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Natasha Sarin

University of Pennsylvania Carey Law School

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THE SALIENCE THEORY OF CONSUMER FINANCIAL REGULATION

Natasha Sarin*
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Abstract

Prior to the financial crisis, banks' fee income was their fastest-growing source of revenue. This revenue was often generated through nefarious bank practices (e.g., ordering overdraft transactions for maximal fees). The crisis focused popular attention on the extent to which current regulatory tools failed consumers in these markets, and policymakers responded: A new Consumer Financial Protection Bureau was tasked with monitoring consumer finance products, and some of the earliest post-crisis financial reforms sought to lower consumer costs.

This Article is the first to empirically evaluate the success of the consumer finance reform agenda by considering three recent price regulations: a decrease in merchant interchange costs, a cap on credit card penalty fees and interest-rate hikes, and a change to the policy default rule that limited banks' overdraft revenue. The varied efficacies of these interventions suggest several insights for policymakers. First, price regulation of non-salient prices (such as late fees or overdraft charges) is desirable. This is true even in a perfectly competitive world, because the existence of shrouded prices can lead to excessive demand for consumer financial products; cause consumers to expend tremendous energy to avoid hidden fees; and result in cross-subsidy of sophisticated consumers, who incorporate these prices into their decision-making, by unsophisticated customers, who do not. In an imperfectly competitive world, regulations that target non-salient prices can also decrease overall consumer costs. A substitute for price regulation is the use of behavioral tools, such as shocks to consumer attention, to encourage consumers to take non-salient prices into account. Such simple, timely disclosure is a choice-preserving alternative to banning expensive consumer finance products.

* Assistant Professor of Law, the University of Pennsylvania Law School, and Assistant Professor of Finance, the Wharton School of the University of Pennsylvania. For thoughtful guidance and discussion, I am grateful to Oren Bar-Gill, Michael Barr, Howell Jackson, Louis Kaplow, Lawrence Summers, and Cass Sunstein. For helpful conversations, I am grateful to David Abrams, Regina Austin, Tom Baker, Michal Barzuza, Emiliano Catan, Cary Coglianese, Angus Corbett, Elizabeth de Fontenay, Ofer Eldar, Jill Fisch, Jean Galbraith, Jonah Gelbach, Talia Gillis, Claudia Goldin, Jeffrey Gordon, Andrew Hayashi, Jim Hines, Scott Hirst, Colleen Honigsberg, David Hoffman, Richard Hynes, Lawrence Katz, Aaron Klein, Adam Levitin, Nellie Liang, Joshua Mitts, Vladimir Mukharlyamov, Eva Nagypal, Scott Nelson, Gabriel Rauterberg, Morgan Ricks, David Scharfstein, Dorothy Shapiro-Lund, Steven Shavell, Louise Sheiner, Jeremy Stein, Guhan Subramaniam, Eric Talley, Aileen Thomas, and Tess Wilkinson-Ryan. I am indebted to Adabelle Ekechukwu for outstanding research assistance.

INTRODUCTION

In the decades leading up to the Great Recession (“Recession” or “crisis”), consumer finance increasingly became a “do-it-yourself” industry, with individuals forced to take responsibility for a greater set of important, and increasingly complex, financial decisions.¹ Given the asymmetry of sophistication between consumers and large financial institutions, the result was a market in which unwitting consumers often bore high and avoidable costs. Regulators responded: A new Consumer Financial Protection Bureau was tasked with monitoring these markets, and some of the earliest post-crisis financial reforms were aimed at reining in consumer costs.

This Article studies three of these reforms—restrictions on late fees and interest rate hikes in the CARD Act, caps on debit interchange from the Durbin Amendment, and changes to the overdraft default rules—and draws lessons from their varied efficacies. These interventions all sought to curb banks’ fee revenue. And yet a careful empirical study illustrates that while banks offset Durbin interchange losses by raising other fees, the same is not true for the CARD Act, and is true to a much lesser extent for the overdraft opt-in rules. This Article considers why similarly situated regulatory interventions had such different impacts on consumers, seeking to draw lessons for future policy.

One answer it offers is salience. Consider a simple example: Penalty fees are ignored by unsophisticated consumers. Banks then charge above-cost fees, either keeping this revenue as profit (in an imperfectly competitive market) or using it to offer a below-cost salient price, for example a no-interest line of credit to a new customer. Regulatory interventions that curb banks’ ability to exploit some consumers’ ignorance of non-salient prices will decrease inefficiencies as well as cross-subsidies by unsophisticated consumers, who bear non-salient costs, of their more sophisticated counterparts, who do not. In imperfectly competitive markets, price regulation can also increase overall consumer welfare.

This Article’s contribution is three-fold. First, it applies the shrouded pricing framework to consumer finance markets, shedding light both on how the regulation of non-salient prices is effective (e.g., the CARD Act) and how price regulation in the absence of a salience problem may fail to meet its objectives (e.g., the Durbin Amendment). Second, it offers a novel alternative to price regulation: intervening to make prices salient to consumers—a “salience shock.” The recent experience of the UK Financial Conduct Authority, where text alerts indicating low account balances substantially decrease the likelihood of costly overdrafts, illustrates the promise of such an approach. Finally, this Article responds to recent debates in the legal literature surrounding mandated disclosure (offered notably by Professors Omri Ben-Shahar and Carl Schneider) and the limits of behavioral law and economics (offered forcefully by Professors Lauren Willis, Ryan Bubb, and Richard Pildes). This Article offers a path forward for disclosure as it advocates for simple, timely disclosures that consumers can retain long enough to act upon. It also argues against the necessity of paternalistic bans of expensive consumer products, since choice-preserving approaches like salience shocks are both theoretically and empirically viable.

This Article proceeds in five parts. Part I presents evidence from case studies of three recent price regulations involving debit interchange fees, credit card contract terms, and overdraft fees. First, I consider the Durbin Amendment (hereinafter referred to as “Durbin”), which restricts debit swipe fees, reducing bank interchange revenue by nearly 40%. Impacted banks responded to Durbin by increasing fees on all customer accounts. They also encouraged greater use of credit,

¹ Andrea Ryan et al., *A Brief Postwar History of U.S. Consumer Finance*, 85 BUS. HIST. REV. 461 (2011).

because credit interchange fees are not capped by Durbin. Moreover, the decrease in debit interchange fees—a large cost of doing business for merchants—was intended to be passed down to consumers through lower prices. However, Durbin failed to result in any meaningful consumer savings, and some merchants even raised prices. Durbin had an especially deleterious impact on low-income consumers who found themselves priced out of the traditional financial system because of higher account fees.

Second, I examine the CARD Act, which limited the ability of card companies to change interest rates and charge penalty fees without appropriate disclosure. Academics who have studied the CARD Act² find that, unlike the response to Durbin, affected financial institutions did not offset the CARD Act's impact by raising other fees or restricting consumer access to credit in unintended ways.³ Overall, the distortionary consequences of the CARD Act appear to be much more limited than those of Durbin.

Third, I consider restrictions on bank overdraft practices. Under new rules, banks are not allowed to impose overdraft fees for ATM or point-of-sale overdraft without opting customers in to their overdraft protection. Legal scholars who study overdraft conclude that, because banks are eager to game the rules by putting pressure on customers to opt in, the new regime is a nudge gone awry⁴ that demonstrates the limitations of behaviorally informed policymaking.⁵ I argue that this interpretation is overly pessimistic. First, opt-in rates for existing accounts (16%) and new accounts (22%) are substantially below the pre-regulation opt-in rate (100% for most banks). Second, many large financial institutions (such as Bank of America, JPMorgan Chase & Co., and Wells Fargo) went beyond the new requirements, moving away from overdraft entirely because of reputational consequences and litigation risk associated with it.

Part II of this Article provides a simple conceptual framework to establish that the existence of non-salient prices justifies regulatory intervention and that, in the presence of market imperfections, this intervention can lower overall consumer costs. It demonstrates that while price regulation in the absence of a salience problem may be desirable, it is more likely to be offset by profit-maximizing firms.

Part III then applies this conceptual framework to the case studies described above to argue for several principles to guide consumer financial regulation. First, shrouded pricing is common in consumer finance—for example, penalty fees are not salient to consumers when they decide on credit instruments and overdraft fees are not salient, even to consumers who bear them frequently—suggesting the potential for effective price regulation in these markets. Importantly, the desirability of regulatory intervention does not hinge on monopoly market power: Even without supracompetitive profits, regulating non-salient prices will reduce both cross-subsidies and inefficient consumer searches for banking alternatives. In the presence of market power, price regulation decreases overall consumer costs. Understanding market dynamics can shed light on other useful policy interventions. For example, market power that results from customer stickiness

² See Sumit Agarwal et al., *Regulating Consumer Financial Products: Evidence from Credit Cards*, 130 Q.J. ECON. 111 (2014); Oren Bar-Gill & Ryan Bubb, *Credit Card Pricing: The CARD Act and Beyond*, 97 CORNELL L. REV. 967 (2012).

³ Chris Dodd, *The Moment for Credit Card Reform*, HUFFPOST (May 25, 2011), https://www.huffingtonpost.com/chris-dodd/the-moment-for-credit-car_b_181296.html (last visited on June 11, 2018). The CARD Act did reduce access to credit for students under 21 years of age, but this was an intended consequence.

⁴ Lauren E. Willis, *When Nudges Fail: Slippery Defaults*, 80 U. CHI. L. REV. 1155 (2013).

⁵ Ryan Bubb & Richard H. Pildes, *How Behavioral Economics Trims Its Sails and Why*, 127 HARV. L. REV. 1593 (2013).

can be diminished by decreasing switching costs. Additionally, cost shocks to merchants, like interchange savings from the Durbin Amendment, may not be fully passed through to consumers. As such, if decreasing consumer costs is the objective, regulations resulting in direct consumer savings are most likely to be effective. Finally, behavioral tools, particularly nudges toward desirable behavior, play an important role in consumer financial regulation, as demonstrated by the new overdraft opt-in regime. To the extent nudges can be designed to make non-salient bank fees and practices salient to consumers, they can achieve the same ends as regulating shrouded prices directly and are superior to mandates (like banning overdraft protection) because they preserve a role for consumer choice.

Part IV considers limitations to the salience theory and examines aspects of the case studies—for example, the differential bank response to changes to the overdraft opt-in regime—it struggles to explain. Part V then concludes.

I. CASE STUDIES

In the wake of the Recession, the financial sector underwent significant regulatory changes, many of which were targeted at regulating consumer financial products. Three of these changes—implemented through Durbin, the CARD Act, and Regulation E—focused on the regulation of debit and credit cards. They sought to reduce the financial burden consumers face due to merchant interchange fees, credit card contract terms, and overdraft fees. Each regulation is discussed to elucidate the successes and failures of regulating non-salient and salient prices.

A. *The Durbin Amendment*

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.⁶ To simplify a complex series of transactions,⁷ the interchange fee can be viewed as the processing fee that a customer's bank collects from a merchant following a card transaction.⁸

The legality of interchange has been challenged repeatedly in court, the earliest example being *National Bancard Corp. (NaBanco) v. Visa USA, Inc.*,⁹ which was followed by a near-constant stream of antitrust cases¹⁰ alleging price fixing by Visa and Mastercard, who together

⁶ Benjamin Klein et al., *Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees*, 73 ANTITRUST L.J. 571, 626 (2006).

⁷ 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. RES. (2006), <https://www.kansascityfed.org/OfOWO/publicat/econrev/PDF/1q06pach.pdf> (last visited Mar. 13, 2018) (providing extensive detail on the mechanics of interchange).

⁸ *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.”

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

¹⁰ *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

control nearly 70% of the payment card market and set interchange rates directly.¹¹ These fees are increasing in significance for merchants—now often the second-highest cost of operating after labor¹²—both because of the growth in electronic payments and because of the introduction of high-interchange rewards cards. Exploding interchange fees prompted calls for regulatory intervention.¹³

2. *Regulatory Approach to Solving the Problem.* Section 1075 of the Dodd-Frank Act¹⁴ was introduced by Senator Dick Durbin (D-Ill) and is colloquially known as the “Durbin Amendment.” In its final form, it required that the Federal Reserve Board (“Federal Reserve” or “Board”) establish rules ensuring “reasonable and proportional” debit interchange fees that would decrease merchant costs and result in lower consumer prices.¹⁵ The amendment preserved an exception for small issuers (with less than \$10 billion in assets).¹⁶ Because of its late introduction to Dodd-Frank in May 2010, Durbin was passed without hearings or debate, and many took issue with the speed of its passage.¹⁷ Critics also pointed to the difficulties of prior interchange caps; for example those implemented in Australia, which resulted in bank fee increases to recover lost revenue.¹⁸

Rising Interchange Fees Have Increased Costs for Merchants, but Options for Reducing Fees Pose Challenge, GOV'T ACCOUNTABILITY OFFICE (2009).

¹¹ 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 Mar. 13, 2018).

¹² Paul Gackle, *The Fight Over Interchange Fees*, FRONTLINE (2009), <https://www.pbs.org/wgbh/pages/frontline/creditcards/themes/interchange.html> (last visited Mar. 14, 2018).

¹³ Pacheco & Sullivan, *supra* note 7.

¹⁴ 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)).

¹⁵ *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/>; Ursula Librizzi, *Visa Increasing Fixed Acquirer Network Fee (FANF) Rates*, PAYJUNCTION BLOG (Dec. 21, 2017), <https://blog.payjunction.com/visa-fixed-acquirer-network-fee/>.

¹⁶ *Id.* § 1693o-2(a)(6)

¹⁷ 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>. 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 Jun. 11, 2018).

¹⁸ 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 Australian Interchange Regulation: Comments on Chang, Evans and Garcia Swartz*, 4 REV. NETWORK ECON. 400 (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.”).

In December 2010, the Federal Reserve proposed a rule implementing Durbin: a \$0.12 cap per debit transaction.¹⁹ The financial services industry was outraged: In fact, a midsize bank, TCF, challenged the constitutionality of Durbin, arguing that the regulation forced banks to offer debit services at a price below cost.²⁰ 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.²¹

The Federal Reserve's final rule raised the interchange fee cap to \$0.21 plus five basis points times the total value of the transaction. This final rule prompted yet another constitutional challenge, this time by a coalition of merchants led by the National Retail Federation angered by the Board's decision to raise the fee cap from its initial proposal.²² The Supreme Court declined to hear the case, and the \$0.21 cap remains.²³

3. *Impact of Regulatory Intervention.* Given that more than six years have passed since the debit fee cap was implemented, it is important to consider whether Durbin has had its intended effect on banks, merchants, and consumers.

Bank impact. Interchange income dropped instantaneously after Durbin. Figure 1 shows that 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, constituting a 25% decrease in interchange revenue.²⁴

¹⁹ *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 SYST. (Dec. 16, 2010), <https://www.federalreserve.gov/newsevents/pressreleases/bcreg20101216a.htm>.

²⁰ 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).

