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THE SALIENCE THEORY OF CONSUMER FINANCIAL REGULATION

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THE SALIENCE THEORY OF CONSUMER FINANCIAL REGULATION

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This Article focuses on recent regulatory interventions in the consumer finance space, considering three attempts to lower prices: 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 efficacy of these interventions suggests several lessons for policymakers. First, consumers are attentive only to fees that are salient to them (such as introductory interest rates on credit cards) and tend to ignore non-salient prices (such as late fees or overdraft charges). The existence of non-salient prices hints at a behavioral market failure that can and should be corrected by regulators. This is true even in a perfectly competitive world, because the existence of shrouded prices can lead to excessive demand for consumer financial products; can cause consumers to expend tremendous energy to avoid hidden fees; and can result in cross-subsidy of sophisticated consumers, who incorporate these prices into their decision-making, by non-sophisticated customers, who do not. In an imperfectly competitive world, price regulations that target non-salient prices can also decrease overall consumer costs. An alternative to price regulation is the use of behavioral tools, such as policy defaults and shocks to consumer attention, to encourage consumers to take non-salient prices into account. Finally, regulations directly lowering consumer prices—rather than decreasing merchant costs in hopes these savings will pass through—are most likely to result in immediate consumer benefit.

INTRODUCTION

In the decades leading up to the Great Recession, consumer finance increasingly became a "do-it-yourself" industry, with consumers forced to take responsibility for a greater set of important, and increasingly complex, financial decisions.[1] Given the asymmetry of information and sophistication between customers and large financial institutions, the result was a market where unwitting customers often bear high and avoidable fees, either because they were unaware of these costs, or they did not realize that cheaper alternatives were available. One of the most significant financial reforms following the Great Recession was the establishment of the Consumer Financial Protection Bureau (CFPB), focused on tilting the scales of consumer finance toward consumers—by protecting against unfair, deceptive, or abusive practices.[2]

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[1] Andrea Ryan et al., *A Brief Postwar History of U.S. Consumer Finance,* 85 BUS. HIST. REV. 461 (2011). Some examples from are as follows: "Through revolving credit and new flexible forms of mortgages, consumers could fashion their own repayment plans. Rather than just hold cash in banks, they could choose from a variety of money-market mutual funds. Rather than work with a full-service broker, they could use online discount brokerages to trade stocks and bonds at will. Rather than getting a fixed pension, workers were allowed—and mostly required—to make their own retirement decisions as part of tax-exempt personal retirement funds. Rather than sit on previously illiquid assets like pensions and houses, individuals could monetize these holdings by borrowing against retirement funds or home equity." *Id.*

[2] Richard Cordray, *Prepared Remarks of CFPB Director Richard Cordray*, THE PEOPLE AND PLACES CONFERENCE (May 31, 2017), https://www.consumerfinance.gov/about-us/newsroom/prepared-remarks-cfpb-director-richard-cordray-people-and-places-conference/. Since 2011, the CFPB has levied fines totaling nearly $12 billion dollars against banks for abusive practices and finalized more than 70 rules to enhance disclosures and consumer protections for products ranging from prepaid debit to mortgage originations to bank overdraft.

This Article focuses on post-crisis reforms of two consumer products that most American households purchase: bank checking accounts and credit card accounts. These products generate revenue for the bank from different sources. Checking account revenue comes from monthly account servicing fees; avoidable penalty fees (like overdraft income and out-of-network ATM fees); and interchange fees collected from merchants when debit cards are used for purchase. Credit card revenue comes from annual account fees; interest rate payments on debt; similarly, avoidable penalty fees (like delinquency fees for late payments); and interchange fees collected from merchants when credit cards are used.

Following the Recession, regulators focused particularly on reform of these markets because fee income from deposit and consumer credit accounts among the fastest-growing sources of revenue for large financial institutions in the decade preceding the crisis, increasing by nearly 100% during this period.[3] These fees became a rallying cry for activists and the media, and regulators responded: some of the earliest financial reforms post-crisis targeted these multi-price products in efforts to lower overall consumer costs.[4]

Given that sufficient time has passed to allow for an in-depth consideration of the successes (and failures) of these reforms, this Article engages in empirical analysis of three major post-crisis consumer finance regulations to provide a nuanced view of when price regulation is most likely to be effective. It extends the work of Professors Xavier Gabaix, David Laibson, Oren Bar-Gill and Ryan Bubb to illustrate the implications of behavioral consumers' ignorance of non-salient price attributes—which creates inefficiencies, has important distributional consequences, and, given imperfections in consumer finance markets, results in product prices that are high relative to firm costs. This Article is novel in its suggestion that a salience shock can be an alternative to the regulation of a non-salient price. Such a shock—like a text message alert when a consumer is about to incur a penalty fee—is responsive to the critiques of mandated disclosure offered by Professors Omri Ben-Shahar and Carl Schneider because it is simple and close-in-time to a consumer's decision, and so does not need to be retained by an agent with limited attention. Salience shocks are a preferable alternative to paternalistic bans of expensive consumer products, like those proposed by Professors Lauren Willis, Ryan Bubb, and Richard Pildes in the overdraft market.

This Article proceeds in five parts. Part I of this Article considers case studies of three price regulations involving debit interchange fees, credit card contract terms, and overdraft fees. First, I consider the Durbin Amendment (hereinafter referred to as "Durbin"), a restriction on debit swipe fees that caused bank interchange revenue to fall by nearly 40%. Impacted banks responded to Durbin by increasing fees on all customer accounts. They also encouraged greater use of credit, since 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 through to consumers through lower prices. However, it failed to result in any meaningful consumer savings, and certain merchants even raised prices. Durbin has had an especially deleterious impact on low-income individuals who found themselves priced out of the traditional financial system because of increases in monthly account fees.

Second, I focus on 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

[3] See Figure 4.

[4] The CARD Act, passed in May 2009, restricted credit card penalty fees and represented the first major post-crisis financial reform. John Poirer, *Obama Signs Sweeping Credit Card Reform Bill*. REUTERS. (May 22, 2009). https://www.reuters.com/article/us-obama-creditcards-idUSTRE54L5S220090522?

the CARD Act[17] find that unlike institutional 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.[18] Although some evidence exists of card companies reducing access to credit *in anticipation of* the new regulatory regime,[20] 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 advising consumers to opt in to the overdraft protection they provide. 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 awry[21] that demonstrates the limitations of behaviourally-informed policymaking.[22] I argue that this is an overly pessimistic interpretation. 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, and Wells Fargo) have moved away from overdraft entirely (a move more extreme than mandated by the new regime) because of reputational consequences and litigation risk now associated with overdraft as a product.

Part II of this article provides a very simple conceptual framework to demonstrate 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. 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—i.e. 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 regulations 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 decrease cross-subsidies and reduce inefficient consumer search. Additionally, 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 that nudges can be designed to make non-salient bank fees and practices salient to consumers, they can achieve the same ends as regulating these shrouded prices, and are superior to mandates (like banning overdraft protection) because they preserve a role for consumer choice. Finally, cost shocks to merchants, like interchange savings from the Durbin Amendment, may not be fully passed through to consumers if merchants have significant market power; or if these savings are not salient to consumers, so do not cause them to search for lower prices. As such, if decreasing consumer costs is the objective, direct price regulations—rather than lowering merchant costs—are most likely to be effective. Part IV considers limitations to the salience theory, and highlights

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[17] *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).

[18] 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. The CARD Act did reduce access to credit for students under 21 years of age, but this was an intended consequence."

[20] *See, e.g.*, Vikram Jambulapati & Joanna Stavins, *The Credit CARD Act of 2009: What Did Banks Do?*, 46 J. BANKING & FIN. 21 (2014)

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

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

aspects of our case studies (for example the differential bank response to changes to the overdraft opt-in regime) that it struggles to explain. Part V then concludes.

I. CASE STUDIES

In the wake of the Great Recession, the financial sector underwent significant regulatory changes, many of which were targeted at regulating consumer financial products. Three of these changes — carried out 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 interchange fee is the fee paid by a merchant's bank ("acquiring bank") to a customer's bank ("issuing bank") for the acceptance of card transactions. The payment card system is a two-sided market, with the cards demanded by two distinct groups of customers: cardholders who use the cards as a form of purchase and merchants who accept the cards as payment for goods.[24] To simplify a complex series of transactions,[25] the interchange fee can be thought of as a processing fee for a transaction that a customer's bank collects from a merchant.[26]

The legality of interchange has been challenged repeatedly in court, with the earliest example being *National Bancard Corp. (NaBanco) v. Visa USA, Inc*.[27] NaBanco—who, like Visa, sought to process merchants' electronic payments—sued Visa alleging that its interchange fee arrangement inhibited NaBanco's ability to compete. This is because Visa offered discounts when processing "on-us" transactions, where the card issuing and merchant banks were the same. The court upheld the interchange fees, finding they were more procompetitive than anticompetitive. Since the mid-1990s, the Department of Justice and a coalition of merchants have filed various suits alleging that the card networks engage in anticompetitive price fixing to prop up interchange fees.[28] Concerns about monopoly power in this market are related to the market share of the largest

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

[25] Barbara Pacheco and 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 FEDERAL RESERVE (2006), https://www.kansascityfed.org/OfOWO/publicat/econrev/PDF/1q06pach.pdf (last visited Mar. 13, 2018) (provides extensive detail on the mechanics of interchange. A chart on page 93 provides extensive detail on the mechanics of interchange).

[26] *Id*. In general, this processing fee varies depending on the card a consumer pays with: "[C]redit cards carry the highest interchange fee, PIN debit the lowest, with signature debit in between." Id.

[27] 596 F. Supp. 1231 (S.D. Fla. 1984), *aff'd*, 779 F.2d 592 (11th Cir. 1986).

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

card issuers — Visa and Mastercard together control more than 70% of the payment card market.[32] And unlike other credit and debit card contract terms, these card networks; not card issuing banks, are responsible for setting interchange rates.[33]

The persistent presence of antitrust lawsuits and calls for regulatory intervention[34] in the interchange sphere are a testament to the growing significance of this cost to merchants. Interchange expense exploded since the early 1990s for two main reasons. First, growth in card usage: the share of consumer payments made with debit grew from 0.4% in 1990[35] to 27% in 2015.[36] And credit card transactions increased from fewer than 3 billion per year in 1993[37] to more than 30 billion per year by 2015. Second, card issuers realized that by offering rewards cards with higher interchange fees, it would be possible to increase revenue. This is especially true in the credit card market, where Visa and Mastercard introduced premium cards with average interchange fees on a $40 purchase totalling nearly $1 (compared to less than $0.60 for non-rewards credit cards).[38] These fees are very salient to the merchants who bear them, with some reporting them to be their second-highest cost of operating (after labor).[39]

2. Regulatory Approach to Solving the Problem. — Section 1075 of the Dodd-Frank Act[40] 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 establish rules to ensure that "the amount of any interchange fee that an issuer may receive or charge with respect to an electronic debit transaction shall be reasonable and proportional to the actual cost incurred by the issuer with respect to the transaction."[41] The amendment preserved an exception for small issuers (banks with less than $10 billion in assets).[42] Because of its late introduction to Dodd-Frank in

[32] *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).

[33] Lawrence Ausubel, *The Failure of Competition in the Credit Card Market*, 81 Am. Econ. Rev. 50 (1991).

[34] *Supra* note XX (Kansas City Fed Conference) At a conference on regulating interchange markets sponsored by the Kansas City Federal Reserve Board, lawyers who argued these antitrust cases on behalf of retailer groups called for regulation, noting: "intervention in the debit card market would not create a new regulated world, but would 'recreate a world which existed for 15 years in the United States in a free market environment."

[35] DAVID EVANS & RICHARD SCHMALENSEE, PAYING WITH PLASTIC: THE DIGITAL REVOLUTION IN BUYING AND BORROWING (2005).

[36] Jennifer Collins. *A Short History of the Debit Card*, MARKETPLACE (Aug. 11, 2011, 8:52 PM), https://www.marketplace.org/2011/08/18/business/news-brief/short-history-debit-card (last visited Mar. 14, 2018).

[37] GAO ACCOUNTABILITY OFFICE, *supra* note YY.

[38] 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). Debit rewards programs, though less common, did exist in the pre-Durbin era, though Chase discontinued its Continental rewards card (offering Continental miles for debit purchases) in July 2011, and the SunTrust Delta rewards card was similarly discontinued.

[39] 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).

[40] 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)).

[41] *Id.* § 1693o-2(a)(2).

[42] *Id.* § 1693o-2(a)(6)

May 2010, Durbin was passed without hearings or debate.[43] Many took issue with the speed of its passage.[44]

In December 2010, the Federal Reserve Board proposed a rule implementing Durbin: a $0.12 cap per debit transaction.[46] This proposal prompted outrage from the financial services industry, which warned that consumers would bear the cost of Durbin. 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.[47] 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.[48]

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.[49] Merchants argued that the $0.21 cap ignored Durbin's text, which specified that "the incremental cost incurred by an issuer for the

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[43] Note that Durbin was not the first post-crisis attempt to regulate interchange fees. In the House, Representative Peter Welch introduced the Credit Card Interchange Fee Act of 2008 to require payment networks to disclose information about merchant interchange fees and allow merchants to use this information as they like. Rep. John Conyers introduced the Credit Card Fair Fee Act of 2008 to force credit card companies to negotiate with a coalition of retailers on a mutually acceptable fee. And Durbin introduced a companion to Conyers' bill in the Senate, which included a prohibition of rate differences depending on merchant type (large merchants with sufficient market power typically have lower interchange rates). In June 2009, he introduced legislation to allow large and small merchants to negotiate directly with card companies to reduce interchange fees. Chris Dodd also introduced legislation to direct the OCC to study the rise of interchange fees and how these fees are overseen by regulatory agencies. *See* Jane Anne Batjer. *Views: How We Arrived at the Debit Card Interchange Fees and Routing Proposals*, FED. RESERVE BANK OF ST. LOUIS (2011), https://www.stlouisfed.org/publications/central-banker/spring-2011/how-we-arrived-at-the-debit-card-interchange-fees-and-routing-proposals; *see also Credit-Card Wars*. WALL ST. J. (Mar. 2009).

[44] 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." *See* Bajer, *supra* note YY [FIND OR SUBSTITUTE SOURCE]. *See also* Rob Nichols, *The Durbin Amendment: A Costly Price Control Experiment*, THE HILL (June 27, 2016, 9:46 AM), 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, 12:13 PM), http://dailycaller.com/2011/03/29/dick-durbins-cozy-alliance-with-wal-mart-home-depot-and-the-giant-retail-lobby/.

[46] *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).

[47] 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).

[48] Both Ben Bernanke, formerly the Chairman of the Federal Reserve, and Sheila Bair, formerly the Chair of the Federal Deposit Insurance Corporation (FDIC), voiced this concern. Said Bernanke, "It is possible that because merchants will reject more expensive cards from smaller institutions or because networks will not be willing to differentiate the interchange fee for issuers of different sizes . . . the exemption will not be effective in the marketplace." In response to these concerns, 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.

