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# Behaviorally Informed Financial Services Regulation

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# BEHAVIORALLY INFORMED FINANCIAL SERVICES REGULATION

MICHAEL S. BARR, SENDHIL MULLAINATHAN,  
AND ELDAR SHAFIR

PREPARED FOR THE  
ASSET BUILDING PROGRAM

NEW AMERICA FOUNDATION



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## Abstract

Financial services decisions can have enormous consequences for household well-being. Households need a range of financial services—to conduct basic transactions, such as receiving their income, storing it, and paying bills; to save for emergency needs and long-term goals; to access credit; and to insure against life’s key risks. But the financial services system is exceedingly complicated and often not well-designed to optimize household behavior. In response to the complexity of our financial system, there has been a long-running debate about the appropriate role and form of regulation. Regulation is largely stuck in two competing models—disclosure, and usury or product restrictions.

This paper explores a different approach, based on insights from behavioral economics on the one hand, and an understanding of industrial organization on the other. At the core of the analysis is the interaction between individual psychology and market competition. This is in contrast to the classic model, which relies on the interaction between rational choice and market competition. The introduction of richer psychology complicates the impact of competition. It helps us understand that firms compete based on how individuals will respond to products in the marketplace, and competitive outcomes may not always and in all contexts closely align with improved decisional choice and increased consumer welfare.

The paper adopts a behavioral economic framework that considers firm incentives to respond to regulation. Under this framework, outcomes are an equilibrium interaction between individuals with specific psychologies and firms that respond to those psychologies within specific market

contexts. Regulation must then address failures in this equilibrium. The model suggests, for example, that in some contexts market participants seek to overcome common human failings (as for example, with under-saving) while in other contexts market participants seek to exploit these failings (as for example, with over-borrowing). Behaviorally informed regulation needs to take account of these different contexts.

The paper discusses the specific application of these forces to the case of mortgage, credit card, and banking markets. The purpose of this paper is not to champion policies, but to illustrate how a behaviorally informed regulatory analysis would lead to a deeper understanding of the costs and benefits of specific policies. To further that understanding, in particular, the paper discusses ten ideas:

- Full information disclosure to debias home mortgage borrowers.
- A new standard for truth in lending.
- A “sticky” opt-out home mortgage system.
- Restructuring the relationship between brokers and borrowers.
- Using framing and salience to improve credit card disclosures.
- An opt-out payment plan for credit cards.
- An opt-out credit card.
- Regulating of credit card late fees.
- A tax credit for banks offering safe and affordable accounts.
- An opt-out bank account for tax refunds.

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Financial services decisions can have enormous consequences for household well-being. Households need a range of financial services—to conduct basic transactions, such as receiving their income, storing it, and paying bills; to save for emergency needs and long-term goals; to access credit; and to insure against life’s key risks. But the financial services system is exceedingly complicated and often not well-designed to optimize household behavior. For example, choosing a mortgage is one of the biggest financial decisions an American consumer will make, but it can be a complicated one, especially in today’s environment where the terms and features of mortgages vary in multiple dimensions. Similarly, credit card contracts now often involve complicated terms and features that may encourage sub-optimal borrowing behavior. And it has long been remarked that households fail to optimize in their savings decisions.

In response to the complexity of our financial system, there has been a long-running debate about the appropriate role and form of regulation. Regulation is largely stuck in two competing models—disclosure, and usury or product restrictions. Disclosure regulation, embodied in the Truth in Lending Act (TILA), presumes one market failure: the market will fail to produce a clear and comparable disclosure of essential product information needed by consumers. TILA responds, potentially, to two types of problems. First, firms will not reveal all information, for example, regarding the desirability of various features, that borrowers should understand and be able to analyze in determining whether to take out a loan. Second, firms will not reveal information in a way that facilitates comparability across products. The first concern speaks to consumer knowledge, “solving” the problem through the provision of information; the second concern addresses consumers’ ability to process the information, “solving” the problem through coordination of terms and definitions.

*Homo economicus* is very much the intellectual basis for disclosure regulation. The model relies on fully rational agents who make intelligent choices. But these neoclassical assumptions are misplaced and in many contexts consequential. In particular, behavioral research has shown that the availability of data does not always lead to commu-

nication and knowledge; understanding and intention do not necessarily lead to action; and contextual nuances can lead to poor choices. Individuals consistently make choices that, they themselves agree, diminish their own well-being in significant ways.

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**Regulation is largely stuck in two competing models—disclosure, and usury or product restrictions.**

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By contrast to disclosure regulation, usury laws 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. But product regulation may in some contexts diminish access to credit or reduce innovation of financial products. Moreover, for certain types of individuals, some limitations may themselves increase consumer confusion regarding what rules apply to which products, and what products may prove beneficial or harmful. In addition, firms will likely develop ways around such product restrictions, undermining their core intention, increasing costs and further confusing consumers.

We explore a different approach, based on insights from behavioral economics on the one hand, and an understanding of industrial organization on the other. At the core of our analysis is the interaction between individual psychology and market competition. This is in contrast to the classic model, which relies on the interaction between rational choice and market competition. In the classic model, absent market failures, because rational agents choose well, firms compete to provide products that improve welfare. Because rational agents process information well, firms compete to provide information that improves decision quality. By contrast, in our model, individuals depart from neo-classical assumptions in important ways. The introduction of richer psychology complicates the impact 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 improved decisional choice and increased consumer welfare.

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**We explore a different approach, based on insights from behavioral economics on the one hand, and an understanding of industrial organization on the other.**

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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 provide more options, people will pick the best ones, and healthy competition will drive out bad options. In reality, people are easily overwhelmed by too many options and make mistakes, often in predictable ways. Borrowers, for example, might pick the most salient dimension (lowest monthly cost) rather than focusing on their cost of credit over the expected life of their loan—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 cater to these behaviors, and people will pick options that carry a greater likelihood of failure than anticipated, and which they themselves would find sub-optimal upon further reflection and analysis. These behavioral considerations suggest that disclosure of information alone will often be insufficient to provide consumers with what is needed to optimize their understanding and decision-making, and the resulting outcomes.

Our work is clearly related to the emerging literature on behaviorally informed policy-making. This literature produces novel considerations in the design and implementation of regulation, including features such as the framing of information, the setting of defaults or “opt-out” rules, the provision of warnings, and other strategies to alter individual behavior.<sup>2</sup> In this paper, we embed this thinking more deeply in the logic of markets. Specifically, we adopt a framework that considers in more depth firm incentives to respond to behaviorally motivated regulation. We envision outcomes as an equilibrium interaction between individuals with specific psychologies and firms that respond to those psychologies within specific market contexts. Regulation must then address failures in this equilibrium.

This perspective produces two dimensions to consider. First, the psychological biases of individuals can either help or hurt the firms they interact with; hence firms’ and public-minded regulators’ interests are sometimes mis-aligned and sometimes not. Let us take the example of a consumer who does not understand the profound effects of the compounding of interest. Such a bias would lead the individual both to under-save, and to over-borrow. 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 under-save so that funds available for investment and fee generation would not diminish but, at least over the short term (and excluding consideration of collection costs), would be perfectly content to see the same individual over-borrow. Because people are fallible and easily misled, transparency does not always pay off and firms sometimes have strong incentives to *exacerbate* psychological biases by hiding borrowing costs. Regulation in this case faces a much more difficult challenge than in the savings situation.

