To Empower, Prohibit, or Delegate?: Regulatory Strategies for Modernizing the Consumer Credit Market

Yoon-Ho A Lee

Available at: https://works.bepress.com/yoon-ho_lee/2/
To Empower, Prohibit, or Delegate?:
Regulatory Strategies for Modernizing the Consumer Credit Market

Yoon-Ho Alex Lee and K. Jeremy Ko

Draft Date: August 2011

Abstract

A number of proposals currently exist to bolster regulation in the market for consumer credit products. How should regulators evaluate their various options? Our diagnosis of the market—based on a review of empirical evidence and economic models—is that consumer are failing to minimize the economic cost of debt as a result of lack of information, lack of expertise, or lack of self-awareness. Consequently, the market lacks competitive dynamics and fails to eliminate welfare-reducing products. We view the space of regulatory options as a triangle with three nodes—empowerment, prohibition, or delegation—depending on whether a particular decision regarding consumer credit arrangement should be given to the consumer, the government, or a third-party. The current regulation largely consists of empowerment and prohibition. But we argue that the way forward is to modernize the consumer credit market by means of efficient delegation, overseen by regulation, in the area of refinancing. This can be achieved, for example, by establishing a central mortgage and credit registry and allowing for customized refinancing auctions, or by regulating the revenue models of third-party liability management services to be performance-based.

JEL Classification: D14, D18, G21, G28

Key Words: Consumer Credit; Mortgages; Credit Cards; Payday Lending; Household finance; Behavioral Finance

1 The authors are financial economists at the Division of Risk, Strategy and Financial Innovation at the U.S. Securities and Exchange Commission. The Securities and Exchange Commission, as a matter of policy, disclaims responsibility for any private publication or statement by any of its employees. The views expressed herein are those of the author and do not necessarily reflect the views of the Commission or of the author’s colleagues upon the staff of the Commission.
To Empower, Prohibit, or Delegate?:
Regulatory Strategies for Modernizing the Consumer Credit Market

Yoon-Ho Alex Lee and K. Jeremy Ko²

Contents

I. Introduction................................................................. 2
II. What Is the Problem?................................................. 4
   A. Some Facts About the Market ................................... 4
   B. Overview of Scholarship: What Have We Learned? .... 7
      i. Empirical Evidence on Consumer Behavior .............. 8
      ii. Propositions from Economic Models ..................... 10
      iii. Diagnosing the Problem .................................... 13
III. Where Can We Go From Here?................................. 15
   A. Regulatory Objectives ........................................... 15
   B. A Cost-Effectiveness Framework for Regulatory and Market-Based Solutions .... 16
      iv. Empowerment ................................................ 17
      v. Prohibition ...................................................... 21
      vi. Delegation ...................................................... 24
   C. Existing Hybrid Solutions ....................................... 24
   D. Modernizing the Market ......................................... 26
      i. Mortgage/Credit Registry and Customized Refinancing Auctions .................... 28
      ii. Third-Party Liability Management with Performance-Based Compensation .... 30
IV. Conclusion ............................................................ 31

I. Introduction

The mounting level of U.S. household debt is a major problem for our nation. On the economic side, the rise of the U.S. mortgage default rates during the last decade led to the most recent crisis.³ On the political side, the aftermath of the crisis led to the enactment of the Dodd-Frank Act, the most extensive regulation to date of the financial markets, and culminated with

² The authors are financial economists at the Division of Risk, Strategy and Financial Innovation at the U.S. Securities and Exchange Commission. The Securities and Exchange Commission, as a matter of policy, disclaims responsibility for any private publication or statement by any of its employees. The views expressed herein are those of the author and do not necessarily reflect the views of the Commission or of the author’s colleagues upon the staff of the Commission. We would like to thank Oren Bar-Gill, Fred Dunbar, and the participants at the workshops from the Division of Risk, Strategy and Financial Innovation and from the University of Massachusetts at Amherst for their helpful comments. We also thank Josh Bolian and Robert Gucwa for their excellent research assistance. All errors are ours.

³ See Atif R. Mian & Amir Sufi, The Consequences of Mortgage Credit Expansion: Evidence from the U.S. Mortgage Default Crisis, 124 Q. J. Econ. 1449, 1449 (2009)(“The sharp rise in U.S. mortgage default rates has led to the most severe financial crisis since the Great Depression.”).
the establishment of the Consumer Financial Protection Bureau (CFPB), among other entities. The private debt crisis has also expanded into an unprecedented public debt crisis. In August of 2011, the U.S. government had its credit rating downgraded from AAA to AA+ for the first time in history amid difficulties in resolving the nation’s debt ceiling and forthcoming budget.

Where can we go from here? Is the current state a result of irresponsible spending, poor credit management, or a series of unfortunate events? What role is the CFPB expected to fulfill? Is more extensive regulation the right solution at this point? To what extent can we rely on consumers, lenders, or regulators to mitigate the current problem?

These are some of the questions scholars have been analyzing. An important aspect of the problem lies with how consumers behave in response to available credit products. The legal scholarship in this area has been a fertile ground of debate for neoclassical and behavioral economists. Adherents of neoclassical economics attribute the current state to the informational failure for consumers who can otherwise make sound decisions. They usually suggest stronger or more effective disclosure regulation. Subscribers of behavioral economics, on the other hand, see consumers as being unable to make optimal decisions even with full information. They suggest much more extensive regulation of credit products-ranging from default rules or other behaviorally-informed policy choices, on the softer side, to comprehensive safety regulation of consumer credit, on the more extreme side. Because these schools have contrasting assumptions, it is not surprising that they reach different conclusions. Nevertheless, they generally seem to agree that consumers need be better protected.

---


5 Mian & Sufi (2009), supra note 3, argue that household debt is one of the principal causes of the financial crisis and the ensuing recession. In particular, they find that household leverage growth and credit card borrowing prior to the crisis is related to subsequent adverse changes in household defaults, unemployment, and consumption by US county. See id. at 1492.


10 See Bar-Gill & Warren (2008), supra note 6.
In this Article, we argue that for better consumer protection, the industry needs to be modernized with the help of regulation. We provide a meta-framework of regulatory strategies founded upon cost-effectiveness. The current level of regulation is only rudimentary, and regulators have not taken advantage of the full gamut of options. They, for example, have not paid enough attention to the dynamic nature of consumer debt financing. Most of the current discourse takes a somewhat static view of the market in which consumer welfare is largely determined by a one-time decision. This description is true in many cases, in a positive sense—many do end up sticking with the original credit arrangement. But from a normative perspective, optimal consumer financing—much like optimal investing in stocks—should entail constant monitoring of the market and switching products in a timely manner to take advantage of its the evolving market conditions. The main problem isn’t just that a consumer doesn’t make the right decision; rather, he is not constantly making right decisions. Any regulatory approach presuming a static market is bound to be ineffective. The government needs to take active steps to stimulate the market. We provide sketches of a few regulatory innovations, which, if used properly, can help modernize the market for consumer credit and render it more efficient.

The rest of the Article is organized as follows. Part II provides an overview of the market and a brief review of the academic scholarship. The implications of the economics models lend support to the idea that the market suffers from three categories of epistemic failures on consumers’ part: lack of information, lack of expertise, and lack of self-awareness. While learning may mitigate some of these effects, over all, these failures deter the competitive dynamics of the market and exacerbate the cost of borrowing. In Part III, we propose a framework for regulation, which views the space of regulatory options in a trichotomic division of empowerment, prohibition, and delegation. We apply the framework to the current regulation and proposals, and also discuss avenues the government can pursue. Delegation is currently an underdeveloped method but one potentially highly effective. In the mortgage market, for example, we argue that the key to protecting consumers is by rendering the refinancing market more competitive through suitable delegation. Part IV concludes.

II. What Is the Problem?

A. Some Facts About the Market

Here’s brushing up on some facts. The U.S. household debt-to-income ratio during the past five years has been the highest since the Great Depression, and a typical household owes more than twice its income level (see Figure 1). The U.S. household default rate has gone from just over 1% in 2004 to nearly 5.5% in 2009—implying that more than one in every twenty household was defaulting (see Figure 2). In the mortgage area, foreclosure rates have reached a historical high and have largely persisted since the beginning of the crisis (see Figure 3). Average consumers incur substantial costs as a result of high balances being managed inefficiently, with a median household paying over $500 a year in credit card costs. The costs

11 See Mian & Sufi (2009), supra note 3.

of consumer indebtedness extend beyond monetary outcomes and have been shown to adversely impact physical and mental health.\textsuperscript{13}

\textbf{Figure 1. Historical U.S. Household Debt-to-Income Ratio}
\textit{Source: Household debt data from the Federal Reserve’s Flow of Funds data; Income represents wage and salary payments from the National Income and Product Accounts (NIPA).}\textsuperscript{14}


\textsuperscript{14} We thank Amir Sufi for providing us with this data.
Figure 2: U.S. Household Default Rate
Source: Default rate as a percentage is measured by the S&P/Experian Consumer Credit Default Index. The Index measures the default rates across a representative sample of autos, first and second mortgage, and bankcards.

