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ASSESSING THE COSTS & BENEFITS OF CREDIT CARD REWARDS: A RESPONSE TO WHO GAINS AND WHO LOSES FROM CREDIT CARD PAYMENTS? THEORY AND CALIBRATIONS

*Steven Semeraro**

For two decades, economic and legal academics have speculated about the impact of the fees that merchants pay for credit card acceptance. Since all customers pay the same price, the theory goes, everyone pays for the benefits that go only to credit card users. A recent Federal Reserve Bank of Boston (FRBB) policy paper written by economists Scott Schuh, Oz Shy, and Joanna Stavins entitled *Who Gains and Who Loses from Credit Card Payments? Theory and Calibrations*¹ has taken the argument a step further, contending that credit card programs reduce consumer welfare by transferring money from low-income households that purchase goods and services with payment

*Professor of Law, Thomas Jefferson School of Law. The author thanks the American Bankers Association for its generous support for this paper, and economists Scott Thompson and Eric Emch of the Bates, White economic consulting firm for their valuable assistance. During the late 1990s, the author was the lead attorney on an investigation of Visa and MasterCard when he served as a trial attorney with the United States Department of Justice, Antitrust Division. The views expressed herein are exclusively those of the author.

¹ Scott Schuh, Oz Shy & Joanna Stavins, *Who Gains and Who Loses from Credit Card Payments? Theory and Calibrations* (Federal Reserve Bank of Boston, Public Policy Discussion Papers No. 10-03, 2010) [hereinafter FRBB]. A revised version of the paper by the same authors expands their wealth transfer analysis beyond card rewards. Scott Schuh, Oz Shy & Joanna Stavins, *Who Gains and Who Loses from Credit Card Payments? Theory and Calibrations*, at 26 (May 4, 2011) [hereinafter Schuh et al. 2011]. This version, which has apparently not been published by the Federal Reserve Bank of Boston, is cited throughout to highlight relevant differences with Paper No. 10-03.

mechanisms other than credit cards to high-income households that pay with cards. Although recognizing that their analysis does not yield “precise policy recommendations that would necessarily optimize social welfare,”² the authors nonetheless offer suggestions for improvement.³ Specifically, they suggest that regulators “could” increase consumer welfare by (1) eliminating card system rules that prohibit merchants from surcharging credit card transactions, and (2) directly regulating merchant fees and reward rates.⁴ Both proposals would likely reduce or eliminate reward programs.

This article shows that the FRBB economists’ policy recommendations would be more likely to harm consumers than to help them. First, the authors’ welfare claims are narrower than a casual reader might assume. They do *not* argue that any reward program constitutes a bad deal for a cardholder who takes advantage of the program. On the contrary, they show that, regardless of a cardholder’s income level, reward cards benefit those who use them and collect rewards.⁵ Like all credit cards, they provide spending flexibility, a no-cost float period for those who do not run balances, and accounting benefits. In addition, reward cards effectively lower the price that card users pay for all goods and services purchased with the card through a bonus that suits the cardholder’s own market preferences. Any regulatory steps that reduce the value of reward card programs would unquestionably reduce the welfare of those consumers regularly receiving card rewards.

The FRBB authors do claim that reward programs harm those consumers who do not use credit cards because merchants increase prices to cover card acceptance costs. The FRBB authors’ data demonstrates that high-income households use reward credit cards more often than low-income households.⁶ This disproportionate use, the authors’ claim, transfers wealth from poorer to wealthier consumers. Importantly, however, the welfare transfer that they predict occurs, if at all, only because low-income households on average *choose* to use reward credit cards for a lower percentage of their purchases than do higher-income households.

² *Id.* at 35.

³ *Id.*

⁴ *Id.*

⁵ See *infra* Part II.A.

⁶ FRBB, *supra* note 1, at 7.

The FRBB authors' proposals would certainly reduce the value of reward card programs and thus the welfare of all reward card users. Any consumer welfare gains from implementing those proposals, however, would be quite speculative. To support their welfare predictions, the FRBB authors claim that one can draw meaningful conclusions about consumer welfare effects by assuming that: (1) merchants pass on the marginal cost of card acceptance through their retail prices to all consumers on a dollar-for-dollar basis⁷; and (2) the only relevant benefit in assessing the consumer welfare impact of payment system choice is the reward paid to credit card users.⁸

The data on which the FRBB authors rely do not confirm these assumptions. On the contrary, those assumptions are almost certainly wrong. Credit card acceptance benefits merchants, banks, and even consumers using other payment mechanisms in ways that impact the net prices paid by all customers. Merchants would not mark up their retail prices by the full marginal cost of credit card acceptance costs over other means of payment if, for example, card acceptance (1) increases sales by enabling consumers to shop more efficiently – alleviating the need to predetermine the amount of cash needed or knowing ones checking account balance – enabling a merchant to spread its fixed costs over more sales or (2) reduces other costs such as the risk of unpaid checks, late payment, default, and collection expenses.⁹ In addition, banks may use reward card system profits to innovate and expand products that benefit all consumers, such as more effective fraud protection, enhanced security, and systems that speed up transactions at the point of sale.¹⁰

Moreover, although consumers who choose not to use rewards credit cards by definition do not receive credit card rewards, they may still benefit from their payment choice in other ways. First, reward card use creates spillover effects – such as faster checkout times – benefiting all customers. Second, overwhelmingly consumers choose to use non-credit-card payment mechanisms for some purchases and reward credit cards

⁷ More specifically, the authors assume that credit card use increases retail prices by precisely the amount that credit card use exceeds the cost to the merchant of alternative means of payment. *See infra* Part IV.A. The authors' analysis ignores the extent to which merchant's benefit from card acceptance in ways that may lower prices. *See infra* Part IV.B.

⁸ *See infra* Part IV.A.

⁹ *See infra* Part IV.B.

¹⁰ *Id.*

for others, necessarily benefitting themselves in ways not fully accounted for in the FRBB policy paper.¹¹ As a result, the FRBB authors' welfare calculations are at best overstated and potentially entirely inaccurate.

Even if one irrationally ignored the non-reward benefits of payment system choices, the FRBB authors' welfare calculations would remain suspect. Important aspects of their consumer welfare calculation – most importantly, the strength of the preference consumers have for reward cards or other means of payment and the negative consumer welfare effect of transferring money from low- to high-income households – rest on assumptions that are entirely independent of the data on which the authors purport to rely.¹² These assumptions are critical to the magnitude of the consumer welfare effect that they predict, and the uncertainty with respect to these factors undermines the reliability of their analysis.

Regulatory intervention is also suspect because if the FRBB authors predicted wealth transfers from credit card programs existed, they would be indistinguishable from a myriad of other reward programs and retailing strategies that have the same impact.¹³ That these practices are so widespread indicates that they are generally accepted as legitimate competitive options supporting economic vitality.

Finally, the FRBB authors' specific policy proposals – encouraging surcharging and regulating fees – could have serious, negative unintended consequences.¹⁴ The ubiquitous nature of rewards programs and other retailing strategies that benefit those who spend heavily suggests that these programs have economic benefits. Rather than undermining card rewards, any regulatory activity in credit card markets should focus on expanding the availability of consumer-welfare enhancing reward programs to those consumers who currently choose not to use them.¹⁵ The FRBB authors' proposals, designed to reduce reward card availability, thus point in precisely the wrong direction.

This article begins by explaining the role of merchant fees

¹¹ See *infra* at 64-65 (reference to charts showing that two thirds of households have both credit and debit cards; nearly all have checking accounts in addition to cards; and they use these payment mechanisms in different percentages for different categories of purchases).

¹² See *infra* Part V.

¹³ See *infra* Part VI.

¹⁴ See *infra* Part VII.

¹⁵ See *infra* Part VIII.

in credit card systems. Part II summarizes the history of the literature recognizing that credit card programs may theoretically transfer wealth from low-income to high-income households. This part also examines the FRBB policy paper in this context. Part III demonstrates that the FRBB economists' conclusions are suspect because the assumptions underlying their analysis underestimate the benefits of current payment system choices accruing to merchants, card issuing banks, and non-credit card users. In Part IV, this paper shows that even if an individual irrationally ignored non-reward benefits, the author's consumer welfare predictions would depend on assumptions that are independent of the hard data and are thus essentially arbitrary. Part V shows that similar wealth transfer effects are pervasive throughout the economy. Part VI explains why permitting merchants to surcharge card transactions or regulating merchant fees would be unwise responses to any wealth transfer that may exist. And finally, this article offers alternative steps that could combat the potentially negative effects of transferring wealth without the risks associated with permitting card transaction surcharges or regulating acceptance fees.

I. PRICING IN CREDIT CARD MARKETS

This section explains how the stream of payments flows in a credit card transaction and how banks participating in the card system earn revenue. The process begins with a cardholder purchasing a good or service using the card, thus generating a receipt for payment. The card-purchase receipt flows from the merchant to its card acceptance bank (CAB) and then to the bank, such as Citibank, that issued the Visa, MasterCard, American Express, or Discover card (issuer). For example, when a customer makes a \$100 purchase with a credit card, the merchant's CAB would pay the retailer approximately \$98. The difference is the merchant's fee (\$2 in this case) for card acceptance. This fee is commonly called the merchant discount because it amounts to a discount from the full purchase price that compensates the credit card system.¹⁶

Next, the issuer would typically pay the CAB

¹⁶ In many cases, the merchant fee would include a small fixed amount per transaction as well as a percentage of the total. The fixed fee is ignored in the illustration in the text to demonstrate more clearly the flow of funds.

approximately \$98.50 for the receivable¹⁷ and bill the cardholder for the entire \$100, plus interest if the account has a balance. From the \$2.00 fee paid by the merchant, the CAB would typically keep about \$.50 or 25%. The remaining \$1.50, approximately 75% of the revenue from the merchant, constitutes the fee that a merchant effectively pays to the issuer.¹⁸ This fee is often referred to as the *interchange fee*.¹⁹ Both the level of the merchant discount and the percentages of the purchase price retained by the issuer and the CAB will vary depending on the industry, type of card, and a variety of other factors. In all cases, however, the issuer will receive a substantially larger percentage of the merchant fee than the CAB.²⁰

Although merchant fees are an important source of card-issuer revenue, approximately 70% of a typical card issuer's revenue comes from interest paid by cardholders for financed purchases.²¹ In addition, a recent survey by Phoenix Marketing International shows that some credit cards, and particularly reward cards, also carry an annual fee paid by the cardholder.²² Issuers also charge cardholders a variety of other fees for services provided as well as for violations of the cardholder agreement, such as late payments, that raise the cost of the system for all participants.

¹⁷ In practice, a small percentage of the merchant fee compensates the card network rather than either the CAB or the issuer for the network's costs of processing transactions.

¹⁸ Alan S. Frankel, *Monopoly and Competition in the Supply and Exchange of Money*, 66 ANTITRUST L. J. 313, 340 (1998).

¹⁹ The term interchange was used in the Visa and MasterCard systems because it constituted the fee that a bank acquiring card transactions from a merchant paid to the bank that had issued the card. Unitary systems such as American Express, Diners Club, and Discover did not technically have interchange fees. Nevertheless, they have always charged more to merchants than the cost of providing merchant services. As a result, merchant fees were used by these systems to support the card issuing business, just as they were in the Visa and MasterCard systems. Steven Semeraro, *Credit Card Interchange Fees: Three Decades of Antitrust Uncertainty*, 14 GEO. MASON L. REV. 941, 947 (2007).

²⁰ *Id.*

²¹ DAVID S. EVANS & RICHARD SCHMALENSSEE, *PAYING WITH PLASTIC: THE DIGITAL REVOLUTION IN BUYING AND BORROWING* 223 (2d ed. 2005).

²² Appendix I.F. This article relies on data produced by Phoenix Marketing International through a broad survey of consumers about credit card and other payment methods. This survey data is cited throughout this article and is on file with the Consumer Law Review.

II. THE LIMITED SCOPE OF THE FRBB AUTHORS' CONSUMER WELFARE ANALYSIS

The FRBB authors do *not* contend that (1) card use reduces the welfare of any consumer who receives card rewards; or (2) the banks' business model sacrifices profit from high-income card users in order to increase revenues earned from low-income households.

A. *Reward Card Holders Benefit From the Current Credit Card System*

The FRBB authors' data shows that reward credit cards are generally available to consumers in both low- and high-income groups, those who use reward credit cards to collect air travel, discounts, or cash, experience substantial welfare gains.²³ The FRBB policy paper thus confirms that reward cards are a good deal for those who use them to collect rewards, regardless of the cardholder's income level.²⁴ As the authors conclude, even "low-income credit card buyers" benefit from those cards, receiving "a subsidy (\$613)" annually as a result of their reward card use.²⁵

B. *High-Income Card Users Generate Substantial Bank Profits*

The FRBB policy paper focuses entirely on the fees that merchants pay for card acceptance. The authors' primary model takes no account of the impact of revolving credit, annual fees, or other fee revenue earned by banks issuing credit cards.²⁶ Yet, this

²³ FRBB, *supra* note 1, at 38 (Table 11) (showing that reducing card rewards alone would reduce consumer welfare).