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The market response to individual failure can profoundly affect regulation. In attempting 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.<sup>3</sup> In forcing disclosure of hidden prices of credit, by contrast, the regulator often faces non-cooperative firms, whose interests are to find ways to work around or undo interventions.

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. One might think of the regulator as holding two different levers, which we describe as changing the rules and changing the scoring.<sup>4</sup> When forcing disclosure of the APR, for example, the regulator effectively changes the “rules” of the game: what a firm must say. A stronger form of rule change is product regulation: changing what a firm must do. Behavioral rule changes, such as creating a favored starting position or default, fall between these two types. When changing liability or providing tax incentives, by contrast, the regulator changes the way the game is “scored”. Typically, changing the rules of the game without changing the scoring maintains the firms’ original incentives to help or hurt consumer bias, channeling the incentive into different behaviors by firms or individuals. In contrast, changing the scoring of the game (as through liability changes) can alter those incentives.

This perspective highlights the care that must be taken when transferring the insights of the most prominent

example of behavioral regulation—defaults in 401(k) participation—to other domains. According to the present analysis, changing the rules on retirement saving (by introducing defaults) works well because employers’ incentives align (or do not mis-align) with regulatory efforts to guide individual choice. In other words, under current conditions, employers are either unaffected or may even be hurt by individuals’ propensity to under-save in 401(k) plans.<sup>5</sup> They thus will not lean against an attempt to fix that problem. In contrast, in circumstances where firms’ incentives misalign with regulatory intent, changing the rules alone may not work well since firms may have the ability to work creatively around those rule changes. Under those conditions, psychological rules such as defaults or framing may be too weak, and changes in liability rules or other measures may be necessary, as we explain below.

This distinction in market responses to individual psychology is central to our framework and is illustrated in Table 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. The different provider incentives generated by consumer lack of understanding about the compounding of interest in the saving and borrowing contexts is discussed above. Similarly, when consumers procrastinate in signing up for the EITC (and hence in filing for taxes) private tax preparation firms have incentives to help remove this procrastination so as to increase their customer base. When

Table 1. The Firm and the Individual

<b>Behavioral Fallibility</b>	<b>Market neutral and/or wants to overcome consumer fallibility</b>	<b>Market exploits consumer fallibility</b>
<b>Consumers misunderstand compounding</b>	<p><b>Consumers</b> misunderstand compounding in <i>savings</i></p> <ul style="list-style-type: none"> <li>› <b>Banks</b> would like to <i>reduce</i> this to increase savings base</li> </ul>	<p><b>Consumers</b> misunderstand compounding in <i>borrowing</i></p> <ul style="list-style-type: none"> <li>› <b>Banks</b> would like to <i>exploit</i> this to increase borrowing</li> </ul>
<b>Consumers procrastinate</b>	<p><b>Consumers</b> procrastinate in signing up for EITC</p> <ul style="list-style-type: none"> <li>› <b>Tax filing companies</b> would like to <i>reduce</i> this so as to increase number of customers</li> </ul>	<p><b>Consumers</b> procrastinate in returning rebates</p> <ul style="list-style-type: none"> <li>› <b>Retailers</b> would like to <i>exploit</i> this to increase revenues</li> </ul>



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

In the consumer credit market, one worries that many firm-individual interactions are of the kind where firms seek to exploit rather than alleviate bias. If true, this raises the concern of over-extrapolating 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 because “high road” interests are too weak to push back against “low road” players; that market forces will defeat positive defaults sets; and that “low-road” players will continue to dominate. Many observers, for example, believe that the credit card markets are, in fact, currently dominated by such “low road” firms (see, e.g., Mann 2007; Bar-Gill 2004) and that formerly “high road” players have come to adopt the sharp practices of their low-road competitors. If government policy makers want to attempt to use defaults in such contexts, they might need to deploy “stickier” defaults or more aggressive policy options.

Table 2 illustrates a conceptual approach to the issue of regulatory choice. In this stylized model, the regulator can either change the rules of the game or change the scoring of the game. Setting a default is an example of changing the rules of the game, as is disclosure regulation. Specifically, the rules of the game are changed when there’s an attempt to change the nature of firm-individual interactions, as 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. This may be done without a particular rule about how the outcome is to be achieved. For example, pension regulation that penalizes firms whose 401(k) plan enrollment is top-heavy with high-paid executives is an example of how scoring gives firms *incentives* to enroll low-income individuals without setting particular rules on how this is done. Changing rules and changing scoring often accompany each other, but they are conceptually distinct.

Table 2. Changing the Game

<b>Rules</b>	Set the defaults in 401(k) savings Organ donation
<b>Scoring</b>	401(k) top heavy requirements for tax Grants to states that enroll organ donors

Table 3 weaves these two dimensions together, illustrating how regulatory choice ought to be analyzed according to the market’s stance towards human fallibility. In what follows, we discuss the specific application of these forces to the case of mortgage, credit card, and banking markets, with specific proposals that fall into each bin. Among other things, the discussion illustrates how policies in the top-right-hand corner of Table 3 face a particular challenge. Changing the rules of the game alone will be difficult when firms are highly motivated to find work-arounds. As such, when we suggest opt-out policies in mortgages below, 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 requires separating low-road from high road firms and making it profitable for high road firms to offer the default product (for a related concept, see Kennedy, 2005). For that to work, the default must be sufficiently attractive to consumers, sufficiently profitable for “high road” firms to succeed in offering it, and penalties associated with deviations from the default must be sufficiently costly so as to make the default “stick” 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.

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The default must be sufficiently attractive to consumers, sufficiently profitable for “high road” firms to succeed in offering it, and penalties associated with deviations from the default must be sufficiently costly so as to make the default “stick” even in the face of market pressures from “low road” firms.

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Moreover, achieving such a default is likely more costly than making defaults work when market incentives align, not least because the costs associated with the stickiness of the default involve greater dead-weight losses given that there will be higher costs to opt-out for 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, given the considerations above, it seems worth exploring whether such “sticky” defaults can help to transform consumer financial markets.

Table 3. Behaviorally Informed Regulation

	Market neutral and/or wants to overcome consumer fallibility	Market exploits consumer fallibility
<b>Rules</b>	Public education on saving Direct deposit/ auto-save Licensing	Opt-out mortgage or credit card Information debiasing on debt (full information disclosure, payoff time for credit cards)
<b>Scoring</b>	Tax incentives for savings vehicles IRS Direct Deposit Accounts	Penalties to make opt-out system sticky Ex post liability standard for truth in lending Broker fiduciary duty and/or changing compensation (Yield Spread Premiums)

The default example is just one of a set of examples we discuss as potential regulatory interventions based on our conceptual framework. As noted above, given market responses to relevant psychological factors in different contexts, regulation may need to take a variety of forms, including some that while informed by psychology are not designed to affect behavioral change but rather to alter the structure of the market in which relevant choices are made. Given the complexities involved, the purpose of this white paper is not to champion the specific policies below.