Figure 3: Number of New Foreclosures in the U.S.
Source: Federal Reserve Bank of New York

Ok, so we don’t quite like where we are—something definitely seems wrong. But statistics alone do not indicate market failures. The high level debt-to-income ratio does not imply economic inefficiency unless theory suggests that it is suboptimal: it may be a consequence of reduced opportunity cost of debt as compared to other types of economic activities; interest rates are at an all-time low as of this writing. High foreclosure rates may be an adverse realization of what was an ex ante rational exposure to risk.\(^\text{15}\)

Nevertheless, the story becomes much more suspect when we consider product features. Many credit products come with a combination of low-cost initial terms to lure consumers with

\(^{15}\) For example, it is rational for a risk-neutral individual to enter into a bet that allows him to earn $10,000 if a fair die rolls numbers one through five and lose $5,000 if the die rolls a six. There is an expected profit of $7,500—that is, ($10,000 x 5 - $5,000 x 1) divided by 6. The fact that the die eventually ends up rolling a six is an event beyond his control. While he comes out $5,000 down at the end of the day, there was no market failure and no uninformed decision on his part. Tomorrow, if he is again offered an identical contract, it will still remain sensible for him to enter into it.
higher-cost later terms once they are effectively “locked in.” Credit cards often feature low teaser introductory interest rates and absence of annual fees combined with higher subsequent rates, penalty rates, disadvantageous payment allocations, high late payment and overlimit fees, etc. Negative amortization and interest-only mortgages, which grew in prevalence prior to the crisis, likewise feature low introductory teaser rates which increase after a pre-set period. Even standard fixed-rate mortgages often feature substantial prepayment penalties, of which many borrowers are unaware. This feature of high subsequent costs, often obscured from consumers, exists across many different consumer credit and payment instruments such as debit cards and payday loans. Although we do not believe these exogenous products bear the sole responsibility for the current state, we agree with Chairman Ben Bernanke that these alternative mortgage products were “a key explanation of the housing bubble” prior to the crisis.¹⁶ Let us now review what legal and economic scholarship has learned about consumer behavior.

B. Overview of Scholarship: What Have We Learned?

Economists make certain assumptions in analyzing a market. Let us begin with the assumptions of neoclassical economics and behavioral economics. The former generally assumes stable preferences and firms maximizing profits and individuals maximizing utility according to available information. The assumptions of behavioral economics are best described as negating those of neoclassical economics: preferences may change, and individuals and even institutions are subject to cognitive biases that impair utility maximization. The list of cognitive biases is long and varied.¹⁷ In the consumer credit market alone, several different types of cognitive bias may be at work: consumers may be over-confident about their future ability to repay the loan; they may be suffering from a status quo bias in switching out of their existing contracts; they may not properly anticipate their preferences changing in the future; or they may be suffering from an anchoring bias of focusing on certain salient product features, such as low initial costs.

Behavioral economics is not espoused universally. But with increasing empirical evidence, it is now considered by some as a viable alternative to neoclassical economics. Skeptics of behavioral economics do not so much dispute the empirical evidence or the assumed tendencies as they question whether these assumptions offer superior explanatory power over the


neoclassical alternatives. In fact, an Exchange that was published a few years ago between Professor Oren Bar-Gill and Professor Richard Epstein provides a careful overview of the two sides of the debate. A good deal of the existing evidence is already summarized in it, and we are indebted to them for paving the way for further analysis. In this section, we only include a cursory summary of high-level, generalizable findings.

i. **Empirical Evidence on Consumer Behavior**

The value of empirical scholarship in this area is clear: whether individuals exhibit a bias or not is strictly an empirical question, not a theoretical one. We highlight three observations that comport with a large class of findings.

*Observation #1. Consumers are subject to certain cognitive biases and frequently agree to welfare-reducing credit arrangements, in a manner consistent with the documented biases.*

This observation is not seriously disputed. Studies have documented that: consumers fail to switch out of their credit cards at the end of the teaser introductory rate despite the minimal transaction cost and a sizable economic benefit in return; they don’t refinance as often as they should; many pay high interest rates on large credit card balances while holding liquid assets that yield low returns; many make poor choices in credit cards terms such as the size of the annual fee and duration of introductory rate when an alternative choice would result in lower costs.

There remain points of disagreement, however. One is whether the mistakes exhibit a *systematic* bias at the aggregate level. On this point, we interpret the general findings to indicate that some mistakes are indeed systematic. To be sure, in some instances several

---

18 *See*, e.g., Epstein (2008), *supra* note 7, at 810-11 (acknowledging “cognitive mistakes are endemic to human behavior” but emphasizing the effect of learning to cure such mistakes in human decision-making).


24 For example, Professor Epstein, while acknowledging that all individuals are subject to cognitive biases and thus make mistakes, argues that the implications of this observation are ambiguous because there may be upward biases as well as downward biases; indeed, some consumers may overestimate certain costs while others underestimate them. See Epstein (2008), *supra* note 19, at 3. Professor Bar-Gill, while acknowledging the existence of biases in both directions, responds that all that is needed is for the average bias to be nonzero—and he argues that it is. See Bar-Gill (2008), *supra* note , at 3.

different cognitive biases may be present simultaneously and may countervail each other. But it seems unlikely that such countervailing biases always exist, and even less likely that they always cancel each other out. Another point of disagreement is whether cognitive bias is the primary cause of consumers’ failures, rather than high information cost. Here, the answer need not necessarily be one or the other. Alternatively, the issue may be properly defining what is meant by “high information cost.” On this point, we do not think it is critical to arrive at a general conclusion.

Observation #2. **Competition has done little to eradicate welfare-reducing credit arrangements.**

A curious observation about the consumer credit market is that while the market exhibits a structure conducive to competition, such as low entry barriers and low concentration among lenders, it nonetheless suffers from a failure of effective, welfare-enhancing competition. As early as in the 90s, Ausubel (1991)\(^{26}\) found evidence that competition functions poorly in the credit card industry and profit margins in credit card lending are substantially higher than in other banking activities. Ausubel himself then put forth three possible explanations for this puzzle: high search/switch costs, adverse selection among consumers,\(^{27}\) and consumer irrationality. Over the past two decades economists have supplied evidence documenting the persistence of the failure of competition, even as the landscape of the credit card market has greatly evolved. In fact, each of Ausubel’s explanations has been empirically validated in turn.\(^{28}\)

Intuitively, Observation #2 is not surprising if we grant a systematic bias among consumers. Cognitive biases can hinder consumers from properly estimating the economic costs of their decisions, and competition cannot be effective if consumers fail to react to lower prices.

Observation #3. **Some mistakes get mitigated over time through consumers’ learning, but other mistakes have persisted.**

---

**Notes:**


**\(^{27}\)** Ausubel had in mind largely two groups of consumers: those who do not intend to borrow but end up borrowing (who usually pay off the debt) and those who fully intend to borrow (who are more likely to default). Ausubel posited that from the bank’s perspective, the first group is the desired consumer group and they will likely be less sensitive to high interest rates. Because a low interest rate may draw a disproportionate amount of consumers from the second group, banks are reluctant to cut interest rates. See id. at 70-71.

Consumer learning has been documented to some extent, but it remains to be seen how pervasively consumers can learn to correct their mistakes. Quick and efficient consumer learning is an argument against government intervention. On the other hand, if some mistakes never get eradicated, or only after a significant passage of time, then there is an argument for intervention. For this reason, the level of consumer sophistication, which may evolve over time, is an important factor of consideration for regulators. It is also important whether learning in this context is specific to consumers as a group or as individuals. For example, if learning occurs at an individual level, and for each individual, it takes at least one mistake to learn, then the prospect of consumer learning is not a strong argument against intervention, especially if one mistake can be costly.

In short, our review of empirical evidence suggests that (i) systematic biases may exist among consumers, (ii) competition has not been effective at solving these problems, and (iii) there exists some documentation of learning, but not in all contexts.

ii. Propositions from Economic Models

While salient for descriptive analysis, empirical literature is comparatively less helpful in explaining the reasons behind the observed behaviors. To this end, economic models can help us appreciate the contexts under which these behaviors arise.

Consider the following. A fully-rational and fully-informed consumer will borrow money on credit only if the expected benefit of borrowing exceeds the expected cost. Here, the economic cost includes interest-rate costs, potential penalty fees, or potential costs related to bankruptcy and/or foreclosure. The rational-actor model says every transaction should be ex ante welfare-enhancing for the consumer. Unfortunately, the anecdotal evidence on household consumption habits is difficult to reconcile with the predictions of the complete information, rational expectation models. Economists have sought therefore to modify certain assumptions.

The first plausible theory, which permits consumer exploitation, is lenders earning information rent from their consumers. In fact, if consumers are fully rational in processing given information and have time-consistent preferences, the only way to account for the seemingly excessive nature of household debt is that they are not given all relevant information. This begs the question, however, as to why lenders are not competing on the basis of information disclosure. This story can only go through if the model also accounts for a structural barrier to competition.