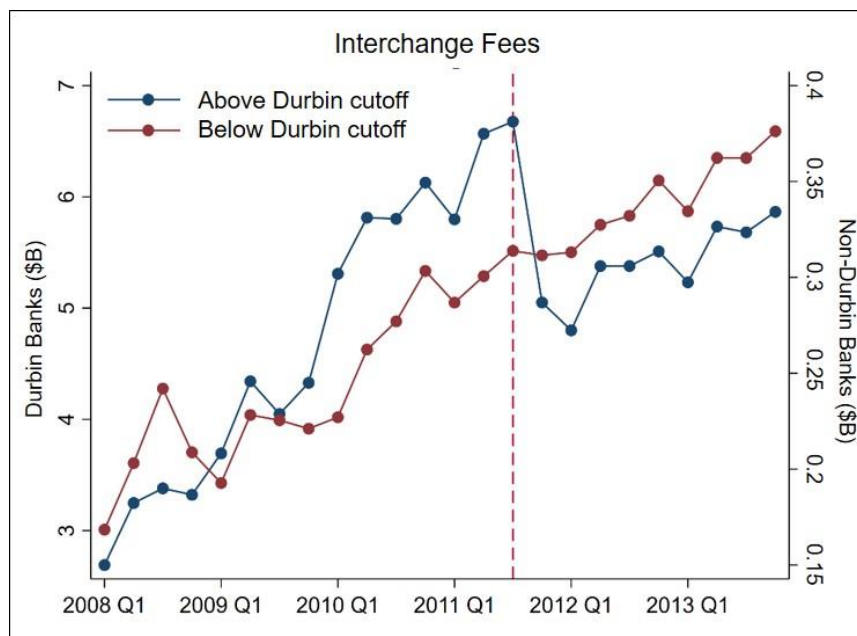
²¹ Both Ben Bernanke, former Chairman of the Federal Reserve, and Sheila Bair, former Chair of the Federal Deposit Insurance Corporation (FDIC), voiced these concerns. In response, an amendment was offered to delay the implementation of Durbin until an FDIC study ascertaining its impact on community 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*, ELECTRONIC 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 Jun. 2, 2018).

²² *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).

²³ *Id.*

²⁴ 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.

Figure 1



Notes: Data from bank regulatory filings (Call Reports)

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. Bank of America asserted that “while producing a windfall to large merchants, the [Federal Reserve’s] Proposal will force the Bank to [recover] lost revenue . . . through increased consumer costs”²⁵ and TCF, which challenged the Durbin Amendment’s constitutionality, stated, “Who is going to pay for this? That Customer that gets that debit card for free.”²⁶

Perhaps unsurprisingly, many of the largest banks (Bank of America, JPMorgan Chase, Suntrust, and Regions Financial) initially proposed a fee on debit purchases to recoup Durbin losses: \$5 every month when consumers used their debit cards as a means of purchase. This fee was abandoned because of consumer outrage. A bank consultant noted that the result would be a decrease in salient fees, and instead banks “are going to have to hide the fees and the customers will still have to pay for them.”²⁷

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% for covered issuers—in the pre-Durbin period, nearly 60% of large banks offered free checking; post-Durbin, this share fell below 20%. Alternatively, checking account fees more than doubled from around \$3 to more than

²⁵ 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/R-1404_022211_67233_584174234336_1.pdf (last visited Jun. 27, 2018).

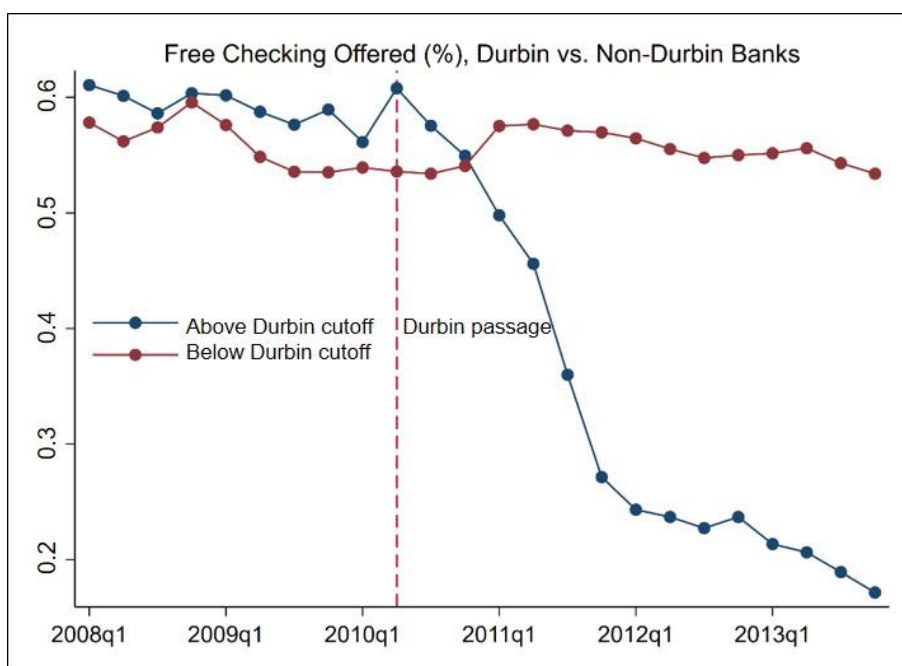
²⁶ Brian J. Hurd, *TCF Comment Letter on Durbin Amendment*, TCF NAT’L BANK (Feb. 18, 2011), https://www.federalreserve.gov/SECRS/2011/April/20110405/R-1404/R-1404_030411_68936_437488369604_1.pdf (last visited on Jun. 27, 2018).

²⁷ Tara Siegel Bernard, *In Retreat, Bank of America Cancels Debit Card Fee*, 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 Mar. 14, 2018).

\$7 for Durbin banks. Significantly, these increases are not related to general trends in banking—there is no equivalent decrease in free checking, nor an increase in maintenance fees, for banks below the Durbin threshold.

The increase in fees is borne primarily by low-income customers—monthly maintenance fees are waived for customers above a certain minimum threshold in their checking accounts (pre-Durbin, this averaged \$920, but Durbin banks raised this by nearly 40%, to \$1,265). Some low-income customers who were priced out of the market by higher fees may have turned to more-expensive banking replacements such as check-cashing and payday lending facilities.²⁸ In the most recent FDIC Survey of Unbanked and Underbanked Households, more than 30% of respondents who previously had a bank account reported that they were now unbanked because account fees were too high and unpredictable.²⁹

Figure 2

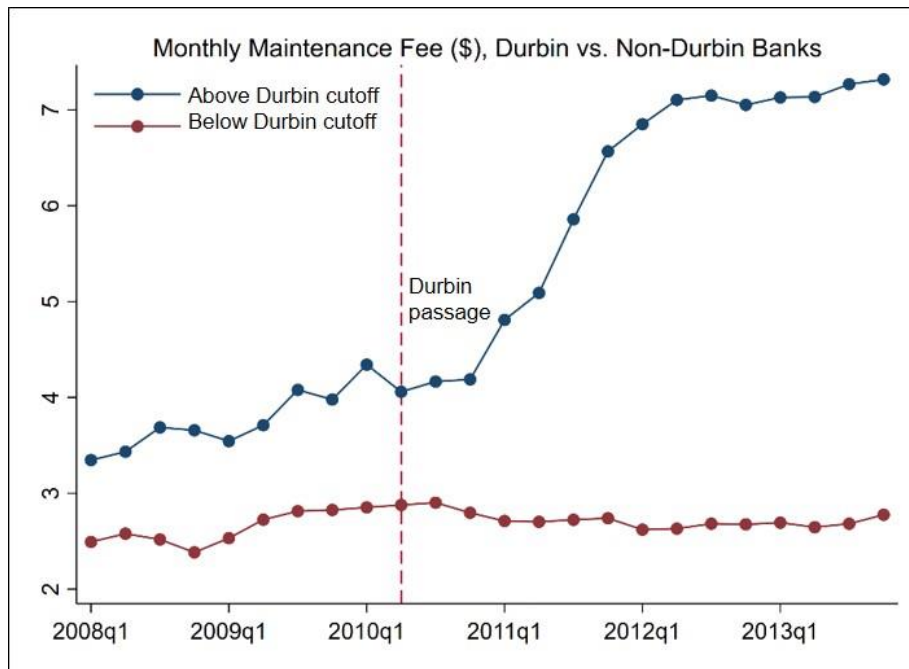


Notes: Data from RateWatch, which surveys bank branches weekly for fee information.

²⁸ 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 Jun. 27, 2018).

²⁹ *FDIC National Survey of Unbanked and Underbanked Households* FED. DEPOSIT INS. CORP. (2015), <https://www.fdic.gov/householdsurvey/2015/2015appendix.pdf> (last visited 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 financial sector. <http://www.spentmovie.com/> (last visited on Jun. 20, 2018). See also Michael S. Barr, *Banking the Poor*, 21 YALE J. REG. 121, 121 (2004) (discussing barriers to banking for low-income families).

Figure 3



Notes: Data from RateWatch, which surveys bank branches weekly for fee information.

Economists Natasha Sarin and Vladimir Mukharlyamov estimate that banks recovered nearly 60% of lost interchange revenue by increasing consumer fees.³⁰ These firms likely recovered even more by pushing consumers toward unregulated credit, as discussed below.

Merchant impact. Advocates of Durbin asserted that it would “enable smaller businesses and merchants to lower their costs and provide discounts for their customers.”³¹ 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. But many were skeptical that consumers would see any benefit: Mark Pryor, a former Republican Arkansas senator, 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.”³²

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

³⁰ 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. Natasha Sarin & Vladimir Mukharlyamov, *The Impact of the Durbin Amendment on Banks, Merchants, and Consumers* (working paper) (2018). 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 THE FED. RESERVE SYST. (2014), the only other empirical study that considers bank responses to the Durbin Amendment.

³¹ 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 Mar. 14, 2018).

³² Zach Carter & Ryan Grim, *Swiped: Banks, Merchants, and Why Washington Doesn’t Work for You*, HUFFPOST (Dec. 6, 2017) https://www.huffpost.com/2011/04/28/swipe-fees-interchange-banks-merchants_n_853574.html (last visited Apr. 30, 2018).

publicly traded retailers increased by nearly 50 basis points in response to Durbin.³³ 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.³⁴

Evidence from merchant prices also suggests that retailers failed to pass through Durbin savings. Prices set by gas stations, supermarkets, and convenience stores whose costs fell significantly because of Durbin are statistically indistinguishable from those set by merchants with low (or no) interchange savings.³⁵ And when surveyed, the sectors that experienced the greatest cost reduction report that they did not decrease prices in response to Durbin.³⁶

Durbin did not help all retailers. Small-ticket merchants without sufficient market power to negotiate with Visa and Mastercard saw their interchange rates rise, not fall, as the Board's \$0.21 debit interchange cap became a floor. These merchants *raised* prices.³⁷ For example, Redbox, which provides movie rentals through vending machines, increased prices by 20% post-Durbin.³⁸ Parkmobile, a smartphone application that helps Washington, D.C. residents pay for parking, raised its fees by over 40%.³⁹ Small business owners decried Durbin's impact. An owner of New York coffee houses said: "[M]y choice is to raise prices, discount for cash, or get an ATM."⁴⁰ Another merchant said that when customers offer a card to purchase a banana, he gives it to them for free: "Just take the banana. Don't give me the card."⁴¹

The vending-machine industry was especially hurt by Durbin: It increased interchange fees by more than 200%.⁴² Visa struck agreements with payment processors for this industry.⁴³ However, Mastercard refused to negotiate a lower rate, leading many vending machines to drop

³³ 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).

³⁴ *Q4 2010 Home Depot, Inc. Earnings Conference Call*, THE HOME DEPOT INC. (Feb. 2011), <http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9ODMwMTB8Q2hpbGRJRD0tMXxUeXBIPtM=&t=1> (last visited Mar. 14, 2018).

³⁵ Sarin & Mukharlyamov, *supra* note 30.

³⁶ 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.

³⁷ *See, e.g., id.*; Sarin & Mukharlyamov, *supra* note 30.

³⁸ Daniel Indiviglio, *Angry that Redbox Is Hiking DVD Rental Prices? Blame Congress*, 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 Jun. 11, 2018).

³⁹ 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. Robin Sidel, *Debit-Fee Cap Has Nasty Side Effect*, WALL ST. J. (Dec. 8, 2011), <https://www.wsj.com/articles/SB10001424052970204319004577084613307585768> (last visited on Mar. 24 2018).

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ *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).

Mastercard debit from their list of accepted payment methods until a deal similar to Visa's was eventually reached years later.⁴⁴

Credit impact. Durbin was not the first legislative attempt to rein in interchange fees. Interestingly, earlier iterations focused on *credit* rather than *debit* fees.⁴⁵ This is both because credit interchange fees were historically higher and because legislators hoped to dissuade merchants and banks 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% 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."⁴⁶

Despite the fact that the Australian case-study was well-known to policymakers during the Durbin debate,⁴⁷ the legislation eventually targeted debit interchange. This was in response to a substantial lobbying effort by banks and credit card networks, who 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."⁴⁸ In fact, Durbin lauded the Amendment's focus on debit interchange, noting that as a result it would avoid any undesirable credit supply impact.⁴⁹

However, in capping *debit* interchange, the Durbin Amendment perversely increased the use of credit relative to its cheaper and less pernicious debit counterpart. David Evans, an academic with extensive background in payment systems, commented on the irony:

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,

⁴⁴ *Id.* In 2015 after a hiatus of more than three years, vending machines that get payment services through USA Technologies began accepting Mastercard debit again in January 2015.

⁴⁵ *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).

⁴⁶ Michele Bullock, *A Guide to the Card Payment System Reforms*, RES. BANK AUS. (Sept. 2010), <https://www.rba.gov.au/publications/bulletin/2010/sep/7.html>.

⁴⁷ *See, e.g.*, Testimony of Governor Sarah Bloom Raskin (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.").

⁴⁸ Keith Bradsher, *U.S. Looks to Australia on Credit Card Fees*, N.Y. TIMES (Nov. 24, 2009), <https://www.nytimes.com/2009/11/25/your-money/credit-and-debit-cards/25card.html>. 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" (2007).

⁴⁹ 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>.

and it's going to have the unavoidable consequences to push them towards credit. I think it's nuts.⁵⁰

In response to Durbin, banks do appear to have pushed consumers toward credit usage.⁵¹ For example, spending on credit card rewards among big issuers more than doubled since 2010⁵² while debit rewards programs were largely eliminated.⁵³ 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.⁵⁴ Unsurprisingly, credit usage grew more in the three years following Durbin's enactment than in any other three year period since 2000.⁵⁵ The push toward credit is especially problematic for low-income consumers for two reasons—first, it can lead to an expensive cycle of debt; and second, for consumers without credit access, the population-wide growth in credit usage increases costly subsidization by debit and cash users of their credit counterparts.⁵⁶

B. The CARD Act

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."⁵⁷ To some extent, she was right.

Card fees have exploded since the late 1990s, when the Supreme Court allowed issuers to apply lax (or non-existent) limitations on fees from their home states to borrowers in other states.⁵⁸ Penalty fees accounted for more than half of the \$24 billion in credit card fees U.S. cardholders paid in 2004 and 12.5% of issuers' revenues.⁵⁹ Various credit card contract terms enabled issuers to extract maximum fees. For example, card companies did not have to provide advance notice of default or penalty-rate increases; either could rise without warning when cardholders applied for a

⁵⁰ Martin Neal Baily, Reasonable Regulation of Debit Card Fees (Transcript), PYMNTS.com (May 2, 2011), <https://www.pymnts.com/news/2011/martin-neal-baily-reasonable-regulation-of-debit-card-fees-transcript/> (last visited Mar. 14, 2018).

⁵¹ 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).

⁵² *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 Mar. 14, 2018).

⁵³ 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 Mar. 14, 2018).