²⁴ *Id.* at 20-21 (Table 6).

²⁵ *Id.* at 21.

²⁶ In a draft revision of their paper, the authors purport to take account of revolving debt. Schuh et al. 2011, *supra* note 3, at 9-10, 15-16, 19-24. Although they recognize that high-income households revolve more often and pay more interest (albeit at a slightly lower interest rate), the authors conclude that on average taking account of revolving debt increases the transfer somewhat. *Id.* at 9. Their revised analysis, however, is driven by the their assumptions about the distribution of profits through stock ownership. *Id.* at 27 (calculating that nearly two-thirds of the transfer between low- and high-income households persists even when the two groups are assumed to shop at entirely different merchants because of the authors assumptions about "interest payments, float, and redistributed profits"). *Id.* Transfer effects resulting from interest

revenue exceeds merchant fee revenue collected by card-issuing banks, and low-income households do not pay more than their proportional share of it. Over the past decade, Phoenix Marketing International surveyed over 21,000 households about their payment system choices.²⁷ The data generated by this survey confirmed that reward card accounts contribute more to total market performance than non-rewards accounts, particularly at high-income levels from all three sources (financing, cardholder fees, and merchant fees).²⁸ A rarely used account, by contrast, is unprofitable. High-use cardholders, a disproportionate percentage of which are high-income cardholders, thus subsidize low-income cardholders who use their credit cards only rarely.²⁹ The FRBB authors do not dispute this conclusion, recognizing that (1) “the propensity to revolve credit card spending is surprisingly similar across income groups”,³⁰ (2) “high-income households carry about twice as much revolving debt as low-income households”; and (3) high-income households pay on average almost twice as much interest.³¹ High-income households also generate more annual fee revenue than low-income households.³² The FRBB authors do not dispute this, recognizing that all cardholder income groups pay more than enough out of their own pockets “to cover the credit card rewards earned by the group.”³³

payments occur because they are assumed to fund the float period enjoyed by convenience users, a transfer that impacts high-income households as often as low-income households, (See Table 3), and is purely a matter of household choice. *Id.* at 9, 22-23. The assumptions about redistribution of bank profits are criticized. *See infra* at IV.C.

²⁷ Appendix at I.A. (providing background on data produced by the Phoenix Marketing International survey of consumers about their payment system choices). This survey data is cited throughout this article and is on file with the Consumer Law Review.

²⁸ *Id.*

²⁹ *Id.*

³⁰ FRBB, *supra* note 1, at 4. Reward credit cards often have a slightly higher interchange fee than non-reward cards, but this increment amounts to only about 25% of a typical reward payment and accounts for an even lower percentage of the more generous reward programs.

³¹ *Id.* at 42 (low income households average \$788 in interest per year while high income households average \$1,316).

³² *Id.* at 43 (low-income households pay an average of \$5.7 while high-income households pay \$7.7). The FRBB authors nevertheless conclude that interest income is unlikely to play “a major role in the [wealth] transfers.” *Id.* at 4, 42.

³³ *Id.* at 42.

This data and analysis shows that the FRBB authors' predicted wealth transfer from low- to high-income households cannot be attributed to any inherent flaw in the card systems. They do not point to any data suggesting that reward cards are unavailable to low-income households, and the authors make clear that they have no reason to believe that banks have designed card systems to transfer wealth.³⁴ The most recent Phoenix Marketing data confirms the wide availability of reward cards, showing that they outpace non-reward card ownership across income groups.

As a result, if high-income households receive disproportionate benefits, they do so in part because individual members of those households choose to use credit cards to make a higher percentage of their purchases than members of low-income households. Any wealth transfer that may occur is thus attributable to individual consumer choices about payment mechanisms.

III. THE HISTORY OF CREDIT CARD WEALTH TRANSFER ANALYSIS

The basic economic intuition underlying the FRBB authors' wealth transfer calculations is not new. Since the early-1980s, commentators have explained that credit card use might transfer wealth from non-card customers to card users because merchants pay for card transactions by blending their card acceptance fees with their other costs of doing business.³⁵ All customers thus pay the same retail price at the point of sale regardless of the means of payment used. So, if (a) a purchase made with a credit card costs merchants more than a purchase made with another means of payment and (b) merchants increase their retail prices on a dollar-for-dollar basis to recover the entire difference in cost between card acceptance and other means of payment, then (c) non-credit card customers would subsidize card users.

To the extent that high-income households use cards more frequently than low-income households, this transfer could cross income groups. Importantly, no commentator prior to the FRBB authors has claimed that the theoretical possibility of a wealth

³⁴ *Id.* at 4-5; *see infra* note 126 (citing sources confirming the wide availability of reward credit cards).

³⁵ *See infra* Part III.A.

transfer can be confirmed *and* be used to calculate the overall effect of credit card use on consumer welfare.

This section reviews the existing commentary, placing the FRBB policy paper in the context of a long-history of theorizing about the potential wealth transfer effects of credit card use. It first focuses on commentary recognizing the theoretical possibility of a transfer, and it then summarizes the claims made by the FRBB authors and the author of another recent paper claiming to demonstrate empirically that a transfer in fact occurs.

A. The Theory that Credit Card Use Transfers Wealth

In 1983, a Federal Reserve Board of Governors' staff report explained that a statute permitting cash discounts was at least in part justified by a potential wealth transfer from non-credit-card to credit card users. The report noted that "[t]he fundamental thesis underlying the Cash Discount Act is that credit card transactions are more costly to retailers than cash or check transactions, and that the higher costs of credit cards are incorporated in the price of goods and services paid by all customers, resulting in a subsidy of credit buyers by cash purchasers."³⁶

A dozen years later, economists Dennis Carlton and Alan Frankel expanded on this possibility. Interchange fees, they explained, "can be viewed as a way to raise costs to merchants who then pass those costs on to cash and credit customers alike by charging the same higher price to both."³⁷ Like the Federal Reserve authors' staff, these economists recognized that merchants generally charge the same price to all customers regardless of the means of payment,³⁸ and both cash and credit consumers therefore contribute to the merchant's costs of

³⁶ John M. Barron, Michael E. Staten & John Umbeck, *Discounts for Cash in Retail Gasoline Marketing* 16 (Credit Research Center, Krannert Graduate School of Management, Purdue University, Working Paper 57, Sept.1991) (quoting *Credit Cards in the U.S. Economy: Their Impact on Costs, Prices, and Retail Sales*, Washington: Board of Governors of the Federal Reserve System, 1996) available at <http://faculty.msb.edu/prog/CRC/pdf/wp57.pdf>.

³⁷ Dennis W. Carlton & Alan S. Frankel, *The Antitrust Economics of Credit Card Networks*, 63 ANTITRUST L. J. 643, 656-58 (1994-95).

³⁸ Alan S. Frankel & Allan L. Shampine, *The Economic Effects of Interchange Fees*, 73 ANTITRUST L. J. 627, 632 (2006) ("Price coherence creates cross-subsidies between payment methods with different costs."); Frankel, *supra* note 18, at 314-39.

accepting various means of payment.³⁹

In 2001, economist Michael Katz concluded that, all else being equal, “[w]hen card-based transactions are more costly to merchants than are non-card-based transactions, non-card users are hurt by card use because merchants have incentives to raise retail prices to reflect their higher costs due to some consumers’ using relatively expensive payment means.”⁴⁰ Katz identified the potential problem as an economic distortion, rather than a wealth transfer. The potentially higher prices that might occur as a result of increased card use, Katz argued, would inefficiently distort consumption by increasing the relative attractiveness of goods sold in markets with little or no card use.⁴¹

In 2002-03, two economic papers presented formal models recognizing that credit card use could potentially produce cross subsidies between types of consumers. Marius Schwartz and Daniel Vincent examined the interacting effects of the card systems’ no-surcharge rules and reward programs.⁴² They found that cash customers are harmed because they fund resources that are used to compensate card users, although they concluded that the net social welfare effect of surcharging is ambiguous.⁴³ Shortly thereafter, Sujit Chakravorti and William Emmons concluded that surcharging could reduce the negative effects of a cross-subsidy from those who borrow on credit cards to those

³⁹ Michael L. Katz, *Commissioned Report, 2 REFORM OF CREDIT CARD SCHEMES IN AUSTRALIA* 41 (Reserve Bank of Australia Aug. 2001) *available at* http://www.rba.gov.au/PaymentsSystem/Reforms/CCSchemes/consult_doc_other_pub.html (“When card-based transactions are more costly to merchants than are non-card-based transactions, non-card users are hurt by card use because merchants have incentives to raise retail prices to reflect their higher costs due to some consumers’ using relatively expensive payment means.”); Jean-Charles Rochet & Jean Tirole, *Externalities and Regulation in Card Payment Systems*, 5 *REV. NETWORK CON.* 1, 4 (2006) (“Merchants are likely to pass the extra costs, if any, of card transactions through to consumers in general, that is to cardholders and cash payers altogether”). This subsidization of card use by merchants may be efficient just as the subsidization of newspaper production and delivery costs by newspaper advertisers is efficient. For a discussion of the economics, see Steven Semeraro, *The Antitrust Economics (and Law) of Surcharging Credit Card Transactions*, 14 *STAN. J. L. BUS. & FIN.* 343, 353-65 (2009).

⁴⁰ Katz, *supra* note 39, at 41.

⁴¹ *Id.* at 39.

⁴² Marius Schwartz & Daniel R. Vincent, *Same Price, Cash or Card: Vertical Control by Payment Networks* 6, 23 (Dep’t. of Econ., Georgetown U., Working Paper 02-01, 2002).

⁴³ *Id.*

who use the cards merely to transact and collect rewards.⁴⁴

In 2005, Carlton and Frankel published another paper, this time suggesting that a potential wealth transfer could flow not just from card users to non-card users, but from low- to high-income households.⁴⁵ “[L]ow income and minority households,” they observed, “are far more likely to use cash exclusively than are more affluent households.”⁴⁶

In 2006, Alan Frankel, this time with economist Allan Shampine, argued that card acceptance fees “significantly and arbitrarily raise[] prices,” and distort competition by “steering consumers toward using more costly and less efficient payment methods.”⁴⁷ Their analysis shows a connection between increasing interchange fees and increasing card purchase volume, because card issuers use the revenue from interchange fees to lower prices for card users and to increase rewards.⁴⁸ “Although it is true that an interchange fee will stimulate card usage,” they claimed, “it accomplishes this not merely by shifting costs of card usage to merchants, but to non-card customers.”⁴⁹

None of this commentary took account of the benefits that increasing card use provides to merchants. Instead, the authors reasoned that *all else being equal*, as card acceptance fees increase, merchants will tend to raise prices as they would if any other cost of doing business increased.⁵⁰ Most of the authors simply ignored the possibility that all would not be equal if credit card use benefitted merchants, banks, and non-card-using customers.⁵¹ Taking these benefits into account could yield net

⁴⁴ Sujit Chakravorti & William R. Emmons, *Who Pays for Credit Cards?*, 37 J. OF CONSUMER AFF. 208, 226-27 (2003).

⁴⁵ Dennis Carleton & Alan Frankel, *Transaction Costs, Externalities, and “Two-Sided” Payment Markets*, 2005 COLUM. BUS. L. REV. 617, 637, 640-41 (“only 28.5% of families with annual income below \$10,000 possess a bank credit card, compared to 95.8% of families with incomes above \$100,000, and only ‘59% of African-American households had credit cards in 2001, compared to 53% for Latinos and 82% for whites’”) (quoting *Study Shows Card Use Linked to Race*, CARDLINE, <http://www.cardline.com> (May 24, 2005) (citing a study based on data from the Federal Reserve’s Survey of Consumer Finances for the years 1992 through 2001).

⁴⁶ *Id.*

⁴⁷ Frankel & Shampine, *supra* note 38, at 671-72.

⁴⁸ *Id.* at 634-37 (“cardholders pay higher retail prices as interchange fees increase”).

⁴⁹ *Id.* at 658-59.

⁵⁰ *Id.* at 636; Chakravorti & Emmons, *supra* note 44, at 210; Schwartz & Vincent, *supra* note 42, at 16.

⁵¹ Schwartz and Vincent are the exception, recognizing explicitly that they

consumer welfare increases, even for non-card-using consumers, compared to a world without credit cards.

B. Claiming to Empirically Confirm a Consumer -Welfare Decreasing Transfer

Prior to the FRBB policy paper, no commentator claimed to quantify the magnitude of a consumer welfare decrease as a result of the theoretical possibility of a wealth transfer from low-income to high-income households. One non-economist author, Adam Levitin, did claim to empirically confirm a wealth transfer from non-card users to credit card purchasers.⁵² This section identifies the weaknesses in Levitin's more limited wealth transfer claim, and it then reviews the FRBB authors' uniquely expansive social welfare claims.

