcomes. Of course, revealing such information would also reduce broker and creditor profit margins. But if the classic market competition story relies on full information and assumes rational behavior based on understanding, one could view this proposal as simply attempting to remove market frictions from information failures and move the market competition model more toward its ideal. Full information disclosure does have its downsides, among them the fact that the disclosure may be too weak to change market dynamics, and that the disclosure itself may increase the often misplaced bond of trust between brokers and borrowers, leading potentially to worse outcomes. The disclosure may increase information overload and simply be ignored. Still, full information disclosure is worth consideration as a method to correct for information asymmetries in the mortgage market.

An Opt-Out Mortgage Product

Even though the causes of the mortgage crisis are myriad, a central problem was that many borrowers took out loans that they did not understand and could not afford. Brokers and lenders offered loans that looked much less expensive than they really were because of low initial monthly payments and hidden, costly features. Families commonly make mistakes in taking out home mortgages because they are misled by broker sales tactics, misunderstand the complicated terms and financial trade-offs in mortgages, wrongly forecast their own behavior, and misperceive their risks of borrowing. How many homeowners really understand how the teaser rate, introductory rate, and reset rate relate to the London interbank offered rate plus some specified margin, or can judge whether the prepayment penalty will offset the gains from the teaser rate?

Disclosure along the lines we suggest might help. By altering the rules of the game of disclosure and altering the scoring for seeking to evade proper disclosure, such approaches may be sufficient to reduce the worst outcomes; however, if market pressures and consumer confusion are sufficiently strong, such disclosure may not be enough. Moreover, if market complexity is sufficiently disruptive to consumer choice, product regulation might be appropriate. For example, barring prepayment penalties could reduce lock-in to bad mortgages, or barring short-term bullet ARMs and balloon payments could reduce refinance pressure; in both cases, more of the cost of the loan would be pushed into interest rates and competition could focus on price. Price competition would benefit consumers, and consumers would be more likely to understand the terms on which lenders are competing. Product regulation would also reduce cognitive and emotional pressures for bad decisionmaking. As we note in the section on regulation, however, product regulation may stifle beneficial innovation and the government may simply get it wrong.

For that reason, we propose what we call a "sticky" opt-out mortgage system to help anchor consumer decisionmaking among the range of potentially confusing choices. An opt-out system would fall, in terms of stringency, somewhere between product regulation and disclosure. Under the proposal, legislation would be enacted requiring firms to offer an opt-out home mortgage product. An opt-out product regulation corresponds to changing the rules of the game, in the top right of table 6-3. In this model, lenders would be required to offer eligible borrowers a standard mortgage (or set of mortgages) such as a fixed-rate, self-amortizing 30-year mortgage loan, according to reasonable underwriting standards. Lenders would be free to charge whatever interest rate they wanted on the loan and, subject to several constraints, could offer whatever other loan products they wanted. Borrowers would get the standard mortgage(s) offered, unless they chose to opt out in favor of another option, after honest and comprehensible disclosures from brokers or lenders about the risks of the alternative mortgages. An opt-out mortgage system would mean borrowers would be more likely to get straightforward loans they could understand.

But a plain vanilla opt-out policy is likely to be inadequate. We return to our equilibrium model of firm incentives and individual psychology. Unlike the savings context, where market incentives align well with policies to overcome behavioral biases, in the context of credit markets, firms often have an incentive to hide the true costs of borrowing. Lenders may seek to extract surplus from borrowers because of asymmetric information about future income or default probabilities,[70] and borrowers may be unable to distinguish among complex loan products and act optimally based on such an understanding.[71]