⁵⁴ Q1 2012 Visa Inc. Earnings Conference Call (Feb. 8, 2012, 10:00 PM), https://s1.q4cdn.com/050606653/files/doc_financials/transcript/2012/V-Transcript-2012-Q1-2012.pdf

⁵⁵ Survey of Consumer Payments. <https://www.federalreserve.gov/newsevents/press/other/2016-payments-study-20161222.pdf>

⁵⁶ This is because prices are equivalent, regardless of payment instrument; and yet credit card users also receive valuable rewards. See, e.g., Adam J. Levitin, *Priceless? The Economic Costs of Credit Card Merchant Restraints*, 55 UCLA L. REV. 1321, 1358 (2008) (discussing the distributional consequences of the payments system, noting that "[i]n its worst form, food stamp consumers are subsidizing first-class frequent flier upgrades.")

⁵⁷ Benjamin Sarlin, *Elizabeth Warren Talks Bank Reform*, DAILY BEAST (Apr. 21, 2010), <https://www.thedailybeast.com/elizabeth-warren-talks-bank-reform> (last visited on Mar. 14, 2018).

⁵⁸ Oren Bar-Gill & Elizabeth Warren, *Making Credit Safer*, 157 U. PA. L. REV. 1 (2008).

⁵⁹ 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 58.

mortgage or made a large purchase that lowered their credit score.⁶⁰ Although introductory teaser rates are presented to consumers up front, 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.⁶¹ Consumer inattention to these less-salient terms precipitated a status quo whereby consumers unknowingly incurred avoidable expenses.⁶²

2. *Regulatory Approach to Solving the Problem.* Given 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.⁶³ Its May 2008 proposed rules focused on protecting customers from unexpected increases in interest rates or penalty fees, ending two-cycle billing,⁶⁴ and prohibiting card issuers from creating a “cycle of debt” for subprime borrowers by opening accounts likely to generate astronomical fee revenue.⁶⁵

In tandem, Congress focused on the consumer credit 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.⁶⁶ 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, meaning it 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 limit credit

⁶⁰ Bar-Gill & Warren, *supra* note 58.

⁶¹ 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).

⁶² See Gregory Bresiger, *People Are Unaware of How Much They Spend on Bank Fees*, N.Y. POST (July 16, 2016, 6:45 PM), <https://nypost.com/2016/07/16/people-are-unaware-of-how-much-they-spend-on-bank-fees/> (last visited on Jun. 11, 2018).

⁶³ Vikram Jambulapati & Joanna Stavins, *The Credit CARD Act of 2009: What Did Banks Do?* FED. RES. BANK OF BOSTON (2013) (providing a detailed discussion of the CARD Act’s staged legislative history).

⁶⁴ 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.

⁶⁵ *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).

⁶⁶ Press Release, Carolyn B. Maloney, *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).

availability for college students, which regulators hoped would decrease the likelihood that young borrowers would get trapped in a lifetime of debt.⁶⁷

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 (or delinquency) 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.⁶⁸

It is important to consider the impact of the CARD Act on the price and availability of consumer credit. 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.⁶⁹ These savings were largest (nearly \$60 per account per year) for the least-credit-worthy borrowers—that is, those with a FICO score below 660.⁷⁰ Overall, these savings represent a decrease in account fees of over 20%.⁷¹

Despite early anecdotal evidence to the contrary,⁷² most academic work finds little support for the notion that card companies offset the CARD Act's fee losses through increases in interest rates or other unregulated fees.⁷³ 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.⁷⁴

Evidence on the CARD Act's impact on credit supply is more mixed. While some authors find no impact on credit availability (e.g., no lower credit limits or more account closures⁷⁵) others

⁶⁷ 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 Jun. 11, 2018).

⁶⁸ *See, e.g.,* Tomoeh Murakami Tse, *JP Morgan's Dimon Says New Laws Have Hurt His Company*, WASH. POST (Apr. 22, 2010), <http://www.washingtonpost.com/wp-dyn/content/article/2010/04/01/AR2010040103684.html> (last visited on Mar. 14, 2018).

⁶⁹ *See generally* Agarwal et al., *supra* note 2 (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)).

⁷⁰ Those with a FICO score above 660 experienced a smaller decline in fees, of around \$7.90 per account. *Id.*

⁷¹ *Id.*

⁷² 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).

⁷³ 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." Scott T. Nelson, *Private Information and Price Regulation in the US Credit Card Market*, (2018) (working paper).

⁷⁴ Bar-Gill & Bubb, *supra* note 2.

⁷⁵ Agarwal et al., *supra* note 2 (finding the CARD Act had but unable to rule out an impact on the number of new accounts).

find the probability of account closure nearly doubled.⁷⁶ 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.⁷⁷ But given that this earlier proposal coincides with the Recession, it is difficult to establish causally that increases in account closures are attributable to imminent credit card pricing restrictions rather than to the general economic downturn.⁷⁸

Recent work suggests that the CARD Act did in fact decrease credit supply for subprime borrowers.⁷⁹ The existence of a supply-side credit effect, especially for the subprime, is consistent with anecdotal evidence and industry remarks at the time.⁸⁰ For example, JPMorgan Chase CEO Jamie Dimon said the bank would no longer offer credit cards to 15% of its customers, who became too risky to be attractive to the bank in light of the CARD Act's restrictions.⁸¹ In its recent assessment of the CARD Act, the American Bankers Association highlighted that it decreased credit availability for subprime borrowers, noting that 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 is outweighed by a decrease in lender rents.⁸² The overall equilibrium effect of the CARD Act is an increase in consumer surplus estimated to be approximately \$12 billion annually.⁸³ 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 2012.⁸⁴ Thus, credit card issuers appeared to be much less focused on offsetting losses from the CARD Act than debit card issuers were on offsetting losses relating to Durbin. I consider the reasons for this difference in Part III, when contemplating policy lessons that can be drawn from these case studies.

⁷⁶ Jambulapati & Stavins, *supra* note 63.

⁷⁷ *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 2; and Bar-Gill & Bubb, *supra* note 2.. Professor Todd Zywicki makes this argument in his critique of Agarwal et al., *supra* note 2: "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*, 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 Apr. 30, 2018).

⁷⁸ Jambulapati & Stavins, *supra* note 63 (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").

⁷⁹ Nelson, *supra* note 73.

⁸⁰ *See, e.g.* Connelly, *supra* note 43.

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.

⁸¹ *Id.*

⁸² Nelson, *supra* note 73.

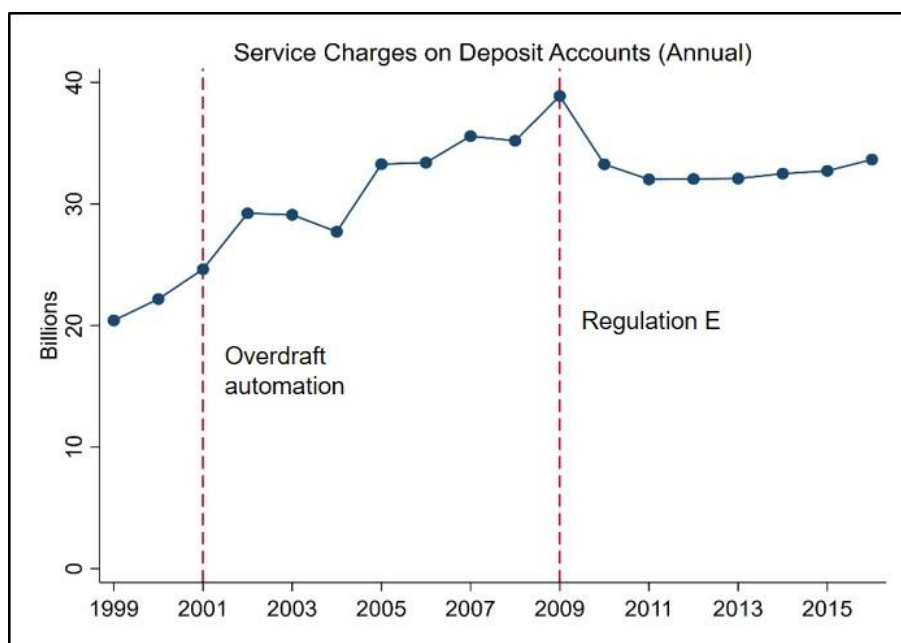
⁸³ Agarwal et al., *supra* note 2.

⁸⁴ *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).

C. Overdraft

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 vendors⁸⁵—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.⁸⁶ As a result, fee income on deposit accounts⁸⁷ increased by more than 90% between 1999 and 2009 (see Figure 4). In 2006, overdraft fees accounted for around 6% of banks’ total net operating revenues.⁸⁸

Figure 4



Notes: Data from bank regulatory filings (Call Reports)

⁸⁵ *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 Mar. 14, 2018).

⁸⁶ *Id.*

⁸⁷ 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.*

⁸⁸ *Id.*

Overdraft revenue is generated primarily by repeat overdrafters. Before the Recession, about 75% of accounts had no overdraft incidents, 12% had one to four, 5% had five to nine, 4% had 10 to 19, and only 5% had more than 20 overdrafts annually. Customers with more than 10 overdraft transactions—fewer than 10% of all checking account customers—accrued 84% of the reported overdraft fees.⁸⁹ These customers are less financially sophisticated and typically lower-income: In 2006, 40% of low-income customers overdrafted, compared to only 20% of their high-income counterparts. Low-income customers are also twice as likely to be frequent overdrafters.⁹⁰

Overdraft is essentially a very high-interest loan: Assuming, for example, a \$27 overdraft fee,⁹¹ a customer repaying a \$20 point-of-sale overdraft in two weeks would incur an APR of 3,520%. Banks offer much cheaper ways to complete overdraft transactions, for example, by opening an overdraft line of credit (usually an APR of around 18%) or linking a checking account to a savings/credit card account (costing at most a \$5 flat fee).⁹² Given the availability of cheaper alternatives, banks' ability to generate overdraft revenue, especially from repeat overdrafters, is puzzling. One possible explanation for overdrafts is consumer inattention—nearly all consumers who overdraft said they were unaware they were doing so.⁹³ The lack of salience of these fees to the consumers who bear them enables banks to generate significant overdraft revenue.

Prior to recent updates to overdraft rules, most bank customers were automatically opted in to overdraft protection. Given the rapid increase in overdraft fees since the early 1990s and their incidence on the least financially sophisticated, both popular commentators⁹⁴ and regulators⁹⁵ voiced concern.

2. *Regulatory Approach to Solving the Problem.* In 2005, the Federal Reserve amended Regulation DD,⁹⁶ which implements the Truth in Savings Act, to require additional disclosures about overdraft services and rein in misleading advertisements—for example, representing an overdraft service as a line of credit or describing overdraft protection as free.⁹⁷ Banks were also required to disclose total overdraft fees incurred in periodic account statements.⁹⁸ Regulators hoped these disclosures would make overdraft fees salient to consumers and push them toward cheaper alternatives.

⁸⁹ CFPB Study of Overdraft Programs, *supra* note 88.

⁹⁰ FDIC Study of Bank Overdraft Programs, *supra* note 89. 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.

⁹¹ Median for the FDIC study. *Id.*

⁹² *Id.*

⁹³ *Overdraft America: Confusion and Concerns about Bank Practices*, PEW CTR. ON THE STATES (May 2012), http://www.pewtrusts.org/~media/legacy/uploadedfiles/pes_assets/2012/sciboverdraft20america1pdf.pdf (last visited on Mar. 14, 2018).

⁹⁴ Ron Lieber & Andrew Martin, *Overspending on Debit Cards Is a Boon for Banks*, N.Y. TIMES (Sept. 8, 2009), <http://www.nytimes.com/2009/09/09/your-money/credit-and-debit-cards/09debit.html> (last visited on Jun. 11, 2018). One *New York Times* editorial called for regulators to “move quickly and aggressively to protect consumers.” Editorial, *Debit Card Trap*, N.Y. TIMES (Aug. 19, 2009), <http://www.nytimes.com/2009/08/20/opinion/20thu1.html> (last visited on Jun. 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*, N.Y. TIMES (Nov. 13, 2009), <http://www.nytimes.com/2009/11/14/opinion/14sat2.html> (last visited on Jun. 11, 2018).

⁹⁵ FDIC Study of Bank Overdraft Programs, *supra* note 89 (citing a 2006 FDIC study to gather data on overdraft programs in response to the growth in automated overdraft).

⁹⁶ 12 CFR Part 1030.

⁹⁷ FDIC Study of Bank Overdraft Programs, *supra* note 89 (citing § 226.4(c)(3)).

⁹⁸ *Id.*

Despite this intervention, overdraft fee income for banks and credit unions rose 35% from 2006 to 2008.⁹⁹ The Board then amended Regulation E¹⁰⁰ 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.¹⁰¹ In selecting this policy default, the Board sought to address the lack of salience of overdraft fees to consumers. Specifically, it noted that “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 the account to cover it.”¹⁰² Because consumers are likely to adhere to established defaults,¹⁰³ the Board believed the opt-in regime would help prevent expensive and frequent overdraft incidents.¹⁰⁴

The new opt-in default was meant to be a strong nudge against overdraft protection: The Board concluded that consumers, if made aware of the cost of overdrafting, would prefer such transactions be declined and amended the default rule accordingly. This view is consistent with the Board’s own internal testing¹⁰⁵ and surveys,¹⁰⁶ which demonstrate a majority of overdrafters would prefer that transactions incurring overdraft fees not be completed.

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 maintenance-fee-free checking accounts, and free online payment.”¹⁰⁷ It is important to consider the actual impact of the new overdraft opt-in regime.

Figure 4 above shows that overdraft revenue decreased significantly immediately following changes to the overdraft default rules. Service charges on deposit accounts declined by

⁹⁹ 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).

¹⁰⁰ 12 CFR Part 1005.

¹⁰¹ 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.

¹⁰² 74 Fed. Reg. 220, 59039.

¹⁰³ 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.

¹⁰⁴ See Todd Zywicki, *Behavioral Law and Economics and Bank Overdraft Protection*, VOLOKH CONSPIRACY (Nov. 20, 2013, 7:19 AM), <http://volokh.com/2013/11/20/behavioral-law-economics-bank-overdraft-protection/> (last visited on Jun. 11, 2018).

¹⁰⁵ 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.

¹⁰⁶ A 2012 Pew study reports that more than 75% of people who reported overdrafting said that they would have preferred the non-recurring debit transactions be declined. *Overdraft America*, *supra* note 97.

¹⁰⁷ *Id.*

14% in the year following the Board’s changes. Banks do not appear to have recovered these losses.¹⁰⁸

Despite the decrease in overdraft revenue associated with the new opt-in regime, some academics have cited it as an example of a failed nudge, or a “slippery default,”¹⁰⁹ cautioning that, given an asymmetry in information and sophistication (as with naïve and inattentive consumers contracting with financial firms), policy defaults fail to stick because motivated firms are focused on persuading consumers to opt out of the default (in this case, by opting *in* to overdraft protection). Any appearance of consumer choice is therefore illusory.¹¹⁰

Professor Lauren Willis suggests that banks made the overdraft default position costly by bombarding customers with marketing and phone calls¹¹¹ so “consumers quickly realized that there [was] an immediate intangible benefit to opting out—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.”¹¹²

Certainly, some banks aggressively focused on opting customers in to overdraft protection. TCF is being sued by the CFPB for improper opt-in practices,¹¹³ including firing employees who fail to maintain an 80% opt-in rate for new accounts, publicly shaming branch managers who fail to meet their opt-in goals, failing to make clear to customers that opting in is a choice,¹¹⁴ and offering emotional hypotheticals in the rare cases of customer resistance to overdraft protection.¹¹⁵

¹⁰⁸ 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.