29 For example, Agarwal et al. (2007), supra note 23, find that 40% of consumers fail to minimize costs when choosing between a low annual fee, high interest rate credit card and a high fee, low rate card. They find several mitigating factors at work, however. Specifically, consumers with higher costs associated with this error are less likely to make the wrong choice and more likely to switch from a suboptimal choice later. There is further evidence that learning can solve potential problems in Sumit Agarwal et al., “Learning in the Credit Card Market,” working paper (2008), available at http://www.nber.org/papers/w13822.pdf. These authors examine credit card account data and find that consumers learn to decrease add-on fees (e.g., cash advance, late payment, and overlimit fees) over time.

30 See Bar-Gill (2008), supra note , at 6-7 .

31 Preference is time-consistent if a consumer who expects to prefer x to y at some fixed point in the future will find himself preferring x to y when that moment arrives.
One scenario consistent with this theory is the case of predatory lending in mortgage refinancing, as modeled by Bond et al. (2009). In their model, consumers lack expertise compared to their lender in assessing their true creditworthiness. The incumbent lender has monopolistic informational advantage over other lenders regarding the consumer’s private information—such as payment history—which allows them to assess the consumer’s creditworthiness. Incumbent lenders can use this information to make a loan offer that would decrease the consumer’s welfare by inducing default. Consumers may agree to potentially unfavorable financial terms because they reap non-financial benefits from owning their home. We can generalize this argument as follows:

**Proposition A. (Information Rent by Monopolistic Lender).** A lender with an informational advantage over his consumer and a monopolistic advantage over his competitors can collect an information rent from his consumer.

Proposition A suggests that we may want to facilitate easy access to the borrower’s true creditworthiness so as to encourage competition. Competition can then decrease interest rates and the likelihood of default, thereby minimizing the magnitude of harm to consumers. Competition can also create signaling of the borrower’s type through the offered refinancing terms: because lenders offer lower (higher) interest rates to borrowers with better (worse) quality credit, borrowers will be able to discern their repayment prospects and will be less susceptible to an informational disadvantage.

The implications of Proposition A also extend to cases where lenders do provide full disclosure of information (perhaps because it’s mandated) but not necessarily in the format easily processed by consumers. If consumers are rational but they incur a high cost in processing information, then Proposition A can also explain why lenders may not compete to disclose information in a more borrower-friendly manner.

There are, of course, instances which involve no obvious competitive advantage one lender has over others, as with the case with credit card solicitations. A model that accounts for perfect competition is one involving a transfer from naïve consumers to sophisticated consumers. For example, Gabaix and Laibson (2006) show that when a “naïve” segment of consumers myopically focus on short-term costs while “sophisticated” ones know how to minimize long-term costs, firms will offer low initial costs and exorbitant long-term ones, such as through products featuring hidden fees and teaser rates. As long as such myopia—or more generally, any lack of expertise among a select group of population—persists and consumers do not learn, lenders have little incentive to compete on the long-term costs. In other words, competition will not remedy the exploitation of naïve consumers. We can generalize this finding beyond the short-term/long-term cost calculations—in fact, it can involve any discrepancy in the level of consumer expertise in comparing the desirability of the credit arrangements.

**Proposition B. (Transfers to Sophisticated Consumers).** The presence of sophisticated and naïve consumers in the market—in which naïve consumers lack expertise in processing information as compared to sophisticated consumers—can allow for

---


exploitative pricing to exist even under perfect competition, which results in a transfer from native consumers to sophisticated consumers.

Meanwhile, certain empirical observations still cannot be explained by either theory. For example, neither the information rent theory nor the transfer theory can explain why consumers simultaneously borrow at high rates while holding assets with low rates of return. To explain these patterns, economists have allowed for deviation of future preference from current expectation of the future preference.\(^{34}\) The dominant framework here is hyperbolic discounting, which is based on the observation that people generally prefer immediate to delayed gratification, but this preference reverses when translated in the future.\(^{35}\) One implication is that people plan to save in the future, but end up spending impulsively when the moment arrives. In this class of models, consumers can systematically underestimate costs because they incorrectly anticipate the future economic cost of their present actions. Hyperbolic preference models have been put forth to explain how firms can design credit contracts with low fixed or initial fees (e.g., annual fees) and high per-use or subsequent fees (e.g., interest rates) as in the model of Della Vigna and Malmendier (2004).\(^{36}\) If consumers are properly anticipate their future preferences, firms set fees that provide the ideal level of commitment and enhance welfare; but if consumers are cannot properly anticipate their future preferences, firms set fees that exploit their lack of foresight. In this case, consumers pay excessive interest rate fees that reduce long-run welfare.\(^{37}\)

**Proposition C. (Rent by Lenders from Self-Unaware Consumers with Hyperbolic Preference).** Lenders, by offering a low fixed or initial fees and high per-use or subsequent fees, can exploit fully-informed consumers who are unaware of their hyperbolic preferences.

Models have also allowed for learning or self-awareness by assuming that consumers with hyperbolic presence can properly anticipate their future preferences. Under this set-up, Laibson et al. (2003)\(^{38}\) develop a model to explain the puzzling empirical fact that households...

---

34 The time-inconsistent preference assumption poses a philosophical challenge from a normative perspective. Even if the majority of the population is found to behave hyperbolically without being aware, it is not clear which of the two welfare frameworks we should seek to maximize between the one based on current expectation and the one based on the future realization. Hard paternalistic solutions that seek to increase the future realized welfare at the expense of the current expected welfare are in some sense arbitrary. Note that this is different from sacrificing the current welfare for a greater future welfare, which may still increase the current net present value of the expected welfare. The issue here is where a hard paternalistic solution may decrease the current net present value of the expected welfare, which will in turn change in the future.


37 By welfare increasing or decreasing, we mean with respect to a utility function at a fixed time. This distinction is important for hyperbolic utility which changes over time. This approach for ascertaining consumer welfare is standard in this literature and one we adopt here.

38 See Laibson et al. (2003), *supra* note 12.
simultaneously hold low yield illiquid assets alongside higher interest rate debt. Sophisticated consumers in their model hold illiquid assets as a commitment device not to overspend in the future; meanwhile, they also borrow on credit cards simultaneously to finance consumption. The authors calibrate their model to data and find that hyperbolic discounting is a key factor in explaining the high rate of credit card balances among U.S. households. These results indicate that households may behave empirically like sophisticated hyperbolic discounters.

**Proposition D. (Commitment Device for Sophisticated Hyperbolic Consumers).**
Commitment devices, such as illiquid assets, can be used by sophisticated self-aware consumers with hyperbolic preferences, even as they may eventually find themselves borrowing.

This last model suggests a striking argument against the need for regulation with regard to certain areas of the credit card market where economic costs depend on the consumer’s future spending patterns: it is unnecessary to prevent firms from exploiting consumers’ lack of foresight where consumers can learn to become sophisticated in their self-awareness and to plan accordingly.

iii. **Diagnosing the Problem**

While it is difficult to generalize, we believe there is a simple story that these models and empirical evidence tell collectively. Namely, they emphasize various epistemic failures on the consumers’ part, and the lenders’ ability to take advantage of these failures, where competition or learning fails. By epistemic failures, we mean to capture a broader set of imperfections than cognitive biases: as shown above, they can include lack of information, lack of expertise, or lack of self-awareness. Consumers can fail to properly estimate the economic cost of debt because they don’t have all the relevant information in a setting where there is barrier to competition among information, they lack expertise to evaluate the economic cost properly, or they improperly forecast the future cost of their current credit arrangement.

Because these failures hinder utility maximization, the market lacks competitive dynamics, which can in turn reinforce these epistemic failures. Firms lack incentive to reveal proper information because consumers may be unresponsive to favorable information anyway. On the contrary, firms may be incentivized to develop complex products to further exploit the consumers’ lack of expertise and exercise exploitive pricing. The lack of competition can thus result in welfare-reducing credit arrangements. If these epistemic failures are not corrected through learning—or if learning is costly—the cycle will continue. Figure 4 below represents our diagnosis of the market failure for consumer credit market.

39 A similar conclusion can be drawn from the model of Shui & Ausubel (2004), supra note 20.
From a partial equilibrium perspective, we can understand the harm of underestimating the economic cost of debt as follows. In Figure 5, we have the supply curve among lenders, $S$, and two different demand curves, $D_1$ and $D_2$, for consumers. $D_1$ is the actual demand curve, induced by epistemic failures. $D_2$ is the demand curve that would be if the consumers are aware of the true economic cost of the credit product—including the possibility of foreclosure and potential implications on health and other factors, which do not transfer as a benefit to the lenders. $D_1$ determines the market equilibrium and the level of producer surplus but $D_2$ determines the consumer surplus (or deficit). Based on this graph, at equilibrium, there is a consumer surplus of $AP_2B$, a producer surplus of $OP_2C$, and a consumer deficit of $BCE$. The overall surplus can be increased by shifting $S$ or $D_2$ out or bringing contracting $D_1$.