Instead, we illustrate how a behaviorally informed regulatory analysis would lead to a deeper understanding of the costs and benefits of specific policies. We explore ten ideas to illustrate our conceptual approach in three main areas of borrowing and saving: home mortgage regulation, credit card regulation, and the provision of bank accounts.

## Behaviorally Informed Home Mortgage Regulation

### Full Information Disclosure to Debias Borrowers

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 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. Yet lenders are not required to reveal this information to borrowers. At the same time, the lack of disclosure of such information is likely exacerbated by consumer beliefs. Consumers likely have false background assumptions regarding what brokers and creditors reveal to them about their borrowing status. 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. Because I am qualified for the loan that must mean 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. Instead, information is hidden from the borrower, information that would improve market compe-

tition and outcomes. 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 useful 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 all of the lender’s mortgage products. Brokers could even be required to reveal the wholesale rate sheet pricing—the rates at which lenders would be willing to lend to this type of borrower. Such an approach corresponds to the use of debiasing information, in the top right of Table 3.

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**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 useful 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 all of the lender’s mortgage products.**

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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 can view this proposal as simply attempting to remove market frictions from information failures, and move the market competition model more towards its ideal. By reducing information asymmetry, full information disclosure would help to debias consumers and lead to better competitive outcomes.

### **Ex Post Standards-based Truth in Lending**

Optimal disclosure will not simply occur in all markets through competition alone. Competition under a range of plausible scenarios will not necessarily generate psychologically informative and actionable disclosure, as the cur-

rent 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 sophistication by regulators, including psychological insight.

A behavioral perspective could focus on improving disclosures themselves. The goal of disclosure should be to improve the quality of information about contract terms in meaningful ways. That would suggest, for example, that simply adding information is unlikely to work. Disclosure policies are effective to the extent that they present a frame—a way of perceiving the disclosure—that is both well understood and conveys salient information that helps the decision-maker act optimally. It is possible, for example, that information about the failure frequency of particular products might help (“2 out of 10 borrowers who take this kind of loan default”), but proper framing can be difficult to achieve and to maintain consistently, given that it may vary across situations. Moreover, the attempt to improve decision quality through an improvement in consumer understanding, which is presumed to change the consumer’s intentions to act, and finally her actual actions, is fraught with difficulty. There is often a gap between understanding and intention, and particularly between intention and action.

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Furthermore, even if meaningful disclosure rules can be created, sellers can undermine whatever before-the-fact or ex ante disclosure rule is established, in some contexts simply by “complying” with it: “Here’s the disclosure form I’m supposed to give you, just sign here.” For example, with rules-based ex ante disclosure requirements for credit, such as TILA, the rule is set up first, and the firm (the discloser) moves last. While an ex ante rule provides certainty to creditors, whatever gave the discloser incentives to confuse consumers remains in the face of

the regulation. While officially complying with the rule, there is market pressure to find other means to avoid the salutary effects on consumer decisions that the disclosure was intended to achieve.

In light of the difficulties of addressing such issues *ex ante*, we propose that policy makers consider shifting away from sole reliance on a rules-based, *ex ante* regulatory structure for disclosure embodied in TILA and toward integration of an *ex-post*, standards-based disclosure requirement as well. Rather than a rule, we would deploy a standard, and rather than an *ex ante* decision about content, we would permit the standard to be enforced after loans are made. In essence, courts or expert agencies would determine whether the disclosure would have, under common understanding, effectively communicated the key terms of the mortgage to the typical borrower. This approach could be similar to *ex post* determinations of reasonableness of disclaimers of warranties in sales contracts under UCC 2-316 (See White & Summers, 1995). This type of policy intervention would correspond to a change in “scoring,” in the lower right of Table 3.

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In our judgment, an *ex post* version of truth in lending based on a reasonable person standard to complement the fixed disclosure rule under TILA 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 and would be more difficult to evade. Under the current approach, creditors can easily “evade” TILA, by simultaneously complying with its actual terms while making the required disclosures regarding the terms effectively useless in the context of the borrowing decisions of consumers with limited attention and understanding. TILA, for example, does not block a creditor from introduc-

ing a more salient term (“lower monthly cost!”) to compete with the APR for borrowers’ attention. Under an *ex post* standards approach, by contrast, 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 easier to verify *ex post*. Over time, through agency action, guidance, model disclosures, “no action” letters, and court decisions, the parameters of the reasonableness standard would become known and predictable.

While TILA has significant short-comings, we do not propose abandoning it. Rather, TILA would remain (with whatever useful modifications to it might be gleaned from our increased understanding of consumers’ emotions, thought processes and behaviors). Quite recently, for example, the Federal Reserve Board unveiled major and useful changes to its disclosure rules, based in part on consumer research.<sup>6</sup> TILA would still be important in permitting comparison-shopping among mortgage products, one of its two central goals. However, some of the burden of TILA’s second goal, to induce firms to reveal information that would promote better consumer understanding, would be shifted to the *ex post* standard.

Of course, there would be significant costs to such an approach, especially at first. Litigation or regulatory enforcement would impose direct costs and the uncertainty surrounding enforcement of the standard *ex post* might deter innovation in the development of mortgage products. 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 regarding how to compare innovative mortgage products to each other, even while it increases consumer understanding of the particular mortgage products being offered. 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 with respect to cross-loan comparisons. That is, if consumer confusion results mostly from firm obfuscation, then our proposal will likely help a good deal. By contrast, if consumer confusion in this context

results mostly from market complexity in product innovation, then the proposal is unlikely to make a major difference, and other approaches focused on loan comparisons might be warranted (see, e.g., Thaler & Sunstein (2008)).

Despite the shortcomings of an ex post standard for truth in lending, we believe that such an approach is worth pursuing. To limit the costs associated with our approach, the ex post determination of reasonableness could be significantly confined. For example, if courts are to be involved in enforcement, the ex post standard for reasonableness of disclosure might be limited to providing a (partial) defense to payment in foreclosure or bankruptcy, rather than being open to broader enforcement through affirmative suit. Alternatively, rather than court enforcement, the ex post standard might be enforced by the bank regulators or another expert consumer agency,<sup>7</sup> through supervision and enforcement actions. The ex post exposure might be significantly reduced through ex ante steps. For example, regulators might develop safe harbors for reasonable disclosures, issue model disclosures, use “no action” letters to provide certainty to lenders, and the like. Moreover, firms might be tasked with conducting regular surveys of borrowers or conducting experimental design research to validate their disclosures, with positive results from the research providing rebuttable presumptions of reasonableness, or even safe harbors from challenge. The key is to give the standard sufficient teeth without deterring innovation. The precise contours of enforcement and liability are not essential to the concept, and weighing the costs and benefits of such penalties is beyond the scope of what we hope to do in introducing the idea here. Further work will be required to detail the design for implementation.

### “Sticky” Opt-Out Mortgage Regulation

While 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 tradeoffs 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?