70. Musto (2007).
71. See, for example, Ausubel (1991).

Given the strong market pressures to deviate from the offer, more would be required than a simple opt-out to render the default sticky enough to make a difference in outcomes. Deviation from the offer would require heightened disclosures and additional legal exposure for lenders to make the default sticky. Under this plan, lenders would have stronger incentives to provide meaningful disclosures to those whom they convince to opt out, because they would face increased costs if the loans did not work out. That is, we need to change the scoring of the game. For example, under one approach, if default occurs when a borrower opts out, the borrower could raise the lack of reasonable disclosure as a defense to bankruptcy or foreclosure. Using an objective reasonableness standard akin to that used for warranty analysis under the UCC, if the court determined that the disclosure would not effectively communicate the key terms and risks of the mortgage to the typical borrower, the court could modify or rescind the loan contract. In another approach, rather than relying on courts, the banking agencies could impose fines for unreasonable disclosures. The precise nature of the stickiness required and the trade-offs involved in imposing these costs on lenders would need to be explored in greater detail, but in principle a sticky opt-out policy could effectively leverage the behavioral insight that framing matters with the industrial organization insight that credit market incentives work against a pure opt-out policy.

An opt-out mortgage system with stickiness might provide several benefits over the current market outcomes. A plain vanilla set of mortgages would be easier to compare across mortgage offers. Consumers are likely to understand the key terms and features of such standard products better than they would alternative mortgage products. Once the alternative products are introduced, the consumer would be made aware that the alternatives represent deviations from the default, and the creditors themselves would be required to make heightened disclosures about the risks of the loan product for the borrower, subject to legal sanction (to be determined) in the event of failure to reasonably comply with the disclosure requirements. Consumers may be less likely to make mistakes. The approach would allow lenders to continue to develop new kinds of mortgages, but only when they can explain the key terms and risks clearly to borrowers.

Moreover, requiring the default to be offered plus requiring heightened disclosures and increased legal exposure for deviations may help make high-road lending more profitable than low-road lending. If offering an opt-out mortgage product helps split the market between high- and low-road firms and rewards the former, the market may shift (back) toward firms that offer home mortgage products that better serve borrowers. For this to work effectively, the default—and the efforts to make the default sticky—would need to distinguish the typical good loan, benefiting both lender and borrower, from a wide range of bad loans: for example, those that benefit the lender (taking fees that exceed default costs) but harm the borrower; those that benefit the borrower (duping the lender and escaping high foreclosure/bankruptcy costs) but harm the lender; and those that harm the borrower and lender but benefit third parties (brokers taking fees on loans likely to fail).

Costs will be associated with requiring an opt-out home mortgage. For example, the sticky defaults may not be sticky enough, given market pressures. Implementing the measure may be costly, thus reducing overall access to home mortgage lending. There may be too many cases in which alternative products are optimal, so that the default product is in essence incorrect and comes to be seen as such. The default would then matter less over time, and forcing firms and consumers to go through the process of deviating from it would become increasingly just another burden (like existing disclosure paperwork) along the road to getting a home mortgage loan.

One could somewhat improve these outcomes in a variety of ways. For example, smart defaults could be based on key borrower characteristics such as income and age. With a handful of key facts, an optimal default might be offered to particular borrowers. Smart defaults might reduce error costs associated with the proposal; however, smart defaults could add to consumer confusion because of too many choices. Another approach would be to build in periodic required reviews of the defaults so that the opt-out product stays current with our knowledge of outcomes in the home mortgage market. Firms might be required to conduct survey research on the effectiveness of disclosures and research could lead the banking agencies to develop safe harbors for reasonable disclosures.

Restructure the Relationship between Brokers and Borrowers

An alternative approach to addressing the problem of market incentives to exploit behavioral biases would be to focus directly on the relationship between brokers and borrowers. Mortgage brokers dominate the subprime market. Brokers are compensated for getting borrowers to pay higher rates than those for which the borrower would qualify. Such yield spread premiums are used widely.[72] In loans with yield spread premiums, unlike other loans, there is wide dispersion in prices paid to mortgage brokers. As Howell Jackson has shown, within the group of borrowers paying yield spread premiums, African Americans paid $474 more for their loans and Hispanics $590 more than white borrowers; thus, even if minority and white borrowers could qualify for the same rate, in practice minority borrowers are likely to pay much more.[73]

72. See Jackson and Burlingame (2007, p. 127). Although in principle yield spread premiums could permit lenders legitimately to pass on the cost of a mortgage broker fee to a cash-strapped borrower in the form of a higher interest rate rather than in the form of a cash payment, the evidence suggests that yield spread premiums are in fact used to compensate brokers for getting borrowers to accept higher interest rates.