---

40 We present the partial equilibrium model for simplification, but there is a danger of relying on the partial equilibrium model for the purpose of calculating the social cost. For a general critique, see Yoon-Ho Alex Lee & Donald J. Brown, “Competition, Consumer Welfare, and the Social Cost of Monopoly,” in *1 Issues in Competition L. & Pol’y* 409 (2008).
III. Where Can We Go From Here?

A. Regulatory Objectives

A plausible regulatory objective is to maximize the total surplus in the most cost-effective manner.\(^{41}\) With respect to Figure 5, it would amount to maximizing the sum of \(AP, B\) and \(OP, C\) minus \(BCE\) and the economic cost of regulation. This would entail, among other things, ensuring that credit products do not decrease ex-ante long-term welfare for any significant consumer segment (i.e., shifting out \(D_2\)), rendering the market more competitive (shifting out \(S\)), or making sure consumers don’t suffer from their epistemic failures (contracting \(D_1\)). It also requires a consideration of the cost of implementing regulation.

Figure 4 informs several approaches through which the government can intervene. One approach is to simply prohibit “unfair” terms and practices. But this amounts to treating the symptoms and not the cause—and will be unlikely to be effective in the long-run. There will also be an inevitable lag, as the government cannot be expected to keep up in real time with all the different innovations the industry may come up with to exploit consumers’ epistemic failures. Nevertheless, we leave open the possibility that, in certain cases, this may be the only viable short-term solution, and may even be highly effective if coupled with the right structural solutions.

Alternatively, the government could seek to induce competitive dynamics. In fact, the CFPB has an affirmative duty to “ensure that market for consumer financial products and services are … competitive.”\(^{42}\) But how is this to be accomplished when the obstacles are not just structural? To be sure, where there is a structural barrier—such as certain monopoly over private information—the government can consider means to reduce it. But if competition failure owes to consumers’ epistemic failures, the government cannot eliminate these. The best it can hope to do is to seek measures to ensure that consumers do not fall victims of their own failures. Besides, inducing competition will not be a cure-all for this market; competition may not cure the exploitation of naive consumers coming in the form of price discrimination. The government must also address certain consumer segments’ lack of expertise.

The most effective approach may be for the government to ensure that the market has an incentive to match consumers with suitable credit products that minimize their long-term costs of debt. Exercising creative regulatory effort in this area will simultaneously ensure competition and address (or bypass) epistemic failures.

The rest of this section develops a framework that can be used to evaluate the effectiveness of the existing regulation and to determine how the government can strategically structure its regulation in other areas. Far from providing an extensive blueprint of the government’s regulatory strategies, our modest aim is to point out the factors that regulators should consider before triggering the traditional tools hitherto relied on to regulate the consumer

\(^{41}\) Alternatively, similar to the long-standing “consumer welfare” debate in antitrust law, one could argue that the proper regulatory objective should be to maximize consumer surplus in the most cost-effective manner. The substance of the main arguments laid out this Article will largely remain the same under either objective.

credit market. Our hope is that the framework will spark a lively discussion of alternatives to the existing regulation.

B. A Cost-Effectiveness Framework for Regulatory and Market-Based Solutions

A consumer’s decision to finance a debt requires processing information regarding his expected cash flow, future market conditions, and expected spending behavior. He may also need to decide, on a continuous basis, whether to refinance the existing loan. Elliehausen (2010) formalizes the problem the consumer faces more generally as follows:

The decision process consists of several stages: 1) identification of a problem; 2) acquisition of pertinent information; 3) development of possible solutions; 4) evaluation of alternatives using relevant decision criteria; 5) choice of an alternative; and 6) assessment of the decision. Each stage of the decision process is affected by many individual, psychological, and social influences that cause the length and intensity of the decision process to vary from consumer to consumer and from decision to decision. Individual or psychological influences include consumer resources, motivation and involvement, knowledge, attitudes, personality, values, and lifestyle. Social influences include culture, social class, personal influences, family, and the situation.43

From this perspective, regulation is in effect the government’s delineation as to which decisions should be left to which party or parties. Candidate decisionmakers are the government, the consumer, or some third party, which may be a broker or a lender or someone else altogether. If the government rests the predominant decision-making power to the consumer but otherwise assists him, we call it empowerment; if the government effectively delineates certain boundary conditions of dos and don’ts, we call it prohibition; and finally, if the decision-making authority is handed over to a third-party whose incentives align with the consumers, we call it delegation. Figure 5 depicts this trichotomic space in which reside both regulatory solutions and market-based solutions. Since in many cases multiple parties may have decision-making authorities, the allocation of decision-making power is not discrete; instead, each side of the triangle represents a spectrum of the division of decision-making power between the parties on the two vertices. The government can create certain rights or duties; it can also seek to reduce certain transaction costs. All of these can change the identity of the party making decisions. In structuring regulation, the government should consider the information cost (whether the decision-making party has or can be made to have the necessary information and expertise in making the right decision in a cost-effective manner), the agency cost (whether the decisionmaker’s incentive is properly aligned with the consumers’ economic interest so that deadweight loss can be minimized), and the cost of enforcement. Below we provide our initial considerations.

43 Elliehausen (2010), supra note 25, at 6 (citing other studies).
iv. **Empowerment**

*Empowerment* refers to any category of solutions designed to aid consumers’ decision-making so that they can maximize their economic welfare. Put differently, it refers to *any measure intended to reduce consumers’ private cost of overcoming their lack of information, lack of expertise, or lack of self-awareness.* It can involve making it easy for consumers to search for, learn about, understand, compare products and their usage, to properly calculate the cost, or to properly predict their behavior. The main advantage of empowerment is that it leaves to consumers to make personal decisions—as a result, it respects consumers’ freedom of choices.

Reducing consumers’ private costs can be done by subsidizing it or shifting it to a third party. But from a cost-effectiveness perspective, it should be done only insofar as there is a total reduction in the social cost. Consumers’ private costs must exceed the aggregate cost to the government or to the lenders. An example of the first category is government-sponsored financial literacy education; an example of the second is some type of disclosure regulation, which essentially amounts to shifting the cost to lenders. We discuss these in turn.

Financial literacy education can directly promote consumer learning and inturn remedy lack of information, expertise, or self-awareness. There is a widespread lack of financial literacy in the US population—especially among disadvantaged and minority populations—44—which has been documented to be associated with costly financial behaviors such as over-indebtedness and insufficient savings.45 Although there have been a number of educational initiatives in the US through schooling, counseling, and other means,46 there is also considerable scope for expansion.

---


46 See U.S. Government Accountability Office, Financial Literacy and Education Commission: Progress Made in Fostering Partnerships, but National Strategy Remains Largely Descriptive Rather Than Strategic, Testimony Before
of these efforts.\textsuperscript{47} On the other hand, empirical evidence on effectiveness of these educational efforts is mixed.\textsuperscript{48} This may be because many of the educational programs encompassing the subject of consumer credit have been focusing exclusively on the mechanical aspects of debt, e.g., interest rate compounding, hidden fees, etc., whereas our review also argues for instruction on how cognitive distortions such as overconfidence and impulsiveness can lead to suboptimal decision-making. It is possible that such biases cannot be corrected through learning. It may also be that financial literacy education can very rarely provide direct product-specific guidance to consumers. The main value of financial literacy education may be helping consumers reduce their search costs and teaching them to ask important questions before making product choices.

The other principal means of consumer empowerment is through some type of disclosure regulation.\textsuperscript{49} Disclosures would primarily serve to remedy consumers’ lack of information by providing them with this information at the point of critical decisions. Ideally, disclosure terms should include any information that might aid consumers in their decision-making.

But disclosure regulation to date, too, has not been as effective in empowering consumers as it could be. Much of the disclosed information may go unread by consumers, such as multi-page documents describing the terms of mortgage. Even if it gets read, there is a concern of information overload: with too much information being disclosed, consumers may have a difficulty understanding the main issue and as a consequence incur a prohibitively high cognitive

\textsuperscript{47} As of 2007, only seven states require personal finance courses as part of school curricula. At the federal level, in 2003, under the Fair and Accurate Credit Transaction Act, the government established the Financial Literacy and Education Commission, which has developed a website (MyMoney.gov) and a hotline (1-888-My Money) dedicated to national financial education. Currently, consumers can go to the website to find money management tools and other useful financial information. The Dodd-Frank Act also explicitly establishes the Office of Financial Literacy.


\textsuperscript{49} Disclosure in consumer lending has until now been governed mainly by the Truth in Lending Act (TILA) of 1968, which calls for clear disclosure of key terms of the lending arrangement such as the APR, loan amount, and all costs. But there is now a host of other laws which govern disclosure in specific instances, including the Dodd-Frank Act, HOEPA, the Real Estate Settlement and Procedures Act as well as state legislation.
cost in processing and synthesizing all the information. This is because the manner of disclosure has not been consumer-friendly.