[49] 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).

role of the issuer in the authorization, clearance, or settlement (ACS) of a particular electronic debit transaction" could be considered in setting a "reasonable and proportional" interchange transaction fee; but "other costs incurred by an issuer which are not specific to a particular electronic debit transaction" could not be.[50] The Board based the $0.21 cap on its determination that the statute divides costs into three categories: incremental ACS costs, which the Board is required to consider; other costs incurred by an issuer not specific to a particular transaction, which it is prohibited from considering; and costs that fall into neither of these categories, which it may, but need not, consider.[51] Merchant petitioners contended that the Board was permitted to only consider incremental ACS costs as required by the statute, and that the inclusion of other costs violated congressional intent. Although the merchant coalition was granted summary judgment in district court,[52] the D.C. Circuit reversed the ruling,[53] arguing that the familiar two-step *Chevron*[54] framework governed the case.[55]

In its petition for certiorari, the merchant coalition argued that the Board's $0.21 cap violated *Chevron*'s first step because Congress did not empower the Board to *increase* interchange rates. But the higher cap had this effect for some merchants, because Visa and Mastercard responded by (1) eliminating the interchange discount that they had previously offered on small dollar purchases and (2) levying a $0.21 interchange fee, regardless of transaction size.[57] Because nearly 50% of debit transactions total $15 or less, many merchants saw their interchange fees increase post-Durbin.[58] The merchants' petition for certiorari was denied, and the $0.21 debit interchange cap for covered institutions (more than $10 billion in assets) remains.[59]

3. Impact of Regulatory Intervention. — Given the variety of legislative and judicial challenges Durbin has faced and continues to face, and given that more than six years have passed

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[50] *See* 15 U.S.C. § 1693o-2(a)(4)(B)(i)–(ii)

[51] *Brief for the Respondent in Opposition*, NACS, 135 S.Ct. 1170 (2015), http://sblog.s3.amazonaws.com/wp-content/uploads/2014/11/14-200_nacs_v_federal_reserve.pdf.

[52] NACS v. Board of Governors of the Federal Reserve System, 958 F. Supp. 2d 85 (D.D.C. 2013).

[53] *NACS*, 746 F.3d at 474.

[54] Chevron U.S.A. Inc. v. NRDC, 467 U.S. 837 (1984).

[55] *NACS*, 746 F.3d at 488 ("Given the Durbin Amendment's ambiguity as to the existence of a third category of costs, we must defer to the Board's reasonable determination that the statute splits cost into three categories."). The Court also criticized the legislative process around Durbin as the cause of the ambiguity it was forced to try and resolve:

> We think it is worth emphasizing that Congress put the Board, the district court, and us in a real bind. Perhaps unsurprising given that the Durbin Amendment was crafted in conference committee at the eleventh hour, its language is confusing and its structure convoluted. But because neither agencies nor courts have authority to disregard the demands of even poorly drafted legislation, we must do our best to discern Congress's intent to determine whether the Board's regulations are faithful to it. *Id.* at 483.

[57] Petition for a Writ of Certiorari, NACS, 135 S.Ct. 1170 (2015).

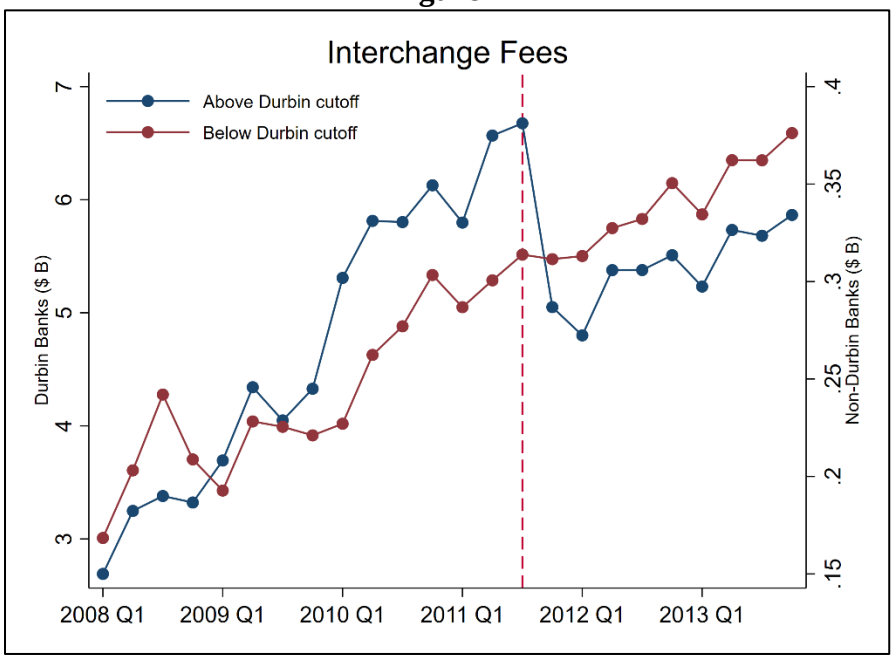
[58] Amicus Curiae Brief of Wal-Mart Stores, Inc., NACS, 135 S.Ct. 1170 (2015), http://sblog.s3.amazonaws.com/wp-content/uploads/2014/09/14-200-walmart.pdf

[59] It is interesting to note that Durbin recently resurfaced. In July 2016, Representative Jeb Hensarling, Chairman of the House Financial Services Committee, introduced a financial deregulation package (the Financial Choice Act) that included a repeal of Durbin. However, the Durbin repeal was eventually dropped from the Act because of congressional opposition. Hensarling issued the following statement to announce the decision to abandon the repeal effort: "I've said before that the repeal of the Durbin Amendment was the most contentious part of the bill among Republicans . . . I believe it belongs in the Financial Choice Act, but I recognize and respect that many members of Congress feel differently." Andrew Soergel, *House GOP Abandoning Repeal of Cap on Debit Fees*, US NEWS (May 25, 2017, 1:29 PM).

since the Federal Reserve's rules went into effect, it is important to consider whether Durbin has had its intended effect on banks, merchants, and consumers.

Bank impact. Interchange income dropped instantaneously after the Federal Reserve Board's final rule was implemented in October 2011. 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 for covered institutions. This estimate understates bank losses because banks report interchange revenue only as a line item on their financials 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, because Durbin decreased their interchange income so substantially that they fell below the 3% reporting threshold.

Figure 1



Notes: Data from bank regulatory filings (Call Reports)

Decreasing banks' interchange revenue was, of course, the purpose of Durbin. However, banks warned that they would be forced to recover lost interchange revenue by increasing other consumer costs. 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. . . ."[60] 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."[61]

It is thus worth considering how bank fees responded to Durbin. Many of the largest banks (Bank of America, JPMorgan Chase, Suntrust, and Regions Financial) initially proposed a direct fee on consumer debit purchases to recoup lost revenue: a $5 monthly fee when consumers used their debit cards as a means of purchase. This fee was abandoned because of consumer outrage—

[60] Karl. F. Kaufmann, *Bank of America Comment Letter on Durbin Amendment* (Feb. 21, 2010), https://www.federalreserve.gov/SECRS/2011/March/20110302/R-1404/R-1404_022211_67233_584174234336_1.pdf (last visited Mar. 14, 2018).

[61] *TCF Comment Letter on Durbin Amendment.* FIND SOURCE

Vice President Joe Biden referred to these banks as "tone deaf," and protesters at Occupy Wall Street events encouraged consumers to close accounts at banks considering the fee and even burned Bank of America debit cards in protest. A bank consultant at the time noted that the result would be a decrease in upfront, salient fees and instead banks "are going to have to hide the fees and the customers will still have to pay for them." [63]

In practice, this is exactly what happened. Figures 2 and 3 below show the impact of Durbin on free checking and on monthly fees associated with bank checking accounts. Following the passage of Durbin, the availability of free checking accounts decreased by more than 40% for large issuers whose interchange revenue fell as a result of Durbin: 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: monthly maintenance fees grew from around $3 to over $7 for Durbin banks. Significantly, these increases are not a by-product of changes in the banking industry generally — there is no equivalent decrease in free checking, nor an increase in maintenance fees, for banks below the Durbin threshold.[64]

The increase in fees is borne primarily by low-income customers—monthly maintenance fees are waived for customers above a certain dollar minimum threshold in their checking account (in the pre-Durbin period, this averaged $920, but Durbin banks raised this threshold by nearly 40%, to $1,265). Some low-income customers who were priced out of the market by higher fees may have turned toward more expensive banking replacements such as check-cashing and payday lending facilities.[65] In the most recent FDIC Survey of Unbanked and Underbanked Households, more than 30% of respondents who had previously had a bank account reported that they were now unbanked because account fees were too high and unpredictable.[66]

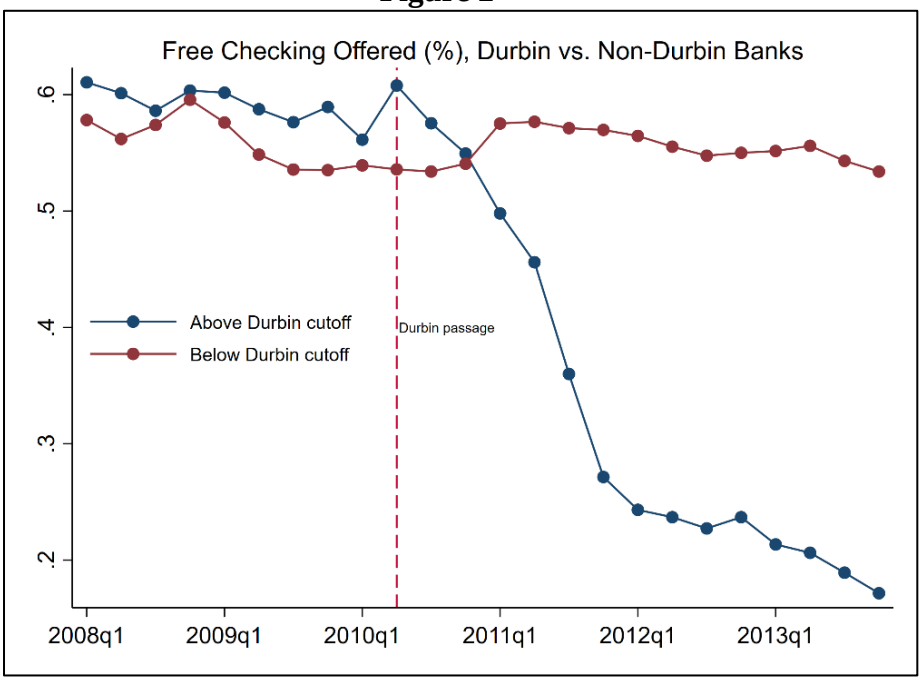
[63] Tara Siegel Bernard, *In Retreat, Bank of America Cancels Debit Card Fee*. N.Y. TIMES (Nov. 1, 2011), http://www.nytimes.com/2011/11/02/business/bank-of-america-drops-plan-for-debit-card-fee.html (last visited Mar. 14, 2018).

[64] *See* Sarin and Mukharlyamov (2018) for a more extensive discussion of the impact of the Durbin Amendment on other bank fees. The authors find that some bank fees actually *decrease* for banks not impacted by Durbin over this time period, which they attribute to small banks using Durbin as an opportunity to grow their own market share. Natasha Sarin and Vladimir Mukharlyamov, *The Impact of the Durbin Amendment on Banks, Merchants, and Consumers* (2018).

[65] Bord (2017) provides suggestive evidence for this result, albeit in a slightly different setting. He finds that an increase in bank fees (stemming from mergers, since large banks charge higher fees than their smaller counterparts) leads to closures of consumer checking accounts and a greater use of payday lending facilities. Vitaly M. Bord, *Bank Consolidation and Financial Inclusion: The Adverse Effects of Bank Mergers on Depositors* (2018), https://scholar.harvard.edu/files/vbord/files/vbord_bank_consolidation_and_financial_inclusion_tu.pdf.

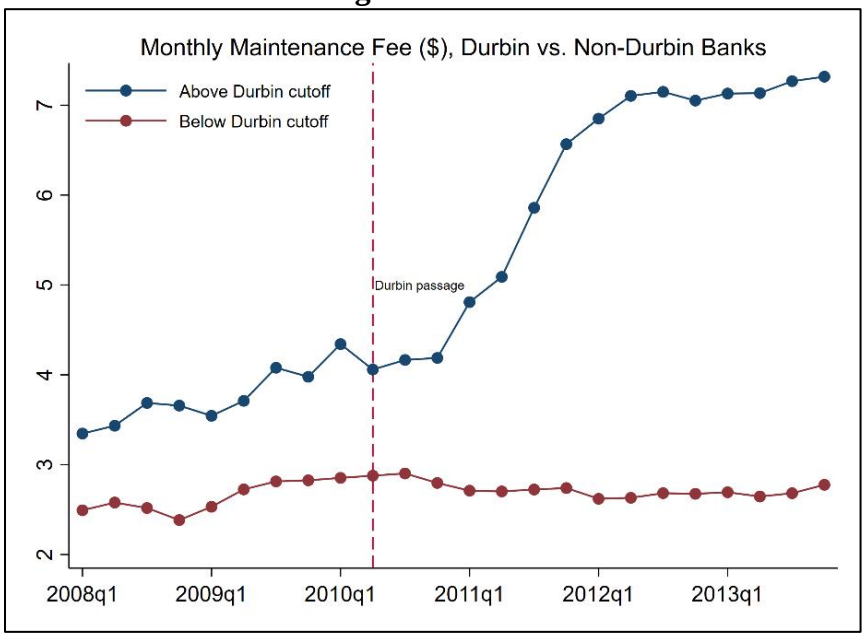
[66] *FDIC National Survey of Unbanked and Underbanked Households* FED. DEPOSIT INS. CORP. (2015), https://www.fdic.gov/householdsurvey/2015/2015appendix.pdf (last visited Mar. 14, 2018).

Figure 2



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

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.[67] Banks also recovered interchange losses by pushing consumers toward greater use of credit, which was left unregulated by Durbin.[68] Spending on credit card rewards among big issuers has more than doubled since 2010,[69] while at the same time debit rewards programs have been largely eliminated. [70]

Merchant impact. — Advocates of Durbin stated that it would "enable smaller businesses and merchants to lower their costs and provide discounts for their customers."[72] 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 senator for Arkansas, suggested that "The consumer probably ends up paying for [the interchange regulation]. They'll get you. You're going to pay for it one way or another."[73]

Stock-price reaction to Durbin suggests that, as Senator Pryor predicted, merchant interchange savings were not fully passed through to consumers. The market capitalization of publicly traded retailers increased by nearly 50 basis points in response to Durbin.[74] This stock price movement is

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[67] Natasha Sarin and Vladimir Mukharlyamov, *The Impact of the Durbin Amendment on Banks, Merchants, and Consumers*. (2018). These estimates are comparable to Kay et al. (2014), the only other empirical study that considers bank responses to the Durbin Amendment. Benjamin S. Kay, Mark D. Manuszak, and Cindy M. Vojtech, *Bank Profitability and Debit Card Interchange Regulation: Bank Responses to the Durbin Amendment,* BD. OF GOV. OF THE FED. RESERVE SYST. (2014).

