ICLE International Center for Law & Economics

Credit Cards and the Reverse Robin Hood Fallacy: Do Credit Card Rewards Really Steal from the Poor and Give to the Rich?

Todd Zywicki
Ben Sperry
Julian Morris

ICLE Issue Brief 2021-11-04

ICLE | 1104 NW 15th Avenue Suite 300 | Portland, OR 97209 | 503.770.0076
icle@laweconcenter.org | @laweconcenter | www.laweconcenter.org

Credit Cards and the Reverse Robin Hood Fallacy: Do Credit Card Rewards Really Steal from the Poor and Give to the Rich?

Todd Zywicki, Ben Sperry, & Julian Morris*

Introduction

News consumers have been treated to a litany of stories in recent years highlighting the purportedly regressive nature of credit-card rewards programs. The coverage centers on a hypothesis about rewards credit cards: that because merchants pay higher interchange fees for credit cards with rewards and then pass those costs on to consumers, it must be the case that users of cash, debit, and non-rewards credit cards effectively subsidize users of rewards credit cards. This hypothesis presumes that users of rewards credit cards tend to be more affluent than those who pay with cash, debit, or non-rewards cards. It is therefore asserted that this arrangement constitutes a transfer of wealth from poorer consumers to more affluent consumers. As newspaper and website headlines declare:

- "The ugly truth behind your fancy rewards credit card: America's poor foot much of the bill for credit card points, miles, and cash back"[1];
- "How credit card companies reward the rich and punish the rest of us"[2];
- "America's poor subsidize wealthier consumers in a vicious income inequality cycle: the less money you have, the more you spend to just be able to use money";[3]
- "How Much Credit Card Rewards Cost the Poor";[4]

* Todd Zywicki is the George Mason University Foundation Professor of Law at the Antonin Scalia Law School, senior fellow at the Cato Institute, and an academic affiliate of the International Center for Law & Economics (ICLE). Ben Sperry is ICLE's associate director of legal research. Julian Morris is a senior scholar with ICLE.

[1] Emily Stewart, *The ugly truth behind your fancy rewards credit card: America's poor foot the bill for credit card points, miles, and cash back*, VOX (Jun. 3, 2021), https://www.vox.com/the-goods/22454885/who-pays-for-credit-card-rewards.

[2] Aaron Klein, *How credit card companies reward the rich and punish the rest of us*, THE BROOKINGS INST. (Dec. 23, 2019), https://www.brookings.edu/opinions/how-credit-card-companies-reward-the-rich-and-punish-the-rest-of-us/.

[3] Aaron Klein, *America's poor subsidize wealthier consumers in a vicious income inequality cycle: The less money you have, the more you spend to just be able to use money.*, THINK: NBC NEWS (Feb. 6, 2018), https://www.nbcnews.com/think/opinion/america-s-poor-subsidize-wealthier-consumers-vicious-income-inequality-cycle-ncna845091.

[4] Jennifer Saranow Schultz, *How Much Credit Card Rewards Cost the Poor*, THE NEW YORK TIMES (Jul. 26, 2010), https://bucks.blogs.nytimes.com/2010/07/26/how-much-credit-card-rewards-cost-the-poor/.

- "Payment Choices Reverse Robin Hood Effect";[5]
- "The Credit-Card Fees Merchants Hate, Banks Love, and Consumers Pay: Growing and largely hidden interchange economy creates 'a giant reverse Robin Hood'".[6]

It isn't just the consumer press that has explored this "reverse Robin Hood" hypothesis. Two working papers from authors at the Federal Reserve Bank of Boston, from 2010[7] and 2020,[8] likewise argue that credit-card-rewards programs largely benefit higher-income consumers at the expense of lower-income consumers. In response, there have been calls for regulatory intervention in order to redress the harms felt by lower-income consumers due to these supposedly unfair practices.[9]

It is a fundamental feature of retail consumer markets that not every consumer gains the same amount from every amenity or service offered by a merchant. For example, "free parking" at a grocery store or shopping mall benefits wealthier people who are more likely to own cars than lower-income people who do not. Higher-income people are more likely to earn free trips using frequent-flyer miles than lower-income people who travel less. Simply because higher-income people may benefit more than lower-income people from a retailer's loyalty program or some other benefit does not automatically suggest the presence of a market failure or a need for regulatory intervention.

This paper considers the evidence for and against the reverse Robin Hood hypothesis. Much like the original Robin Hood narrative, it is a moralistic story in which one income group benefits at the expense of another. In the original story, the outlaw Robin Hood and his Merry Men rob from the rich and give to the poor. In the "reverse Robin Hood" story, credit-card companies rob from the poor users of cash and give to the rich users of credit cards. But there are real problems with this story. Indeed, the reverse Robin Hood may be more mythical than the original Robin Hood.

Part I describes a strong form of the reverse Robin Hood hypothesis in more detail, focusing on studies published by the Brookings Institution and the Boston Federal Reserve Bank. Despite the popularity of this hypothesis, and the seeming endorsement from scholars, there are many problems with the reverse Robin Hood narrative that should be understood before it used as the basis for

---

[5] *Payment Choices Reveres Robin Hood Effect*, CONSUMERS COUNCIL OF CANADA NEWS (Feb. 24, 2021), https://www.consumerscouncil.com/payment-choices-reverse-robin-hood-effect/.

[6] AnnaMaria Andriotis & Harriet Torry, *The Credit-Car Fees Merchants Hate, Banks Love and Consumers Pay: Growing and largely hidden interchange economy creates 'a giant reverse Robin Hood'*, WALL ST. J. (Jun. 21, 2020), https://www.wsj.com/articles/the-credit-card-fees-merchants-hate-banks-love-and-consumers-pay-11592731800.

[7] Scott Schuh, Oz Shy, & Joanna Stavins, *Who Gains and Who Loses from Credit Card Payments? Theory and Calibrations* (Fed. Res. Bank of Boston Pub. Pol'y Discussion Paper Ser. No 10-03, Aug. 31, 2010) [hereinafter "2010 Boston Fed Study"].

[8] Marie-Helene Felt, Fumiko Hayashi, Joanna Stavins, & Angelika Welte, *Distributional Effects of Payment Card Pricing and Merchant Cost Pass-Through in the United States and Canada* (Fed. Res. Bank of Boston Working Papers No. 20-13, Dec. 2020) [hereinafter "2020 Boston Fed Study"].

[9] *See, e.g.*, Natasha Sarin, *Making Consumer Finance Work*, 119 COLUM. L. REV. 1519, 1529 (2019) ("The existence of these cross-subsidies justifies regulatory intervention. The CFPB has broad power to prohibit abusive or unfair bank practices that the consumer cannot reasonably avoid.49 The payments market is a prime candidate for CFPB intervention, because one group of consumers (low income) pays higher prices and cannot reasonably avoid these higher prices without access to rewards cards. Curbing banks' loyalty rewards programs will decrease these cross-subsidies.").

public policy. Part I breaks down the hypothesis into a series of conjectures which are considered later in the paper.

Part II subjects this strong form of the reverse Robin Hood hypothesis to economic scrutiny. First, the economics of multisided markets is introduced to provide a basic framework to understand the operation of credit-card networks and the roles played by interchange fees and rewards programs. This framework helps explain that all participants in the credit-card ecosystem benefit from its establishment of complex relationships. Sometimes, this means participants on one side of the platform, such as merchants, pay charges that are used to provide benefits to another side of the platform, such as consumers. But doing so often ultimately benefits participants on the side that pays—for example, by increasing their sales sufficiently that net income increases despite the additional cost. Mandating changes to one part of the system—for example, by capping credit-card interchange fees—could affect other platform participants in unexpected ways, including by reducing benefits to consumers, who make fewer purchases, which results in lower net income for merchants.

Second, the logic of the reverse Robin Hood hypothesis is analyzed in light of those economic principles, as well as the system's empirical realities. Implicit to the conjectures that make up the reverse Robin Hood hypothesis are a number of propositions that must be true for the hypothesis to be upheld. Two main observations falsify the hypothesis. First, merchants are not able to pass on all costs to consumers. Second, the availability of rewards cards is more tied to credit ratings than to income, which means that even those with lower incomes do benefit from the use of rewards cards.

Part III considers a weaker form of the reverse Robin Hood hypothesis from a 2020 Boston Fed Study. This study attempts to establish regressivity by positing a larger "net pecuniary cost" as a percentage of transaction value for lower-income consumers compared to higher-income consumers. But to do so, it must assume a pass-through rate of merchant costs that is inconsistent with known estimates from the empirical literature. While it may be the case that wealthier rewards-card users benefit even more from rewards than those who use them less, this hardly means that there is a harm that demands regulation, any more than it would make sense to regulate access to parking lots because car owners may tend to be wealthier on average than those who commute by public transportation.

Finally, the brief considers the likely distributional effects of proposed legislative or regulatory action to target credit-card interchange fees. Specifically, Part IV considers the evidence related to merchant pass-through of interchange-fee caps in the form of lower prices for consumers, as well as the likely ways banks and other card issuers would adapt to any such fee caps. If the experience with caps on debit card fees under the Durbin Amendment is any indication, the benefits of interchange-fee caps will be much smaller than the costs to consumers, especially lower-income consumers.

I. Defining the Reverse Robin Hood Hypothesis

The Robin Hood of English folklore stole from the rich to give to the poor.[10] But in the "reverse Robin Hood" hypothesis we discuss here, credit-card issuers steal from the poor to give to the rich. Specifically, the hypothesis is that credit-card issuers use interchange fees—paid by merchants and passed onto consumers, including poorer consumers who pay with cash—to fund rewards that benefit wealthier consumers.

