

MAKING CONSUMER FINANCE WORK

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Abstract

The financial crisis exposed major faultlines in banking and financial markets more broadly. Policymakers responded with far-reaching regulation that created a new agency—the CFPB—and changed the structure and function of these markets.

Consumer advocates cheered reforms as welfare-enhancing, while the financial sector declared that consumers would be harmed by interventions. With a decade of data now available, this Article presents the first empirical examination of the successes and failures of the consumer finance reform agenda. Specifically, I marshal data from every zip code and bank in the United States to test the efficacy of three of the most significant post-crisis reforms: in the debit, credit, and overdraft markets.

The results of my analysis are surprising. Despite cosmetic similarities, these reforms had very different outcomes. Two (changes in the credit and overdraft markets) increase consumer welfare, while the other (in the debit market) decreases it. These findings run counter to prior work by prominent legal scholars and push us to reevaluate our (mis)conceptions about the efficacy of regulation.

The empirical evidence leads me to novel insights for regulatory design. First, banks regularly levy hidden fees on consumers, obscuring the true cost of financial products. Regulators should restrict such practices. Second, consumer finance markets are regressive: low-income customers pay higher prices than their higher-income counterparts. Regulators should address this inequity. Finally, profit-maximizing banks will always discourage regulation by promising its costs will be passed through to consumers. Regulators should not be overly swayed by their dire warnings.

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Table of Contents

INTRODUCTION	1
I. POST-CRISIS INTERVENTIONS.....	8
I.A. The Durbin Amendment.....	8
I.A.1. The Policy Problem	8
I.A.2. Regulatory Approach to Solving the Problem.....	9
I.A.3. Impact of Regulatory Intervention.....	11
I.A.4. Unintended Consequences of Intervention.....	15
I.B. The CARD Act	18
I.B.1. The Policy Problem.....	18
I.B.2. Regulatory Approach to Solving the Problem.....	19
I.B.3. Impact of Regulatory Intervention.....	20
I.B.4. Unintended Consequences of Intervention	21
I.C. Overdraft.....	22
I.C.1. The Policy Problem.....	22
I.C.2. Regulatory Approach to Solving the Problem.....	24
I.C.3. Impact of Regulatory Intervention.....	25
I.C.4. Unintended Consequences of Intervention	26
II. LESSONS OF THESE INTERVENTIONS	27
II.A. Regulators Should Target Non-Salient Prices.....	28
II.A.1. Price Regulation Can Tackle Salience Problems	29
II.A.2. An Alternative to Direct Price Regulation is a Shock to Consumer Attention	29
II.B. Regulators Should Address Inequitable Cross-Subsidies.....	33
II.B.1. Regulators Should Use Consumer Protection Authority to Tackle Inequitable Cross-Subsidization	36
II.B.2. Regulation that Helps Unsophisticated Consumers—Even if at the Expense of Their Sophisticated Counterparts—Is Desirable.....	39
II.C. Watch What Firms Do, Not What They Say	41
II.C.1. Listening to Banks Can Lead to Poorly Designed Regulation	42
II.C.2. Listening to Banks Can Lead to Pessimism About the Efficacy of Regulation.....	43
III. CONCLUSION.....	48
APPENDIX: WHY DO INEQUITABLE CROSS-SUBSIDIES EXIST?.....	49
A. Shrouded Prices and Perfectly Competitive Markets	49
B. Shrouded Prices and Imperfect Competition	52
C. Extension: A World Without Price Shrouding.....	53

INTRODUCTION

The Great Recession was the worst economic downturn in the United States since the Depression. More Americans lost their jobs than at any time since World War II.¹ Over two million businesses closed their doors because they could not make payroll.² Nearly eight million families lost their homes.³ The average American household lost one-third of its net worth.⁴

Outrage about the Recession stems from the following inequity: although bank executives' risky bets caused the crisis, regular consumers' lives were ruined by it. President Obama acknowledged exactly this upon taking office in 2009: "for years, too many Wall Street executives made imprudent and dangerous decisions, seeking profits with too little regard for risk, too little regulatory scrutiny, and too little accountability."⁵ While the President could not undo the pain inflicted by the Recession, he promised policymakers would overhaul financial markets to better protect consumers going forward.

As a result, a new Consumer Financial Protection Bureau ("CFPB") was tasked with policing these markets, and early in the new Administration a host of new regulations aimed to rein in on nefarious bank practices. Each time lawmakers acted, they celebrated a victory against Wall Street; however, the affected institutions said changes would end up hurting, rather than helping, consumers.

For example, in May 2010, Senator Dick Durbin cheered the passage of his namesake legislation, the "Durbin Amendment" ("Durbin"), which caps debit interchange fees—the fees that merchants pay card issuers to process electronic transactions. He proclaimed that "Wall Street reform is really about two things: holding big banks accountable for how they operate and empowering consumers to make good financial choices. Passage of this amendment is a win on both fronts...small businesses and their customers will be able to keep more of their own money."⁶

However, the large financial institutions that lost revenue because of Durbin warned consumers would be harmed by its passage: "Who is going to pay for this? That Customer that gets that debit card for free," assured the CEO of TCF, a midsize Minnesota-based bank.⁷ Bank of

¹ Barack Obama, *Speech on the Economy* (Jan. 8, 2009), <https://www.nytimes.com/2009/01/08/us/politics/08text-obama.html> (last visited on Jan. 22, 2019).

² *The Great Recession: Over But Not Gone?* Northwestern Institute for Policy Research (2014), <https://www.ipr.northwestern.edu/about/news/2014/IPR-research-Great-Recession-unemployment-foreclosures-safety-net-fertility-public-opinion.html> (last visited on Jan. 22, 2019).

³ Paul, Kari and Jacob Passy. *A Decade After the Housing Crisis, Foreclosures Still Haunt Homeowners* (Sep. 30, 2018), <https://www.marketwatch.com/story/a-decade-after-the-housing-crisis-foreclosures-still-haunt-homeowners-2018-09-27> (last visited on Jan. 22, 2019).

⁴ Schultz, Colin. *The Average American Household Lost a Third of Its Net Worth During the Recession* (July 29, 2014), <https://www.smithsonianmag.com/smart-news/average-american-household-lost-third-their-net-worth-during-recession-180952191/> (last visited on Jan. 22, 2019).

⁵ See Obama, *supra* note 1.

⁶ Dick Durbin, *Press Release, Durbin Statement on His Debit Card Swipe Fee Amendment* (May 13, 2010), <https://www.durbin.senate.gov/newsroom/press-releases/durbin-statement-on-his-debit-card-swipe-fee-amendment> (last visited on Oct. 1, 2018).

⁷ Brian J. Hurd. *TCF Comment Letter on Durbin Amendment*, TCF NAT'L BANK (Feb. 18, 2011), https://www.federalreserve.gov/SECRES/2011/April/20110405/R-1404/R1404_030411_68936_437488369604_1.pdf (last visited on June 27, 2018).

America executives called Durbin a “windfall to large merchants” that would increase consumer costs.⁸

Similarly, a year before Durbin, Congress passed the Credit Card Accountability Responsibility and Disclosure Act (“CARD Act”), limiting banks’ ability to levy credit card penalty fees and hike interest rates. Consumer advocates cheered the reform: “Amidst the financial turmoil on Wall Street, today the House took steps to help those on Main Street....This historic legislation will help working families.”⁹

Yet the financial industry assured legislators this would not be the case. They argued that instead the CARD Act would increase the cost of credit for consumers and small businesses: In fact, Jamie Dimon, the CEO of JP Morgan, warned that, in response, his bank would stop offering credit cards to 15 percent of its customers.¹⁰

And again, when the Federal Reserve Board (“Federal Reserve” or “Board”) proposed changes to the overdraft regime to limit banks’ ability to levy overdraft fees, industry participants warned of dire consequences. “If this folly happens, we estimate that we will close 10-15 percent of our consumer accounts. Be careful what you wish, we serve these folks well,” cautioned an executive at Bridge Community Bank.¹¹

How to evaluate who got the better of these debates? Did these sweeping regulations ultimately limit abusive bank practices, or instead hamper industries and deprive consumers of beneficial financial products or services? A decade removed from the crisis, the time is ripe to examine the successes—and failures—of the consumer reform agenda. This Article is the first to empirically evaluate post-crisis consumer financial regulation. The results are surprising and provide guidance to policymakers about how to design regulation and how to evaluate its efficacy.

This is a critical undertaking. A decade removed from the crisis, new risks are emerging in consumer finance markets: More than 50 percent of mortgages are now originated in the unregulated shadow banking sector,¹² student loan balances have exploded,¹³ and the subprime auto loan bubble appears on the verge of collapse.¹⁴ In seminal work, Professors Oren Bar-Gill and Elizabeth Warren called on policymakers to “make credit safer” by creating the CFPB and

⁸ Karl. F. Kaufmann, *Bank of America Comment Letter on Durbin Amendment*, BANK OF AM. (Feb. 22, 2011), https://www.federalreserve.gov/SECRS/2011/March/20110302/R-1404/R1404_022211_67233_584174234336_1.pdf (last visited June 27, 2018).

⁹ Connie Prater, *House passes Credit Cardholders’ Bill of Rights bill* (Sep. 23, 2008), <https://www.creditcards.com/credit-card-news/credit-cardholders-bill-rights-house-vote-pass-1282.php> (last visited on Oct. 1, 2018).

¹⁰ Eileen Connelly, *Mixed Blessing: Credit Card Reform May Shock Some*, SEATTLE TIMES (Feb. 22, 2010), <https://www.seattletimes.com/business/mixed-blessing-credit-card-reform-may-shock-some/> (last visited on Mar. 14, 2018).

¹¹ Robert Sheen, *Comment regarding Reg E – Electronic Fund Transfer by Robert A. Sheen* (Mar. 25, 2010), https://www.federalreserve.gov/SECRS/2010/March/20100326/R-1343/R-1343_032510_32327_341354941882_1.pdf (last visited on Oct. 1, 2018).

¹² Michele Lerner, *The mortgage market is now dominated by non-bank lenders*, THE WASHINGTON POST (Feb. 23, 2017), https://www.washingtonpost.com/realestate/the-mortgage-market-is-now-dominated-by-nonbank-lenders/2017/02/22/9c6bf5fc-d1f5-11e6-a783-cd3fa950f2fd_story.html?utm_term=.e9bcc700f7ae (last visited on Jan. 10, 2019).

¹³ Annie Nova, *For some students, what they borrow can end up being a fraction of what they wind up owing*, CNBC (June 7, 2018), <https://www.cnbc.com/2018/06/07/peoples-student-loan-balances-are-spiraling-out-of-control.html> (last visited on Jan. 10, 2019).

¹⁴ Cecile Gutscher, *Subprime Auto Debt Is Booming Even as Defaults Soar*, BLOOMBERG (Feb. 1, 2018), <https://www.bloomberg.com/news/articles/2018-02-02/never-mind-defaults-debt-backed-by-subprime-auto-loans-is-hot> (last visited on Jan. 10, 2019).

providing it the authority and incentives to police consumer finance markets.¹⁵ As consumer advocates wield this authority, the success of the reform agenda relies on heeding the lessons learned from the triumphs and failures of past regulatory interventions. Only then can we successfully course-correct, where necessary, to best serve consumer interests.

The empirical contribution of this paper is a novel analysis of three of the most important post-crisis consumer reforms: significant regulation of the debit, credit, and overdraft markets. I draw insights from big data, relying on a unique dataset that I am the first to assemble of effective interchange rates for 120 industries in 40,000 zip codes in the United States (totaling more than ten million observations), branch-level data on checking account fees reported weekly for 58,000 bank branches in the United States, and financial regulatory data reported quarterly by each of the 4,800 bank holding companies in the country. I show that the myriad regulations I study have varied efficacy—two (overdraft reform and the CARD Act) benefit consumers; while one (the Durbin Amendment) exacerbates the market failures it should have corrected. It is surprising that similarly situated interventions have different impacts, and my work refutes prominent prior scholarship.

The normative contribution of this Article is to use the empirical evidence I gather to glean lessons for regulatory design. Unlike much of the literature, I do not assess a single intervention.¹⁶ Instead, I am the first to test the efficacy of the broader consumer reform project by comparing the design and effectiveness of interventions in distinct markets. This far-reaching analysis makes me uniquely well-positioned to advise on how to “make consumer finance work,” and I offer explicit guidance for both how to regulate and how to analyze the incidence of regulation. These suggestions are three-fold. First, regulators should target salience problems: Consumers ignore hidden prices—like the cost of overdrafting or late fees—and so end up paying more than they expect for financial products. This is a market failure well-designed regulation can solve. Second, regulators should heed the fact that our financial markets are regressive. As I illustrate, low-income consumers tend to pay higher prices than their higher-income counterparts. This is both because wealthier consumers tend to be more sophisticated and because they have access to the most attractive financial products. Well-designed regulation can decrease unfair cross-subsidization, though poorly designed regulation can exacerbate it. Finally, when analyzing regulation, policymakers and academics should focus on what banks do—not what they say. Financial institutions have every incentive to try and dissuade regulators by stating that consumers will be harmed, not helped, by intervention. They repeat this dire warning each time lawmakers act, and as a result many believe regulation is futile. The data shows that regulation can work and that relying too much on banks’ cautions will lead to mistaken pessimism about the regulatory project.

Part I of this Article begins with novel empirical analysis of the Durbin Amendment, which capped debit interchange fees. Prior to Durbin, a merchant would pay 2 percent of the value of a customer’s debit transaction to her bank to cover the cost of processing that transaction. Post-Durbin, these fees are capped at \$0.22.¹⁷ Thus, pre-Durbin, a merchant paid \$2 to process a \$100

¹⁵ Oren Bar-Gill & Elizabeth Warren, Making Credit Safer, 157 U. PA. L. REV. 1 (2008).

¹⁶ See, e.g., a line of literature on the CARD Act, including Oren Bar-Gill & Ryan Bubb, *Credit Card Pricing: The CARD Act and Beyond*, 97 CORNELL L. REV. 967 (2012); Vikram Jambulapati & Joanna Stavins, *The Credit CARD Act of 2009: What Did Banks Do?* FED. RES. BANK OF BOSTON (2013); Agarwal et al., *Regulating Consumer Financial Products: Evidence from Credit Cards*, THE QUARTERLY J. OF ECON. V. 130, Issue 1:111-164 (2014); Scott T. Nelson, *Private Information and Price Regulation in the US Credit Card Market* (2018) (working paper).

¹⁷ To be precise, \$0.21 cap plus five basis points times the value of the transaction, with a one-cent adjustment allowed to cover the implementation of anti-fraud measures. In practice, nearly all transactions are charges \$0.22 (plus five basis points times transaction value).

transaction, and post-Durbin, she pays only \$0.22, about one-tenth of the previous fee. As a result, banks lost—and merchants saved—\$6.5 billion annually. The policy objective was for these merchant savings to pass through to consumers in the form of lower retail prices. However, I am the first to show empirically that consumers were harmed, not helped, by the passage of this legislation, because (1) banks increased consumer account fees to recover all lost interchange revenue, and (2) merchants failed to fully pass through their cost savings to consumers. In fact, Durbin is regressive, because only low-income consumers bear new bank fees. Additionally, because Durbin caps debit, but not credit, interchange, banks evade its impact by encouraging greater use of unregulated credit cards, which traps consumers in expensive cycles of debt.

I next consider the CARD Act, which, like Durbin, sought to decrease consumer costs. Prior to the CARD Act, banks increased credit card interest rates without warning and levied exorbitant penalty fees. As a result, credit was significantly more expensive—particularly for low-income consumers who are most often hit by penalty fees—than consumers anticipated. The CARD Act restricted how issuers price credit, for example, by requiring advance notice before increasing interest rates and capping late fees. Unlike Durbin, the CARD Act achieved its intended effect: Consumers save around \$12 billion annually. There is no evidence that issuers change other aspects of credit card prices left unregulated by the CARD Act to compensate for losses in interest and penalty fee revenue.

Finally, I analyze changes to the overdraft regime. In the decade preceding the financial crisis, overdraft fees became one of the fastest-growing sources of bank revenue. Consumers could effectively pay \$40 for their morning coffee (coffee plus \$35 overdraft fee) by using their debit cards without sufficient funds in their checking accounts. Post-crisis, regulators required that banks affirmatively opt consumers in to overdraft protection before levying overdraft fees. If a consumer is not opted in and tries to use a debit card to make a purchase, that transaction is declined. As a result of this new default rule, the share of consumer accounts eligible for overdraft protection decreased by 84 percent.¹⁸ Novel data analysis disproves the popular consensus among legal academics that the overdraft default rule fails to achieve its ends. Specifically, I am the first to show that banks lose 15 percent of their pre-crisis overdraft revenue from this intervention, and there is no evidence that banks offset these losses.

At first glance, these three interventions appear similar. They involve the same financial institutions, and each is a price regulation that decreases banks' fee revenue. In each intervention, regulators and academics voiced concerns about the possibility of regulatory “whack-a-mole”¹⁹—that is, in response to well-intentioned interventions that reduce revenue, banks would adjust other rates and fees in response.²⁰ However, the data reveal that banks offset losses only from the interchange fee cap—not from decreases in credit card and overdraft revenue. Why?

¹⁸ CONSUMER FIN. PROTECTION BUREAU, *CFPB Study of Overdraft Programs* at 29 (June 2003), https://files.consumerfinance.gov/f/201306_cfpb_whitepaper_overdraft-practices.pdf (last visited on Jan. 10, 2019).

¹⁹ “Whack-a-mole” is an arcade game. Players use a mallet to hit moles back into their holes. When one mole disappears, another rises. The objective is to hit as many moles as possible in a certain period of time.

²⁰ Barr, Michael et al. *The Case for Behaviorally Informed Regulation*, in *NEW PERSPECTIVES ON REGULATION* (edited by D. Moss and J. Cisternino), 25-61, Cambridge, MA: The Tobin Project (2009) (voicing concern that regulation that reduces revenue from penalty fees would mean that other rates and fees would be adjusted to compensate, and there is little reason to believe that the adjustments would be in consumers' favor).

The answer is *salience*. Many consumers are prone to well-documented behavioral limitations.²¹ One such limitation is to focus on prominent (“salient”) aspects of a price bundle (e.g., the cost of an airline ticket in bold, large letters on Expedia) but ignore aspects that are less clearly displayed (e.g., the cost of checking a bag or changing that reservation). Firms have no incentive to compete to offer low non-salient prices, because most consumers ignore them. In fact, firms purposely charge *high* non-salient prices so they can offer *low* salient prices and attract the most customers. Consumer financial contracts have become increasingly complicated over time—the average credit card contract used to be one page long, but now averages more than 30 pages.²² Complexity facilitates the following equilibrium: sophisticated banks charge low, or even no, salient prices—e.g., 0 percent APR or free checking accounts—and tuck away high non-salient fees deep in contracts that no one, not even the most sophisticated law professors among us, would ever read. The data reveals that when regulators restrict non-salient fees—as did the CARD Act and overdraft reform—banks are unlikely to pass the costs of these interventions through to consumers.

As such, Part II of this Article begins with the first lesson for regulators: Policymakers should regulate non-salient prices. The CARD Act and overdraft reform did just this: they can be understood as restricting banks’ ability to hide fees on page 26 of that 30-page contract. In light of these restrictions, banks faced a choice. To offset these losses, they would have had to raise salient prices (e.g., increase the introductory APR on page 1 of the credit card contract) and risk losing market share by increasing a price consumers pay attention to. JP Morgan is the largest lender in the country, and its credit card business contributes to its nearly \$100 billion²³ in revenue—why risk alienating its customer base over relatively minor (\$750 million)²⁴ CARD Act losses? JP Morgan—and other large financial institutions—did not adjust salient prices in response to regulation of non-salient prices. The result is an increase in overall consumer welfare.

I also propose a novel alternative to direct regulation of non-salient prices: a “salience shock.” The approach is simple—many consumers ignore penalty fees because they are inattentive (e.g., they do not realize they are about to overdraft) or overly optimistic (e.g., they do not believe they will ever be delinquent in repaying their credit card balances). A timely “shock” that focuses their attention, like a notification immediately before overdrafting will decrease the incidence of costly consumer mistakes. A recent reform in the United Kingdom provides evidence to support this view: Banks that give customers text-message alerts about low account balances find overdraft incidence declines by around 25 percent.²⁵

As each of the post-crisis interventions I study illustrate, consumer finance markets regularly feature cross-subsidies running from low-income consumers to their wealthy

²¹ Behavioral economists focus on theoretically and empirically demonstrating human deviations from rational behavior. Early work in this field was pioneered by psychologists Daniel Kahneman and Amos Tversky. *See, e.g.,* Amos Tversky and Daniel Kahneman, *Rational choice and the framing of decisions*, J. OF BUS. (1986): S251-S278.

²² Benjamin Sarlin, *Elizabeth Warren Talks Bank Reform*, THE DAILY BEAST (Apr. 21, 2010), <https://www.thedailybeast.com/elizabeth-warren-talks-bank-reform> (last visited on Mar. 14, 2018).

²³ JPMORGAN CHASE, *2017 Annual Report*. \$750 million is approximately 3 percent of JP Morgan’s 2017 net revenue (approximately \$25 billion after accounting for expenses)—certainly not insignificant, but not a large contributor.

²⁴ Tomoeh Murakami Tse, *JP Morgan’s Dimon says new laws have hurt his company*, THE WASH. POST (Apr. 2, 2010), <http://www.washingtonpost.com/wp-dyn/content/article/2010/04/01/AR2010040103684.html?noredirect=on> (last visited on Nov. 2, 2018).

²⁵ *Press Release: New Overdraft Alerts as CMA Banking Rules Come into Force*. GOV.UK (Feb. 2, 2018), <https://www.gov.uk/government/news/new-overdraft-alerts-as-cma-banking-rules-come-into-force> (last visited on June 27, 2018).

counterparts. The second lesson of this Article is that well-designed regulation should address these cross-subsidies.

This is true in markets where salience problems exist. Hidden fees are most often borne by low-income consumers: Nine percent of bank customers—disproportionately low-income and less-educated—are responsible for 84 percent of banks’ overdraft income.²⁶ Additionally, lower-income customers are less likely to pay their credit card bills on time,²⁷ and the high fees they pay subsidize cheaper credit for the rest of the population.

But cross-subsidization also exists in financial markets without salience problems, because wealthier customers have access to more attractive products. Consumers all pay the same price for retail goods, even though some transact with cash (no processing fee for merchants) and others use rewards cards (3 to 5 percent processing fee for merchants). Financial firms benefit from high card processing fees, but so do consumers who transact with these cards: A wealthy customer who uses a platinum American Express to buy a new pair of \$100 sneakers gets airline miles and cash back. If the value of those rewards totals \$2 (e.g., 2 percent cash back), she effectively pays only \$98 for new shoes. A customer who uses cash pays the full \$100. This may seem miniscule, but it scales quickly: On average, card-using households receive nearly \$1,200 from cash users each year.²⁸ This is a regressive transfer: Your airline miles are subsidized by low-income consumers who do not have access to credit.

The existence of these cross-subsidies justifies regulatory intervention. The CFPB has broad power to prohibit abusive or unfair bank practices that cannot be reasonably avoided by the consumer.²⁹ The payments market is a prime candidate for CFPB intervention, because one group of consumers (low-income) pays higher prices and cannot reasonably avoid these higher prices because they do not have access to rewards cards. Curbing banks’ loyalty rewards programs will decrease these cross-subsidies. A less-radical alternative is to allow merchants to price discriminate—e.g., by charging higher prices to the wealthy, who pay with rewards cards with high processing fees; or at the very least allowing merchants to nudge consumers toward using payment instruments with lower processing fees.