[68] 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, and it's going to have the unavoidable consequences to push them towards credit. I think it's nuts.

Martin Neal Baily: Reasonable Regulation of Debit Card Fees (Transcript), PYMTS.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).

[69] *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).

[70] 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). Debit rewards programs, though less common, did exist in the pre-Durbin era, though Chase discontinued its Continental rewards card (offering Continental miles for debit purchases) in July 2011, and the SunTrust Delta rewards card was similarly discontinued.

[72] Press Release: *Durbin Sends Letter To Wall Street Reform Conferees On Interchange Amendment* (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).

[73] Zach Carter and Ryan Grim, *Swiped: Banks, Merchants, and Why Washington Doesn't Work for You.* Huffington Post (April 28, 2011, updated December 6, 2017) https://www.huffingtonpost.com/2011/04/28/swipe-fees-interchange-banks-merchants_n_853574.html (last visited April 30, 2018).

[74] Market capitalization for financial services companies (banks and card networks) fell by 75 basis points on Durbin announcement days, suggesting lack of full pass through of Durbin losses on the bank side. There is no statistically significant change in stock price for control (non-bank and non-retailer) firms on these days. Sarin & Mukharlyamov, *supra* note XX.

consistent with public statements by large retailers in the aftermath of Durbin: for example, The Home Depot said it gained $35 million/year from Durbin.[75]

Evidence from merchant prices also suggests that retailers failed to pass through savings from Durbin. 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.[76] And when surveyed, the sectors that experienced the greatest debit cost reduction (home furnishings, sporting goods, maintenance, entertainment, and services) report that they did not decrease prices in response to Durbin.[77]

Durbin did not help all retailers. Small-ticket merchants without sufficient market power to negotiate attractive interchange rates with Visa and Mastercard saw their interchange rates rise, not fall, in response to Durbin, as the Board's $0.21 cap became a floor for debit interchange fees.[78]The price reaction to Durbin appears asymmetric: although merchants helped by Durbin do not lower prices, merchants hurt by Durbin raise them.[79] Anecdotal evidence confirms that Durbin prompted price increases for merchants harmed by its enactment. For example, Redbox, which provides movie rentals through vending machines, raised prices by 20% in response to Durbin.[80] Parkmobile, a smartphone application that helps Washington, D.C., residents pay for street parking, sent an email to customers in October 2011 saying that its fees would rise from 32 cents to 45 cents on each parking session, and that these cost hikes were triggered by the Durbin Amendment[82] Dairy Queen, a fast food chain, advised its franchisees to consider offering discounts or incentives to steer customers away from debit cards.[83] Small business owners decried Durbin's

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[75] *Q4 2010 Home Depot, Inc. Earnings Conference Call.* THE HOME DEPOT INC. (Feb. 2011), http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9ODMwMTB8Q2hpbGRJRD0tMXxUeXBlPTM=&t=1 (last visited Mar. 14, 2018).

[76] Sarin & Mukharlyamov, *supra* note YY.

[77] Zhu Wang, Scharlett Schwartz, and Neil Mitchell, *The Impact of the Durbin Amendment on Merchants: A Survey Study*, FED. RESERVE BANK OF RICHMOND ECONOMIC QUARTERLY (2014). The authors survey 420 merchants across 26 sectors and find that only 4 sectors decrease price in response to Durbin (Art, Automobiles, Sporting Goods, and Other), and even in these 4 sectors, prices fall for less than 6% of merchants.

[78] Sarin & Mukharlyamov, *supra* note YY; *see also A Vending Machine Payment Processor Hopes to Preserve Interchange Incentive*, DIGITAL TRANSACTIONS (Oct. 7, 2011), https://www.digitaltransactions.net/a-vending-machine-payment-processor-hopes-to-preserve-interchange-incentive/.

[79] As Wang et al., *supra* note 59, note:

> [t]he survey results . . . show asymmetric merchant reactions to changing debit costs in terms of adjusting prices and debit restrictions. A sizable fraction of merchants are found to raise prices or debit restrictions as their costs of accepting debit cards increase. However, few merchants are found to reduce prices or debit restrictions as debit costs decrease.

[80] 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/.

[82] Parkmobile eventually had to apologize for its email when Senator Durbin wrote a letter calling their claim "grossly misleading" given that his legislation was only the proximate cause of the interchange fee increases for the company: it was Visa and Mastercard's reaction to the Durbin Amendment (to offset losses by raising interchange costs for small-ticket merchants) and 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).

[83] Although the legality of merchants' steering consumers to cheaper forms of credit/debit and/or offering cash discounts is fairly complicated and still in flux, eleven states—California, Colorado, Connecticut, Florida, Kansas, Maine, Massachusetts, New York, Oklahoma and Texas—and Puerto Rico have laws that prohibit merchants from surcharging consumers on credit card transactions. And ten states (interestingly many of those who ban surcharging)—California, Colorado, Connecticut, Maryland, Massachusetts, Nevada, Oklahoma, Washington, Wisconsin, and

impact. For example, an owner of five New York coffee shops said Durbin left him with few options: "my choice is to raise prices, discount for cash, or get an ATM."[85] Another merchant whose business is housed in the Russell Senate Office Building 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."[86]

The vending machine industry was especially hurt by Durbin. Pre-Durbin, Visa and Mastercard offered an incentive for machine owners: install contactless card technology and receive a cut in debit and credit card interchange fees.[87] Since the statutory $0.21 cap applied to all-sized transactions, Durbin increased small transaction interchange fees by more than 200%.[88] Visa struck agreements with payment processors for this industry.[89] However, Mastercard refused to negotiate a lower rate, leading these companies to drop Mastercard debit from their list of accepted payment methods until a deal similar to Visa's was eventually reached years later.[90]

B. The CARD Act

1. The Policy Problem. — In 1980, credit card contracts were a page long. Today, the average credit card 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."[91] To a certain extent, she was right.

Wyoming—and Puerto Rico—have laws that allow merchants to give discounts for use of cheaper forms of payment like cash or debit. *Credit or Debit Card Surcharging Statutes*, NAT'L CONF. OF STATE LEGISLATURES. (Oct. 13, 2016), http://www.ncsl.org/research/financial-services-and-commerce/credit-or-debit-card-surcharges-statutes.aspx (last visited on March 14, 2018).

Indeed, the Supreme Court recently agreed to take up the case of whether state laws that prohibit merchant surcharging (charging higher prices for cards with higher interchange fees) are constitutional. *Expressions Hair Design v. Schneiderman*, 137 S.Ct. 1144 (2017). At the core of the legal question was whether the New York law banning credit-card surcharges is a price-control or an infringement on merchants' First Amendment rights to communicate the cost of credit-card transactions. The Supreme Court agreed that the law was subject to First Amendment scrutiny: "What the law does regulate is how sellers may communicate their prices. . . . In regulating the communication of prices rather than prices themselves, § 518 regulates speech." *Id.* at 1151. Emphasizing that the court is one of review, not of first view, the opinion offered no clarity on whether the statute would survive scrutiny under the First Amendment, *id.*, and so the case has returned to the Second Circuit for litigation of the validity of the statute under the First Amendment. *See id.* at 1147. *Compare* Dana's R.R. Supply v. Att'y Gen., 807 F.3d 1235, 1251 (11th Cir. 2015) (holding that Florida's surcharge ban violates the First Amendment), *with* Rowell v. Pettijohn, 816 F.3d 73, 80 (5th Cir. 2016) (holding that Texas's surcharge ban does not implicate the First Amendment), *vacated*, 137 S. Ct. 1431 (2017) (mem.). *See also* Andy Jang v. Asset Campus Hous., Inc., No. LA CV15-01067, 2017 WL 2416376, at *5 (C.D. Cal. May 18, 2017) (invalidating California's surcharge ban in light of *Expressions Hair Design*); *The Supreme Court, 2016 Term — Leading Cases*, 131 HARV. L. REV. 223 (2017) (arguing that "[d]eceptive legislation should . . . be deemed per se illegitimate," *id.* at 232).

[85] Sidel, *supra* note 72.

[86] *Id.*

[87] *See* DIGITAL TRANSACTIONS (*A Vending Machine Payment Processor*), *supra* note 68.

[88] *See id.*

[89] *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).

[90] *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.

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

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.[92] 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.[93] 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; these could rise without warning when cardholders applied for a mortgage or made a large purchase that lowered their credit score.[94] Many of these fees are not salient to consumers when they choose credit products: although the introductory teaser rates are presented to consumers upfront, 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, among many others—are buried deep in these increasingly complex contracts.[95] Consumer inattention to these less-salient terms precipitated a status quo whereby consumer raked up avoidable expenses, without even realizing they were being incurred.[96]

The introductory teaser rate on credit cards is an example of card issuers' exploitation of consumer irrationality.[98] Empirical work demonstrates that consumers fail to switch cards when teaser rates expire, a mistake that costs them more than $250 annually.[99] This is true even when they receive multiple pre-approved credit card offers per month, meaning switching is associated with only a small transaction cost.[100] Penalty fees exploit related behavioral limitations: historically, firms could charge these fees with impunity, because naïve customers believed they would never be delinquent and therefore did not factor these high fees into their optimal product choice.

2. Regulatory Approach to Solving the Problem. — Given the limited nature of ex-post judicial review in the consumer credit card market[103] and widespread outrage concerning financial-sector

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

[93] Nadia Massoud et al., *The Cost of Being Late: The Case of Credit Card Penalty Fees* 2-3 (Am. Fin. Ass'n 2007 Chicago Meetings Paper, 2006); *see also* Bar-Gill & Warren, *supra* note 92.

[94] Bar-Gill & Warren, *supra* note 92

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

> Our paper is motivated by the observation that firms choose to hide information from consumers. 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 stricture until long after they have opened their accounts."

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

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

[98] Bar-Gill & Warren, *supra* note 92.

[99] Haiyan Shui and Lawrence M. Ausubel, *Time Inconsistency in the Credit Market.* (Jan. 30, 2005) (unpublished manuscript), https://pdfs.semanticscholar.org/a6e3/d841e960666adc8e32a8bc2a3bc4d1446db6.pdf (last visited on Mar. 14, 2018).

[100] *Id.*

[103] Bar-Gill & Warren, *supra* note 92.

exploitation of consumer naiveté, regulatory interventions in this market began in 2008, during the Recession.[104]

In May 2007, the Federal Reserve Board published 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. Its proposed rules, which were issued in May 2008, focused on protecting consumers from unexpected increases in interest rates; ending two-cycle billing;[106] requiring that consumers receive a reasonable amount of time to make credit card payments before they were treated as late; and prohibiting banks from creating a "cycle of debt" for subprime borrowers by financing account opening or membership fees if charges assessed during the first 12 months would exceed 50% of the available credit limit.[107] The proposal also included revised disclosures, requiring changes to the format, timing, and content requirements for credit card applications and solicitations, and abandoning the APR in favor of terms more easily understood—that is, disclosure of interest and fee dollar amount totals on each statement. The final rules were issued in December 2008, but the enactment date was not until July 2010 to minimally disturb the market in a time of great uncertainty.

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.[108] 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 was to become effective, meaning it superseded the Board's proposals. The CARD Act adopted many of the Board's prohibitions (for example, prohibiting unexpected increases in rates) but added an emphasis on prohibiting creditors from advertising cards to consumers under the age of 21 without determining their ability to repay these loans. By decreasing credit availability for college students, regulators hoped to end the practice of card companies forcing young borrowers into inevitable delinquencies and penalty fees, precipitating "a lifetime of debt."[111]

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[104] Per the National Bureau of Economic Research, the Great Recession officially ended in 2009. http://www.nber.org/cycles.html (last visited on Mar. 14, 2018). Jambulapati and Stavins (2013) provide a very helpful discussion of the timeline of legislative interventions in the consumer credit market which eventually led to the CARD Act. Vikram Jambulapati and Joanna Stavins, *The Credit CARD Act of 2009: What Did Banks Do?* FED. RESERVE BANK OF BOSTON (2013).

[106] 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.

[107] *Highlights of Final Rules Regarding Credit Card Accounts,* FED. RESERVE BD. OF GOVERNORS, (Dec. 2008), https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20081218a1.pdf

[108] 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).

[111] *Id.* In this Article, I focus on the aspects of the CARD Act that regulated issuers' back-end credit card contract terms, rather than changes in credit standards mandated by the Act, especially for young borrowers. Much work remains to be done on the impact of these changes on credit supply, for subprime borrowers specifically. Some recent work includes Nelson (2017), who finds that the CARD Act curtailed credit supply for this group. Scott Nelson, *Private Information and Price Regulation in the US Credit Card Market,* Working Paper (2018). An additional group of borrowers who found their access to credit restricted is spouses or partners who do not work outside the home. This was unintended; and the CARD Act has since been amended to allow for the consideration of partner income for

Similar to its staged legislative history, the actual implementation of the CARD Act also occurred in stages: (1) beginning in August 2009, issuers were required to provide 45 days' notice for certain rate and fee increases; (2) in February 2010, other major pieces of the CARD Act—including restrictions on interest rate increases and an opt-in default rule for over-the-limit transactions; and (3) in August 2010, the remaining pieces of the legislation, including restrictions on late payment fees and inactivity fees for not using the credit card were implemented.[112]

3. Impact of Regulatory Intervention. — The CARD Act changed the economics of the credit card business by making credit card loans riskier and reducing firms' ability to distinguish between differentially risky borrowers. The CARD Act turned 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.[113]

It is important to consider the impact of the CARD Act on the price and availability of consumer credit. Estimates suggest that 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.[114] These savings were largest (nearly $60 per account per year) for the least credit-worthy borrowers—with a FICO score below 660.[115] Overall, these savings represent a decrease in account fees of around 22% relative to the pre-CARD Act period.[116]

Despite early anecdotal evidence to the contrary,[117] most empirical 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.[118] There appears to be no increase in interest rates in response to the CARD Act, either on existing accounts in anticipation of or following the CARD Act's enactment, or on new accounts, which are less constrained by the CARD Act's repricing

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borrowers above the age of 21. *See The CFPB Amends Card Act Rule to Make It Easier for Stay-at-Home Spouses and Partners to Get Credit Cards*, CFPB (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/

[112] Oren Bar-Gill & Ryan Bubb, *Credit Card Pricing: The Card Act and Beyond*, 97 CORNELL L. REV. 967 (2012). The authors focus on two datasets that provide detail on the actual terms of different card agreements: the Federal Reserve's semi-annual Survey of the Terms of Credit Card Plans (TCCP) and a hand-collected dataset on the terms of credit card contracts just prior to the February 2010 phase-in of (some) of the CARD Act Rules and after August 2010, when the remainder of the rules were implemented. They compare credit card contract terms before and after the implementation of the CARD Act.