Improved disclosures might help. Altering the rules of the game of disclosure, and altering the “scoring” for seeking to evade proper disclosure, may be sufficient to reduce the worst outcomes. However, if market pressures and consumer confusion are sufficiently strong, such disclosure may not be enough. If market complexity is sufficiently disruptive to consumer choice, product regulation might prove most appropriate. For example, by barring prepayment penalties, one could reduce lock-in to bad mortgages; by barring short-term ARMs and balloon payments, one 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 a consistently stated price in the form of the APR. Price competition would benefit consumers, who would be more likely to understand the terms on which lenders were competing. Product regulation would also reduce cognitive and emotional pressures related to potentially bad decision-making by reducing the number of choices and eliminating loan features that put pressure on borrowers to refinance on bad terms. However, product regulation may stifle beneficial innovation and there is always the possibility that government may simply get it wrong.

For that reason, we propose a new form of regulation. We propose that a default be established with increased liability exposure for deviations that harm consumers. For lack of a better term, we call this a “sticky” opt-out mortgage system.<sup>12</sup> As with “opt out” regulation generally, a “sticky” opt out system would fall, in terms of stringency, somewhere between product regulation and disclosure; however, for reasons we explain below, market forces would likely swamp a pure “opt out” regime—that’s where the need for stickiness comes in. This approach corresponds to a combination of changing the rules of the game, in the top right of Table 3, and changing liability rules, at the bottom right of that table.

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**We propose that a default be established with increased liability exposure for deviations that harm consumers. For lack of a better term, we call this a “sticky” opt-out mortgage system.**

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The proposal is grounded in our equilibrium model of firm incentives and individual psychology. Borrowers may be unable to distinguish among complex loan products and act optimally based on such an understanding (see, e.g., Ausubel 1991). We thus deploy an opt-out strategy to make it easier for borrowers to choose a standard product, and harder for borrowers to choose a product that they are less likely to understand. At the same time, lenders may seek to extract surplus from borrowers because of asymmetric information about future income or default probabilities (see Musto 2007), and, in the short term, lenders and brokers may benefit from selling borrowers loans they cannot afford. Thus, a pure default would be undermined by firms, and regulation needs to take account of this market pressure by pushing back.

In our 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. The precise contours of the standard set of mortgages would be set by regulation. Lenders would be free to charge whatever interest rate they wanted on the loan, and, subject to the constraints outlined below, could offer whatever other loan products they wanted outside of the standard package. Borrowers, however, would get the standard mortgage offered, unless they chose to opt out in favor of a non-standard option offered by the lender, after honest and comprehensible disclosures from brokers or lenders about the terms and 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 for the reasons cited above, a plain-vanilla opt-out policy is likely to be inadequate. 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. Given the strong market pressures to deviate from the default offer, we would need to require more than a simple “opt out” to make the default “sticky” enough to make a difference in outcomes. Deviation from the offer would require heightened disclosures and additional legal exposure for lenders in order to make the default “sticky.” Under our plan, lenders would have stronger incentives to provide meaningful disclosures to those whom they convince to opt out, because they would face increased regulatory scrutiny, or increased costs if the loans did not work out.

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Deviation from the offer would require heightened disclosures and additional legal exposure for lenders in order to make the default “sticky.”

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Future work will need to explore in greater detail the enforcement mechanism. For example, under one potential approach to making the opt-out “sticky,” 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 Uniform Commercial Code, 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.<sup>8</sup> Another alternative would be to have the banking agencies (or another expert consumer agency) enforce the requirement on a supervisory basis, rather than relying on the courts. The agency would be responsible for supervising the nature of disclosures according to a reasonableness standard, and would impose a fine on the lender and order corrective actions if the disclosures were found to be unreasonable. The precise nature of the “stickiness” required and the tradeoffs 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 defaults matter with the industrial organizational insight that certain market incentives work against a pure opt-out policy.

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An opt-out mortgage system with “stickiness” might provide several benefits over current market outcomes. Under the plan, a plain vanilla set of default mortgages would be

easier to compare across mortgage offers. Information would be more efficiently transmitted across the market. Consumers would be likely to understand the key terms and features of such standard products better than they would alternative mortgage products. Price competition would more likely be salient once features are standardized. Behaviorally, when alternative products are introduced, the consumer would be made aware that such alternatives represent deviations from the default, helping to anchor consumers in the terms of the default product and providing some basic expectations for what ought to enter into consumer choice. Framing the mortgage choice as one between accepting a standard mortgage offer and needing affirmatively to choose a non-standard product should improve consumer decision-making. Creditors will be required to make heightened disclosures about the risks of the alternative loan products for the borrower, subject to legal sanction in the event of failure reasonably to disclose such risks; the legal sanctions should deter creditors from making highly unreasonable alternative offers, with hidden and complicated terms. Consumers may be less likely to make significant mistakes. In contrast to a pure product regulation approach, the sticky default approach would allow lenders to continue to develop new kinds of mortgages, but only when they can adequately explain key terms and risks to borrowers.

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**Requiring a default to be offered, accompanied by required heightened disclosures and increased legal exposure for deviations, may help to make “high road” lending more profitable in relation to “low road” lending—at least if deviations resulting in harm are appropriately penalized.**

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Moreover, requiring a default to be offered, accompanied by required heightened disclosures and increased legal exposure for deviations, may help to make “high road” lending more profitable in relation to “low road” lending—at least if deviations resulting in harm are appropriately penalized. If offering an opt-out mortgage product helps to split the market between high and low-road firms, and rewards the former, the market may shift (back) towards 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 enable the consumer easily to distinguish the typical “good” loan, benefiting both lender and borrower, which would be offered as the default, from a wide range of “bad” loans, including those that benefit the lender with higher rates and fees but harm the borrower; those that benefit the borrower but harm the lender; and those that harm the borrower and lender but benefit third parties, such as brokers.

There will be costs associated with requiring an opt-out home mortgage. For example, the sticky defaults may not be sticky enough to alter outcomes, given market pressures. The default could be undermined, as well, through the firm’s incentive structures for loan officers and brokers, which could provide greater rewards for non-standard loans. Implementation of the measure may be costly and the disclosure requirement and uncertainty regarding enforcement of the standard might reduce 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. Low-income, minority or first-time homeowners who have benefited from more flexible underwriting and more innovative mortgage developments might see their access reduced if the standard set of mortgages does not include products suitable to their needs.

One could improve these outcomes in a variety of ways. For example, the opt-out regulation could require that the standard set of mortgages include a 30-year fixed mortgage, a five- or seven-year adjustable rate mortgage, and straightforward mortgages designed to meet the particular needs of first-time, minority or low-income homeowners. One might develop “smart defaults,” based on key borrower characteristics, such as income and age. With a handful of key facts, an optimal default might be offered to an individual borrower. The optimal default would consist of a mortgage or set of mortgages that most closely align with the set of mortgages that the typical borrower with that income, age, and education would prefer. For example, a borrower with rising income prospects might

appropriately be offered a five-year adjustable rate mortgage. Smart defaults might reduce error costs associated with the proposal and increase the range of mortgages that can be developed to meet the needs of a broad range of borrowers, including lower-income or first-time homeowners; however, smart defaults may add to consumer confusion. Even if the consumer (with the particular characteristics encompassed by the smart default) only faces one default product, spillover from too many options across the market may make decision-making more difficult. Moreover, it may be difficult to design smart defaults consistent with fair lending rules.