Importantly, when policymakers debate regulation, they often ask whether it will increase overall consumer welfare. This focus is misplaced. Removing cross-subsidies in consumer finance markets may not help all consumers, because the wealthy benefit from the status quo. However, regulation that creates a more equitable financial system and increases the welfare of the most financially fragile is desirable.

Finally, my analysis demonstrates that policymakers and academics should heed what banks do in response to regulation, not what they say they will do. Every time regulators act, affected institutions claim that the result will be harm, not benefit, for consumers. These warnings lead consumer advocates to be skeptical of the desirability of what we now know are welfare-

²⁶ CFPB, *supra* note 18 at 18.

²⁷ Gerri Detweiler, *How rich people use credit cards differently from the rest of us*, CREDIT.COM (Feb. 18, 2018), <https://www.businessinsider.com/how-rich-people-use-credit-cards-differently-than-the-rest-of-us-2015-2> (last visited on Jan. 13 2019)

²⁸ Scott Schuh, Oz Shy & Joanna Stavins, *Who Gains and Who Loses from Credit Card Payments? Theory and Calibrations*, FED. RESERVE BANK OF BOSTON (Aug. 2010), <https://www.bostonfed.org/publications/public-policy-discussion-paper/2010/who-gains-and-who-loses-from-credit-card-payments-theory-and-calibrations.aspx> (last visited Jan. 15, 2019).

²⁹ 12 U.S.C. § 5511 (b)(2) (“The Bureau is authorized to exercise its authorities under Federal consumer financial law for the purposes of ensuring that, with respect to consumer financial products and services—...consumers are protected from unfair, deceptive, or abusive acts and practices and from discrimination”).

enhancing reforms, like restricting credit card late fees.³⁰ They also lead academics to proclaim that “light-touch” regulatory approaches are futile, because sophisticated institutions will always pass along the costs of regulation to consumers.³¹ Instead of interventions that restrict markets but allow consumers to freely choose between diverse products, these critics advocate for more heavy-handed approaches, like mandates banning certain financial products.³²

This Article challenges the conventional wisdom about the inevitable failure of light-touch regulation. Prominent legal scholarship by Professor Lauren Willis and Professors Ryan Bubb and Richard Pildes question the effectiveness of behavioral policies, like the new opt-in default rule for overdraft protection.^{33,34} They suggest that since firms rationally optimize and consumers do not, light-touch regulation will not be effective, because firms will rationally offset it and default consumers into the choice that is most profitable for the firm: In the case of overdraft, this means that firms will work to opt-in consumers.

There are theoretical reasons to believe that firms will offset regulation in the manner these authors describe. And firms themselves say that they will offset regulation. However, the magnitude of this offset—and thus the efficacy of intervention—is ultimately an empirical question and one this Article undertakes with surprising results.

Specifically, the data reveal that the new overdraft default rules are a resounding success, not a failure as previously believed. Despite our assumptions about how banks will respond—based not unreasonably on how they say they will respond—most financial institutions do not aggressively opt-in consumers, but rather move away from overdraft as a product.

The implications are significant. Past authors cite the new overdraft default rules as a canonical example of how behavioral law and economics approaches do not deliver for consumers. However, the new opt-in regime does achieve its ends and does help consumers. This case is a paradigmatic example of how behavioral policies work, not an illustration of their limitations. Fortunately the existence of a power imbalance in the consumer/bank relationship does not doom all efforts at taming these markets. The aggressiveness with which financial institutions respond to regulation varies depending on market particulars, and only by following the data can we glean accurate insights about regulation.

The remainder of this Article is organized as follows. Part I describes three of the most important post-crisis consumer financial reforms—in the debit, credit, and overdraft markets—detailing the rationale for regulatory intervention and using hand-collected data to present novel empirical evidence on the impact of these reforms. Armed with this evidence, Part II then elaborates on several lessons for policymakers. Part III concludes.

³⁰ Barr et al., *supra* note 20.

³¹ Ryan Bubb & Richard H. Pildes, *How Behavioral Economics Trims Its Sails and Why*, 127 HARV. L. REV. 1593 (2013). This Article adopts the term “light-touch” from Bubb & Pildes to refer to regulatory approaches that preserve a role for consumer choice. Compare changing the overdraft default rule (light-touch, nudging consumers away from overdraft) to banning overdraft entirely (heavy-handed, preventing even consumers who like overdraft from using this product).

³² *Id.* at 1658 (“But policy can offer more here than just disclosure and defaults, and the unwillingness to seriously analyze regulatory tools that go beyond nudges limits the role BLE (behavioral law and economics) should be playing in fashioning welfare-improving interventions. To illustrate, we consider two policy tools that go beyond disclosure and defaults: regulating products and reshaping firm incentives.”).

³³ Lauren E. Willis, *When Nudges Fail: Slippery Defaults*, 80 U. CHI. L. REV. 1155 (2013).

³⁴ Bubb & Pildes, *supra* note 31.

I. POST-CRISIS INTERVENTIONS

In the wake of the Recession, the financial sector underwent significant regulatory changes, many of which sought to tame consumer finance markets. Three of these changes—implemented through Durbin, the CARD Act, and amendments to Regulation E that changed the overdraft default rules—were price regulations aimed at decreasing banks’ fee revenue and increasing consumer savings. This Part considers the efficacy of each intervention with novel empirical analysis using data from every bank and every zipcode in the United States.

I.A. The Durbin Amendment

I.A.1. The Policy Problem

The payment card system is a two-sided market, with cards demanded both by cardholders who use them as a means of purchase and merchants who accept them as payment for goods.³⁵ To simplify a complex series of transactions,³⁶ the interchange fee can be thought of as the processing fee a customer’s bank collects from a merchant following a card transaction.³⁷

A fundamental characteristic of payment networks is that they necessarily involve two groups of users: cardholders and merchants.³⁸ The two-sided nature of these markets means card networks must choose prices that encourage adoption by both sides of the market—cards that merchants do not accept will not generate interchange revenue, and neither will cards that merchants accept but consumers do not use. This two-sidedness, at least conceptually, discourages card networks from charging interchange fees that are too high; interchange fees above competitive levels will discourage merchants from accepting expensive cards and encourage the entry of lower-cost competitors.

Even so, historically, interchange rates have been challenged on antitrust grounds, with the earliest example being *National Bancard Corp. (NaBanco) v. Visa USA, Inc.*³⁹ This case involved a dispute between Visa and NaBanco, a third-party processor of merchant card transactions, over the legality of interchange fees. NaBanco’s business model relied on it competing with Visa member banks to process electronic transactions for merchants. NaBanco struggled to compete with Visa member banks that could afford to offer lower rates to merchants because Visa gave “on-us” transactions (where customers and merchants banked with the same institution) a discount. This case established the legality of interchange fees, with the court concluding that this fee arrangement was “pro-competitive” and no less-restrictive alternative to allow for the distribution of costs associated with payment transactions was available.

³⁵ Benjamin Klein et al., *Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees*, 73 ANTITRUST L.J. 571, 626 (2006).

³⁶ Barbara Pacheco & Richard Sullivan. *Interchange Fees in Credit and Debit Card Markets: What Role for Public Authorities? A Summary of a Federal Reserve Bank of Kansas City Conference*, KANSAS CITY FED. RESERVE (2006), <https://www.kansascityfed.org/OfOWO/publicat/econrev/PDF/1q06pach.pdf> (last visited on Mar. 13, 2018) (providing extensive detail on the mechanics of interchange).

³⁷ *Id.* In general, this processing fee varies depending on the card used: “[C]redit cards carry the highest interchange fee, PIN debit the lowest, with signature debit in between.”

³⁸ Jean-Charles Rochet & Jean Tirole. *An Economic Analysis of the Determination of Interchange Fees in Payment Card Systems*. REV. OF NETWORK ECON. vol. 2(2) 1-11 (June 2003).

³⁹ 596 F. SUPP. 1231 (S.D. Fla. 1984), *aff’d*, 779 F.2d 592 (11th Cir. 1986) (finding interchange fee arrangements more procompetitive than anticompetitive).

Importantly, as we discuss below, these fees were always very salient to the merchants that bear them. As a result, *NaBanco* was followed by a near-constant stream of antitrust litigation⁴⁰ by merchants upset at high interchange costs and alleging price-fixing by Visa and Mastercard, which together control nearly 70 percent of the payment card market.⁴¹ Merchants have successfully challenged various card-network practices as anti-competitive. For example, exclusivity agreements (forbidding banks from issuing cards from other networks if they issue cards from Visa or MasterCard) and “Honor-All-Cards” terms (contractual provisions that require that merchants who accept basic cards also accept high-price rewards cards issued by the same network) were deemed unlawful. These changes decreased market frictions and encouraged the emergence of new competitors like American Express and Discover.

Despite increased competitive pressure, in the decade leading up to the crisis, card networks’ revenue from interchange expense *increased* rather than *decreased*, due to the growth in electronic payments and the introduction of rewards cards with high processing fees. As a result, interchange expense became even more significant for merchants, often their second-highest cost of operating after labor.⁴² Exploding interchange expense prompted calls for regulatory intervention.⁴³

I.A.2. Regulatory Approach to Solving the Problem

Section 1075 of the Dodd-Frank Act⁴⁴ was introduced by Senator Dick Durbin (D-Ill) and is colloquially known as the “Durbin Amendment.” In its final form, it required the Federal Reserve to establish rules ensuring “reasonable and proportional” debit interchange fees that would decrease merchant costs and result in lower consumer prices.⁴⁵ The amendment preserved an exception for small issuers (with less than \$10 billion in assets).⁴⁶ Because of its late introduction to Dodd-Frank in May 2010, Durbin was passed without hearings or debate, and many took issue

⁴⁰ See, e.g., *Kendall v. Visa U.S.A., Inc.*, 518 F.3d 1042 (9th Cir. 2008), *aff’g*, 2005 U.S. Dist. LEXIS 21450 (N.D. Cal. Jul. 25, 2005); *In re Visa Check/Mastermoney Antitrust Litig.*, 396 F.3d 96 (2d Cir. 2005), *aff’g*, 297 F. Supp. 2d 503 (E.D.N.Y., 2003); *United States v. Visa U.S.A., Inc.*, 344 F.3d 229 (2d Cir. 2003), *aff’g*, 163 F. Supp. 2d 322 (S.D.N.Y. 2001), *cert. denied*, 543 U.S. 811 (2004); see also Avivah Litan, *Retailers Sue Visa, Seek Lower Credit Card Interchange Fees*, GARTNER RESEARCH (2005). For a full description of legal challenges to interchange, see *Rising Interchange Fees Have Increased Costs for Merchants, but Options for Reducing Fees Pose Challenge*, GOV’T ACCOUNTABILITY OFFICE (2009).

⁴¹ See Travis B. Plunkett, *Debit Card Interchange Fees and Routing: Proposed Rule* (2011), 12 CFR Part 235, Docket No. R-1404, <https://consumerfed.org/pdfs/debit-cards-FRB-interchange-rule-comments-2-22-11.pdf> (last visited on Mar. 13, 2018).

⁴² Paul Gackle, *The Fight Over Interchange Fees*, FRONTLINE (2009) <https://www.pbs.org/wgbh/pages/frontline/creditcards/themes/interchange.html> (last visited on Mar. 14, 2018).

⁴³ Pacheco and Sullivan, *supra* note 36.

⁴⁴ DODD-FRANK WALL STREET REFORM AND CONSUMER PROTECTION ACT, Pub. L. No. 111-203, §1075, 124 Stat. 1376, 2068-74 (2010) (codified at 15 U.S.C. §1693o-2 (2012)).

⁴⁵ *Id.* § 1693o-2(b)(2). For this work, I focus on Durbin’s interchange cap. Further work remains to be done on the consequences of other aspects of Durbin, for example, the exclusivity and routing restrictions, which halved volume for Visa’s pin-debit payment processor, Interlink, causing it to levy a network fee to encourage routing through Interlink. See *Interlink Loses More Than Half Its Volume as Durbin Routing Provisions Take Effect*, DIGITAL TRANSACTIONS (Jul. 25, 2012), <https://www.digitaltransactions.net/interlink-loses-more-than-half-its-volume-as-durbin-routing-provisions-take-effect/> (last visited on Nov. 2, 2018); Ursula Librizzi, *Visa Increasing Fixed Acquirer Network Fee (FANF) Rates*, PAYJUNCTION BLOG (Dec. 21, 2017), <https://blog.payjunction.com/visa-fixed-acquirer-network-fee/> (last visited on Nov. 2, 2018).

⁴⁶ *Id.* § 1693o-2(a)(6)

with the speed of its passage.⁴⁷ Critics also pointed to the difficulties of prior interchange caps; for example, those implemented in Australia resulted in bank fee increases to recover lost revenue.⁴⁸

In December 2010, the Federal Reserve proposed a rule implementing Durbin: a \$0.12 cap per debit transaction.⁴⁹ The financial services industry was outraged; in fact, one bank even challenged the constitutionality of Durbin, arguing that the regulation forced banks to offer debit services at a price below cost.⁵⁰ Regulators voiced concern as well, suggesting that the small-issuer exemption would fail in practice because networks would decrease interchange rates for large and small issuers alike rather than vary rates by issuer size.⁵¹

The Federal Reserve's final rule raised the debit interchange cap to \$0.22 plus five basis points times the total value of the transaction. Importantly, credit card interchange fees were left unregulated. This final rule prompted yet another constitutional challenge, this time by a coalition of merchants angered by the Board's decision to raise the fee cap from its initial proposal.⁵² The Supreme Court declined to hear the case, and the cap remains.⁵³

⁴⁷ The President of the American Bankers Association called this "11th hour" legislation that "handed one industry a victory without considering the unintended consequences of the government second-guessing the market." Rob Nichols, *The Durbin Amendment: A Costly Price Control Experiment*, THE HILL (June 27, 2016), <http://thehill.com/blogs/congress-blog/economy-budget/284842-the-durbin-amendment-a-costly-price-control-experiment> (last visited on Nov. 2, 2108). Some even attacked Durbin for his championing of interchange legislation, noting that some of the largest beneficiaries (Wal-Mart and Home Depot) lobbied him intensely. Wal-Mart even opened stores in the Chicago area (which Durbin represents) and donated \$20 million to Illinois charities on the eve of a key vote on the measure. See Jonathan Strong, *Dick Durbin's Cozy Alliance with Wal-Mart, Home Depot, and the Giant Retail Lobby* (Mar. 29, 2011), <http://dailycaller.com/2011/03/29/dick-durbins-cozy-alliance-with-wal-mart-home-depot-and-the-giant-retail-lobby/> (last visited on June 11, 2018).

⁴⁸ See, e.g., Howard Chang et al., *The Effect of Regulatory Intervention in Two-Sided Markets: An Assessment of Interchange-Fee Capping in Australia*, 4 REV. NETWORK ECON. 328 (2005) (noting that the five major banks in Australia increased credit card fees by 50 percent in response to credit card interchange regulation and that the intervention benefitted merchants with the costs shared by banks and consumers). Note though that this assessment of the Australian experience is not shared by all observers. Cf. Joseph Farrell, *Assessing Australia Interchange Regulation: Comments on Chang, Evans and Garcia Swartz*, REV. OF NETWORK ECON. vol. 4, issue 4, 1-5 (2005) (arguing that Chang (2005) suffer from limited and noisy data, and that the "correct reading" is "so far, the data doesn't show much.").

⁴⁹ *Federal Reserve requests comment on a proposed rule to establish debit card interchange fee standards and prohibit network exclusivity arrangements and routing restrictions*. BD. OF GOVERNORS OF THE FED. RESERVE SYS. (Dec. 16, 2010), <https://www.federalreserve.gov/newsevents/pressreleases/bcreg20101216a.htm> (last visited on Nov. 2, 2018).

⁵⁰ TCF lost in district court in South Dakota and lost its appeal in the Eighth Circuit. *TCF Nat'l Bank v. Bernanke* (TCF I), No. CIV 10-4149, 2011 U.S. Dist. LEXIS 45059, *aff'd*, 643 F.3d 1158 (8th Cir. June 29, 2011).

⁵¹ Both Ben Bernanke, former Chairman of the Federal Reserve, and Sheila Bair, former Chair of the Federal Deposit Insurance Corporation (FDIC), voiced these concerns. In response, an amendment was offered to delay the implementation of Durbin until an FDIC study ascertaining its impact on community banks was completed. This bill failed by only six votes. See Evan Weinberger, *Bernanke Questions Small Bank Swipe Fee Exemption*, LAW360 (Feb. 17, 2011), <https://www.law360.com/articles/225275/bernanke-questions-small-bank-swipe-fee-exemption> (last visited on June 11, 2018). See also *On the Eve of Implementation, Fed Chairman Bernanke and FDIC Chairman Bair Still "Concerned" that Debit Card Rule Exemption for Small Financial Institutions Won't Work*, ELEC. PAYMENTS COALITION (MAY 12, 2011), <https://www.prnewswire.com/news-releases/on-the-eve-of-implementation-fed-chairman-bernanke-and-fdic-chairman-bair-still-concerned-that-debit-card-rule-exemption-for-small-financial-institutions-wont-work-121734093.html> (last visited on June 2, 2018).

⁵² *NACS v. Board of Governors of the Federal Reserve System*, 746 F.3d 474 (D.C. Cir. 2014), *cert. denied*, 135 S.Ct. 1170 (2015).

⁵³ *Id.*

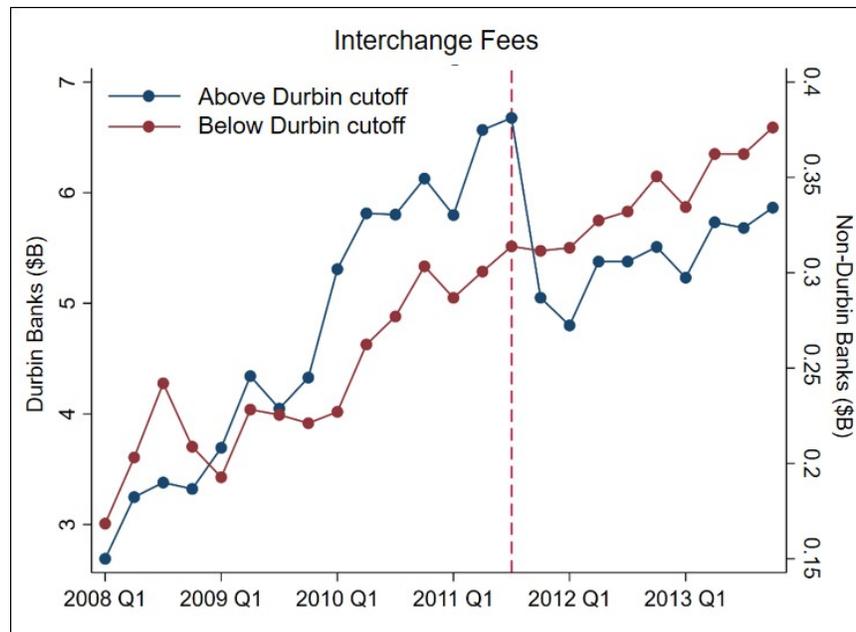
I.A.3. Impact of Regulatory Intervention

Considering the effect of Durbin on banks and merchants can help us understand its impact on overall consumer welfare and help inform regulation of this market and of two-sided platforms more generally.

To study how banks responded to Durbin, I rely on data from a variety of sources.⁵⁴ Specifically, I look to bank financial statements to see how bank revenue changes following Durbin's enactment (Figure 1). I then use data from RateWatch, which surveys bank branches weekly on their fee-setting practices. This data allows us to examine how bank checking account prices change in response to Durbin (Figures 2 and 3). To study how merchants responded to Durbin, I report results from analysis using actual gas prices and effective interchange rates across the United States. I am also able to observe how credit and debit usage changes in response to Durbin with data from the annual Nielsen Report (Figure 4).

Bank impact. Interchange income dropped instantaneously after Durbin. As Figure 1 shows, the decrease is concentrated in banks above the \$10 billion threshold, suggesting that large issuers bore the brunt of Durbin, as intended. Losses for banks above the Durbin threshold total approximately \$6.5 billion per year, a 25 percent decrease in interchange revenue.⁵⁵

Figure 1



Notes: Author's calculations from bank regulatory filings (Call Reports)

⁵⁴ The primary empirical results on the Durbin Amendment were developed in joint work with Vladimir Mukharlyamov. See Vladimir Mukharlyamov & Natasha Sarin, *The Impact of the Durbin Amendment on Banks, Merchants, and Consumers* (working paper) (2019).

⁵⁵ This estimate understates bank losses because banks report interchange revenue only if it constitutes more than 3% of non-interest income. Ten percent of banks above the Durbin threshold that reported interchange income in Q3 2011 no longer reported it in Q4 2011.

Decreasing banks' interchange revenue was, of course, Durbin's purpose. However, banks warned that they would be forced to recover lost revenue by increasing other consumer fees.⁵⁶ Not surprisingly, many large banks (Bank of America, JPMorgan Chase, Suntrust, and Regions Financial) initially proposed a fee on debit purchases to recoup Durbin losses: \$5 every month consumers used their debit cards as a means of purchase. This fee was abandoned due to consumer outrage. A bank consultant suggested that the result would be a less-conspicuous increase in fees: Banks "are going to have to hide the fees and the customers will still have to pay for them."⁵⁷

In practice, this is exactly what happened. Figures 2 and 3 below show the impact of Durbin on free checking and monthly fees associated with bank checking accounts. Post-Durbin, the availability of free checking accounts decreased by more than 40 percentage points for covered issuers: Said another way, in the pre-Durbin period, nearly 60 percent of large banks offered free checking; post-Durbin, this share fell to below 20 percent. Alternatively, checking account fees more than doubled, from around \$4 to more than \$7, for Durbin banks. Significantly, these increases are not related to general trends in banking—there is neither an equivalent decrease in free checking nor an increase in maintenance fees for banks below the Durbin threshold. In fact, banks recovered nearly all their lost interchange revenue by increasing consumer fees.⁵⁸

The increase in fees is borne primarily by low-income customers because monthly maintenance fees are waived for customers above a certain minimum threshold in their checking accounts.⁵⁹ One unintended consequence of Durbin is that higher fees priced some consumers out of the market and resulted in their using more-expensive banking replacements such as check-cashing and payday lending facilities.⁶⁰ In the most recent FDIC Survey of Unbanked and Underbanked Households, more than 30 percent of respondents who previously had a bank account reported that they became unbanked because account fees were too high and unpredictable.⁶¹

⁵⁶ Comments to the Fed's proposed rule-making contain several such cautions by banks, *see, e.g.*, Karl. F. Kaufmann, *supra* note 8. *See also* Brian J. Hurd. *TCF Comment Letter on Durbin Amendment*, TCF NAT'L BANK (Feb. 18, 2001), https://www.federalreserve.gov/SECRS/2011/April/20110405/R-1404/R-1404_030411_68936_437488369604_1.pdf (last visited on June 27, 2018).

⁵⁷ Tara Siegel Bernard, *In Retreat, Bank of America Cancels Debit Card Fee*, THE N.Y. TIMES (Nov. 1, 2011), <http://www.nytimes.com/2011/11/02/business/bank-of-america-drops-plan-for-debit-card-fee.html> (last visited on Mar. 14, 2018).