The basics of the hypothesis are as follows: (1) interchange fees charged by credit-card issuers are passed on to consumers because merchants generally don't charge different prices for cash, debit, or credit transactions (whether due to credit-card network rules or by their own choice); (2) credit-card companies give users rewards funded by interchange fees; (3) the users of rewards credit cards tend to be wealthier consumers, while users of cash or debit (or non-rewards credit cards) tend to be less wealthy; and (4) thus, there is a reverse Robin Hood effect in our payment systems, transferring value from poorer consumers to wealthier ones.[11]

---

[10] *See Robin Hood*, Wikipedia, https://en.wikipedia.org/wiki/Robin_Hood (last accessed Oct. 20, 2021). Though it is notable that Robin Hood stole from the Sheriff of Nottingham, who was stealing from the poor in the form of taxes.

[11] The broad outlines of the hypothesis have been sketched very effectively by Aaron Klein from the Brookings Institution. In his commentary on the Supreme Court's decision in *Ohio v. American Express Co. [138 S. Ct. 2274 (2018)],* which upheld certain provisions of Amex's merchant contract against an antitrust action, Klein argued:

> It may sound surprising, but if you buy a $4 cup of coffee on a fancy credit card, the coffee shop may spend 10 percent or more processing your payment—often more than the actual coffee beans cost. The path each payment method takes can be complex, but the outcome is fairly straightforward. Hand over cash and the merchant pockets everything. Use a prepaid card (America's fastest growing type of payment at 1 out of every 10 card transactions) and merchants will lose a little. Debit Cards used to cost between 1 to 3 percent of the total transaction, but the Dodd-Frank Act required the Federal Reserve to lower fees, and now the merchant pays a combination of a flat fee of just over 20 cents plus 5 basis points (0.05 percent) of the transaction. Use a typical Visa or Mastercard branded credit card and the merchant will probably pay fees ranging in the 2 to 3.5 percent range. Leave home with an American Express and the merchant will pay even more, approaching 3 to 5 five percent, depending on how much you charge.
>
> At issue before the court was whether or not the merchant could charge customers different prices depending on how they choose to pay. American Express has written into merchant agreements prohibitions against charging customers who use AmEx more, even though it costs merchants more to process AmEx cards. Merchants can choose not to accept AmEx, and many do, but for those that choose to take AmEx—requiring merchants to charge the same price means that customers who use cheaper forms of payment are in effect subsidizing AmEx card holders. While it is only a few percentage points of each transaction, this subsidy adds up.
>
> Fees charged to merchants can be more profitable to credit card companies and banks than interest payments on the card itself. American Express reported nearly $5 billion in profits on these interchange fees in one quarter alone. That same quarter AmEx reported just under $2 billion in earnings on interest payments by card holders. People who pay their credit card bill on time can be extremely profitable customers, as long as they charge a lot.
>
> Here is where the reverse Robin Hood kicks in. Credit card companies share some of this bounty with you: rewards. Rewards come in all flavors: frequent flier miles, hotel points, and cash back. The competition for rewards has become fierce. Some companies now offer 'first opportunity to purchase' for select concerts,

A 2010 Boston Federal Reserve paper is the lodestar for this hypothesis. It makes the case that cash users are essentially "paying" card users on net, concluding that the best way to deal with this problem is to reduce interchange fees and card-reward programs:

> Merchant fees and reward programs generate an implicit monetary transfer to credit card users from non-card (or "cash") users because merchants generally do not set differential prices for card users to recoup the costs of fees and rewards. On average, each cash-using household pays $149 to card-using households and each card-using household receives $1,133 from cash users every year. Because credit card spending and rewards are positively correlated with household income, the payment instrument transfer also induces a regressive transfer from low-income to high-income households in general. On average, and after accounting for rewards paid to households by banks, the lowest-income household ($20,000 or less annually) pays $21 and the highest-income household ($150,000 or more annually) receives $750 every year. We build and calibrate a model of consumer payment choice to compute the effects of merchant fees and card rewards on consumer welfare. Reducing merchant fees and card rewards would likely increase consumer welfare.[12]

In 2020, researchers at the Boston Fed revisited the question of whether there is a "reverse Robin Hood" effect and concluded that, even under the most extreme and unrealistic assumptions, the estimated transfer from lower-income consumers was in the single digits of dollars annually.

Below, we expand on these arguments—including fleshing out some of the implicit propositions on which they rely—to see if they hold up empirically. The basic point made by Klein and the Boston Fed study is that there is something amiss with how the market deals with payments because it leads to distributional effects that benefit wealthier consumers at the expense of poorer ones, and that the answer is government intervention to correct these effects.

> and 'unique private experiences' that are not even for sale, such as a private tennis lesson from Andre Agassi.
>
> Take a wealthy family that charges $80,000 a year in credit cards, earning 1.5 percent cash back. That comes out to a nice $1,200 check, which is not subject to federal or state income tax since it is considered a rebate and not income. For this family that is probably equal to a $2,000 a year raise in their pre-tax earnings. That is equal to almost two weeks of total earnings for the median American family who earns $60,000 a year (which would be $1,150 per week). That's right, a wealthy family may earn in credit card cash rewards the same value as a two-week paid vacation for the average American household.
>
> Lower income households systematically do not use or have access to elite payment mechanisms. Payment usage is inversely related to perks. The poorest tend to use cash, followed by prepaid cards, and then debit cards. Even if they use credit cards, the higher rewards cards are reserved for wealthier customers. Those rewards aren't free. If merchants are not allowed to change the price despite different payment costs, the end result is that they are paid for out of the totality of the system

See Aaron Klein, *Why the Supreme Court's decision in Ohio v. AmEx will fatten the wealthy's wallet (at the expense of the middle class)*, THE BROOKINGS INST. (Jun. 25, 2018), https://www.brookings.edu/research/ohio-v-amex/.

[12] 2010 Boston Fed Study, *supra* note 7, at 1.

II. Some Problems with the Reverse Robin Hood Hypothesis

Having defined the reverse Robin Hood hypothesis according to its clearest expositors, the next goal is to place it within the context of the market we are analyzing, and then to break it down empirically. Part II.A places credit-card rewards and interchange fees within the proper multi-sided market setting, which seeks to account for what each potential participant in the market hopes to gain by joining. This framework is then used to analyze the reverse Robin Hood hypothesis more closely, to determine whether it holds up to scrutiny. Part II.B considers the various ways the hypothesis breaks down once the implicit assumptions undergirding it are brought to light.

A. What's in It for Me? The Economics of Credit-Card Networks

Credit-card networks are an example of a "two-sided market": that is, a market in which there are two (or, in the case of "multi-sided markets," multiple) sets of participants whose consumption decisions are intermediated by a platform.[13] There are network externalities between the two sides of the market; as the number of participants on one side increases, so the number of participants on the other side of the market also increases.

Platform owners structure the rules and pricing in order to attract participants to each side. This can often lead to one side "subsidizing" the other.[14] Moreover, it is not uncommon in two-sided markets (or markets generally) for some consumers to subsidize others. For example, consumers who purchase hardback books subsidize more patient consumers who wait until the less costly paperback edition is published. Consumers who pay full price for retail items subsidize those who use coupons or buy items on sale. And banking customers who enter branches and interact with bank tellers are subsidized by those who bank solely online. But simply because one side of the market subsidizes the other, or consumers cross-subsidize each other, does not inherently suggest the presence of a market failure or some inequitable conduct, so long as all parties continue to gain some benefit from continued use of the platform.

A couple of examples help to make this idea more concrete.

Newspapers are an example of a two-sided market, with readers on one side and advertisers on the other. As the number of readers increases, so the value to advertisers increases. Meanwhile, as the number of advertisers increases, so the value to readers increases. The publisher of the newspaper intermediates these two sides by printing and distributing the paper, while journalists and editors provide additional content that attracts readers, which in turn attracts advertisers, and so on. Advertisers subsidize the newspaper's production so that consumers pay less than the cost to them of

---

[13] As Jean Tirole, the Nobel Prize winning economist who has done some of the seminal work on two-sided markets, put it: there are at least two groups of consumers "whose ultimate benefit stems from interacting through a common platform." Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. OF THE EUR. ECON. ASS'N 990 (2003), https://www.rchss.sinica.edu.tw/cibs/pdf/RochetTirole3.pdf; *see also* Todd J. Zywicki, *The Economics of Payment Card Interchange Fees and the Limits of Regulation*, at 36 (ICLE Financial Regulatory Program White Paper Series, Jun. 2, 2010), *available at* http://laweconcenter.org/images/articles/zywicki_interchange.pdf.

[14] David S. Evans, *The Antitrust Economics of Multi-Sided Platform Markets*, 20 YALE J. ON REG. 325, 342 (2003).

receiving the newspaper. Moreover, readers who buy at the newsstand subsidize those who receive home delivery, even though the latter is more expensive to service, presumably because the value to advertisers and to the newspaper publisher of a built-in circulation base outweighs any additional cost.[15] In some cases, the value of consumers reading the newspaper is sufficient that the paper can be entirely funded by revenue from advertisers, as with "free" newspapers such as local alternative press or commuter newspapers available at subway stations. Online search engines, such as Google, follow the same model, as advertisers subsidize unlimited free searches by consumers, relatively few of which are intended to find a product to purchase.