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The opt-out regulation could require that the standard set of mortgages include a 30-year fixed mortgage, a five- or seven-year adjustable rate mortgage, and straightforward mortgages designed to meet the particular needs of first-time, minority or low-income homeowners.

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Another approach to improve the standard mortgage choice set and to reduce enforcement costs over time, would be to build in banking agency supervision as well as periodic required reviews of the defaults, with consumer experimental design or survey research to test both the products and the disclosures, so that the disclosures and the default products stay current with updated knowledge of outcomes in the home mortgage market. Indeed, lenders might be required to conduct such research and to disclose the results to regulators and the public upon developing a new product and its related disclosures. In addition, regulators might use the results of the research to provide safe harbors for disclosures that are shown to be reasonable ex ante through these methods. Regulators could also issue “no action” letters regarding disclosures that are deemed to be reasonable through such research. The appropriate federal and state supervisory agencies could be required to conduct ongoing supervision and testing of compliance with the opt-out regulations and disclosure requirements. The federal and state banking agencies could easily adapt to this additional role with respect to depositories, while the FTC, a new expert consumer finance agency, or state

agencies would need to be provided with the authority and resources to conduct ongoing supervisory and testing functions for non-depositories, instead of relying solely on enforcement actions. Through these no action letters, safe harbors, supervision, and other regulatory guidance, the regulators can develop a body of law that would increase compliance across the diverse financial sectors involved in mortgage lending, while reducing the uncertainty facing lenders from the new opt-out requirement, and providing greater freedom for financial innovation.

### 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 restructuring brokers’ duties to borrowers and reforming compensation schemes that provide incentives to brokers to mislead borrowers. Mortgage brokers have dominated the subprime market. Brokers generally have been compensated with “yield spread premiums” (YSP) for getting borrowers to pay higher rates than those for which the borrower would qualify. Such YSPs have been used widely.<sup>9</sup> 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.<sup>10</sup>

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An alternative approach to addressing the problem of market incentives to exploit behavioral biases would be to focus directly on restructuring brokers’ duties to borrowers and reforming compensation schemes that provide incentives to brokers to mislead borrowers. Mortgage brokers have dominated the subprime market.

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Brokers cannot be monitored sufficiently by borrowers (See Jackson & Burlingame), and it is dubious that additional disclosures would help borrowers be better monitors



(see, e.g., FTC 2007), in part because brokers' disclosures of potential conflicts of interest may paradoxically increase consumer trust (Cain et al. 2005).<sup>11</sup> Thus, 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! Moreover, evidence from the subprime mortgage crisis suggests that while in theory creditors and investors have some incentives to monitor brokers, they do not do so effectively.

It is possible to undertake an array of structural changes regarding the broker-borrower relationship. For example, one could alter the incentives of creditors and investors to monitor mortgage brokers by changing liability rules to make it clear that broker misconduct can be attributed to lenders and creditors in suits by borrowers (see Engel & McCoy 2007). One could directly regulate mortgage brokers through licensing and registration requirements (as is done elsewhere, e.g., in the UK); recent U.S. legislation now mandates licensing and reporting requirements for brokers. In addition, the ex post disclosure standard we suggest might have a salutary effect by making it more costly for lenders when brokers evade disclosure duties; this may lead to better monitoring of brokers.

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**We also believe it is worth considering fundamentally altering the duties of brokers by treating mortgage brokers as fiduciaries to borrowers.**

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We also believe it is worth considering fundamentally altering the duties of brokers by treating mortgage brokers as fiduciaries *to borrowers*, similar to the requirements for investment advisors 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 some broker abuses by eliminating a strong

incentive for brokers to seek out higher-cost loans for customers. In fact, quite recently a number of lenders have moved away from YSPs to fixed fees with some funds held back until the loan has performed well for a period of time, precisely because of broker conflicts of interest in seeking higher YSPs rather than sound loans. Banning YSPs now would reinforce these “high road” practices, and protect against a renewed and profitable “low road” push for using YSPs to increase market share once stability is restored to mortgage markets. Banning YSPs would constitute a form of scoring change, corresponding to regulation in the bottom right of Table 3 because it affects the payoff brokers receive for pursuing different mortgage outcomes.

## **Behaviorally Informed Credit Card Regulation**

### **Using framing and salience in disclosures to encourage good credit card behavior**

Credit card companies have fine-tuned product offerings and disclosures in a manner that appears to be systematically designed to prey on common psychological biases—biases that limit consumer ability to make rational choices regarding credit card borrowing.<sup>13</sup> Behavioral economics suggests that consumers underestimate how much they will borrow and overestimate their ability to pay their bills in a timely manner.<sup>14</sup> Credit card companies can then price their credit cards and compete on the basis of these fundamental human failings.<sup>15</sup> Nearly 60% of credit card holders do not pay their bills in full every month.<sup>16</sup> Moreover, excessive credit card debt can lead to personal financial ruin. Credit card debt is a good predictor of bankruptcy.<sup>17</sup> Ronald Mann has argued that credit card companies seek to keep consumers in a “sweat box” of distressed credit card debt, paying high fees for as long as possible before finally succumbing to bankruptcy.<sup>18</sup>

The 2005 bankruptcy legislation<sup>19</sup> focused on the need for improved borrower responsibility but paid insufficient attention to creditor responsibility for borrowing patterns. Credit card companies provide complex disclosures regarding teaser rates, introductory terms, variable rate cards, penalties, and a host of other matters. Both the terms themselves and the disclosures are confusing to consumers.<sup>20</sup> Credit card companies are not competing, it appears, to offer the most transparent pricing.

Going forward, regulatory and legislative steps could help prod the credit card industry into better practices. The Office of the Comptroller of the Currency intervened to require national banks to engage in better credit card practices and to provide greater transparency on minimum payments,<sup>21</sup> and the Federal Reserve recently released proposed changes to its regulations under the Truth in Lending Act (TILA), in part in the wake of TILA amendments contained in the bankruptcy legislation.<sup>22</sup> Under the proposals, for example, creditors would need to disclose that paying only the minimum balance would lengthen the payoff time and interest paid on the credit card; describe a hypothetical example of a payoff period paying only the minimum balance; and provide a toll-free number for the consumer to obtain an estimate of actual payoff time.<sup>23</sup> Although the very length and complexity of the Board's proposal hints at the difficulty of the task of using complex disclosure to alter consumer understanding and behavior, such improved disclosures might nevertheless help.

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Congress could require that minimum payment terms be accompanied by clear statements regarding how long it would take, and how much interest would be paid, if the customer's actual balance were paid off only in minimum payments, and card companies could be required to state the monthly payment amount that would be required to pay the customer's actual balance in full over some reasonable period of time

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But we could do much better. Congress could require that minimum payment terms be accompanied by clear statements regarding how long it would take, and how much interest would be paid, if the customer's *actual* balance were paid off only in minimum payments, and card companies could be required to state the monthly payment amount that would be required to pay the customer's actual balance in full over some reasonable period of time, as determined by regulation. These tailored disclosures use framing and salience to help consumers, whose intuitions regarding compounding and timing are weak, to make better

informed payment choices based on their specific circumstances. Such an approach would correspond to changing the rules in order to debias consumers with behaviorally informed information disclosure, in the top right of table 3. Although credit card companies have opposed such ideas in the past, disclosures based on the customer's actual balances are not overly burdensome.