¹⁰⁹ See, e.g., Willis, *supra* note 4. Citing Professor Willis, Professors Ryan Bubb and Richard Pildes use the overdraft opt-in default as an example of a setting in which “behavioral economics trims its sails” and a case for which a policy mandate (here, no overdraft protection) is preferable. Bubb & Pildes, *supra* note 5.

¹¹⁰ Bubb & Pildes, *supra* note 5.

¹¹¹ Willis, *supra* note 4, at 1188 (citing Phil Villareal, *When It Comes to Overdraft Opt-In, Chase Won’t Take No for an Answer*, CONSUMERIST (Aug. 6, 2010), <https://consumerist.com/2010/08/06/when-it-comes-to-overdraft-opt-in-chase-wont-take-no-for-an-answer/> (last visited on Mar. 14, 2018)).

¹¹² *Id.*

¹¹³ CFPB’s complaint was two-fold: first, that TCF engaged in abusive and deceptive practices to opt in new consumers barred by Section 1031 of the Dodd-Frank Act, and second, that it violated Regulation E’s opt-in requirement for new and existing customers. The latter has been dismissed. *Consumer Financial Protection Bureau v. TCF National Bank*, Civ. No. 17-166 (D. Minn. Sept. 8, 2017), <https://www.consumerfinance.com/wp-content/uploads/sites/14/2017/09/TCF-Order-17cv166-2.pdf>.

¹¹⁴ To encourage existing customers to opt in, bank employees engaged in an aggressive telephone campaign and asked consumers whether they would “like your TCF check card to continue to work as it does today?”—the majority said yes, and TCF considered a “yes” opting in to overdraft protection. The strategy was a successful one: TCF achieved an opt-in rate of 66%, more than three times the industry average. See CFPB Complaint, *Consumer Financial Protection Bureau v. TCF National Bank*, No. 0:17-cv-00166 (D. Minn. Jan. 19, 2017), https://files.consumerfinance.gov/f/documents/201701_cfpb_TCF-National-Bank-complaint.pdf (last visited on Mar. 14, 2018).

¹¹⁵ *Id.* at 20:

The major strategy would be to present an example of how it benefited the customer. It tugged at your heart strings. It usually was related to an emergency situation in which you needed funds. [For example] ‘We live in Minnesota too. It is cold outside. You are on the side of the road. You know 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, kind of like scare tactics.’

But TCF is the exception, not the rule.¹¹⁶ Relying on vivid anecdotal evidence about particular banks' opt-in practices fails to capture the reality that there is substantial heterogeneity in bank responses to the new overdraft regime.

Large banks mostly moved away from overdraft as a product. Bank of America, JPMorgan Chase, Wells Fargo, and Citibank, which together account for more than 35% of total domestic deposits,¹¹⁷ exceed the opt-in requirements of Regulation E. In March 2010, Bank of America eliminated entirely overdraft protection on point-of-sale purchases, a substantial move given that debit purchases accounted for roughly 60% of its overdraft fee income.¹¹⁸ More recently, in 2014, Bank of America launched a new "SafeBalance" checking account to prevent customers from overdrafting when withdrawing cash from ATMs or paying bills (including check payments not covered by the new opt-in regime).¹¹⁹ In July 2012, JPMorgan Chase decided to end overdraft charges on small transactions (purchases of \$5 or less).¹²⁰ In June 2017, Wells Fargo began notifying customers via email when their account balances drop to zero or less.¹²¹ Most recently, in November 2017, Wells Fargo also eliminated overdraft fees for small transactions (less than \$5) and added a "rewind" option to eliminate the overdraft fees if a direct deposit large enough to cover the overdraft transactions is received by 9 A.M. the day after an account becomes negative.¹²² Citibank, even prior to changes to Regulation E, never allowed overdrafts on ATM or point-of-sale transactions.¹²³ One reason the largest banks dislike overdraft as a product is its recent notoriety: Executives at two of these large banks¹²⁴ suggest industry movement away from overdraft stems from reputational costs associated with being an overdraft gouger, and relatedly, the threat of litigation for abusive overdraft practices.¹²⁵

¹¹⁶ Overdraft was such a successful product for TCF that Bill Cooper, the bank's former chairman and CEO, dubbed his boat *The Overdraft*. *Id.* at 7.

¹¹⁷ Bank call reports.

¹¹⁸ See Dan Fitzpatrick and Robin Sidel, *Bank of America Eliminates Overdraft Fees on Debit Buys*, WALL ST. J. (Mar. 10, 2010), <https://www.wsj.com/articles/SB10001424052748704784904575112430638527738> (last visited on Jun. 11, 2018). Bank of America retains overdraft protection for ATM withdrawals but alerts customers who are about to overdraw their accounts that they will be charged a \$35 fee if they proceed. Geoff Williams, *Bank of America Announces New Information on Overdraft Policies*, AOL (Mar. 10, 2010), <https://www.aol.com/2010/03/10/bank-of-america-announces-new-information-on-overdraft-policies/> (last visited on Mar. 14, 2018).

¹¹⁹ Melanie Hicken, *BofA Rolls out Checking Account for Chronic Overdrafter*, CNN MONEY (Mar. 6, 2014), <http://money.cnn.com/2014/03/06/pf/bank-of-america-overdraft/index.html> (last visited on Mar. 14, 2018).

¹²⁰ Emily Cohn, *Chase Overdraft Fee Won't Apply to Purchases \$5 or Less*, HUFFPOST (June 20, 2012), https://www.huffingtonpost.com/2012/06/20/chase-overdraft-fee-5-dollars_n_1613406.html (last visited on Mar. 14, 2018).

¹²¹ Robert Barbra, *Wells Fargo Adds Overdraft Protection with Rewind*, BANKRATE (Nov. 21, 2017), <http://www.bankrate.com/banking/checking/wells-fargo-launches-overdraft-rewind/> (last visited on Mar. 14, 2018).

¹²² See *id.*

¹²³ See Jane Quinn, *Automatic Overdraft Protection: Just Say No*, MONEYWATCH (Aug. 16, 2010), <https://www.cbsnews.com/news/automatic-overdraft-protection-just-say-no/> (last visited on Jun. 11, 2018).

¹²⁴ Anonymous interview (on file with author).

¹²⁵ Bank of America settled its overdraft lawsuit in November 2017 for \$66 million. The complaint alleged that the overdraft fees were in fact interest and therefore subject to restrictions on usurious or excessive rates. See Gordon Gibb, *Bank of America to Settle Excessive Fees Class Action for \$66.6 Million*, LAWYERSANDSETTLEMENTS.COM (Nov. 10, 2017), <https://www.lawyersandsettlements.com/articles/excessive-bank-overdraft-fees/excessive-bank-overdraft-fees-43-22703.html> (last visited on Jun. 11, 2018); Dena Aubin, *Bank of America Settles Overdraft Lawsuit for \$66.6 Million*, REUTERS (Nov. 2, 2017), <https://www.reuters.com/article/us-bank-of-america-overdrafts/bank-of-america-settles-overdraft-lawsuit-for-66-6-million-idUSKBN1D22ER> (last visited on Jun. 11, 2018). And Wells Fargo is currently the target of class action lawsuits around the country that accuse it of changing the order of debit card transactions—from highest dollar amount to lowest dollar amount—with the sole purpose of increasing overdraft

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% 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.¹²⁶ As such, the fee increases observed appear to be more related to Durbin than to changes in banks' overdraft policies, although disentangling the two is difficult.¹²⁷

As a result of the new overdraft regime, the share of bank customers opted in to overdraft protection (and thus capable of incurring overdraft fees) decreased from 100% to 16%.¹²⁸ Even among frequent overdrafters, only 45% have opted in to overdraft protection.¹²⁹ 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. Another interpretation of this evidence is that frequent overdrafters prefer overdraft protection to their transactions being declined.¹³⁰

It seems extreme to characterize as a “slippery default” a default rule that decreased the share of bank customers eligible to incur overdraft fees by nearly 85%.¹³¹ However, a valid concern is that banks may be focused on opting in the least financially sophisticated customers who generate the most overdraft revenue. Below, I consider additional behaviorally informed changes to the overdraft regime that could increase the salience of its costs to consumers but still preserve a role for consumer choice.

revenue, in violation of state competition laws. *See, e.g.,* Gutierrez v. Wells Fargo Bank, 704 F.3d 712 (9th Cir. 2012); *see also* Associated Press, *Wells Fargo Wants Court to Toss Overdraft Lawsuits and Let It Use Arbitration*, L.A. TIMES (Aug. 24, 2017, 3:15 PM), <http://www.latimes.com/business/la-fi-wells-fargo-20170824-story.html> (last visited on Jun. 11, 2018). A similar charge was at the heart of the JPMorgan Chase litigation that resulted in a \$110 million settlement. Jonathan Stempel, *JP Morgan Settles Overdraft Fee Case for \$110 Million*, REUTERS, (Feb. 7, 2012), <https://www.reuters.com/article/us-jpmorgan-overdraft-settlement/jpmorgan-settles-overdraft-fee-case-for-110-million-idUSTRE8161CR20120207> (last visited on Jun. 11, 2018).

¹²⁶ 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%. Willis, *supra* note 4.

¹²⁷ Both were passed in Q2 2010, although changes to overdraft were previously proposed in 2008 and 2009.

¹²⁸ CFPB *Study of Overdraft Programs*, *supra* note 88. The opt-in rate is 22% for new accounts, which are easier to opt in to because they involve more direct contact with consumers.

¹²⁹ *Id.*

¹³⁰ 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).

¹³¹ Willis, *supra* note 4.

Table 1. Summary of Case Studies

Case Study	Cause(s) for Intervention	Summary of Intervention	Efficacy of Intervention	Unintended Consequences of Intervention
Durbin Amendment	Interchange became a large operating cost for merchants as use of credit/debit for payment exploded. Card network market has monopoly-like features. 70% controlled by Visa/Mastercard.	\$0.21 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.	Shifted consumers to credit. Increased interchange fees for small-ticket merchants. Higher checking account fees for consumers.
CARD Act	Rise in complexity of credit card contracts. Unanticipated consumer fees.	Restricts unannounced fee increases and back-end penalty fees for late payment/exceeding credit limits.	Fee reductions of \$12 billion annually, with little evidence of offsetting increase in interest rates or reduction in credit volume.	Some evidence of anticipatory decreases in credit availability.
Overdraft Opt-In	Overdraft revenue grew by more than 100% in a decade, due to automated overdraft programs aimed at generating revenue; <i>e.g.</i> , 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 target frequent overdrafters (10% are responsible for 85% of overdraft revenue) for opt-in; often poorest and least financially sophisticated.

II. CONCEPTUAL FRAMEWORK

The case studies in Part I show that recent consumer-payments regulations have had mixed efficacy. Part II begins to glean lessons from these interventions, providing a simplistic conceptual framework to establish that, in the presence of shrouded pricing, regulatory intervention can be effective.

A. Shrouded Information and Imperfect Markets

This conceptual framework is built on the observation that banks regularly hide certain prices from consumers. Card issuers advertise low upfront pricing (for example, the introductory APR in large letters on envelopes to potential customers) but hide add-on costs those same customers are likely to incur (for example, 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). p_s is \$90, p_{ns} is \$20. First, note that the existence of price-shrouding leads to excessive credit card borrowing,¹³² excessive use of credit or debit cards to pay for transactions,¹³³ and, in our example, too many checking accounts. How so? Assume there are two types of consumers, high-marginal-benefit consumers who derive a benefit of \$110 from the consumer checking account, and low-marginal-benefit 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-marginal-benefit types would purchase checking accounts; however, believing the total cost is only \$90, both high and low 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} . Both types have equal marginal benefits of \$100. Sneaky Bank's total cost of servicing a checking account is \$100. Thus, in a perfectly competitive world, the total revenue it generates from customers must also equal \$100—any more, and the demand for its checking account will be 0; any less, and it will earn negative profits. Sophisticated customers avoid overdraft fees and pay only \$90 for their checking accounts; unsophisticated consumers know no better and pay \$110, both the \$90 monthly fee and a \$20 overdraft fee. This numerical example is summarized below.

¹³² 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”).

¹³³ 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”).

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 as not engaging 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.¹³⁴

The result is an equilibrium where 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 checking accounts at the loss-leader price. Unsophisticated consumers pay more for their checking accounts, thereby cross-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 that they will never incur overdraft fees. If the total cost of understanding contract provisions, checking account balances, and keeping cash handy is \$8, sophisticated consumers will still prefer expending this effort to save \$2 (\$90 in checking account fees + \$8 to avoid overdraft costs) rather than signing on to Transparent Bank for a total cost of \$100.

What role can regulatory intervention play?¹³⁵ Consider a regulator that is aware of shrouded prices and heterogeneous customer sophistication and intervenes, perhaps by capping the overdraft fee at \$0.¹³⁶ 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 :

¹³⁴ This example is a simplistic version of the model presented in Gabaix & Laibson, *supra* note 61, 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.”

¹³⁵ 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.

¹³⁶ This is an extreme example, and illustrative only. For reasons I discuss in Part III, 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.¹³⁷ 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 time obsessively reading contracts and balancing accounts 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. 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—high-type 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 expensive overdraft add-on, and *poor* consumers are likely to avoid it; thus, wealthy customers subsidize their poorer counterparts. This “traditional” explanation¹³⁸ also generates a cross-subsidy that can be addressed by regulatory intervention; however, it 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-sophisticated to the more, regulatory intervention can be justified on fairness and distributional grounds.

¹³⁷ 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 Jun. 11, 2018).

¹³⁸ So termed by Glenn Ellison, *A Model of Add-On Pricing*, 120 Q. J. ECON. 585 (2005).

Next consider a world *without* perfect competition, in which banks have substantial market power. At least in the short-run, in an imperfectly competitive market, banks are able to generate positive profits, or rents.¹³⁹ So, for example, Sneaky Bank can charge \$105 for its checking account, even though it costs only \$100 to provide it. Without regulatory intervention, sophisticated consumers pay \$105, and unsophisticated consumers pay a whopping \$125 for their checking accounts.

IMPERFECTLY COMPETITIVE MARKET (UNREGULATED)	
Sneaky Bank	
Cost	\$100
P_s (fee)	\$105
P_{ns} (overdraft)	\$20
Customer	
Sophisticated pays	\$105
Unsophisticated pays	\$120
Profit	\$15

The difference between this imperfectly competitive case and the baseline of perfect competition is that now, the beneficiary of the non-sophisticated consumers' naïveté 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. 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 will not offset the losses from the non-salient price cap entirely, because its customers decide whether to open (and maintain) a checking account based on the *salient* monthly fee. That is, 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 profits, albeit lower profits than it would generate in this absence of price regulation.

Note that the lack of full 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 these losses.

¹³⁹ 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.

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

B. Related Literature

The insights presented in the framework are related to a long line of both legal and economics literature considering the existence of loss-leader¹⁴⁰ pricing and its equilibrium effects on consumers and firms.¹⁴¹ For example, Professor Glenn Ellison considers an economy with two types of consumers: high types (with a high marginal utility of income) and low types (with a low marginal utility of income).¹⁴² In his framework, in equilibrium, high add-on prices are not competed away, and firms end up with positive profits because there is no incentive to lower price and attract more frugal consumers who will not consume the non-salient add-ons.¹⁴³ Thus, the existence of shrouded pricing lowers competitive market pressures. In follow-on work, economists Xavier Gabaix and David Laibson provide a model of shrouded pricing in which firms have zero profit in equilibrium, but price-shrouding remains and creates a cross-subsidy of the sophisticated by their unsophisticated counterparts, as described above.¹⁴⁴

Studies by economists Sumit Agarwal, Souphala Chomsisengphet, Neale Mahoney, and Johannes Stroebel, and Professors Oren Bar-Gill and Ryan Bubb are closely related to this particular framework. 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

¹⁴⁰ Loss-leader pricing involves setting a low base price to attract customers and high-price add-ons. Richard H. Holton, *Price Discrimination at Retail: The Supermarket Case*, 6 J. INDUS. ECON. 28 (1957).