1. Credit Card Fees and Gasoline Retailer Cash Discounts

Levitin based his analysis on data showing that when, in the late 1980s, gasoline retailers regularly charged separate cash and credit prices, they always charged card users more than cash customers. From this, he concluded that card acceptance increased costs for all customers and thus shifted wealth toward credit card users.⁵³ Importantly, Levitin's claim is distinguishable from those made in the FRBB policy paper, because Levitin did not draw explicit conclusions about changes in overall consumer welfare as a result of the wealth transfer that he purported to confirm.

In addition, Levitin's analysis was criticized because he ignored the likelihood that the market forces driving the gas stations' differing prices for cash and credit transactions were attributable to factors having little to do with credit card acceptance fees.⁵⁴ Since the late 1980s, both credit markets and

"restrict[ed their] attention to . . . where the merchant derives no gross benefit from processing card rather than cash transactions . . ." Schwartz & Vincent, *supra* note 42, at 16.

⁵² Adam Levitin, *Priceless? The Social Costs of Credit Card Merchant Restraints*, 45 HARV. J. ON LEGIS. 1 (2008).

⁵³ Although Levitin's empirical analysis did not directly address a wealth transfer between income groups, he nonetheless urged Congress to take steps similar to those proposed by the FRBB authors, including rules prohibiting merchants from surcharging card transactions. *Id.* at 15-16.

⁵⁴ Steven Semeraro, *The Reverse-Robin-Hood-Cross-Subsidy Hypothesis: Do Credit Card Systems Tax the Poor and Reward the Rich?*, 40 RUTGERS L.

the benefits of card acceptance have changed dramatically. Most critically, gasoline retailers now overwhelmingly charge the same price for cash and credit purchases, and some effectively discount credit purchases through the use of reward cards.⁵⁵ As a result, the price differences observed in Levitin's data are not generalizable across time and industries, and thus cannot conclusively demonstrate a transfer from non-card users to card purchasers, much less from low-income to high-income households.⁵⁶

2. The FRBB Policy Paper's Unique Consumer Welfare Claims

The FRBB policy paper's authors acknowledge that the theory that credit card use may transfer wealth is not new. But they claim to be "the first to compute who gains and loses from credit card payments in the aggregate economy" on a dollar-for-dollar basis.⁵⁷ In summarizing their findings, the FRBB authors claim that a consumer's "decision to pay by credit card involves . . . retail price increases, a nontrivial transfer of income from cash to card payers, and consequently a transfer from low-income to high-income consumers."⁵⁸

This process occurs, the FRBB authors contend, because "merchants mark up their retail prices for all consumers by enough to recoup the merchant fees from credit card sales"⁵⁹ and "merchant fees are passed on [] to all buyers in the form of higher retail prices."⁶⁰ Card rewards come into play because card issuers are assumed to use merchant fees in part to pay rewards to card users. Non-card users thus pay higher prices that help fund the

J. REV. 419, 437-43 (2009).

⁵⁵ Appendix II.K. This article relies on data produced by Phoenix Marketing International through a broad survey of consumers about credit card and other payment methods. This survey data is cited throughout this article and is on file with the Consumer Law Review. See *Shell Platinum Mastercard*, SHELL, http://www.shell.us/home/content/usa/products_services/shell_cards/mastercard/ (last visited Oct. 25, 2012) (describing Exxon the Shell MasterCard paying a 15 cent with which cardholders can save \$.10-.20 per gallon rebate plus 2% of other purchases up compared to \$10,000 and 1% on additional eligible purchases paying with cash).

⁵⁶ Semeraro, *supra* note 54, at 437-43.

⁵⁷ Schuh et al. 2011, *supra* note 1, at 2.

⁵⁸ *Id.* at 1.

⁵⁹ *Id.*

⁶⁰ *Id.* at 2.

rewards, but they receive no rewards themselves. Reward card use thus transfers wealth, the authors reason, to those who use those cards.⁶¹

Next, the FRBB authors observe that card use is not consistent across income types. Higher income groups use credit cards more and receive greater rewards than low-income groups. “Consequently,” the authors reason, “the subsidy of credit card payers by cash payers also involves a regressive transfer of income from low-income to high-income consumers.”⁶² The authors calculate that on average each household with an annual income below \$50,000 contributes from \$21-\$26 to subsidize wealthier households. The loss becomes a small gain for households with incomes exceeding \$50,000 annually and grows to the point that the average household earning above \$150,000 per year receives a \$750 annual subsidy.⁶³ The authors then calculate that eliminating merchant fees and card rewards would increase consumer welfare by 0.15-0.26 percent; a result that they believe justifies regulatory intervention.⁶⁴

The authors acknowledge that households, merchants, and banks all could take steps to preempt these predicted welfare transfers and that “the limitations of [their] model and analysis [does not permit them to] provide precise policy recommendations that would necessarily optimize social welfare.”⁶⁵ Nevertheless,

⁶¹ See generally *id.* at 28 (showing assumed values for the cost of accepting cash, credit cards, and of reward payments to card users).

⁶² *Id.* at 2.

⁶³ *Id.* at 22. In a draft revision of the paper, the authors purport to consider the financing component of credit cards in addition to merchant fees and rewards. In this version, the positive impact of cards does not kick in until household income exceeds \$120,000 annually and the authors calculate that households making under \$100,000 on average contribute \$81 and households making over \$100,000 gain \$350. Schuh et al. 2011, *supra* note 1, at 26; *id.* at 3 (breaking the calculation out as, on average, a \$63 loss for households earning less than \$20,000 per year and a \$840 gain for households earning more than \$150,000 annually).

⁶⁴ Schuh et al. 2011, *supra* note 1, at 3-4, 21. The authors consider alterations to their model (e.g., price differentiation and imperfect competition) that would reduce, but not eliminate, the transfer payment that they calculate. *Id.* at 38-40. They then conjecture that business card use, which they do not consider, would increase the transfer because business cards are more likely to be used by high-income households. *Id.* at 43. But business cards are also likely to be used overwhelmingly to make purchases that low-income cardholders are relatively less likely to make: air travel, taxis, expensive hotels, and fine dining establishments.

⁶⁵ *Id.* at 35.

they recommend, *inter alia*, that regulatory authorities consider the following initiatives: eliminate impediments to merchants surcharging card transactions; and directly regulate merchant fees with the caveat that the optimal fee is difficult to determine and thus regulators “could actually reduce consumer welfare.”⁶⁶

The following section demonstrates that the FRBB authors’ wealth transfer calculations are suspect because of their failure to consider fully the benefits of various payment system choices to merchants, banks, and non-credit-card users. These benefits impact the magnitude of any wealth transfer and potentially its direction as well. Subsequent parts show that even if non-reward benefits are ignored, (1) the authors’ welfare calculations rest on essentially arbitrary assumptions that are not dictated by their data, and (2) any wealth transfer that may occur would not justify the sort of regulatory responses that the FRBB authors propose.

IV. TAKING ACCOUNT OF THE FULL BENEFITS OF PAYMENT SYSTEM CHOICES

The FRBB policy paper claims to calculate the amount by which credit card use reduces consumer welfare. In making their predictions, the authors purport to rely on a comprehensive data set.⁶⁷ But these hard data do not dictate their welfare calculations. To generate those results, the authors implausibly assume that the only benefits from payment system choice that matter to consumer welfare are the rewards paid to credit card users. This Part explains the authors’ assumption and then discusses how the array of benefits flowing from card use to merchants, banks, and even non-credit-card using consumers impacts consumer welfare.

A. The FRBB Authors’ Implicitly Assume that Credit Card Rewards are the Only Benefit of Payment System Choice

The authors’ consumer welfare prediction flows from the following line of reasoning: a merchant’s net – as opposed to out-of-pocket – cost of accepting credit cards is equal to the difference

⁶⁶ *Id.* at 35-36.

⁶⁷ *Id.* at 5 (finding that over the past 20 years, the percentage of total consumption paid for by credit cards has increased by two thirds); *id.* at 7-9, 16 (wealthy consumers on average use credit cards more than low-income households but wide variance exists within all wealth levels).

between the price that a bank charges the merchant for card acceptance services and the merchant's blended out-of-pocket costs for handling alternative means of payment (*i.e.*, the merchant receives no cost reducing benefits from card acceptance); a merchant passes "through the full merchant [credit card acceptance] fee to . . . customers via the retail price,"⁶⁸ making the merchant's single price to all customers higher than it otherwise would be in the absence of credit card use by precisely the amount that the merchant's card acceptance fees exceed what the merchant would have paid if its customers had used alternative means of payment;⁶⁹ card fees are in fact higher than the cost of other means of payment and thus card use increases retail prices and reduces the welfare of all consumers; and credit card rewards increase the welfare of card-using consumers more than the higher retail prices reduced their welfare, but non-card using consumers are worse off because they receive no rewards and, implicitly, no other benefit flowing from payment system choice is relevant to consumer welfare.

To be sure, the FRBB policy paper acknowledges that the "validity [of its assumptions] is an empirical matter and the data needed to verify them are not available."⁷⁰ But the problem goes well beyond a lack of precision in the available information to the basic question of how to assess consumer welfare. The authors tacitly and inexplicably deem benefits flowing from card use (other than rewards) irrelevant. They never acknowledge this assumption. Like most of the theoretical papers summarized in Part III, they fail to incorporate into their calculations other benefits from payment system choices that flow to merchants, banks, and non-credit-card-using consumers. Unlike the theoretical papers, however, the FRBB authors claim to draw firm, real world conclusions from their analysis.

The following sections show that (1) the non-reward benefits of card use and (2) the benefits that consumers receive from choosing different payment mechanisms for different purposes could both significantly impact the magnitude and even the direction of any wealth transfer and thus the consumer welfare implications of card rewards.

⁶⁸ *Id.* at 16.

⁶⁹ *Id.* at 17.

⁷⁰ *Id.* at 16.

B. The Benefits of Credit Card Use to Merchants

The FRBB authors' analysis considers the merchants' out-of-pocket cost of accepting credit cards, but it fails to consider the benefits accruing to the merchant as a result of card acceptance or the costs that would likely accrue if credit cards were not available. If the authors believe that merchants receive no direct benefits or cost savings, they fail to explain that wholly unjustified conclusion. Merchants are not required to accept credit cards. Some do not, and many do not accept all brands of cards. Merchants must therefore perceive some benefit to accepting the cards that they choose to accept.

To determine the impact of card acceptance on retail prices and consumer welfare, a merchant's benefits, including ancillary cost savings resulting from card acceptance, must be weighed against its costs to determine the merchant's net loss or gain. The FRBB authors effectively assume that, without credit cards, the merchant would have exactly the same costs (except for the absence of credit card acceptance fees) and make just as many sales in precisely the same quantities and with the same likelihood of actually receiving timely payment. The authors' analysis thus amounts to a worst-case scenario that would apply only if – for some mysterious reason – merchants accepted credit cards even though they received no benefit from doing so.

No hard data supports this unrealistic assumption, and strong intuitions as well as available data weigh against it. As an initial matter, credit cards provide the merchant with a guaranteed source of timely payment. Particularly for larger purchases, the likely alternative – a check – carries considerable risk.⁷¹ According to the 2010 Federal Reserve Payments Study, 126.8 million checks totaling \$126.9 billion were returned unpaid.⁷² Although not all bad checks were written to merchants that could have alternatively accepted credit card payments, a

⁷¹ Although the percentage of non-cash payments made by check has fallen in recent years, they are still used for approximately twenty percent of all payments and probably a much higher percentage of large payments in excess of a few hundred dollars. FEDERAL RESERVE SYSTEM, THE 2010 FEDERAL RESERVE PAYMENTS STUDY: NONCASH PAYMENT TRENDS IN THE UNITED STATES: 2006 – 2009 11 (Apr. 5, 2011) (showing that in 2009 out of \$109 billion non-cash payments 24.5 billion were paid by check compared to 21.6 billion by credit card); *id.* at 13 (showing average check to be \$1165); *id.* at 54 (showing average value of a credit card transaction to be \$86).

⁷² *Id.* at 23.

substantial portion surely were. Over 70% of check payments by number and over 80% by value were made by consumers or businesses to businesses and thus potentially could have substituted for a credit card transaction.⁷³ And subscribing to systems to protect against bad checks would (1) increase the merchant's out of pocket costs just as credit card acceptance does, but (2) not provide the additional benefits credit cards provide. These benefits are discussed in Part IV *infra*, and include increased sales, reduced payment delays or defaults, reduced merchant collection costs, improved transaction flow, and assistance with accounting.⁷⁴

Accepting credit cards may thus lead a merchant to decrease its retail prices if the relative *net* costs of non-credit-card payment mechanisms that the merchant accepts exceed the net cost of credit cards.⁷⁵ To determine the net cost, one must subtract from the out-of-pocket expenses of accepting a payment mechanism – on which the FRBB authors rely – the incremental benefits and avoided ancillary costs that the merchant derives from customers choosing that form of payment compared to the alternatives.⁷⁶ Assuming that retail markets are competitive, these benefits should translate into consumer benefits through lower retail prices or quality enhancements, such as faster transactions. When these merchant benefits are combined with those accruing to non-credit card consumers as a result of their payment choice (*see infra* IV.D.), the FRBB authors' welfare conclusions are

⁷³ *Id.* at 32 (showing that 71.4 percent of checks are written to businesses from consumers or other businesses); *id.* at 35 (showing that 79.5 percent of check value comes from checks written to businesses by consumers or other businesses).