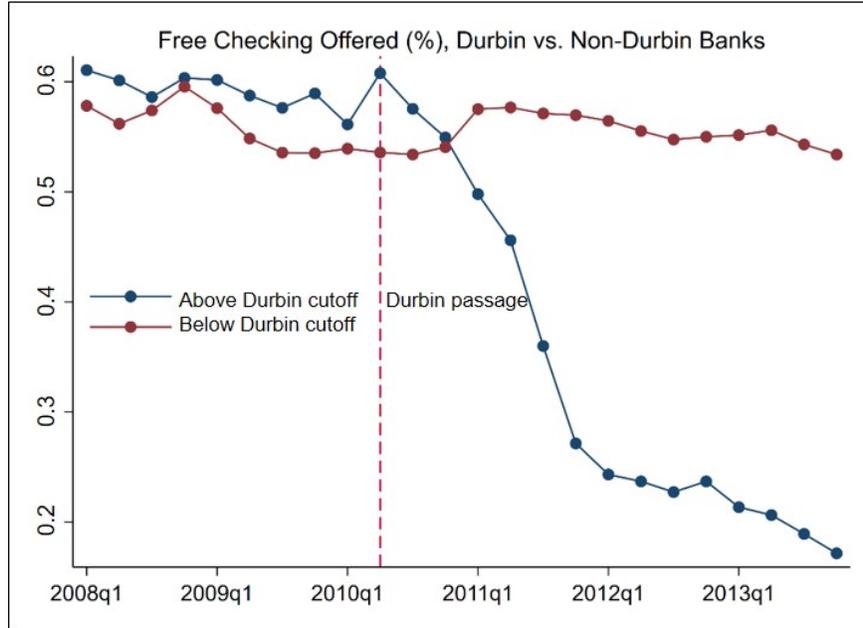
⁵⁸ Interestingly, some small banks appear to decrease fees during this same period, which these authors attribute to banks using Durbin-related fee increases by competitors as an opportunity to grow their market share. Mukharlyamov & Sarin, *supra* note 54. These estimates are directionally consistent with Benjamin S. Kay et al., *Bank Profitability and Debit Card Interchange Regulation: Bank Responses to the Durbin Amendment*, BD. OF GOV. OF THE FED. RESERVE SYS. (2014), the only other empirical study that considers bank responses to the Durbin Amendment.

⁵⁹ Pre-Durbin, this averaged \$920, but Durbin banks raised this by nearly 40 percent, to \$1,265.

⁶⁰ Bord (2017) provides suggestive evidence for this result, albeit in a different setting. He finds that an increase in bank fees (stemming from mergers) leads to closures of consumer checking accounts and a greater use of payday lending. Vitaly M. Bord, *Bank Consolidation and Financial Inclusion: The Adverse Effects of Bank Mergers on Depositors*, HARV. U. (Nov. 7, 2017), https://scholar.harvard.edu/files/vbord/files/vbord_bank_consolidation_and_financial_inclusion_tu.pdf (last visited on June 27, 2018). The biannual *FDIC Survey of the Unbanked* provides additional evidence: The share of bank customers who ascribe their lack of a bank account to high account fees nearly doubles between 2011-2013, from 7.4 to 13.4 percent.

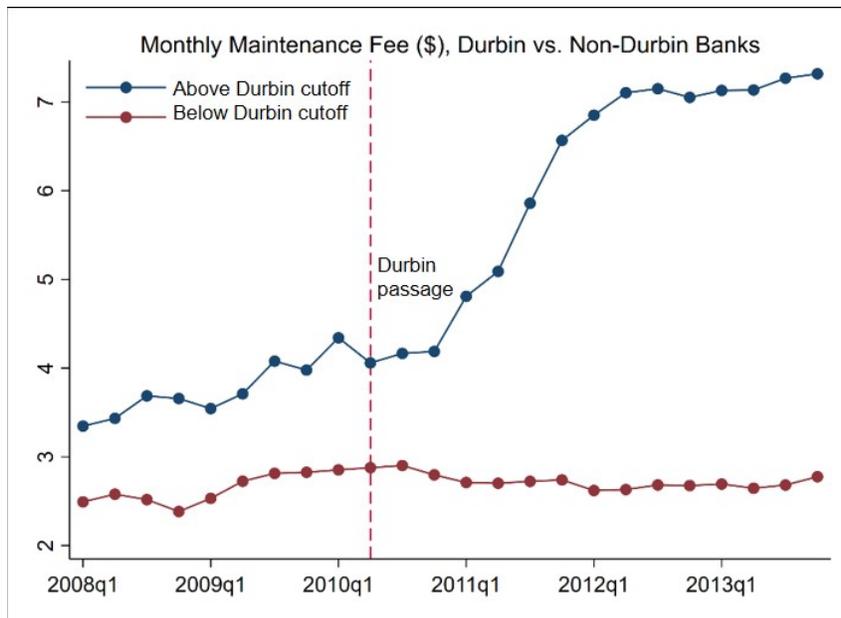
⁶¹ *FDIC National Survey of Unbanked and Underbanked Households*, FED. DEPOSIT INS. CORP. (2015), <https://www.fdic.gov/householdsurvey/2015/2015appendix.pdf> (last visited on Mar. 14, 2018). This growth in the unbanked and underbanked population has drawn attention and necessitates further study. A recent documentary, *Spent*, chronicles the difficulties faced by nearly 70 million American families without access to the traditional

Figure 2



Notes: Author's calculations from RateWatch, which surveys bank branches weekly for fee information

Figure 3



Notes: Author's calculations from RateWatch, which surveys bank branches weekly for fee information.

financial sector. See also Michael S. Barr, *Banking the Poor*, 21 YALE J. ON REG. (2004) (discussing barriers to banking for low-income families).

Merchant impact. Advocates of Durbin asserted that it would “enable smaller businesses and merchants to lower their costs and provide discounts for their customers.”⁶² As a result of Durbin, merchant interchange fees decreased by \$6.5 billion annually. In a perfectly competitive world, these merchant savings would be passed through to consumers in the form of lower prices. However, many were skeptical that consumers would see any benefit: Former Senator Mark Pryor suggested that “[t]he consumer probably ends up paying for [the interchange regulation]. They’ll get you. You’re going to pay for it one way or another.”⁶³

Stock-price reaction to Durbin suggests that, as Senator Pryor predicted, merchant interchange savings were not fully passed through to consumers. The market capitalization of publicly traded retailers increased by nearly 50 basis points in response to Durbin.⁶⁴ This stock-price movement is consistent with public statements by large retailers. For example, The Home Depot said it gained \$35 million per year from Durbin.⁶⁵

Evidence from merchant prices also suggests that retailers failed to pass through savings. Prices set by supermarkets and convenience stores whose costs fell significantly because of Durbin are virtually indistinguishable from those set by merchants with low (or no) interchange savings.⁶⁶ And when surveyed, the sectors that experienced the greatest cost reduction report that they did not decrease prices in response to Durbin.⁶⁷

To estimate the extent to which Durbin lowers retail prices, I turn to the gas station industry. This is for three reasons: first, gas is an industry where interchange expense declines substantially post-Durbin: 15 percent of total savings accrue to gas retailers. Second, gas prices are set locally, making it easier to identify a precise Durbin effect. Third, gas products are standardized, allowing for identification of relatively small price movements. If gas stations fully passed through Durbin savings, then we would expect prices to fall by \$0.0076 per gallon for the average gas station.

While there is evidence of a statistically significant price reduction following Durbin for gas retailers in the top deciles, on average, gas prices fall by only \$.004. Thus, a conservative upper

⁶² Dick Durbin, *Press Release, Durbin Sends Letter To Wall Street Reform Conferees On Interchange Amendment*, DICK DURBIN, UNITED STATES SENATOR, ILLINOIS (May 25, 2010), <https://www.durbin.senate.gov/newsroom/press-releases/durbin-sends-letter-to-wall-street-reform-conferees-on-interchange-amendment> (last visited on Mar. 14, 2018).

⁶³ Zach Carter & Ryan Grim, *Swiped: Banks, Merchants, and Why Washington Doesn’t Work for You*, HUFFPOST (Dec. 6, 2017), https://www.huffingtonpost.com/2011/04/28/swipe-fees-interchange-banks-merchants_n_853574.html (last visited on Apr. 30, 2018).

⁶⁴ These results are consistent with prior work by Professor David Evans who, with a different event study approach, estimate that over time consumers will lose between \$22–\$25 billion from Durbin. David S. Evans et al., “*The Impact of the U.S. Debit Card Interchange Fee Regulation on Consumer Welfare: An Event Study Analysis*,” U. CHI. L. SCHOOL COASE-SANDOR INST. FOR L. & ECON. (2013) (working paper).

⁶⁵ *Q4 2010 Home Depot, Inc. Earnings Conference Call*, THE HOME DEPOT INC. (Feb. 2011), <http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9ODMwMTB8Q2hpbGRJRjRD0tMXxUeXBIPtM=&t=1> (last visited on Mar. 14, 2018).

⁶⁶ Mukharlyamov & Sarin, *supra* note 54 (finding that gas stations that save the most from Durbin (those in the top decline of interchange expense reduction) do decrease retail price in response to Durbin. One explanation is that gas stations fail to update price until a cost reduction is significant. The top decile of savers see interchange expense fall by over 2 cents/gallon, relative to much more minor savings on average (0.5 cents/gallon)).

⁶⁷ Zhu Wang et al., *The Impact of the Durbin Amendment on Merchants: A Survey Study*, FED. RES. BANK OF RICHMOND, ECON. Q. (2014). The authors survey 420 merchants across 26 sectors and find that only four sectors decrease price in response to Durbin (Art, Automobiles, Sporting Goods, and Other), and even in these four sectors, prices fall for less than 6% of merchants.

bound is that gas stations pass through only 53 percent (\$.004/\$.0076) of their Durbin savings.⁶⁸ Extrapolating this estimate from the gas industry more broadly, the analysis suggests that nearly half of the \$6.5 billion in annual Durbin savings went directly to retailers' bottom line. Consequently, Durbin decreases overall consumer welfare by over \$3 billion annually.⁶⁹

This estimate likely understates Durbin's impact, because the new debit interchange cap did not help all retailers. Small-ticket merchants without sufficient market power to negotiate with card networks saw their interchange rates rise, not fall, as the Board's debit interchange cap became a floor. These merchants *raised* prices.⁷⁰ For example, Redbox, which provides movie rentals through vending machines, increased prices by 20 percent post-Durbin,⁷¹ while Parkmobile, a smartphone application that helps Washington D.C. residents pay for parking, raised its fees by more than 40 percent.⁷² Small business owners decried Durbin's impact. An owner of New York coffee houses said that in response to the new debit fee cap: "[M]y choice is to raise prices, discount for cash, or get an ATM."⁷³ Another merchant said that when customers offer a card to buy a low-dollar item, like a banana, he gives it to them for free to forego the interchange expense: "Just take the banana. Don't give me the card."⁷⁴

The vending machine industry was especially hurt by Durbin—its interchange fees increased by more than 200 percent.⁷⁵ Visa struck agreements with payment processors,⁷⁶ however, Mastercard refused to negotiate a lower rate, leading many vending machines to drop Mastercard debit from their list of accepted payment methods until a similar deal was eventually reached years later.⁷⁷

I.A.4. Unintended Consequences of Intervention

⁶⁸ Mukharlyamov & Sarin, *supra* note 54 (providing much more detail on these estimates of gas stations' pass-through of Durbin savings).

⁶⁹ One way to understand the Durbin Amendment is as a wealth transfer from banks to businesses. One large retailer suggests that, despite the lack of discernible price changes, consumers are in fact the ultimate beneficiaries—because the retailer was able to improve its customer service because of declining interchange expense. This is certainly plausible, but does not seem to fit with the consumer savings that Sen. Durbin claimed regulation would bring about. Retailers' shareholders, who are consumers, certainly benefit, but this benefit is subsidized by higher checking account prices for low-income consumers.

⁷⁰ See, e.g., *id.*; Mukharlyamov & Sarin, *supra* note 54.

⁷¹ Daniel Indiviglio, *Angry that Redbox Is Hiking DVD Rental Prices? Blame Congress*, THE ATLANTIC (Oct. 28, 2011), <https://www.theatlantic.com/business/archive/2011/10/angry-that-redbox-is-hiking-dvd-rental-prices-blame-congress/247535/> (last visited on June 11, 2018).

⁷² Parkmobile eventually had to apologize when Senator Durbin wrote a letter calling their claim "grossly misleading" since it was Visa and Mastercard's reaction to the Durbin Amendment, not the legislation itself, that resulted in higher costs for Parkmobile. See Robin Sidel, *Debit-Fee Cap Has Nasty Side Effect*, THE WALL ST. J. (Dec. 8, 2011), <https://www.wsj.com/articles/SB10001424052970204319004577084613307585768> (last visited on Mar. 24 2018).

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Apriva Extends Agreement with Visa to Offer Discounted Vending-Machine Pricing*, DIGITAL TRANSACTIONS, (Nov. 29, 2012), <http://www.digitaltransactions.net/apriva-extends-agreement-with-visa-to-offer-discounted-vending-machine-pricing/> (last visited on Mar. 14, 2018).

⁷⁷ *Id.* In January 2015, after a hiatus of more than three years, vending machines that get payment services through USA Technologies began accepting Mastercard debit again.

Durbin was not the first legislative attempt to rein in interchange fees. Interestingly, earlier iterations focused on *credit* rather than *debit* fees.⁷⁸ This was because credit interchange rates were historically higher and legislators hoped to dissuade banks and card networks from encouraging consumers to overuse credit cards, which can lead to expensive cycles of indebtedness.

The latter was exactly the rationale for the Reserve Bank of Australia's 2003 decision to intervene in this market by capping *credit* interchange fees at 0.55 percent of total transaction value. The RBA's primary objective "was to change the relative prices of credit cards and debit cards to cardholders ... reducing the substantial incentive to use credit cards over debit cards."⁷⁹

Despite the fact that the Australian case study was well known to policymakers during the Durbin debate,⁸⁰ the legislation eventually targeted debit interchange. This was in response to a substantial lobbying effort by banks and credit card networks, which warned that any restriction on credit interchange would lead issuers to "squeeze credit and raise the cost of credit cards at a time when the economy thirsts for credit to sustain an economic recovery."⁸¹ In fact, Durbin lauded the Amendment's focus on debit interchange, noting that, as a result, it would avoid any undesirable credit supply impact.⁸²

However, in capping *debit* interchange, the Durbin Amendment perversely increased the use of credit relative to its cheaper debit counterpart. Debit is also a preferred means of transacting in the eyes of many because it decouples financial transacting from consumer borrowing, thereby reducing the likelihood that purchases will land consumers in expensive cycles of debt. David Evans, an academic with extensive background in payment systems, commented on the irony of Durbin targeting debit, rather than credit:

Debit cards . . . are the responsible man's plastic. You are only using the money you have, it comes right out of your checking account, so if you're concerned about consumer debt, you want people to be using debit cards more. . . . It makes no sense for the Dodd-Frank Act to include an amendment that is going to make debit cards less available for consumers, and it's going to have the unavoidable consequences to push them towards credit. I think it's nuts.⁸³

⁷⁸ See, e.g., H.R. 6248, *Credit Card Interchange Fees Act of 2008* (sponsored in the House by Representative Peter Welch); H.R. 5546, *The Credit Card Fair Fee Act of 2008* (sponsored by Representative John Conyers, and in the Senate a companion bill S. 3086 sponsored by Durbin); S. 3252, *Credit Card Accountability and Responsibility Disclosure Act of 2008* (sponsored by Senator Chris Dodd).

⁷⁹ Michele Bullock, *A Guide to the Card Payment System Reforms*, RES. BANK OF AUS. (Sep. 2010), <https://www.rba.gov.au/publications/bulletin/2010/sep/7.html>.

⁸⁰ See Testimony of Governor Sarah Bloom Raskin before U.S. Congress, House Committee on Financial Services, Subcommittee on Financial Institutions and Consumer Credit, Interchange Fees, 112th Cong., 1st sess., Feb. 17, 2011 (distinguishing the Durbin Amendment from its Australian predecessor: "The Reserve Bank of Australia actually regulates credit card interchange on a cost basis. We are obviously looking just at debit card interchange.").

⁸¹ Keith Bradsher, *U.S. Looks to Australia on Credit Card Fees*, THE N.Y. TIMES (Nov. 24, 2009), <https://www.nytimes.com/2009/11/25/your-money/credit-and-debit-cards/25card.html> (last visited on Jan. 16, 2019). The implications of a potential credit squeeze were especially worrying for minority groups, who historically have less credit access than their white counterparts. Christian E. Weller, *Access Denied: Low-Income and Minority Families Face More Credit Constraints and Higher Borrowing Costs*, CTR. FOR AM. PROGRESS (2007), <https://www.americanprogress.org/issues/economy/reports/2007/08/15/3395/access-denied/> (last visited on Jan. 16, 2019).

⁸² Dick Durbin, *supra* note 61.

⁸³ Martin Neal Baily, *Reasonable Regulation of Debit Card Fees* (transcript), PYMTS.COM (May 2, 2011), <https://www.pymts.com/news/2011/martin-neal-baily-reasonable-regulation-of-debit-card-fees-transcript/> (last visited on Mar. 14, 2018).

In response to Durbin, banks encouraged greater credit usage.⁸⁴ For example, spending on credit card rewards among big issuers more than doubled since 2010⁸⁵ while debit rewards programs were largely eliminated.⁸⁶ Not surprisingly, as a result credit usage grew more in the three years following Durbin's enactment than in any other three-year period since 2000.⁸⁷ For megabanks, this growth was especially pronounced: Credit usage by Wells Fargo customers increased by around 20 percent annually in the years following Durbin, but debit growth rates fell to 2 percent annually.⁸⁸ For JP Morgan, credit usage grew by around 10 percent annually following Durbin, but debit growth rates fell to only 4 percent a year. Figure 4 plots the average credit and debit growth rates for the five largest financial institutions, with together account for more than 60 percent of total US deposits. Although debit growth falls significantly following Durbin, credit growth increases substantially, at least suggestive of banks encouraging consumers to turn more frequently to credit cards, whose interchange rates are left uncapped by Durbin. Visa's CEO Joe Saunders highlighted this trend and noted that it is "what one would expect" from legislation capping debit, but not credit, interchange.⁸⁹

⁸⁴ As an example, in September 2011, Chase distributed a brochure to explain that credit is a superior payment instrument to debit for all purchases. Arin H. Smith, Note, *Durbin's Defect: The Impact of Post-Recession Legislation on Low Income Consumers*, 89 N.Y.U L. REV. 363, 369 n.17, 369–70 (2014).

⁸⁵ *Credit Card Rewards More Than Doubled Since the Recession, New Study Shows*, MAGNIFY MONEY BLOG (May 4, 2017), <http://www.magnifymoney.com/blog/news/credit-card-issuers-doubled-spending-rewards840948580/> (last visited on Mar. 14, 2018).

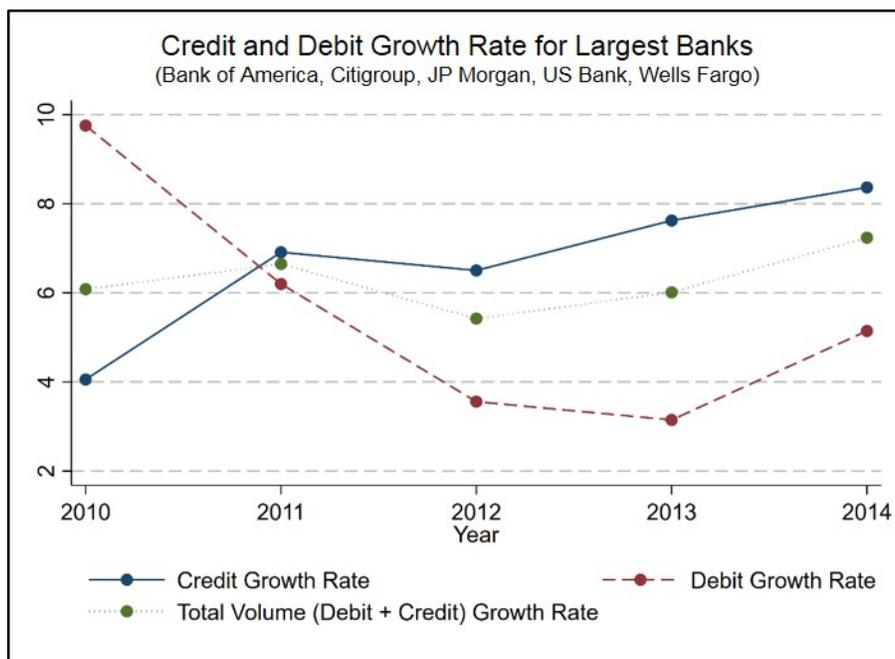
⁸⁶ Richard Kerr, *Where Have All the Rewards Cards Gone?* THE POINTS GUY (June 24, 2015), <https://thepointsguy.com/2015/06/rewards-debit-cards-gone/> (last visited on Mar. 14, 2018).

⁸⁷ *The Federal Reserve Payment Study 2016*, U.S. FED. RESERVE SYS. <https://www.federalreserve.gov/newsevents/press/other/2016-payments-study-20161222.pdf>, (last visited on Nov. 2, 2018).

⁸⁸ Mukharlyamov & Sarin, *supra* note 54.

⁸⁹ THOMSON REUTERS STREET EVENTS, edited transcript, *V-Q1 2012 Visa Inc. Earnings Conference Call* (Feb. 8, 2012), https://s1.q4cdn.com/050606653/files/doc_financials/transcript/2012/V-Transcript-2012-Q1-2012.pdf (last visited on Nov. 2, 2018).

Figure 4



Notes: Author’s calculations from Nilson Report, which reports debit and credit usage for large issuers annually

I.B. The CARD Act

I.B.1. The Policy Problem

In 1980, credit card contracts were a page long. Today, the average contract is more than 30 pages. Professor and now-Senator Elizabeth Warren called this a move toward the inclusion of “tricks and traps that would obscure the true cost of credit—and drive profits through the roof.”⁹⁰ To some extent, she was correct.

Card fees have exploded since the late 1990s. This growth is tied to the Supreme Court’s decision in *Smiley v. Citibank National Association* (“*Smiley*”).⁹¹ The case related to the interpretation of the National Bank Act, which allows banks to charge interest rates based on the state in which the bank resides. In *Smiley*, Citibank levied penalty fees against a customer (*Smiley*) that were legal in the state of its headquarters (South Dakota) but not where *Smiley* resided (California). Shortly after the initial complaint, the Office of the Comptroller promulgated a rule explicitly including late fees within the context of the National Bank Act, and in *Smiley*, the Supreme Court ruled that this interpretation was not unreasonable.

Consumer penalty fees more than doubled in the immediate aftermath of *Smiley*, from just over \$8 billion in 1995 to nearly \$19 billion in 1998.⁹² By 2004, penalty fees accounted for more

⁹⁰ Benjamin Sarlin, *supra* note 22.

⁹¹ 517 U.S. 735 (1996).

⁹² Tamara Draut & Javier Silva, *Borrowing to Make Ends Meet: The Growth of Credit Card Debt in the ‘90s*. DEMOS (2003), <https://www.demos.org/publication/borrowing-make-ends-meet-growth-credit-card-debt-90s-0> (last visited on Jan. 6, 2019) (highlighting how *Smiley* drastically increased credit card penalty fees).

than half of the credit card fees U.S. cardholders paid in 2004 (12.5 percent of issuers' revenues).⁹³ Various credit card contract terms enabled issuers to extract maximum fees. For example, card companies did not have to provide advance notice of interest rate increases; they could raise them without warning when cardholders applied for a mortgage or made a large purchase that lowered their credit score.⁹⁴ And although introductory teaser rates are presented to consumers up front myriad other fees—such as late fees, over-limit fees, bounced-check fees, convenience and service fees, fees for statement copies and replacement cards, foreign-currency conversion fees, phone-payment convenience fees, wire-transfer fees, and balance-transfer fees—are buried deep in increasingly complex contracts.⁹⁵ Consumer inattention to these non-salient back-end terms precipitated a status quo whereby consumers unknowingly incurred avoidable expenses.⁹⁶ And there was no incentive for new firms to offer more transparent products—that is, making clear upfront what the cost of credit will be for consumers—because such honest brokers would have no customers: Consumers opted for products with a low upfront price (0 percent APR for 18 months) and high penalty fees, even though they would end up paying more in the long-run in late fees and higher interest rates if they were delinquent. Loss-leader pricing to exploit consumers' irrationality was responsible for substantial credit card revenues in the pre-crisis period.⁹⁷

I.B.2. Regulatory Approach to Solving the Problem

In response to widespread outrage, interventions in this market began during the Recession. In May 2007, the Federal Reserve proposed revisions to the Truth in Lending Act, and in February 2008, Federal Reserve Chairman Ben Bernanke testified before Congress that the Federal Reserve planned to use its authority to prohibit unfair or deceptive credit card practices.⁹⁸ In May 2008, the Fed proposed rules focused on protecting customers from unexpected increases in interest rates or penalty fees, ending two-cycle billing,⁹⁹ and prohibiting card issuers from creating a “cycle of debt” for subprime borrowers by opening accounts likely to generate astronomical fee revenue.¹⁰⁰

⁹³ Nadia Massoud et al., *The Cost of Being Late: The Case of Credit Card Penalty Fees 2-3*, AM. FIN. ASS'N (2007); Chicago Meetings Paper, 2006); see also Bar-Gill & Warren, *supra* note 15.