¹⁴¹ Incidentally, the importance of salience in pricing was understood by both industry participants and the regulatory community before behavioral law and economics scholars began contemplating these issues. *See, e.g.*, FTC, Trade Regulation Rule; Credit Practices, 49 FED. REG. 7740, 7746 (Mar. 1, 1984):

Consumers have limited incentives to search out better remedial provisions in credit contracts. The substantive similarities of contracts from different creditors mean that a search is less likely to reveal a different alternative. Because remedies are relevant only in the event of default, and default is relatively infrequent, consumers reasonably concentrate their search on such factors as interest rates and payment terms.

¹⁴² Glenn Ellison, *supra* note 142.

¹⁴³ *See id.* at 589.

¹⁴⁴ *See* Gabaix & Laibson, *supra* note 61. These are two prominent examples of a long line of papers around this time that model markets with sophisticated firms exploiting their customers' behavioral biases. *See also* Stefano Della Vigna & 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).

losses.¹⁴⁵ In later work, Professor Bar-Gill considers the question of when regulatory price caps can increase consumer welfare.¹⁴⁶ He makes the point that consumers can under- or over-estimate what he refers to as “utility” (e.g., the base utility from subscribing to a credit card) and “price” (e.g., the per-use price of an overdraft incident) and suggests well-designed regulatory intervention can address these behavioral errors.¹⁴⁷

III. LESSONS OF THESE CASE STUDIES

Like Professor Bar-Gill, my goal is to understand when price regulation will be effective. This Article focuses on what he terms “price misperception,” but in the narrower consumer finance market.¹⁴⁸ The goal of this Article is to intermediate between some in the regulatory community who believe price regulations will be universally effective regardless of the market particulars¹⁴⁹ and those who believe any regulatory intervention will be ill-fated.¹⁵⁰ By studying the available empirical evidence from these three recent case studies, I form a more nuanced view and believe the lessons for regulators can be succinctly stated: Shrouding of consumer prices results in inefficient overuse of products, inefficient effort expended by the sophisticated to avoid costly add-ons, and subsidies of the sophisticated by their less-sophisticated counterparts. Regulation of non-salient prices is thus likely to be effective. In imperfectly competitive markets, price regulation, or alternatively behaviorally informed “salience shocks,” can also decrease overall consumer costs. However, price regulation absent a salience problem is less likely to achieve its ends. The differential impact of Durbin and the CARD Act can be explained through this lens of salience.

¹⁴⁵ See Agarwal et al., *supra* note 2 (on the CARD Act); Bar-Gill & Bubb, *supra* note 2 (same).

¹⁴⁶ Oren Bar-Gill, *Price Caps in Multiprice Markets*, 44 J. LEGAL STUD. 453 (2015).

¹⁴⁷ See *id.* at 454–55.

¹⁴⁸ Although I believe it is fair to extend these findings beyond consumer finance, to other markets where unsophisticated consumers contract with sophisticated firms. In related work, Professors Tom Baker and Peter Siegelman suggest that price-shrouding in the insurance market leads to persistent high profits on insurance products like extended warranties on consumer electronics and rental-car insurance. “You Want Insurance with That?” Using Behavioral Economics to Protect Consumers from Add-on Insurance Products, 20 CONN. INS. L.J. 1 (2013) (with Peter Siegelman).

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 (Sept. 28, 2016), <https://medium.com/@SenatorDurbin/sideswiped-the-hidden-motive-behind-the-big-bank-push-to-repeal-swipe-fee-reform-504b9a097827> (last visited on Jun. 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 (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 Jun. 11, 2018) (criticizing overdraft reform); Zywicki, *supra* note 77.

A. *Lesson 1: Non-Salient Pricing Is Common in Consumer Finance and Suggests a Role for Regulatory Intervention*

Salience problems in consumer finance markets result from inattention and irrational optimism. These are distinct problems but perhaps both at play in the case studies above. Consumers may entirely fail to read lengthy and complicated¹⁵¹ credit card contracts, and so they ignore terms discussing penalty fees and interest rate hikes—this is an inattention problem.¹⁵² Or, some consumers may read these terms, but believe (wrongly) that they will never incur penalties, and so similarly fail to factor them into product choice.¹⁵³

The price structure for consumer finance products, with low up-front pricing (like low teaser rates for credit cards or checking accounts with zero monthly fees) and high long-term shrouded pricing (like overdraft/delinquency fees or increases in credit card interest rates) is designed to exploit consumer irrationality to generate profits. Behavioral failings suggest a role for price regulation to help rein in shrouded prices.

Even in a world with perfect competition—where banks’ revenue is not supracompetitive—regulation of shrouded prices is desirable. This is because often high-cost hidden add-ons, like overdraft, are avoided by sophisticated consumers: In 2006, low-income customers¹⁵⁴ paid twice the overdraft fees of their high-income counterparts.¹⁵⁵ Regulating non-salient prices will eliminate this cross-subsidy. Also, price regulation will decrease use of products by consumers who misunderstand their costs and eliminate inefficient behavior to avoid add-on prices.

From a policy perspective, regulators would be well-served to monitor growing sources of revenue for large financial institutions that appear to implicate salience concerns. The fact that overdraft revenue sky-rocketed after the introduction of automated overdraft services,¹⁵⁶ or that penalty fees became the fastest growing source of revenue for card issuers,¹⁵⁷ hinted at salience problems that price regulation was well-suited to address.

I focus on the desirability of price regulations in markets with shrouded pricing and assume that it is obvious when salience problems are at play. While I acknowledge this assumption not necessarily realistic, there are many ways we can imagine testing for price-shrouding in consumer markets. For example, we can use surveys to ascertain whether consumers correctly perceive their likelihood of needing expensive add-on services like overdraft protection.¹⁵⁸

¹⁵¹ The typical credit card agreement is written at an 8th- to 9th-grade reading level, which is higher than that of the average American. Alyxandra Cash & Hui-Ju Tsai, *Readability of the Credit Card Agreements and Financial Charges*, 24 FIN. RES. LETTERS 145, 146 (2018).

¹⁵² Professor Cass Sunstein discusses this exact phenomenon: “[Borrowers] might not read the fine print; they might believe that short-term ‘teaser rates’ are actually long-term.” Sunstein, *supra* note 136, at 251.

¹⁵³ As Barr et al., *supra* note 137, highlight, pre-CARD Act issuers were able to levy penalty fees with “relative impunity” because consumers believed they would never bear them.

¹⁵⁴ Median household income of \$30,000 or less. *FDIC Study of Bank Overdraft* *supra* note 89.

¹⁵⁵ Median household income of \$70,000 or more. *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ “Late fees have become the fastest growing source of revenue for the industry, jumping from \$1.7 billion in 1996 to \$7.3 billion in 2001.” Tamara Draut & Javier Silva, *Borrowing to Make Ends Meet*, DEMOS (Sept. 2003) http://www.demos.org/sites/default/files/publications/borrowing_to_make_ends_meet_0.pdf.

¹⁵⁸ Gabaix & Laibson, *supra* note 61, propose this and four other empirical strategies to identify the existence of shrouding: (1) consumer surveys to determine whether consumers at the point of purchase are aware of add-on costs, (2) testing comparative statics associated with a model of muted consumer response to camouflaged pricing schemes, (3) determining whether firms increase search costs for add-on prices, (4) conducting product audits to determine if

B. Lesson 1a: Not All Consumer Finance Markets Involve Shrouded Prices.

The existence of price-shrouding makes clear that regulatory intervention is desirable, regardless of market specifics. However, the inverse is not true. That is, the absence of non-salient pricing does not necessarily suggest that price regulation is undesirable; however, it does suggest that intervention will be more complicated, and losses are likely to be offset by profit-maximizing firms. The effect of the Durbin Amendment highlights the challenges of price regulation in the absence of a salience problem.

For many merchants, after labor, interchange fees are among the highest operating costs.¹⁵⁹ These fees—which grew substantially due to greater use of payment cards and the introduction of rewards cards with high interchange rates—prompted a series of antitrust lawsuits and merchant lobbying for legislative intervention. No price shrouding was at play here.

Unlike the CARD Act, which capped non-salient aspects of the consumer credit bundle,¹⁶⁰ Durbin instituted a price ceiling on debit interchange below banks' costs. Banks can (roughly) be understood as generating checking account revenue from two sources: consumer account fees and merchant interchange fees. Prior to Durbin, most banks did not charge an account fee to consumers and used interchange revenue from merchants (through consumer debit purchases) to cover checking account costs. Durbin capped interchange fees, so the other aspect of the checking account bundle increased to cover costs: Consumers' account fees more than doubled.¹⁶¹ As a result, customers who cannot afford, or refuse to pay, these higher account fees were pushed into often-costlier banking alternatives such as payday lending and check-cashing services.¹⁶²

The fact that interchange revenue and account servicing costs are bundled together is not obvious to one unfamiliar with the organization of banks. To forestall distortionary consequences, banks must not be forced to offer products at a price below cost. But what is a product? A payment transaction? A checking account? The sum of customers' relationships with the bank ranging from checking accounts to money market accounts to home mortgages? This question demonstrates the importance of attention to institutional detail and organization. Given how consumer banking is often siloed (for example, into deposits, cards, and consumer real estate divisions), most banks do not set prices based on the sum of a consumer's relationships with the institution. Instead, banks appear to optimize by considering all of the revenue generated from a product offering and whether

base goods are being sold at loss-leader prices, and (5) looking for learning effects to see if consumers, when made aware of add-on pricing, change their behavior. *Id.* at 528–29.

¹⁵⁹ See Paul Gackle, *The Fight Over Interchange Fees*, FRONTLINE (Nov. 24, 2009), <https://www.pbs.org/wgbh/pages/frontline/creditcards/themes/interchange.html> (last visited on Jun. 11, 2018).

¹⁶⁰ Hidden penalty fees exploded to become the fastest-growing source of revenue for issuers, accounting for 12.5% of total card industry profits immediately preceding the CARD Act's passage. See Tim Ranzetta, *How Much Do Consumers Pay Annually in Credit Card Late Fees?*, NGPF (Nov. 28, 2016), <https://www.ngpf.org/blog/credit-cards/much-consumers-pay-annually-credit-card-late-fees/>. In response to the CARD Act's restrictions, even those in the industry cheered many of the changes as “completely appropriate. Jamie Dimon, *Letter to Shareholders* (Mar. 26, 2010), https://www.jpmorganchase.com/corporate/investor-relations/document/2009AR_Letter_to_shareholders.pdf (last visited on Jun. 11, 2018); see also *id.* (“In fact, we had voluntarily eliminated certain of the targeted practices—like double-cycle billing, which resulted in greater interest charges for customers who revolve a balance for the first time (2007); and universal default pricing, in which creditors consider credit histories with other lenders in setting rates (2008).”). Penalty fees have fallen by roughly half since the CARD Act was enacted. See Ranzetta, *supra*.

¹⁶¹ See, e.g. Sarin & Mukharlyamov, *supra* note 30.

¹⁶² FDIC data suggest that of the approximately 800,000 households that once had bank accounts but are currently unbanked, an estimated 10% cite “[b]ank account fees are too high” as the primary reason for their unbanked status. *FDIC Unbanked Survey 2015*, *supra* note 89.

this revenue exceeds the cost of offering that product. This is why industry experts cautioned that regulations reducing overdraft and interchange fees (two revenue streams for consumer checking accounts) would decrease the availability of free checking.¹⁶³

Another added complexity for regulators is that costs are bank-specific. For example, large banks can charge higher fees than small banks,¹⁶⁴ and have lower funding costs.¹⁶⁵ These differences suggest significant heterogeneity in individual bank business models that results in the same regulation having differentially distortionary consequences. This is evident when studying banks' responses to the new overdraft opt-in regime: Large banks announced the end of the \$40 cup of coffee and moved beyond the requirements of the new opt-in policies.¹⁶⁶ In contrast, community banks pushed customers toward overdraft protection, achieving opt-in rates of around three times the industry average.¹⁶⁷ Fee income from deposit accounts was such a significant source of revenue for the midsize bank TCF that it challenged the constitutionality of Durbin and is being investigated by the CFPB for deceptive opt-in practices.¹⁶⁸ Such differences in bank business models highlight the desirability of tailored regulatory approaches.

The fact that price shrouding is not a concern in the interchange market does not mean that regulatory intervention cannot be justified. Many who study the credit and debit card market believe the interchange fee structure—which charges merchants for consumers' use of these payment products through zero (or, through rewards programs, even negative) per-transaction cost—incincentivizes excessive card usage.¹⁶⁹ Additionally, since this market enforces price coherence,¹⁷⁰ the result is another cross-subsidy: All consumers pay higher retail prices to cover merchant costs for processing the high-cost rewards cards of the wealthiest.¹⁷¹ This is one plausible explanation for Durbin: Rather than lower overall consumer costs, the objective may have been to shift interchange costs to consumers to disincentivize card use. If so, the fact that banks offset

¹⁶³ 74 FED. REG. at 5903, banking industry comments note that because overdraft subsidizes checking-account maintenance costs, any loss of overdraft revenue would harm consumers who currently enjoy these services without paying for them. <https://www.gpo.gov/fdsys/pkg/FR-2009-11-17/html/E9-27474.htm> (last visited on Mar. 15, 2018). See also 76 FED. REG. at 43460, with many banks commenting that the response to Durbin would be an increase in debit card or other account fees, a decrease in cardholder rewards, and a decrease in the availability of debit cards, i.e., with transaction size limits. <https://www.gpo.gov/fdsys/pkg/FR-2011-07-20/html/2011-16860.htm> (last visited on March 15, 2018).

¹⁶⁴ This may be because they provide access to better services like developed eBanking platforms and more-extensive branch and ATM networks. Bord, *supra* note YY.

¹⁶⁵ Large banks' access to wholesale funding sources decreases reliance on retail deposits, contributing to banks' ability to offer lower retail deposit rates. See, e.g., Kwangwoo Park and George Pennacchi, *Harming Depositors and Helping Borrowers: The Disparate Impact of Bank Consolidation*. 22 REV. FIN. STUD. 1 (2009).

¹⁶⁶ Andrew Martin, *Bank of America to End Debit Overdraft Fees*, N.Y. TIMES (Mar. 9, 2010) <http://www.nytimes.com/2010/03/10/your-money/credit-and-debit-cards/10overdraft.html> (last visited on Jun. 11, 2018).

¹⁶⁷ Willis, *supra* note 4.

¹⁶⁸ The CFPB's complaint states explicitly that "Given TCF's dependence on overdraft fee revenue, the Opt-In Rule posed a serious threat to its business model." *CFPB Complaint*, *supra* note 118.

¹⁶⁹ See, e.g., Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EURO. ECON. ASS'N 990 (2003); Julian Wright, *The Determinants of Optimal Interchange Fees in Payment Systems*, 52 J. INDUS. ECON. 1 (2004); Özlem Bedre-Defolie, *Pricing Payment Cards*, 5 AM. ECON. J. 206 (2013); Levitin, *supra* note 60.

¹⁷⁰ See, e.g., *Expressions Hair Design v. Schneiderman*, 137 S.Ct. 1144 (2017) (holding that a New York statute that prevents credit-card surcharges but allows cash discounts requires First Amendment scrutiny because it restricts how merchants can communicate prices).