⁷⁴ See Margaret E. Guerin-Calvert & Jansuz A. Ordovery, *Merchant Benefits and Public Policy toward Interchange: An Economic Assessment*, 18-19 (2005) available at http://www.newyorkfed.org/research/conference/2005/antitrust/Guerin_Calvert_Ordovery.pdf (reviewing the empirical evidence and concluding that “the costs of providing [check verification] services are roughly comparable – if not somewhat higher – than those for credit card ‘payment guarantee’ services”).

⁷⁵ In a draft revision of their paper, the FRBB authors recognize that something other than a 100 percent pass through is possible, but they continue to assume it as their benchmark. Schuh et al. 2011, *supra* note 1, at 19.

⁷⁶ Julian Wright, *The Determinants of Optimal Interchange Fees in Payment Systems*, LII J. OF INDUS. ECON. 1, 18, 20 (2004) (“one cannot presume . . . that cash-paying customers necessarily pay more as a result of the existence of more expensive card-paying customers – one has to consider the additional benefits the cards provide as well”).

significantly undermined.

The following subsections analyze the relative costs and benefits to merchants of accepting various means of payment, concluding that disparities producing significant wealth transfers are unlikely and, if they exist, they are likely to be small and non-credit card users are likely to be better off when the merchants with whom they deal accept credit cards. Subsequent sections will then explain how benefits accruing to banks and non-cardholding consumers also positively impact consumer welfare in ways not taken into account by the FRBB authors.

1. The Costs of Accepting Payment Mechanisms

Determining the cost of accepting a means of payment is more complicated than asking how much a merchant must pay to a service provider. Any form of payment will create expenses for the merchant. For example, one tends to think that accepting cash is free. In fact, cash-accepting merchants bear significant costs that would not be borne by a merchant, such as an internet-only retailer, that only accepted cards. These costs range from the time it takes to make change to the costs of counting the cash and making deposits, to theft losses and the cost of insuring against them.⁷⁷ For example, a Food Marketing Research study calculated that the cost of cash acceptance was 1.9% of a \$100 transaction without taking account of uncompensated theft losses or incremental insurance costs as a result of cash acceptance.⁷⁸ Under a unitary retail pricing policy, a non-cash purchaser must help cover these expenses, just as a cash-paying customer contributes to the merchant's cost of accepting credit cards.

To determine the direction of any subsidy, one must look to the relative net costs of various means of payment. The FRBB

⁷⁷ Timothy J. Muris, *Payment Card Regulation and the (Mis)application of Economics of Two-sided Markets*, 2005 COLUM. BUS. L. REV. 515, 538 (2005) (explaining that “[c]ash, for instance, imposes costs on retailers and consumers that electronic payment systems do not. One example is the labor cost associated with counting cash and reconciling the cash register drawer. As labor costs increase, the cost of cash payments to retailers becomes more expensive relative to electronic payments. In addition, cash has a higher risk of theft and loss for both consumers and merchants (from employee malfeasance). The costs associated with collecting and transporting cash safely, most notably armored cars, do not exist for payment cards”).

⁷⁸ FRONTIER ECONOMICS, JOINT BANK REVIEW OF CREDIT CARD MEMBERSHIP AND INTERCHANGE FEES: REPORT ON CREDIT CARD INTERCHANGE FEES TO REVIEW BANKS 22 (2001).

authors assume a 1.5% difference between credit cards, on the one hand, and a blended rate for all other means of payment, on the other.⁷⁹ Although they purport to rely on sophisticated cost studies,⁸⁰ the variation in these studies reveals that there is no accepted method of calculating the relative costs of payment mechanisms. Moreover, at average transaction volumes, these studies generally calculate the cost difference between credit cards and other means of payment at less than 1% of the retail price.⁸¹

Even this low percentage is likely to be overstated – and may point in the wrong direction entirely – given the potential for ancillary cost savings flowing from card acceptance. As the economists Guerin-Calvert and Ordovery have explained, “academic papers assessing interchange fees and the efficiency and welfare effects of various outcomes are necessarily based on stripped down models that do not capture the richness of the markets at issue.”⁸² As a result, they have tended to underestimate the ancillary cost savings that merchants enjoy because they accept credit cards.⁸³

The principal ancillary cost savings from credit card acceptance encompass payment verification and credit extension. Were merchants to forego card acceptance, most would continue to desire means to continue verifying payments and extending credit. Some larger merchants may be able to perform these functions for themselves, though many could not. And while third-party providers exist, the size and ubiquity of credit card

⁷⁹ FRBB, *supra* note 1, at 13. Even using the authors’ own number, the impact of card rewards is far less significant than the fee difference. Although the authors favor eliminating all card rewards, *id.* at 34, their analysis predicts that doing so would ameliorate only 1.4% of the markup consumers purportedly pay as a result of credit card use. *Id.* at 29, 32, 36-37 (merchant fee more influential than rewards). Of course, eliminating card rewards would entirely eliminate the consumer welfare gains now enjoyed by those using these cards.

⁸⁰ David Humphrey et al., *What Does It Cost to Make a Payment?*, 2 REV. OF NETWORK ECON. 159, 162-63 (2003); Daniel D. Garcia Swartz, Robert W. Hahn & Anne Layne-Farrar, *The Economics of a Cashless Society: An Analysis of the Costs and Benefits of Payment Instruments*, 5 REV. OF NET. ECON. 199, at 203, 208, 213-14 (2006), available at <http://www.aei-bookings.org/admin/authorpdfs/page.php?id=1048>.

⁸¹ *Id.*; Guerin-Calvert & Ordovery, *supra* note 74, at 26 (citing a 2004 study finding that the cost of processing a \$100 transaction with a credit card was only 21 cents more than processing a cash transaction of a similar size).

⁸² *Id.* at 9.

⁸³ *Id.*

networks take advantage of economies of scale and scope that are inaccessible to even the largest merchants or third-party providers.⁸⁴ Substitute verification and authorization services are thus likely to be inferior to those provided by credit card networks and “substantially exceed the implicit price that merchants [now pay] . . . to payments networks.”⁸⁵ The ancillary costs that merchants would have to bear if they did not accept credit cards could thus outweigh any additional out-of-pocket costs that those merchants must pay. The next section will look more broadly at the benefits that card acceptance provides to merchants.

2. Potential for Wealth Transfers Considering Merchant Benefits

The FRBB authors’ analysis attributes their predicted consumer welfare loss to merchant card acceptance fees, which the authors assume to be higher than the costs merchants bear when customers use other forms of payment. In that simple world where card acceptance simply increases costs, one might conclude that consumers would be better off without credit cards. Considering that merchants may receive benefits from cards that can impact overall pricing decisions and consumer welfare, the issue becomes more complicated. This sub-section considers how the benefits that merchants receive from accepting cards might benefit all consumers. It then focuses on the FRBB authors’ claim that reward cards are the primary culprits in transferring wealth from low- to high-income households.

a. The Merchant Benefits of Credit Card Acceptance

Credit card use provides a merchant with prompt, guaranteed payment and may, among other things, increase sales, reduce instances of non- and late-payment, lower theft insurance costs, and improve customer flow at the point of sale and various aspects of accounting.⁸⁶ Although these benefits are almost

⁸⁴ *Id.* at 13-25 (reviewing the services credit card networks provide to merchants that would be more costly and less effective if merchants needed to acquire them from other sources).

⁸⁵ *Id.* at 11-12.

⁸⁶ Margaret E. Guerin-Calvert & Janusz A. Ordover, *Merchant Benefits and Public Policy Towards Interchange: An Economic Assessment* 4 REV. NETWORK ECON. 384, 387, 391-407 (2006).

certainly real and substantial, they are difficult, if not impossible, to measure precisely. A merchant may experience them in complex ways that evolve over time and that are difficult to isolate from other causes. As a result, the benefits of credit card use may be difficult even for the merchant itself to quantify. The cost of card acceptance is immediate, while the benefits of increased sales and savings from prompt payment and reduced default are delayed and difficult to isolate from other potential causes. For example, if a merchant begins accepting cards at the start of an economic downturn, purchase volume may fall, payments may be less timely, and default rates may increase in absolute terms. Card acceptance may nevertheless have lessened the impact of each negative event in ways that would be hard for the merchant to perceive, much less measure. Nevertheless, the merchant's prices could be lower than they would have been if it had never accepted cards.

Although a definitive empirical measure of the net costs of various means of payment will not be readily forthcoming, analysis may still shed light on the likelihood of significant wealth transfers. The most significant incremental benefit of credit card use is the potential to increase sales.⁸⁷ Obviously, an easily accessible line of credit will enable some consumers to make purchases that they could not otherwise make because of then-existing resource constraints and the relatively high cost of obtaining other forms of credit.⁸⁸ In addition, some research indicates that psychological factors lead credit card users to spend more than they otherwise would, even when resource constraints do not exist.⁸⁹ A 1996 Ernst and Young survey, for example, found that merchants have recognized this effect for some time: 83% indicated that accepting credit cards would increase sales

⁸⁷ See *infra* Part IV.B.2.a.

⁸⁸ Importantly, the cost of obtaining credit cannot be gauged solely by the interest rate. Convenience is also a critical factor. For example, both home equity and pay-day loans require substantial up-front investments of time and planning that are not required of customers using credit cards.

⁸⁹ See Priya Raghurir & Joydeep Srivastava, *Monopoly Money: The Effect of Payment Coupling and Form on Spending Behavior*, 14 J. OF EXPERIMENTAL PSYCHOL.: APPLIED 213 (2008); see also Adam J. Levitin, *The Antitrust Super Bowl: America's Payment Systems, No-Surcharge Rules, and The Hidden Costs of Credit*, 3 BERKELEY BUS. L.J. 265, 288 (2005) (explaining that with credit cards consumers will "make more purchases because they feel less constrained in credit spending than they do when spending cash on hand"); Levitin, *supra* note 52, at 38-39.

and 58% thought accepting credit cards would increase profits.⁹⁰ Currently, business consultants are advising merchants that accepting cards will increase their sales, and an ever-growing collection of merchants appear to be reaching that conclusion.⁹¹ Two long-time holdouts, The Waffle House and Neiman Marcus, recently agreed to accept credit cards,⁹² and New York City taxis reported that introducing card acceptance increased both ridership and tips substantially and, three years into the program, these effects have persisted and total revenue and the percentage of riders paying by card has increased significantly.⁹³ There have been reports that accepting cards significantly increased the average amount spent at McDonald's,⁹⁴ and even the Salvation

⁹⁰ Chakravorti & Emmons, *supra* note 44, at 213 (citing Ernst & Young, *Survey of Retail Payment Systems*, Chain Store Age, (1996)).

⁹¹ Appendix at II.A. This article relies on data produced by Phoenix Marketing International through a broad survey of consumers about credit card and other payment methods. This survey data is cited throughout this article and is on file with the Consumer Law Review.

See, e.g., Chris Rempel, *Are You Losing Business by Only Accepting Cash and Checks*, <http://ezinearticles.com/?Are-You-Losing-Business-by-Only-Accepting-Cash-and-Checks?&id=669109>.

⁹² Appendix at II.I & J. This article relies on data produced by Phoenix Marketing International through a broad survey of consumers about credit card and other payment methods. This survey data is cited throughout this article and is on file with the Consumer Law Review.

Nick Vagnoni, *Waffle House to accept credit cards*, SLASHFOOD (Feb. 21, 2006) available at <http://www.slashfood.com/2006/02/21/waffle-house-to-accept-credit-cards>; Dana Mattioli, *Hoity-Toity to Hoi Polloi: Neiman Takes More Plastic*, WALL ST. J. (Oct. 27, 2011) available at <http://online.wsj.com/article/SB10001424052970204505304577000103355671444.html>.

⁹³ Appendix at II.B. This article relies on data produced by Phoenix Marketing International through a broad survey of consumers about credit card and other payment methods. This survey data is cited throughout this article and is on file with the Consumer Law Review. Ted Mann, *More Decide to Charge a Taxi Ride*, WALL ST. J. (Feb. 27, 2012), available at <http://online.wsj.com/article/SB10001424052970204520204577247850694349844.html>; Michael M. Grynbaum, *New York's Cabbies Like Credit Cards? Go Figure*, N. Y. TIMES (Nov. 7, 2009), available at http://www.nytimes.com/2009/11/08/nyregion/08taxi.html?_r=2&scp=2&sq=credit%20card&st=cse&.

⁹⁴ J.D. Roth, *Research Reveals Credit Cards Encourage Spending*, GET RICH SLOWLY (Sept. 23, 2008), <http://www.getrichslowly.org/blog/2008/09/23/research-reveals-credit-cards-encourage-spending>. (quoting Cornell University economics professor Robert Frank as stating "When McDonald's started allowing credit card purchases, the average purchase went from \$4.50 up to \$7.00").