⁹⁴ Bar-Gill & Warren, *supra* note 15.

⁹⁵ Professors Xavier Gabaix and David Laibson discuss the tendency of firms to shroud information from less-sophisticated customers. One example they provide is bank accounts:

For example, banks prominently advertise the virtues of their accounts, but the marketing materials do not highlight the costs of an account which include ATM usage fees, bounced check fees, minimum balance fees, etc. Banks could compete on these costs, but they instead choose to shroud them. Indeed, many bank customers do not learn the details of the fee structure until long after they have opened their accounts.

Xavier Gabaix & David Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q. J. ECON. 505, 540 (2006).

⁹⁶ See Gregory Bresiger, *People Are Unaware of How Much They Spend on Bank Fees*, N.Y. POST (Jul. 16, 2016), <https://nypost.com/2016/07/16/people-are-unaware-of-how-much-they-spend-on-bank-fees/> (last visited on June 11, 2018).

⁹⁷ Ausubel, Lawrence. *Adverse Selection in the Credit Market* (Working paper, 1999) (noting that consumers are overly sensitive to promotional teaser rates and hypothesizing this is because of behavioral limitations: they underestimate the probability that they will later still be borrowing at higher, post-teaser rates, and fail to optimize with these post-teaser prices in mind).

⁹⁸ Jambalapati & Stavins, *supra* note 16 (providing a detailed discussion of the CARD Act's staged legislative history).

⁹⁹ That is, when a consumer pays the entire balance one month but fails to do so the following month, and the bank calculates interest for the second month using days in the previous cycle as well as the current cycle.

¹⁰⁰ *Highlights of Final Rules Regarding Credit Card Accounts*, FED. RES. BD. OF GOVERNORS (Dec. 2008), <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20081218a1.pdf> (last visited on Jun 11, 2018).

In tandem, Congress focused on this market. Carolyn Maloney (D-NY) introduced the “Credit Cardholder’s Bill of Rights,” which passed the House in September 2008 but was never considered in the Senate. The bill was reintroduced in January 2009, only one month after the Federal Reserve issued its final rules to regulate card company practices.¹⁰¹ In April 2009, both the House and the Senate overwhelmingly passed (357-70 and 90-5 votes, respectively) the reintroduced bill—the Credit Card Accountability Responsibility and Disclosure Act (“CARD Act”). The effective date for the Federal Reserve’s rules was several months after the CARD Act, so the CARD Act superseded the Board’s proposals. The CARD Act adopted many of the same prohibitions (e.g., limiting unexpected interest rate hikes) and added terms to reduce credit availability for college students, which regulators hoped would decrease the likelihood that young borrowers would find themselves stuck in cycles of debt.¹⁰² The CARD Act’s ban on certain contract terms was meant to address the salience problem in this market: Consumers unknowingly paid high back-end fees (e.g., penalty fees, interest rate increases, and over-limit fees), enticed by attractive offers of 0 percent initial interest rates. By decreasing card networks’ ability to generate revenue from some of these hidden levers, CARD Act advocates hoped to decrease the overall cost of credit for consumers or at the very least make sure that consumers appreciated the true cost of credit.

I.B.3. Impact of Regulatory Intervention

The CARD Act changed the economics of the credit card business by turning a short-term revolving unsecured loan, which could reprice when signals of consumer riskiness materialized into a longer-term unsecured loan with lower ability to price-discriminate by risk type. Opponents of the CARD Act warned that the result would be higher interest rates for consumers across the board and a decrease in credit supply.¹⁰³ Empirical evidence (detailed below) illustrates that critics were wrong—the CARD Act increased overall consumer welfare. It is important to understand why these concerns were overblown.

Estimates suggest the CARD Act reduced overall credit card fees by nearly \$25 per account annually, resulting in total cost savings for credit card users of nearly \$12 billion per year.¹⁰⁴ These savings were largest (nearly \$60 per account per year) for the least-credit-worthy borrowers (those

¹⁰¹ Carolyn B. Maloney, press release, *The Credit Cardholder’s Bill of Rights* (Feb. 6, 2008), <https://maloney.house.gov/media-center/press-releases/credit-cardholders%E2%80%99-bill-rights-balanced-reform> (last visited on Mar. 14, 2018).

¹⁰² For this Article, I focus on the aspects of the CARD Act that regulated issuers’ back-end credit card contract terms rather than other features; for example, requirements that issuers’ assess borrowers’ ability to repay before providing credit. These too had unintended consequences: Until the CARD Act was amended, one group of borrowers who found their access to credit restricted is spouses or partners who do not work outside the home. See *The CFPB Amends Card Act Rule to Make It Easier for Stay-at-Home Spouses and Partners to Get Credit Cards*, CONSUMER FIN. PROTECTION BUREAU (Apr. 29, 2013), <https://www.consumerfinance.gov/about-us/newsroom/the-cfpb-amends-card-act-rule-to-make-it-easier-for-stay-at-home-spouses-and-partners-to-get-credit-cards/> (last visited on June 11, 2018).

¹⁰³ See, e.g., Tomoeh Murakami Tse, *supra* note 24.

¹⁰⁴ See generally Agarwal et al. *supra* note 16 (Provides the most exhaustive empirical work done on the impact of the CARD Act to date. The authors use a panel data set covering 160 million credit card accounts and adopt a difference-in-difference research design, comparing changes in outcomes over time for consumer credit cards (subject to the new regulations) to small business cards (which were exempted)).

with a FICO score below 660).¹⁰⁵ Overall, these savings represent a decrease in account fees of more than 20 percent.¹⁰⁶

Despite early anecdotal evidence to the contrary,¹⁰⁷ most academic work finds little support for the notion that banks offset the CARD Act's losses through increases in interest rates or other fees.¹⁰⁸ There appears to be no increase in interest rates in response to the CARD Act, either on existing accounts or on new accounts, which are less constrained by the CARD Act's repricing restrictions. However, there is some evidence that unregulated fees less salient to consumers—such as cash advance APRs—increased slightly in response to the CARD Act.¹⁰⁹

I.B.4. Unintended Consequences of Intervention

Evidence on the CARD Act's impact on credit supply is more mixed. While some authors find no impact on credit availability (no lower credit limits or more account closures¹¹⁰) others find the probability of account closure nearly doubled.¹¹¹ This discrepancy is attributable to the different stages of the CARD Act: Although the Act was passed in May 2009, the Board proposed similar rules in May 2008. Thus, although there is no increase in account closures after the CARD Act's passage, there appears to be an increase in account closures after the Board's earlier proposal.¹¹² But given that this earlier proposal coincides with the Recession, it is difficult to establish causally that decreased credit supply is attributable to imminent pricing restrictions rather than to the general economic downturn.¹¹³

Recent work suggests that the CARD Act did somewhat decrease credit supply for subprime borrowers.¹¹⁴ The existence of a supply-side credit effect, especially for the subprime, is consistent with industry commentary:¹¹⁵ In its recent assessment of the CARD Act, the American Bankers Association suggested it decreased credit availability for subprime borrowers, noting that

¹⁰⁵ Those with a FICO score above 660 experienced a smaller decline in fees, of around \$7.90 per account. *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ Connelly, *supra* note 10.

¹⁰⁸ One recent exception is economist Scott Nelson who suggests that the CARD Act's limits on interest-rate adjustment resulted in across-the-board higher interest rates on average for all borrowers at origination. However, he concludes that the reduction in lender rents outweighs the impact of higher prices, "so that on net, the Act's restrictions allow consumers of all credit scores to capture higher surplus on average." Nelson, *supra* note 16.

¹⁰⁹ Bar-Gill & Bubb, *supra* note 16.

¹¹⁰ Agarwal et al., *supra* note 16. (Finding the CARD Act had but unable to rule out an impact on the number of new accounts.)

¹¹¹ Jambulapati & Stavins, *supra* note 16.

¹¹² *Id.* Unfortunately, banks' reaction to the Board's proposed rules has not been considered by many academics in this space, for example Agarwal et al., *supra* note 16; and Bar-Gill & Bubb, *supra* note 16. Professor Todd Zywicki makes this argument in his critique of Agarwal et al., *supra* note 16: "The entire paper rests on a fatal flaw in the authors' understanding of the regulatory regime they examine." Todd Zywicki, *No, the Credit Card Act Is Not a Free Lunch*, THE WASH. POST (Jan. 13, 2016), https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/01/13/no-the-credit-card-act-is-not-a-free-lunch/?utm_term=.69fc36720335 (last visited on Apr. 30, 2018).

¹¹³ Jambulapati & Stavins, *supra* note 98 (making clear that it is difficult to determine whether the cause of account closures "was the economic downturn or preemptive action in anticipation of the new legislation").

¹¹⁴ Nelson, *supra* note 16.

¹¹⁵ See, e.g., Connelly, *supra* note 10.

During the past nine months, credit card companies jacked up interest rates, created new fees and cut credit lines. They also closed down millions of accounts. So, a law hailed as the most sweeping piece of consumer legislation in decades has helped make it more difficult for millions of Americans to get credit, and made that credit more expensive.

from 2008 to 2016, total credit card accounts for superprime borrowers rose from 151 million to 176 million while total credit card accounts for subprime borrowers fell from 89 million to 73 million.

Still, on aggregate, this credit-supply effect appears outweighed by a decrease in lender rents.¹¹⁶ The overall equilibrium effect of the CARD Act is an increase in consumer surplus estimated to be approximately \$12 billion annually.¹¹⁷ This finding is consistent with estimates from the CFPB, which argues that the total cost of consumer credit declined by two percentage points between 2008 and 2012.¹¹⁸

I.C. Overdraft

I.C.1. The Policy Problem

An overdraft occurs when a customer attempts to withdraw an amount from her checking account, either through an ATM withdrawal or point-of-sale purchase, that exceeds the funds available in her account. Banks earn overdraft revenue by allowing customers to complete these transactions for a fee. Historically, institutions determined whether to cover overdraft transactions on a case-by-case basis based on customer and overdraft characteristics. In the early 2000s, banks began transitioning to automated overdraft programs—often designed by third-party vendors¹¹⁹—to maximize bank overdraft revenue by, for example, ordering customer overdrafts by size and advertising overdraft to customers as a simple way to meet short-term borrowing needs.¹²⁰ To study the growth in overdraft revenue and how it shifts as a result of recent reform, I rely on data from bank regulatory filings. As Figure 5 illustrates, service charges on deposit accounts¹²¹ increased by more than 90 percent between 1999 and 2009. In fact, in 2006, overdraft fees accounted for around 6 percent of banks' *total* net operating revenues.¹²²

¹¹⁶ Nelson, *supra* note 16.

¹¹⁷ Agarwal et al., *supra* note 16.

¹¹⁸ *CARD Act Report: A review of the impact of the CARD Act on the consumer credit market*, CONSUMER FIN. PROTECTION BUREAU (Oct. 1, 2013), https://files.consumerfinance.gov/f/201309_cfpb_card-act-report.pdf (last visited on Mar. 14, 2018).

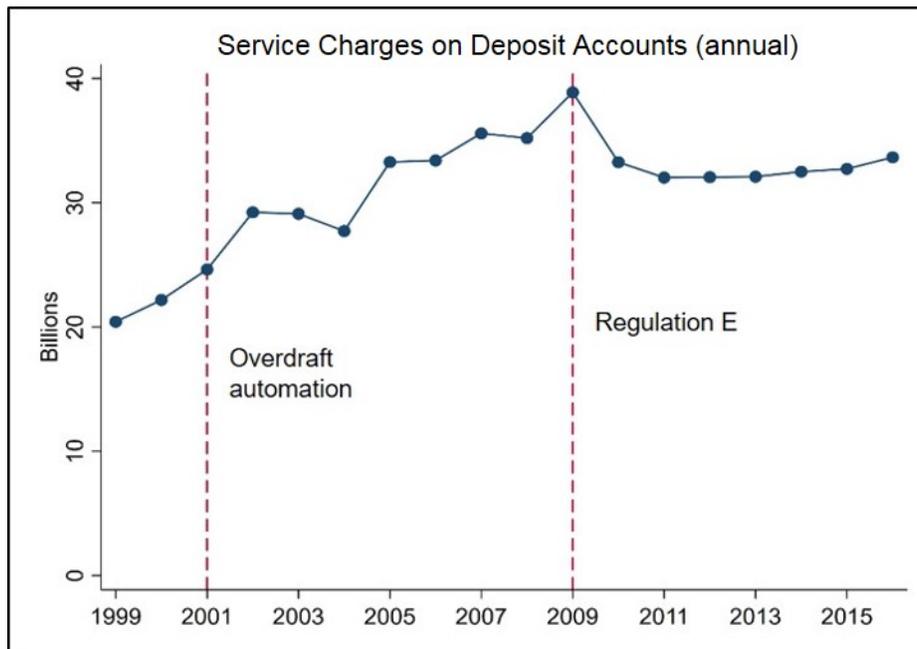
¹¹⁹ *FDIC Study of Bank Overdraft Programs*, FED. DEPOSIT INS. COMM'N. (Nov. 2008), https://www.fdic.gov/bank/analytical/overdraft/fdic138_report_final_v508.pdf (last visited on Mar. 14, 2018).

¹²⁰ *Id.*

¹²¹ Until 2015, bank overdraft fees were not reported as a line item on financial filings. Instead, “Service Charges on Deposit Accounts” includes overdraft and other fees, including check-cashing fees and monthly maintenance fees on deposit accounts. But overdraft fees, at least prior to changes to Reg-E, were responsible for a sizable fraction of service charges on deposit accounts. The FDIC estimated that fees related to non-sufficient funds (NSF) were over 75% of total service charges on deposit accounts in 2006. *Id.*

¹²² *Id.*

Figure 5



Notes: Author's calculations from bank regulatory filings (Call Reports)

Overdraft revenue is generated primarily by repeat overdrafters. Before the Recession, about 75 percent of accounts had no overdraft incidents, 12 percent had one to four, 5 percent had five to nine, 4 percent had 10 to 19, and only 5 percent had more than 20 overdrafts annually. Customers with more than 10 overdraft transactions—fewer than 10 percent of all checking account customers—accrued 84 percent of the reported overdraft fees.¹²³ These customers were less financially sophisticated and typically low-income: In 2006, 40 percent of low-income customers overdrafted, compared to only 20 percent of their wealthy counterparts. Low-income customers were also twice as likely to be frequent overdrafters.¹²⁴

Overdraft is essentially a very high-interest loan: A \$27 overdraft fee¹²⁵ for a \$20 overdraft incident that is repaid in two weeks is a bank loan with an APR of 3,520 percent. Banks offer cheaper ways to complete these transactions, for example, by opening an overdraft line of credit (usually an APR of around 18 percent) or linking a checking account to a savings/credit card account (costing a \$5 flat fee).¹²⁶ Given the availability of cheaper alternatives, banks' ability to generate overdraft revenue, especially from repeat overdrafters, is puzzling. One possible explanation for overdraft incidence is consumer inattention—nearly all consumers who overdraft are unaware that they are about to overdraw their accounts and unfamiliar with the magnitude of

¹²³ CONSUMER FIN. PROTECTION BUREAU, *supra* note 18.

¹²⁴ FDIC Study of Bank Overdraft Programs, *supra* note 119. Seven-point-five percent of low-income customers experienced 20 or more overdraft incidents in a year, compared to only 3.8% of high-income customers.

¹²⁵ Median for the FDIC study. *Id.*

¹²⁶ *Id.*

overdraft penalties.¹²⁷ The lack of salience of these fees to the consumers who bear them enables banks to generate large overdraft profits.

Prior to recent changes, bank customers were automatically opted in to overdraft protection. Given the rapid increase in overdraft fees since the early 1990s and their disproportionate incidence on low-income customers both popular commentators¹²⁸ and regulators¹²⁹ voiced concern.

I.C.2. Regulatory Approach to Solving the Problem

In 2005, the Federal Reserve amended Regulation DD,¹³⁰ which implements the Truth in Savings Act, to require additional disclosures about overdraft services and rein in misleading advertisements (e.g., representing an overdraft service as a line of credit or describing overdraft protection as free).¹³¹ Banks were also required to disclose total overdraft fees incurred in periodic account statements.¹³² Regulators hoped disclosures would nudge customers away from overdraft and push them toward cheaper alternatives.

Despite this intervention, overdraft fee income for banks and credit unions rose 35 percent from 2006 to 2008.¹³³ The Board then amended Regulation E¹³⁴ to change the default rules for overdraft. In January 2009, it requested comment on two policy defaults: (1) an opt-out default, which would prohibit banks from assessing overdraft fees unless customers were given notice and a reasonable opportunity to opt out of overdraft protection and chose not to; and (2) an opt-in default, which would prohibit banks from assessing overdraft fees unless customers affirmatively opted in.

The final rule adopted an opt-in approach.¹³⁵ In selecting this policy default, the Board specifically pointed to the fact that consumers unwittingly bear these fees, hoping to avoid situations going forward where consumers “may unintentionally overdraft their account based on the erroneous belief that a transaction would be paid only if the consumer has sufficient funds in

¹²⁷ *Overdraft America: Confusion and Concerns about Bank Practices*, PEW CTR. ON THE STATES (May 2012), http://www.pewtrusts.org/~media/legacy/uploadedfiles/pcs_assets/2012/sciboverdraft20america1.pdf.pdf (last visited on Mar. 14, 2018).

¹²⁸ Ron Lieber & Andrew Martin, *Overspending on Debit Cards Is a Boon for Banks*, THE N.Y. TIMES (Sep. 8, 2009) <http://www.nytimes.com/2009/09/09/your-money/credit-and-debit-cards/09debit.html> (last visited on June 11, 2018). One *New York Times* editorial called for regulators to “move quickly and aggressively to protect consumers”: Editorial, *Debit Card Trap*, THE N.Y. TIMES (Aug. 19, 2009), <http://www.nytimes.com/2009/08/20/opinion/20thu1.html> (last visited on June 27, 2018). The editorial offered vivid anecdotes, for example, of a college student who “made seven small purchases including coffee and school supplies that totaled \$16.55 and was hit with overdraft fees that totaled \$245.” See *id.*; see also Editorial, *That \$35 Cup of Coffee*, THE N.Y. TIMES (Nov. 13, 2009), <http://www.nytimes.com/2009/11/14/opinion/14sat2.html> (last visited on June 11, 2018).

¹²⁹ *FDIC Study of Bank Overdraft Programs*, *supra* note 119 (citing a 2006 FDIC study to gather data on overdraft programs in response to the growth in automated overdraft).

¹³⁰ 12 CFR Part 1030.

¹³¹ *FDIC Study of Bank Overdraft Programs*, *supra* note 119 (citing § 226.4(c)(3)).

¹³² *Id.*

¹³³ Leslie Parrish, *Overdraft Explosion: Bank fees for Overdrafts Increase 35% in Two Years*, CTR. FOR RESPONSIBLE LENDING (Oct. 6, 2009), <http://www.responsiblelending.org/overdraft-loans/research-analysis/crl-overdraft-explosion.pdf> (last visited on Mar. 14, 2018).

¹³⁴ 12 CFR, Part 1005.

¹³⁵ Changes to Regulation E involve only ATM and point-of-sale overdrafts. Overdrafts for check or scheduled recurring payments are not subject to the new opt-in requirement.

the account to cover it.”¹³⁶ Because consumers are likely to adhere to established defaults,¹³⁷ the Board believed the opt-in regime would help prevent expensive and frequent overdraft incidents.¹³⁸

The new default rule, which prohibits levying overdraft fees unless consumers actively opt-in to overdraft protection, was meant to be a strong nudge against overdraft protection: The Board concluded that consumers would prefer such transactions be declined and amended the default rule accordingly. This view is consistent with the Board’s own internal testing¹³⁹ and surveys,¹⁴⁰ which demonstrate that a majority of overdrafters would prefer transactions incurring overdraft fees not be completed.

I.C.3. Impact of Regulatory Intervention

In commenting on the likely impact of changes to Regulation E, industry experts predicted that the result would be higher fees or a reduction in bank services given that “overdraft fees . . . subsidize other checking account features consumers enjoy, such as free checking accounts, and free online payment.”¹⁴¹ Understanding the impact of changes to the overdraft opt-in regime—and the extent to which these are offset by sophisticated firms—can usefully inform debates about the desirability of behavioral policy interventions in consumer finance markets.

Figure 6 above shows that overdraft revenue decreased significantly following changes to the overdraft default rules. Service charges on deposit accounts declined by 14 percent in the year following the Board’s changes. Banks do not appear to have recovered these losses.¹⁴²

Have overdraft losses been offset by increases in other types of bank fees? Figures 1 and 2 above illustrate that free checking has decreased by 40 percent since 2010. However, this decrease is concentrated in banks above the \$10 billion Durbin cut-off. Unlike Durbin, the new overdraft opt-in regime applies to large and small banks alike. In fact, smaller banks, more dependent on overdraft as a source of revenue, were harder hit by the new opt-in default.¹⁴³ As such, the fee

¹³⁶ 74 Fed. Reg. 220, 59039.

¹³⁷ As support for this proposition, the Federal Reserve Board cited Brigitte Madrian & Dennis Shea, *The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior*, 116 Q. J. ECON. 1149 (2001); and Gabriel D. Carroll et al., *Optimal Defaults and Active Decisions*, 124 Q. J. ECON. 1639 (2009). Both studies are of automatic enrollment in 401(k) savings plans and find a significant increase in employee participation when the default rule is enrollment rather than a default that requires employees agree to participation.

¹³⁸ See Todd Zywicki, *Behavioral Law and Economics and Bank Overdraft Protection*, VOLOKH CONSPIRACY (Nov. 20, 2013), <http://volokh.com/2013/11/20/behavioral-law-economics-bank-overdraft-protection/> (last visited on June 11, 2018).

¹³⁹ See *Design and Testing of Overdraft Notices: Phase Two*, ICF MACRO (Oct. 12, 2009), <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20091112a4.pdf> (last visited on Mar. 14, 2018). Most consumers indicated that they would prefer an opt-in to an opt-out regime for ATM and point-of-sale transactions, because these transactions tend to be discretionary in nature.

¹⁴⁰ A 2012 Pew study reports that more than 75 percent of people who reported overdrafting said that they would have preferred the non-recurring debit transactions be declined. *Overdraft America*, *supra* note 127.

¹⁴¹ *Id.*

¹⁴² In fact, overdraft revenue may have decreased further since 2010. We know that “Service Charges on Deposit Accounts” includes monthly maintenance fees, which double for banks above the \$10 billion threshold in response to the Durbin Amendment. See Figure 3.