Payment-card networks, similarly, are two-sided markets, with consumers on one side of the market and merchants on the other. As the number of consumers using a given payment network increases, the value of that network to merchants also increases. Meanwhile, as the number of merchants accepting payment via a given network increases, so the value of that network to consumers increases. The payment network intermediates this process by offering the means to make payments and facilitating inducements to participants. The subsections below elucidate in more detail the nature of the two-sided payment-card markets, but first, a little history:

> Although often taken for granted, the modern electronic payment-card system is a true marvel: an instantaneous, secure, globally connected system available 24 hours a day, in-person, online, or over the phone. Consumers can travel the globe (and businesses can conduct commerce around the globe) without a penny in their pockets. Electronic payments are the cornerstone of the evolving ecommerce economy and of mobile-banking platforms, which have brought the convenience and efficiency of modern payment systems to billions of people around the globe.
>
> To understand how the modern electronic payment-card system works, it helps to go back to the beginning. In 1914, Western Union began offering charge cards to some customers. In the 1920s, many larger U.S. stores followed suit, with several using a system called "Charge Plate." These simple, "two-party" charge cards were a formal way for merchants to offer short-term credit to regular customers, which would typically be paid off in full at a specified date.
>
> While some merchants no doubt accepted cards from other stores even in the earliest days, Diners' Club established the first full-fledged payment network in 1951. American Express followed in 1958. These "three-party" cards enabled (and still enable) consumers to acquire goods in multiple stores, with payment being made by the card issuer, to be repaid by the card owner at a later date.
>
> In the 1960s, two groups of banks established their own payment networks, which eventually became MasterCard and Visa. These "four-party" systems (and other similar networks) work as follows: (1) the consumer obtains goods or services from (2) the merchant, and (3) the merchant's "acquirer" then acquires funds from (4) the card issuer (the company who issued the card to the consumer and to whom the consumer will owe payment).

---

[15] The observation is confirmed by the fact that, as print advertising revenue has declined because of the Internet, traditional publishers have responded by increasing the price of their publications to consumers.

> Meanwhile, the entire process occurs over a platform operated by one of the payment networks. [16]

As the history of payment cards attests, these payment systems were developed for the mutual benefit of the various parties—not only the payment-card issuers and consumers, but merchants, as well.

1. Payment-Card Issuers

Payment-card issuers benefit from payment cards in numerous ways. First, to the extent that they also supply other services, they may benefit by gaining new customers who use those cards, enabling them to upsell other services. Second, some benefit by charging users an annual fee. Third, credit-card issuers benefit from the payment of interest on accounts that are not paid in full each month. Fourth, issuers may also make money by charging fees (usually a percentage of the transaction value) to merchants that are part of the credit-card network.

Some payment-card networks (mainly Visa and Mastercard) are "four-party" systems, so-called because there are four parties involved in any transaction: a cardholder, an issuer, an acquirer, and a merchant. In a transaction, merchants receive the purchase price less the "merchant discount rate" (MDR)—which comprises the interchange fee plus a premium—from their acquirer (usually, but not always, a bank). The acquirer then sends transaction data to the issuer (the company that issued the card, also usually a bank), which pays the acquirer the transaction amount less the interchange fee. The acquirer thus retains the difference between the MDR and the interchange fee. Part of the interchange fee is used to cover the costs of the network operator (Visa or Mastercard). Finally, the issuer charges the cardholder for the total amount spent at the merchant.

2. Payment-Card Users

Payment-card users benefit from their cards in various ways. The most important is that they have a safe and secure way to transact business without carrying cash. The benefit of credit cards, in particular, comes from providing liquidity to the consumer to be able to make purchases without cash on-hand. In other words, it allows the purchase of goods and services on credit, to be paid back later when the customer has money available. Consumers need not bear the inconvenience of obtaining cash nor the risk of loss or theft once acquired. The convenience of payment cards in general and credit cards, in particular, has greatly expanded the reach of markets for consumers, especially for online shopping. It has been observed, for example, that with a credit card, you can buy a car; without a credit card, you cannot even rent one.

On top of that, a large proportion of credit cards also reward consumers for purchases. These rewards can include points or miles that can be cashed in for trips, access to concerts and other events, exclusive deals, and coupons that entitle the user to reductions in the purchase price of various goods

---

[16] Ian Lee, Geoffrey A. Manne, Julian Morris, & Todd J. Zywicki, *Credit Where It's Due: How payment cards benefit Canadian merchants and consumers, and how regulation can harm them*, at 7-8 (MacDonald-Laurier Institute Publication, Oct. 2013), https://www.macdonaldlaurier.ca/files/pdf/MLIPaymentCardRegulation10-13Draft5.pdf [hereinafter "Credit Where It's Due"].

and services. Credit-card companies compete for consumers by extending these and other benefits, as well as through differences in their own fees, interest rates, and so on.

3. Merchants

Payment cards offer merchants multiple benefits, relative to cash: increased sales, faster throughput of customers, reduced fraud, and reduced theft from employees and third parties.[17] Merchants that accept cards benefit from consumers' ability to transact without having cash on-hand, increasing sales. Card payments are about twice as quick as cash, enabling merchants to serve more customers at lower labor cost, and to serve customers faster, thus benefiting *other* customers, who do not have to wait as long in line. [18] Merchants can also maximize the value of sales and special pricing, as consumers can buy sale items without worry about having sufficient cash on hand or even sufficient short-term bank account liquidity to clear a check.

Cash handling is also labor intensive, given the time it takes to handle and transport cash. As wage rates rise (such as in the tight labor market the United States is experiencing in fall 2021), the relative cost of cash transactions will increase. A recent study conducted by a retail-industry research firm found that the average retailer spends more than 9% of the value of their cash transactions counting, auditing, and depositing cash.[19] By contrast, the cost of telecommunications has been declining and the speed of payment-card transactions has increased. Payment cards provide both merchants and consumers with greater protection against theft and fraud than cash.[20] Handling cash also requires an array of capital investments, including vaults and security surveillance systems, as well as expenses for armored cars and even security guards.

Moreover, cash is a known carrier of bacteria and other pathogens. While this may seem a minor risk, concerns about transmission led many U.S. merchants to cease accepting cash at all during the early days of the COVID-19 pandemic, especially in restaurants and other locations where there could be some risk associated with surface transmission of disease and impurities.[21] Coins have been found to carry antibiotic-resistant forms of bacteria.[22]

---

[17] *See* Todd J. Zywicki, *The Economics of Credit Cards*, 3 CHAPMAN L. REV. 79 (2000) [hereinafter "*Economics of Credit Cards*").

[18] *See* Anne Layne-Farrar, *Are Debit Cards Really More Costly for Merchants? Assessing Retailers' Costs and Benefits of Payment Instrument Acceptance* 14 (Working Paper, Sept. 9, 2011), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1924925, at 7-8.

[19] Greg Buzek & Jerry Sheldon, *Cash Multipliers: How Reducing the Costs of Cash Handling Can Enable Retail Sales and Profit Growth*, IHL GROUP (2018), *available at*: https://www.ihlservices.com/product/costofcash/

[20] *See* David B. Humphrey et al., *Cash, Paper, and Electronic Payments: A Cross-Country Analysis*, 28 J. OF MONEY, CREDIT AND BANKING 914, 916 (1996).

[21] *See* Frank Vriesekoop, et al., *Dirty Money: A Matter of Bacterial Survival, Adherence, and Toxicity*, 4 MICROORGANISMS 42 (November 2016), *available at* https://www.researchgate.net/publication/310782801_Dirty_Money_A_Matter_of_Bacterial_Survival_Adherence_and_Toxicity.

[22] *See* Ola Tolba, Anne Loughrey, Colin E. Goldsmith, B. Cherie Millar, Paul J. Rooney, & John E. Moore, *Survival of Epidemic Strains of Nosocomial- and Community-Acquired Methicillin-Resistant Staphylococcus Aureus on Coins*, AM. J. OF INFECTION

Merchants—and small businesses, in particular—also benefit from accepting credit cards because it relieves them of the cost and risk of operating their own in-house credit operations. Larger businesses and department stores can more easily afford to issue, service, and collect on credit accounts than smaller merchants. Enabling consumers to purchase on credit without having to bear those costs reduces this competitive advantage of larger stores.[23] Financial companies also have a comparative advantage in the underwriting, issuing, and collection of credit, which suggests that they can do it at lower cost than the merchants themselves, thereby creating surplus that can be shared among the various players in the market.

Given those benefits, merchants further benefit from the existence of rewards programs because such programs encourage the use of credit cards.[24] Perhaps the biggest benefit merchants receive, of course, is greater revenue from more and larger transactions. Consumers who pay with cards tend to spend more than those who use cash, with card transactions being two to four times larger.[25] This is even more pronounced with rewards cards. The average transaction size for rewards cards is 25% to 60% larger than non-rewards cards, while premium rewards-card transactions are 30% larger than regular rewards cards.[26]

On the other hand, there are costs to accepting credit cards—namely, the transaction fees that merchants must pay to be a part of the credit-card network. As a result, some merchants won't accept certain credit cards with particularly high fees (such as American Express).

In other words, merchants experience positive externalities from being a part of credit-card networks. They benefit from accepting credit cards through increased sales, more rapid checkout, and reduced fraud and theft. And the more merchants that accept credit cards, the more benefits there are for consumers. The credit-card networks can't reduce the benefits (or raise the costs) to either side of the platform too much without running the risk of losing that side of the platform, which would then greatly reduce the benefits to the other side of the platform.[27]

Society also benefits from reduced usage of cash and increased use of payment cards. Because cash usage is anonymous and untraceable, widespread use of cash facilitates tax evasion and criminal

---

CONTROL (2007), *available at* https://www.semanticscholar.org/paper/Survival-of-epidemic-strains-of-nosocomial-and-on-Tolba-Loughrey/00d3f1f4a922f52d2cfea68cae4711e3f9d3d809.