Given the primary purpose of disclosure regulation—to reduce the consumers’ private cost of epistemic failure—regulation should be tailored to meet this need, rather than simply making sure all relevant information “gets out.” Disclosure should seek to lower not only the search cost but also the cost of information-processing for consumers. Disclosing more isn’t necessarily better—instead, a well-tested format of disclosing certain limited information can be quiet effective. Where lenders are not competing on the basis of information disclosure, still less will they compete on or otherwise invest in the manner of disclosing the mandatory disclosure items. This is unfortunate since the cost of the disclosing party to appropriately process the relevant information is most likely far lower than the economic cost of individual consumer to learn the terms and to process them in ways relevant for them.

Here we mention just a few possibilities. First of all, the most obvious type of disclosure regulation may not always be the most effective. Key to effective disclosure regulation is not providing as much information in the simplest manner possibly, highlighting certain portions that have been proven to grab consumers’ attention. We might think requiring lenders to provide a single-page summary of pertinent costs associated with the product—including its current interest rate and payment, projected future rates and payments, other penalties and fees, likelihood of default, and comparison of competing available products—might be effective. It has, however, documented in other settings that the mere availability of a ready summary of information does not significantly affect consumers’ decisions. For example, the disclosure of the lender’s APR versus that of competitors has essentially no effect on borrowing—implying that APR disclosure is either not fully understood by borrowers or carries little emotional salience as an economic cost.

On the other hand, providing the aggregated costs associated with a credit product in a form easily understood by consumers may help. For example, clearly disclosing the total dollar costs of the loan over time, or the amount of time typically required to repay loans, tends to significantly decrease the amount consumers borrow. Thus, such a disclosure policy could provide the median amount in total costs paid by customers on a given balance (e.g., $1000 for a

---

50 In the context of securities regulation, for example, Professor Troy Paredes has argued that “[t]he net result of having access to more information, combined with using a less accurate decision strategy as the information load increases, is often an inferior decision.” Troy A. Paredes, Blinded by the Light: Information Overload and Its Consequences for Securities Regulation, 81 WASH. UNIV. L. Q. 417, 417 (2003).


credit card) over a fixed time period such as a year. It may also be advisable to include total cost estimates at the low and high ends of the distribution, e.g., for the 10\textsuperscript{th} and 90\textsuperscript{th} percentiles of customers. Studies also indicate that simple regular reminders to repay or avoid fees—via text messages or surveys—are effective at reducing consumer credit costs.\textsuperscript{53} These studies suggest that disclosure or reminders can serve an effective alternative or supplement to point-of-sale disclosures. An example of such disclosure policy is the Federal Reserve’s recently adopted rule mandating aggregated fee disclosures on monthly credit card statements. Specifically, credit card companies are now required to disclose the length of time required to pay off a customer’s balance with the minimum payment as well as the amount required to pay off the balance in three years. There is some evidence that these disclosures have caused consumers to increase their credit card payments.\textsuperscript{54} Overall, we believe experimental psychology can be a great tool for designing effective disclosure regulation. It can also capitalize on tested cognitive biases, such as anchoring bias, to convey information to consumers more efficiently.

The government could also consider categorizing the disclosed information for consumers through some type of labeling or gradation. Studies in other fields have shown that consumers generally do respond to information disclosure where the bottom-line information to be disclosed is simple and short and the disclosure is done in a standardized form of display, such as the fat contents in nutrition labeling\textsuperscript{55} or restaurant hygiene quality grade cards.\textsuperscript{56} In such cases, consumption choices did vary and those that were considered dangerous products generally left the market. The Pink Sheets’ “skulls and bones” stock label has also had the effect of significantly discouraging naïve investors from trading those stocks. Likewise, the government could consider a form of disclosure regulation that reveals in some concrete manner the level of inherent risk or welfare-decreased associated with these credit products, as history has shown. Disclosure regulation encouraging use of gradation may be especially helpful in overcoming naïve consumers’ lack of expertise. Or better still, it may help drive out altogether those credit products which have historically proven to be welfare-reducing.

Still another problem with disclosure regulation is that consumers may not properly forecast their own expected costs even if provided full information about them because cognitive


\textsuperscript{54} According to a survey conducted in July of 2010 by the Consumer Reports National Research Center, “23 percent of respondents said they were motivated to pay off their credit cards faster by the Minimum Payment Warning on their bills mandated by the Credit Card Act of 2009.” James Limbach, New Credit Card Law Hasn’t Done Much to Relieve Consumer Dissatisfaction, ConsumerAffairs.com (October 5, 2010), available at http://www.consumeraffairs.com/news04/2010/10/new-credit-card-law-consumer-dissatisfaction.html.


\textsuperscript{56} Ginger Zhe Jin & Phillip Leslie, The Effect of Information on Product Quality: Evidence from Restaurant Hygiene Grade Cards, 118 Q. J. ECON. 409 (2003)(documenting that the 1998 L.A. County’s hygiene quality grade cards to be displayed in restaurant windows caused the restaurant health inspection scores to increase, consumer demand to become sensitive to changes in restaurants’ hygiene quality, and the number of foodborne illness hospitalizations to decrease).
distortions may distort these expectations downward. For example, if investors due to lack of self-awareness are suffering from over-confidence and they are irrationally optimistic about their ability to arbitrage opportunities and make a profit out of a dangerous credit instrument, then an appropriate regulatory solution might appear at first blush to be some type of consumer education or warning labels. But even if a warning that reads “95% of those who use this product tend to experience a substantial financial loss” may not be effective, if everyone assume he or she belongs to the 5% that actually makes money.

Here, Professor Sunstein’s suggested proposal of debiasing may be effective. Sunstein (2006) proposes “debiasing” consumers by providing narratives describing concrete episodes of faulty payment for the credit product. This approach specifically attempts to counteract the overconfidence that a consumer would naturally attach to their ability to repay the loan. This method attempts to focus the consumers’ attention on the adverse event of default. Such framing, too, has been shown to significantly influence decision-making. This method also familiarizes the consumer with concrete instances of default, which should push their assessed likelihood of this event upward. This tendency has is known as “availability bias.” Debiasing therefore maybe used to lower the consumer’s cost of overcoming the lack of self-awareness problem.

The potential for more effective empowerment methods is vast, given all the untried methods of disclosure. But there is also an important caveat under our framework: even where empowerment may be effective, it may ultimately be not cost-effective. The social costs of empowerment include, among others, the cost of disseminating information, the cost on the consumers’ part of learning (which include the cost of consumer errors), and the cost of enforcement to make sure instances of fraud is minimized. In addition, in the realm of disclosure regulation, the marginal benefit of each item to be disclosure should be measured against the marginal cost of potential information overload—implying that in some instances it may be prudent to reassess the value of certain items currently mandated to be disclosed. Finally, empowerment may be particularly cost-ineffective where the content of the information to be delivered to consumers is constantly fluctuating and need perpetual updating—such as market conditions. Where consumers need be constantly empowered, the cost of disseminating information and consumer learning will likely exceed the benefit.

v. Prohibition

By prohibition—often known as, hard paternalism—we refer to any regulatory solution that makes it prohibitively costly for consumers to agree to certain credit arrangements. In these

57 Debiasing occurs where the government attempts attempts to “operate[e] directly on the boundedly rational behavior and attempting to help people either to reduce or to eliminate it.” See Sunstein (2006), supra note 6.


60 It is also true that one must be careful about too readily generalizing the findings of behavioral economics to regulation. See, e.g., Michael S. Barr et al, “Behaviorally Informed Home Mortgage Credit Regulation,” working paper (2008), available at http://www.jchs.harvard.edu/publications/finance/understanding_consumer_credit/papers/ucc08-12_barr_multinational_shafir.pdf at 4 (“[O]ne must be careful when transferring the insights of the most prominent example of behavioral regulation . . . to other examples.”).
instances, the government is making the decision for the consumers because people who would otherwise deviate “don’t know any better.” Restrictions include limits on certain credit costs, such as overlimit fees, prepayment penalties, caps on interest rates, or limits on lenders’ revenue models.

The main argument for prohibiting certain credit costs is that many of these costs are clearly exploitative, in the sense that they are obscured from the customer and not priced competitively to reflect the cost to the lender. Note that the fact that certain credit provisions can be considered ex ante welfare-reducing already presupposes either an epistemic failure or a failure of competition.

The economic cost of prohibition, however, is generally difficult to determine. Even a cursory attempt at estimating it would involve a consideration of counterfactual scenarios of what could have happened in the absence of such and such prohibitions. There are, however, several well-known objections with prohibition, which we list briefly.