[113] See, e.g. Tomoeh Murakami Tse, *JP Morgan's Dimon says new laws have hurt his company,* THE WASHINGTON POST (Apr 22, 2010), http://www.washingtonpost.com/wp-dyn/content/article/2010/04/01/AR2010040103684.html (last visited on Mar. 14, 2018).

[114] *See generally* Sumit Agarwal et al., *Regulating Consumer Financial Products: Evidence from Credit Cards*, 130 Q. J. ECON. 111 (2014) (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)).

[115] Those with a FICO score above 660 experienced a smaller decline in fees, of around $7.90 per account. Agarwal et al., *supra* note 114.

[116] *Id.*

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

[118] Agarwal et al., *supra* note 114; Bar-Gill & Bubb, *supra* note 112.

restrictions.[119] 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.[120]

Evidence relating to the CARD Act's impact on credit supply is more mixed. While some authors find no impact of the CARD Act on credit limits or account closures,[121] others find that the probability of account closure nearly doubled.[122] This discrepancy is attributable to the different stages of the CARD Act: although the Act was passed in May 2009, as discussed previously, the Board proposed similar rules a year prior, in May 2008. Thus, although there is no increase in account closures in the aftermath of the CARD Act's passage, there appears to be an increase in account closures in the aftermath of the Board's earlier proposal of similar changes to credit card contract terms.[123] But given that this earlier proposal coincides with the Recession, it is difficult to establish causally that pre-CARD Act closures are attributable to banks' preemptive adjustment to imminent credit card regulation[124] rather than the general economic downturn.[125] Recent work suggests that the CARD Act did in fact decrease credit supply for subprime borrowers, but on aggregate, this adverse selection impact of the CARD Act—that is, the fact that the inability to reprice contract terms made it harder for riskier borrowers to get access to credit—is outweighed by a decrease in lender rents, meaning overall the CARD Act increased in consumer welfare.[126]

This supply-side credit effect for subprime borrowers is supported by anecdotal evidence,[127] as well as remarks from trade groups and industry commentators regarding the CARD Act's impact.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.[129] In addition, in its recent assessment of the CARD Act, the American Bankers

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[119] Agarwal et al., *supra* note 114(finding no evidence of bank offsetting CARD Act losses by increasing interest rates or decreasing credit supply) ; Bar-Gill & Bubb, *supra* note 112 (finding little evidence of bank offsetting CARD Act losses, except for a slight increase in cash advance APRs)..

[120] Bar-Gill & Bubb, *supra* note 112.

[121] Agarwal et al., *supra* note 114. Although the authors estimate that the CARD Act had a precise zero effect on credit limits, they are unable to rule out an impact on the number of new accounts.

[122] Jambulapati & Stavins, *supra* note YY.

[123] *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 114; and Bar-Gill & Bubb, *supra* note 112.

[124] Professor Todd Zwyicki makes exactly this argument in his critique of Agarwal et al., *supra* note 104 ("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.* Washington 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 April 30, 2018).

[125] Without the CARD Act, the Board's proposal would have taken effect in 2010. Jambulapati & Stavins, *supra* note YY. But these authors are careful not to causally attribute the decrease in credit supply they document to the CARD Act: "this earlier period coincides with the recession, making it difficult to identify clearly whether the main cause…was the economic downturn or preemptive action in anticipation of the new legislation."

[126] Nelson (2018), *supra* note YY.

[127] Anecdotal evidence also suggests that banks adjusted credit card fees and decreased credit availability in response to the CARD Act:

> 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."

Connelly (2010), *supra* note YY.

[129] Supra note 113.

Association suggested that the availability of credit declined, particularly for subprime borrowers: total credit card accounts for superprime borrowers rose from 151 million to 176 million between 2008 and 2016 while total credit card accounts for subprime borrowers fell from 89 million to 73 million during this same time, and average credit lines decreased, falling by around 5% for super-prime accounts, from $12,234 to $11,562, and by more than 20% for subprime accounts, from $4,531 to $3,622.

In aggregate, the CARD Act's equilibrium effects appear to be a decrease in regulated fees (particularly late fees and over-limit fees), very little offsetting increase in interest rates or other unregulated credit card fees or interest rates, and potentially some decrease in credit availability for the riskiest (subprime) borrowers.[130] The overall equilibrium effect of the CARD Act is an increase in consumer surplus is estimated to be approximately $12 billion annually.[131] This finding is consistent with CFPB estimates, which argue that the total cost of consumer credit declined by two percentage points between 2008 and 2012.[132] Thus, credit card issuers appeared to be much less focused on at 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 the recent regulation of these two consumer payment products.

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 a 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 vendors.[133] Automated programs were designed 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.[134] As a result, fee income on deposit accounts[135] 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.[136]

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[130] Nelson (2017), *supra* note YY.

[131] Agarwal et al., *supra* note 114.

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

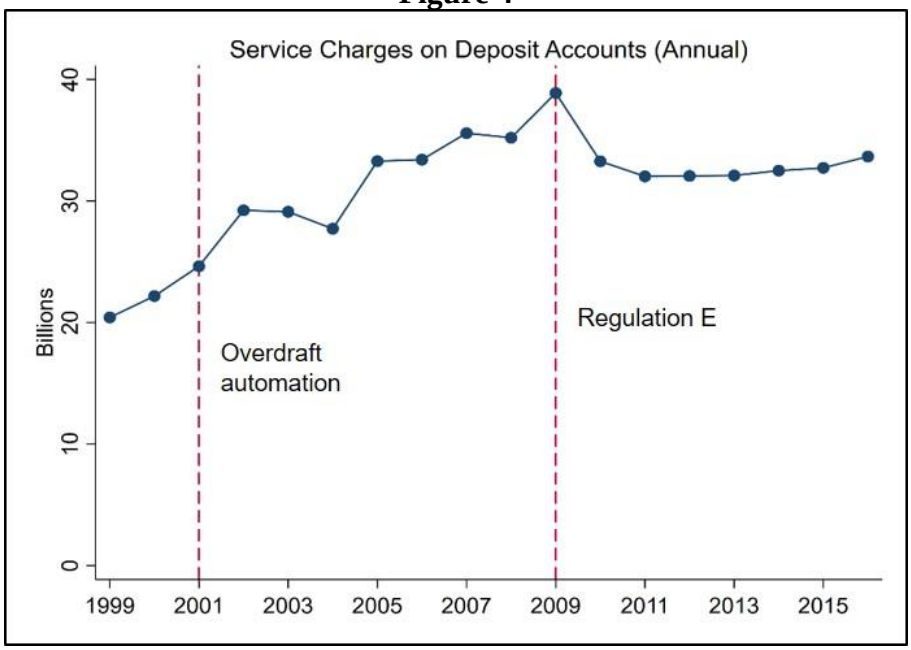
[133] *FDIC Study of Bank Overdraft Programs*, FED. DEPOSIT INS. COMM'N. (Nov. 2008). https://www.fdic.gov/bank/analytical/overdraft/fdic138_report_final_v508.pdf (last visited Mar. 14, 2018).

[134] *Id.*

[135] 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. *FDIC Study of Bank Overdraft Programs, supra* note 120.

[136] *Id.*

Figure 4



Notes: Data from bank regulatory filings (Call Reports)

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 10-19, and only 5% had more than 20 overdrafts annually. Customers with more than 10 overdraft transactions (which constituted fewer than 10% of all checking account customers) accrued 84% of the reported overdraft fees.[137] Customers who overdraft their accounts are less financially sophisticated and typically lower-income: in 2006, nearly 40% of low-income customers overdrafted compared to around 20% of high-income customers. Low-income customers are also twice as likely to be frequent overdrafters.[138]

Overdraft can be viewed as a very-high-interest loan: assuming, for example, a $27 overdraft fee,[139] 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, 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).[140] Given the availability of cheaper alternatives, banks' ability to generate overdraft revenue, especially from repeat overdrafters, is puzzling. One potential explanation for overdrafts is consumer inattention—nearly all consumers who overdraft say it was a mistake and they did not realize they had done so.[141] The lack of salience of these fees to the consumers who bear them enables banks to generate significant revenue from overdraft protection.

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[137] CFPB Study of Overdraft Programs, *supra* note YY.

[138] FDIC Study of Bank Overdraft Programs, *supra* note 120. 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.

[139] Median for the FDIC study. *FDIC Study of Bank Overdraft Programs, supra* note YY.

[140] *Id.*

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

Prior to recent updates to overdraft rules, most bank customers were automatically opted in to banks' overdraft protection. Given the rapid increase in overdraft fees since the early 1990s and their incidence on the least financially sophisticated, both popular commentators[142] and regulators[143] voiced concern about bank overdraft practices in the late 2000s.

2. Regulatory Approach to Solving the Problem. — In 2005, the Federal Reserve Board amended Regulation DD,[144] 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.[145] Banks were also required to disclose total overdraft fees incurred in periodic account statements.[146] Regulators hoped that these disclosures would make overdraft fees salient to consumers and push them toward cheaper alternatives to overdraft protection.

Despite this intervention, overdraft fee income for banks and credit unions rose 35% from 2006 to 2008.[147] The Board then amended Regulation E[148] 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 and chose not to; and (2) an opt-in default, which would prohibit banks from assessing overdraft fees unless customers affirmatively opted in to banks' overdraft protection.

The final rule adopted an opt-in approach.[149] In favoring this policy default, the Board sought to address the lack of salience of overdraft fees to consumers. Specifically, it noted that "many consumers may not be aware that they are able to overdraft. . . . Consequently, 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."[150] Because consumers

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[142] 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?mtrref=www.google.com&gwh=DF025FB3AD35E98790C14BC3E4F25231&gwt=pay. In fact, overdraft became a symbol of abusive bank practices. 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. It 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 (criticizing the Federal Reserve Board's new rules as "half-measures").

[143] *FDIC Study of Bank Overdraft Programs*, *supra* note 120 (citing a 2006 FDIC study to gather empirical data on types, characteristics, and use of overdraft programs operated by FDIC-supervised banks. This study was a direct response to the rapid growth in use of automated overdraft programs).

[144] 12 CFR Part 1030.

[145] *FDIC Study of Bank Overdraft Programs*, *supra* note 120 (citing § 226.4(c)(3)).

[146] *Id.*

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

[148] 12 CFR Part 1005.

[149] Note that 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.

[150] 74 Fed. Reg. 220, 59039.

are likely to adhere to established defaults,[151] the Board believed the opt-in regime would help prevent expensive and frequent overdraft incidents.[152]

The new opt-in default was meant to be a strong nudge against overdraft protection. Given that overdraft is expensive (a $27 fee for a $20 overdraft, paid back in ten days, has an APR of over 7000%) and that cheaper alternatives are available (an overdraft line of credit has around an 18% APR),[153] the Board concluded that consumers, if made aware of the cost of overdrafting, would prefer such transactions be declined. This view is consistent with the Board's own internal testing[154] and surveys,[155] that 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 for customers across the board, given that "overdraft fees . . . subsidize other checking account features consumers enjoy, such as maintenance-fee-free checking accounts, and free online payment."[156] It is important to consider the actual impact of the overdraft opt-in regime on bank overdraft income and the extent to which the decrease in overdraft revenue is offset by increases in other bank fees.

Figure 4 above shows that overdraft revenue decreased significantly immediately following the implementation of the new opt-in regime. Service charges on deposit accounts declined by 14% in the year following the Board's changes. This decrease is persistent: banks have not recovered overdraft losses since changes in the default regime were implemented.[157]

Despite the decrease in overdraft revenue associated with the new opt-in regime, some have highlighted it as an example of a failed nudge, or a "slippery default." These authors caution that when there is an asymmetry in information and sophistication (as is the case with naïve and inattentive consumers contracting with financial firms), policy defaults fail to stick, because

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[151] As support for this proposition, the Federal Reserve Board cited Brigette 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*, Q. J. ECON. (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.

[152] *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/.

[153] Willis, *supra* note 144, at 1176-77.

[154] *See Design and Testing of Overdraft Notices: Phase Two*, MACRO INT'L (Oct. 12, 2009), https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20091112a4.pdf (last visited on Mar. 14, 2018). In these tests, the concept of overdraft coverage was first explained to participants. The majority indicated that they would prefer an opt-in over an opt-out regime for ATM and point of sale transactions, because these transactions tend to be discretionary in nature.

[155] 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 rather than incur the $35 fee. *Overdraft America: Confusion and Concerns about Bank Practices*, THE PEW CENTER ON THE STATES (May 2012),

[156] Supra note 150.

[157] 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.

motivated firms are focused on persuading consumers to opt out of the default (in this case, by opting *in* to overdraft protection).[158] Any appearance of consumer choice is illusory.[159]

Professor Lauren Willis makes precisely this argument, suggesting that banks made the default position costly by bombarding customers with marketing and phone calls[160] so "consumers quickly realized that there is 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."[161]

Certainly, some banks aggressively focused on opting customers in to overdraft protection. TCF is being sued by the CFPB for improper opt-in practices, 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,[162] and offering emotional hypotheticals in the rare cases of customer resistance to overdraft protection.[163] But TCF is the exception, not the rule.[164] Relying on vivid anecdotal evidence about particular banks' opt-

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[158] Professor Lauren Willis's thesis asserts that policy defaults will fail to stick consumers to the default when (1) motivated firms oppose the default, (2) these firms have access to the consumer, (3) consumers find the decision environment confusing, and (4) consumer preferences are uncertain. Willis notes that lack of data makes it difficult to ascertain opt-in rates, but argues that many banks energetically pursued profitable opt-in revenue by persuading customers, and especially frequent overdrafters, to opt-in to protection. Lauren E. Willis, *When Nudges Fail: Slippery Defaults,* 80 U. CHI. L. REV. 1155, 1229 (2013). 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 where a policy mandate (here, no overdraft protection) is preferable. Ryan Bubb & Richard H. Pildes, *How Behavioral Economics Trims Its Sails and Why*, 127 HARV. L. REV. 1593 (2014).

[159] According to Bubb and Pildes, the evidence on overdraft concludes that "[f]or effective defaults in this area, choice is often a façade." Bubb & Pildes, *supra* note 144, at 1658. They argue that behavioral law and economics scholars use this façade of choice to avoid directly analyzing the costs and benefits of direct mandates. *See id.* at 1609–10. In the case of overdraft, for example, direct mandates could involve forcing overdraft protections to be linked to checking accounts. A more extreme but also feasible mandate would be to prohibit banks from offering overdraft protection to consumers.

[160] Willis, *supra* note 144, 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)).

[161] *Id.*

[162] 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).

[163] *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.'

[164] 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.

in practices fails to capture that there is substantial heterogeneity in bank responses to the new overdraft regime.