Disclosures regarding the expected time to pay off actual credit card balances are designed to provide a salient frame intended to facilitate more optimal behavior. But such disclosures may not be strong enough to matter. The disclosures are geared towards influencing the intention of the borrower to change his behavior; however, even if the disclosure succeeds in changing the borrower's intentions, we know that there is often a large gap between intention and action.<sup>24</sup> In fact, the borrower would need to change his behavior in the face of strong inertia and marketing by the credit card companies propelling him to make minimum payments. Furthermore, those market players who are strongly opposed to such disclosures would promptly attempt to undermine them once enacted with countervailing marketing and other policies.

#### *An Opt Out Payment Plan for Credit Cards*

A more promising approach, based on default rules establishing the starting point for behavior, rather than framing of disclosures to change intentions, would be to develop an "opt-out payment plan" for credit cards, under which consumers would be required automatically to make the payment necessary to pay off their existing balance over a relatively short period of time unless the customer affirmatively opted-out of such a payment plan and chose an alternative payment plan with a longer (or shorter) payment term.<sup>25</sup> Such an approach corresponds to changing the rules through opt-out policies, in the top right of Table 3. Given what we know about default rules and framing, such a payment plan may be followed by many consumers. The payment plan would create expectations about consumer conduct and in any event inertia would cause many households simply to follow the plan. Increasing such behavior would mean lower rates of interest and fees paid, and lower incidence of financial failure. In any event, confronting an optimal payment plan may force card holders to confront the reality of their borrowing, and this may help to alter their borrowing behavior, or their payoff plans. Moreover, credit card industry players would find it difficult to argue publicly against reasonable opt-out payment plans and, in

the face of such plans, to continue using a pricing model based on borrowers going into financial distress.

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A more promising approach would be to develop an “opt-out payment plan” for credit cards, under which consumers would be required automatically to make the payment necessary to pay off their existing balance over a relatively short period of time unless the customer affirmatively opted-out of such a payment plan and chose an alternative payment plan with a longer (or shorter) payment term.

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Of course, an opt-out payment plan will impose costs. Some consumers who, in the absence of the opt-out payment plan, would have paid off their credit cards much faster than the plan provides, might now follow the slower payment plan offered as the default, thus incurring higher costs from interest and fees, possibly even facing a higher chance of financial failure. Alternatively, some consumers may follow the opt-out payment plan when it is unaffordable for them, consequently reducing necessary current consumption such as medical care or sufficient food, or incurring other costly forms of debt. While there are undoubtedly problems with such an approach, public debate over the proposal would at least have the virtue of engaging all relevant players in an important conversation about fundamental changes in market practice.

#### *Regulate Late Fees*

A narrower intervention based on behavioral insights about credit card customers would seek to change the behavior of credit card firms, rather than consumers. One problem with the pricing of credit cards is that credit card firms can charge late and over-limit fees with relative impunity because consumers typically do not believe *ex ante* that they will pay such fees. In principle, firms need to charge late and over-limit fees to the extent that they wish to provide incentives to customers not to pay late or go over their credit card limits. In practice, given the fees they charge, credit card firms are perfectly content to let consumers pay

late and go over their card limits, in order to obtain fee revenue from such occurrences.

We would change the scoring of the game (corresponding to a regulatory choice in the bottom right of table 3). Under our proposal, firms could deter consumers from paying late or going over their credit card limits with whatever fees they deemed appropriate, but the bulk of such fees would be placed in a public trust to be used for financial education and assistance to troubled borrowers. Firms would retain a fixed percentage of the fees to pay for their actual costs incurred from late payments or over-limit charges, or for any increased risks of default that such behavior presages. The benefit of such an approach is that it permits firms to deter “bad conduct” by consumers, but prevents firms from taking advantage of the psychological insight that consumers predictably mis-forecast their own behavior with respect to paying late and borrowing over their limit. Firm incentives to over-charge for late payments and over-limit borrowing would be removed, while firms would retain incentives appropriately to deter these consumer failures.

As with our other proposals, there would be costs as well: in particular, the reduced revenue stream to lenders from these fees would mean that other rates and fees would be adjusted to compensate, and there is little reason to believe that the adjustments would be in consumers’ favor. Moreover, taxing late and over-limit fees in this manner might be seen as a significant interference with contractual relationships beyond the form and content of disclosures required under TILA for credit card agreements.

#### *Opt Out Credit Card*

As a last option to consider in the credit card market, we might think about regulation requiring firms to offer a standard “opt-out” credit card. Elizabeth Warren has argued that private sector firms should offer “clean” credit cards with straightforward terms and honest pricing.<sup>26</sup> We agree with her that this would be a significant achievement and would set an important example for others. Looking at the structure of the market, one wonders whether such a high-road firm offering a clean credit card could win market share and remain profitable. Given predictable consumer biases, such firms will have a hard time competing with low-road players offering less transparent and seemingly “better” offers. We thus wonder whether regulation might be designed to reward high-road credit card firms offering

such cards and penalize low-road firms offering products designed to take advantage of consumer failings.

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**Consumers would be offered credit cards that meet the definition of “safe.” They could opt for another kind of credit card, but only after meaningful disclosure. And credit card firms would face increased liability risk if the disclosure is found to have been unreasonable.**

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Warren’s innovative suggestion in this regard is for the creation of a consumer financial safety commission that could review credit card offers.<sup>27</sup> Perhaps an entity such as this could specify terms and conditions that are “safe” and qualify for being offered as a standard credit card. As with the home mortgage idea discussed earlier, consumers would be offered credit cards that meet the definition of “safe.” They could opt for another kind of credit card, but only after meaningful disclosure. And credit card firms would face increased liability risk if the disclosure is found to have been unreasonable. As with our earlier concept, the precise details of liability determination and consequences would need to be carefully calibrated. In essence, the proposal would permit firms to continue to innovate in credit card practices, but with strong anchoring around straightforward practices and with the risk of increased consequences to firms when consumers opt out and wind up in trouble. This type of “sticky” opt-out provision, as with our proposal for an opt-out home mortgage, would correspond to changing both the rules and the scoring of the game on the right side of Table 3.

## **Increasing Saving Among LMI Households**

We have focused in this paper thus far on improving outcomes in the credit markets using insights from behavioral economics and industrial organization. Our focus derives from the relative lack of attention to this area in the behavioral literature thus far. Savings is also an area ripe for further attention, however, because so much of saving policy has focused on using defaults to improve retirement sav-

ing. For many low- and moderate-income households there is a much greater need to focus on basic banking services and short-term savings options, services which, for this population, may require a different mix of governmental responses than typically suggested in the context of retirement savings for middle- and upper-income households.