[23] *See* Zywicki, *Economics of Credit Cards*, *supra* note 17, at 98-99.

[24] For a good summary of the benefits of rewards cards to merchants, *see* ELEC. PAYMENTS COAL., THE VALUE OF REWARDS (Mar. 2019), *available at* https://assets.realclear.com/files/2019/05/1273_EPC.pdf.

[25] *See id.* at 2.

[26] *See id.* at 2-3.

[27] *See, e.g.*, Benjamin Klein et. al, *Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees*, 73 ANTITRUST L. J. 571, 577-88 (2006) (discussing how demand sensitivities of each side of the market will largely determine the alignment that maximizes output).

activity.[28] Cash usage also facilitates the operation of the shadow economy.[29] Indeed, some countries have gone so far as to effectively outlaw cash or eliminate large bills from circulation, or to provide tax benefits and other incentives for consumers to increase their usage of payment cards, in order to address the problems of tax evasion and the shadow economy.

Merchants, of course, would like to receive the benefits of accepting credit cards at a lower cost to them. But the benefits of card acceptance must outweigh the costs, or else merchants wouldn't join credit-card networks.[30] Merchants' decisions to accept cards, despite their cost, reflects consumer demand. Similarly, merchants would employ rude salesclerks and operate dirty, poorly lit stores if doing so would reduce costs without harming sales. It is because consumers demand the opposite that successful merchants will provide polite clerks and pleasant stores, notwithstanding the higher cost.

B. A Breakdown of the Reverse Robin Hood Hypothesis

The reverse Robin Hood hypothesis outlined above is based on the following conjectures:

> (1) Interchange fees are passed on to consumers because merchants generally don't charge different prices depending on the payment method used (cash, debit, or credit) (whether due to credit-card network rules or their own choice).
>
> (2) Rewards-card users tend to be wealthier consumers, while users of cash, debit, and non-rewards credit cards tend to be less wealthy.

These conjectures are considered below. If and only if both conjectures hold can there exist a reverse Robin Hood effect, meaning that value is transferred from poorer consumers to wealthier ones. If any of these conjectures, or the implicit claims upon which they are based, do not hold up to

---

[28] Kenneth S. Rogoff, *Costs and Benefits to Phasing Out Paper Currency* (NBER Working Paper May 2014), *available at* https://www.nber.org/papers/w20126; Bhaskar Chakravorti, *The Hidden Costs of Cash*, HARVARD BUSINESS REV. (Jun. 26, 2014), *available at* https://hbr.org/2014/06/the-hidden-costs-of-cash.

[29] *See* Hugh Thomas & Kevin Mellyn, *Is There Such a Thing as Having Too Much Cash?* (MasterCard Advisors Global Insights, Oct. 2012), *available at* https://newsroom.mastercard.com/wp-content/uploads/2013/06/Consequences-of-Cash_MA-Advisors.pdf.

[30] *See* Steven Semeraro, *How Reward Cards Encourage Merchants to Lower Prices*, FORTUNE (Jul. 16, 2018), https://fortune.com/2018/07/16/reward-credit-cards-lower-prices/ ("The problem with [reverse Robin Hood] analysis is that no rational merchant would accept reward cards if doing so would have no positive effect on the merchant's sales. A merchant that took on additional costs without receiving a benefit that at least covers those new costs would not remain in business very long. Since most merchants are rational, they likely receive benefits from accepting reward cards that more than cover the merchant's cost of accepting them. The benefit leading merchants to accept reward cards must be increased sales. Like all credit cards, reward cards enable some consumers to make purchases when they don't have cash readily available. Consumers who use a revolving balance are the obvious example. But many more simply won't have the cash in their pocket when they consider making a purchase, even though they pay their bill in full without revolving credit. And the bonuses that reward cards pay to cardholders adds an additional stimulus. First, the bonus constitutes an effective discount that has the standard demand-increasing effect that any price discount would have, so a consumer would likely buy more of the same product or other products and services if he or she is getting a discount. Second, rewards may stimulate sales beyond what traditional economics would predict because of the psychological allure of getting something for nothing. Because of this effect, paying a bonus may actually stimulate more spending than a similar point-of-sale discount would.").

empirical scrutiny, the hypothesis that credit-card payments exhibit a reverse Robin Hood effect may be rejected.

Part II.B.1 considers conjecture (1). It begins by asking, first, whether low- and high-income consumers shop at the same places or buy the same goods. If they don't, then there is no basis for concluding that merchants pass on costs from credit-card payments and the reverse Robin Hood hypothesis may be rejected. Second, for those merchants that serve both poorer and wealthier customers, it asks whether merchants fully pass on the merchant discount to consumers. If not, then the reverse Robin Hood hypothesis may be rejected.

Part II.B.2 considers conjecture (2). The implicit assumption is that credit-card rewards are connected to wealth or income, but it if it is due to something else, like credit score, then the claim that wealthier consumers benefit at the expense of poorer ones is much less persuasive.

Part II.B.3 concludes.

1. Why Merchants Do or Don't Discount – Or Pass on Costs to Consumers

The first implicit assumption of the reverse Robin Hood hypothesis is that all consumers buy the same basket of goods at the same price at the same store but using different payment methods. The extent to which this assumption holds goes a long way toward determining the degree to which it is even feasible for credit-card networks to transfer wealth from the poor to the rich.[31] It is also, obviously, rather unlikely, or perhaps even absurd.

For example, if low-income consumers mostly shopped at Walmart and high-income consumers shopped mostly shopped at Target, then even if they bought the same goods but used completely different payments, the redistributive effect would be greatly reduced. Later versions of the 2010 Boston Fed Study note that the distribution effect is reduced when low- and high-income groups shop at different places.[32]

In reality, cash users and card users tend to buy goods or services that differ considerably in quality and price, even when they shop at the same merchant.[33] If cardholders primarily buy premium

---

[31] *See* Joshua S. Gans, *Are We Too Negative on Negative Fees for Payment Cardholders?*, at 33 (Rotman School of Management Working Paper No. 3162627, Apr. 14, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3162627 ("If low-income households shop at merchants with very low card usage while the reverse is true for high- income households, then the redistribution calculations [of the Boston Fed Paper] will be inflated even further. Indeed, segmentation by income class at the merchant level may undo any redistribution at all.").

[32] Scott Schuch, Oz Shy, & Joanna Stavins, *Who Gains and Who Loses form Credit Card Payments? Theory and Calibrations* at 17 (May 4, 2011), *available at* https://www.ecb.europa.eu/events/pdf/conferences/ecb_oenb/Schuh_Shy_Stavins.pdf ("Merchants supply one 'good,' which could be either a product or a service. This assumption is necessary because of a lack of data on payment choice for individual goods; in any case many payments are made for a basket of different goods… However, the distribution of household shopping across merchants affects the calculation of the transfers. For example, if high-income households only used credit cards and low-income households only used cash, and there was a complete separation of shopping by households across merchants, there would be no transfers from credit card payments.").

[33] *See* Malte Krueger, *Do the Poor Pay for Card Rewards of the Rich?* (Rome Discussion Paper Series, No 14-08, Sept. 2014), *available at* https://www.econstor.eu/bitstream/10419/104787/1/805024956.pdf.

products, such as organic raisins from a well-known vineyard, and cash holders buy regular quality products, such as Sun-Maid raisins, then if merchants are able to respond by charging higher margins for premium products, cardholders will effectively end up paying for their own rewards.[34]

In either case, whether consumers are shopping at different stores or buying different goods, merchants cannot pass on costs incurred on one type of consumer to the other. The mechanism for reverse Robin Hood is not possible without lower-income consumers paying for card benefits through higher prices.

The reverse Robin Hood hypothesis also assumes that merchants do not discount for cash when consumers are buying the same goods. But federal law guarantees merchants the right to provide cash discounts if they'd like (just as merchants can choose to offer free parking or friendly sales employees). Many merchants simply choose not to do it, presumably because consumers don't demand cash discounts. It isn't explained why merchants' decisions not to offer cash discounts requires federal regulatory intervention with respect to payment cards. In addition, the actual difference in cost between cash and cards is often very small, given the additional costs of handling cash. It thus usually isn't worthwhile for merchants to provide cash discounts to consumers who use debit and cash.[35]

While merchants appear reluctant to offer cash discounts, some are eager to impose payment-card surcharges. But this preference for surcharging has nothing to do with eliminating cross-subsidies among consumers or reducing "expensive" card use. It reflects, instead, the reality that some merchants see surcharges as a potential profit center to extract wealth from consumers who have inelastic demand to use cards as a payment device, such as to buy plane tickets and the like.[36]

Second, the reverse Robin Hood hypothesis assumes that the pass-through rate for the merchant discount to customers is close to 100%. It is not clear how much of the merchant discount charged by acquirers is passed through by merchants to their customers, but the amount is certainly not 100%. Moreover, the pass-through of interchange fees from merchant acquirers to merchants is not likely to always be 100% in the first place.[37]

---

[34] *See id.* at 15. *See also* Gans, *supra* note 31, at 30-34 (arguing that merchants with heterogenous mixes of cash and card transactions can selectively increase prices for goods and services based on preferences of customer base).