Large banks have 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,[165] 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.[166] More recently, in 2014, Bank of America launched a new a "SafeBalance" checking account to prevent customers from overdrafting when withdrawing cash from ATMs or when paying bills (including check payments, uncovered by the new opt-in regime).[167] In July 2012, JPMorgan Chase decided to end overdraft charges on small transactions (incurred by purchases that cost $5 or less).[168] In June 2017, Wells Fargo began notifying customers via email when their account balances drop to zero or less.[169] Most recently, in November 2017, Wells Fargo also eliminated overdraft fees for small transactions (under $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 AM the day after an account becomes negative.[170] And Citibank, even prior to changes to Regulation E, never allowed overdrafts on ATM or point-of-sale transactions.[171] One reason the largest banks dislike overdraft as a product is its recent notoriety: executives at two of these large banks[172] 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.[173]

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[165] Bank Call Reports.

[166] *See* Dan Fitzpatrick & Robin Sidel, *Bank of America Eliminates Overdraft Fees on Debit Buys*, WALL ST. J. (Mar. 10, 2010, 12:01 AM), https://www.wsj.com/articles/SB10001424052748704784904575112430638527738. Bank of America retains overdraft protection for ATM withdrawals, but alerts customers every time they try to exceed their balance when making a withdrawal 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).

[167] 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).

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

[169] 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).

[170] *See id.*

[171] *See* Jane Quinn, *Automatic Overdraft Protection: Just Say No*, MONEYWATCH (Aug. 16, 2010, 1:15 PM), https://www.cbsnews.com/news/automatic-overdraft-protection-just-say-no/.

[172] Anonymous interview (on file with author).

[173] 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 thus are 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; 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. 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 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*, LA TIMES (Aug. 24, 2017, 3:15 PM), http://www.latimes.com/business/la-fi-wells-fargo-20170824-story.html. A similar charge was at the heart of the

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 Regulation E.[175] As such, it seems that the fee increases observed are more related to Durbin than to changes in banks' overdraft policies, although disentangling the two is difficult. [176]

As a result of the new overdraft regime, the share of bank customers who are opted in to overdraft protection (and thus capable of incurring overdraft fees) decreased from 100% to 16%.[177] Even for frequent overdrafters, only 45% have opted in to overdraft protection (compared to 100% prior to the amendment of Regulation E).[178] One way to interpret the higher opt-in rate for frequent overdrafters is that motivated banks seek to avoid the opt-in default. Another interpretation of this evidence is that frequent overdrafters prefer overdraft protection to the possibility of their transactions being declined.[179]

It seems extreme to characterize as a "slippery default" a default rule that decreased the share of bank customers opted-in to overdraft protection by nearly 85%.[180] However, it is fair to be concerned 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.

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..

[175] 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 2013, *supra* note YY.

[176] Both were passed in Q2 2010, although changes to overdraft had been proposed earlier, in 2008 and 2009.

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

[178] *Id.*

[179] 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).

[180] Willis, *supra* note 144.

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; *e.g.*, by ordering transactions for maximum overdrafts.	Prohibit overdraft protection (and thus fees) unless customers opt-in, else transaction denied.	Share of customers opted in to overdraft protection decreases from 100% to 16% (22% for new customers).	Banks dependent on overdraft 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 indicate that recent consumer payments regulations have had mixed efficacy. Part II begins to glean lessons from these interventions, providing a very simplistic conceptual framework to establish that, in the presence of shrouded pricing and imperfect competition, regulatory intervention can be effective.

A. Shrouded Information and Imperfect Markets

This conceptual framework is motivated by 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 that those same customers are likely to incur (for example, higher interest rates when those introductory teaser offers expire and penalty fees for late payments). This framework seeks to explain why price shrouding occurs, what are its consequences, and how can it be sustained in equilibrium.

Consider the consumer checking account, and for simplicity imagine it has two components: a salient price p_s (that is, the monthly maintenance fee on the account), and a non-salient price $p_{ns,}$ (that is, the overdraft fee charged if a customer has an overdraft incident, such as when buying a $5 latte with her debit card when only $2 remain in her account). P_s is $90, p_{ns} is $20. First, note that the existence of price shrouding in consumer finance markets leads to excessive credit card borrowing,[181] excessive use of credit or debit cards to pay for transactions,[182] or, in this case, excessive purchase of consumer checking accounts. How so? Assume that 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 that they will. If costs were properly internalized by consumers, only high marginal benefit types would purchase checking accounts; however, thinking the total cost is only $90, both high and low types will buy them.

Now assume that awareness of the non-salient overdraft price differs depending on customer sophistication. There are still two types of customers: sophisticates, who consider both p_s and p_{ns} when they make product decisions, and neophytes, who neglect p_{ns}. But both types have equal marginal benefits of $100.

Sneaky Bank's total cost of servicing a checking account is $100. And so, in a perfectly competitive world, the total revenue it generates from its 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 consumers cleverly 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.

[181] See Sunstein, Cass. "Boundedly Rational Borrowing" (noting that "excessive borrowing, no less than insufficient savings, might be a product of bounded rationality.")

[182] Bar-Gill, Oren. "Seduction by Plastic" (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
Non-sophisticated pays	$110
Profit	$0

But what is to stop another bank from coming in and being transparent about its pricing structure? If Transparent Bank offered a $100 price, inclusive of overdraft, and advertised itself as not engaging in sneaky shrouding pricing, then any newly educated consumers would still prefer to get checking accounts at Sneaky. This is because they are now sophisticated—and get a product that is worth $100 for only $90, plus some inconvenience cost to avoid overdrafting.[185]

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, and cross-subsidize their sophisticated counterparts.

Of course, sophistication is costly on two dimensions: (1) sophisticated consumers have to read through complex checking account contracts to locate non-salient overdraft terms and (2) to avoid these fees, sophisticated consumers have to be vigilant, for example by verifying that their account balances are positive regularly, or by carrying around wads of 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, then sophisticated consumers 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?[186] Imagine a regulator, aware of these shrouded prices and heterogenous customer sophistication, decided to rein in on banks' pricing. Specifically, the regulator decided to ban overdraft fees entirely.[187] Then, banks can no longer charge any p_{ns},

[185] This example is a simplistic version of the model presented in Gabaix & Laibson, *supra* note 95. The authors refer to the failure of the transparent bank to gain market share as illustrative of the curse of debiasing: "This curse occurs whenever debiasing makes a consumer less profitable for the debiasing firm. 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." *Id.* at 508.

[186] Gabaix and 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 take heed of this caution, and in this Article attempt to highlight cases where I find it likely that price caps will be minimally distortive.

[187] This is an extreme example, and illustrative only. For reasons I discuss in Part III, I think capping overdraft fees at $0 is a mistake because it will result in overdraft protection no longer being offered, and thus restrict the ability of consumers to get access to a product that they may want, despite its high cost. In this example I assume that overdraft has little value to consumers because once educated about its costs, they can easily avoid it in ways outlined *supra* note YY. In the real world, it is unlikely that such simple alternatives to overdraft protection are a panacea.

but still have to cover their $100 costs in equilibrium. As such, Sneaky Bank would fully offset this price regulation through an increase in the salient price p_s:

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

In equilibrium, the regulatory intervention eliminates the cross-subsidy of the sophisticates by the neophytes.[190] It also eliminates costly behavior by the sophisticates, like spending copious time reading contracts and balancing accounts to avoid being overdrawn. Also getting rid of 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 importantly, 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. Said another way, *wealthy* consumers are likely to take advantage of expensive overdraft add-on, and *poor* consumers are likely to avoid it; so rich and frivolous customers subsidize their poorer counterparts. This "traditional" explanation[191] also generates a cross-subsidy that can be addressed by regulatory intervention, but it appears unlikely to describe the reality of consumer finance markets, where consumers who bear penalty fees are disproportionately less financially sophisticated and poorer. With the behavioral cross-subsidy running from the less-sophisticated to the more, regulatory intervention can also address fairness and distributional concerns.

[190] It is beyond the scope of this paper but perhaps worth noting that 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, since banks bear costs for offering overdraft protection, for example completing a transaction whose costs are never recovered. 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 of the particulars of 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, 7:07 PM), https://www.npr.org/sections/thetwo-way/2018/01/24/580324251/bank-of-america-ends-free-checking-option-a-bastion-for-low-income-customers

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

Next consider a world *without* perfect competition, where 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.[193] 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 are paying $105, and unsophisticated consumers are paying 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
Non-sophisticated 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 can't the sophisticated consumers demand a lower price by threatening to educate the unsophisticated? It is not obvious that this threat is credible. Sophisticated consumers will have to coordinate to spread their message; and even if they are able to, it is likely that unsophisticated consumers will trust Sneaky Bank, the provider of their checking accounts, rather than the less familiar sophisticates.[194]

A regulatory price cap in this setting can help decrease checking account costs for non-sophisticates. Imagine the same regulatory intervention as above: regulators ban overdraft as a product entirely. Unlike in the case with perfect competition, now Sneaky will not offset the losses from the non-salient price cap entirely, and (under some assumptions) may choose not to offset at all. The simplest way to understand Sneaky's decision to less-than-fully offset losses is it now faces a tradeoff: 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 on each account, albeit lower profits than it generated without the overdraft regulation.

[193] 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 longer run) or long-run rents.

[194] Although launching such a widespread education campaign could conceivably be a role for the regulatory community, as I propose below in the context of proposed increases in overdraft disclosures.

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

B. Related Literature

The insights presented in the framework above come from a long line of both the legal and economics literature considering the existence of loss-leader[195] pricing and its equilibrium effects on consumers and firms. As in the framework above, 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).[196] He does not distinguish between what he calls the "traditional" difference between low and high marginal utility types—that is, richer consumers have lower marginal utility of income—and the behavioral difference—that is, more sophisticated consumers are more aware of add-on prices.[197] 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 for firms to lower price and attract more "cheapskate" consumers that will not consume the add-on.[198] Thus, the existence of shrouded pricing lowers competitive market pressures. In closely related work, economists Xavier Gabaix and David Laibson provide a model of shrouded pricing where firms have zero profit in equilibrium, but price shrouding remains and creates a cross-subsidy of the sophisticated by their non-sophisticated counterparts, precisely as described above.[199]

Economists Sumit Agarwal, Souphala Chomsisengphet, Neale Mahoney, and Johannes Stroebel and Professors Oren Bar-Gill and Ryan Bubb are most closely related to our main conceptual takeaways. In their study of the CARD Act, both sets of authors point to (1) the shrouded nature of many of the fees that the CARD Act sought to regulate and (2) the imperfectly

[195] Loss-leader pricing involves setting a low base price to attract customers and high price add-ons. It is also common in the grocery store industry. One interesting piece of evidence: "In partial support of this point, one chain has reported margins of only 5.8% on cigarettes, 6.2% on sugar, 8.4% on soap, and 9.8% on baby foods in spite of the store-wide margin of 17.9% on sales." Richard H. Holton, *Price Discrimination at Retail: The Supermarket Case*, 6 J. INDUS. ECON. 28 (1957).

[196] Glenn Ellison, *A Model of Add-On Pricing*, 120 Q. J. ECON. 585 (2005).

[197] *See id.* at 586.

[198] *See id.* at 589.

[199] *See* Gabaix & Laibson, *supra* note 95. These are but two examples of a long line of papers around this time that models 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).

competitive card issuer market as theoretical explanations for their empirical result—that card networks failed to significantly offset revenue losses from the CARD Act.[200] In later work, Professor Bar-Gill considers the question of when regulatory price caps can increase consumer welfare.[201] He makes the point that consumers can under- or over-estimate what he refers to as "utility" (that is, the base utility from subscribing to a credit card) and "price" (that is, the per-use price of an overdraft incident) and suggests well-designed regulatory intervention can address these behavioral errors.[202]

Like Professor Bar-Gill, my goal is to understand when regulatory price caps will be effective. My work focuses on what he terms price misperception, but in a narrower market—consumer finance.[203] The point of this essay is to intermediate between some in the regulatory community who believe price regulations will be universally effective, no matter the market particulars,[204] and those who believe that any regulatory intervention will be ill-fated.[205] By studying the available empirical evidence from these three recent consumer payments regulatory interventions, I form a more nuanced view and think that the lessons for regulators can be succinctly stated: shrouding of consumer prices results in inefficient overuse of products, inefficient effort expended by sophisticates to avoid costly add-ons, and subsidies of the sophisticated by their less-sophisticated counterparts. Thus, even without supracompetitive monopoly profits, shrouded pricing indicates a role for effective price regulation, or for behaviorally-informed "salience shocks" to help unsophisticated consumers incorporate traditionally neglected costs into their decision-making. In imperfectly competitive markets—either precipitated by monopoly market power or differentiated products—regulatory interventions can reduce overall consumer costs. But just as caps on banks' non-salient prices will not be fully passed through in imperfectly competitive markets; caps on non-salient merchant costs will also not be fully passed through to consumers. The differential impact of Durbin and the CARD Act can be explained through this lens of salience. In Part III, I discuss these lessons in more detail.

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[200] *See* Agarwal et al., *supra* note 114 (on the CARD Act); Bar-Gill & Bubb, *supra* note 112 (same).

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

[202] *See id.* at 454–55.

[203] Although I think it is fair to extend these findings beyond consumer finance, to other markets where unsophisticated consumers contract with sophisticated firms.

[204] See, for example, 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 over the transitions to tokenized, mobile, and biometric payments. They don't want interference with their efforts to shape these transitions in ways that entrench their own dominant market position—even if competition, security, and the consumer experience suffer as a result. Part of their strategy involves arguing that the 2010 swipe fee reform law has failed. 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.

[205] See, for example, 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 (criticizing overdraft reform); Todd Zywicki, *No, The Credit Card Act Is not a Fee Lunch*, VOLOKH CONSPIRACY (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=.a649de5ece17 (criticizing the CARD Act).

III. LESSONS OF THESE CASE STUDIES

The conceptual framework of Part II suggests that in the face of non-salient pricing and imperfect competition, regulators can cap prices and lower overall consumer costs. I next interpret the response (or lack thereof) of banks to recent consumer payments regulation through the lens of this salience theory.

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

In advocating for the CARD Act, policymakers pointed out that the length and complexity of credit card contracts obscured the true cost of credit from consumers. Chris Dodd, a former Senator and co-sponsor of the CARD Act, campaigned for this legislation by highlighting the plight of Samantha Moore, a paralegal from Connecticut who was three days late on a credit card payment—her first delinquency in 18 years.[206] She unexpectedly found her interest rate more than doubled (from 12 to 27 percent) and her credit limit slashed from $31,400 to $4,500.[207] A similar refrain emerges in the overdraft space—over 90% of consumers who overdraft say it was a mistake and they did not realize that they had overdrawn, and around 75% say that they would have preferred their over-limit transactions be denied rather than completed with an overdraft fee.[208] These examples demonstrate one type of price shrouding—banks set high fees and take advantage of the fact that consumers misperceive their likelihood of accruing these penalties. Because consumers do not anticipate delinquency or overdrawing their accounts, they do not factor these add-on fees into product choices. [209]

Consumer inattention can also lead to ignorance of non-salient prices. Professor Cass Sunstein argues this is an explanation for excessive credit card borrowing: "[Borrowers] might not read the fine print; they might believe that short-term 'teaser rates' are actually long-term . . . ."[210] This possibility is buoyed by the fact that credit card contract terms are difficult reads to many. The typical credit card agreement is written at an 8th to 9th grade reading level, which is higher than that of the average American.[211]

Many academics argue that this price structure for consumer financial 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) exploits consumer irrationality and creates supracompetitive rents in these markets. Economist Lawrence Ausubel raised this possibility when he suggested that card issuers earn

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[206] 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*

[207] *Id*.