Many low- and moderate-income (LMI) individuals lack access to the sort of financial services that middle-income families take for granted, such as checking accounts or easily-utilized savings opportunities. High cost financial services, barriers to savings, lack of insurance, and credit constraints increase the economic challenges faced by LMI families. In the short run, it is often hard for these families to deal with fluctuations in income that occur because of job changes, instability in hours worked, medical illnesses or emergencies, changes in family composition, or a myriad of other factors that can cause abrupt changes in economic inflows and outflows. At low income levels, small income fluctuations may create serious problems in paying rent, utilities, or other bills. Moreover, the high costs and low utility of the financial transaction services used by many low-income households extract a daily toll on take-home pay. Limited access to mainstream financial services reduces ready opportunities to save and thus limit families’ ability to build assets and to save for the future.

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**Market forces weaken or break down entirely with respect to encouraging saving for low-income households. This is simply because the administrative costs of collecting small-value deposits are high in relation to banks’ potential earnings on the relatively small amounts saved, unless the bank can charge high fees; with sufficiently high fees, however, it is not clear that utilizing a bank account makes economic sense for LMI households.**

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In theory, opt-out policies ought to work well here, as in the retirement world, in encouraging saving by such households. However, while in general the market pulls in the same direction as policy for saving, market forces

weaken or break down entirely with respect to encouraging saving for low-income households. This is simply because the administrative costs of collecting small-value deposits are high in relation to banks' potential earnings on the relatively small amounts saved, unless the bank can charge high fees; with sufficiently high fees, however, it is not clear that utilizing a bank account makes economic sense for LMI households. Indeed, the current structure of bank accounts is one of the primary reasons why LMI households do not have them.

With respect to transaction accounts, high minimum balance requirements, high fees for overdraft protection or bounced checks, and delays in check clearance dissuade LMI households from opening or retaining bank accounts. Moreover, banks use the private ChexSystems to screen out households who have had difficulty with accounts in the past. Behaviorally insightful tweaks are unlikely to suffice in this context; rather, we need to devise methods to change the nature of the products being offered and, with them, the behavior of the consumers who open and maintain the accounts.

In this area, we need to figure out how to increase scale and offset costs for the private sector, in addition to increasing saving by low- and moderate-income families. As explained more fully below, we propose two options: a new tax credit to financial institutions for offering safe and affordable bank accounts, and a proposal under which the IRS would direct deposit tax refunds into "opt-out" bank accounts automatically set up through private sector financial institutions at tax time. Both proposals are designed to induce the private sector to change their account offerings by offering tax subsidies or government bundling to reach scale, as well as to alter consumer behavior through the structure of the accounts offered. The proposals pertain to changing the rules and the scoring on the left hand side of Table 3, where markets may prove neutral to, or even positively inclined towards, the potential overcoming of consumer fallibility. In particular, the tax credit and government backing change the scoring to firms for offering such products, while the opt-out nature of the proposal changes the starting rules.

### **Tax Credit to Financial Institutions for Offering Safe and Affordable Bank Accounts**

To overcome the problem of the high fixed costs of offering sensible transaction accounts to low-income individuals with low savings levels, Congress could enact a tax credit

for financial institutions for offering safe and affordable bank accounts to LMI households (see Barr 2004, 2007). The tax credit would be pay-for-performance, with financial institutions able to claim tax credits for a fixed amount per account opened by LMI households. The bank accounts eligible for the tax credit could be structured and priced by the private sector, but according to essential terms required by regulation. For example, costly and inefficient checking accounts with high risk of overdraft or hidden, costly features would be eschewed in favor of low-cost, low-risk accounts with only debit card access. In particular, bank accounts would be debit-card based, with no check-writing capability, no overdrafts permitted, and no ChexSystems rejections for past account failures, in the absence of fraud or other meaningful abuse.

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**Congress could enact a tax credit for financial institutions for offering safe and affordable bank accounts to LMI households (see Barr 2004, 2007). The tax credit would be pay-for-performance, with financial institutions able to claim tax credits for a fixed amount per account opened by LMI households.**

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The power of the tax credit initiative could be significantly increased if it were coupled with a series of behaviorally informed efforts to improve take up of the accounts and savings outcomes for account holders. For example, banks could reach out to employers to encourage direct deposit and automatic savings plans to set up default rules that would increase savings outcomes. With an automatic savings plan, accounts could be structured so that holders could designate a portion of their paycheck to be deposited into a savings "pocket"; the savings feature would rely on the pre-commitment device of automatic savings, and funds would be somewhat more difficult to access than those in the regular bank account, in order to make the commitment more likely to stick. To provide necessary access to emergency funds in a more cost effective manner than usually available to LMI households, the bank account could also include a six-month consumer loan with direct deposit and direct debit, using relationship banking and automated payment systems to provide an alternative to

costly payday loans. With direct deposit of income and direct debit of interest and principal due, the loan should be relatively costless to service and relatively low-risk for the bank. With a longer payment period than usual for payday lending, the loan should be more manageable for consumers living paycheck to paycheck, and would likely to lead to less repeated borrowing undertaken to stay current on past payday loans. Moreover, the loan repayment features could also include a provision that consumers “pay themselves first,” by including a savings deposit to their account with every payment. Such a pre-commitment device could overcome consumer biases to procrastinate in savings, and reduce the likelihood of the need for future emergency borrowing. All of these efforts would likely increase take up of the banking product and improve savings outcomes from becoming banked.

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To provide necessary access to emergency funds in a more cost effective manner than usually available to LMI households, the bank account could also include a six-month consumer loan with direct deposit and direct debit, using relationship banking and automated payment systems to provide an alternative to costly payday loans.

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#### *An Opt Out Bank Account for Tax Refunds*

Congress could also enact a new, opt-out “tax refund account” plan to encourage savings and expanded access to banking services, while reducing reliance on costly refund loans (see Barr 2007). Under the plan, unbanked low-income households who file their tax returns would have their tax refunds directly deposited into a new account. Banks agreeing to offer safe and affordable bank accounts would register with the IRS to offer the accounts, and a fiscal agent for the IRS would draw from a roster of banks offering these services in the taxpayer’s geographic area in assigning the new accounts. On receiving the account number from its fiscal agent, the IRS would directly deposit EITC (and other tax refunds) into those accounts. Taxpayers could choose to opt-out of the system if they did not want to directly deposit their refund but the expectation is that the accounts would be widely accepted since

they would significantly reduce the costs of receiving one’s tax refund. Once the tax refund account is set up through the IRS-mechanism at tax time, households would receive their tax refund in the account, weeks earlier than if they had to wait for a paper check. Moreover, once it is established, the account could continue to be used long past tax time. Households could also use the account just like any other bank account—to receive their income, to save, to pay bills, and the like.

By using an opt-out strategy and reaching households at tax time, this approach could help to overcome consumer biases to procrastinate in setting up accounts. By reducing the time it takes to receive a refund, setting up such accounts could help to reduce the incentives to take out costly refund loans, incentives that are magnified by temporal myopia and misunderstanding regarding the costs of credit. It could dramatically, efficiently, and quickly reach millions of LMI households and bring them into the banking system. A complementary approach (Koide 2007) would reach scale by using prepaid debit cards and pooled accounts offered by a more limited number of vendors chosen by the IRS, rather than individually-owned bank accounts offered by a large number of financial institutions. In that manner, the private sector vendor would be assured large scale of operations. In either event, opt-out strategies and government incentives would be coupled to reach low-income households with essential banking services.