[35] Some who support the Reverse Robin Hood argument use this fact to explain why there are so few cash discounts. *See* Tamas Briglevics & Oz Shy, *Why Don't Most Merchants Use Price Discounts to Steer Consumer Payment Choice?* (Fed. Res. Bank of Boston, Pub. Pol'y Discussion Papers No. 12-9, Dec. 13, 2012)), *available at* https://www.econstor.eu/bitstream/10419/99121/1/73408935X.pdf.

[36] *See, e.g.*, Todd J. Zywicki, Geoffrey A. Manne, & Kristian Stout, *Behavioral Economics Goes to Court: The Fundamental Flaws in the Behavioral Law & Economics Arguments Against No-Surcharge Laws*, 82 MO. L. REV. 769 (2017).

[37] *See* 2020 Boston Fed Study, *supra* note 8, at 28 ("Although we consider different rates of pass-through from merchants to consumers, we implicitly assume a 100 percent pass-through rate of the interchange fee reduction from merchant acquirers to merchants. However, it is possible that the acquirers' pass-through rate is less than 100 percent, especially for smaller U.S. merchants."). *See also* Todd J. Zywicki, Geoffrey A. Manne, &Julian Morris, *Price Controls on Payment Card Interchange Fees; The U.S. Experience*, at 34 (George Mason University Law and Economics Research Paper Series 14-18 2014), *available at*

A 100% merchant pass-through rate would imply what economists call a "horizontal supply curve." For instance, when there is a higher sales tax, whether the incidence primarily falls upon suppliers or consumers depends on each group's sensitivity to price changes (known as the elasticity of demand). In the face of higher taxes, all other things being equal, consumers would buy less. But suppliers also respond by lowering prices to offset the tax effect, creating a new equilibrium.[38] If suppliers are more sensitive to price changes than consumers, then they will pass on more of the tax to consumers. In a situation where suppliers are completely sensitive to price (perfectly elastic), then they will pass all of the tax on to consumers, while receiving the same surplus on each sale. This is what 100% pass-through for interchange fees means.

If merchants passed through 100% of any change in interchange fees, merchants would reap precisely no benefit from a reduction in interchange fees, and thus would have no incentive to lobby for such a change. Since some—mainly big-box—merchants do lobby for reduced interchange fees, it seems highly likely that they enjoy some degree of pricing power in their given markets and are thus able to pass through less than 100% of the reduction in interchange fees.[39]

Finally, the notional benefits of capping interchange rates are uncertain. While advocates believe such caps will lead to lower prices, there is little evidence to suggest that merchants' savings will be passed through to consumers. For example, after the Durbin Amendment's caps on debit-card interchange fees went into effect, there was no corresponding drop in prices from merchants.[40] This has led several studies to conclude that the caps on debit-interchange fees were, at best, a transfer from

---

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2446080 ("for a sample of 1,000 merchants in 23 different sectors..., although the weighted average interchange fee fell from 1.07% to 0.74% in this group, nearly all the difference (93%) was captured by the acquiring banks – and only 7% passed through to merchants.") [hereinafter "Price Controls"].

[38] *See* Lee, Manne, Morris, & Zywicki, *Credit Where It's Due, supra* note 16, at 26-27.

[39] For more on this discussion, *see id.* at 27.

[40] *See* Zywicki, Manne, & Morris, *Price Controls*, *supra* note 37, at 26-28.

consumers to merchants.[41] One study concluded the net effect of the Durbin Amendment's caps was a loss of between $22 and $25 billion for U.S. consumers.[42]

In fact, a survey of studies on pass-through rates (mostly on taxes on producers or changes in foreign exchange rates) found that "the pass-through rate varies in real-world markets from 22-74 percent in the long run with a median of approximately 50 percent in the long run."[43] Moreover, most merchants do not adjust prices quickly, with prices staying constant for roughly a year or more.[44] In other words, savings from cost reductions are not completely passed through to consumers, nor are they passed through very quickly.

By contrast, empirical evidence indicates that pass-through of revenue losses for financial institutions are nearly 100%. A study by Kay, et al., estimated that banks recovered more than 90% of the revenue losses imposed by the Durbin Amendment by charging higher deposit fees.[45]

Other studies have also found that merchants passed through minimal amounts of their savings from the Durbin Amendment and that banks passed through a greater amount of their losses than merchants passed through their gains. Mukharlyamov and Sarin, for example, estimated that merchants passed through "at most" 28% of their savings from the Durbin Amendment in lower prices.[46] They found that this percentage was about 50% less than banks' pass-through of their interchange-fee revenue losses, mostly to lower-income consumers who lost access to free checking and

---

[41] *See, e.g.*, David S. Evans, Howard Chang, & Steven Joyce, *The Impact of the U.S. Debit Card Interchange Fee Regulation on Consumer Welfare: An Event Study Analysis* (University of Chicago Institute for Law and Economic s Working Paper Series, Oct. 2013), *available at* https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1651&context=law_and_economics ("Did consumers gain more from cost savings passed on by merchants, in the form of lower prices and better services, than they lost from cost increases passed on by banks, in the form of higher prices or less service? We find that consumers lost more on the bank side than they gained on the merchant side. Our estimate is that, based on the expectations of investors, the present discounted value of the losses for consumers as a result of the implementation of the Durbin Amendment is between $22 and $25 billion."); Eliana Garces & Brent Lutes, *Regulatory Intervention in Card Payment Systems: An analysis of regulatory goals and impact* (Work Paper, Sept. 21, 2018), *available at* http://files.brattle.com/files/15608_regulatory_intervention_in_card_payment_systems_-_an_analysis_of_regulatory_goals_and_impact.pdf ("Regulatory interventions were mostly founded on a partial analysis of payment card systems and their impact was riddled with unintended consequences. Besides a transfer of rent from consumers and issuing banks to mostly large merchants, there is no empirical evidence that any other policy objectives in the form of overall efficiency or consumer welfare was achieved. Two decades of regulatory intervention in payment card systems provide sufficient evidence to call for much caution for further intervention in an increasingly dynamic and fast changing market.").

[42] *See* Evans, Chang, & Joyce, *supra* note 41.

[43] *See* David S. Evans & Abel Mateus, *How Changes in Payment Card Interchange Fees Affect Consumers Fees and Merchant Prices: An Economic Analysis with Applications to the European Union* at 15 (Working Paper, Jun. 27, 2011), http://papers.ssrn.com/sol3/papers. cfm?abstract_id=1878735.

[44] *See id.* at 16. *See also id.* at 47-48 (Appendix B).

[45] Benjamin S. Kay, Mark D. Manuszak, & Cindy M. Vojtech, *Competition and Complementarities in Retail Banking: Evidence form Debit Card Interchange Regulation*, 34 J. FIN. INTERMEDIATION 91, 92 (2018).

[46] *See* Vladimir Mukharlyamov & Natasha Sarin, *Price Regulation in Two-Sided Markets: Empirical Evidence from Debit Cards*, at 3, 31 (working paper, Dec. 2019), *available at* https://www.aeaweb.org/conference/2020/preliminary/2006?q=eNqrVipOLS7OzM8LqSxIVbKqhnGVrAxrawGlCArI.

paid higher bank fees.[47] They estimate a net wealth transfer to merchants of $4 billion from consumers and financial institutions combined.[48] Wang, Schwartz, and Mitchell surveyed merchants a few years after the Durbin Amendment became effective and concluded that merchants passed through little of their savings to consumers and, to the extent that any significant amount was passed through, it was greatly delayed.[49] On the other hand, the minority of merchants that saw their costs increase passed through most of those increased costs to consumers.[50] This finding is consistent with data from Europe finding that, while merchants pass through about 90% of their cost increases to consumers, only about 66% of cost decreases are passed through.[51]

2. Credit score determines access to credit, not income level

Finally, the reverse Robin Hood hypothesis assumes a direct causal connection between income and rewards benefits. To be sure, it is probable that higher-income consumers will earn more rewards than lower-income consumers, because they typically spend more. But just as loyalty benefits for valuable customers aren't unique to credit cards, nor is an indirect association between income and benefits. For example, higher-income people would be expected to fly more and thus earn more frequent-flyer awards; frequent Uber customers likewise can gain cash back and other benefits.

But reward cards are not just a perquisite for high-income consumers.[52] Data from Verisk shows that 86% of credit cardholders have active rewards cards, including 77% of cardholders with a household income of less than $50,000.[53] Thus, although higher-income consumers are more likely to have

---

[47] *See id.* at 29-31.

[48] They estimate that consumers overall paid $2.3 billion in higher checking fees and received only $1.5 billion in cost savings in estimated cost savings from merchants. *Id.* at 3.

[49] Zhu Wang, Scarlett Schwartz, and Neil Mitchell, *The Impact of the Durbin Amendment on Merchants: A Survey Study*, 100(3) ECON. Q. 183 (2014) (3rd Quarter).

[50] *Id.*

[51] EUROPEAN COMMISSION, STUDY ON THE APPLICATION OF THE INTERCHANGE FEE REGULATION 170 (2020), *available in* https://ec.europa.eu/competition/publications/reports/kd0120161enn.pdf. The EC Report also finds "some, but not systematic" increases in bank fees but claims that these price increases were not related to the implementation of interchange fee price controls. *Id.* at 134.