[208] *Overdraft America: Confusion and Concerns about Bank Practices*, PEW (May 2012), http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2012/sciboverdraft20america1pdf.pdf

[209] As Barr et al., *supra* note YY, highlight, an issue with the pricing of credit card, and particularly penalty fees, is that card companies (in the pre-CARD Act era) were able to charge these fees with "relative impunity" because ex-ante, they believed they would not be susceptible to these fees.

[210] Cass R. Sunstein, *Boundedly Rational Borrowing*, 73 U. CHI. L. REV. 249, 251 (2006).

[211] Alyxandra Cash & Hui-Ju Tsai, *Readability of the Credit Card Agreements and Financial Charges*, 24 FIN. RES. LETTERS 145, 146 (2018). Perhaps unsurprisingly, the authors find that cards with easier-to-read agreements are associated with lower annual percentage rates, lower minimum monthly payments, and lower cash advance fees—suggestive of the notion that complexity of credit card contracts shrouds unattractive terms.

three-to-five times the normal rate of return.[212] If the existence of shrouded pricing allows for monopoly profits, then the case for regulatory intervention is clear. Reining in non-salient prices, for example through the CARD Act's restrictions on penalty fees or changes in the default rules for overdraft protection, will decrease overall consumer costs.

Importantly, though, the case for regulatory intervention does not rely on the existence of an imperfectly competitive market. Even if markets are perfectly competitive, if consumers ignore one aspect of a product's price—for example penalty fees for overdrawing or long-term interest rates—then perfectly competitive firms will compete on the price that is salient to consumers (for example, credit card or checking account fees). Imagine that it costs banks $90 to provide a checking account to customers, and $20 to provide overdraft protection, which all consumers will need. One possible equilibrium is for this to be the pricing structure: $90 in annual fees, and $20 in overdraft charges. But customers do not realize that they will overdraft, and so will prefer a bank that charges $80 in annual fees, and $30 in overdraft. The perfectly competitive equilibrium will end up with $0 (or even negative) annual fees, and $110+ overdraft fee. This helps to explain why, prior to the Durbin Amendment, most banks offered free checking accounts. The result is excessive purchase of consumer checking accounts since consumers underestimate cost.[213]

Furthermore, given that add-ons like overdraft are avoidable by careful customers (and those with high account balances), in reality only low-income and financially unsophisticated consumers bear penalty fees. These fees subsidize the existence of free checking for all customers, including the high-income and careful sophisticates. This is clearly the case with overdraft: in 2006, low income customers (median household income of $30,000) paid fees twice as large as their high-income counterparts.[215] Thus, even in a perfectly competitive market, regulation of shrouded prices will bring the use of these products closer to the socially optimal level and eliminate the cross-subsidy of one consumer group by another. An added benefit is that these price regulations reduce incentives for sophisticated customers to expend energy to avoid high-price add-ons, which may be personally beneficial, but is of little social value.

It is worth noting that I focus on the desirability of price regulations in markets with shrouded pricing and assume that the existence of such pricing schemes is obvious to those in the regulatory community and concerned observers generally. This is an unrealistic assumption. But there are many ways we can imagine testing for price shrouding in consumer markets: for example, using surveys to ascertain whether consumers correctly perceive their likelihood of needing expensive add-on services like overdraft protection.[216]

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[212] Lawrence Ausubel, *The Failure of Competition in the Credit Card Market*, 81 Am. Econ. Rev. 50 (1991).

[213] Professor Cass Sunstein discusses this exact phenomenon in the credit card market, suggesting "bounded rationality"—arising from myopia, procrastination, over-optimism, "miswanting" what is not welfare-enhancing, and neglect of non-salient costs—can explain excessive consumer borrowing. *See* Sunstein, *supra* note 210. Oren Bar-Gill also discusses the possibility of an inefficient use of credit cards due to the shrouded nature of pricing in this market. "To the extent that teaser rates are set below the marginal cost of funds, excessive borrowing will occur in the introductory period. In addition, the absence of annual and per-transaction fees implies that consumers will obtain too many credit cards and use these cards excessive for transacting purposes." Oren Bar-Gill, *Seduction by Plastic*, 98 NW. U. L. REV. 1373 (2004)

[215] Supra note 133.

[216] Gabaix & Laibson, supra note YY, 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 base goods are being sold at loss-leader prices; fifth, looking for learning effects to see if consumers, when made aware of add-on pricing, change their behavior.*Id.* at 528–29.

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

The existence of price shrouding makes clear that, regardless of market particulars, regulatory intervention is desirable. The inverse is not true: that is, the absence of non-salient pricing does not necessarily suggest that price regulation is unnecessary or undesirable; however, it does suggest that intervention will be more complicated, and losses are likely to be offset by profit-maximizing firms. The experience of the Durbin Amendment is indicative of the difficulties of regulating a salient price.

For many merchants, interchange fees are among the highest costs of operating, after labor.[217] 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 dating back to the 1980s, alleging collusive rate-setting by Visa and MasterCard. As such, interchange fees are far from shrouded from the merchant group that bears them.

One explanation for banks' decision to raise account fees to offset Durbin losses is that salient interchange fees cover the cost of providing checking accounts, in contrast to non-salient credit card contract terms that helped banks generate above-cost profits targeted by the CARD Act. There is potentially still a case to be made for regulatory intervention to curb interchange fees, as discussed below. But the likelihood of distortionary offset is larger because the nature of the market failure is less evident.

Unlike the CARD Act, which capped non-salient aspects of the consumer credit bundle,[218] Durbin instituted a price ceiling that was lower than banks' costs. How so? 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 chose to charge no account fee and simply used interchange revenue to cover their costs of the provision of checking accounts. Although interchange fees were likely higher than the cost of processing electronic payments,[219] they were not significantly higher than the total cost of banks' checking account servicing. Thus, banks moved to offset Durbin by increasing other fees to cover costs, and monthly maintenance fees more than doubled.[220] As a result, a subset of the population for whom the checking account fee is upsetting or prohibitively expensive were pushed into banking alternatives that are often more expensive, such as payday lending and check-cashing services.[221] Price controls that cap

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[217] *See* Paul Gackle, *The Fight Over Interchange Fees*, FRONTLINE (Nov. 24, 2009), https://www.pbs.org/wgbh/pages/frontline/creditcards/themes/interchange.html.

[218] 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* Ranzetta, *supra* note YY. In response to the CARD Act's restrictions, even those in the industry cheered many of the changes as "completely appropriate. Jamie Dimon, *Dear Shareholders* (Mar. 26, 2010), https://www.jpmorganchase.com/corporate/investor-relations/document/2009AR_Letter_to_shareholders.pdf; *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*.

[219] Economides, *supra* note YY.

[220] In Q2 2010 (pre-Durbin), the share of bank branches offering free checking accounts was nearly 60%. Post-Durbin, this share has dropped well below 20%. Sarin & Mukharlyamov, *supra* note YY.

[221] 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 YY.

prices at a level below marginal cost will result in a less than socially optimal quantity of that product being offered.[222]

The fact that, from the perspective of banks, interchange revenue and account servicing costs are bundled together is not obvious to one unfamiliar with the organization of financial institutions. 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 the consumer's relationships with the institution. This failure to bundle consumer relationships is consistent with the fact that the extent of consumer cross-selling remains limited: on average, customers have fewer than three products at their main bank.[223] Instead, in most cases, the bank optimizes by considering all of the revenue generated from a product offering and whether this revenue exceeds the cost of offering that product. This is why industry experts cautioned that regulations that pushed down overdraft and interchange fees, two revenue streams for consumer checking accounts, would decrease the availability of free checking.[224]

Another added complexity for regulators is that costs are bank-specific. For example, large banks can charge higher fees than small banks[225] and have lower funding costs.[226] 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 responded by announcing the end of the $40 cup of coffee and moving beyond the requirements of the new opt-in policies.[227] In contrast, community banks focused on pushing customers toward overdraft protection, achieving opt-in rates around three times the industry average.[228] Fee income from deposit accounts was

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[222] As another example, since the Recession, increases in regulatory burdens have raised the cost of small-business lending above its market price for the largest banks. In response, many have moved away from the small business market. *See* B. Chen, S. Hanson, and J. Stein, *The Decline of Big-Bank Lending to Small Business: Dynamic Impacts on Local Credit and Labor Markets.* Working Paper (2017). The resulting effect—fewer loans available for small businesses—may have contributed to a decline in new business formation, and, consequently, economic growth.

[223] Fewer than half of all customers (47%) sign up for credit cards at their primary bank, and only 11% take out a mortgage and 12% have a retirement account at this same institution. Rachel Louise Ensign, *What the Wells Fargo Cross-Selling Mess Means for Banks*, WALL ST. J. (Sept. 15, 2016), https://www.wsj.com/articles/what-the-wells-fargo-cross-selling-mess-means-for-banks-1473965166.

[224] 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).

[225] This is because they provide access to better services, like developed eBanking platforms and more extensive branch and ATM networks. Bord, *supra* note YY.

[226] 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 & George Pennacchi, *Harming Depositors and Helping Borrowers: The Disparate Impact of Bank Consolidation.* 22 REV. FIN. STUD. 1 (2009).

[227] 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.

[228] Willis, *supra* note YY.

such a significant source of revenue for the midsize bank TCF that the bank challenged the constitutionality of Durbin, and is being investigated by the CFPB for deceptive overdraft opt-in practices.[229] Differences in bank business models suggest the desirability of tailored regulatory approaches.

Also, although non-salient pricing suggests a role for regulatory intervention, the salience of a price (like merchant interchange fees) does not mean that no regulatory intervention is desirable. Many who study the credit and debit card market believe that the interchange fee structure—which charges merchants for consumers' use of these payment products, with zero (or, through rewards programs, even negative) per transaction cost—incentivizes excessive card usage.[230] Additionally, since this market—in many cases, through contract terms and statutes that make it difficult for merchants to steer consumers towards cheaper forms of payment[231]—enforces price coherence, the result is yet another cross-subsidy: all consumers pay higher retail prices to cover merchant costs for processing the high-cost rewards cards of the wealthiest.[232] Concerns about over-use of payment cards is a plausible explanation for Durbin—rather than lower overall consumer costs, the objective may have been to shift the cost of processing these payments to consumers and disincentivize card use. If this is the case, the fact that banks offset Durbin's losses through increases in consumer fees was an expected outcome, rather than an unexpected distortion. It is hard to reconcile this rationale with the statements of regulators who made clear that they anticipated (and believe that there was) a decrease in overall consumer costs and no bank offset to Durbin.[233] It is also not clear that this regulation was well-designed to lower card usage, given that banks responded by increasing overall consumer checking account fees rather than a per-transaction consumer fee.[234] And finally, it is especially unclear why Durbin targeted *debit card* rather than *credit card* fees (or rather than fees for both payment types) if reining in socially non-optimal excessive card usage was its hope.[235] Debit cards are widely regarded as a more desirable

[229] 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 YY.

[230] *See, e.g.*, Jean-Charles Rochet & Jean Tirole, *Platform Competitors in Two-Sided Markets*, 1 J. EURO. ECON. ASS'N 990 (2003); Wright (2004) [COULDN'T FIND SOURCE], Özlem Bedre-Defolie, *Pricing Payment Cards*, 5 AM. ECON. J. 206 (2013).

[231] *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).

[232] 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.

[233] 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, where 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.

[234] Though it is worth noting there that many large banks initially proposed a $5 monthly debit card usage fee (only charged in months when consumers use debit cards as a means of purchase) as a way to recover Durbin losses that may have decreased inefficient use of debit as a means of purchase. However, this fee was later attacked by the Occupy Movement and eventually repealed. Ylan Q. Mui, *Bank of America Backs Off Debit Card Fee After Consumer Backlash*, WASH. POST (Nov. 1, 2011), https://www.washingtonpost.com/business/economy/bank-of-american-drops-debit-card-fee/2011/11/01/gIQADvugcM_story.html.

[235] Interestingly, the first proposed regulatory intervention in this market was attached to the CARD Act and targeted at credit, and not debit, interchange. H.R. 6248. "Credit Card Interchange Fees Act of 2008" sponsored in the House by Rep. Peter Welch, H.R. 5546 "The Credit Card Fair Fee Act of 2008" sponsored by Rep. John Conyers, and in the Senate a companion bill S. 3086 sponsored by Durbin, and S. 3252 "Credit Card Accountability and Responsibility Disclosure Act of 2008" sponsored by Sen. Chris Dodd.

alternative to credit because they decouple transacting from the provision of financial services through consumer credit loans.[236] There is no concern with debit cards that overuse will increase consumer indebtedness. However, because of Durbin, banks stopped innovating their debit line of products and pushed consumers toward greater use of credit cards, increasing consumer credit indebtedness. Greater credit usage hurts merchants as well, as credit card interchange fees, especially on rewards cards, tend to be higher than debit interchange fees.

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

Given that imperfect competition may lead to consumer exploitation, thinking through particular market dynamics can help guide toward regulation to lower overall consumer costs and increase social welfare. The combination of shrouded prices and imperfectly competitive markets paves the way for price regulation that will not be fully passed through to consumers, and thus will 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.[237]

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. Since they do not have to raise price to get back to zero profits (as in the case of perfect competition), they will not fully offset losses. Academics who have studied the CARD Act develop theoretical models illustrate this point[238] but relatively little work has been done on understanding the origin of market power in imperfectly competitive consumer finance markets. Understanding why these markets deviate from the perfectly competitive ideal can help regulators craft regulation to best address the market failure at hand.

To be clear, the case studies in this Article refer to two distinct, albeit related, industries. First, credit card networks (like Visa and Mastercard) that intermediate between issuing banks that distribute their cards, consumers who use them, and merchants who accept them. These networks set interchange rates on their payment instruments. Second, 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.[239]

There are reasons to believe that the card network industry is closer to oligopoly than perfect competition. Market share is very 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 member banks from issuing credit or charge cards for other systems, like American Express and Discover. Before these agreements were deemed unlawful restraints on competition, they were

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[236] 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, and even absent legal intervention, the market has taken its first step in this direction with the advent of the debit card).

[237] Agarwal et al., *supra* note 17.

[238] See Bar-Gill & Bubb, *supra* note YY, and Agarwal et al., *supra* note 17, as the most prominent examples.