Army has experienced an increase in kettle donations during the holiday season after installing an option to donate using a card.⁹⁵

Reward cards are likely to increase spending even more than non-reward credit cards. After all, the Phoenix Marketing survey data confirms that reward cards effectively lower prices for the cardholders who use them.⁹⁶ Interestingly, retail merchants and travel and entertainment companies apparently agree with credit card issuers that loyalty programs increase consumer spending, offering their own reward programs in numbers that outstrip those offered by financial service companies.⁹⁷ In some cases, proprietary store cards offer rewards that are larger than those available from credit cards.⁹⁸ To be sure, merchants capture all the gain from their own reward programs. The point, however, is that merchants recognize the value of these programs to their own marketing efforts and thus critics of reward cards should bear the burden of distinguishing financial services from other businesses with respect to the value of loyalty programs. In short, if merchants recognize that rewarding their customers helps expand their own businesses, similar programs should also be a good way to expand the credit

⁹⁵ Appendix at II.C. This article relies on data produced by Phoenix Marketing International through a broad survey of consumers about credit card and other payment methods. This survey data is cited throughout this article and is on file with the Consumer Law Review. Jessica Leving, *Salvation Army kettles can now accept credit cards*, USA TODAY (Nov. 26, 2011) available at http://usatoday30.usatoday.com/news/nation/2009-11-26-salvation-army-credit-cards_N.htm.

⁹⁶ See Phoenix Marketing Survey Data on file with the Consumer Law Review.

⁹⁷ Appendix at II.D. This article relies on data produced by Phoenix Marketing International through a broad survey of consumers about credit card and other payment methods. This survey data is cited throughout this article and is on file with the Consumer Law Review. Leo Jakobson, *Retailers Hold Lion's Share of U.S. Loyalty Program Memberships*, INCENTIVE: WHAT MOTIVATES (June 16, 2009) available at <http://www.incentivemag.com/Incentive-Programs/Consumer/Articles/Retailers-Hold-Lion-s-Share-of-U-S—Loyalty-Program-Memberships/>.

⁹⁸ Appendix at II.F. This article relies on data produced by Phoenix Marketing International through a broad survey of consumers about credit card and other payment methods. This survey data is cited throughout this article and is on file with the Consumer Law Review. (For example, Best Buy offers a reward card offering four percent). FINANCING & AWARDS, BEST BUY, <http://www.bestbuy.com/site/Finance/Credit-Cards/pcmcat102500050032.c?id=pcmcat102500050032> (last visited Oct. 26, 2012).

card business.

If credit card use and rewards increase consumer spending, it could effectively lower retail prices. Higher sales levels would enable retailers to spread their fixed costs over greater sales volume. This cost spreading and savings would tend to reduce retail prices. If credit cards lead to sufficient increases in customer spending, the benefits to merchants could outweigh the incremental out-of-pocket costs of credit cards, and a merchant that starts accepting credit cards might thus leave its retail prices the same or even lower them despite higher out-of-pocket card acceptance fees.⁹⁹

Precisely the same analysis would apply to merchants who are able to secure payments more quickly and avoid defaults by accepting credit cards. A merchant could reduce its own borrowing costs and losses due to non-payment as well as costs associated with pursuing customers who would eventually pay without credit cards, but pay more quickly with them. And again, the merchant could spread its fixed costs over more (and more timely) completed sales.

One might be tempted to argue that credit cards must have lower net costs than other forms of payment, because if they did not, merchants would simply refuse to accept them. Economists have cautioned, however, that a particular merchant's perceived increase in sales volume as a result of credit card acceptance may be the result of shifting sales among merchants rather than actual increases in consumption levels. This is true because merchants use card acceptance strategically in order to attract sales away from, and avoid losing sales to, their competitors. This strategic behavior provides the merchant a private benefit – sales that would otherwise have gone to competitors – but not necessarily an increase in total consumer spending.¹⁰⁰ As a result, a merchant may accept cards despite a

⁹⁹ Levitin, *supra* note 52, at 28 (recognizing the credit card use could lead to lower prices if it “increases sales sufficiently”).

¹⁰⁰ See Katz, *supra* note 39, at 26-27; *id.* at 10 (“An individual merchant may recognize that failure to accept a major general purpose credit card would lead potential customers to patronize rival merchants that accept those customers’ preferred cards. Hence, from the individual merchant’s perspective, card acceptance generates significant additional sales benefits. The benefits to the overall economy, however, depend on the effects on merchants as a whole (in addition to effects on consumers). It is easy to see that the collective effects may be very different from the individual effects. The reason, of course, is that the merchant’s acceptance decision may have negative effects on rival merchants; the merchant accepts credit cards in part

net cost above other means of payment, because failing to accept them would lead to lost sales that would reduce profits even more than card acceptance.

If merchants in a particular industry accept cards for strategic reasons, prices throughout that industry could be higher with credit card acceptance than without it. Nevertheless, non-credit card users may still be better off if the stores at which they shop accept credit cards. To understand why this is true, assume that a merchant accepts cards only because it believes that it has to do so to avoid losing customers to competitive merchants. Such a merchant would know that card acceptance would cost more than other means of payment and any increase in sales or other benefits would not outweigh the higher incremental out-of-pocket cost. Nevertheless, the merchant counter-intuitively chooses to accept cards because failing to do so would cause it to lose sales to competitors, reducing its profits, and forcing it to increase its prices on remaining sales to cover its fixed costs, to an even greater extent than would card acceptance.

In this case, the merchant's prices with credit card acceptance would be higher than they would be in a hypothetical world in which no merchant in the industry accepted credit cards. In the real world in which competitors do accept cards, however, prices would be lower if the merchant also accepts them. From the perspective of non-card customers, if some stores accept credit cards, then non-credit card users would be better off when the stores at which they shop also accept them. This is particularly true given that most consumers are not strictly card users or non-card users. Virtually all consumers use multiple means of payment, including credit cards.¹⁰¹ Even those who usually pay another way benefit from the option to use a credit card when they need to.

This conclusion depends on the relationship between the effect of card acceptance on merchant sales and the incremental costs of accepting cards. Minimal data exists shedding light on this question, but both (a) the paucity of non-credit-card-accepting merchants in most retail sectors and (b) the continuously expanding base of merchants across business sectors

to take business away from its rivals. Thus, the collective benefits of a merchant's accepting credit and charge cards may be much lower than the merchant's individual benefits").

¹⁰¹ See Phoenix Marketing Survey Data on file with the Consumer Law Review.

that have begun taking payments with cards suggests that card acceptance by a particular retailer leads to higher profits and potentially lower prices whether or not other merchants in that sector accept credit cards. If a merchant could actually charge a significantly lower price, and thereby maintain or increase its sales and profits by not accepting cards, one would expect to see non-credit-card-accepting merchants seeking to attract consumers by under-cutting the prices of credit-accepting merchants.¹⁰² Although merchant fees have moved up and down over time, even during periods of substantial increases,¹⁰³ retailers virtually never pursue this competitive response. In fact, the trend in card acceptance has been in the opposite direction. Retail sectors that previously did not accept credit cards –supermarkets, convenience stores, utilities, insurance companies, and health care providers – now do, while no sector, or individual major retailer, has stopped accepting credit cards because of fee increases.¹⁰⁴

b. Wealth Transfers With Merchant Benefits & Rewards

The FRBB authors do not recommend eliminating card acceptance. Instead, they focus their attack on reward cards. One might contend that even if merchants benefit from card acceptance generally in ways that lower consumer prices, the

¹⁰² Joshua S. Gans & Stephen P. King, *The Neutrality of Interchange Fees in Payment Systems* 21 (Melbourne Bus. Sch., Working Paper No. 2001-03, 2001), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=276228#PaperDownload (“the cash price from a credit card merchant will also make cash-only merchants appear to be relatively cheap for those customers that use cash as well as credit”).

¹⁰³ *United States v. VISA U.S.A. Inc.*, 163 F. Supp.2d 322, 340 (S.D.N.Y. 2001) (finding that “both Visa and MasterCard have recently raised interchange rates charged to merchants a number of times, without losing a single merchant customer as a result”); *see Evans & Schmalensee, supra* note 21, at 126; James M. Lyon, *The Interchange Fee Debate: Issues and Economics*, FED. RES. BANK OF MINNEAPOLIS: THE REGION, June 2006, *available at* <http://www.minneapolisfed.org/pubs/region/06-06/interchange.cfm>.

¹⁰⁴ *VISA U.S.A.*, 163 F. Supp.2d at 340 (finding that merchants have not stopped accepting credit cards despite fee increases); *but see Katz, supra* note 39, at 24 (finding that economies of scale may require merchants to accept cards in markets that are too small to support separate credit-card and non-credit card merchants. But economies of scale cannot explain the paucity of non-credit-card merchants even in big cities).

FRBB authors might still reasonably assume that merchants receive no net benefit from card *rewards*. Virtually all purchases made with a reward card, they might contend, would still be made even if the merchant did not accept the card because the customer could always use a less expensive ordinary credit card.¹⁰⁵ The incremental cost of reward cards would thus lead to a wealth transfer because high-income households use the most expensive reward cards.¹⁰⁶

Reward cards, however, may well provide merchants with incremental sales increases that would not occur in a market without them. Cardholders earning rewards effectively face a lower price for the products and services that they buy. Available data from the Phoenix Marketing Survey of consumer payment system use reflects that spending is higher on reward cards than non-reward cards.¹⁰⁷

Even if reward cards do not increase overall spending, however, non-card-using consumers are still likely to be better off if a merchant accepts them. If one merchant stopped accepting reward cards, it would likely lose sales to competitors that strategically continued to accept them in order to attract the business of reward-card-holding high-income households.¹⁰⁸ The reward-card-refusing merchant would lose the patronage of some of its best customers, possibly causing it to raise its prices to cover its fixed costs, and leaving non-reward card users worse off than they would have been if the merchant had simply accepted all credit cards.

This analysis cannot establish that the merchants' benefits of card acceptance at current usage and fee levels in fact enable those merchants to charge lower prices than they would if they did not accept credit cards generally (or reward cards in

¹⁰⁵ Levitin, *supra* note 52, at 15-16. (arguing many of the same policy proposals as the FRBB authors).

¹⁰⁶ *Id.* at 34-35.

¹⁰⁷ Appendix at I.I. This article relies on data produced by Phoenix Marketing International through a broad survey of consumers about credit card and other payment methods. This survey data is cited throughout this article and is on file with the Consumer Law Review.

¹⁰⁸ Barron et al., *supra* note 36, at 16, 18-19 (explaining that the decision to offer cash discounts depended on the relative elasticity of cash and credit customers which differed across stations. Interestingly, this is exactly what happened in the gasoline retailing market when it experimented with cash discounts. While some stations trumped discounts for cash purchases, others, including those selling under the banner of the giant Shell Oil, touted the same price for cash or credit).

particular). Given the relatively small differences in out-of-pocket costs between credit cards and other means of payment, however, the potential ancillary cost savings and benefits identified here create at least a reasonable possibility that credit card acceptance leads to lower prices in some retail markets. Furthermore, the disappearance of non-credit-card-accepting merchants across the economy suggests that even if credit cards increase prices overall, a particular merchant's refusal to accept them would cause it to increase its prices even more. In a world that includes reward credit cards, non-reward-card users are likely to be better off if the stores at which they shop accept them.

c. Credit Card System Bank Benefits

In addition to ignoring merchant benefits, the FRBB authors' analysis does not account for the benefits of card rewards to banks. Credit card systems operated for many years without reward programs, and no network rule requires card issuers to offer them. Just as merchants choose to accept cards for a reason, the banks choose to offer reward programs because they perceive some benefit that is unaccounted for in the FRBB policy paper's analysis.

Although the authors did not incorporate bank benefits into their original analysis, they later assumed that reward programs increase bank profits and benefit the primarily high-income households that hold bank stock.¹⁰⁹ They thus concluded that incorporating bank benefits into their analysis would exacerbate the wealth transfer. But that view inappropriately focuses narrowly on distributed profits. Banks reinvest credit card system profits in ways that benefit all consumers, such as more effective fraud protection, enhanced security, and systems that speed up transactions at the point of sale.

Most obviously, reward programs that stimulate card usage have made card networks larger and more efficient, thereby lowering the networks' operating costs. Perhaps more significantly, a bank may offer a card rewards program because it enables the bank to increase revenue from financing purchases and cardholder fees. By offering rewards, for example, banks may entice cardholders to pay an annual fee that they would not otherwise pay or run larger balances than they otherwise would.

¹⁰⁹ Schuh et al. 2011, *supra* note 1, at 20 (assuming that the distribution of ownership of bank stock was similar to the distribution of stocks generally).

The Phoenix International Marketing consumer survey confirms that card issuers earn more revenue from these sources than they do from merchant fees.¹¹⁰

Banks may then use this revenue – which is attributable, directly or indirectly, to reward programs – to expand services and offer new and improved products (relating to credit cards and otherwise) that could benefit all consumers.