[52] *See* ELECTRONIC PAYMENTS COALITION, THE VALUE OF REWARDS 3 (Oct. 2021) ("The vast majority of consumers have access to electronic payments, with survey data showing that 95% of consumers earning less than $20,000 per year have access to a credit or debit card. Moreover, most consumers own at least one credit card, including nearly two-thirds of adults earning less than $40,000 per year. Most of these cardholders own and enjoy rewards cards. For example, according to a recent survey, 98% of credit cardholders owned a rewards card, including 82% of cardholders earning less than $20,000 per year.").

[53] *See* AMERICAN BANKERS ASS'N, THE BENEFITS OF CREDIT CARD REWARDS: HOW REWARDS PROVIDE VALUE TO MERCHANTS AND CONSUMERS OF ALL INCOMES 8 (2021), *available at* https://www.aba.com/-/media/documents/reports-and-surveys/the-benefits-of-credit-card-rewards-62121.pdf [hereinafter ABA Study] (citing Verisk).

rewards cards than lower-income consumers, the difference is not substantial.[54] In fact, rewards cards make up nearly all of the spending for credit cardholders, including for low-income cardholders.[55]

Moreover, it is not obvious that higher income predicts the likelihood of owning a rewards card. According to a recent report, access to rewards cards is tied to credit score, not to income, per se.[56] Moreover, income has little bearing on a cardholder's credit score (and thus eligibility for rewards-card ownership). One study from economists at the Federal Reserve found that household income is only "moderately correlated with consumers' credit scores."[57] Other variables, the most important being credit history, have far more explanatory power.[58] Statistically, most lower-income cardholders have good credit scores. It could therefore be the case that a greater number of lower-income consumers could acquire rewards cards but choose not to.[59] Why they would opt not to is an important question; one possible explanation is that many rewards cards carry annual fees and lower-income consumers do not spend enough to justify paying those fees.

3. The Reverse Robin Hood Myth

Taken together, these facts show that the narrative of higher-income credit-card users benefiting at the expense of lower-income cash users is an unproven hypothesis. Nor is a scenario in which different consumers gain different amounts of surplus from a given product or service inherently problematic, so long as all reasonably believe that, on net, they gain more than they lose. This is not a

---

[54] Meanwhile, as the 2020 Boston Fed study notes, even in the lowest quartile of households (those with income under $25,000), 50% of households have at least one credit card and most POS credit card transactions among this group are made using rewards credit cards. *See* 2020 Boston Fed Study, *supra* note 8, at 3, 38.

[55] *See* Electronic Payments Coalition, *supra* note **Error! Bookmark not defined.**, at 3 ("According to data from Phoenix Marketing International, 97% of total credit card spending is charged to rewards accounts, and nearly three-fourths of rewards credit cardholders redeemed their resulting rewards within the past year. Moreover, the preference for spending on rewards cards vs. non-rewards cards holds true across income groups: low-income cardholders use their rewards cards for more than 90% of their card spending.").

[56] Even the spending, and therefore the benefits that are received from rewards-card usage, is tied more to credit score than income alone. *See* 2020 Boston Fed Study, *supra* note 8, at n.**Error! Bookmark not defined.** ("Still, lower-income cardholders with super-prime credit scores spend more per month than higher-income cardholders with low subprime credit scores. Super-prime cardholders earning less than $50,000 in annual household income used their credit cards to spend an average of $1,022 per month, while low subprime (<620) cardholders earning more than $250,000 spent an average of $726.").

[57] *See* Rachael Beer, Felicia Ionescu, & Geng Li, *Are Income and Credit Scores Highly Correlated*, FEDS NOTES (Aug. 13, 2018), https://www.federalreserve.gov/econres/notes/feds-notes/are-income-and-credit-scores-highly-correlated-20180813.htm. *See also id.* ("To summarize, using a unique proprietary data set that includes consumers' credit scores and self-reported household income, we find that household income is moderately correlated with consumers' credit scores, and cross-sectional variations in household income account for a modest fraction of variations of credit scores. The additional explanatory power of income becomes minimal once a small set of credit history variables are accounted for. The limited correlation suggests that the rising income inequality witnessed in recent decades does not mechanically imply rising inequality in credit access through the channel of this particular correlation.").

[58] *See id.* ("previous research and disclosures of model developing agencies indicate that credit scores are estimated using information such as debt payment history, level of indebtedness, length of the credit history file, and credit limit utilizations. Income, by contrast, is not included in the scoring model algorithms.").

[59] *See* ABA Study, *supra* note 53, at 10-11.

story of the rich stealing from the poor, and the reverse Robin Hood hypothesis can be soundly rejected.

It would be much more precise, though less dramatic, to say that those with better credit scores, regardless of income, benefit from rewards programs, which are partially "paid for" by interchange fees charged to merchants. Those interchange fees, in turn, may or may not be passed on to consumers who use cash, depending on whether those consumers buy the same goods and services from the same merchants as those using credit cards. But even then, the pass-through is a proximate result of decisions by merchants not to offer cash discounts, often because the administrative cost of doing so is greater than any benefit they would reap through larger margins on cash transactions.

But such precision would not lead one to think it necessary to change the laws governing credit-card rewards or interchange fees. A clear perspective on the nature and economics of multi-sided platforms would counsel instead for cautious reform efforts that seek to avoid upsetting a marketplace that appears to serve the needs of consumers, credit-card companies, and merchants alike.

III. Robin Hood, the Sequel: Everybody Benefits but Some Benefit More

A second study from the Boston Fed (from 2020) revises the initial argument to make a humbler claim—that even though all consumers likely benefit on net from access to credit cards and rewards, higher-income consumers gain relatively greater surplus from card usage than lower-income consumers. It is not clear why this is a significant concern for economists or lawmakers, so long as most consumers benefit from the system, including lower-income consumers. Nevertheless, the 2020 Boston Fed study focuses on the net cost of different types of payment methods, which include fees paid, rewards received, and retail prices. The authors argue that consumers in the lowest-income cohort pay the highest "net pecuniary cost" as a percentage of transaction value, while the highest-income cohort pays the lowest:

> Using data from the United States and Canada, we quantify consumers' net pecuniary cost of using cash, credit cards, and debit cards for purchases across income cohorts. The net cost includes fees paid to financial institutions, rewards received from credit or debit card issuers, and the merchant cost of accepting payments that is passed on to consumers as higher retail prices. Even though credit cards are more expensive for merchants to accept compared with other payment methods, merchants typically do not differentiate prices at checkout, but instead pass through their costs to all consumers. As a result, credit card transactions are cross- subsidized by cheaper debit and cash payments. Card rewards and consumer fees paid to financial institutions are additional sources of cross-subsidies. We find that consumers in the lowest-income cohort pay the highest net pecuniary cost as a percentage of transaction value, while consumers in the highest-income cohort pay the lowest. This result is robust under various scenarios and assumptions,

> suggesting payment card pricing and merchant cost pass-through have regressive distributional effects in the United States and Canada.[60]

This paper is saying something slightly different than the strong form of the hypothesis considered above. While there is still a focus on the distributional effects of credit-card rewards, the mechanism is primarily a result of the proportionality of the benefits conferred to credit-card users: "Card rewards and consumer fees paid to financial institutions may be other sources of cross-subsidies. Credit card rewards are proportional to the amount charged on a card. This disproportionately benefits higher-income consumers, who are more likely to hold rewards cards, tend to hold cards with higher reward levels, and tend to spend more on those cards."[61] Moreover, the paper recognizes that "the quantitative results vary with the specific assumptions, such as merchants' pass-through rate or whether a merchant serves all income cohorts or just a subset."[62] Nonetheless, it argues "the basic finding that low-income consumers bear a disproportionally high net pecuniary cost remains robust."[63]

In the 2020 Boston Fed Study, the authors invent (and then use throughout) the concept of "net pecuniary cost" to measure what they claim are "regressive" cost allocations. By limiting themselves to "pecuniary" costs, they thereby exclude non-pecuniary costs, such as the time taken to process transactions (which, as noted, is considerably higher for cash than for cards, and which falls on both merchants and customers) and the costs associated with fraud and theft (which are real but indirect, and thus can be excluded from the "pecuniary" transaction costs). In addition, the authors explicitly exclude the effects of cross-subsidies from other fees. And they fail to account in any way for the effect of rewards on encouraging the use of credit cards and the associated effects on demand.

By limiting themselves to "net pecuniary costs," the authors have thus effectively assumed their conclusions. The ratio of "net pecuniary costs" to the size of a purchase is inherently higher for low-income consumers than for high-income consumers. High-income consumers make bigger purchases and their total payment costs are higher. But because high-income consumers receive larger benefits in the form of credit-card rewards and are more likely to use credit cards (and thus benefit from rewards), they have a lower net pecuniary cost as a percentage of transaction value than lower-income consumers.

Net pecuniary costs are a peculiar way to measure regressivity. The 2020 Boston Fed Study fails to establish whether there is a wealth transfer from low-income to high-income households on net, which is what the 2010 Boston Fed Study attempted to do. Instead, it offers several scenarios with different assumptions to test, theoretically, whether regressive effects hold. Despite the highly artificial construct of "net pecuniary costs," they are only able to demonstrate—hypothetically—a regressive effect under the most unrealistic scenarios.

---

[60] 2020 Boston Fed Study, *supra* note 8, at 1.

[61] *Id.* at 2.

[62] *Id.* at 4.