¹⁷¹ See, for example, Benjamin Edelman & Julian Wright, *Price Coherence and Excessive Intermediation*, 130 Q. J. ECON. 1283 (2015), for a theoretical model of price coherence on consumer welfare. The authors suggest that lifting restrictions that enforce price coherence can help increase consumer surplus in these settings.

Durbin's losses through higher fees was an expected outcome rather than an unexpected distortion. It is hard to reconcile this rationale with the statements of regulators who said they anticipated (and believe there was) a decrease in overall consumer costs and no bank offset to Durbin.¹⁷² Additionally, it is particularly unclear why Durbin targeted *debit card* rather than *credit card* fees (or fees for both payment types) if reining in socially non-optimal excessive card usage was its goal.¹⁷³ Debit cards are a desirable alternative to credit because they decouple transacting from the provision of financial services through consumer credit loans: There is no concern with debit cards that overuse will increase consumer indebtedness.¹⁷⁴ Perversely, because of Durbin, banks stopped innovating their safer debit products and pushed consumers toward greater use of credit cards.

C. Lesson 2: The Banking Industry Is Not Perfectly Competitive

The combination of shrouded prices and imperfectly competitive markets paves the way for price regulation to decrease overall consumer costs. Both elements were present in the credit card market, which is why the CARD Act lowered overall consumer borrowing costs by an estimated \$12 billion annually.¹⁷⁵

In an imperfectly competitive market, firms with market power whose non-salient prices are capped weigh the benefits of increasing salient prices for all customers against the costs of decreasing demand for their product. Because they do not have to raise prices to get back to zero profits (as with perfect competition), they may not fully offset losses. Academics who have studied the CARD Act develop theoretical models to illustrate this point,¹⁷⁶ but relatively little work has been done to understand the origin of market power in imperfectly competitive consumer finance markets. Understanding why these markets deviate from the perfectly competitive ideal can help policymakers craft regulation to best address the market failure at hand.

To be clear, the case studies discussed involve two distinct but closely related industries: (1) credit card networks (like Visa and Mastercard) that set interchange rates on their payment instruments and intermediate between issuing banks that distribute their cards, consumers who use them, and merchants who accept them; and (2) card-issuing banks (like Bank of America and Cambridge Savings Bank) that set contract terms on the credit cards they issue and the checking accounts they provide.¹⁷⁷

¹⁷² See, for example, Dick Durbin, *Correcting the Record About the Durbin Amendment*, MEDIUM (Feb. 3, 2017), <https://medium.com/@SenatorDurbin/correcting-the-record-about-the-durbin-amendment-94e913f014f1> (last visited on Jun. 11, 2018), in which Senator Durbin suggests that claims that banks decreased the availability of free checking in response to the Durbin Amendment are a "myth," and that retailer savings have been passed through to consumers.

¹⁷³ Unlike predecessor legislation in Australia, which capped credit interchange with the specific goal of reducing credit usage. See Chang et al., *supra* note 18.

¹⁷⁴ Oren Bar-Gill, *Seduction by Plastic*, 98 NW. U. L. REV. 1373 (2004) (suggesting that unbundling transacting and financial services would help decrease consumer indebtedness; even absent legal intervention, the market took its first step in this direction with the advent of the debit card).

¹⁷⁵ Agarwal et al., *supra* note 2.

¹⁷⁶ See Bar-Gill & Bubb, *supra* note 2, and Agarwal et al., *supra* note 2, as the most prominent examples.

¹⁷⁷ Lawrence Ausubel focuses on this distinction in his early study on imperfect competition in the credit card industry: "If Visa and Mastercard were the relevant levels of business to examine, then two firms would control a substantial part of the credit card market. However, most relevant business decisions are made at the level of the issuing bank. Individual banks own their cardholders' accounts and determine the interest rate, annual fee, grace period, credit limit, and other terms of the accounts. Only charges such as the 'interchange fee' from the merchant's bank to the cardholder's bank are standardized . . ." Laurence M. Ausubel, *The Failure of Competition in the Credit Card Market*, 81 AM. ECON. REV. 50 (1991).

From all appearances, the card network industry is much closer to oligopoly than perfect competition. Market share is highly concentrated: Visa and Mastercard together account for nearly 80% of the global debit market and 75% of the credit card market. These issuers historically erected barriers to entry to impede competitors. For example, exclusivity agreements prohibited banks from issuing credit or other charge cards for other networks, like American Express and Discover. Before these agreements were deemed to be unlawful restraints on competition, they were highly successful. Between 1996 (when American Express first offered its cards to bank issuers) and the *United States v. Visa U.S.A., Inc.*¹⁷⁸ decision in 2001, no banks concluded deals with American Express because of concerns about losing Visa and Mastercard as card providers.¹⁷⁹ Even today, only a handful of bank issuers offer American Express and Discover cards, and few other card competitors exist. On the merchant side, Visa and Mastercard exploit their market power by crafting contract terms like “Honor All Cards” and prohibiting merchants from steering consumers toward cheaper payment types.¹⁸⁰

Some commentators point to the banking industry as similarly oligopolistic. Forty percent of U.S. deposits are concentrated in five banks: Bank of America, JPMorgan Chase, Wells Fargo, Citibank, and U.S. Bancorp. This big-bank share has more than quadrupled since 1990.¹⁸¹ Calls to break up the banks following the Recession relate to a view that these firms are oligopolies with a government backstop that results in high consumer prices and excessive risk-taking. Progressives like Senator Elizabeth Warren point to banking as an example of how “in every corner of our economy, big, powerful corporations are killing off competition.”¹⁸²

But, unlike credit card networks, the banking industry has neither contractually-implied barriers to entry nor a near-constant stream of antitrust cases alleging collusive pricing practices. Professor Oren Bar-Gill distinguishes these two markets: “While competition at the network level might be less than perfect, it is difficult to deny the intensity of competition at the issuing level, where thousands of banks, as well as American Express and Discover, compete for customers.”¹⁸³

The fact that the card-issuing banks are less oligopolistic than card networks does not mean banking is perfectly competitive. However, it suggests that market failures in this industry are not a by-product of too-big-to-fail firms erecting impediments to competition to concentrate their market power. Instead, in the card-issuing market, deviations from competitive pricing arise from customer loyalty: Once you have a Bank of America checking account, you’re unlikely to leave to join Cambridge Savings Bank, even if Cambridge Savings Bank offers you a lower price. Banks exploit this stickiness by charging fees and imposing interest rates that earn them positive profits.

Customer stickiness has two sources: ex-ante and ex-post product differentiation. Ex-ante, bank products are different: Bank of America’s checking account comes with a set of amenities (like ATMs conveniently located nationally and a mobile app for check deposits) that are distinct from those at Cambridge Savings Bank (like personal relationships with the bank’s staff) that make the cost of the account but one part of a consumer’s decision-making process. If the cost of switching banks and the value to the consumer of her home bank’s slightly differentiated product

¹⁷⁸ 163 F. Supp. 2d 322, 340–42 (S.D.N.Y. 2001), *aff’d*, 344 F.3d 229 (2d Cir. 2003), *cert. denied*, 543 U.S. 811 (2004).

¹⁷⁹ *Id.*

¹⁸⁰ Professor Adam Levitin discusses these rules—which prohibit merchants from steering customers to cheaper payment system—as causes of imperfect competition in the credit card industry that harm consumers. Levitin, *supra* note 60.

¹⁸¹ See Bank Call Reports.

¹⁸² Senator Elizabeth Warren, *Speech to Open Markets* (Dec. 6, 2018).

¹⁸³ See Bar-Gill, *supra* note 54, at 16.

are higher than the mark-up of the bank over marginal cost, she will bear the higher price rather than take her business to a cheaper competitor. However, ex-ante product differentiation alone will not sustain large profits, because there is an incentive for a national bank competitor to enter and offer Bank of America's amenities, or a local bank to enter that parallels Cambridge Savings Bank almost exactly but has a lower price. This is a market with differentiated products and monopolistic competition rather than a monopoly with supracompetitive long-term profits.

However, gains from product differentiation will not necessarily be competed away due to switching costs that discourage customers from taking their business to lower-price competitors.¹⁸⁴ One example is a search cost—that is, the physical cost of performing research on neighboring banks to locate cheaper checking account alternatives. Another is a transaction cost, such as the time cost associated with closing an account once a cheaper alternative is identified, a cost firms consciously try to keep high.¹⁸⁵ Another switching cost is a learning cost: Once a consumer knows how to check her account balance, or inform her bank that she'll be traveling, learning a whole new set of such practices may be daunting. Additionally, the existence of customer loyalty programs, like extra rewards points for being a long-term client, are contractual switching costs that entrench customers. Yet another cost arises from brand loyalty: A customer who has banked with Cambridge Savings Bank her whole life may prefer it to East Cambridge Savings Bank with an identical product because the mortgage officer helped her parents refinance their house, and because the teller never forgets her birthday. Even if products are ex-ante identical, ex-post switching costs make it unlikely that customers will sever banking relationships. This is empirically true: estimates suggest that only 3% of checking account holders move banks annually, and nearly 60% have been with their provider for more than a decade.¹⁸⁶

Ex-post product differentiation can and does sustain long-run positive profits because once customers are locked into their banking relationship, banks can exploit them—for example, by levelling high fees. Stickiness becomes a source of market power for large financial institutions. Incidentally, one plausible explanation for different degrees of market power in the deposits and the consumer credit market is that stickiness varies for these two products. Solicitations for new credit cards are extremely common—in the pre-crisis period, credit card issuers averaged 6.7 million pieces of mail per year;¹⁸⁷ yet, new checking account offers are much less frequent. Still, there is evidence of stickiness in both markets, which increases financial institutions' profitability:

¹⁸⁴ The switching-cost model is outlined theoretically by Paul Klemperer, *Markets with Consumer Switching Costs*, 102 Q. J. ECON. 375 (1987), and its implications for the credit card market are discussed by Ausubel, *supra* note 177; as well as Paul S. Calem & Loretta J. Mester, *Consumer Behavior and the Stickiness of Credit Card Interest Rates*, 85 AM. ECON. REV. 1327 (1991); and Victor Stango, *Pricing with Consumer Switching Costs: Evidence from the Credit Card Market*, 50 J. INDUS. ECON. 475 (2002); among others.

¹⁸⁵ See, e.g., Connie Prater, *For Some, Switching Credit Cards Gets Harder*, CREDIT CARD NEWS (Feb. 19, 2009), <https://www.creditcards.com/credit-card-news/switching-credit-cards-gets-harder-1267.php> (last visited on Jun. 11, 2018). In this article, Professor Levitin discusses how, for many credit card users, “[w]alking away is costly.”

¹⁸⁶ Emma Dunkley, *CMA Told to Drop Efforts to Make Customers Switch Banks*, FIN. TIMES (June 7, 2016), <https://www.ft.com/content/70741fc6-2ca8-11e6-bf8d-26294ad519fc> (last visited on Jun. 11, 2018).

¹⁸⁷ These volumes have fallen post-crisis, to closer to 4 million. Bob Bryan, *Credit Card Companies Have Sent Out 3.2 Billion Pieces of Mail This Year, and That's Not Even Close to the Record*, BUS. INSIDER (Nov. 24 2015), <http://www.businessinsider.com/credit-card-companies-32-billion-pieces-of-mail-this-year-2015-11> (last visited on Jun. 20, 2018).

Consumers tend not to switch credit cards when attractive introductory rates expire,¹⁸⁸ and banks feel little pressure to pass down increases in interest rates¹⁸⁹ to their sticky deposit customers.¹⁹⁰

Why does the nature of market imperfection matter? It is true that, in the presence of shrouded prices, no matter the cause of the market imperfection, price regulation—like the CARD Act or changes to the overdraft default rules—can decrease overall consumer costs. But market dynamics provide useful insights for regulators beyond the attractiveness of regulating hidden prices: While monopoly markets may necessitate stricter antitrust enforcement, markets that are imperfectly competitive due to switching costs can be brought closer to perfect competition by lowering these costs. Although ex-ante product differentiation is societally beneficial because it increases the choices available to consumers (for example, offering different products for consumers who care about national ATM networks and those who do not),¹⁹¹ differentiating functionally identical products through switching costs has no similar benefits.

Thus, practical measures—like requiring banks to simplify account closure—may help move the market closer to perfect competition, thus curbing excessive bank profits. Similarly, regulators should consider limiting customer loyalty programs and standardizing product types between institutions to decrease the learning hurdle for potential switchers. In a world with lower switching costs, it is plausible that some banks—specifically, those that did not rely on lost interchange revenue to cover their costs—would have been more reluctant to raise checking account fees post-Durbin. If customers are fluid, these banks would have to weigh benefits from higher prices against costs from lower demand. If instead customers are sticky, there is room for banks to adjust price without losing customers.

There is an added benefit to reining in switching costs. Like regulations that decrease price-shrouding, interventions that lower switching costs will disincentivize inefficient consumer behavior. For example, imagine your friend Penny is highly cost-sensitive. If there is a penny to be saved by closing her current checking account and switching to another bank, she will expend tremendous effort to locate the slightly cheaper bank, close her current account, and open another. Although this is an extreme example, variants are not far from reality—many consumers are

¹⁸⁸ See Sumit Agarwal et al., *Do Consumers Choose the Right Credit Contracts?* REV. CORP. FIN. STUDIES (2015), who provide large-scale experimental evidence that around 40% of consumers choose sub-optimal credit contracts.

¹⁸⁹ On bank deposits, see David Neumark & Steven A. Sharpe, *Market Structure and the Nature of Price Rigidity: Evidence from the Market for Consumer Deposits*, 107 Q.J. ECON. 657 (1992) (showing banks are slow to raise interest rates on deposits in response to rising market interest rates; but fast to reduce deposit rates in response to declining market interest rates); John C. Driscoll & Ruth A. Judson, *Sticky Deposit Rates*, FED. RESERVE BD. (2013) (working paper) (suggesting that in the absence of such stickiness, depositors would have received as much as \$100 billion more in interest per year when market rates were rising); Maria Lamagna, *Banks Have Raised Credit-Card Interest Rates—But Not Savings Account Rates*, FORBES (Jul. 23, 2017), <https://www.marketwatch.com/story/banks-have-raised-credit-card-interest-rates-but-not-savings-account-rates-2017-07-20> (last visited Jun. 20, 2018) (pointing out that recent increases in interest rates have increased the cost of credit but not been passed through to depositors).

¹⁹⁰ There is also evidence of significant stickiness in other consumer finance markets; for example, borrowers fail to refinance expensive home mortgages. See, e.g., John Y. Campbell, *Household Finance*, 61 J. FIN. 1553, 1579-85 (2006) (documenting that 25% of borrowers pay more than 200 basis points above the prevailing market rate, and that these refinancing mistakes are concentrated in less-educated, lower income, and minority borrowers); Alex Yoon-Ho Lee & K. Jeremy Ko, *Consumer Mistakes in the Mortgage Market: Choosing Unwisely Versus Not Switching Wisely*, 14 U. PA. BUS. L. J. 417 (2012) (suggesting that failure-to-switch problems are unlikely to be corrected by the market and arguing for a salience-shock-style approach to convey the wealth effects of refinancing).

¹⁹¹ Although the psychology literature counters that cognitive limitations—like information overload from too many choices and cognitive strain from evaluating varied options—mean that policymakers seeking to help consumers “should avoid adding options without considering their content and quality” Simona Botti & Sheena S. Iyengar, *The Dark Side of Choice: When Choice Impairs Social Welfare*, 25 J. PUB. POL’Y & MARKETING 24 (2006).