First, prohibition limits consumers’ freedom and may therefore be seen to violate the libertarian principles of contracting. This objection is primarily of philosophical significance and only secondarily of economical significance. Proponents of prohibition can argue in turn that prohibition can be limited to areas that can be seen to run afoul of public policy. Second, the government may have incomplete information in deciding for consumers that certain credit arrangements are welfare-reducing; or even with full information, regulators may themselves be subject to certain cognitive biases that plague their prescriptions. Third, there may be market distortions and unintended consequences. For example, caps on interest rates can lead to welfare-decreasing distortions such as the underprovision of credit to consumers. Fourth, certain prohibitions may dampen competition and inhibit innovation. For example, restrictions on different types of credit products such as adjustable rate or negative amortization mortgages can curtail beneficial financial innovation. As Gabaix and Laibson (2006) point out, restrictions on various types of adjustable rate mortgages, for example, could potentially inhibit the creation of inflation-indexed mortgages, which would provide consumers with a beneficial hedge against inflation. Fifth, prohibition may deprive consumers of a chance to learn, even as consumer mistakes are costly. This is a particularly challenging question if we ask whether a partial sacrifice of current consumer welfare may bring about a greater gain in the future, through elevation in the level of consumer sophistication. Sixth, some may worry that this type of

61 See, e.g., Stephen Choi & Adam Pritchard, Behavioral Economics and the SEC, 56 STANFORD L. REV. 1 (2003) (arguing that because regulators are also subject to cognitive bias there is a presumption against monopolistic regulators, such as the SEC).

62 Several states have interest rate caps as part of anti-usury laws, which effectively ban high rate consumer credit activities such as payday lending. A study by Zinman (2008) finds that imposing such caps on payday lenders in the state of Oregon has led to a “deterioration in the overall financial condition” of households relative to the neighboring state of Washington where such caps are absent. Jonathan Zinman, “Restricting Consumer Credit Access: Household Survey Evidence on Effects around the Oregon Rate Cap,” working paper (2008), available at http://www.dartmouth.edu/~jzinman/Papers/Zinman_RestrictingAccess_oct08.pdf. The benefit of interest rate caps is also unclear in light of calibrated models such as Laibson et al. (2003), supra note 12. As discussed earlier, these models find that hyperbolic consumers are not harmed by prevailing market interest rates and can, in fact, benefit from their use as a commitment device not to overspend in the future. Collectively, this evidence weighs against the establishment of federal interest rate caps.

63 Restrictions on specific forms of credit products have not been pursued extensively in federal legislation. The exception is the home ownership and equity protection act of 1994 (HOEPA), which prohibits balloon payments and negative amortization for high-rate, high-fee mortgage refinancing.
command-and-control regulation is more susceptible to regulatory capture. That is, the government may regulate these areas not wholly out of concern for consumer welfare but due to a powerful lobbying effort by industry groups. Finally, perhaps the strongest argument against prohibition is that in many cases, a suitable combination of creative disclosure rules, coupled with debiasing and default rules may achieve virtually all the government intends through prohibition, while still allowing for sophisticated parties to contract with lenders. Rules that mandate disclosure of concrete anecdotes of dangers associated with certain credit arrangements together with statistics of expected outcomes may be able to discourage consumers from opting out of the given arrangement.

Why then would we ever want to exercise prohibition? Our framework informs two circumstances under which the presumption against prohibition may be overcome: (i) where empowerment and delegation are, for all intents and purposes, not cost-effective; and (ii) where prohibition is intended primarily to render empowerment and/or delegation more cost-effective.

In the first case, prohibition has its uses where empowerment solutions don’t work effectively or cost-effectively due to lack of expertise or self-awareness, and the government can identify ex ante harmful choices consumers are prone to without need for in-depth market information. These may include cases where information overload or overconfidence may confuse consumers. Under this principle, prohibition may be sensible where the government’s restriction is not aimed at limiting consumers’ freedom but at limiting sufficiently nuanced credit arrangements which are obscure and capitalize on the customer’s ignorance rather than merit.

One possible example is the disadvantageous allocation of payments on credit cards to lower rate balances first, which is designed to maximize the interest rate costs of the customer. To be sure, it is at least theoretically possible that disadvantageous allocation of payments, fully revealed to and comprehended by consumers, can potentially become a term of negotiation for highly sophisticated consumers who may be able to secure lower overall interest rates in turn and may therefore improve their welfare. But consumers lack such bargaining power at the moment. The case for limiting fees

is less compelling but still arguable at least. Overlimit fees can be considered exploitative in the sense that they are often charged without the consumer knowing. Consumers may not even think about looking for these items at the moment they are choosing their products. Thus, the advantage of prohibition is that where competition fails, it is often the most efficient way to prevent patently unfair or otherwise insensible credit arrangements from the market.

With prohibition as an alternative to empowerment or delegation, the government must be able to decide which terms are unfair practices for a significant segment of consumers, a proper determination of which requires discerning the level of consumer sophistication. As such, prohibitions should be lifted in a timely manner when consumers are ready for making proper use of those terms. It is advisable for prohibition regulation to come with sunset provisions,

---

64 With respect to existing legislative efforts, the Credit Card Reform Act of 2009 (henceforth, the “Card Act”) prohibits disadvantageous allocation of payments and mandates that any payments above the minimum be applied to highest rate balances first.

65 The Card Act has banned inactivity fees and placed a $25 limit on late fees. In the mortgage domain, the Dodd-Frank Wall Street Reform and Consumer Protection Act also introduced measures to constrain fees. For example, the Dodd-Frank Act has placed explicit limitations on the size of pre-payment penalties for certain standard mortgages and banned them outright for other types and also mandates the establishment of the Consumer Financial Protection Bureau as another critical measure in this direction. Namely, this new agency will have the authority to prevent the introduction of any new credit card and lending fees that are potentially exploitative.
which would force the regulator to re-evaluate the general level of consumer sophistication and the market’s competitiveness every few years.

The second principle that argues for prohibition is where it is used not primarily to prohibit credit terms or products but in order to make empowerment or delegation more cost-effective. One example of prohibition that can aid empowerment is standardization of credit products. Standardization, while subject to all of the usual criticisms as listed above, facilitates an easier comparison of the credit terms for consumers and can aid the market to become more competitive. In terms of aiding delegation, prohibition has a role in specifying the compensation arrangement for loan originating officers. Effective delegation will turn on the extent to which the delegate’s interest is aligned with the consumer’s economic interest, and to this extent prohibiting compensation arrangements that may distort the delegate’s incentive is a good example. The Dodd-Frank Act currently allows loan originators to be compensated by either the consumer or the loaning bank but not from both. The government could consider an outright ban of any compensation paid by the bank and structure the compensation scheme so that there is a greater incentive alignment between consumers and loan officers.

vi. Delegation

The idea behind delegation is that neither the government nor the consumer is in the best position to make certain decisions. This may happen if, for instance, both lack the necessary information or expertise; or it may be too costly for either the government or the consumer to continually monitor and survey market products to find the most suitable products for consumers. Delegation seeks to outsource either the information processing or the decision-making authority to a third party who can better address the problem. Sometimes, it might amount to limiting the scope of competition for the market so as to ensure that consumers can unambiguously benefit. If a workable solution can be arranged, delegation may be an efficient division of labor from the informational perspective and can be used to modernize the consumer credit market.

The government likely has two important roles in structuring delegation: the first is to make sure the incentives of the third-party decisionmaker is at least partially aligned with the economic interest of the consumer; the second is, where necessary, set the standard for conducting the task that is being delegated. At this point, once we sufficiently narrowed the scope, we can then let the market do its job. Delegation is therefore most appropriate in situations where empowerment solutions are too costly and the correct decision-making requires a lot of private or market information the government lacks—such as lack of expertise—but where the government can effectively regulate incentives.

The market currently offers many solutions to the consumer credit market which offer a degree of delegation in empowering consumers. These include appraisal requirements, and mortgage brokers. However, we have not found instances of pure delegation where the arrangement dictates that the delegate receives successful compensation only for arrangements that are net welfare-improving for consumers. In Section III.D, we discuss potential avenues of regulatory innovation along the line of delegation.

C. Existing Hybrid Solutions

Figure 6 represents the space for regulatory and market-based solutions. While the three vertices, empowerment, prohibition, and delegation, represent the “corner” solutions, in practice,
many solutions are hybrid in that they lie on the middle of these spectrums. We list just a few in this section. The point of this exercise is not that we need to place each regulatory solution into the proper space within the triangle. Instead, we seek to highlight the manner in which the government, the consumer, and the market currently interact together so that we can continue to think about other ways to make more effective use of the combination of these three agents.

A hybrid solution along the consumer-government spectrum is a regulatory means which limits consumers’ choices not by outright prohibition but instead by discouraging consumers from choosing certain credit arrangements. One example is default rules which mandate that consumers be automatically matched with a pre-specified alternative unless they choose otherwise. These rules can represent an effective prohibition in that a large class of consumers generally fails to opt out. Its use is ideal when the preponderance of consumers benefit from a certain fixed choice while a minority benefits from a fuller range of choices. For example, the Card Act mandates that consumers be restricted from exceeding limits on credit cards by default. Most consumers stand to benefit from this default option because it prevents them from unknowingly being charged overlimit fees. Credit card holders can, however, choose the right to exceed this limit and pay associated overlimit fees. It can be argued that certain consumers, who are aware of their incurred fees, can benefit from retaining this right and having access to funds above their limit when needed.