Merchants often contend that a more efficient card system should have led to lower merchant fees, but competitive markets do not work in such a static way. Banks must approach the credit card market dynamically, constantly focusing on the competitive steps that will best improve the system. If lowering merchant fees would more efficiently expand the system, banks would undoubtedly lower those fees. The card systems' unqualified success, however, testifies to the correctness of the banks' decision to focus generally on expanding services to cardholders rather than lowering merchant fees.

The banking sector innovations made possible by a more profitable credit card system could benefit low-income households more than high-income households, thus counteracting the wealth transfer predicted by the FRBB policy paper. For example, greater credit card use benefits banks by making cards attractive to more merchants, increasing card transaction volume and presumably card borrowing. In recent years, this benefit has been realized as new merchant sectors have begun accepting credit cards, including utilities, medical service providers, taxing authorities, and insurance companies. These sectors, which generally provide non-discretionary products, may not value the credit component of the card system to expand sales as traditional retailers do. Nevertheless, cards may benefit these merchants in other ways, including enabling their customers to make more timely payments, and decreasing non-payment and default risk, as well as collection costs. In short, credit card use shifts these costs and risks from merchants to banks, an extremely valuable benefit.

Low-income households may be more likely to face cash flow issues leading to late payment or default, the penalties attendant thereto, and ultimately reduced credit ratings. These low-income customers are thus more likely to benefit from expanded card acceptance for non-discretionary spending than

¹¹⁰ Appendix at I.D through H. See Phoenix Marketing Survey Data on file with the Consumer Law Review.

high-income households. Although they use credit cards less often than high-income households, the ability to pay merchants in these sectors that are new to card acceptance with a credit card could enable low-income households to avoid late payment and maintain or even improve their credit ratings – the latter of which would reduce the low-income households’ future costs of borrowing.

d. Non-credit Card Customer Benefits

The FRBB authors assume that credit card use benefits only those who receive rewards. Allocating and assessing the value of a means of payment to all customers, however, is a much more complex endeavor. First, the costs and benefits of one payment mechanism often spill over, impacting customers who use other means of payment in ways that go beyond retail prices and rewards.¹¹¹ An example of an easily observable spillover involves cash acceptance. Some supermarkets now use change dispensers that speed up checkout lines. Although this cost is directly attributable to the merchant’s acceptance of cash, the benefits of faster check-out times extend to all customers. Similarly, when increased credit card use reduces a merchant’s cash handling costs, late- and non-payment expenses (such as bounced check expenses), and theft losses, all customers benefit.¹¹²

¹¹¹ See Guerin-Calvert & Ordovery, *supra* note 86, at 387, 391-407 (“It is not at all clear that these complex bundles of benefits can be neatly converted into a ‘per transaction’ benefit with a well-calibrated cost”); Katz, *supra* note 39, at 35 (“card based transactions may have costs and benefits for both sides of the market simultaneously, many costs are common”).

¹¹² Although these types of benefits *could* be obtained with other electronic forms of payment, such as pin-based debit cards, that would impose lower out-of-pocket costs on merchants once the technology for acceptance is installed, the same level of benefits would not be obtained without credit cards. Debit card use would be unlikely to replace reduced credit card use on a dollar-for-dollar basis for at least three reasons:

- (1) many consumers need, or prefer, the float period or revolving credit offered by credit cards;
- (2) others value the security of maintaining their level of cash on hand in case an emergency expense arises for which they cannot use a credit card; and
- (3) some fear that fraudulent use of their debit card would have more severe consequences than credit card fraud. With respect to this last factor, the most significant difference is that debit fraud can empty the cardholder’s checking account, leaving her without access to her money for some indeterminable period of time. By contrast, credit card fraud does not raise that concern

Second, the FRBB authors' data shows that consumers use reward cards *sometimes* at all wealth levels. The majority of consumers – again at all wealth levels – however, choose not to use reward credit cards for the majority of their purchases. The FRBB authors do not contend that these consumer payment decisions are irrational. On the contrary, consumers likely make considered decisions about which payment system to use based on the welfare that each provides to them with respect to particular purchases. Just as merchants choose to accept particular means of payment because of the perceived benefits, consumers use payment mechanisms other than reward credit cards in the circumstances in which they perceive a net benefit from doing so.

Although these benefits are difficult to quantify, they are relatively easy to predict. Recall that the authors place consumers using debit cards, proprietary store cards, gift cards, and checks as well as cash, in the same category. Many consumers use debit cards instead of credit cards because they do not want to take on a credit balance and are concerned that, if given the option to revolve, they will not pay their credit card bill in full. These consumers, however, often do use credit cards when they need to extend payments. More extensive use of credit cards by others ensures that a safe and efficient system is available when these consumers choose to use it.

Moreover, debit card users may also receive rewards. And proprietary store cards may offer rewards that are greater than credit cards.¹¹³ Cash purchasers may simply enjoy being the customer who uses cash when others are using cards. If these benefits did not exist, many consumers who now choose not to use reward credit cards would likely use them, reducing the FRBB authors' predicted welfare transfer.

The authors' failure to consider the spillover benefits of reward card use causes them to overstate any potential wealth transfer. Moreover, their failure to take account of the individualized benefits received by those choosing not to use a reward credit card casts doubt on whether any transfer the authors may show is actually a "wealth transfer" in any meaningful sense. The consumers who are said to be losing

because a credit card issuer has no direct access to the cardholder's deposit accounts.

¹¹³ Appendix at II.F (showing example of the Best Buy credit card); *see* BEST BUY, *supra* note 98.

wealth through reward card use choose a different means of payment because they believe that it provides them greater benefits than they would receive if they used a reward card.

e. The Impact of Ignoring the Benefits of Payment System Choices

The benefits of payment system choices impact how reward credit cards affect welfare. Yet, the FRBB authors ignore many of these benefits. Given that their analysis only takes account of card rewards and redistributed profits to wealthy stockholders, the authors' prediction that a wealth transfer favors high-income households is as unsurprising as it is unilluminating. To be sure, many of the benefits of payment system choices are difficult to measure, and the authors' goal was to make precise consumer welfare predictions. That goal, however, may simply be unachievable. "It is not at all clear," economists Meg Guerin-Calvert and Jansuz Ordover have observed, "that complex of bundles of benefits [resulting from credit card use] can be neatly converted into a 'per transaction' benefit with a well-calibrated cost."¹¹⁴ As Michael Katz has explained "card based transactions may have costs and benefits for both sides of the market simultaneously, many costs are common."¹¹⁵

The analysis presented here cannot establish that reward credit card use increases consumer welfare. But it does show that a meaningful assessment of consumer welfare would require analysts to consider inputs that the FRBB authors ignore. Payment system markets are not a zero sum game; the amount and size of transactions are not independent of the choice of payment mechanism.¹¹⁶ To the extent that cardholders would

¹¹⁴ Guerin-Calvert & Ordover, *supra* note 86, at 387.

¹¹⁵ Katz, *supra* note 39, at 35.

¹¹⁶ Ronald J. RONALD J. MANN, CHARGING AHEAD: THE GROWTH AND REGULATION OF PAYMENT CARD MARKETS 48 (2006); Ronald J. Levitin, *supra* note 52, at 38-39 (citing studies); Levitin, *supra* note 89, at 288 (explaining that with credit cards consumers will "make more purchases because they feel less constrained in credit spending than they do when spending cash on hand"). Although the strength of this effect is apparently difficult to prove it seems likely to be substantial. Katz, *supra* note 39, at 9-12, 19 (questioning whether credit cards really increase overall spending). If it were not, one would expect to see cash-only merchants emerge to take advantage of the cost savings that such merchants could provide to consumers. Cf. Gans & King, *supra* note 102, at 21 ("the cash price from a credit card merchant will also make cash-only merchants appear to be relatively cheap for

switch away from credit cards if rewards were reduced or eliminated, the FRBB authors predict that merchant card acceptance costs and retail prices would drop accordingly. But when consumers stop using reward cards, they are likely to spend less and impose other types of costs, such as bad check losses, on merchants. These costs and lost revenue would restrain a merchant's ability to cut its prices by the full amount of the reduction in card acceptance fees. The impact of the authors' proposed regulatory interventions on consumer welfare is thus highly uncertain.

V. ADDITIONAL ASSUMPTIONS DRIVING THE FRBB AUTHORS' CONSUMER-WELFARE CALCULATION

The previous section addressed the effect of the FRBB policy paper's failure to take account of the full spectrum of benefits, other than credit card rewards, flowing to merchants, banks, and non-credit card customers from existing payment system choices. This section shows that even if those effects could plausibly be ignored in calculating changes to consumer welfare – which they cannot – the FRBB paper's predictions would still rest on a set of arbitrary assumptions about the value of payment system choices and of shifting wealth between income groups.

First, the FRBB authors assume that merchants pay card acceptance fees of approximately 2% and face a cost of .5% to handle cash, a category in which they include all means of payment other than credit cards.¹¹⁷ Merchants' out-of-pocket costs to accept different means of payment vary across merchant types, and the authors acknowledge that their figures are "very rough."¹¹⁸ They cite research estimating the cost of accepting non-credit-card payment mechanisms along a range from .5% to 1.6%.¹¹⁹ Without attempting to evaluate rigorously the accuracy of these numbers, the authors adopt the lower end of the range, maximizing the possibility that they will overstate any wealth transfer. To the extent that merchant costs for (1) non-credit card transactions are higher or (2) credit card transactions are lower,

those customers that use cash as well as credit"). In fact, the trend has been entirely in the opposite direction as more and more merchants accept credit cards.

¹¹⁷ Schuh et al. 2011, *supra* note 1, at 11.

¹¹⁸ *Id.* at 12.

¹¹⁹ *Id.*

the FRBB authors' calculations would overstate any wealth transfer and thus any change in consumer welfare. One reason to suspect that the authors' assumption understates the merchant costs of the payment mechanisms used by low-income households is that those households use debit cards more often than high-income households, leveling out card use considerably across income groups.¹²⁰

The merchant cost of accepting debit cards may be higher than the cost of cash, and consumers are often rewarded for debit card use. By lumping debit card use in with cash use, the FRBB authors may overstate the differences in payment system costs imposed on merchants between high- and low-income groups.

Second, the authors assume that merchants generally charge a single price for their goods and services regardless of the means of payment. Although they cite no hard data establishing the accuracy of this assumption, it appears to comport with general experience. But exceptions exist. Some small merchants offer cash discounts, and many large retail stores offer proprietary store cards (which fall on the "cash" side of the FRBB authors' analysis) that provide rewards and other significant consumer benefits.¹²¹ To the extent that these programs lead merchants to charge credit card purchasers more than customers using other payment mechanisms, the authors' wealth transfer and consumer welfare predictions are again overstated.

Third, and perhaps most critically, the FRBB authors' accounting exercise predicts only a transfer of money, not welfare. Their hard data fails to show any inefficiency or dead weight loss that would make consumers objectively worse off. The authors simply conclude that dollars flow from one pocket to another because of the choices that merchants and consumers make about which payment mechanisms to accept and use, respectively.

To make the broader claim that this monetary transfer

¹²⁰ Appendix at I.B.C. (See Phoenix Marketing International Survey Data on file with the Consumer Law Review (showing that 94-97% of households have a credit or debit card at all income levels above \$20,000 annually, and 83% of households below that level have one type of card or the other).

¹²¹ Appendix at II.E. (See Phoenix Marketing International Survey Data on file with the Consumer Law Review, for example, Macy's offers a 20 percent discount on the day a new card account is opened). See CREDIT CARD APPLICATION, MACY'S, <https://www.macys.com/service/credit/applynow/creditapp.ognc> (last visited Oct. 26, 2012).

reduces overall consumer welfare, the authors must move beyond calculations based on hard data and assume two contestable, if not entirely arbitrary, facts about consumer preferences. First, they assume that preferences for card use are uniformly distributed across consumers. Second, they assume that money held by low-income households produces a specific amount of additional overall welfare compared to money held by high-income households. These two assumptions are both critical to their conclusions and independent from the data on which they rely. Changes to either one could dramatically change their calculations of the consumer welfare impact of card usage.

With respect to the distribution of consumer preferences for card use, the data show how often consumers at various income levels choose to use credit cards or alternative means of payment. But the data say nothing about the relative preference levels of various consumers for the alternative means of payment. The FRBB authors assume that the strength of the preference for a means of payment is uniform across all consumers regardless of income, which impacts their specific consumer welfare predictions.¹²²

The authors fail to articulate a reason to believe that this assumption is true. Preferences could reasonably be distributed in other ways that would significantly influence the FRBB authors' welfare predictions. For example, many high-income consumers choosing to use credit cards could have a very slight preference for them because they use cards only for marginal convenience benefits or rewards, while low-income consumers choosing another means of payment might have a very strong preference such as the need to manage their use of credit. When this is the case, consumer welfare would not change as a result of card use in the way that the authors predict. Similarly, because consumers in both income groups often choose both means of payment, it is possible that the low-income consumers who use credit cards have much stronger preferences for them than the high-income consumers who use cards. This might occur if low-income households perceived card rewards as particularly welcome windfalls generating more utility for them than the higher absolute reward payments generate for high-income households. The negative welfare effects of denying these benefits to the low-wealth consumers who use reward cards could potentially outweigh any benefits to low-wealth consumers who use cash,

¹²² Schuh et al. 2011, *supra* note 1, at 27 fig. 3.

particularly if other flaws in the FRBB Report's analysis reduce the magnitude of the transfer.