[239] 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 . . . " Ausubel, *supra* note YY.

immensely successful. Between 1996 (when American Express first offered its cards to bank issuers) and the *United States v. Visa U.S.A., Inc.*[240] decision in 2001, no banks concluded deals with American Express because of concerns about losing Visa and Mastercard as card providers.[241] 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 make use of their market power by crafting contract terms like "Honor All Cards" and prohibiting merchants from steering consumers toward cheaper payment types.[242]

Some commentators point to the banking industry as similarly monopolistic. Forty percent of U.S. deposits are concentrated in five banks: Bank of America, J.P.Morgan Chase, Wells Fargo, Citibank, and U.S. Bancorp. This big-bank share has more than quadrupled since 1990.[243] Calls to break up the banks following the Great Recession relate to a belief that these firms are oligopolies with a government backstop which 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."[245]

But, unlike credit card networks, in the banking industry there are neither barriers to entry, nor a history 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."[246,247]

The fact that the card issuing banks are less oligopolistic than card networks does not mean that 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 impose interest rates that earn them positive profits.

This stickiness has two sources: ex-ante and ex-post product differentiation. Ex-ante, bank products are different, not identical: Bank of America 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

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[240] 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).

[241] *Id*.

[242] 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 harms consumers. Adam Levitin, *Priceless: The Economic Costs of Credit Card Merchant Restraints*, 55 UCLA L. REV. 1321 (2008)

[243] *See* Bank Call Reports. This is largely a byproduct of deregulation of the banking industry that facilitated the growth of interstate branching. *See* Tara Rice & Philip E. Strahan, *Does Credit Competition Affect Small-Firm Finance?* 65 J. FIN. 861 (2010).

[245] Senator Elizabeth Warren, *Speech to Open Markets* (Dec. 6, 2018).

[246] *See* Bar-Gill, *supra* note YY at 16.

[247] Professor Laurence Ausubel makes a similar point, pointing to the number of competing firms in the bank credit card market (4,000 in 1991 when his paper was written; today above 5,000) as well as the concentration of the market ("The top ten firms control only about two-fifths of the market, and the next ten firms control only one-tenth of the market.") as evidence for the fact that market concentration does not explain imperfect competition in the bank issuer market. *See* Ausubel, *supra* note XX.

product is higher than the markup of the bank over marginal cost, she will bear the higher price rather than take her business to a cheaper competitor. However, without barriers to entry, large positive profits cannot be sustained due to ex-ante product differentiation, because there is an incentive for a National Bank competitor to enter and offer Bank of America's amenities, or a Local Bank to emerge 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.

Even without barriers to entry, though, gains from product differentiation will not necessarily be competed away, because of the existence of what academics refer to as "switching costs" that that discourage customers from taking their business to lower-price competitors.[248] One example is a search cost—that is, the physical cost of driving to a neighboring bank (or more common today, investigating online) to locate cheaper checking account alternatives. Another is a transaction cost, like the time cost associated with closing an account once a cheaper alternative is identified. Firms often try and increase these transaction costs to make their customer base less likely to leave.[249] 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, the idea of learning a whole new set of such practices is daunting. Additionally, the existence of customer loyalty programs, like extra rewards points for being a long-term client, or account closure fees to sever your banking relationship are contractual switching costs that entrench customers. And yet another kind of switching costs arises from brand loyalty: a customer who has banked with Cambridge Savings Bank her whole life may prefer it to East Cambridge Savings Bank next door with an identical product because the mortgage officer helped her parents refinance their house, and because the teller never forgets her birthday.[250] Even if products are ex-ante identical, ex-post switching costs make it unlikely that customers will regularly sever banking relationships. This is empirically true: estimates suggest that only 3% of account holders move banks annually, and nearly 60% have been with their provider for more than a decade.[251]

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 and the overdraft opt-in default—can decrease overall consumer costs. But market dynamics provide useful insights for regulators beyond the attractiveness of price regulations: while monopoly

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[248] 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 Laurence M. Ausubel, *The Failure of Competition in the Credit Card Market*, 81 AM. ECON. REV. 50 (1991); 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.

[249] *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 . In this article, Professor Levitin discusses how for many credit card users, "[w]alking away is costly" because "today's complex credit card contracts have a lock-in effect that traps consumers." He pointed out that Citi increased interest rates on credit cards in 2009 despite the Federal Reserve cutting interest rates to historic lows. "Citi raised rates and they wouldn't do that if they didn't know there was a serious lock-in effect.'" *Id.*

[250] Paul Klemperer, *Markets with Consumer Switching Costs*, 102 Q. J. ECON. 375 (1987), discusses how switching costs help firms generate monopoly power over their respective markets and cause vigorous competition for market share before consumers have attached themselves to a firm.

[251] 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 (discussing experts' view that banks should "better serve loyal customers who stay with their lenders for years" rather than encourage them to switch banks for better service).

markets may necessitate stricter antitrust enforcement, markets that are imperfectly competitive because of 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, producing different products for consumers who care about national ATM networks and those who do not),[252] differentiating functionally identical products through switching costs has no similar benefits.

Thus, practical measures—like forcing banks to simplify account closure and forcing more public disclosure of checking account fees and how these compare to account fees of competitors in large font atop new account contracts and on company websites (similar to calorie count disclosures at large restaurant chains)—may help move banking closer to perfect competition. 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 in response to Durbin. If customers are fluid, these banks would have to weigh benefits from higher prices against costs from lower demand. If instead customers are made sticky, then 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. An example is illustrative. Imagine that your friend Penny is incredibly 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, to close her current account and open another one—to save that penny. Although this is an extreme example, variants are not far off from reality—many among us are "point chasing fanatics," maintaining several credit cards, and expending both mental energy and time to determine which card to use for groceries, which offers the most cash-back, and when to close accounts before teaser offers expire. Some even take so-called "mileage runs," or air travel for the sole purpose of earning frequent flier miles.[253] Finding the best deal is likely utility-enhancing for individuals; however, it is hard to see that this intensity of search is socially desirable.[254] Regulations that decrease search and switching costs will increase efficiency by saving society these costs.[255]

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[252] Though 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" and ask, for example "when is the potential benefit of choosing N + 1 rather than N outweighed by the increase in information overload?" Simona Botti & Sheena S. Iyengar, *The Dark Side of Choice: When Choice Impairs Social Welfare*, 25 J. PUB. POL'Y & MARKETING 24 (2006).

[253] There are even conferences for the point obsessed: "I used to think the hobby was ridiculous and crazy, and I attended the Chicago Seminar led by the Frugal Travel Guy in 2010 with zero expectations . . . I was blown away by the community. I couldn't believe there was a whole culture of people who were just as nerdy as I was about collecting credit card points," recalled Angelina Acullo, a then 28-year-old stay-at-home mother who took 90 international flights on points in 2014. 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.

[254] *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.").

[255] Economist Christopher Pissarides focused on the inefficiency of search in his study of the labor market, demonstrating that both employers and potential employees ignore a positive externality: "When they establish a job

D. Lesson 3: Salience-Increasing Regulations and Behaviorial Approaches Will Likely Curb Abusive Practices

Since at least some consumers fail to incorporate non-salient prices into their product choice, price regulations are socially desirable. In the presence of imperfect competition, price caps on non-salient prices can decrease overall consumer costs. But this is not the only regulatory intervention imaginable—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 (J.P.Morgan Chase, Bank of America, Wells Fargo, and Suntrust) responded to the loss in interchange revenue by proposing a $5 monthly fee for consumers 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 cards[256] and an online petition against the fee attracted more than 200,000 signatories.[257] Lawmakers scorned the proposal, with then-Vice President Joe Biden labelling it as "incredibly tone deaf"[258] and Senator Durbin urging consumers to "vote with their feet" and close accounts at these institutions.[259] Normally inattentive depositors heeded the call: Bank of America CEO Brian Moynihan stated the number of people closing accounts in the immediate aftermath of the proposal jumped by more than 20% relative to the same period the prior year.[260] The proposed $5 fee became so unpopular that all of the institutions chose to reverse it. Bank of America's COO said the bank had "listened to our customers very closely" and recognized their concerns: "As a result, we are not currently charging the fee and will not be moving forward with any additional plans to do so."[261]

Although banks still increased fees in response to Durbin (albeit in a less-salient way), the lesson of the failed $5 debit charge is a valuable one. Raising the salience of a price can encourage consumers to make more intelligent product choices, while still preserving a role for consumer choice.

This 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 observers[262] point to higher opt-in rates for frequent overdrafters[263] as evidence that this behavioral nudge is not sufficient. These authors contend that frequent

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match they remove from the market a job searcher, so they save society his search costs." Christopher A. Pissarides, *Search Intensity, Job Advertising, and Efficiency*, 2 J. LABOR ECON. 128 (1984).

[256] *See* Bernard, *supra* note YY.

[257] 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/.

[258] Amanda Terkel, *Joe Biden on Bank of America: At a Minimum, They Are Incredibly Tone Deaf*, HUFFINGTON POST (Oct. 6, 2011), https://www.huffingtonpost.com/2011/10/06/joe-biden-bank-america-tone-deaf_n_998055.html.

[259] 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.

[260] 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/.

[261] Bernard, *supra* note YY.

[262] *See, e.g.*, Bubb & Pildes, *supra* note YY; Willis, *supra* note YY.

[263] 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 with only 11% of accounts with no NSF incident. *CFPB Study of Overdraft Programs*, *supra* note YY.

overdrafters are targeted for opt-in because they are unsophisticated and easy targets for revenue generation.[264] Professors Ryan Bubb and Richard Pildes argue that the experience of bank overdraft is a case for which 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.[265]

An alternative proposed by these critics of the new overdraft regime 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.[266] Rather than abandon a behavioral nudge in favor of a prohibitive mandate, in the case of overdraft there is room for a "nudge-plus" that preserves consumer choice while increasing the salience of overdraft's costs to unsophisticated consumers.

How can salience help behavioral economics achieve its ends? Making consumers aware of overdraft fees before they are incurred decreases overdraft incidents: for example, after being asked overdraft-related questions in a survey, customers' probability of an overdraft incident fell significantly.[267] It is possible to imagine a nudge that is stronger than monthly survey questions. Forcing all banks to offer a version of the new Bank of America ATM overdraft protection—such that when a customer attempts an ATM withdrawal, if she is about to overdraft, the bank informs her that she will be charged a $35 fee and provides her the opportunity to cancel the withdrawal—will make these fees salient immediately before an overdraft incident and allow consumers to weigh the benefits of completing the transaction against the high costs.

One could imagine an identical regime 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 an overdraft 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 would rather avoid talking to her bank, it is possible she will elect to complete the transaction. But making the fee salient will decrease overdraft incidence for the nearly 70% of overdrafters who would prefer their transaction be declined to incurring high fees.[268]

It is important to distinguish this call for a "salience shock" in the context of overdraft from mandatory disclosures, which have been intensely criticized in the legal literature. Professors Omri Ben-Shahar and Carl Schneider provide a scathing indictment of mandatory disclosures, suggesting that consumers suffer from two main problems that render disclosures ineffective: (1) an overload effect (because disclosures are too complex to be properly understood) and (2) an accumulation problem (because it is hard remember a disclosure when it competes in your memory with information about all other disclosures—"memory is a sieve.").[270] Professors Michael Barr, Sendhil Mullainathan, and Eldar Shafir are also skeptical of the usefulness of disclosures, because

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[264] *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.

[265] Bubb & Pildes, *supra* note YY

[266] Sunstein, *supra* note XX (highlighting this possibility in response to Bubb & Pildes, *supra* note YY).

[267] Professors Stango and Zinman find that facing multiple overdraft-related survey questions builds up a "stock" of attention that reduces overdrafts for up to two years. 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).

[268] *Overdraft America Pew Study*, *supra* note YY.

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

they note that part of how financial institutions generate rents from penalty fees is by exploiting consumers' tendency to underestimate the likelihood that they will make a late payment or overdraft.[271] Therefore, consumers may opt in to overdraft protection (even if the high fees are very saliently disclosed) because, although they believe it is unlikely they will ever make use of the service, they want protection in case of emergency.

A behavioral "salience shock" like alerting consumers to the cost of an overdraft fee *immediately* before an overdraft incident has the potential to be successful because it avoids the overload and accumulation problems. It is an incredibly simple disclosure (closer in spirit to sanitation grades outside Los Angeles restaurants that Ben-Shahar and Schneider approve of than complicated credit card contracts) and it does not need to be recalled: the information is presented to a consumer the moment prior to her making the relevant decision. 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. This is why a salience nudge is likely to be more effective in reducing costly overdrafts than recent proposed changes to overdraft opt-in disclosure forms.[272]

In fact, in proposing this salience shock, I follow the Ben-Shahar and Schneider suggestion that "brief, simple, and easy" disclosures work best when they are part of a "larger program of social change. Sometimes, the purpose of mandates is not to give people information for making the choice that they prefer but rather to induce them to make the choice the lawmaker thinks preferable."[274] That is exactly what the salience shock is meant to do in this context—strongly nudge consumers away from the $40 latte but preserve their choice to reject the nudge.

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 (for example, $270 over three months) compares with the cost of borrowing a similar sum on a credit card (for example, $15 over three months), the take-up of payday loans falls significantly.[275] The same is

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[271] See Michael S. Barr, et al., *The Case for Behavoirally Informed Regulation*, *in* NEW PERSPECTIVES ON REGULATION (D. Moss & J. Cisternino eds. 2009)

[272] *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). 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 YY. While a fair critique of disclosure generally, this is not an indictment of the proposed salience shock. That is because we believe that consumers, when made aware of the costs of overdrafting, will overwhelmingly choose not to complete a transaction likely to incur a large fee. This is consistent with survey evidence that suggests that nearly all consumers do not realize that they have overdrafted, and over 70% would have preferred these transactions declined. 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.

[274] Ben-Shahar & Schneider, *supra* note XX, at 744

[275] *See* Marianne Bertrand & Adair Morse, *Information Disclosure, Cognitive Biases, and Payday Borrowing*, 66 J. FIN. 1865 (2011). The authors note that even though the payday borrowing transaction

> [A]ppears quite transparent (especially when compared to the opacity of other consumer financial products), our results suggest that information disclosure that is inspired by, and tries to respond to, the specific cognitive biases and limitations that surround the payday borrowing decision might have a non-trivial effect on the individuals' decision of whether or not to take a payday loan. *Id.*

true in the credit card market: the CARD Act's nudge toward early payment of credit card debt increases early repayment significantly.[276]

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 in the next day or incur a penalty would be more effective in discouraging delinquency than a disclosure of high penalty fees in these loan contracts. Given consumers' limited attention, regulatory interventions that make prices salient to consumers close-in-time to decisions that will precipitate penalty fees and rates hikes will limit costly consumer mistakes on these dimensions.