¹⁴³ As a result, smaller banks are more focused on opting in customers to overdraft protection: Community banks, for example, report opt-out rates of around 60 percent. Willis, *supra* note 33 at 1184.

increases observed appear to be more related to Durbin than to changes in banks’ overdraft policies.¹⁴⁴

But we know that the share of bank customers opted in to overdraft protection (and thus capable of incurring overdraft fees) decreased significantly following the new rule, from 100 percent to 16 percent.¹⁴⁵ Even among frequent overdrafters, only 45 percent have opted in to overdraft protection.¹⁴⁶

I.C.4. Unintended Consequences of Intervention

One way to interpret the higher opt-in rate for frequent overdrafters is that motivated banks seek to avoid the opt-in default for highly lucrative customers. The economic rationale for such behavior is clear: Prior to changes to the default rule, nine percent of customers generated 84 percent of interchange revenue.¹⁴⁷ By expending effort to opt in just this nine percent, banks could recover nearly all their overdraft revenue. However, another interpretation of this evidence is that frequent overdrafters like overdraft as a product—that is, they prefer overdraft protection to their transactions being declined.¹⁴⁸ Disentangling these two explanations is challenging, but well-designed regulation will discourage targeting of financially vulnerable consumers while still making overdraft as a product available to consumers who want it.

Table 1 below summarizes the three post-crisis interventions discussed in Part I.

Table 1. Summary of Interventions

Post-Crisis Intervention	Policy Problem	Regulatory Approach to Solving Problem	Impact of Regulatory Intervention	Unintended Consequences of Intervention
Durbin Amendment	Interchange became a large operating cost for merchants as use of credit/debit for payment exploded.	\$0.22 cap on debit interchange collected from merchants.	Bank interchange revenue fell by \$6.5 billion annually. Monthly checking account fees doubled. Substantial decrease in free checking.	Higher checking account fees for consumers. Shifted consumers to credit. Increased interchange fees for small-ticket merchants.
CARD Act	Rise in complexity of credit card contracts.	Restricts unannounced fee	Fee reductions of \$12 billion	Some evidence of anticipatory

¹⁴⁴ Although disentangling the two is difficult: Both were passed in Q2 2010, although changes to overdraft were previously proposed in 2008 and 2009.

¹⁴⁵ *CFPB Study of Overdraft Programs*, *supra* note 17 at 29. The opt-in rate is 22 percent for new accounts, which are easier to opt in to because they involve more direct contact with consumers.

¹⁴⁶ *Id.* at 30.

¹⁴⁷ *Id.* at 18.

¹⁴⁸ Professor Cass Sunstein suggests this rationale: For frequent overdrafters, “[i]t is plausible to think that opting in is a good idea. If they cannot borrow from their bank, they might have to borrow from someone else—which would mean a level of inconvenience . . . and potentially equivalent or higher interest rates.” Cass R. Sunstein, *Nudges vs. Shoves: The Benefits of Preserving Choice*, 127 HARV. L. REV. F. 210, 215 (2014).

	Unanticipated consumer fees.	increases and back-end penalty fees.	annually. Little evidence of offsetting increase in interest rates.	decreases in credit availability.
Overdraft	Overdraft revenue grew by more than 100% in a decade, due to automated overdraft programs aimed at generating revenue; e.g., by ordering transactions for maximum overdrafts.	Prohibit overdraft protection (and thus fees) unless customers opt-in, else transaction denied.	Share of customers opted in to overdraft protection decreases from 100% to 16% (22% for new customers).	Banks dependent on overdraft may target frequent overdrafters for opt-in: 10% are responsible for 85% of overdraft revenue; often poorest and least financially sophisticated.

II. LESSONS OF THESE INTERVENTIONS

This Article serves as a clear, empirical response to those in the regulatory community who believe consumer financial regulation will increase overall welfare regardless of the market particulars¹⁴⁹ and to those who believe any regulatory intervention will be ill-fated.¹⁵⁰ Neither group paints an accurate picture, and my work offers three primary lessons: First, the regulation of non-salient prices is desirable. This is because banks exploit consumers’ behavioral limitations—like over-optimism (e.g., consumers’ mistaken beliefs that they will never be delinquent in paying credit card bills) and inattention (e.g., consumers’ failure to read checking account contracts, which explicitly detail the significant costs of overdrafting). Banks charge exorbitant non-salient prices without worrying about losing customers. As such, policymakers must bring discipline to these markets by restricting shrouded pricing.

Second, in consumer finance markets, low-income consumers tend to pay higher prices than their high-income counterparts. The existence of inequitable cross-subsidization calls for regulatory intervention. These cross-subsidies arise for two distinct reasons: (1) high-income consumers are less likely to bear hidden penalty fees—because they tend to be more attentive and mechanically because they are wealthier, so less likely to overdraw their accounts or be delinquent

¹⁴⁹ See, e.g., Senator Dick Durbin and Representative Peter Welch’s response to calls to repeal Durbin, arguing aggressively in favor of regulatory intervention in this market: “Make no mistake—Visa, Mastercard, and the big banks want to scare Congress and regulators away from exerting oversight...They think that by discrediting Congressional efforts to rein in their rigged schemes in the past, they will enhance their ability to get away with rigged schemes in the future.” Dick Durbin & Peter Welch, *Sideswiped: The Hidden Motive Behind the Big Bank Push to Repeal Swipe Fee Reform*, MEDIUM (Sep. 28, 2016), <https://medium.com/@SenatorDurbin/sideswiped-the-hidden-motive-behind-the-big-bank-push-to-repeal-swipe-fee-reform-504b9a097827> (last visited on June 11, 2018).

¹⁵⁰ See, e.g., Professor Todd Zywicki’s sharp critiques of the three regulatory interventions studied in this paper, Todd J. Zywicki et al., *Price Controls on Payment Card Interchange Fees: The U.S. Experience*, ICLE (2014), https://www.law.gmu.edu/assets/files/publications/working_papers/1418.pdf (last visited on Nov. 2, 2018) (criticizing Durbin); Todd Zywicki, *Overdraft Protection Rules Could Hurt Consumers More Than They Help*, MERCATUS CTR. (Nov. 24, 2014), https://www.mercatus.org/expert_commentary/overdraft-protection-rules-could-hurt-consumers-more-they-help (last visited on June 11, 2018) (criticizing overdraft reform); Zywicki, *supra* note 138.

on a credit card payment; (2) high-income consumers have access to the most attractive financial products. For example, they transact with payment instruments that provide rewards for retail purchases. Cash users receive no similar benefits, and the result is a regressive transfer from low-income credit-less consumers to their wealthier counterparts.

Third, regulators should follow what banks do—not what they say. Every time regulators act, banks caution that consumers will be hurt, because affected institutions will have no choice but to pass costs through to consumers. These warnings lead many academics and policymakers to be skeptical of the desirability of intervention. However, how banks respond to regulation is ultimately an empirical question, and one that this Article undertakes to surprising results. Despite bank assertions to the contrary, in many instances, impacted institutions eat the losses from regulation, rather than passing them through to their customers. Being too beholden to how we believe banks will respond to regulation—rather than following the data to understand how banks actually respond to regulation—leads to an overly pessimistic view of regulatory efficacy. In the following Part, I elaborate on these lessons in greater detail.

II.A. Regulators Should Target Non-Salient Prices

This Article considers the efficacy of post-crisis price regulations in the debit interchange, credit card, and overdraft markets. Each interventions decreased banks' fee revenue, each targeted the same financial institutions, each was cheered by consumer advocates as welfare-enhancing, and each was decried by banks as likely to hurt exactly the consumers it sought to help.

While these three price regulations appear very similar, the empirical analysis in Part I demonstrates their varied efficacy. Consumers are helped by the CARD Act's cap on credit card penalty fees and restriction on unanticipated interest rate hikes. Net savings from this reform are on the order of \$12 billion annually.¹⁵¹ Consumers are also helped by changes to the overdraft regime. The new opt-in default rules decreased the share of consumers eligible to incur overdraft fees by nearly 85 percent.¹⁵² Service charges on deposit accounts declined by around 15 percent, and these losses have not been recovered.¹⁵³ In stark contrast, consumers are *harmed* by Durbin's cap on debit interchange fees. Durbin decreases bank interchange revenue (and merchant interchange expense) by around \$6.5 billion annually, and banks respond to this intervention by doubling account fees.¹⁵⁴ The share of bank customers with access to a free checking account declines by more than 40 percentage points, from 60 percent of customers to around 20 percent.^{155,156} And merchants—who save around \$6.5 billion annually from Durbin—do not pass-through these savings to consumers. Instead, they largely pocket the reduction in interchange expense, and their profitability rises.

Why do three price-regulations provoke such different responses by banks, and consequently, have such varied implications for consumer welfare? The answer is salience.

¹⁵¹ See Agarwal et al., *supra* note 16.

¹⁵² See *supra* Figure 6, at 23.

¹⁵³ There is no precise line item that captures total overdraft revenue. Instead, "Service Charges on Deposit Accounts" includes overdraft revenue as well as other account fees, like monthly maintenance fees. It is estimated that overdraft fees account for over 60 percent of total service charges. Overdraft revenue likely fell by even more than 15 percent, as bank account fees are rising around the same period.

¹⁵⁴ Mukharlyamov & Sarin, *supra* note 54.

¹⁵⁵ See Figure 2.

¹⁵⁶ \$0 monthly fee, regardless of account size.

Consumers tend to ignore certain aspects of product prices. Although they pay attention to salient terms—the sticker price of a car, the introductory APR offer on a new credit card solicitation—they ignore non-salient terms—e.g., the cost of refinancing and the penalty for late payments. As consumer finance has become an increasingly do-it-yourself industry, consumers are responsible for an increasingly intricate set of financial decisions.¹⁵⁷ Firms offer more products with greater complexity. For example, the sheer number of credit cards consumers can choose from has exploded, with each offering different terms and rewards benefits. These product differences are detailed in contracts that have increased in length from one page to more than 30 pages on average, giving credit card issuers more room to add hidden terms and fees to behemoth agreements that no reasonable consumer will ever read.¹⁵⁸

II.A.1. Price Regulation Can Tackle Salience Problems

Regulations that curb banks' ability to generate revenue from non-salient pricing terms are beneficial. This is especially true if the financial sector is dominated by large institutions that are able to exercise monopoly power. When large firms have market power, high non-salient prices mean excess profits for banks at the expense of consumers. When regulations curb non-salient prices—e.g., by capping them (like the CARD Act's restriction on late fees) or by requiring consumers to opt-in before incurring them (like changes to the overdraft default rules)—banks have a choice. They can offset losses by increasing salient prices or they can give up some of their rents. If banks choose to raise salient prices to offset these losses, they risk losing market share as customers flee to cheaper competitors.

Empirically, the case studies above illustrate banks' reluctance to adjust salient prices: There is no evidence that banks recover CARD Act losses by across-the-board interest rate increases, nor is there evidence that banks recover losses from the new overdraft regime. That said, even if banks *had* offset their losses, these regulations would still have been desirable. The existence of non-salient prices means consumers do not understand the true cost of consumer financial products. A credit customer thinks she is paying a 0 percent APR, but does not appreciate that the 0 percent is only for the first 6 months, or that she will pay \$35 every time she is delinquent. If she knew about these hidden fees, she would make a more-educated product choice—perhaps she would pick a card with a slightly higher introductory APR, but lower delinquency fees. Or perhaps she would choose to avoid credit cards entirely. Any regulation that restricts banks' ability to shroud prices will, at the very least, help consumers make more informed decisions.

II.A.2. An Alternative to Direct Price Regulation is a Shock to Consumer Attention

An alternative to reining in non-salient pricing directly is to make consumers aware of these exploitative pricing practices. Banks' initial response to Durbin illustrates the impact of making fees salient on both consumer and firm behavior. In the immediate aftermath of Durbin, many large banks proposed a \$5 monthly fee for customers who use their debit cards as a form of purchase. This fee became a rallying cry for the Occupy Wall Street movement—protesters burned Bank of America debit cards¹⁵⁹ and an online petition against the fee garnered more than 200,000

¹⁵⁷ J.Y. Campbell, Howell Jackson, Brigitte Madrian, & Peter Tufano. *Consumer Financial Protection*. J. OF ECON. PERSPECTIVES, vol. 25, no. 1, 91-114 (Winter 2011).

¹⁵⁸ Elizabeth Warren, *Unsafe at Any Rate*, DEMOCRACY (2007), <https://democracyjournal.org/magazine/5/unsafe-at-any-rate/> (last visited on Jan. 15, 2019) (providing an early description of why we need the CFPB: “The additional terms were not designed to make like easier for the consumer. Rather, they were designed in large part to add unexpected—and unreadable—terms that favor the card companies”).

¹⁵⁹ See Bernard, *supra* note 57.

signatures.¹⁶⁰ Lawmakers scorned the proposal, with then-Vice President Joe Biden labelling it as “incredibly tone deaf”¹⁶¹ and Senator Durbin urging consumers to “vote with their feet” and close accounts at these institutions.¹⁶² Normally, inattentive depositors heeded the call: Bank of America CEO Brian Moynihan reported that the number of people closing accounts in the immediate aftermath of the proposal jumped by more than 20 percent compared to the same period the prior year.¹⁶³ The proposed \$5 fee became so unpopular that all of the institutions chose to reverse it. Bank of America’s COO said the bank “listened to our customers very closely” and decided against moving forward with plans to charge this fee.¹⁶⁴ While banks still offset Durbin losses, the lesson of the failed \$5 debit usage fee is clear: Raising the salience of a price can incentivize consumers to make more-informed product choices.

The potential of such an approach is evident in the overdraft domain. Some support paternalistic mandates banning overdraft protection. But such blanket bans decrease the set of options available to consumers, some of whom may prefer the convenience of overdraft protection despite its high costs.¹⁶⁵ Rather than abandon a behavioral nudge in favor of a prohibitive mandate, in the case of overdraft, there is room for a salience shock that preserves consumer choice.

Bank of America implemented a version of a salience shock for overdrafts from ATM transactions. Now, consumers receive a notification when withdrawing cash asking if they want to complete transactions that will cause them to overdraft. The benefit of this approach is that it alerts consumers to penalty fees immediately before they are incurred, allowing them to weigh the benefits of completing their transactions against the high costs. Priming consumers in such a manner decreases the frequency of overdraft incidents.¹⁶⁶

The same is possible for point-of-sale transactions. If a consumer is buying a coffee and is about to overdraft, she could receive an alert indicating that if she completes the purchase, she will be charged a fee. The alert could also include a reminder that she can set up a less-expensive overdraft line of credit through her bank that will still allow her to complete the transaction. If the consumer is eager for caffeine and has no other means of payment, she may elect to complete it and pay the overdraft fee. But making the fee salient will decrease overdraft incidence for the nearly 70 percent of overdrafters who claim they would have preferred their transactions be declined to incurring high overdraft fees.¹⁶⁷

¹⁶⁰ Ann Carrns, *Petition on Debit Card Fee Attracts 200,000 Supporters*, THE N.Y. TIMES (Oct. 13, 2011), <https://bucks.blogs.nytimes.com/2011/10/13/petition-on-debit-card-fee-attracts-200000-supporters/> (last visited on June 11, 2018).

¹⁶¹ Amanda Terkel, *Joe Biden on Bank of America: At a Minimum, They Are Incredibly Tone Deaf*, HUFFPOST (Oct. 6, 2011), https://www.huffingtonpost.com/2011/10/06/joe-biden-bank-america-tone-deaf_n_998055.html (last visited on June 11, 2018).

¹⁶² Dick Durbin, Press Release, *Bank of America’s Outrageous New Fees*, DICK DURBIN, UNITED STATES SENATOR, ILLINOIS (Oct. 3, 2011), <https://www.durbin.senate.gov/newsroom/press-releases/bank-of-americas-outrageous-new-fees> (last visited on June 11, 2018).

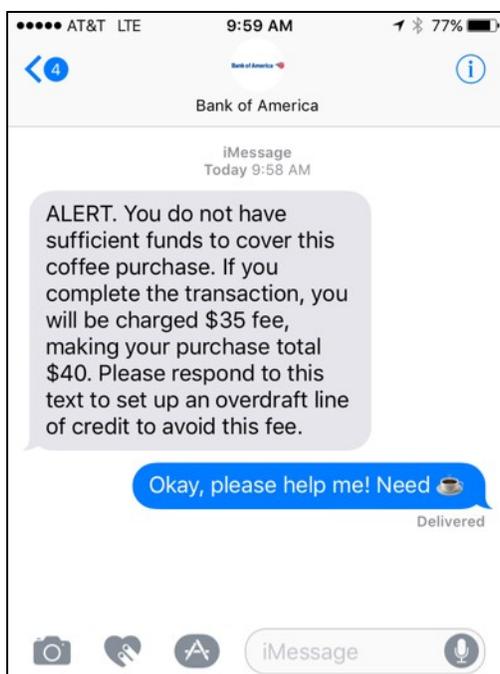
¹⁶³ Martha C. White, *Bank of America’s \$5 Debit Fee Led to More Account Closings, CEO Says*, TIME (Jan. 23, 2012), <http://business.time.com/2012/01/23/bank-of-americas-5-debit-fee-led-to-more-account-closings-ceo-says/> (last visited on June 11, 2018).

¹⁶⁴ Bernard, *supra* note 57.

¹⁶⁵ Sunstein, *supra* note 148 (highlighting this possibility in response to Bubb & Pildes, *supra* note 31).

¹⁶⁶ Victor Stango & Jonathan Zinman, *Limited and Varying Consumer Attention: Evidence from Shocks to the Salience of Bank Overdraft Fees*, 27 REV. FIN. STUD. 990 (2014) (finding in an experimental setting that consumers who face overdraft-related questions in surveys are less likely to incur these fees going forward).

¹⁶⁷ *Overdraft America*, *supra* note 127.



Sample “Salience Shock”

It is important to distinguish this call for such a salience shock in the context of overdraft from mandatory disclosures. Professors Omri Ben-Shahar and Carl Schneider provide a scathing indictment of mandatory disclosures, suggesting consumers suffer from two main problems that render disclosures ineffective: (1) an overload effect (i.e., disclosures are too complex to be understood) and (2) an accumulation problem (i.e., it is hard to remember a disclosure when it competes in your memory with information about all other disclosures—“memory is a sieve.”).¹⁶⁸ Additionally, many are skeptical of the usefulness of disclosures, noting that financial institutions generate rents by exploiting consumers’ tendency to underestimate the likelihood they will make a late payment or overdraft.¹⁶⁹ Therefore, overly optimistic consumers may opt in to overdraft protection (even if the high fees are clearly disclosed) because, although they believe it is unlikely they will ever use service, they want protection in case of emergency. This is why recent changes to overdraft disclosure forms proposed by the CFPB are unlikely to be very effective.¹⁷⁰

¹⁶⁸ Omri Ben-Shahar & Carl E. Schneider, *The Failure of Mandated Disclosures*, 159 U. PENN. L. REV. 647 (2011).

¹⁶⁹ See Barr et al., *supra* note 20.

¹⁷⁰ See *Know Before You Owe: Current Model Form A-9*, CONSUMER FIN. PROTECTION BUREAU, http://files.consumerfinance.gov/f/documents/201708_cfpb_A-9-form-ficus_overdraft-model-forms-prototypes.pdf (last visited on Mar. 15, 2018). Professors Bubb & Pildes provide a vivid analogy for why they believe mandated disclosures to be ineffective: “Given the structure of the self-control problem, solving it requires forcing or enticing the consumer not to engage in a transaction that, even with a clear-eyed understanding of the terms and risks, the consumer in that moment wants to make. But while Odysseus could have himself forcibly lashed to the mast, no easy way exists for consumers to commit themselves not to open that store line of credit promising no payments and no interest for the next twelve months. After all, Odysseus did not instruct his sailors to provide him with a ‘Total Cost of Swimming with the Sirens’ disclosure as soon as he got within earshot.” Bubb & Pildes, *supra* note 31. While a fair critique of disclosure in general, this is not an indictment of the proposed salience shock because we believe that, when made aware of the costs of overdrafting, consumers will overwhelmingly choose not to complete a transaction likely to incur a large fee. This is consistent with survey evidence suggesting that nearly all consumers do not realize

Disclosures—even very clear ones—may prime consumers to the costs of overdrafting, but it is impossible to expect people to retain this information or accurately estimate their likelihood of ever bearing these fees.

Instead, a behavioral salience shock like alerting consumers to the cost of an overdraft fee *immediately* before an overdraft incident has the potential to be successful because it avoids the overload, accumulation, and over-optimism problems. This immediate alert is a very simple disclosure that does not need to be recalled: Closer in spirit to sanitation grades outside restaurants that Professors Ben-Shahar and Schneider approve of than complicated credit card contracts. Because relevant information is presented to consumers immediately prior to an overdraft occurrence, a salience shock also overcomes their over-optimism.¹⁷¹ It makes the cost of overdraft salient when the overdraft incident is imminent, not long before the point at which consumers naively believe they will never make use of this service.

In proposing this salience shock, I follow the Ben-Shahar and Schneider suggestion that “brief, simple, and easy” disclosures work best when they are part of a “larger program of social change. Sometimes, the purpose of mandates is not to give people information for making the choice they prefer but rather to induce them to make the choice the lawmaker deems preferable.”¹⁷² This shock is meant to do precisely that—strongly nudge consumers away from the \$40 cup of coffee but preserve their right to reject the nudge.

One reason to be confident about the efficacy of a salience shock in the overdraft market is that it is already proven to work in practice. The UK Financial Conduct Authority found that customers who receive text alerts when their checking account balances fall close to zero reduce overdraft incidents by 24 percent.¹⁷³ As a result, all UK banking customers now receive these notifications.¹⁷⁴

The ability of increased salience to shape consumer choice is evidenced across consumer finance markets: When consumers considering a payday loan learn how its financing charge compares with the cost of borrowing a similar sum on a credit card, the use of payday loans falls significantly.¹⁷⁵ The same is true in the credit card market, where the CARD Act’s requirement that issuers disclose the benefits of early repayment increases consumers’ pre-payment significantly,¹⁷⁶ and the retail investing market, where consumers made aware of high mutual fund fees re-allocate investments.¹⁷⁷

Salience shocks can thus be extended to consumer finance products more generally. For example, for credit card, mortgage, or student loan late fees, a notification reminding a consumer to pay her bill immediately or incur a penalty would be more effective in discouraging delinquency than ex-ante disclosure of high penalty fees in these contracts. Given many consumers’ limited

they have overdrafted. In this setting, it’s more like Odysseus being tied to the mast when a simple alert from his fellow sailors—there are sirens coming and if they lure you off this boat it won’t end well—would have sufficed.

¹⁷¹ See Ben-Shahar & Schneider, *supra* note 168 at 743.

¹⁷² *Id.* at 744.

¹⁷³ *New Overdraft Alerts as CMA Banking Rules Come into Force*, *supra* note 25.

¹⁷⁴ Rob Goodman, *Red Alert: Banks Must Now Text You If You’re About to Slip into Your Overdraft*, THE SUN (Feb. 2, 2018), <https://www.thesun.co.uk/money/5484712/banks-must-now-text-you-if-youre-about-to-slip-into-your-overdraft/> (last visited on June 27, 2018).

¹⁷⁵ See Marianne Bertrand & Adair Morse, *Information Disclosure, Cognitive Biases, and Payday Borrowing*, 66 J. FIN. 1865 (2011).

¹⁷⁶ See Agarwal et al., *supra* note 16 (finding making salient the benefits of early repayment on monthly statements increases the number of account holders that repay early).

¹⁷⁷ Jill E. Fisch & Tess Wilkinson-Ryan, *Why Do Retail Investors Make Costly Mistakes? An Experiment on Mutual Fund Choice*, 162 U. PENN. L. REV. 605 (2014).

attention, interventions that make prices salient just prior to decisions that will precipitate penalties will limit costly consumer mistakes.