The point here is not that either of these possible distributions of consumer preferences is necessarily more likely to be accurate than the one chosen by the FRBB authors. It is simply that no one knows, and the value one chooses has a significant impact on the predicted welfare changes. The impact of regulatory intervention would thus be uncertain.

This uncertainty is magnified by the variability of another critical component of the FRBB authors' welfare calculations. Recall that the authors accounting exercise predicts a simple movement of money from one pocket to another, rather than an overall welfare loss to the economy. If one dollar produced the same amount of welfare regardless of who had it, the authors' transfer predictions would have no impact whatsoever on aggregate consumer welfare. To obtain a welfare impact, they must assume that a dollar is worth more to a low-income household than to a high-income household. That assumption is hardly implausible, but it is nonetheless problematic on three levels.

First, assuming that low-income households value a dollar more than high-income households creates a paradox. Why would households valuing money more choose to use payment mechanisms that cost them more? The reason is not that low-income households have no access to credit cards. Although the limits and terms are set based on the risk posed and card issuer policies differ widely, in almost all cases, even low-income households could use credit cards.¹²³ But they nonetheless choose to use them less often than high-income households. Two plausible reasons for that choice would undermine the FRBB policy paper's welfare predictions: (1) credit card rewards are

¹²³ Levitin, *supra* note 52, at 14 ("almost anyone who wants a rewards card can get one."); *see id.* at 6 (Phoenix Marketing Group chart showing that consumers hold a higher percentage of reward cards than non-reward cards at all income groups). Even individuals who have recently declared bankruptcy have no problem obtaining credit cards, though many choose not to. Katherine Porter, *The Debt Dilemma: Reviewing Ronald J. Mann, Charging Ahead: The Growth and Regulation of Payment Card Markets* (2006), 106 MICH. L. REV. 1167, 1170 (2008) (explaining that "nearly every consumer has access to a credit card. Card issuers have used price differentiation and technology to offer cards to nearly every segment of the market, a strategy that banks have not deployed for many conventional lending products."); *id.* at 1181 (recognizing that "the rampant marketing of credit cards to families after bankruptcy means nearly everyone can get a credit card").

valued much less highly than the paper makes them out to be, and perhaps are valued even less highly by low-income than by high-income households, or (2) low-income households do not systematically garner more welfare from consumption than high-income households.

Second, making interpersonal utility comparisons is not a matter of traditional economics, which instead tends to focus on more objective criteria like Pareto optimality or economic efficiency. The reason for this typical restraint in economic analysis is that it is impossible to know how one should value a shift in levels of utility across individuals without making an arbitrary assumption.¹²⁴

Third, even if one agreed that relative welfare levels could appropriately be incorporated into an economic analysis of welfare transfers, the question would remain as to the magnitude of the effect. The FRBB authors acknowledge that they have no tools capable of answering that question. Ultimately, they conclude that this parameter in their analysis “can be interpreted equivalently as a measure of the economy’s aversion to income inequality.”¹²⁵ But the economy is not inherently averse to inequality. Societies must make value judgments about it, and many assumptions differing from the authors would (1) be entirely plausible and (2) significantly impact the welfare effects that they predict.

The bottom line is that even if the authors took account of all the relevant factors in payment system markets – which they do not – their specific consumer welfare predictions would ultimately rest not on the hard data that they have gathered, but on arbitrary and controversial assumptions about consumer and

¹²⁴ KENNETH J. ARROW, SOCIAL CHOICE AND INDIVIDUAL VALUES 10-11 (2d ed. 1963), *available at* <http://cowles.econ.yale.edu/P/cm/m12-2/m12-2-all.pdf>. A half century ago, Nobel Laureate Kenneth Arrow explained the problem with basing analysis on inter-personal utility comparisons. Even if, for some reason, we should admit the measurability of utility for an individual, there still remains the question of aggregating the individual utilities. . . . In general there seems to be no method intrinsic to utility measurement, which will make the choices compatible. It requires a definite value judgment not derivable from individual sensations to make the utilities of different individuals dimensionally compatible and still a further value judgment to aggregate them according to any particular mathematical formula. If we look away from the mathematical aspects of the matter, it seems to make no sense to add the utility of one individual, a psychic magnitude in his mind, with the utility of another individual.

¹²⁵ Schuh et al. 2011, *supra* note 1, at 33.

societal preferences.

VI. THE UBIQUITY OF WEALTH TRANSFER EFFECTS IN RETAIL MARKETS

The preceding parts of this paper questioned whether significant cross subsidies and consumer-welfare shifts exist as a result of reward credit card use. This section explains that marketing programs apparently favoring wealthy consumers are pervasive throughout the retail economy, and the FRBB authors ignore the question of why regulators should intervene in credit card markets, but not in any other retail environment producing an ostensibly similar wealth transfer effect. Other commentators have attempted to distinguish credit card markets from others in which similar transfers may occur. This part illustrates that these efforts have failed. To the extent that payment system markets differ from other retail markets, regulatory intervention is less justifiable in the case of credit cards.

A. The Apparent Wealth Transfer Phenomenon

Marketing programs across many sectors of the economy ostensibly have potential wealth transfer effects similar to those predicted by the FRBB Report. For example, airline frequent flier programs likely benefit high-wealth fliers more than low-wealth fliers. Just as merchants charge the same price for goods and services regardless of means of payment, airlines use the same fee schedule irrespective of whether a traveler will ever benefit from a frequent flier reward.

Similarly, many retail merchants offer rewards to frequent purchasers or proprietary credit card holders. Large supermarket chains offer discount cards that reward customers who use them regularly with lower prices than other consumers pay. For example, Macy's and Best Buy offer their own credit cards that include special benefits not available to general-purpose card users.¹²⁶ High-income households may well derive more benefits from these programs to the extent that they buy more, and more expensive, goods. These programs impose costs on merchants just as credit card acceptance imposes costs. If credit cards impose a wealth transfer, then these programs must as well.

A different sort of wealth transfer could arise whenever a

¹²⁶ Appendix II.F. See BEST BUY, *supra* note 98.

merchant operates multiple locations facing different levels of competition. For example, a grocery chain may have (a) one store in a high-income area with numerous competitors in the geographic market and (b) a second store in a poor area without any other groceries. The chain would be expected to charge higher prices in the poor area, effectively transferring wealth across income groups.

More fundamentally, pervasive consumer amenities have similar wealth transfer effects. Merchants selling at a unitary price virtually always provide penumbral products and services bundled together with their primary wares. For example, when a supermarket, clothier, or home repair store offers shopping carts that only certain customers use, the merchant bears the expense of purchasing and maintaining the carts as well as the cost of hiring laborers to gather them from the parking lot.¹²⁷ Like credit card fees, the cost of the carts and the attendant services are blended into the cost of the merchant's goods and are thus borne in part by shoppers who buy just a few items and use a bag or basket. Cart users who would presumably spend more, thus enjoy a subsidy.

While many of these amenities may not transfer wealth between income groups, some apparently do. Parking lots, for example, are a commonly provided benefit that many retail merchants make available to their customers free of charge. Wealthy customers with cars take full advantage of the parking lot, while low-income customers who walk or take the bus cannot. Since the costs of maintaining the parking lot are blended into the merchant's prices – free parking is never really free – wealth is transferred toward more affluent consumers with cars. Those who walk effectively pay so that those with cars can park for free.

Similar amenities – rest rooms, napkins etc. – are pervasive, but this practice extends beyond these add-ons to core aspects of the merchant's business as fundamental as the array of products offered. Many merchants carry a variety of goods appealing to different customer groups. To the extent that inventory costs are uniformly spread across products, those who

¹²⁷ David S. Evans, *Bank Interchange Fees Balance Dual Demand*, AM. BANKER 17 (Jan. 26, 2001) (“All customers end up paying higher prices as a result of retailers offering parking, tailoring, escalators, convenient store hours, gift-wrapping, and many other amenities that are used by only some customers”).

never purchase items that are more expensive to inventory subsidize those who buy these high-storage-cost products.

Similarly, a retailer may earn different levels of profit depending on the type of service provided. For example, automobile maintenance shops specializing in oil changes may advertise a low price to change the oil, hoping to convince customers at the point of sale to also buy a replacement air filter at a much higher mark up. Customers who only purchase the less profitable advertised services benefit from subsidies paid by those who purchase the more profitable services.

Every customer sub-group that benefits from some particular merchant expenditure effectively imposes a portion of the merchant's cost of doing business on other groups of customers who do not benefit from that expenditure. At its limit, one might argue that, because small purchases generally impose a greater proportionate cost on merchants than large ones, the wealthy who tend to make bigger purchases effectively subsidize poorer consumers who purchase fewer items.

Economic regulators pervasively ignore merchants' blending costs into unitary prices in ways that shift wealth. That practice counsels against concluding that a similar transfer should be addressed in payment system markets, unless card acceptance costs differ in some relevant way from other sorts of merchant expenditures. The following sections show that to the extent any differences exist, they weigh against intervention in credit card markets.

B. Attempts to Distinguish Credit Card Wealth Transfers

Although the FRBB authors ignore the pervasive nature of wealth transfers, other commentators have suggested three ways in which card acceptance may differ from other potentially wealth-transferring merchant expenditures. The following subsections assess these claims, concluding that they fail to justify condemning credit card rewards either because no real distinction exists or because any distinction weighs more heavily in favor of intervening in markets other than credit cards.

1. Distinguishing Credit Cards Based on the Entity Deciding Whether to Allocate the Cost

Some commentators have argued that retailers usually decide for themselves whether to pass a particular expense on to all customers through a unitary price or only to those customers

benefiting from the expenditure. For example, if a retailer pays a shipper to deliver goods to a customer, the retailer decides whether to allocate a separate charge for shipping or to provide *free shipping*, which blends the cost into its general prices. A common practice is to provide free shipping on more profitable larger orders, but to allocate shipping separately for less profitable small orders. To the extent that high-income households place a disproportionate number of large orders, this practice transfers wealth toward high-income households. Intervention is generally believed to be unjustified in these cases because the merchant may exercise its business judgment to operate its business as it chooses.

Credit cards are different, these commentators claim, because the card systems prohibit retailers from passing on the acceptance fee only to credit card users.¹²⁸ A merchant, therefore, cannot choose to surcharge higher priced credit cards, while blending the cost of non-reward cards into its prices. As an initial matter, it is far from obvious why a wealth transfer resulting from choices made jointly by card systems and merchants, who choose to accept the cards, should justify regulatory intervention when a transfer resulting solely from the merchant's choice does not. Moreover, any difference based on the entity responsible for the choice is overstated and, to the extent that it is valid, the limits that card systems impose are justified by the unusual economics governing credit card markets.

It is overstated, because although, the card systems prohibit surcharging, they permit merchants to allocate extra costs to credit card customers in other ways. Federal law safeguards cash discounting,¹²⁹ and many stores offer discounts for consumers who use that store's own credit card.¹³⁰ Stores might also offer separate, and fewer, check-out lines for credit card customers or free delivery for those who pay in cash. To be sure, these measures may be less effective and/or more costly than surcharging credit card purchases would be. Nevertheless, retailers have options that would enable them to place at least a portion of their card acceptance costs on credit card users if doing so would increase their profits. Most retailers, however, simply choose not to use these available tools.

More importantly, to the extent that the credit card

¹²⁸ Katz, *supra* note 39, at 47; Frankel & Shampine, *supra* note 38, at 636.

¹²⁹ 15 U.S.C. § 1666f (2011).

¹³⁰ Appendix at II.G. See BEST BUY, *supra* note 98.

systems do limit the ability to pass costs on to card users, they have a legitimate business justification for doing so. A card system must provide a service to two distinct customer bases, consumers and merchants.¹³¹ In such a two-sided market, efficient pricing generally requires fee setting that diverges from marginal cost pricing for each customer set.¹³² Just as a newspaper charges advertisers above marginal cost prices so that it can deliver papers to readers at a price below marginal cost, card systems charge merchants higher fees to enable the system to attract cardholders and stimulate card use. If merchants fully allocated the cost of card acceptance to individual card users, the card systems could become less efficient. These pricing considerations, which are addressed more fully in the following Part, make credit card acceptance fees different from most other merchant expenditures in a way that justifies a prohibition on surcharging.¹³³

2. Credit Card Fees Would Be Easier to Allocate than Other Amenities

Allocating some merchant-provided amenities to particular customers would be costly. For example, a merchant charging for parking might need to limit access to the lot and hire an attendant. Allocating credit card costs to those customers who

¹³¹ In the Visa and MasterCard systems, the central system generally deals only with banks issuing cards and signing merchants. In some instances, these systems may deal with large merchants, but never with cardholders. Economic analysis of card systems, however, has typically viewed the participating banks as part of the overall system marking cards accessible to both consumers and merchants.