In the mortgage market, Campbell et al. (2010) advocate that innovative new mortgage types be used as default options for consumers. These authors argue that consumers generally incur costs with standard fixed and adjustable rate mortgages. Specifically, consumers are exposed to substantial inflation risk—more precisely, deflation risk—through fixed rate mortgages and also typically do not refinance them optimally. Adjustable rate mortgages, on the other hand, pose real cash flow risk to borrowers—the risk that the monthly payments will suddenly rise. These authors, therefore, advocate the use of default mortgage types which circumvent these costs such as inflation-indexed and automatic refinancing mortgages.

An example of a market-based solution that lies in the middle of the consumer-other spectrum is mortgage brokers. Mortgage brokers are the largest sellers of mortgage products for lenders and they exist to find a bank or a direct lender that an individual seeks with a specific loan the individual is seeking. They charge fees based on the percentage of the loan amount. Here consumers make choices but they are often given a set of options from their brokers who find suitable credit arrangements based on the consumers’ desires, needs, and borrowing abilities. Mortgage brokers in this sense make certain decisions on behalf of the consumers, while the consumers are free to make the final decisions.

An example of a government-other hybrid solution is the appraisal contingency requirement. Many states require an appraisal contingency requirement in their home sales contracts. Under this arrangement, the government is essentially prohibiting consumers from entering into a contract to purchase a home which is below the fair market value. In this sense, this is a form of prohibition. However, the government is not dictating which homes should be sold at which prices—that decision is left to an unbiased party who specializes in property appraisal. The government’s role here also includes specifying the standard for fair appraisal.

---

66 See Campbell et al. (2010), supra note 51.

Located at the center of the triangle are arrangements involving substantial decision-making by all three parties. One example is the Dodd-Frank Act contains a provision requiring loan originators to provide a good-faith assessment of repayment ability before originating loans. Here, the government is concerned with reducing instances of predatory lending without making judgment calls as to which loans are predatory and which are not. The government is instead letting the lenders make this decision and oversees only whether the lenders’ decisions were ex ante reasonable. Ultimately, the consumer still gets to make his decisions based on the available loan products that meet this requirement. This provision does not prohibit specific contract terms or product types but rather prohibits any contract which the lender deems to be unsuitable for the particular borrower. Such imposed liabilities may help correct the fact that lenders generally do not fully internalize the harm from mortgage default and foreclosure.

![Figure 6. Existing Hybrid Solutions: Regulatory and Market-Based](image)

D. Modernizing the Market

There is ample room for the CFPB to seek regulatory innovation in the area of consumer credit market so as to improve consumer welfare. One area that holds promise is the mortgage or credit card refinancing industry. There are a number of different ways to structure this industry to induce more vigorous refinancing dynamics. Our proposed solutions highlight the fact that optimal consumer financing requires frequent monitoring of credit products and switching when it improves the economic interest of the consumer. Since loan products available to first-time financing consumers are often identical to those seeking to refinance, the competitive dynamics in the refinancing area will naturally flow into competition for first-time borrowers.

The main idea is that we can modernize the refinancing industry much like the market for securities. The U.S. capital markets are generally considered highly competitive and efficient. Investors seeking to trade stocks or bonds have much to speculate about the market condition and value of the underlying assets. But the market is aided by centralized exchanges such as NYSE or NASDAQ which provide quotes and the general trend. The market is further bolstered by institutions such as investment advisors, broker-dealers, and market-makers. In many
instances, investors can put their money in an externally managed fund, where fund managers may receive compensation based on gains to investors. Investors can also personally manage their fund through brokers and dealers by placing stop-loss orders or specific instructions for buying and selling. Even those who know very little about the market can usually find a way to multiply their wealth, or otherwise take advantage of the opportunities the market offers, through competitive third-party services, such as actively managed portfolios. Competition in turn reinforces disclosure of information from firms. The technical aspect of some of the disclosed items is not a huge concern in the securities market because in many cases professionals can interpret them and execute transactions accordingly, and these decisions will be reflected in the price.

By contrast, currently in the mortgage industry, consumers have relatively few options in seeking reliable guidance on choosing the right product for themselves. There is no centralized database like national stock exchanges. There are only a handful of privately-run databases, with limited information. Credit products that seek to diversify inflation risks and interest rate risks—much like mutual funds do for investors—are not readily available. More critically, those who may be in a position to provide meaningful advice do not necessarily have the proper incentive to aid consumers. Performance-based compensation systems are not available and mortgage brokers don’t internalize the potential economic harm from their recommendations.

With respect to original purchase financing, there is no obvious way to structure the financial incentive of the loan originator so that he is aligned financially with the consumer’s welfare. If the loan originator’s compensation scheme is based on the number of loans he originates, that he will likely make minimal effort to ensure the consumer has the ability to repay the loan and will be motivated to originate as many loans as possible. With consumers largely oblivious to the consequence of these payment schemes arising from the principal-agent problems, the market offers no compelling reason why loan originators should all of sudden stop receiving commissions from banks and begin charging fees to consumers. Simply limiting the loan originator’s compensation to be paid by the consumer will not solve the problem because there is no easy way to measure the consumers’ incremental welfare as a result of the work done by the loan originator.

This difficulty partly disappears, however, when we consider the case of refinancing. In the case of mortgage refinancing, it is easier to quantify the financial benefit to a consumer of a great refinancing decision—even as this amount may depend on how long the consumer waits before selling her home. One way to reduce interest-related costs specifically is for consumers to switch to competing products with lower interest rates. The problem is consumers exhibit significant inertia in this domain.\(^{68}\) Part of this is due to high search costs of looking for the right lender with the right terms. But optimal refinancing also requires specialized knowledge beyond that of the average consumer. It is a non-trivial problem in the area of contingent-claims pricing.\(^{69}\)

In addition, if consumers behave according to hyperbolic discounting, they will be reluctant to incur an upfront cost to reap future benefits. The prospect of paying a lump-sum for

\(^{68}\) See Shui & Ausubel (2004), supra note 20.

home appraisal can act as a psychological barrier to seeking the overall economic gains through future savings. All of these serve to reduce the likelihood of consumers taking advantage of favorable refinancing terms and to chill competitive dynamics.

There are some immediate steps the government can take, first of all, to reduce the transaction cost of refinancing. The government can seek to reduce the appraisal fee or have it be a structured payment so as to assist the lump-sum fee from being a barrier to refinancing. The government may consider regulating the credit scoring method which, currently, gets reduced each time a prospective lender looks at the consumer’s credit report. But most importantly, the government can devise a mechanism that will continuously facilitate a better match between consumers and better refinancing products. If this can be done in a prompt—and possibly automated—manner, the industry will become more competitive and much of the economic rent currently accrued to lenders, as in Bond et al. (2009), will dissipate. We discuss some concrete options below.

i. **Mortgage/Credit Registry and Customized Refinancing Auctions**

If part of the reason consumers do not refinance as frequently, or otherwise optimally, as they should is due to high search cost, one possible remedy involves mandating that consumers be given the option, at the point of sale, of placing their relevant credit information and details of their loan agreements in a centrally-maintained registry. Approved lenders can then access this registry and send targeted advertising to these consumers about competing products. A regulatory solution along the similar line can present distinct advantages over private databases and targeted advertising already in existence. First, this public database will contain detailed information about existing loan terms, including, for example, whether there’s a penalty for early payment and how surplus payments will be allocated. Lenders can then compete on these terms in a manner resembling an auction in a centralized market. Since we want to protect consumers from signing on to a refinancing term that is actually welfare-reducing, we want to ensure that consumers are only offered terms that are “strictly better” for them. Consumers may even be given an option of specifying only certain lenders to contact them.

The role for the government here is providing a clear standard as to what it means for one loan product to be “strictly better” for the borrower than the incumbent loan product. This argues for more standardization of consumer credit products. Perhaps the interest rate may be lower while all other terms remain the same. Competing lenders can choose to waive the appraisal fee, or may make it contingent upon qualifying, but the government can stipulate that the borrower must be able to reap this amount or greater within two years. If effective, this registry can also erode the monopolistic informational advantage the incumbent lender has over other lenders. Second, the government can facilitate these competing offers being delivered in a manner that minimize consumer search costs. For example, lenders can be required to attach

---

70 To some extent, this general idea of maintaining a debt registry and auctioning it to third-party lenders is applicable to credit card loans as well.

71 Currently, there are some privately-run databases that can facilitate this type of matching service for credit cards or refinancing options. For example, Mint.com is a website that allows users to upload their financial information from their credit card accounts, bank accounts, mortgage accounts, and other asset accounts. Consumers can also upload their credit reports if they choose. The database keeps track of the user’s spending patterns and then recommend credit cards or mortgage products that would give the user a greater amount of savings.
these offers from competitors to customer account statements. In the end, this set-up also reduces consumers’ search cost in the sense that lenders have an incentive to compete over even obscure terms, which the consumers may not have noticed initially. If a consumer currently has a credit arrangement which—unbeknownst to the consumer—contains a disadvantageous payment allocation clause, then a future lender can send an advertisement to the consumer saying it will match all the terms of the consumer’s current credit card, except it will also waive the disadvantageous payment allocation clause. This will put the consumer on notice as to the terms that are potentially welfare-reducing.