It is important to restrict these types of salience interventions and dynamically assess when they are most necessary and most likely to be effective. Shocking consumers along all the decisions they make—and all the fees they are assessed—is likely to run into Ben-Shahar and Schneider’s “accumulation” problem: “So many disclosures assail disclosees that they cannot possibly attend to more than a fraction of them.”¹⁷⁸ As such, it will be important to focus on salience shocks to target only lines of revenue generation that are (1) generating significant profits for large financial institutions and (2) seem poorly understood by the consumers bearing them.¹⁷⁹

Experimental evidence can usefully shed light about when “salience shocks” can help guide consumers toward optimal behavior, and when interventions are less useful. Compare the success of the UK’s overdraft shock (25 percent decrease in overdrafts) to the failure of an experiment in Mexico, where visually showing consumers that their debt burden is risky relative to peers has little impact on overall indebtedness (worse still, those who receive news that they are less risky tend to increase indebtedness).¹⁸⁰ Professor Omri Ben-Shahar highlights this proof that “smart disclosure” of the kind advocated for in this Section—“timely-relevant compact disclosure”—is unlikely to succeed.¹⁸¹

I am more optimistic and hypothesize that salience shocks can be effective when they alert consumers to a cost that they can immediately and easily avoid. In the overdraft setting, a consumer about to bear this fee purchasing her morning latte can simply pay with cash or begin her morning without caffeine. When a consumer who receives a notice—even a clear, easy to understand notice—that she is likely to default on her credit, and to reduce her risk she should “maintain [her] debt well below [her] credit limit”, the shock is less effective because the action demanded of her is more ambiguous.¹⁸² Shocks that highlight for consumers immediate costs and simple, easy ways to avoid them are likely to meaningfully shape behavior.

II.B. Regulators Should Address Inequitable Cross-Subsidies

Each of the three case studies in this Article feature cross-subsidization of wealthy consumers by their low-income counterparts. The fact that poorer consumers tend to pay higher prices for consumer financial products justifies regulation.

This inequitable cross-subsidization clearly exists in markets with salience problems for two distinct reasons. First, low-income consumers are more prone to behavioral limitations that financial firms exploit. They are more inattentive (less likely to read complex credit contracts) and

¹⁷⁸ Ben-Shahar & Schneider, *supra* note 168 at 687.

¹⁷⁹ For example, pre-crisis dependency on overdraft income and credit card back-end fee income hinted at numerous salience problems. Further work should consider the appropriate regulatory design, but as a starting point, I suggest a model for consumer finance following on Robin Greenwood et al., *Strengthening and Streamlining Bank Capital Regulation*, BROOKINGS PAPERS ON ECON. ACTIVITY (Fall 2017), in the macroprudential risk arena. These authors propose a dynamic stress test by each year rounding up the “most highly compensated line managers or traders” and then “stressing the exposures most closely associated with these employees.” In the consumer finance setting, the CFPB seems well suited to such dynamic assessments. *See id.*

¹⁸⁰ Seira, Enrique et al. *Are Information Disclosures Effective? Evidence from the Credit Card Market*, ECON. J.: ECON. POL’Y 277 (2017).

¹⁸¹ Ben-Shahar, Omri. *More Failed Nudges: Evidence of Ineffective ‘Behaviorally Informed’ Disclosures*. Contracts Jotwell (Aug. 10, 2017), <https://contracts.jotwell.com/more-failed-nudges-evidence-of-ineffective-behaviorally-informed-disclosures/> (last accessed Jan. 22, 2019).

¹⁸² Seira et al. *supra* note 180 at 288.

more naive (more likely to under-estimate the chances that they will pay penalty fees).¹⁸³ Second, these consumers are less financially stable: They make less money and as a result have fewer funds in their bank accounts, increasing the likelihood of overdrafting. Similarly, they have less disposable income less money available to repay bills in a timely manner.

Note that these characterizations are generalizations: certainly, some low-income consumers closely read every financial contract; and some high-income consumers have lavish spending habits and limited savings. However, as a general rule, low-income customers disproportionately bear shrouded bank fees: An FDIC study estimates that fewer than 20 percent of consumers with median household income of \$70,000 or more regularly overdraw, whereas more than 40 percent of consumers making less than \$30,000 per year overdraw their accounts and bear penalty fees.¹⁸⁴ Similarly, although nearly 70 percent of customers below the poverty line are in credit card debt (and thus capable of incurring penalty fees), this share is closer to 50 percent for consumers who make more than \$100,000.¹⁸⁵ Additionally, the wealthy tend to have access to cheaper financial products—checking accounts with no monthly fees¹⁸⁶ and credit cards with attractive rewards and low interest rates. These products are often offered at below-cost prices: Consider a \$0 checking account. Providing a checking account is costly to the bank: For example, the bank needs to build a national ATM network, hire tellers to process transactions, monitor potential fraud in your account, and develop online banking technology. And yet, prior to Durbin, banks offered this product for free. They could afford to do this because fees from primarily low-income consumers, such as overdraft revenue, helped cover the cost of providing these services.¹⁸⁷

Regulating non-salient prices will help the low-income because it will decrease this cross-subsidization. But it can also help the wealthy. Avoiding non-salient fees is time-consuming. Imagine your friend Penny is both sophisticated and highly cost-sensitive. If there is a penny to be saved, she will expend tremendous effort to save it. To avoid potentially overdrafting, she either calls her bank to check her account balance before making every purchase or pays with cash. She continuously signs up for new credit cards to take advantage of 0 percent APR offers, carefully records when these rates expire, and closes the accounts before the introductory period ends. She sets alarms on her phone and leaves notes on her refrigerator reminding her of deadlines for credit card payments, lest she delay by a single day. Avoiding shrouded fees is utility-enhancing for Penny—she pays less for financial services than her less careful counterparts. However, from a

¹⁸³ See, e.g. Nadia Massoud, Anthony Saunders & Barry Scholnick, *The impact of wealth on financial mistakes: Evidence from credit card non-payment*, J. OF FIN. STABILITY (Vol. 9, Issue 1 2013) (finding that individuals who make avoidable credit card mistakes—e.g., incur credit card penalty fees despite having sufficient funds in their deposit accounts—are poorer. These authors point out that there is a difference between individuals who overlimit in spite of having sufficient funds available and those who overlimit because they don't have sufficient funds and are facing financial difficulties. Although we expect the latter to primarily be lower-income consumers, it is not ex-ante obvious that the former—those who make mistakes like forgetting to mail checks on time or miscalculating their account balances and overdrawing—will be. Wealthier consumers may simply not care about the cost of incurring relatively minor fees. However, the empirical evidence shows that poorer consumers are much more likely to pay avoidable penalty fees. These results are consistent with behavioral models that the poor are more financially unsophisticated and hold even after accounting for differences in educational attainment.)

¹⁸⁴ *FDIC Study of Bank Overdraft Programs*, *supra* note 119.

¹⁸⁵ Tamara Draut & Javier Silva, *supra* note 92.

¹⁸⁶ Prior to Durbin, most consumers had free checking accounts; post Durbin—only the rich, with sufficiently large account balances. See Mukharlyamov & Sarin, *supra* note 54.

¹⁸⁷ Willis, *supra* note 33 at 1177 (highlighting that banks are explicit that overdraft revenue subsidizes checking account provision).

societal perspective, this behavior is inefficient.¹⁸⁸ Even consumers who benefit from cross-subsidization are expending inefficient energy to preserve these benefits. More upfront pricing of consumer products will reduce these inefficiencies.

Importantly, inequitable cross-subsidization is also commonplace in markets that do not feature price shrouding. Even in the absence of salience problems, regulators should intervene to address regressive transfers. For example, many who study the interchange market highlight its unfairness: Low-income consumers pay higher prices for retail goods than the wealthy.¹⁸⁹ When consumers pay in cash, merchants pay nothing to process these transactions. Cash-paying consumers tend to be the poorest—those without access to debit or credit instruments.¹⁹⁰ When consumers pay with debit cards, merchants pay relatively low interchange fees. Debit-paying consumers are slightly better off than those who use cash, but still relatively low-income, without access to credit.¹⁹¹ Credit usage is most pronounced among the wealthy.¹⁹² When consumers pay with rewards cards, merchants pay exorbitant interchange fees, often upwards of 4 percent of the value of the transaction. Some of that 4 percent goes to the card networks, which profit from interchange. But some of it also goes to wealthy consumers: A customer who uses a rewards card to buy a new pair of \$100 sneakers gets 1.5 percent cash back, paying only \$98.50 for her new Nikes. A customer who uses cash to make that same purchase pays the full \$100. These dollar values may seem minute, but they accumulate quickly: On average, card-using households receive nearly \$1,200 from cash users every year.¹⁹³ Rewards are subsidized by higher retail prices for low-income consumers.

One way to decrease the incidence of regressive transfers is to ban loyalty rewards programs. Economists estimate that eliminating credit rewards would increase consumer welfare.¹⁹⁴ The intuition is simple: Banks generate high interchange revenue by offering attractive rewards programs to card-using consumers. If these rewards programs disappear, consumers will have no incentive to transact with payment instruments that are especially expensive to merchants. Less-frequent use of these cards will lower merchant costs. As the conceptual framework offered in the Appendix illustrates, lower merchant costs will lead to lower retail prices. These savings

¹⁸⁸ See, e.g., Chavie Lieber, *The Credit Card Obsessives Who Game the System—And Share Secrets Online*, RACKED (Apr. 1, 2015), <https://www.racked.com/2015/4/1/8320731/credit-card-points-miles> (last visited on June 11, 2018).

¹⁸⁹ Aaron Klein, *America's poor subsidize wealthier consumers in a vicious income inequality cycle*, THINK (Feb. 6, 2018), <https://www.nbcnews.com/think/opinion/america-s-poor-subsidize-wealthier-consumers-vicious-income-inequality-cycle-nca845091> (last visited on Jan. 16, 2019).

¹⁹⁰ Kumar, Raynil, Tayeba Maktabi, & Shaun O'Brien, *Findings from the Diary of Consumer Choice*, FED. RES. BANK OF SAN FRANCISCO (Nov. 15, 2018), <https://www.frbsf.org/cash/publications/fed-notes/2018/november/2018-findings-from-the-diary-of-consumer-payment-choice/> (last visited in Jan. 28, 2019) (point out that “for individuals in households that earn \$50,000 or less, cash is the most common form of payment, followed by debit. As income rises, credit and debit replace cash as the most commonly used payment instrument”).

¹⁹¹ *Id.* (finding that for households with less than \$25,000 in annual income, cash is the most common means of purchase; for households who make between \$50,000–\$75,000, debit is the most common means of purchase; and for households that make more than \$125,000, credit is the most common means of purchase.)

¹⁹² *Id.* (noting that at incomes above \$100,000, households use credit cards to pay for the largest number of transactions—33 percent of their total. In contrast, those with incomes below \$25,000 disproportionately use cash—for nearly 50 percent of their transactions—and use credit cards only 7 percent of the time) (last visited on Jan. 15, 2019).

¹⁹³ Schuh et al., *supra* note 28.

¹⁹⁴ *Id.*, *supra* note 28.

will accrue most significantly to the low-income, eliminating the “reverse Robin-Hood problem” of the current payment regime.¹⁹⁵

As with regulations to rein in price shrouding, eliminating this cross-subsidy clearly helps the low-income, decreasing the prices they bear. But it helps consumers more broadly as well. Many are point-chasing fanatics, maintaining several credit cards and expending both mental energy and time to determine which card to use for groceries, which offers the highest cash-back rewards, and when to close accounts before teaser offers expire.¹⁹⁶ This may be utility enhancing for individuals who derive pleasure from maximizing rewards; however, it is hard to view this intensity of search as socially desirable.¹⁹⁷

Banning credit card rewards is unlikely to be a popular regulatory approach. A less-aggressive alternative to eliminate cross-subsidization is to allow retailers to price-discriminate. Inequities in this market arise from the fact that retail prices are uniform. It can cost merchants \$4 to process a \$100 credit card transaction, but there are legal and contractual barriers that prohibit merchants from surcharging credit card consumers to cover those \$4 of interchange expense. If merchants could pass through these processing fees to card users alone, the result would be lower retail prices for the cash-paying low-income consumers. And card users could decide whether the benefits of card usage—e.g., the cash-back, the airline miles—were worth paying an extra \$4.

An even milder approach is to allow merchants to encourage consumers to use cheaper forms of payment. Card networks ban merchants from directly signaling to consumers that rewards cards have higher processing fees than other cards. These “anti-steering provisions” make it impossible for retailers to nudge consumers toward cards with lower interchange expense. Allowing merchants to suggest consumers use cheaper payment alternatives will decrease inequitable cross-subsidies by reducing the incidence of transactions with rewards cards. Eliminating anti-steering restrictions would also encourage the emergence of credit cards with lower interchange fees: Because merchants will be able to push consumers to use cheaper cards, there will be greater incentive for card networks to compete to be the card most recommended by retailers.

II.B.1. Regulators Should Use Consumer Protection Authority to Tackle Inequitable Cross-Subsidization

Through a series of recent antitrust cases, merchants sought to implement some of the policies I propose: allowing retail price discrimination through surcharging consumers who use

¹⁹⁵ See, e.g., Steven Semeraro, *The Reverse-Robin-Hood-Cross-Subsidy Hypothesis: Do Credit Card Systems Effectively Tax the Poor and Reward the Rich?* RUTGERS LAW J., VOL. 40, NO. 2 (2009) (discussing the interchange market colorfully: “Robin Hood and his band of merry men infamously, if apocryphally, robbed from the rich and gave to the poor. Over the last decade, some economists have postulated that credit card companies do the opposite – forcing low-income cash customers to pay higher prices for retail goods that effectively fund the frequent flier miles and other rewards that go predominantly to affluent cardholders.”).

¹⁹⁶ See, e.g. Copeland, Rob, *If You Have 29 Credit Cards, You’re Probably a Millennial*. THE WALL ST. J. (March 31, 2017), <https://www.wsj.com/articles/if-you-have-29-credit-cards-youre-probably-a-millennial-1490972634> (last visited on Jan. 20, 2019) (detailing how “fanatics sign up for new cards in every city they visit. They get multiple versions of the same card. (That’s often allowed.) They angle to use their cards to cover tabs at restaurants.” One tale of point-chasing obsession stands out: a customer, so disappointed about being rejected for a Chase Sapphire Reserve, constructed a costume of the card out of cardboard and sent the bank a photo, hoping for reconsideration).

¹⁹⁷ Lieber, *supra* note 188 (noting that “a large part of the [point-chasing] community doesn’t actually like to travel, but they love gaming the system. It’s like extreme couponing: Those people get, like, 10,000 diapers for free even though they don’t have kids. In this case, some people care about screwing the airline.”).

expensive payment instruments¹⁹⁸ and removing anti-steering prohibitions.¹⁹⁹ The antitrust argument is that these practices help too-big-to-fail institutions engage in anticompetitive exercises of market power, creating barriers to entry for new competitors facilitating collusion to generate supracompetitive profits.

Historically, antitrust has been a powerful tool to rein in card-network behavior. In the mid-1990s, Visa's and MasterCard's "exclusivity rules," which prohibited member banks from issuing cards from emerging competitors (Discover and American Express), were found to unfairly reduce competition. And after extensive litigation, card networks agreed to make changes to "Honor-All-Cards" rules—which required merchants to accept all networks' cards (even high-cost rewards) if they wanted to accept any of them,²⁰⁰ and card networks agreed to pay billions in damages for price-fixing.²⁰¹

However, recent trends in antitrust—directly related to interchange—question the viability of continued reliance on judicial enforcement in this setting. In *Ohio v. American Express*, believed by some to be the "most significant antitrust decision in a decade,"²⁰² the Supreme Court held that American Express' anti-steering terms—which prohibit merchants from encouraging consumers to use credit cards with lower interchange fees—are not anticompetitive. The Court's basic argument was that because the interchange market is two-sided (meaning that card networks' profits depend on simultaneously marketing their product to merchants to accept their cards, and to consumers to use them), proof of anticompetitive harm must consider both sides of this market. Thus, although one side of the market (merchants) may be harmed by anti-steering provisions, this harm must be weighed against countervailing benefits that accrue to consumers who use these cards and get attractive rewards.

Many antitrust experts point out flaws in this reasoning²⁰³ and believe the Court erred by ignoring clear impediments to competition that eliminate the incentive for card networks to

¹⁹⁸ See, e.g., *Expressions Hair Design v. Schneiderman* 137 S.Ct. 1144 (2017) (holding no-surcharge statutes, barring merchants from charging consumers higher prices for credit card usage, implicate First Amendment concerns). See also *What Have Merchants Gained from Payment Card Antitrust Litigation*, MINTZ (Aug. 3, 2016), <https://www.mintz.com/insights-center/viewpoints/2301/2016-08-what-have-merchants-gained-payment-card-antitrust> (last visited on Dec. 14, 2018). (Interestingly, in some cases merchants allowed to offer cash discounts and discounts for debit (versus credit) usage, although these rules vary by state and even by merchant.)

¹⁹⁹ See, e.g., *Ohio v. American Express Co.*, 585 U.S. __ (2018) (holding although anti-steering provisions may restrict card network's incentives to decrease merchant interchange rates, determination of whether these provisions are anticompetitive requires consideration of countervailing benefits that accrue to consumers from using rewards cards).

²⁰⁰ Although "Honor all Cards" lawsuits for debit versus credit cards resulted in settlement, merchant suits to decouple rewards credit acceptance from non-premium credit card acceptance remain live and a new set of litigation is likely to emerge around "Honor all Devices" terms, whereby merchants that accept payment instruments housed in one digital wallet have to accept all digital wallets, regardless of the costs associated. Adam Levitin, *Pandora's Digital Box: Digital Wallets and the Honor All Devices Rule*, CREDIT SLIPS (May 31, 2016), <http://www.creditslips.org/files/pandoras-digital-box.pdf> (last visited on Nov. 2, 2018).

²⁰¹ In fact, a recent class action suit alleging collusive pricing practices was settled but then invalidated, largely because it restricted merchants' future ability to bring such suits. AnnaMaria Andriotis, *Visa, Mastercard Near Settlement Over Card-Swipe Fees*, THE WALL ST. J. (June 29, 2018), <https://www.wsj.com/articles/visa-mastercard-near-settlement-over-card-swipe-fees-1530193694> (last visited on Nov. 2, 2018).

²⁰² Lina Khan, *The Supreme Court Just Quietly Guttured Antitrust Law*, VOX (Jul. 3, 2018), <https://www.vox.com/the-big-idea/2018/7/3/17530320/antitrust-american-express-amazon-uber-tech-monopoly-monopsony> (last visited on Nov. 2, 2018).

²⁰³ See, e.g., Guniganti, Pallavi, *Amex ruling is an "economic nightmare," Hovenkamp says*, GLOBAL COMPETITION REV. (Sep. 7, 2018), <https://globalcompetitionreview.com/article/usa/1173902/amex-ruling-is-an-%E2%80%9Ceconomic-nightmare%E2%80%9D-hovenkamp-says> (last visited Jan. 20, 2019).

compete to offer lower merchant interchange rates.²⁰⁴ This is a reasonable critique. However, independent of any concerns about monopoly pricing, the existence of inequitable cross-subsidies in the interchange market, and more broadly in most financial markets, justifies intervention on consumer protection grounds because it is unfair that low-income consumers pay higher prices than their wealthy counterparts.

Specifically, Section 1031 of the Dodd-Frank Act provides the CFPB with broad authority to intervene to prohibit “unfair, deceptive, or abusive acts or practices” (collectively, “UDAAPs”). Practices may be unfair, deceptive, *and* abusive—but each prohibition is governed by distinct standards:²⁰⁵ Roughly, unfair acts are those likely to cause substantial injury, are not reasonably avoided, and lack countervailing benefits; deceptive acts are those likely to mislead consumers; and abusive practices are those that take unreasonable advantage of consumer lack of understanding of the risks, costs, or conditions of consumer finance products or services.

Financial institution practices that create cross-subsidies, like anti-steering provisions and prohibitions on merchant surcharging, are likely UDAAPs because they are unfair to low-income consumers: These consumers pay more for goods because they do not receive rewards kickbacks. In many cases, these consumers cannot reasonably act to avoid injury because they do not have access to premium rewards cards. Although there are countervailing benefits from loyalty rewards, crucially, these do not accrue to the same class of customers who suffer harm. Although the CFPB has yet to assert its UDAAP power in this setting, it likely has the authority to target payment products for the cross-subsidies they create.

Crucially, UDAAP power—unlike antitrust authority—does not require that consumer advocates demonstrate proof of anticompetitive harm to justify intervention. Thus, this Article hopes to push policymakers away from a singular focus on market concentration, which creates unnecessary hurdles that, in the current judicial climate, may be insurmountable.²⁰⁶ It is true that the financial sector is concentrated and becoming increasingly more so: Five megabanks hold more than half the domestic deposits in the United States.²⁰⁷ This prompts calls by policymakers and academics to “break up the banks.”²⁰⁸ Card networks are even more concentrated—Visa and Mastercard control more than 70 percent of the payment card market.²⁰⁹ It is plausible, and perhaps even likely, that the markets I study feature large financial institutions using their market power to

²⁰⁴ The District Court in *Ohio v. American Express* found that anti-steering discourage card network competition. “Because the provisions eliminated any advantage that lower prices might produce, Discover ‘abandoned its low-price business model’ and raised its merchant fees to match those of its competitors.” *Supra*, note 197 Breyer, J., dissenting.

²⁰⁵ Although the “abusive” standard has rarely been used as providing stand-alone authority—it is used to justify intervention to prevent practices that are also “deceptive” or “abusive.” Adam Levitin, *CFPB ‘Abusive’ Rulemaking? CREDIT SLIPS* (Oct. 17, 2018), <https://www.creditslips.org/creditslips/2018/10/cfpb-abusive-rulemaking.html> (last visited on Jan. 28, 2019) (pointing out that of the 206 enforcement actions to date, the CFPB has brought ‘abusive’ claims in only 27 cases, and in all but one the allegations alleged to be abusive were also alleged to be either unfair or deceptive).

²⁰⁶ *See, e.g., Khan, supra note 202* (suggesting that the Court’s decision in *Ohio v. AmEx* makes it harder to enforce antitrust laws and consequently easier for dominant firms “to abuse their market power with impunity”).

²⁰⁷ Trefis Team, *The Five Largest U.S. Banks Hold More Than 40% Of All Deposits*, FORBES (Dec. 14, 2017), <https://www.forbes.com/sites/greatspeculations/2017/12/14/the-five-largest-u-s-banks-hold-more-than-40-of-all-deposits/#7fc1a52116aa> (last visited on Jan. 15, 2019).

²⁰⁸ *See, e.g., Sylvan Lane, Bernie Sanders introduces bill to break up big banks*, THE HILL (Oct. 3, 2018), <https://thehill.com/policy/finance/409785-bernie-sanders-introduces-bill-to-break-up-big-banks> (last visited on Nov. 2, 2018).

²⁰⁹ *The Nilson Report*. (June 2018), https://nilsonreport.com/publication_newsletter_archive.php?1=1&year=2018 (last visited on Jan. 29, 2019).

generate supracompetitive profits.²¹⁰ However, even abstracting away from market power concerns, regulators can—and should—intervene in these markets on consumer protection grounds. The fact that consumers wealthy pay lower prices than their low-income counterparts justifies regulation. The focus on market power is thus unnecessarily limiting.