[63] *Id.*

Specifically, the first scenario assumes that high- and low-income consumers shop at the same stores and buy the same things, *and* that the merchant passes through 90% of the payment-card costs. Based on these (entirely unrealistic) assumptions, the authors conclude that "[r]elative to how much it costs the merchants to process their payments, each consumer in the highest-income cohort pays $13 less on average per month through retail prices. In contrast, every consumer in the lowest- income cohort pays $0.60 more."[64] Thus, even under extreme and implausible assumptions about the degree to which merchants would pass through savings and that high- and low-income consumers would shop at the same stores, the authors could find a monthly cost increase of only 60 cents or an annual increase of $7.20. When benefits, which tend to be larger the more one uses reward cards, are taken into account, as well as other costs like user fees paid, the net pecuniary cost ratio for the lowest-income cohort in the United Sates is 1.41% and 0.82% for the highest-income cohort, meaning there is a 0.59 percentage point difference.[65]

When these assumptions are relaxed, the difference nearly disappears. For instance, when merchants serve different income groups, the difference falls to 0.11%.[66] Meanwhile, if the pass-through rate is 82% or lower in the United States, along with heterogeneity in income groups that merchants serve, the regressive effect disappears almost entirely.[67] Interestingly, as noted above, the actual empirical data on merchant pass-through suggests a much lower number yet, of around 50%.[68] In this scenario, there would be no regressivity at all according to the 2020 Boston Fed Study's model.

In addition, charges that the payment-card system is "regressive" need to be assessed against some baseline: regressive compared to what? For instance, bank fees (or annual fees) are more likely to be regressive than credit-card rewards. An annual fee of, say, $40—regardless of whether a customer spends $3,000/year or $30,000/year—is far more regressive than credit-card rewards that, as discussed above, are only moderately correlated with income.

Moreover, cross-subsidies are ubiquitous in both the banking and retail markets. But as noted, the 2020 Boston Fed study explicitly excludes other instances of cross-subsidization. As such, it is arbitrary to focus on interchange fees, especially if the numbers involved are relatively small. For example, higher-income individuals are more likely to own a car than lower-income individuals. Does that make it regressive for a shopping center to offer free parking? Likewise, consumers will vary in their time preferences; those with more elastic demand are more likely to wait to buy things on sale. That doesn't render such discounts "regressive" transfers, even if those with more elastic demand are, in general, wealthier than those with strong time preferences.

---

[64] *See id.* at 17.

[65] *See id.* at 20-21.

[66] *See id.* at 22. And this is still assuming 90% pass-through of merchant costs.

[67] *See id.* at 25.

[68] *See supra* n. 43 and associated text.

There are also progressive transfers in banking. It has been found, following the Pareto principle, that 20% of all bank customers provide 80% of all deposits (the bank's lending capital).[69] Yet, despite lending greater capital to the bank, someone with $100,000 in a savings account does not receive a 100x better interest rate than someone who has $1,000 in deposits.[70]

Similarly, as discussed above, the level of competition at the merchant level, along with the positive externalities of rewards cards, could actually lead to greater competition and lower merchant prices due to higher volumes of sales at lower margins.[71] Competition for consumers among credit-card networks leads them to offer more rewards, including to lower-income consumers.[72] In other words, there is a plausible scenario that credit-card rewards are progressive in nature, depending on the level of competition on each side of the market.

As interesting as the modeling provided by the 2020 Boston Fed Study is, it does not provide a firm basis to conclude that credit-card rewards are regressive in real life. More realistic assumptions about pass-through rates and where consumers shop wipe out the net pecuniary cost differential. All we are left with is a trivial complaint that wealthier consumers who use credit-card rewards more receive larger benefits than those who do not use credit-card rewards as extensively.

IV. Regulation of Interchange Fees Has Regressive Effects

While the reverse Robin Hood hypothesis should be rejected on its own terms, it is also worth considering the potential distributive effects of the proposed (and misguided) regulatory efforts it has inspired. As discussed below, such interventions are likely to be regressive. As such, policymakers contemplating such interventions must weigh the very real regressive effects of their policies against the entirely hypothetical reverse Robin Hood effect.

As mentioned above, interchange fees are only one way that credit-card rewards are "paid for." But assuming that there is some relationship between the two, one potential consequence of capping interchange fees could be a reduction or elimination of rewards offerings. This happened, for instance, with debit-card rewards after the Durbin Amendment.[73] But that isn't the only possibility.

---

[69] An analysis of one community bank found that 83 percent of the dollar balances in the bank's checking account were held by just 15 percent of the bank's customers, yet those with higher balances were paid only marginally higher rates of interest, if any, compared to those with much lower balances. *See* G. Michael Flores & Todd J. Zywicki, *Commentary on CFPB Report: Data Point: Checking Account Overdraft* (George Mason University Law and Economics Research Paper Series No. 14-45, Jul. 16, 2016), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2499716.

[70] *See, e.g.*, *Savings Accounts and CD (Time Account) Rates*, WELLS FARGO (last accessed Oct. 20, 2021), https://www.wellsfargo.com/savings-cds/rates/ (interest rates on different savings accounts and certificate of deposit accounts do not scale with the amount deposited, although there is some bonus offered for clients that also maintain investment accounts with the bank.)

[71] *See supra* note 30 and associated text.

[72] Which the ABA Study data suggests is occurring. *See* ABA Study, *supra* note 53, at 8 (noting that 84% of cardholders have at least one rewards card; 7 in 10 cardholders earning less than $20,000 have a rewards card; 77% of lower-income cardholders have an active rewards card; and that the share of consumers owning a rewards card has increased by more than 10% during the pandemic).

[73] *See* Zywicki, Manne, & Morris, *Price Controls*, *supra* note 37.

For instance, the Durbin Amendment's caps on interchange fees for debit cards led to a loss of access to bank accounts and higher bank fees for hundreds of thousands of low-income consumers: the number of banks offering free checking accounts fell significantly, banks also increased the minimum balance requirements to maintain free checking accounts, and they increased the monthly maintenance fees for checking accounts.[74] Mukharlyamov and Sarin found, for example, that "over 70 percent of consumers in the lowest income quintile (annual household income of $22,500 or less) bear higher account fees, since they fall below the average post-Durbin account minimum required to avoid a monthly maintenance fee ($1,400). In contrast, only 5 percent of consumers in the highest income quintile (household income of $157,000 or more) keep balances falling below this threshold."[75] They also found that the share of free basic checking accounts fell from 61% to 28% due to Section 1075.[76]

As a result, many consumers left the banking system entirely and became reliant on cash and on higher-cost sources of credit, such as payday loans and check-cashing services. All of these effects are highly regressive.

There is no telling how exactly this would play out with price controls on credit-card interchange fees, but one likely consequence would likely be higher annual fees to use such credit cards, effectively pricing out lower-income individuals.[77] In fact, given the small dollar size of the supposed "reverse Robin Hood" effect ($7.20 annually in the latest version), the increase in annual fees on cards would almost certainly exceed the retail savings for lower-income consumers, just as occurred with bank account fees following enactment of the Durbin Amendment. But one way to consider whether this type of regulation would have regressive effects is by comparing the likely effects of a reduction in rewards on higher-income, middle-class, and lower-income consumers.

First, as discussed above, rewards can lead to greater volume of sales by reducing the effective cost of purchased goods and services. Insofar as rewards effectively lower prices for low-elasticity products such as food, loss of those rewards could be especially harmful for lower- and middle-class consumers, for whom food takes up a larger percentage of their budgets. This is consistent with available data

---

[74] CONSUMER FINANCIAL PROTECTION BUREAU, 1 TASKFORCE ON CONSUMER FINANCIAL LAW REPORT 591-593, *available in* https://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureaus-taskforce-on-federal-consumer-financial-law-releases-its-report.

[75] *Id.* at 30.

[76] Mukharlyamov & Sarin, *supra* note 46, at 4.

[77] *Cf.* 2020 Boston Fed Study, *supra* note 8, at 26 ("For example, substantial reductions in credit card rewards and interchange fees may reduce regressive distributional effects caused by credit card rewards and merchant cost pass-through, but such reductions may subsequently change the behavior of credit card issuers. If issuers reacted to the interchange fee reduction by raising other fees, limiting credit supply, or even exiting the market, lower-income consumers would be harmed."). *See also id.* at 29 ("If rewards were reduced significantly, instead of attracting customers with rewards, issuers may do so by enhancing convenience or speed, which potentially could adversely affect security. On the one hand, a simple reduction in interchange fees could have unintended negative consequences: Card issuers may not reduce rewards along with interchange fees, and/or they might raise other fees to compensate for their lost revenues. This may hurt lower-income consumers especially, as their fees may increase and thus access to credit may become more costly. In an extreme case, some issuers might also withdraw from issuing credit cards or focus on issuing credit cards only to the most profitable consumers.").

on consumer purchases with reward cards. According to a 2017 survey by RFi Consulting, compared with high-income consumers, lower- and middle-class consumers are more likely to spend credit-card rewards on everyday purchases and other items they would have bought anyway.[78]

Second, higher-income consumers will likely be relatively less affected by reduced rewards on four-party cards for two main reasons. One, if issuers were to restrict the availability of rewards by, for example, imposing new or higher fees for rewards cards, higher-income consumers are better able to absorb those costs. Two, higher-income consumers are similarly better able to switch to three-party cards, like American Express. In the RFi survey, the probability of switching cards due to reduced rewards rises with income and is significantly higher among those with household incomes above $150,000, compared with middle- and lower-income households.[79]

In fact, studies show that the introduction of interchange fee caps in Australia led to higher annual fees and reduced rewards for lower-income consumers. A 2008 study by CRA International showed that annual fees for cards with standard rewards rose by about 40% in the immediate aftermath of the introduction of interchange fee caps.[80] However, a 2012 study by the Reserve Bank of Australia showed that higher-income consumers largely avoided this adverse effect, either by switching to Amex (whose merchant discount fee was left unregulated because it is a three-party network rather than a four-party network) and because of the development of a new "super-premium" card market, which sought to capture high spenders by offering more benefits.[81] Lower-income consumers were less able to make that switch. Moreover, the benefits associated with credit cards that were not super-premium went down after the reforms.[82]

At the same time, in an assessment of the effect of its interchange fee caps five years after their introduction, the reserve Bank of Australia concluded that:

> "No concrete evidence has been presented to the Board regarding the pass-through of these savings, although this is not surprising as the effect is difficult to isolate. The Bank had previously estimated that the cost savings would be likely to lead to the CPI being around 0.1 to 0.2 percentage points lower than would otherwise be the case over the longer term (all else constant). It is very difficult to detect this against a background where other costs are

---

[78] Proprietary information from RFI cited in Julian Morris, Geoffrey A. Manne, Ian Lee, & Todd Zywicki, *Punishing Rewards: How clamping down on credit card interchange fees can hurt the middle class*, at 27 (MacDonald-Laurier Institute, Nov. 2017), *available at* https://laweconcenter.org/wp-content/uploads/2017/11/MLI-PaymentCardRegulationPaper10-17web.pdf.