Let’s take a step further. To render competitive dynamics even more aggressive, the consumer may even be given an option of checking a box at the point of registration, which effectively gives any lender which meets certain pre-selected criteria and can offer strictly better terms to come in and “steal away” the loan contract. Again, the government’s role in this case may be to specify the conditions under which one loan can be considered unambiguously advantageous for consumers. Under this set-up, where an incumbent credit product contains a disadvantageous payment allocation term, another lender can steal away the loan contract by removing the condition, and the consumer will be better off. From the lender’s perspective, the prospect of getting the mortgage contract stolen will also motivate them to offer the most competitive terms from the get-go, so as to prolong the amount of credit costs it can collect from the consumer. The automatic contracting mechanism would force the market to compete on every term upon which the government permits improvements. A simple crude condition may be a straight cash offer to the borrower while keeping all the terms the same. Furthermore, because the loan originating officer will probably receive commission from the lending bank, there is a partial incentive alignment—the officer receives commission for a match that strictly improves the borrower’s welfare.

Let’s take a step even further. So far, by imposing the “strictly better” requirement, we have only discussed the ways in which the mechanism is absolutely risk-free for consumers. It would not result, for example, in refinancing from a 30-year fixed mortgage product to a 7-year adjustable rate mortgage product, even though an adjustable rate mortgage may actually be a safer option depending on the inflation risk. Quite likely even a greater efficiency gain can be achieved in the mechanism if we allow consumers to adjust the auction mechanism for their mortgages to match their risk preference or even allow them to diversify their inflation risks and interest rate risks. For example, we might want an option whereby a consumer with a 30-year fixed mortgage can say “any 30-year fixed mortgage with a better interest rate (and all else equal) can take over my mortgage, and a 7-year adjustable rate mortgage may also take over my mortgage if it can beat my current rate by more than 2%.” This way, the consumer is clearly willing to bear the risk of the fixed rate increasing eventually, but may accrue a substantial benefit before eventually losing out seven years later with a higher payment.

These are only sketches of the delegation option. There is room for both more refinements as well as other innovative applications. The principal desired effect in all this is to reduce the search cost among consumers and instead turn the table and let the lenders search for available and mutually beneficial contracts.

This idea of passive on-going acceptance of the new borrower-lender relationship may sound foreign, but it is not too different from what is already happening in the today’s market, except under a different business arrangement. In today’s mortgage market, once a mortgage

---

72 One may even consider the registry solution as an opportunity for empowering the consumers, if part of the initial set-up could be devoted to debiasing consumers.
contract is drawn up, it almost always gets sold to another lender, often multiple times. Under
the current setting, the borrower is already “checking the box” as to his loan being actively sold
to third parties without additional consent. In the course of his residence, the loan may get sold
any number of times.

In the secondary mortgage market, it has become customary for sellers to honor the
offering terms of the previous lenders. Likewise, we can imagine a state of the market where a
new lender can simply take the existing terms provided by the incumbent lender but at a lower
rate or at a lower fee. This would be unambiguously beneficial for consumers. The fact that
loans are being sold frequently already implies that there are some economic rents these initial
and subsequent buyers of loans extract, perhaps because these lenders have differing needs or
because they have different expectations about the true economic value of the mortgage. This in
turn indicates that if the consumer gets to deal directly with the latest purchaser, he would likely
reap some savings. As such, our “check-the-box” method will allow this economic rent to flow
to consumers. The net economic effect is more than just a transfer from lenders to borrowers, as
this transfer will likely allow some individuals on the margin who previously chose not to enter
into mortgage contracts to choose cheaper mortgage products. Therefore, facilitating a
customized refinancing auction of this type will result in an overall increase in the aggregate
consumer welfare.

A potential source of inefficiency with the automatic refinancing proposal as described
above is the possible mismatched incentives between borrower and lender over time. Depending
on the new lender’s revenue model, the new lender’s incentive to undercut an existing loan may
not align perfectly with the borrower’s incentive in finding a beneficial refinancing term. Put
differently, new lenders do not internalize option values associated with refinancing in the future
as well as the present. One way to remedy these deficiencies may be for the government to
facilitate the creation of a market for third-party management of consumer liabilities, which we
discuss next.

ii. Third-Party Liability Management with Performance-Based Compensation

A recent study by Amar et al. (2011) shows that consumers pay back multiple loans
suboptimally, prioritizing loans by size rather than by interest rate. This study suggests the need
for some form of credit counseling or professional liability management to assist consumers in
the repayment of their loans.\textsuperscript{73}

We envision liability management services that function like financial analysts who
receive performance-based compensations. Thus, these liability managers have revenue models
much like asset managers in the mutual fund industry or general debt consolidators. Specifically,
liabilities will be pooled together with similar characteristics such as their interest rate,
household credit rating, loan amount, and expected duration (e.g., the expected time to sale of the
home). Liability managers will be incentivized to refinance this loan pool optimally by being
paid some fraction of the consumers’ interest savings from each payment minus some equal
fraction of the fixed cost of refinancing. Since the exact amount of the savings will depend on
how long the consumer chooses to keep the current property, the liability manager’s

\textsuperscript{73} See Moty Amar et al., “Winning the Battle but Losing the War: The Psychology of Debt Management,” working
paper (2011), available at \url{http://webuser.bus.umich.edu/srick/Winning%20the%20Battle.pdf}.
compensation would have to be in the form of a stream of income each month. But on a large scale, this arrangement can also be securitized and sold for a lump sum payment as well.

Given the evidence that a large fraction of households would benefit from refinancing at prevailing market rates, we believe households could enjoy potentially a large cost savings from hiring such a liability manager. This industry can only be feasible, however, if its costs are sufficiently low. A necessary condition would be for there to be sufficient economies of scale in finding superior rates for loans in the pool. The government can seek to facilitate the creation of such an industry. Once again, it can reduce search and learning costs by mandating that consumers be given the choice of placing their loan with a manager at the point of sale. Alternatively, consumers, knowing that they essentially have a continual compensation arrangement for the length of their loan obligation, may be motivated to seek their own refinancing options more vigorously.

For this arrangement to work, the liability managers specifically must not be compensated by lenders, as this can distort their incentives to over-refinance. This is to ensure that mortgage refinancing officers do not have an incentive to simply write-off loans, but instead they get paid a fraction of the savings accruing to consumers as a result of their professional search for good products.

Such an industry would serve a similar function as existing consumer debt consolidation businesses, which refinance existing debt. These operations, however, target consumers who are either in or near delinquency with their debt. Our approach, in contrast, targets consumers prior to distress and can consequently help prevent it by attempting to keep debt costs manageable. This model could even be extended beyond the realm of mortgages to credit card and other forms of consumer debt.

These proposals seek to decrease consumers’ long-term costs of debt either by reducing search costs directly for consumers or by facilitating a market for third parties to manage consumer liabilities. In the end, we believe both of these options will likely lead to more vigorous competition in the refinancing market, and the difficult decisions will be made by better-informed third parties whose incentives are better aligned with consumers. Overall, we expect the aggregate consumer welfare will increase as a result of both a surplus increase and a reduction in the deadweight loss among those who could not previously afford to take out loans. These are just a few ways in which we are “delegating competition” to professionals. Given the CFPB’s broad discretion, we think these arrangements fall within their purview. We hope to see the Bureau experimenting with these alternative means to foster competition in the consumer credit market.

IV. Conclusion

In this Article, we make a case for a regulatory approach in the consumer credit market that moves beyond the usual disclosure-dictate dichotomy. The market has its failures and the government its weaknesses. Our approach to protecting consumers must start from seeking the right combination of market forces and government regulation.


75 Of some relevance, the Dodd-Frank Act has certain “financing origination fee restrictions” which prescribes that the loan officer gets paid either by the consumer or from loan banks but not from both.
We highlighted, in particular, empowerment, prohibition, and delegation as three corner solutions for the space of regulatory instruments, which the government can use to improve consumer welfare. We believe creative regulatory solutions in the form of delegation, which can properly limit the scope of competition for the market, can potentially modernize the consumer credit industry. The market for consumer credit products is complex and features many components and arrangements. There is unlikely one cure-all for regulators. The more practical approach, we believe, is to consider the cost-effectiveness of regulatory options one case at a time and decide how the decision-making powers should be allocated in a more efficient and enforceable manner.

Finally, we also note that we have said nothing in this Article regarding the optimal household consumption and saving policy. The scope of the discussion was limited to potential inefficiencies in the consumer credit market that can be reduced through regulation. Quite likely, the fact that some consumers may have been exploited by lenders is not enough to justify the staggering statistics on household debt in the U.S. economy these days. Irresponsible spending habit is best addressed by introspection and education, not regulation. That said, we do believe there is much that can be improved about the way the consumer credit market functions, and hope the Consumer Financial Protection Bureau will make the most of its broad discretion and authority to reshape the industry.