One important caveat is, the fact that regulators can and should intervene in these markets does not mean all interventions will be beneficial. Durbin provides a powerful example of how ill-designed regulation can exacerbate the problems it seeks to correct. The interchange market features an inequitable cross-subsidy: Low-income consumers pay more for retail goods than their wealthier, rewards-earning counterparts. Rather than help these consumers, Durbin harmed them. As a result of the cap on debit interchange fees, bank fees doubled. These increases are borne entirely by low-income consumers, because fees are waived for wealthy consumers with sufficiently high account balances.²¹¹

Unlike Durbin, well-designed interchange regulation should focus on *credit* interchange. The success of this approach is elucidated by predecessor legislation in Australia, where the cap on credit card interchange fees decreased the benefits to banks from credit usage: Consequently, banks lowered credit card rewards, thereby decreasing cross-subsidization of the wealthy by their low-income counterparts.²¹²

Perversely, Durbin learned little from the Australian example. Instead, this legislation capped *debit* interchange fees, leaving *credit* interchange fees unchecked. Rather than reduce credit card rewards, banks were incentivized to offer even more generous rewards programs to encourage consumers to use credit, for which interchange rates remain unregulated.²¹³ For consumers without access to credit cards, this widens the gap between the prices they pay and the prices the wealthy pay for retail goods. For the financially fragile with access to credit, the nudge toward credit leads to higher indebtedness, trapping these consumers in expensive cycles of debt. Overall, Durbin harms consumers—especially the low-income—increasing the inequitable cross-subsidies that well-designed intervention in this market should address.

II.B.2. Regulation that Helps Low-Income Consumers—Even if at the Expense of Their Wealthy Counterparts—Is Desirable

When policymakers debate regulation, they often discuss consumers as a group. Calling for a Consumer Product Safety Commission, Senator Warren described the inequities of a market with profit-hungry banks on one side; and naive consumers on another. The issue with these markets, she argued, was that prior to the crisis regulators “focus intently on bank profitability and far less on the financial impact *on consumers* of many of the products the banks sell.”²¹⁴

²¹⁰ Or, profits above what could be sustained in a competitive market.

²¹¹ Mukharlyamov & Sarin, *supra* note 54 (finding that more than 70 percent of consumers in the lowest income quintile pay account fees post-Durbin, compared to only 5 percent of those in the highest quintile).

²¹² See Testimony of Dr. Philip Lowe, HOUSE OF REPRESENTATIVES STANDING COMM. ON ECON., FIN. AND PUB. ADMIN. (EFPA) (2005) (commenting on the impact of the Australian credit interchange cap: “The value of reward points has been cut, some merchants have introduced surcharges, and annual fees have been increased. From our perspective, these are all welcome developments. On average, the value of reward points on those cards that offer points has fallen from around 0.8 per cent of the amount spent to around 0.65 per cent of the amount spent”), <https://www.aph.gov.au/binaries/hansard/reps/commtee/r9267.pdf> (last visited on Jan. 15, 2019).

²¹³ See, e.g., Kevin Wack, *Did Durbin amendment lead to unintended credit card splurge?* AM. BANKER (Feb. 27, 2017), <https://www.americanbanker.com/news/did-durbin-amendment-lead-to-unintended-credit-card-splurge> (last visited on Jan. 15, 2019).

²¹⁴ Emphasis added. Warren, *supra* note 158.

This was certainly true of the pre-crisis regulatory regime. However, this view misses the important nuance that consumers are heterogeneous. It is overly simplistic to think of these markets as featuring bad actors (banks) exploiting naïve actors (consumers). It is still simplistic (though less so) to think of these markets as I do in this Article: as featuring banks, sophisticated consumers, and unsophisticated consumers. Sophistication and income status tend to be closely related: Higher income consumers tend to be more sophisticated and have more money in their bank accounts: practically, this means that the high penalty fees that low-income customers are likely to pay subsidize banks offering cheaper financial products to those who are wealthier.²¹⁵

There are reasons to believe that reducing this inequitable cross-subsidization can be Pareto improving—e.g., by decreasing the prices that poor consumers pay for financial products without making the wealthy worse off. As I illustrate in the Appendix, this can result if banks charge supracompetitive prices to generate excessive rents. Imagine a large sneaky bank. Sneaky Bank rips off customers and charges excessively high prices. For a checking account that costs \$100 to provide, Sneaky Bank charges \$105. It also charges consumers that overdraft an extra \$20—this means unsophisticated consumers pay \$125 for their checking accounts; and sophisticated consumers pay \$105. Now imagine that regulators cap overdraft fees at \$0. Sneaky is making less revenue from unsophisticated customers. But if Sneaky raises baseline checking account prices to cover these losses, then it may lose customers. It is possible that banks like Sneaky Bank will not offset losses from regulation: the CARD Act and the new overdraft default rules are examples of this phenomenon.

What if instead Sneaky Bank used to be less sneaky: it charged \$100 for their checking accounts, which cost them exactly \$100 to provide. But then a competitor realized that it could offer free checking (a \$0 bank account) and cover costs by charging \$200 in overdraft fees to only unsophisticated customers. Sneaky Bank was forced to change its pricing to mimic this competitor, otherwise it would have lost all its customers. This means that sophisticated consumers who avoid overdraft fees end up with cheaper bank accounts even though banks do not necessarily generate rents from pricing in this manner. If a regulator caps overdraft fees at \$0, Sneaky Bank will be forced to raise checking account prices to cover costs. In this example, sophisticated consumers would be harmed, because their checking account costs increase from \$0 to \$100. This intervention would not increase overall consumer welfare. However, it would increase welfare for the financially fragile, who were being disadvantaged by shrouded pricing: This is a progressive reform that will create more equitable financial markets.

The stylized Sneaky Bank examples are meant to illustrate a simple point: no matter the market dynamics at play—whether oligopoly with banks making excessive profits; or perfect competition with zero bank profits; or some middle ground—regulation to tackle cross-subsidization is desirable.²¹⁶ The relevant metric for policymakers should not be whether intervention increases consumer welfare overall, but rather whether it creates a more equitable financial system. Practically, the interventions this Article advocates for in the interchange market (like decreasing loyalty rewards or allowing merchants to surcharge wealthy customers who use cards with higher interchange fees) may not benefit every group of consumers. The wealthy, who

²¹⁵ See Willis, *supra* note 32 at 1178 (pointing out that because overdraft fees “effectively subsidize all checking accounts, the effect is that the poorest account holders pay the costs of all accounts.”)

²¹⁶ It is worth noting that many prominent law and economics scholars are skeptical of legal rules to accomplish such redistribution, and instead prefer redistribution through progressive income taxation. See, e.g., Louis Kaplow and Steven Shavell, *Why the Legal System is Less Efficient than the Income Tax in Redistributing Income*. 23 J. LEGAL STUD. 667 (1994). While not the subject of this Article, future research should consider whether more progressive taxes can right the inequities in consumer finance markets more efficiently than direct intervention.

currently pay low retail prices because of rewards kickbacks, may see their prices rise. That is a feature of well-designed regulation, not a bug. Regulation should put a weight on the scale in favor of those disadvantaged in consumer markets. This means tilting the scales in favor of naïve consumers and away from sophisticated banks. But it can also mean tilting the scales in favor of naïve consumers and away from their more sophisticated counterparts.

II.C. Watch What Firms Do, Not What They Say

This Article illustrates the dangers of judging the desirability of regulation based on how banks say they will respond to intervention. As profit-maximizing institutions, these firms have every incentive to prevent regulators from curbing their behavior. To discourage costly regulation, every time policymakers propose a change, banks argue that the result will be higher consumer costs and less access to desirable financial products. The empirical evidence in this Article suggests that financial institutions' assertions about how interventions will harm consumers are often overstated. Analyzing regulatory efficacy requires thorough data-driven analysis of what banks actually do in consumer finance markets; not simply trusting banks' assertions that losses will be passed through to consumers.

In commenting on the CARD Act, large card issuers argued that consumers, not banks, would bear the costs of restrictions on penalty fee revenue and unanticipated interest rate hikes.²¹⁷ Financial institutions noted that before the CARD Act, the ability to freely adjust credit card prices allowed card issuers to price-discriminate between risky customers, to whom the provision of credit is expensive, and stable customers, to whom the provision of credit is less costly. Because the CARD Act restricts penalty fees and interest rate changes, card companies said they would lose this potential for price discrimination and all consumers' prices would increase to cover the likely defaults of the riskiest borrowers. Even academics who supported regulating credit card penalty fees took heed of banks' caution and warned that "the reduced revenue stream to lenders from these fees would mean that other rates and fees would be adjusted to compensate."²¹⁸

Early reports of the CARD Act suggested that banks adjusted in the manner they said they would, and that the intervention increased the cost of borrowing across the board for borrowers of all risk types. Popular press articles suggested that the CARD Act increased interest rates for consumers,²¹⁹ and Federal Reserve commentators postulated that the CARD Act may have led to closures of now-unprofitable consumer accounts²²⁰ and lower credit limits for customers.²²¹ The financial sector suggested that the CARD Act increased interest rates by more than 72 basis points, pointing out that: "While the CARD Act has provided clear and significant benefits to consumers,

²¹⁷ AM. BANKERS ASS'N, *Letter from the ABA to the Consumer Financial Protection Bureau* (June 8, 2017), <https://www.aba.com/Advocacy/commentletters/Documents/cl-CARD-Act2017June.pdf> (last visited on Jan. 15, 2019).

²¹⁸ Mullainthan et al., *The Case for Behaviorally Informed Regulation*, NEW PERSPECTIVES ON REGULATION, 2009. Cambridge, MA. Tobin Project (pp. 25-62).

²¹⁹ Curtis Arnold, *CARD Act may have cost consumers billions*, FORBES (Feb. 21, 2012), <https://www.forbes.com/sites/moneybuilder/2012/02/21/card-act-may-have-cost-consumers-billions/#2b6ae9a75bbb> (last visited on Jan. 15, 2019).

²²⁰ Jambulapati & Stavins, *supra* note 16.

²²¹ Larry Santucci, *A Tale of Two Vintages: Credit Limit Management Before and after the Card Act and Great Recession* (Feb. 18, 2015). FED. RESERVE BANK OF PHILADELPHIA, Payment Cards Center Discussion Paper No. 15-01.

there have also been significant tradeoffs, specifically, higher costs and less availability for credit card credit.”²²²

However, these early analyses conflate the impact of the CARD Act with general economic conditions. The period surrounding its enactment coincides with the worst economic downturn since the Great Depression. This makes drawing causal inferences challenging: Do banks close credit card accounts and decrease credit limits because of the CARD Act, or because aggregate consumption—and thus demand for credit—dropped off because of the Recession?²²³

Thorough empirical work on the CARD Act is able to disentangle the impact of the legislation from the impact of the decrease in credit demand that follows from the Recession and comes to a much more positive outlook on its efficacy. Working with a unique panel dataset from the Office of the Comptroller of the Currency, economists compare consumer credit card accounts, which are impacted by the CARD Act, to small business accounts, which are left unregulated.²²⁴ Because both consumers and small businesses are impacted by the recession, this approach is able to isolate the impact of the CARD Act alone. The authors find that although fees on consumer credit cards decrease substantially following the CARD Act, there is no offsetting increase in interest rates or reduction in credit availability. The overall effect of the CARD Act is thus to *reduce* credit costs for consumers by nearly \$12 billion annually.²²⁵ Well-identified empirical work demonstrates that, despite banks’ warnings, the CARD Act did not increase the cost of credit or decrease its availability. Although financial institutions stated they would offset CARD Act losses, concerns about losing customers appear to have limited their adjustment. Accurate insights about regulatory efficacy rely on studying how firms actually respond to consumer-oriented regulations.

II.C.1. Listening to Banks Can Lead to Poorly Designed Regulation

Overreliance on banks’ comments on how they plan to respond to regulation can lead to ineffective regulation, as the Durbin Amendment demonstrates. Initially, policymakers proposed regulating credit, rather than debit, interchange.²²⁶ This made sense: in the decade leading up to the Recession, card issuers had introduced premium cards with high interchange rates. To incentivize consumers to use these cards, they offered rewards. The result of the growth in rewards credit cards was that (1) consumers were using credit cards more, thus increasing their indebtedness; and (2) the inequitable cross-subsidization of the wealthy grew, because only the wealthy have access to these payment instruments.

In Australia, predecessor regulation that capped credit card interchange successfully addressed the problems in this market. Australia’s cap on credit card interchange increased the use of debit cards, which are generally regarded as a safer payment instrument because they decouple financial transacting from borrowing. This means that debit usage, unlike credit usage, does not increase indebtedness. Because credit card interchange became less profitable, card issuers had less incentive to encourage credit usage and thus lowered rewards, decreasing the cross-subsidization of the wealthy by their low-income counterparts.

²²² Nessa Eileen Feddis, *Comment Letter on Credit Card Accountability Responsibility and Disclosure Act of 2009*, AM. BANKERS ASS’N (Feb. 19, 2003), <https://www.aba.com/Advocacy/commentletters/Documents/clCardAct2013Feb.pdf> (last visited on Jan. 15, 2019).

²²³ Jamulapati & Stavins, *supra* note 16, are explicit about this challenge: “Because the period prior to the enactment of the CARD Act coincided with the financial crisis and recession, causality in this case is particularly difficult to establish.”

²²⁴ See Agarwal et al., *supra* note 16.

²²⁵ *Id.*

²²⁶ See *supra* note 78 and accompanying text.

Despite early attempts to similarly regulate credit interchange in the United States, perversely, the Durbin Amendment eventually targeted *debit* interchange fees, leaving *credit* interchange fees unchecked. This exacerbated, rather than lessened, the inequitable cross-subsidization in this market, harming exactly the consumers Senator Durbin sought to help. Rather than reduce credit card rewards, banks were incentivized to offer even more generous rewards programs to encourage consumers to use credit, for which interchange rates remain unregulated.²²⁷ For consumers without access to credit cards, this widens the gap between the prices they pay and the prices the wealthy pay for retail goods. For the financially fragile with access to credit, the nudge toward credit leads to higher indebtedness, trapping these consumers in expensive cycles of debt. Unsurprisingly, the three years following the enactment of the Durbin Amendment saw the largest credit growth in any three year period since the 1990s.

In this case, a potentially useful regulation (restriction on credit interchange) was abandoned in favor of a harmful one (restriction on credit interchange) precisely because regulators were too attentive to banks' warnings about the impact of intervention. Banks assured policymakers that capping credit interchange fees would increase the cost of credit "at a time when the economy thirsts for credit to sustain an economic recovery."²²⁸ Regulators subsequently changed tacks and sought to cap debit rather than credit interchange out of fears that a decrease in credit supply could prolong the Recession. Senator Durbin was so convinced about the inevitability of consumer harm from regulating credit card interchange that he celebrated that unlike earlier proposals, his namesake Amendment would leave credit fees unchecked.

It is impossible to know how banks would have responded to a cap on credit interchange fees. If the Australian case study is informative, then there is reason to believe the impact would have been a positive one: less cross-subsidization of the wealthy by the poor. Certainly, it is easy to understand why banks pushed against credit card interchange regulation: credit interchange rates are higher and card issuers generate significant revenue from inducing consumers to use these cards with rewards. One bank executive describes Durbin as the "lesser of two evils" when it came to interchange regulation—"we would have preferred no regulation, but if they were going to do something, better debit than credit."²²⁹

The ability of industry to shape regulation is precisely why economist George Stigler was wary of the regulatory project. Stigler's central thesis was that regulation would inevitably be "acquired by the industry and is designed and operated primarily for its benefit."²³⁰ The watering down of interchange reform illustrates Stigler's concerns. For consumer financial regulation to serve consumers, regulators must be skeptical of how sophisticated financial firms describe their likely response to regulation. Being too beholden to concerns voiced by industry can dismantle potentially useful interventions.

II.C.2. Listening to Banks Can Lead to Pessimism About the Efficacy of Regulation

Policymakers are not alone in mistakenly relying on banks' warnings about the likely impact of regulatory interventions. Some academics rush to believe banks too. As a result, two prominent recent articles—one by Professor Lauren Willis and another by Professors Ryan Bubb

²²⁷ See, e.g., Kevin Wack, *Did Durbin amendment lead to unintended credit card splurge?* AM. BANKER (Feb. 27, 2017), <https://www.americanbanker.com/news/did-durbin-amendment-lead-to-unintended-credit-card-splurge> (last visited on Jan. 15, 2019).

²²⁸ See *supra* note 81 and accompanying text.

²²⁹ Anonymous interview with the author.

²³⁰ George J. Stigler, *The theory of economic regulation*. THE BELL J. OF MGMT. SCI., Vol. 2, No. 1 (1971).

and Richard Pildes—are overly pessimistic about the efficacy of consumer financial regulation. These authors start from the premise that banks are sophisticated and consumers naïve, and as a result relatively light-touch regulatory interventions can never be effective, because sophisticated banks will always pass the costs of regulation on to consumers. This criticism is bolstered by the fact that banks say that they will engage in exactly the offsetting behavior that these authors are concerned with. However, when we study what banks do, rather than what they say, we realize that such extreme skepticism about the consumer financial regulatory project is unfounded.

This fact is well-illustrated by the overdraft case study. As Professors Bubb and Pildes helpfully point out, consumer markets are not static, and so theoretically we expect firms to adjust to regulation. The magnitude of this adjustment, though, is an empirical question. Just because banks say that consumers will bear the incidence of regulatory intervention does not mean that they will—who bears these costs depends on competitive dynamics in financial markets that banks themselves may not appreciate ex-ante; and certainly have no incentive to honestly convey to regulators if they do understand them.

The perception that banks are sophisticated and offset any “light-touch” regulation leads Professor Willis and Professors Bubb and Pildes to misrely on incomplete data and anecdotal evidence rather than empirically assessing the incidence of the regulations they study. Incidentally, their influential critiques of behavioral policy approaches suffer from a behavioral problem themselves: they are anchored to the prior that light-touch regulation is ineffective and rely on confirming evidence, rather than thorough data-driven analysis.

For example, Professor Lauren Willis cites vivid anecdotal evidence as proof of the failure of changes to the overdraft default rule:

Consumers quickly realized that there is an immediate intangible benefit to opting out [of the no overdraft default]—the marketing will stop. The calls and emails will cease, the tellers will stop asking, and those who bank online will be able to navigate directly to their personal account without clicking through a computer screen asking whether they would like to opt out first.²³¹

This dire picture is perhaps true of how some banks approached opting consumers in to overdraft following changes to the default rules. For instance, TCF manipulated consumers into opting in to overdraft protection with fear-inducing hypotheticals to convince consumers that failure to opt in would leave them and their families exposed in moments of distress. Branch employees—required to maintain an opt-in rate of 80 percent or more on all new accounts—would combat resistance to opt-in by telling customers: “We live in Minnesota too. It is cold outside. You are on the side of the road. Your account has \$50 in it. You know to get a service call it is going to cost you \$80. You have to get it fixed. So you make that call. If you are opted in, we will pay it. You get an overdraft fee. If you don’t Opt-In, it declines you. You might get stuck on the side of the road.”²³²

TCF, though, is the exception, not the rule. It was so reliant on overdraft that its former CEO, Richard Cooper, dubbed his yacht “The Overdraft.” Opt-in rates were more than three times

²³¹ Willis, *supra* note 33 at 1188.

²³² *Consumer Financial Protection Bureau v. TCF National Bank*, Civ. No. 17-166 (D. Minn. Sep. 8, 2017).

the industry average,²³³ and so aggressive that the CFPB is in the process of investigating the bank for improper opt-in practices.²³⁴ Empirical evidence makes clear that overall, though, changes to the default rule were significantly welfare-enhancing for consumers. Service charges on deposit accounts dropped by more than 15 percent immediately following this reform, and banks have not recovered these losses. This sustained decline makes sense given that, as a result of this intervention, only 16 percent of bank customers are still eligible to incur overdraft fees. Prior to overdraft reform, all consumers were opted in to overdraft protection. Thus, changing this default rule decreased the share of customers even eligible to incur these fees by 84 percent.²³⁵ Professor Willis’ read of the evidence—that the new overdraft regime is not particularly successful in increasing consumer welfare—is wrong.

Rather than aggressively nudging people toward overdraft as a product, many of the largest financial institutions, concerned about the notoriety of and potential legal liability from overdraft, moved away from it entirely. Bank of America, in a move heralded by *The New York Times* as bringing “an end to the \$40 cup of coffee,”²³⁶ stopped charging overdraft fees for debit purchases, and even introduced a “safe-checking” product²³⁷ to help consumers who regularly incur penalty fees. Furthermore, Wells Fargo no longer charges consumers overdraft fees on small-dollar transactions and offers its customers the opportunity to “rewind” overdraft incidents, removing fees for overdraft transactions as long as customers quickly replenish their accounts.²³⁸ Citigroup does not charge overdraft fees²³⁹ and JP Morgan also eliminated overdraft fees for small-dollar purchases. These large banks are especially relevant, given that together they are responsible for more than 40 percent of domestic deposits.²⁴⁰ This means that for four out of 10 bank customers, post-crisis overdraft savings are even more significant than regulators hoped.

Still, Professors Bubb and Pildes rely on what they call Willis’ “damning account of the failure of this regulatory approach” as evidence not only that the overdraft default rules failed to help consumers, but more broadly that behavioral economics “trims its sails” by advocating for choice-preserving interventions.²⁴¹ Their critique is that since large financial institutions are sophisticated, they have both the resources and the incentives to push consumers toward the choice that is most beneficial to the firm (in this setting, opting consumers into overdraft). In their view, the failure of the overdraft default rule reflects how generally, light-touch regulatory interventions

²³³ Nathan Bomey, *Agency: TCF National Bank tricked customers on overdraft fees*, USA TODAY (Jan. 19, 2019), <https://www.usatoday.com/story/money/2017/01/19/consumer-financial-protection-bureau-cfpb/96772082/> (last visited on Jan. 15, 2019).

²³⁴ See, e.g., *Consumer Financial Protection Bureau v. TCF National Bank*, *supra* note 232.

²³⁵ See *CFPB Study of Overdraft Programs*, *supra* note 18 at 29. https://files.consumerfinance.gov/f/201306_cfpb_whitepaper_overdraft-practices.pdf (last visited on Jan. 15, 2019).

²³⁶ Andrew Martin, *Bank of America to End Debit Overdraft Fees*, THE N.Y. TIMES (Mar. 9, 2010), <https://www.nytimes.com/2010/03/10/your-money/credit-and-debit-cards/10overdraft.html> (last visited on Jan. 15, 2019).

²³⁷ Melanie Hicken, *BofA rolls out checking account for chronic overdrafters*, CNN MONEY (Mar. 6, 2014), <http://money.cnn.com/2014/03/06/pf/bank-of-america-overdraft/index.html> (last visited on Jan. 15, 2019).

²³⁸ Robert Barba, *Wells Fargo adds overdraft protection with Rewind*, BANKRATE (Nov. 21, 2017), <https://www.bankrate.com/banking/checking/wells-fargo-launches-overdraft-rewind/> (last visited on Jan. 15, 2019).

²³⁹ Andrew Martin, *Bank of America to End Debit Overdraft Fees*, THE N.Y. TIMES (Mar. 9, 2010), <https://www.nytimes.com/2010/03/10/your-money/credit-and-debit-cards/10overdraft.html> (last visited on Jan. 15, 2019).

²⁴⁰ *The Five Largest Banks Hold More than 40% of All Deposits*, FORBES (Dec. 14, 2017), <https://www.forbes.com/sites/greatspeculations/2017/12/14/the-five-largest-u-s-banks-hold-more-than-40-of-all-deposits/#5c7df1f116aa> (last visited on Jan. 31, 2019).

²⁴¹ See, e.g., Bubb & Pildes, *supra* note 31.

are doomed to futility. Instead, to help consumers, they suggest regulators need to embrace paternalistic policies, such as a blanket ban on overdraft protection.