73. Jackson and Burlingame (2007, p. 125); see also Guttentag (2000, p. 8).

Brokers cannot be monitored sufficiently by borrowers.[74] We are dubious that additional disclosures would help borrowers to be better monitors,[75] in part because disclosures about brokers may reinforce borrower trust in them. Disclosing conflicts of interest may paradoxically increase consumer trust.[76] For example, if the broker is required to tell the borrower that the broker works for himself, not in the interest of the borrower, the borrower's trust in the broker may increase. After all, the broker is being honest with her! Moreover, evidence from the subprime mortgage crisis suggests that, in theory, creditors and investors have incentives to monitor brokers, but they do not do so effectively.

One could alter the incentives of creditors and investors to monitor or directly regulate mortgage brokers. The ex post disclosure standard we suggest might have a salutary effect by making it harder to evade disclosure duties. Moreover, in addition to licensing requirements that may increase regulator and public scrutiny of broker practices, we also believe it is worth considering treating mortgage brokers as fiduciaries to borrowers, similar to the requirements for investment advisers under the Investment Advisors Act. This would, of course, require vast changes to the brokerage market, including to the ways in which mortgage brokers are compensated and by whom. We would need to shift from a lender-compensation system to a borrower-compensation system, and we would need a regulatory system and resources to police the fiduciary duty. An interim step with much lower costs, and potentially significant benefits, would be to ban yield spread premiums. Banning YSPs could reduce broker abuses by eliminating a strong incentive for brokers to seek out higher-cost loans for customers.

Conclusion

Existing regulations fail to take account of advances in behavioral research about how people think and act. Existing regulations based on the rational actor model have significant shortcomings. Our understanding of how human beings perceive and act based on regulatory and market "facts" in the world suggests an alternative approach. Behaviorally informed regulation would take account of the importance of framing and defaults, of the gap between information and understanding, and intention and action as well as of decisional conflict and other psychological factors affecting how people behave. At the same time, behaviorally informed regulation should take into account not only behavioral insights about individuals but also economic insights about markets. Markets can be shown to systematically favor overcoming behavioral biases in some contexts and to

74. Jackson and Burlingame (2007).

75. See, for example, FTC (2007).

76. Cain, Lowenstein, and Moore (2005).

systematically favor exploiting those biases in other contexts. A central illustration of this distinction is the contrast between the market for saving and the market for borrowing—in which the same human failing in understanding and acting on the important concept of compound interest leads to opposite market reactions in the two contexts.

In our model outcomes are an equilibrium interaction between individuals with specific psychologies and firms that respond to those psychologies within specific markets. Regulation must then account for the social welfare failures in this equilibrium. Taking both individuals and industrial organization into account seriously suggests the need for a range of market-context-specific policy options, including changing both the rules of the game and its scoring. We have sketched here what some of these policy options might be, although we have not defended them as optimal. In particular, the focus is on an ex post, standards-based truth in lending law, a requirement of full disclosure of information favorable to the borrower, a "sticky" opt-out mortgage system, and restructuring the relationship between brokers and borrowers. Further work will be required to explore whether these alternative approaches might merit enactment.

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7

Interventions in Mortgage Default: Policies and Practices to Prevent Home Loss and Lower Costs

AMY CREWS CUTTS AND WILLIAM A. MERRILL

The implosion of the subprime market in early 2007 and subsequent deterioration of the prime market in 2008 caused by the rapid rise in mortgage defaults resulted in significant media and political focus on saving homeowners from foreclosure and the possible loss of their home. Although the default problem in the prime segment of the market is less severe, the issues related to keeping borrowers in their homes affect all market segments, not just subprime loans. In particular, what do we know about defaults and what causes them? Is there an ideal cost-benefit time frame for the foreclosure process? What are the costs of foreclosure? Where will the next gains in default servicing come from to maximize the potential for borrowers to keep their homes?

This chapter examines these issues, focusing on the prime side of the market and in particular prime conventional (that is, not government insured) and conforming (meeting the underwriting guidelines of Freddie Mac or Fannie Mae)

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