## Conclusion

We have explored how existing regulation fails to take account of advances in behavioral research about how people think and act. By contrast, behaviorally informed regulation would take account of the importance of framing and defaults, of the gap between information and understanding, and between intention and action, as well as of other psychological factors affecting how people behave. At the same time, we argue, 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 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 upon the concept of compound interest leads to opposite market reactions.

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Rather than relying on the classic model of rational agents and maximizing firms, we have developed a model in which we understand outcomes as an equilibrium interaction between individuals with specific psychologies and firms that respond to those psychologies within specific markets. As we have seen rather dramatically in the case of subprime mortgages, for example, market outcomes may not be socially optimal. To the extent that the interaction produces real harms, regulation could potentially be usefully addressed to the social welfare failures, if any, in this equilibrium. Taking both individuals and industrial organization seriously suggests the need for policy makers to consider a range of market-context specific policy options, including both changing the “rules” of the game, as well as changing its “scoring.”

We have sketched here ten policy suggestions derived from our conceptual model. In particular, in the home mortgage market, we have focused on a standards-based truth in lending law, a requirement of full disclosure of information favorable to the borrower, changing the incentives in the relationship between brokers and borrowers, and a new, opt-out home mortgage system. With respect to credit cards, we have explored more salient disclosures, an opt-out payment plan, an opt-out credit card, and regulation of late fees. We have also suggested ways in which behaviorally informed policy might promote basic banking and savings beyond the retirement world, for example, through an opt-out direct deposit account set up at tax time, or through tax incentives to firms to offer low-cost accounts.

It is noteworthy that our current framework largely retains the classical perspective of consumers interacting in competitive markets. The difference is that consumers are now shown to be fallible in systematic and important ways, and firms are now understood to have incentives either to overcome such fallibility, or to exacerbate it, in different specific market contexts. Recognition of the serious social failures that can result from the interaction between individual psychology and industrial organization ought to lead to a range of behaviorally informed regulation of the types that we have described here, in order to restore fair and healthy competition. ✦

## Notes

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2 These strategies have been called variously “Asymmetric Paternalism,” “Libertarian Paternalism,” and “Debiasing Through Law,” see, e.g., Camerer et al. (2003), Thaler & Sunstein (2008), Jolls & Sunstein (2005).

3 We recognize that there are significant compliance issues regarding pensions and retirement plans, disclosure failures, fee churning and complicated and costly fee structures, conflicts of interest in plan management, as well as problems with encouraging employers to sign up low-wage workers for retirement plans. We do not mean to suggest that these failings are trivial; far from it. We only mean to suggest that, as a comparative matter, market incentives to overcome psychological biases in order to encourage saving are more aligned with optimal social policy than market incentives to exacerbate psychological biases to encourage borrowing.

4 We use this bi-modal framework of regulatory choice to simplify the exploration of how our model of individual psychology and firm incentives affects regulation. We acknowledge that the regulatory choice matrix is more complex (see Barr 2005b).

5 This is largely because of the existing regulatory framework: pension regulation gives employers incentives to enroll lower income individuals in 401(k) programs. Absent this, it is likely that firms would be happy to discourage enrollment since they often must pay the match for these individuals. This point is interesting because it suggests that even defaults in savings only work because some other regulation “changed the scoring” of the game.

6 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.

7 Elizabeth Warren, for example, has proposed a new Financial Product Safety Commission, see *Unsafe At Any Rate, Democracy #8*, Summer 2007.

8 A more aggressive approach would be to permit class action litigation on an affirmative basis. In this paper, we are not yet able to balance the costs of class action litigation against the benefits of stronger enforcement.

9 See Jackson & Burlingame, *supra*, at 127. While 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, prepayment penalties, and other loan terms.

10 *Id.* at 125; see also Jack Guttentag, Another View of Predatory Lending 8 (Wharton Fin. Inst. Ctr., Working Paper No. 01-23-B, 2000), available at <http://fic.wharton.upenn.edu/fic/papers/01/0123.pdf>.

11 Cain, D.M., Lowenstein, G., & Moore, D.A. 2005, *The Dirt on Coming Clean: Perverse Effects of Disclosing Conflicts of Interest*, *Journal of Legal Studies*, 34: 1-25.

12 We discuss this idea in further detail in Barr, Mullainathan and Shafir (2008).

13 See generally Oren Bar-Gill, *Seduction by Plastic*, 98 *Nw. U. L. Rev.* 1373 (2004).

14 *Id.* at 1395 – 96.



15 *Id.* at 1394 – 95.

16 Brian K. Bucks et al., Recent Changes in U.S. Family Finances: Evidence from the 2001 and 2004 Survey of Consumer Finances, *Fed. Res. Bull.*, Mar. 22, 2006, at A1, available at <http://www.federalreserve.gov/pubs/bulletin/2006/financesurvey.pdf>.

17 Ronald Mann, Charging Ahead: The Growth and Regulation of Payment Card Markets Around the World 60 – 69 (2006).

18 Ronald J. Mann, Bankruptcy Reform and the “Sweat Box” of Credit Card Debt, *Ill. Law. Rev.* 1:375 (2007).

19 See Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Pub L. No. 109-8, 119 Stat. 23 (codified at 11 U.S.C. § 101 et seq (2005)).

20 See, e.g., U.S. Gen. Accounting Office, Report 06-929, Credit Cards: Increased Complexity in Rates and Fees Heightens the Need for More Effective Disclosures to Consumers (2006).

21 See, e.g., Office of the Comptroller of the Currency, OCC Bull. 2003-1, Credit Card Lending: Account Management and Loss Allowance Guidance (2003); Office of the Comptroller of the Currency, OCC Advisory Letter 2004-4, Secured Credit Cards (2004), available at <http://www.occ.treas.gov/ftp/advisory/2004-4.doc>; Office of the Comptroller of the Currency, OCC Advisory Letter 2004-10, Credit Card Practices (2004), available at <http://www.occ.treas.gov/ftp/advisory/2004-10.doc>.

22 See Press Release, The Federal Reserve Board, Proposed Amendments to Regulation Z, available at <http://www.federalreserve.gov/BoardDocs/Press/bcreg/2007/20070523/default.htm> (May 23, 2007).

23 *Id.*, Proposed Rule, 12 C.F.R. 226, proposed §.7(b)(12), implementing 15 U.S.C. §1637(b)(11).

24 Buehler, R., Griffin, D., & Ross, M. (2002). Inside the planning fallacy: The causes and consequences of optimistic time predictions,” in T. Gilovich, D. Griffin, & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment*. Cambridge: Cambridge University Press. Koehler, D.J., & Poon, C.S.K. (2005).

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25 Barr (2007). For a related proposal, see Robert Gordon and Derek Douglas, “Taking Charge”, *The Washington Monthly* (December 2005) (arguing for an opt-out direct debit arrangement for credit cards).

26 *Unsafe At Any Rate, Democracy #8*, Summer 2007.

27 *Id.*

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