“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. Some even take so-called “mileage runs,” that is, traveling by air for the sole purpose of earning frequent flier miles.¹⁹² Finding the best deal is likely utility-enhancing for these individuals; however, it is hard to see why this intensity of search as socially desirable.¹⁹³

D. Lesson 3: Non-Salient Cost Shocks May Not Be Fully Passed Through to Consumers

In advocating for the Durbin Amendment, Senator Dick Durbin argued that these cost savings to merchants would “lead to lower consumer prices at grocery stores, convenience stores, and other retailers that, unlike Visa and MasterCard, have to vigorously compete with one another on price.”¹⁹⁴

A host of empirical evidence suggests that such savings have not come to pass. Although Durbin decreased merchant costs by an estimated \$6.5 billion annually, academics studying Durbin’s retail price impacts have found little evidence of a pass-through of interchange savings.¹⁹⁵ If increasing consumer welfare was the goal, a regulatory intervention that directly increased consumer wealth instead of relying on merchant pass-through would have been preferable.

The failure of retail prices to decrease in response to interchange cost savings parallels the impact of interchange regulation in Australia.¹⁹⁶ Conceptually, the lack of a full price pass through is surprising—as Representative Peter Welch noted, these are fairly competitive industries: “you have one gas station on a corner and there are three competitors, most of us when we are filling up with gas, go to the one that is a penny or two cheaper. And is there any reason to think that wouldn’t happen[?]”¹⁹⁷

Incidentally, interchange is not the only case in which merchants appear slow to pass through cost savings to their customers and the gas industry in particular provides a helpful case study for when Welch’s simple economic intuition can break down. While increases in wholesale prices are quickly passed through, it takes much longer for decreases in wholesale prices to result in *lower* retail gas prices. This is often referred to as the “rockets and feathers effect.”¹⁹⁸

¹⁹² There are even conferences for point-chasers. Chavie Lieber, *The Credit Card Obsessives Who Game the System—And Share Secrets Online*, RACKED (Apr. 1, 2015, 11:00 AM), <https://www.racked.com/2015/4/1/8320731/credit-card-points-miles> (last visited on Jun. 11, 2018). (quoting Angelina Acullo, a conference attendee and then stay-at-home mother who took 90 international flights on points in 2014).

¹⁹³ *Id.* (noting that “a large part of the 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.”).

¹⁹⁴ 156 Cong. Rec. S4839 (daily ed. June 10, 2010).

¹⁹⁵ See, e.g., Wang et al., *supra* note 36 (discussing how merchants that saved did not change prices meaningfully and how small-ticket merchants whose interchange fees rose following Durbin’s enactment increased prices). See also Sarin & Mukharlyamov, *supra* note 30 (estimating that Durbin saved gas stations on the order of \$.006 cents per gallon and ruling out a price impact of even 25% that size).

¹⁹⁶ Testimony of Governor Sarah Bloom Raskin, *supra* note 47 (noting that the Australian credit interchange cap had an “inconclusive” impact on retail prices) <https://financialservices.house.gov/uploadedfiles/112-8.pdf>

¹⁹⁷ *Id.*

¹⁹⁸ See Nick Collins, *Fuel Prices: The ‘Rocket and Feather Effect’ Explained*, TELEGRAPH (Nov. 6, 2014, 12:49 PM), <https://www.telegraph.co.uk/news/uknews/road-and-rail-transport/11212890/Fuel-prices-the-rocket-and-feather-effect-explained.html> (last visited on Jun. 11, 2018); Michael T. Owyang & E. Katarina Vermann, *Rockets and Feathers: Why Don’t Gasoline Prices Always Move in Sync with Oil Prices?* REGIONAL ECONOMIST (Oct. 2014),

Economists Severin Borenstein, Colin Cameron, and Richard Gilbert find that a one-cent increase in crude oil prices is almost fully incorporated into retail prices within two weeks, whereas a one-cent decrease results in a barely 0.2-cent decrease over this same horizon.¹⁹⁹ While this is an oft-revisited question in the economics literature,²⁰⁰ a review of the available evidence indicates an asymmetric response to price hikes and decreases. Evidence of this asymmetry exists more broadly. In a seminal article, economist Sam Peltzman studied a large sample of diverse products spanning 77 consumer and 165 producer goods and found evidence that output prices respond faster to input increases than decreases in two-thirds of the markets examined.²⁰¹ On average, he concludes that the response to a positive price shock is at least twice the response to a negative shock, and this difference is sustained for at least five to eight months.²⁰² Especially relevant to this study of consumer finance, banks respond to increases in the federal funds rate by raising interest rates for borrowers but not for depositors.²⁰³ So, even in the same market, and sometimes to the same consumer, banks charge higher prices to consumers who borrow from them when interest rates rise, but fail to pay more to consumers from whom they borrow.

There are two common explanations in the economics literature to explain asymmetric price adjustment in retail gas that seem plausibly related to merchants' responses to the Durbin Amendment.²⁰⁴ The first relies on gas stations being oligopolists. Although a significant positive cost shock triggers retail price increases (otherwise, margins become negative), negative cost shocks need not be immediately passed through. Prevailing prices (prior to the shock) are a coordination mechanism for oligopolists that allows for the market price to exceed marginal cost, at least temporarily. The possibility of oligopolistic pricing is bolstered by evidence that asymmetries are largest—and persist longest—for gas stations with market power, because they are either isolated from competitors or have brand loyalty from customers.²⁰⁵

The second explanation relates to the impact of wholesale cost shocks on incentives for consumer search. One version relies on volatility in the crude oil market: The average consumer assumes changes in retail gas prices are a by-product of volatile wholesale prices. Thus, they

https://www.stlouisfed.org/~media/Files/PDFs/publications/pub_assets/pdf/re/2014/d/oil_prices.pdf (last visited on Jun. 11, 2018).

¹⁹⁹ Severin Borenstein et al., *Do Gasoline Prices Respond Asymmetrically to Oil Price Changes?* 112 Q. J. ECON. 305 (1997).

²⁰⁰ There is not a broad consensus on the existence or magnitude of this asymmetry. See, e.g., Michael C. Davis & James D. Hamilton, *Why Are Prices Sticky? The Dynamics of Wholesale Gasoline Prices*, 36 J. MONEY, CREDIT, & BANKING 17 (2004); Matthew S. Lewis, *Asymmetric Price Adjustment and Consumer Search: An Examination of the Retail Gasoline Market*, 20 J. ECON. & MGMT. STRATEGY 409 (2011); Jeremy A. Verlinda, *Do Rockets Rise Faster and Feathers Fall Slower in an Atmosphere of Local Market Power? Evidence from the Retail Gasoline Market*, 56 J. INDUS. ECON. 581 (2008); among many others.

²⁰¹ Sam Peltzman, *Prices Rise Faster than They Fall*, 108 J. POL. ECON. 466 (2000).

²⁰² *Id.*

²⁰³ See Annalyn Kurtz, *Rising Interest Rates Aren't Going to Do Much for Your Savings Account*, FORTUNE (Mar. 9, 2017), <http://fortune.com/2017/03/09/federal-reserves-saving-accounts-rates/> (last visited on Jun. 11, 2018); George Deltas, *Retail Gasoline Price Dynamics and Local Market Power*, 56 J. INDUS. ECON. 613 (2008) (comparing asymmetric pricing in the retail gasoline industry to the banking industry, where deposits and loans exhibit price stickiness and asymmetric responses to the cost of funds).

²⁰⁴ Although the most common, these are not the only explanations for asymmetric price pass-through. For detailed discussion, see Borenstein et al., *supra* note 199.

²⁰⁵ See, e.g., Verlinda, *supra* note 207. (finding market power decreases the propensity to pass through savings and that branded stations—Chevron, Shell, and Texaco—exhibit greater asymmetry than unbranded stations).

believe gains from search are small.²⁰⁶ Gas retailers realize that, at least temporarily, consumers have little incentive to search for a cheaper alternative and, therefore, fail to pass through wholesale cost savings. Another version, the “reference cost model,”²⁰⁷ instead suggests that retailers adjust prices only as needed to keep price above marginal cost. A positive cost shock requires full pass-through; however, in response to a negative cost shock, retailers lower price just enough to forestall search. In either case, because no one is searching in response to a negative cost shock, competitors are unable to attract customers by lowering their prices. It is worth noting that if low consumer search is responsible for the failure of merchants to pass through Durbin savings, policymakers can help encourage greater pass-through by making these savings more salient to retail customers.²⁰⁸

There are several important caveats to this lesson. First, as the gas literature makes clear, negative cost shocks are eventually passed through to consumers—although this price adjustment can take months. So, the fact that economists who study retail price adjustments to Durbin²⁰⁹ fail to observe lower prices may be related to the fact that these studies do not consider long-term price adjustment. It would be useful to understand whether retail margins have increased post-Durbin. Incidentally, given retailers’ extensive Durbin lobbying,²¹⁰ it seems likely that they believed its passage would result in profits. Such merchant gains are consistent with direct statements by retailers²¹¹ as well as by equity price reactions to Durbin.²¹²

Whether or not these savings are a long-run gain for retailers, however, available empirical evidence suggests that consumers lost immediately on the bank side (with higher fees) and failed to gain immediately on the merchant side (with lower prices). As such, the Durbin case study cautions against indirect price regulation, like targeting merchants’ interchange fees and trusting that these savings will quickly pass through to consumers. More direct price regulation—like caps on non-salient prices in the CARD Act or decreasing the likelihood that consumers incur overdraft fees—are most likely to increase welfare and decrease costs.

Although Durbin was repeatedly lauded as a regulatory intervention to benefit consumers,²¹³ an alternative justification is that it tilted the balance in the interchange bargaining relationship away from oligopolistic card networks in favor of merchants, and particularly small businesses without the market power to negotiate attractive side-deals with Visa and MasterCard for lower interchange rates.

²⁰⁶ See, for example, Roland Bénabou & Robert Gertner, *Search with Learning from Prices: Does Increased Inflationary Uncertainty Lead to Higher Markups?* 60 REV. ECON. STUD. 69 (1993), who formalize this theory, and Borenstein et al., *supra* note 199, who apply it to the retail gas industry.

²⁰⁷ Matthew Lewis, *Asymmetric Price Adjustment and consumer search: An examination of the retail gasoline market*. J. OF ECON. & MGMT. STRATEGY (2011).

²⁰⁸ The Electronic Payments Coalition sought to do exactly this: In response to Durbin, they launched a “Where Is My Debit Discount?” campaign, which sought to estimate, for example, the magnitude of savings in the gasoline industry (more than \$1 billion). See *Congress Gave Gas Retailers \$1 Billion Annual Subsidy*, ELECTRONIC PAYMENTS COALITION, <http://www.electronicpaymentscoalition.org/gasprices/#gaschart> (last visited May 3, 2018).

²⁰⁹ See, e.g., Sarin & Mukharlyamov, *supra* note 30; Wang et al., *supra* note 36.

²¹⁰ Durbin was so contentious that it precipitated more unique comments than any other rule issued by the Federal Reserve under Dodd-Frank. Brian Libgober & Daniel Carpenter, *Lobbying with Lawyers: Financial Market Evidence for Banks’ Influence on Rule-Making*, WASH. CTR. FOR EQUITABLE GROWTH Working Paper (Jan. 2018).

²¹¹ *Supra* note 37 (Home Depot earnings report speculated gains from Durbin totaling \$35M).

²¹² Sarin & Mukharlyamov, *supra* note 30.

²¹³ See, e.g., Dick Durbin, *Durbin Statement on His Debit Card Swipe Fee Amendment*, DICK DURBIN, UNITED STATES SENATOR, ILLINOIS (May 13, 2010), <https://www.durbin.senate.gov/newsroom/press-releases/durbin-statement-on-his-debit-card-swipe-fee-amendment>.

Historically, merchants relied on antitrust enforcement, not regulatory price caps, to limit card networks' power. For example, litigation challenging "Honor all Cards" rules resulted in a \$3 billion settlement and the forced decoupling of Visa and Mastercard credit and debit card acceptance,²¹⁴ and 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.²¹⁵

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,"²¹⁶ the Supreme Court held that since interchange implicates a two-sided market, courts must include both sides of the platform—merchants and cardholders—when defining the market and assessing whether competition is impeded. This approach differs from that recently advocated by Michael Katz and Jonathan Sallet in the *Yale Law Journal* who suggest a "multiple-markets approach" to cases involving multisided platforms, such that these are viewed as involving different, yet deeply interrelated markets that both may (independently) implicate antitrust concerns.²¹⁷

In *Ohio v. American Express*,²¹⁸ the Court adopts the "single-markets" approach disfavored by Katz and Sallet, holding that although merchants suffer harm (higher fees) from American Express contract terms that prohibit them from steering consumers toward cheaper payment instruments, on the other side of the market consumers may benefit (through rebates or rewards such as airline miles) and thus merchant harm is not sufficient to demonstrate that steering prohibitions are anti-competitive.²¹⁹ With far-ranging implications for several platforms,²²⁰ in the context of card networks the decision clearly signals a shift—"credit card networks are different" and the standards for antitrust violations thus heightened.²²¹ Concerns about the ability of antitrust

²¹⁴ 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>.

²¹⁵ AnnaMaria Andriotis, *Visa, Mastercard Near Settlement Over Card-Swipe Fees*, WALL ST. J. (June 29, 2018), <https://www.wsj.com/articles/visa-mastercard-near-settlement-over-card-swipe-fees-1530193694>.

²¹⁶ Lina Khan, *The Supreme Court Just Quietly Guttled Antitrust Law*, VOX (Jul. 3, 2018 9:40 AM) <https://www.vox.com/the-big-idea/2018/7/3/17530320/antitrust-american-express-amazon-uber-tech-monopoly-monopsony>

²¹⁷ Michael Katz & Jonathan Sallet, *Multisided Platforms and Antitrust Enforcement*, 127 YALE L.J. 2142, 2144 (2018).

²¹⁸ 138 S. Ct. 355 (2017).

²¹⁹ *Id.* at 365.

²²⁰ "Consider: Under the logic the appeals court used, an anticompetitive scheme by Uber to suppress driver income would not be considered illegal unless those bringing the suit showed that riders were also harmed." Khan, *supra* note 223.

²²¹ In fact, the ruling appears to have pushed merchants toward another settlement with Visa and Mastercard in the decades-old price-fixing litigation. One industry commentator suggested that "The Supreme Court AmEx ruling probably dissuaded [merchants] from the notion that they had more leverage." Emily Bary, *How Visa and Mastercard Could Benefit from a Settlement Over Card-Swipe Fees*, MARKETWATCH (Jul. 1, 2018 10:23 AM), <https://www.marketwatch.com/story/how-visa-and-mastercard-could-benefit-from-a-settlement-over-card-swipe-fees-2018-06-29>

law to adequately address the increased concentration of corporate power throughout the economy have pushed many to argue for a legislative overhaul of antitrust.²²²

Although not the focus of this Article, emerging judicial barriers to the use of antitrust enforcement to intermediate the merchant/card network relationship may push in favor of regulating interchange fees directly, even absent salience problems. However, while such regulation—like Durbin’s cap on debit interchange—can help limit card networks’ and issuers’ power and supracompetitive profits, it is a mistake to ignore the possible unintended consequences on consumers, for example through the increase in bank fees to recoup these losses.

E. Lesson 4: Salience-Increasing Regulations and Behavioral Approaches Will Likely Curb Abusive Practices

Given that at least some consumers fail to incorporate non-salient prices into their product choice, price regulations are socially desirable. But this is not the only regulatory option—making non-salient prices salient to consumers is a useful alternative.