[79] *See id.*

[80] Stillman, Robert, William Bishop, Kyla Malcolm, & Nicole Hildebrandt, *Regulatory Intervention in the Payment Card Industry by the Reserve Bank of Australia: Analysis of the Evidence* CRA INTERNATIONAL (2008), *available at* https://www.rba.gov.au/payments-and-infrastructure/payments-system-regulation/past-regulatory-reviews/review-of-card-payment-systems-reforms/pdf/review-0708-pre-conclusions/cra-28042008-2.pdf.

[81] *See* Iris Chan, Sophia Chong, & Stephen Mitchell, *The Personal Credit Card Market in Australia: Pricing over the Past Decade*, RESERVE BANK OF AUSTRALIA (2012), *available at* https://www.rba.gov.au/publications/bulletin/2012/mar/pdf/bu-0312-7.pdf.

[82] *See id.*

> changing by much larger amounts and the CPI is increasing by around 2½ per cent per year on average."[83]

Ironically, insofar as costs to merchants are passed on to consumers in the form of higher prices, the switch to three-party cards not subject to interchange-fee caps likely had some upward pricing pressure for consumers. As the 2012 Reserve Bank of Australia study put it, "Merchants largely bear the cost of these more generous rewards cards through the *higher* merchant service fees for American Express products, on average, unless they choose to pass that cost back through to cardholders in the form of a surcharge."[84]

An assessment of the effects of interchange-fee price controls in Europe also found no tangible evidence of pass-through of savings to retail consumers. The report simply asserts that "competition between merchants *should* result in the longer run in interchange fee reductions being reflected in lower prices or improvement of services on the consumer side."[85] Similarly, when price controls were imposed on interchange fees in Spain in 2010, the result was higher cardholder fees, reduced cardholder benefits, and no evidence of retail price pass-through to consumers.[86]

The U.S. experience under the Durbin Amendment illustrates the point further. In addition to reducing access to free checking and increasing fees for lower-income consumers, banks also eliminated or reduced debit-card rewards programs.[87] Prior to the passage of Dodd-Frank Act, rewards averaged approximately 5 cents per transaction; they were subsequently reduced to an average of about 2 cents per transaction.[88] Higher-income consumers adjusted to this reduced generosity by increasing their use of credit cards for transactional purposes, as credit-card rewards remained unaffected by the Durbin Amendment.[89] A discussion paper by the Federal Reserve Bank of Philadelphia Consumer Finance Institute observed that this shift from debit-card usage to credit cards was driven by two factors: "regulatory changes in the debit space that limited interchange, making debit rewards less financially viable for depository institutions and a change in preferences by both card issuers

---

[83] Reserve Bank of Australia, *Reform of Australia's Payments System: Preliminary conclusions of the 2007/08 Review*, April 2008.

[84] *See* Chan, Chong, & Mitchell., *supra* note *81* at 63.

[85] *See* EUROPEAN COMMISSION, COMMISSION STAFF WORKING DOCUMENT: REPORT ON THE APPLICATION OF REGULATION (EU) 2015/751 ON INTERCHANGE FEES FOR CARD-BASED PAYMENT TRANSACTIONS 7 (June 29, 2020), *available in* https://ec.europa.eu/competition/sectors/financial_services/IFR_report_card_payment.pdf.

[86] Juan Iranzo, Pascual Fernandez, Gustavo Matias, & Manuel Delgado, *The Effects of the Mandatory Decrease of Interchange Fees in Spain* (MPRA Paper No. 43097, Dec. 6, 2012), *available at* https://mpra.ub.uni-muenchen.de/43097/1/MPRA_paper_43097.pdf.

[87] *See* Darryl E. Getter, *Regulation of Debit Interchange Fees* at 8, CONGRESSIONAL RESEARCH SERVICE (May 16, 2017); *see also* ELECTRONIC PAYMENTS COALITION, OUT OF BALANCE: HOW THE DURBIN AMENDMENT HAS FAILED TO MEET ITS PROMISES 7 (Dec. 2018). Eliminating rewards, such as cash-back on purchases, is functionally equivalent to a price increase.

[88] Kay, Manuszak, Vojtech, *supra* note 45, at 99.

[89] *See* Zywicki, Manne, & Morris, *Price Controls*, *supra* note 37, at 18-22; *see also* Vladimir Mukharylyamov & Natasha Sarin, *The Impact of the Durbin Amendment on Banks, Merchants, and Consumers*, at 34-35 (Institute for Law and Economics Research Paper No. 19-06, Jan. 2019), *available at* https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=3048&context=faculty_scholarship; Tom Ankana, *Consumer Payment Preferences and the Impact of Technology and Regulation: Insights from the Via Payment Panel Study* (Federal Reserve Bank of Philadelphia Consumer Finance Institute Discussion Paper DP 19-01, Feb. 2019).

and consumers for more and richer rewards as incentives for using a particular form of payment."[90] Lower-income consumers, however, increased their use of cash and checks.[91] Ironically, therefore, the net effect of Section 1075's impact has been to reduce or eliminate rewards for those who use debit cards while preserving them for higher-income consumers who use credit cards.[92]

Moreover, mandatory reductions in interchange fees could harm many merchants themselves. If restricting interchange fees does lead to fewer or less generous rewards programs, one consequence could be less spending, therefore reducing revenue and profits for merchants. In this respect, it is possible that some merchants, especially smaller ones, would be more adversely affected than others, such as big-box merchants.[93]

Altogether, this suggests that it cannot be assumed that lower-income consumers will be made better off overall by caps on interchange fees. They almost certainly will see higher fees and less-generous rewards, while any cost savings to merchants will likely be passed through only incompletely and gradually. Higher-spending, higher-income consumers, by contrast, are likely to be largely unaffected, as they were by the Durbin Amendment and as illustrated by the Australian experience. Experience further suggests that while large, big-box merchants are likely to benefit from the cost savings they receive, any benefit to smaller merchants is speculative and might even be negative.

Conclusion

The principle of *primum non nocere*—or "first, do no harm"—suggests that it is sometimes better not to try to "solve" a problem if doing so risks causing more harm than good. This is even more true for problems that are poorly defined or based on false hypotheses.

Before taking action to correct the alleged "reverse Robin Hood" problem, regulators should first evaluate the evidence for and against the hypothesis that it is a real problem. The evidence presented here suggests that the hypothesis should be rejected and that action to address it could be counter-productive.

Regulators should also scrutinize the effect that interchange-fee caps under the Durbin Amendment have had on debit-card transactions. Despite the best intentions, these caps did little to solve the problems the rule was intended to address, while they also created a whole new set of harms. In

---

[90] Ankana, *supra* note 89, at 11.

[91] *See* Sergei Koulayev, Marc Rysman, Scott Schuh, & Joanna Stavins, *Explaining Adoption and Use of Payment Instruments by US Consumers*, 47 RAND J. OF ECON. 293 (2016). Kloulayev, et al., also note the same trends associated with higher and lower education levels.

[92] The regressive effects of interchange-fee price controls and the impact on payment-card rewards mirrors the experience with interchange-fee price controls in Australia, where rewards for ordinary cardholders decreased and the generosity of rewards programs for higher-income consumers increased. *See* Chan, Chong, Mitchell, *supra* note 81, at 55.

[93] *See, e.g.*, Todd J. Zywicki, Geoffrey A. Manne, & Julian Morris, *Unreasonable and Disproportionate: How the Durbin Amendment Harms Poorer Americans and Small Businesses*, at 20-23, INT'L CTR. FOR L. & ECON. (Apr. 25, 2017), http://laweconcenter.org/images/articles/icle-durbin_update_2017_final.pdf (discussing how large-box retailers benefitted from the Durbin Amendment, but smaller merchants did not and largely saw their interchange fees go up due to loss of price discrimination in their favor pre-Durbin).

particular, there is little evidence that merchants pass on savings from reduced interchange fees, but plenty of evidence that card issuers (in this case, banks and credit unions with more than $10 billion in assets) will find other ways to make up revenue shortfalls, to the detriment of consumers (especially poorer ones).

In light of these facts, regulators should be reluctant to act upon the reverse Robin Hood hypothesis by capping credit-card interchange fees. To do so would create far more risk of harm than good.