E. Lesson 4: 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 result in lower prices, "allow[ing] merchants to offer discounts to their customers and restor[ing] common sense and fairness to this broken system."[277]

And yet, 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 the Durbin's retail price impacts have found little evidence of a pass-through of interchange savings. In the aftermath of Durbin's passage, researchers at the Richmond Federal Reserve Board surveyed merchants and found that the vast majority did not change their prices in response to the fee cap. In fact, only around 1% lowered prices, while a much more sizeable portion (nearly 22%) increased their prices in response to their interchange costs rising.[278,279]

Durbin is not the only case where merchants appear slow to pass through cost savings to their customers. There is a long economics literature that studies the retail gas industry and documents that while increases in wholesale prices are quickly passed through in the form of higher prices, it takes much longer for decrease in wholesale prices to result in *lower* prices. This is often referred to as the "rockets and feathers effect."[280] Economists Severin Borenstein, Colin Cameron, and Richard Gilbert find that a 1-cent increase in crude oil prices is almost fully incorporated into retail prices within two weeks, whereas a 1-cent decrease results in a barely .2-cent decrease over this

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[276] One nudge requires monthly credit card statements, which makes salient both the cost of repaying the balance when making minimum payments and the cost of paying it off within the next 36 months. Specifically, the nudge increased the number of account holders that repay within 36 months by 0.4 percentage points on a base of 5.3%. *See* Agarwal et al., *supra* note YY.

[277] Dick Durbin, Press Release, *Durbin Statement on His Debit Swipe Fee Amendment*, DICK DURBIN UNITED STATES CENTER ILLINOIS (May 13, 2010), https://www.durbin.senate.gov/newsroom/press-releases/durbin-statement-on-his-debit-card-swipe-fee-amendment.

[278] *See, e.g.*,Wang et al., *supra* note YY (discussing how merchants who saved did not change prices meaningfully and how small-ticket merchants whose interchange fees rose following Durbin's enactment increased prices).

[279] *See, also* Sarin and Mukharlyamov (2017) *supra* note YY (demonstrating that Durbin saved gas stations on the order of $.006 cents per gallon and ruling out a price impact of even 25% that size).

[280] *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; 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), https://www.stlouisfed.org/~/media/Files/PDFs/publications/pub_assets/pdf/re/2014/d/oil_prices.pdf.

same horizon.[281] While this is an oft-revisited question in the economics literature,[282] a read 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 of 77 consumer and 165 producer goods and found evidence that output prices respond faster to input increases than decreases in 2/3 of the markets examined.[283] 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 5-8 months.[284] Especially relevant to this study of consumer finance, banks recently responded to increases in the federal funds rate by raising interest rates for borrowers, but not by increasing interest rates for depositors.[286] 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 they borrow from.

There are two common explanations in the economics literature to explain asymmetric price adjustment in the retail gasoline market that seem plausibly related to merchants' responses to the Durbin Amendment.[287] The first relies on gas stations being collusive 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 local market power. This is because they are isolated from competitors, or are branded and so have loyal customers.[288]

The second explanation relates to the impact of wholesale cost shocks on incentives for consumer search. When crude oil prices are volatile, the average consumer believes that changes in retail gas prices are attributable to this volatility, rather than changes in a station's price relative

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

[282]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..

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

[284] *Id.*

[286] *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/. George Deltas, *Retail Gasoline Price Dynamics and Local Market Power*, 56 J. Indus. Econ. 613 (2008) compares asymmetric pricing in the retail gasoline industry to the banking industry, suggesting that it relates to literature that shows that deposits and loans exhibit price stickiness, asymmetric responses to the cost of funds, and that these asymmetries in banking, like gasoline, are related to firms' market power.

[287] Although the most common, these are not the only explanations for asymmetric price pass through. For example, there are inventories-based explanations, which suggests cost of operations rises sharply when inventories are reduced below normal operating levels, so firms aggressively increase selling prices when they experience a decrease in upstream supply. *See* Borenstein et al., *supra* note XX.

[288] *See, e.g.*, Verlinda, supra note XX. Specifically, Professor Verlinda finds that a wholesale cost increase of 100 cents raises retail prices by an estimated 110 cents, but when costs fall by 100 cents, retail prices fall only by 83 cents. This 27-cent asymmetry is reduced by 7 cents for gas stations with a rival in immediate proximity, and branded stations (for example, Chevron, Shell, and Texaco) have a 14 cent greater asymmetry than unbranded stations. *Id.*

to its competitors. This means that she believes there is little to be gained by searching for a cheaper station, thus lowering her incentive to search and lowering the merchant's incentive to price at cost.[289] The average consumer's perception may be the natural product of the industry's asymmetric response to change in costs — when wholesale prices rise, gas stations are forced to raise prices higher than consumer expectations, motivating search. But when wholesale prices fall, firms lower their prices just enough to forestall search. Since no one is searching, competitors are unable to attract these customers by lowering their price.[290] Said another way, changes in wholesale gas prices—or extending to our case study of Durbin, merchant interchange costs—are not *salient* to consumers. As such, there is no greater incentive to search—to shop around for lower gas or grocery prices—when an interchange cost shock, in the form of Durbin, is realized. Thus, competitors cannot attract non-searching consumers, and entrenched firms are not pressured to adjust their prices downward.[291]

"Rockets and feathers" can help to understand why Durbin losses (a positive cost shock for banks) are passed through immediately to consumers; and yet Durbin gains (a negative cost shock for merchants) are not. In this Article, I do not take a stand on whether low search intensity, rather than oligopoly market power, is responsible for asymmetric retail price adjustment, although this is certainly an important question for future research. It is worth noting though that if too little consumer search is responsible for the failure of merchants to pass through Durbin savings, then policymakers can help encourage greater pass-through by making these savings more salient to retail customers.[292]

There are a few 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, rather than more instantaneous adjustment for positive cost shocks. In gas, this is perhaps because the collusive gasoline price cannot be sustained long-term, or because once prices become less volatile, consumers search for low prices in earnest. And so, that economists who study retail price adjustment to Durbin[293] fail to observe lower prices may well be related to the fact that these studies do not consider long-term price adjustment. Rather, they focus on the initial reaction of merchants to this cost shock. As many advocates of Durbin—including Senator Durbin himself—point out, the retail industry has relatively thin margins, making it difficult to

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[289] 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 XX, who apply it to the retail gas industry.

[290] Lewis, *supra* note XX, models this theoretically to explain the asymmetry of price adjustment in response to wholesale cost shocks: consumers search less when prices are falling. *Id*.

[291] For fullness I should note that although costly search models can explain price dispersion (rather than full pass through and zero firm profits), understanding the asymmetric nature of cost shock pass-through is not as straightforward. Models of asymmetric pass-through rely on the fact that (1) consumers do not observe the firms' true costs and (2) they search less intensely when they expect costs to be high. In the "rockets and feathers" gas literature, this leads to little incentive for gas stations to lower prices when wholesale costs decline. This is the main intuition of Mariano Tappata, *Rockets and Feathers: Understanding Asymmetric Pricing*, 40 RAND J. ECON. 681 (2009). There are other models of asymmetric pricing that get a rockets and feathers result from asymmetric learning about costs risings versus falling. *See, e.g.*, Huanxing Yang & Lixin Ye, *Search with Learning: Understanding Asymmetric Price Adjustments*, 39 RAND J. ECON. 547 (2008).

[292] 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 (over $1B). *See Congress Gave Gas Retailers $1 Billion Annual Subsidy*, ELECTRONIC PAYMENTS COALITION, http://www.electronicpaymentscoalition.org/gasprices/#gaschart (last visited May 3, 2018).

[293] *See, e.g.*, Sarin & Mukharlyamov, *supra* note YY; Wang et al., *supra* note XX

understand why Durbin savings would not be fully passed through.[294] It would be useful to understand (though admittedly difficult to determine empirically) whether retail margins have increased as a result of Durbin. Whether or not these savings are a long-run gain for retailers, however, the 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 firms' interchange fees and trusting that these savings will pass through to consumers. More direct price regulation—like caps on non-salient prices in the CARD Act or changes to overdraft default rules—that target costs that consumers bear themselves are most likely to increase welfare and decrease costs.

IV. CAVEATS

It is obvious, though perhaps important to note, that the salience theory presented here can neither explain all aspects of bank responses to the consumer payments regulations discussed nor elucidate for regulators the optimal intervention (or lack thereof) in all consumer finance settings.

For example, at least part of the success of the overdraft default change is the fact that the largest financial institutions reacted to the change by moving even beyond the requirements of the opt-in requirement. Although their responses have been varied, overall the result has been that even consumers opted-in to overdraft protection at large financial institutions are less likely to incur fees for small overdraft incidents, are better alerted to the possibility of incurring these fees,[367] and are often given the opportunity to "rewind" the overdraft incident and avoid the fee if they replenish their accounts sufficiently quickly.[368] It is possible to try and fit this large versus small bank heterogeneity into the context of the "salience theory" if there is a reason to believe that these overdraft incidents are more salient to large bank customers than 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 associated with improper overdraft practices.[369] 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 the heterogeneity in bank business models: small and midsize banks depend on fee income more than behemoth national banks whose market share is rising substantially.

Also, I have certainly 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 revenue generated from delinquencies from firms' bottom lines, so that the incentive for shrouding penalty fees or goading consumers into costly mistakes would be

[294] *See* Durbin, *supra* note YY ("[T]he retail industry is highly competitive, with about 2 percent net profit margins…if merchants were hoarding savings from swipe fee reform, wouldn't they have soaring profits?").
[367] *Id.* Bank of America has stopped offering overdraft protection on debit point-of-sale transactions and alerts customers at the ATM every time they are about to overdraw their accounts.
[368] Barbra, *supra* note 169 (discussing Wells Fargo's rewind option).
[369] *See infra* note 173.

removed.[370] This suggestion tackles salience in a manner similar to price regulation, by decreasing the ability of banks to profit from hidden fees.

Additionally, this Article focused extensively on understanding the differential response to Durbin versus the CARD Act but has glossed over an important distinction between these two consumer payment regulations. The CARD Act relates to a direct transaction between a sophisticated bank and a naïve consumer, whereas Durbin regulated a firm-to-firm transaction between retailers and merchants (with consumers more indirectly involved as the purchasers of retail goods and the holders of bank checking accounts).[371] There are reasons to believe that 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 and lower costly contracting costs—becomes less plausible in consumer markets, when one party (the firm) can unilaterally opt-out, consumers lack the necessary information to make informed opt-out decisions, and opt-out costs can vary drastically and in some cases be prohibitively large (like having to search for a new product with new contract terms).[372] It is likely that, given the asymmetry of information in the consumer/firm relationship, in this setting, the role for price regulation is most clear. This is another way to distinguish the success of the CARD Act relative to Durbin's interchange price cap. When one party is less informed, or less powerful, that party is likely to be exploited (that is, charged high non-salient fees) in a way that can be reined in by regulators.

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 (for example, gas station customers who respond to an increase in gas prices by substituting away from premium gas more intensely than is justified[373]).[375] Given the case studies above, this Article is concerned principally with agents who neglect certain aspects of a price, primarily for behavioral reasons like inattention (for example, failing to read every subsection of a 38-page credit card contract) or over-optimism (for example, failing to believe they will be incur late fees).[376] This Article is not concerned with agents who, when faced with the true price, will

[370] Michael S. Barr et al., *The case for behaviorally informed regulation*. NEW PERSPECTIVES ON REGULATION 25 (2009): 41-42.

[371] This is a simplification, of course. Small retail merchants negotiating interchange rates with Visa and Mastercard are more similar to consumers than to Walmart and Target.

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

[373] Professors Justine Hastings and Jesse Shapiro find striking evidence for reactions to gas price changes that are impossible to reconcile with rational consumer behavior: "[T]he cross-sectional relationship between income and octane choice implies that a loss of $1000 in household income increases the propensity to buy regular gasoline by less than one tenth of a percentage point. Yet we find that a $1 increase in the price of gasoline-equivalent to a loss of income of about $1200 for a typical household-increases the propensity to buy regular gasoline by 1.4 percentage points." Justine S. Hastings & Jesse M. Shapiro, *Fungibility and Consumer Choice: Evidence from Commodity Price Shocks*, 128 Q. J. ECON. 1449, 1451 (2013).

[375] Professor Bordalo and his team 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 not aware 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)

[376] I focus on behavioral errors that can lead to neglect of non-salient prices, but of course, limited salience could arise in non-behavioral models of consumer behavior (for example, there are high search costs to learning alternatives for non-salient add-on costs). *See, e.g.*, Agarwal et al., *supra* note 114.

still make irrational decisions. Such a case would prove more complicated for a regulator, and one where an intervention like the proposed behavioral "salience shock" is unlikely to be effective.[377]

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 an integral aspect of regulatory design—namely, what is the appropriate magnitude of the price cap? Though the answer to this question is beyond the scope of this paper, the price cap arguably hinges on the particular consumer market at issue: the larger the consumer misperception, the more likely it is that price deviates from cost, and thus the more aggressive the regulator's price cap should be.

V. CONCLUSION

Consumer financial protection is an area of critical importance to the regulatory community. This Article focuses on three regulatory interventions that sought to lower consumer costs: a cap on debit interchange fees, a restriction on credit card contract terms, including interchange hikes and penalty fee amounts, and a change in the overdraft default rule that prohibits banks from charging penalty fees unless consumers have actively opted in to overdraft protection. In each case, the consumer pays for a base product—a checking account or a credit card—which generates revenue for the bank from different sources. Checking account revenue comes from monthly fees; penalty fees—like overdraft fees and ATM fees, among many others; and interchange fees collected from merchants for every transaction. Credit card revenue comes from annual account fees, interest rate payments on borrowed funds, penalty fees like delinquency fees, and per transaction interchange fees. These are complicated multi-price products, and Durbin, the CARD Act, and changes to the overdraft default rules each regulated an aspect of these bundles. I argue that, given the success of the CARD Act and the new overdraft regime, the existence of non-salient consumer prices hints at a behavioral market failure that regulators can correct. In the consumer-bank relationship, freedom of contract alone cannot be trusted to generate a socially optimal equilibrium because consumers misperceive the true cost of consumer financial products, either because they are inattentive to confusing and lengthy contract terms or because they are overly optimistic and underestimate their likelihood of bearing penalty fees. Depending on the competitiveness of the market, regulatory intervention that caps non-salient fees or makes these fees salient can curtail excessive product use, decrease subsidies by non-sophisticated 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—as was the case with the Durbin Amendment—are necessarily inadvisable, but these are more likely to be distortionary.

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[377] This irrationality even with full understanding of costs seems unlikely to be driving consumer overdrafts, but ultimately, this is an empirical question. The failure of a salience shock to reduce overdraft would argue in favor of the Bubb and Pildes point that disclosure, even close-in-time to a decision that will result in high penalty fees, will not correct irrational behavior of agents with self-control problems. *See* Bubb & Pildes, *supra* note 144. One recent piece of evidence suggests hope for the salience shock: as a result of a text alert when account balances fall close to zero, bank customers' overdraft fees fall by 24%. The success of this intervention in the UK has led to regulations forcing all UK banks to provide these alerts. Rob Goodman. *Banks Must Now Text You if You're About to Slip Into Your Overdraft* (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 April 30, 2018).