Far from a “nudge gone awry,”²⁴² behavioral approaches to regulating overdraft were thus a resounding success. And there is substantial potential for additional behavioral interventions, such as “salience shocks” to alert customers to these fees immediately before they incur them—as illustrated by a shock-style intervention in the United Kingdom, where text alerts to consumers of low account balances have decreased overdraft incidence by nearly 25 percent.²⁴³ Past critiques of the efficacy of the new default rules illustrate how academics can be misled by analysis that relies on anecdotal evidence.

The implications are significant: these influential critics of behavioral law and economics approaches argue that behavioral policies do not deliver for consumers. As proof, they cite the failures of overdraft reform—except that the new overdraft default rules do achieve their ends and do enhance consumer welfare. Overdraft reform is a thorn in the side of critics of behavioral policy approaches, not a paradigmatic example of its failings. The fact that prominent authors—whose work has prompted responses by regulators²⁴⁴ and garnered widespread media attention²⁴⁵—miss this proves that even thoughtful academics can be misled by relying on their assumptions about how the market will respond to regulation. These assumptions are not baseless: there are theoretical reasons to think banks will work to offset regulation. And banks themselves say that they will offset the impact of regulation. But policy inferences based on what banks say—rather than what we empirically observe that they do—leads to confusion not only about the efficacy of regulations (like the overdraft default rule) but more broadly of an entire regulatory approach (behaviorally-motivated consumer financial protection).

Thankfully, in consumer finance in particular, academics have access to a wealth of data. Bank financial data is reported quarterly, and more timely snapshots are available to policymakers like economists at the Federal Reserve. Regulators conduct surveys of consumers to understand a variety of topics ranging from their decision to be unbanked²⁴⁶ to how they choose between payment methods.²⁴⁷ Proprietary data from large financial institutions—for example, detailed credit and checking account transaction history²⁴⁸—allows for interferences about policy efficacy and the limits of consumer rationality. Determining the efficacy of regulation is ultimately an empirical question, and one this Article undertakes with surprising results.

Table 2 below summarizes the lessons discussed in Part II.

²⁴² Willis, *supra* note 33.

²⁴³ *Press Release: New Overdraft Alerts as CMA Banking Rules Come into Force*, *supra* note 25.

²⁴⁴ Peter Orszag & Cass R. Sunstein, *Give People Choices, Not Edicts*, BLOOMBERG (Dec. 5, 2013), <https://www.bloomberg.com/opinion/articles/2013-12-05/give-people-choices-not-edicts> (last visited on Jan. 15, 2019).

²⁴⁵ Jill Priluck, *The overselling of behavioral economics*, REUTERS (Nov. 20, 2013), <http://blogs.reuters.com/great-debate/2013/11/20/the-overselling-of-behavioral-economics/> (last visited on Jan. 15, 2019).

²⁴⁶ See, e.g., *FDIC Survey of Unbanked and Underbanked Households*, FED. DEPOSIT INS. CORP. (2017), <https://www.fdic.gov/householdsurvey/> (last visited on Jan. 28, 2019).

²⁴⁷ See, e.g., Clare Greene & Joanna Stavins, *The 2016 and 2017 Surveys of Consumer Payment Choice: Summary Results*, FED. RESERVE BANK OF BOSTON, <https://www.bostonfed.org/publications/research-data-report/2018/the-2016-and-2017-surveys-of-consumer-payment-choice-summary-results.aspx> (last visited on Jan. 15, 2019).

²⁴⁸ See, e.g., Peter Ganong & Pascal J. Noel, *Consumer Spending During Unemployment: Positive and Normative Implications*, THE NAT’L BUREAU OF ECON. RESEARCH (Jan. 2019), <https://www.nber.org/papers/w25417> (last visited on Jan. 16, 2019) (using de-identified bank account data to find that spending drops significantly following the expiration of UI benefits in a way that is inconsistent with rational models).

Table 2. Summary of Lessons

Overall Lesson	Specific Suggestions for Designing and Evaluating Regulatory Regime	Examples
<p><i>Regulators Should Target Non-Salient Prices:</i> Consumer suffer from behavioral problems (e.g., inattention and over-optimism). Banks exploit by charging high hidden fees.</p>	<p>Direction regulation of non-salient prices benefits consumers.</p> <p>Salience shock is a novel alternative.</p>	<p>CARD Act, overdraft reform increase consumer welfare.</p> <p>Proposed \$5 Durbin fee sparks outrage, UK alert that consumer accounts are low decreases overdraft incidence.</p>
<p><i>Regulators Should Address Inequitable Cross-Subsidies:</i> Essentially all consumer markets feature higher prices for poorer consumers. These higher prices subsidize lower costs for the wealthy.</p>	<p>Consumer protection provides authority for intervention.</p> <p>Evaluate whether regulation increases fairness in consumer markets; not whether regulation benefits all consumers.</p>	<p>UDAAP claims to change interchange market (for example by limiting anti-steering provisions) as alternative to antitrust litigation.</p> <p>Capping overdraft fees could have increased account fees, banning rewards cards may increase retail prices for the wealthy. Even so, these are desirable interventions to increase fairness.</p>
<p><i>Regulators Should Watch What Firms Do, Not What They Say:</i> Banks are incentivized to deter regulators by warning interventions will distort market. Relying on these assertions is a costly mistake.</p>	<p>Listening to banks can lead to poorly designed regulation.</p> <p>Listening to banks can lead to unwarranted pessimism.</p>	<p>Interchange regulation initially targeted credit cards, shifted to debit because banks warned of credit supply effect. Result is intervention that harms consumers.</p> <p>Leading academics believe—as banks warned—that financial institutions offset losses from overdraft default rule, rendering it ineffective. This is inaccurate: Consumers benefitted from intervention.</p>

III. CONCLUSION

The pain ordinary consumers suffered during the Great Recession highlighted the ways in which financial markets were failing them. Policymakers responded, and some of the earliest post-crisis consumer financial reforms sought to rein in bank revenue from credit cards, overdraft, and debit interchange. This Article intermediates between progressive politicians who cheer regulation and bank executives who warn that consumers will be harmed, not helped, by well-intentioned interventions. The reality is more nuanced, and through novel empirical analysis, this Article offers a roadmap for effective consumer financial regulation.

Its lessons are three-fold. First, banks understand consumers' behavioral limitations and exploit the fact that many are inattentive and misestimate the likelihood of incurring penalty fees. These limitations provide firms the means to charge high non-salient prices without worrying about losing customers. Policymakers should rein in on such practices through regulation to help consumers better understand the cost of financial products and increase overall consumer welfare.

Second, each of the consumer finance markets I study features cross-subsidies running from the low-income to the wealthy. Unsophisticated, low-income consumers have a high likelihood of incurring penalty fees, as opposed to their sophisticated counterparts, who are more rational and wealthier—and thus have a larger buffer: that is, higher account balances and more generous credit terms—shielding them from penalty fees. Wealthy consumers are also advantaged because they alone have access to the most-attractive financial products, like rewards cards. Because retail prices are uniform, the low-income and the wealthy pay the same for goods; however, the wealthy receive a rewards kickback for their purchases. The existence of inequitable cross-subsidies justifies intervention on consumer protection grounds. Relying on this authority to regulate is a sensible alternative to antitrust authority, which has historically been the tool wielded by consumer advocates in these markets. Intervening on consumer protection grounds is preferable because it is a lower hurdle (no proof of anticompetitive harm required) and is thus more likely to prevail in the current judicial climate.

Finally, I argue that policymakers and academics should be guided by what banks do—not what they say. Financial institutions have every incentive to discourage regulators from curbing their behavior. As such, every time policymakers propose a change, they warn that the result will be higher consumer costs and less access to financial products. Theoretically, it makes sense that banks will offset the impact of regulation: in the contest between sophisticated, optimizing financial institutions and naïve, non-optimizing consumers, the power seems to lie with the sophisticates. However, the empirical results in this paper illustrate that financial institutions' assertions about how consumers will end up bearing the costs of regulation are often overstated. These findings are surprising and differ significantly from prior work. In the past, influential legal academics have argued against light-touch regulatory approaches as inevitably unsuccessful, suggesting more paternalistic approaches are necessary to protect irrational consumers in these markets. This Article corrects this misconception.

APPENDIX: WHY DO INEQUITABLE CROSS-SUBSIDIES EXIST?

Each of the post-crisis interventions studied in this Article feature inequitable cross-subsidization. Practically, less-sophisticated, poorer consumers pay higher prices than their more-sophisticated, wealthier counterparts. These inequities can exist when banks have significant market power, but they can also exist in perfectly competitive markets, and competitive dynamics dictate whether banks or sophisticated consumers bear the incidence of regulation. This Appendix provides a simple conceptual framework to establish the winners and losers from regulation to address cross-subsidies in different settings. It illustrates that intervention to decrease cross-subsidization is always desirable as it benefits unsophisticated consumers, who are currently disadvantaged in financial markets.

A. Shrouded Prices and Perfectly Competitive Markets

Banks regularly hide certain prices from consumers.²⁴⁹ Card issuers advertise low upfront pricing (e.g., the introductory APR in large letters on envelopes to potential customers) but hide add-on costs those same customers are likely to incur (e.g., higher interest rates when the introductory teaser offers expire and penalty fees for late payments). This framework sheds light on why price shrouding occurs, its consequences, and why it persists in equilibrium.

Consider the consumer checking account. For simplicity, imagine it has two components: a salient price p_s (the monthly maintenance fee on the account), and a non-salient price p_{ns} , (the overdraft fee charged to a customer for an overdraft incident). Assume p_s is \$90, p_{ns} is \$20. First, note that the existence of price shrouding leads to excessive credit card borrowing,²⁵⁰ excessive use of credit or debit cards to pay for transactions,²⁵¹ and, in this example, too many checking accounts. How so? Assume there are two types of consumers, high-value consumers who derive a benefit of \$110 from the consumer checking account, and low-value consumers, who derive a benefit of only \$90. All consumers will need overdraft protection, but no consumers think they will. If costs were properly internalized by consumers, only high-value types would purchase checking accounts; however, believing the total cost is only \$90, both high- and low-value types will purchase them.

Now assume awareness of the non-salient overdraft differs depending on customer sophistication. There are still two types of consumers: sophisticated, who consider both p_s and p_{ns} when they make product decisions, and unsophisticated, who neglect p_{ns} . Each values the checking account at \$100 precisely, Sneaky Bank's total cost of providing a checking account. Sophisticated customers avoid overdraft fees and pay only \$90 for their checking accounts; unsophisticated

²⁴⁹ These insights are related to a long line of both legal and economics literature that considers loss-leader pricing and its equilibrium effects on consumers and firms. See, e.g. Glenn Ellison, *A Model of Add-On Pricing*, 120 QUARTERLY J. ECON. 585 (2005) (presenting an equilibrium where high shrouded prices are not competed away because there is no incentive for firms to compete on these costs); Gabaix & Laibson, *supra* note 95 (modeling markets with sophisticated firms exploiting consumers' behavioral biases). Many papers around this time provide empirical evidence on this phenomenon, see, e.g., Stefano Della Vigna and Ulrike Malmendier, *Paying Not to Go to the Gym*, 96 AM. ECON. REV. 694 (2006); Haiyan Shui & Laurence M. Ausubel, *Consumer Time Inconsistency: Evidence from a Market Experiment in the Credit Card Market* (2004) (working paper); Sendhil Mullainathan & Andrei Shleifer, *The Market for News*, 95 AM. ECON. REV. 1031 (2005).

²⁵⁰ See Cass R. Sunstein, *Boundedly Rational Borrowing*, 73 U. CHI. L. REV. 249 (2006) (noting that "excessive borrowing, no less than insufficient savings, might be a product of bounded rationality").

²⁵¹ Oren Bar-Gill, *Seduction by Plastic*, 94 NW. U.L. REV. 1373 (2004) (highlighting that "teaser rates lead to excessive pre-distress borrowing, which in turn renders the consumer more vulnerable to financial hardships").

customers know no better and pay \$110, both the \$90 monthly fee and a \$20 overdraft fee. This numerical example is summarized below.

Sneaky Bank	
Cost	\$100
P_s (fee)	\$90
P_{ns} (overdraft)	\$20
Customer	
Sophisticated pays	\$90
Unsophisticated pays	\$110
Profit	\$0

But what is to stop a competing bank from entering and being transparent about its pricing structure? If Transparent Bank offers a \$100 price, inclusive of overdraft, and advertises that it does not engage in sneaky price shrouding, newly educated consumers would still prefer checking accounts at Sneaky Bank: Because they are now sophisticated, they will get a product worth \$100 for only \$90, plus some inconvenience cost to avoid overdrafting.²⁵²

The result is an equilibrium in which Sneaky Bank charges high add-on overdraft fees to exploit unsophisticated customers, and sophisticated customers take advantage of Sneaky Bank by avoiding high add-on costs and getting below-cost checking accounts. Unsophisticated consumers pay more, thereby subsidizing their sophisticated counterparts.

Sophistication is costly on two dimensions: Sophisticated consumers must (1) read through complex checking account contracts to locate non-salient terms and (2) be vigilant in avoiding fees, for example, by verifying that their account balances are positive regularly, or by carrying cash to make sure they will never incur overdraft fees. But as long as the total cost of understanding contract provisions, checking account balances, and keeping cash handy is below \$10, sophisticated consumers will still prefer expending this effort to Transparent Bank's \$100 account.

What role can regulatory intervention play?²⁵³ Consider a regulator that is aware of shrouded prices and heterogeneous customer sophistication and intervenes, perhaps by capping the overdraft fee at \$0.²⁵⁴ Now, banks can no longer charge p_{ns} but still need to cover their \$100 costs in equilibrium. As such, Sneaky Bank would fully offset this price regulation through an increase in p_s :

²⁵² This example is a simplistic version of the model presented in Gabaix & Laibson, *supra* note 95 at 508. The authors refer to the failure of the transparent bank to gain market share as illustrative of the “curse of debiasing”: “Sophisticated consumers tend to be less profitable because they know how to avoid unnecessary costs. In such cases, firms do not have an incentive to pursue debiasing and competition will not lead consumers to behave rationally.”

²⁵³ Gabaix & Laibson briefly consider regulatory solutions for shrouded pricing, for example, enhanced disclosure and warning customers to pay attention to hidden costs. They are not very encouraging about the potential of regulatory price caps: “Finally regulators may impose markup caps on shrouded attributes. . . . However, even if good theoretical arguments exist for regulating shrouded fees, such regulations put us on a slippery slope that may produce great unintended harm. Mark-up regulations are often counterproductive.” *Id.* at 531. I heed this caution and attempt to highlight cases where price caps are likely to be minimally distortive.

²⁵⁴ This is an extreme example, and illustrative only. For reasons discussed in Part II above, I believe capping overdraft fees at \$0 is undesirable because it will eliminate a product consumers may want despite its high cost. A more desirable cap would be to restrict overdraft fees to the cost of offering overdraft protection.

PERFECTLY COMPETITIVE MARKET (REGULATED)	
Sneaky Bank	
Cost	\$100
P_s (fee)	\$100
P_{ns} (overdraft)	\$0
Customer	
Sophisticated pays	\$100
Unsophisticated pays	\$100
Profit	\$0

In equilibrium, this regulatory intervention eliminates the cross-subsidy of the sophisticated by the unsophisticated (i.e., of the wealthy by the low-income).²⁵⁵ This benefit alone is sufficient to justify regulatory intervention on distributional grounds: A price cap can tilt the scales away from sophisticated consumers who have access to the checking account at a price below cost because of their less-sophisticated counterparts. As an added benefit, regulation also eliminates costly behavior by the sophisticated, like spending copious time checking account balances to avoid being overdrawn. Also, tackling price shrouding eliminates any inefficient over-use of the consumer checking account product: A consumer will weigh the marginal benefit of a checking account against its *true* cost, not an underestimated cost that ignores non-salient price attributes.

Thus, even in a perfectly competitive world, the existence of price shrouding suggests a role for regulatory intervention to eliminate inequitable cross-subsidies. Note that I propose behavioral differences between the two groups of consumers in this framework: sophisticated and aware of non-salient prices and unsophisticated and unaware. An alternative is a rational framework: Some consumers have low marginal utility of income and thus are likely to use overdraft protection rather than expend energy reading contracts, hoarding cash, or searching for cheaper checking account alternatives. That is, *wealthy* consumers are likely to take advantage of an expensive overdraft add-on, and *low-income* consumers are likely to avoid it. This “traditional” explanation²⁵⁶ also generates a cross-subsidy that can be addressed by regulation, but it runs in the opposite direction, from the wealthy to the low-income, and so the distributional case for intervention is less clear. However, this traditional model appears unlikely to describe the reality of consumer finance markets, where consumers who bear penalty fees are disproportionately poorer and less financially sophisticated. With the behavioral cross-subsidy running from the less

²⁵⁵ One question for those interested in these topics is why greater product diversity does not exist in the checking account market. For example, in this simplified world, it is possible to imagine a checking account without any overdraft protection being offered at a lower fee than a checking account with overdraft protection, because banks bear costs for offering overdraft protection. Literature in economics—notably A. Michael Spence, *Monopoly, Quality, and Regulation*, 6 BELL J. ECON. 417 (1975) and Avinash K. Dixit & Joseph E. Stiglitz, *Monopolistic Competition and Optimum Product Diversity*, 67 AM. ECON. REV. 297 (1977) — suggests that imperfect competition can result in too little (but also too much) product diversity, depending on consumer demand. Interestingly, Bank of America recently reduced its product diversity, eliminating its low-cost eBanking checking accounts. See Colin Dwyer, *Bank of America Ends Free Checking Option, A Bastion for Low-Income Customers*, NPR (Jan. 24, 2018), <https://www.npr.org/sections/thetwo-way/2018/01/24/580324251/bank-of-america-ends-free-checking-option-a-bastion-for-low-income-customers> (last visited on June 11, 2018).

²⁵⁶ So termed by Glenn Ellison, *supra* note 249.

sophisticated to the more sophisticated, regulatory intervention can be justified on fairness and distributional grounds.

B. Shrouded Prices and Imperfect Competition

Next, consider a world *without* perfect competition, with banks with substantial market power. At least in the short-run, in an imperfectly competitive market, banks are able to generate positive profits, or rents.²⁵⁷ So, for example, Sneaky Bank can charge \$105 for its checking account, even though it costs only \$100 to provide. Without regulatory intervention, sophisticated consumers pay \$105, and unsophisticated consumers pay a whopping \$125 for their checking accounts.²⁵⁸

IMPERFECTLY COMPETITIVE MARKET (UNREGULATED)	
Sneaky Bank	
Cost	\$100
P_s (fee)	\$105
P_{ns} (overdraft)	\$20
Customer	
Sophisticated pays	\$105
Unsophisticated pays	\$125
Profit	\$30

The difference between this imperfectly competitive case and the baseline of perfect competition is that now, the beneficiary of the unsophisticated consumers' irrationality is Sneaky Bank, not the sophisticated consumers.

Why could sophisticated consumers not demand a lower price by threatening to educate the unsophisticated? This threat is not obviously credible. Sophisticated consumers would have to coordinate to spread their message; and, even if they were able to, it is likely unsophisticated consumers would trust Sneaky Bank, the provider of their checking accounts, over the less-familiar sophisticated.

A cap on the shrouded overdraft fee can help decrease checking account costs for the unsophisticated consumer. Imagine the same regulatory intervention as above: Regulators cap overdraft fees at \$0. In the perfectly competitive world, Sneaky Bank has to raise its price to cover its marginal costs. In this imperfectly competitive world, Sneaky Bank has positive profits and may not offset the losses from the non-salient price cap entirely,²⁵⁹ because its customers decide whether to open (and maintain) a checking account based on the *salient* monthly fee. That is,

²⁵⁷ The particular nature of the non-perfectly competitive market (monopoly versus monopolistic competition) will dictate whether firms are able to generate quasi-rents (positive profits in the short run that will be competed away in the longer run) or long-run rents.

²⁵⁸ Economists Sumit Agarwal, Souphala Chomsisengphet, Neale Mahoney, & Johannes Stroebel, and Professors Oren Bar-Gill & Ryan Bubb are closely related to this example. In their study of the CARD Act, both sets of authors point to (1) the shrouded nature of many of the fees the CARD Act sought to regulate and (2) the imperfectly competitive card-issuer market as theoretical explanations for their finding only limited offset of CARD Act losses. See Agarwal et al., *supra* note 16; Bar-Gill & Bubb, *supra* note 16.

²⁵⁹ The degree of bank offset will depend on the elasticity of consumer demand.

Sneaky Bank faces a trade-off: Raise salient fees for everyone and lower the quantity of checking accounts it provides, or keep salient fees as they are and still generate positive, albeit lower, profits than it would generate in the absence of price regulation.

Note that the possibility of incomplete offset is attributable to the fact that some consumers ignore non-salient prices. There would be no similar tradeoff if regulators instead targeted *salient* prices—as long as there are other aspects of the pricing bundle to adjust, banks will fully offset losses.

IMPERFECTLY COMPETITIVE MARKET (REGULATED)	
Bank	
Cost	\$100
P_s (fee)	\$105
P_{ns} (overdraft)	\$0
Customer	
Sophisticated pays	\$105
Unsophisticated pays	\$105
Profit	\$5

C. Extension: A World Without Price Shrouding

What if no salience problem exists, and yet undesirable cross-subsidies remain? This describes the interchange market. Merchants pay a set fee of \$2 in interchange expense for processing a credit transaction. When a consumer buys a \$100 pair of shoes with cash, all of the money goes to the merchant; but when the consumer pays with credit, the merchant only receives \$98 (\$100 minus \$2 of interchange expense). The merchant would like to pass on the \$2 in interchange expense to the card-using consumer directly—but this is illegal.²⁶⁰ So instead, she charges \$101 to both consumers. If all consumers paid in cash, the merchant would set prices at cost (\$100). So, unsophisticated consumers, without access to credit cards, end up paying higher prices to cover interchange costs associated with their wealthier counterparts' credit instruments. That is, they subsidize the rewards these consumers accrue.

Regulatory intervention can usefully address this cross-subsidy. For example, by facilitating merchant price discrimination, regulators can help ensure that the customers who benefit from transacting with rewards cards (the sophisticated) pay higher retail prices. Importantly, this is not a Pareto improvement, where one class of consumers is made better off without hurting any other group. In a perfectly competitive market, Pareto improvement is not possible. Instead, sophisticated consumers are being made worse off: They no longer pay below-cost prices, with rewards like airline miles subsidized by high retail prices paid by the unsophisticated. Although not welfare-improving overall, regulation increases fairness in this

²⁶⁰ This is a simplification, although legal and contractual barriers do exist to price discrimination, for example state-level prohibitions on merchant surcharging and contract terms that disallow merchants from steering consumers toward cheaper forms of payment. These are at the heart of two recent Supreme Court cases involving card networks. See, e.g., *Expressions Hair Design v. Schneiderman*, *supra* note 198 (holding no-surcharge statutes, barring merchants from charging consumers higher prices for credit card usage, implicate First Amendment concerns). See also *Ohio v. American Express*, *supra* note 199.

market by forcing consumers who benefit from rewards cards to bear the costs of these financial transactions.

PERFECTLY COMPETITIVE MARKET (NO SHROUDING)	
Merchant Cost	\$100
<i>Option 1: \$100 retail price</i>	
Customer pays	\$100
Merchant receives	
Sophisticated (credit)	$\$100 - \$2 = \$98$
Unsophisticated (cash)	\$100
Profit	(\$2)
<i>Option 2: \$101 retail price</i>	
Customer pays	\$101
Merchant receives	
Sophisticated (credit)	$\$101 - \$2 = \$99$
Unsophisticated (cash)	\$101
Profit	\$0
<i>Option 3: Regulation allows price discrimination</i>	
Customer pays	
Sophisticated (credit)	\$102
Unsophisticated (cash)	\$100
Merchant receives	
Sophisticated (credit)	$\$102 - \$2 = \$100$
Unsophisticated (cash)	\$100
Profit	\$0