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 cards²²³ and an online petition against the fee garnered more than 200,000 signatures.²²⁴ Lawmakers scorned the proposal, with then-Vice President Joe Biden labelling it as “incredibly tone deaf”²²⁵ and Senator Durbin urging consumers to “vote with their feet” and close accounts at these institutions.²²⁶ 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% compared to the same period the prior year.²²⁷ 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 the fee.²²⁸ While banks increased other fees in response to Durbin, the lesson of

²²² See, e.g. Dave Jamieson, *Democrats Are Finally Waking Up to the Monopoly Problem*, HUFFPOST (Jul. 24, 2017), https://www.huffingtonpost.com/entry/democrats-antitrust_us_5976572fe4b0a8a40e817612. “In fact, several members of Congress already have proposed anti-monopoly legislation in the past year, including United States Senators Cory Booker (D-NJ), Amy Klobuchar (D-MN), and Elizabeth Warren (D-MA) and Representatives David Cicilline (D-RI), Keith Ellison (D-MN), and Seth Moulton (D-MA). Khan, *supra* note 216.

²²³ See Bernard, *supra* note 27.

²²⁴ Ann Carrns, *Petition on Debit Card Fee Attracts 200,000 Supporters*, 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 Jun. 11, 2018).

²²⁵ 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 Jun. 11, 2018).

²²⁶ 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 Jun. 11, 2018).

²²⁷ 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 Jun. 11, 2018).

²²⁸ Bernard, *supra* note 27.

the failed \$5 debit charge 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. Changing the policy default to consumer opt-in for overdraft protection decreased the share of customers capable of incurring overdraft fees by more than 80%. Still, many observers²²⁹ point to higher opt-in rates for frequent overdrafters²³⁰ as evidence that this behavioral nudge is not sufficient. These authors contend that frequent overdrafters are targeted for opt-in because they are unsophisticated and easy targets for revenue generation.²³¹ Professors Ryan Bubb and Richard Pildes argue that bank overdraft is a case where behavioral economics “trims its sails” by limiting itself to “choice-preserving regulatory tools” that can generate “incomplete or counterproductive policy implications” by enabling firms to continue to exploit consumers’ cognitive limitations.²³²

An alternative proposed by critics is a mandate banning overdraft protection, which would prohibit banks’ provision of this costly product to irrational consumers. But such mandates decrease the set of options available to consumers, some of whom may prefer the convenience of overdraft protection despite its high costs.²³³ 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.

Making consumers aware of overdraft fees before they are incurred—for example, through surveys—discourages overdraft incidence.²³⁴ It is possible to imagine a shock that is stronger than survey questions. Forcing all banks to offer a version of the new Bank of America ATM overdraft protection—such that when a customer attempts a withdrawal, if she is about to overdraft, the bank informs her of the fee and provides her the opportunity to cancel the withdrawal—will make these fees salient immediately before an overdraft occurs and allow consumers to weigh the benefits of completing the transaction against the high costs.

The same is easily 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, has no other means of payment, and values her time such that she wants to avoid engaging with her bank, she may elect to complete the transaction. But making the fee salient will decrease overdraft incidence for the nearly 70% of overdrafters who claim they would have preferred their transactions be declined to high overdraft fees.²³⁵

It is important to distinguish this call for a “salience shock” in the context of overdraft from mandatory disclosures. Professors Omri Ben-Shahar and Carl Schneider provide a scathing

²²⁹ See, e.g., Bubb & Pildes, *supra* note 5; Willis, *supra* note 4.

²³⁰ Forty-five percent of accounts that had more than 10 non-sufficient funds (NSF) items during the first six months of 2010 opted in by the end of 2010, in contrast to only 11% of accounts with no NSF incident. *CFPB Study of Overdraft Programs*, *supra* note 88.

²³¹ *Issue Brief: Consumers Need Protection from Excessive Overdraft Costs*, PEW CHARITABLE TRUSTS (Dec. 20, 2016), <http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2016/12/consumers-need-protection-from-excessive-overdraft-costs> (last visited on Jun. 11, 2018).

²³² Bubb & Pildes, *supra* note 5.

²³³ Sunstein, *supra* note 136 (highlighting this possibility in response to Bubb & Pildes, *supra* note 5).

²³⁴ 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).

²³⁵ *Overdraft America*, *supra* note 97.

indictment of mandatory disclosures, suggesting consumers suffer from two main problems that render disclosures ineffective: (1) an overload effect (because disclosures are too complex to be understood) and (2) an accumulation problem (because it is hard to remember a disclosure when it competes in your memory with information about all other disclosures—“memory is a sieve.”).²³⁶ Professors Michael Barr, Sendhil Mullainathan, and Eldar Shafir are also skeptical of the usefulness of disclosures, because they note that one way financial institutions generate rents from penalty fees is by exploiting consumers’ tendency to underestimate the likelihood they will make a late payment or overdraft.²³⁷ 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.

A behavioral “saliency 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 and accumulation problems. This immediate alert is a very simple disclosure (closer in spirit to sanitation grades outside restaurants that Ben-Shahar and Schneider approve of than complicated credit card contracts) that does not need to be recalled: The information is presented to a consumer the moment prior to decision-making. As such, it also addresses the Barr, Mullainathan, and Shafir concern because it makes the cost of overdraft salient when the overdraft incident is imminent, not long before when consumers optimistically believe they will never make use of this service. Thus, a saliency shock is likely to be more effective in reducing costly overdrafts than recent proposed changes to opt-in disclosure forms.²³⁸

In proposing this saliency 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.”²³⁹ This shock is meant to do precisely that—strongly nudge consumers away from the \$40 coffee but preserve their choice to reject the nudge.

One reason to be confident about the efficacy of a saliency 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

²³⁶ Omri Ben-Shahar & Carl E. Schneider, *The Failure of Mandated Disclosures*, 159 U. PENN. L. REV. 647 (2011).

²³⁷ See Michael S. Barr, et al., *The Case for Behaviorally Informed Regulation*, in *NEW PERSPECTIVES ON REGULATION* (D. Moss and J. Cisternino eds. 2009).

²³⁸ 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 and 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 5. While a fair critique of disclosure in general, this is not an indictment of the proposed saliency 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 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.

²³⁹ Ben-Shahar & Schneider, *supra* note 236, at 744.

overdraft charges by 24%.²⁴⁰ As a result, all UK banking customers now receive these notifications.²⁴¹

The ability of increased salience to shape consumer choice is also evident in the payday lending space. 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 take-up of payday loans falls significantly.²⁴² 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' prepayment significantly²⁴³ and the retail investing market, where consumers made aware of high mutual fund fees re-allocate investments.²⁴⁴

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 consumers' limited 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 sorts 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."²⁴⁵ 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.²⁴⁶

²⁴⁰ *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 Jun. 27, 2018).

²⁴¹ 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 Jun. 27, 2018).

²⁴² See Marianne Bertrand & Adair Morse, *Information Disclosure, Cognitive Biases, and Payday Borrowing*, 66 J. FIN. 1865 (2011).

²⁴³ See Agarwal et al., *supra* note 69 (finding making salient the benefits of early repayment on monthly statements increases the number of account holders that repay early).

²⁴⁴ 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).

²⁴⁵ Ben-Shahar and Schneider, *supra* note 243.

²⁴⁶ 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.*

IV. CAVEATS

The salience theory presented herein can neither explain all aspects of bank responses to the regulations discussed nor elucidate for regulators the optimal intervention in all consumer finance settings. For example, at least part of the success of the overdraft default change stems from large financial institutions moving even beyond the new requirements. It is perhaps possible to fit this large-versus-small bank heterogeneity into the context of the salience theory, if there is reason to believe overdraft costs became more salient to large-bank customers than to their small-bank counterparts. This seems unlikely. Anecdotally, larger financial institutions suggest that their decision to move away from overdraft as a product is related to reputational consequences and fears of costly litigation.²⁴⁷ These concerns are less pronounced for small banks. Consequently, the fact that small and midsize banks failed to move away from overdraft is not a by-product of differential salience of these fees to their consumers, but instead a consequence of these differences in reputational risk as well as heterogeneity in bank business models: Small and midsize banks depend on fee income more than large national banks, whose market shares are rising substantially.²⁴⁸

Also, I have not considered the full set of possible behaviorally informed interventions in these markets. For example, Professors Michael Barr, Sendhil Mullainathan, and Eldar Shafir suggest an alternative: Banks have high add-on prices because they increase profits. Forcing issuers to place a portion of consumer penalty fees into a public trust for financial education decouples fee revenue from firms' bottom lines so the incentive for shrouding would be removed.²⁴⁹ This suggestion tackles salience problems in a manner similar to price regulation—directly limiting banks' ability to profit from hidden fees.

This Article advocates for regulation in response to price-shrouding, but engages less with how to design these interventions. One alternative is new legislation, like the CARD Act or Durbin. Another is Section 1031 of the Dodd-Frank Act, which provides the CFPB with rule-making authority to intervene to prohibit “abusive” bank practices that take “unreasonable advantage” of the “lack of understanding on the part of the consumer of the material risks, costs, or conditions of the product or service.”²⁵⁰ The nature of price-shrouding fits clearly into this abusive standard—financial institutions use loss-leader pricing (0% APR, free checking) to attract customers who lack understanding of the true costs of these products. Although there are limits to this authority,²⁵¹ it seems natural for salience-focused interventions to be promulgated as CFPB rule-makings.²⁵²

Additionally, this Article focuses on understanding the differential response to Durbin and the CARD Act but only tangentially engages with an important distinction between these two case studies: The CARD Act relates to a direct transaction between a sophisticated bank and a naïve

²⁴⁷ See *infra* note 125.

²⁴⁸ See, e.g., Rachel Louise Ensign, *Biggest Three Banks Gobble Up \$2.4 Trillion in New Deposits Since Crisis*, WALL ST. J. (Mar. 22, 2018), <https://www.wsj.com/articles/biggest-three-banks-gobble-up-2-4-trillion-in-new-deposits-since-crisis-1521711001> (last visited on Jun. 27, 2018).

²⁴⁹ Michael S. Barr et al., *The Case for Behaviorally Informed Regulation*, 25 NEW PERSPECTIVES ON REGULATION 41 (2009).

²⁵⁰ 12 U.S.C. § 5531.

²⁵¹ See Adam J. Levitin, *The Consumer Financial Protection Bureau: An Introduction*, 32 REV. BANKING & FIN. L. 321 (2013) (“The CFPB must make particular findings in order to exercise its authority to restrict or prohibit acts and practices as unfair, deceptive, or abusive.”).

²⁵² See, e.g., Carey Alexander, *Abusive: Dodd-Frank Section 1031 and the Continuing Struggle to Protect Consumers*, 85 ST. JOHN'S L. REV. 1105 (2011) (arguing that lengthy consumer credit contracts and high overdraft fees implicate Section 1031).

consumer, whereas Durbin regulated a firm-to-firm transaction between retailers and merchants (with consumers indirectly involved as the purchasers of retail goods and the holders of bank checking accounts). There are reasons to believe regulatory interventions are differentially necessary and will have heterogeneous impact in these two settings. Professors Oren Bar-Gill and Omri Ben-Shahar focus on this distinction in their work on default rules in consumer markets, noting that the general theory—that default rules mimic what most parties would agree to—becomes less plausible in consumer markets.²⁵³ It is likely that, given the asymmetry of information and bargaining power in the consumer/firm relationship, the need for intervention is most clear. This is another way to distinguish the success of the CARD Act relative to Durbin’s interchange price cap. Though, it is important to note that small merchants have little bargaining power with Visa and Mastercard, much like retail consumers in their banking relationships.²⁵⁴

Also, there is an important difference between behavioral agents who fail to consider non-salient prices in their product decisions (for example, bank customers who do not realize overdraft is costly) and behavioral agents who, even when provided full information, make a seemingly irrational choice.²⁵⁵ This Article is concerned principally with agents who neglect certain aspects of a price, primarily for behavioral reasons like inattention or over-optimism. This Article is not concerned with agents who, when faced with the true price, will still make irrational decisions. Such a case would prove more complicated for a regulator and is one where “salience shock” type interventions are unlikely to be effective.

Furthermore, there is robust discussion among academics interested in financial regulation around the merits of traditional cost-benefit analysis.²⁵⁶ While this Article does not take a stand on this debate, it is worth noting that both formal cost-benefit analysis and the more informal approaches advocated by its critics would do well to consider possible unintended consequences of regulatory interventions—for example, the push toward credit usage resulting from Durbin’s debit fee cap.

Finally, this Article suggests that well-designed regulatory intervention can decrease overall consumer costs in imperfectly competitive markets with shrouded prices. However, it does not deal with the appropriate design or magnitude of price caps. Although beyond the scope of this Article, this hinges on market particulars: The larger the consumer misperception, the more likely price will deviate from cost, and thus the more aggressive the intervention should be.

²⁵³ Oren Bar-Gill & Omri Ben-Shahar, *Optimal Defaults in Consumer Markets*, 45 J. LEGAL STUD. 137 (2016).

²⁵⁴ This is precisely why merchants with sufficient credit and debit volume receive lower base interchange rates. See, e.g., *Mastercard 2018-2019 U.S. Region Interchange Programs and Rates* (effective Apr. 13, 2018), MASTERCARD, <https://www.mastercard.us/content/dam/mccom/en-us/documents/merchant-interchange-rates.pdf> (last visited on Jun. 27, 2018).

²⁵⁵ Professor Bordalo and his coauthors refer to these different kinds of mistakes as the difference between Forgetful But Otherwise Rational (FBOR) agents and Forgetful and Salient Thinkers (FAST). For these authors, salience means agents with selective memory and attention for information they are provided, not agents who are unaware of certain aspects of a product’s price, as in this Article. See Pedro Bordalo et al., *Salience Theory of Choice Under Risk*, 127 Q. J. ECON. 1243 (2012).

²⁵⁶ See, e.g., Eric A. Posner & E. Glen Weyl, *Benefit-Cost Analysis for Financial Regulation*, 103 AM. ECON. REV. 393 (2013); Eric A. Posner & E. Glen Weyl, *Benefit-Cost Paradigms in Financial Regulation*, 43 J. LEGAL STUD. S1 (2014) (urging the use of CBA in the financial regulatory context); John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications*, 24 YALE L.J. 882 (2015) (critiquing the use of quantifiable cost-benefit analysis as no more than ‘guestimation’ using causal inferences that are unreliable, problematic data, and assumption-based modeling).

V. CONCLUSION

Consumer financial protection is an area of critical importance to the regulatory community. This Article focuses on three recent regulatory interventions that sought to lower consumer costs: (1) a cap on debit interchange fees; (2) a restriction on credit card contract terms, including interchange hikes and penalty fee amounts; and (3) a change in the overdraft default rule that prohibits banks from charging penalty fees unless consumers have actively opted in to overdraft protection.

I argue that, given the success of the CARD Act and the new overdraft regime, the existence of non-salient consumer prices suggests a behavioral market failure that regulators can correct. Consumers misperceive the true cost of consumer financial products, either because they are inattentive to confusing and lengthy contract terms or overly optimistic and underestimate their likelihood of bearing penalty fees. Regulatory intervention that caps non-salient fees or makes these fees salient can curtail excessive product use; decrease subsidies by the unsophisticated of sophisticated market participants; limit inefficient consumer behavior; and, in an imperfectly competitive world, lower overall consumer costs. This is not to say that price regulations that restrict salient fees—for example, the Durbin Amendment—are inadvisable, but these are likely to prompt substantial bank offset.