¹³² Richard Schmalensee, *Payment Systems and Interchange Fees*, 50 J. OF INDUS. ECON. 103, 114 (2002) (“Unless the partial demand functions are identical, using cost-based regulation to determine [the per transaction interchange fee] will maximize system output only by chance.”); Guerin-Calvert & Ordovery, *supra* note 86, at 384-85 (explaining that “[t]he *network externalities* that link merchants who accept cards and card-holders who use them compel a price/fee structure that will likely entail deviations from the cost-causality principles that call for prices to be closely linked to the underlying costs of providing *direct* benefits to either side of the market”); Michael L. Katz, *What Do We Know About Interchange Fees and What Does it Mean for Public Policy?: Commentary on Evans and Schmalensee*, 126 (Proceedings – Payment Systems Research Conferences, Fed. Reserve Bank of Kansas City, 2005) *available at* <http://www.kansascityfed.org/PUBLICAT/PSR/pscp/2005/katz.pdf>.

¹³³ See *infra* Part VII.B & C.

use them would, by contrast, entail a relatively small incremental cost after the initial investment.¹³⁴ Merchants, however, rarely allocate the cost of amenities even where they could do so easily (e.g., shopping carts or bags). Customer resistance to extra charges, rather than administrative expense, likely explains the failure to allocate to particular customers both the cost of amenities and credit card acceptance fees.

3. Consumers Can Choose Whether to Use Most Amenities

One commentator has argued that credit card fees are different from other merchant expenses because consumers can choose whether to use virtually all merchant-provided amenities, but those without a credit card cannot choose to use one. Nor can the card-less avoid the wealth transfer by shopping elsewhere because almost all retail outlets accept credit cards.¹³⁵

In many, perhaps most, cases, however, a consumer who does not use a credit card could use one. Although the terms will surely vary based on a cardholder's credit risk, very few consumers cannot obtain a credit card if they want one.¹³⁶ Most consumers who do not use credit cards for particular transactions choose not to use them for a host of reasons, including philosophical objections, budget planning, avoiding interest, masking a record of the purchase, and whim. In these cases, credit card acceptance is no different from other merchant-provided amenities.

Some consumers, however, may have their choices limited as a practical matter even if they could theoretically obtain a credit card. A significant percentage of American consumers have no banking relationship, and the poorest Americans and minority groups comprise a large majority of this unbanked population.¹³⁷ For this group, a welfare transfer, if it exists, would be unfair, but not unusual. As described above, low-income consumers suffer in a host of ways vis-à-vis those with higher incomes, and non-card users could help themselves more readily than those disadvantaged by other merchant practices. Low-wealth fliers

¹³⁴ Katz, *supra* note 39, at 47.

¹³⁵ Levitin, *supra* note 52, at 34-35.

¹³⁶ *Id.* at 14.

¹³⁷ *Id.* at 36. Javier Silva & Rebecca Epstein, *Costly Credit*, DEMOS, (May 2005), (using data from 1992-2001 and showing that 82% of whites held credit cards, but only 59% of blacks and 53% of Latinos) available at <http://www.aecf.org/>.

could not readily increase their use of air transportation sufficiently to qualify for free flights through frequent flier programs. And parking, the quintessential merchant-provided amenity that is often blended into purchase prices, can only be enjoyed by those with cars. The carless, like the card-less, come disproportionately from low-income households, and obtaining and maintaining a car is considerably more difficult than obtaining and using a credit card.

VII. INAPPROPRIATE RESPONSES TO WEALTH TRANSFER

In addition to the concerns recognized above, the FRBB authors' proposed regulatory remedies would be at least as likely to increase consumer harm as to alleviate it. Although an omniscient social planner could set credit card merchant fees at precisely the right level to maximize consumer welfare, the FRBB authors recognize that, like leprechauns, planners with perfect market knowledge are hard to find. They thus point out that if regulators set merchant fees at the wrong level, they would do more harm than good.¹³⁸

In an attempt to avoid this problem, the authors draw on the standard presumption that "cost-based pricing"¹³⁹ is preferable. The FRBB authors refer to cost when suggesting that merchants could be empowered to surcharge credit card purchases. An objective cost measure, however, could also, in theory, reduce regulatory discretion while indirectly decreasing the price that merchants pay for card acceptance. Because of the two-sided nature of credit card markets, however, the FRBB authors' proposed responses could reduce consumer welfare by distorting efficient card system pricing.

A. Efficient Pricing in Credit Card Markets

In real world markets, pricing decisions are based on a variety of factors including cost, value, and the impact of competition. Standard economic theory generally presumes that cost-based pricing is desirable. In two-sided markets, like credit cards, however, one must focus on the entire system's costs and the relative elasticity of demand of the customers on each side of

¹³⁸ FRBB, *supra* note 1, at 36.

¹³⁹ *Id.* at 35.

the market, rather than the costs of serving a particular customer.

In setting prices, card systems face two distinct customer bases: cardholders and merchants. Within such a two-sided market, prices are efficiently set at the level necessary to recover the system's marginal costs. But the efficient price for the cardholder and the merchant, the two sides of the market, may not equal the marginal cost of the services received by each of them. On the contrary, two-sided market theory predicts that an efficient system will charge prices returning more than the marginal cost of service to the customer set that is less sensitive to price, *i.e.* has lower demand elasticity, and prices below marginal cost to the customers on the other side. Assuming that merchant demand for card acceptance is less elastic than cardholder demand, allowing card systems to set merchant fees above their basic costs of providing acceptance services, and prohibiting surcharges, may enable the systems to ensure an efficient pricing structure in which merchants pay more than their marginal cost of service and cardholders pay less. By contrast, empowering merchants to place card acceptance costs on card users, or capping through regulation credit card acceptance fees at some measure of cost created by merchants, would be inefficient to the extent that it failed to take proper account of the relative elasticities of demand between card users and merchants with respect to card use.

1. Understanding Two-sided Markets

In a two-sided market (as all payment system markets are), the use of the product or service by consumers on each side of the market makes the product or service more valuable to those on the other. Common examples of markets functioning this way include newspapers (readers and advertisers), dating services (men and women), and optical disc technology suppliers (disc pressers and player manufacturers). The more readers, men, and disc pressers that use these products and services, the more valuable they will be to advertisers, women, and player manufacturers; and vice versa.¹⁴⁰

Although the connection between value and use across

¹⁴⁰ For a detailed discussion of the economics of two-sided markets see generally David S. Evans & Michael Noel, *Defining Antitrust Markets When Firms Operate Two-Sided Platforms*, 2005 COLUM. BUS. L. REV. 667; David S. Evans, *The Antitrust Economics of Multi-Sided Platform Markets*, 20 YALE J. ON REG. 325 (2003).

customer types in a two-sided network market is intuitively obvious, the implication of this economic effect for efficient pricing is more opaque. In a typical *one-sided* market, an efficient price – one that will lead to an optimal consumption level – will generally approximate the marginal cost of production plus the profit necessary to attract investment to the industry.¹⁴¹ This pricing model is efficient because it maximizes short-run output consistently with the producer earning sufficient revenue to continue providing the product or service.

In a two-sided market, the same principle applies, but efficient pricing must take account of both total cost *and* the relative elasticities of demand between the two customer sets.¹⁴² If the customers on each side of such a market (merchants and cardholders in rewards credit card markets) were charged the marginal cost of serving just their side of the market, they could fail to internalize the impact of their decisions to the customer set on the other side.¹⁴³ For example, a merchant would fail to account for the benefits of reward card use to a customer who would make the same purchase with or without a card.

Two-sided market economic theory predicts that if demand elasticities diverge to any significant degree between the customers on each side of the market, output under a pricing scheme that covered marginal-cost separately on each side of the market would be inefficiently low. To obtain an efficient output level, a producer must charge the customer set that is more sensitive to price less than marginal cost of serving that customer (effectively enabling those consumers to internalize the benefits to both sides of the market).¹⁴⁴

The classic example is the daily newspaper.¹⁴⁵ Readers have many sources of news, including television, magazines, and the internet. Reader demand for newspapers is thus likely to be

¹⁴¹ Katz, *supra* note 132, at 127.

¹⁴² Evans & Noel, *supra* note 140, at 681.

¹⁴³ Katz, *supra* note 39, at 126-27; Wright, *supra* note 76, at 8; Guerin-Calvert & Ordovery, *supra* note 86, at 384-85 (explaining that “[t]he *network externalities* that link merchants who accept cards and card-holders who use them compel a price/fee structure that will likely entail deviations from the cost-causality principles that call for prices to be closely linked to the underlying costs of providing *direct* benefits to either side of the market”).

¹⁴⁴ Katz, *supra* note 39, at 127; Rochet & Tirole, *supra* note 39, at 566; Wright, *supra* note 76, at 17.

¹⁴⁵ See Benjamin Klein et al., *Competition in Two-sided Markets: The Antitrust Economics of Payment Card Interchange*, 73 ANTITRUST L. J. 571, 577-79 (2006).

quite elastic, leading them to turn away from the morning paper if the subscription price were to approach the marginal cost of producing and delivering it. By contrast, advertisers perceive significant benefits in print advertising (so long as readership is high), and are thus willing to pay substantially above the newspapers' marginal cost of printing and providing associated services to the advertiser because of the value of exposure through a high circulation paper. As a result, readers pay significantly below marginal cost and advertisers pay substantially more.¹⁴⁶ Competition between newspapers and other media for advertising space still drives pricing, but not to marginal cost plus normal profit for each customer set.

This pricing pattern efficiently optimizes newspaper circulation, satisfying both the advertisers' need for broad exposure and the readers' need for information. Assuming that newspapers have little market power, both advertisers and readers would be worse off if pricing were forced into line with marginal cost on each side of the market. If advertising fees were to drop and reader fees proportionally increased, prices would move toward marginal cost on each side of the market. Because reader demand is more elastic, however, readership would drop more than advertising would increase, and advertising rates would thus fall. As a result, the paper would (1) earn lower overall revenue; (2) be less valuable to advertisers because readership would fall; and (3) be less valuable to readers because the paper would have less revenue for newsgathering.

2. Applying Two-sided Market Theory to Card Markets

To the extent that the elasticity of demand varies significantly between merchants and cardholders, credit systems resemble newspapers. Assuming that merchants, like print advertisers, are willing to pay significantly above the marginal cost of the credit card acceptance services provided directly to merchants because of the value card acceptance creates, but many cardholders, like newspaper readers, would be reluctant to pay the marginal cost of providing credit cards and associated services,¹⁴⁷ two-sided market theory predicts that efficient credit card pricing would resemble the existing marketplace – a greater share of the total costs of the payment system are placed on

¹⁴⁶ *Id.* at 577.

¹⁴⁷ *Id.* at 585-88.

merchants.¹⁴⁸

To be sure, relative elasticities across customer groups are difficult to measure. Long standing practice in credit card markets, however, appears to confirm that cardholder demand is considerably more elastic than merchant demand.¹⁴⁹ Since the beginning, card systems have adopted cost allocation systems that empower cardholders to use cards without taking account of costs that arise as a result of their decision. Every existing credit card system has done this by charging merchants more than the cost of providing card acceptance services, and each system adopted that pricing policy well before it had market power.¹⁵⁰ By uniformly adopting a pricing policy in a competitive market that shifts revenue from the merchant side to the cardholder side, the card systems practice accords with what two-sided market theory would predict.¹⁵¹

The efficiency of this form of elasticity-based pricing garners further support by the growth in both merchant acceptance and card use over time.¹⁵² If a pricing policy placing a greater burden on the merchant side were inefficient, one would expect to see merchants rejecting credit cards. But that has not happened. The existing system of cost allocation appears to be efficient, and forcing cardholders to cover costs now paid by merchants would be likely to lead to an inefficient under-use of cards.

¹⁴⁸ *Id.* at 584; Schmalensee, *supra* note 132, at 115 (explaining that “increasing total output . . . by subsidizing price cuts where demand elasticity is high . . . increases the size of the pie for the system as a whole”).

¹⁴⁹ In ATM and PIN debit card markets, by contrast, interchange fees have in some cases flowed away from issuers and toward merchants.

¹⁵⁰ Semeraro, *supra* note 19, at 988 (explaining that “[t]he direction of interchange fee payments . . . appears to be consistent with an efficient and competitive market”); *see* Katz, *supra* note 39, at 123 (virtually all debit card systems also have interchange fees flowing from merchants to issuers).

¹⁵¹ *See* Steven Semeraro, *The Efficiency and Fairness of Enforced Sharing: An Examination of the Essence of Antitrust*, 52 U. KAN. L. REV. 57, 97-98 (2003) (discussing generally how practices undertaken by firms in competitive markets are presumptively efficient).

¹⁵² Judge Frank H. Easterbrook has famously explained that practices increasing output over time are likely to be efficient. *See* Frank H. Easterbrook, *On Identifying Exclusionary Conduct*, 61 NOTRE DAME L. REV. 972, 979 (1986); Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 30-34 (1984).

B. Efficient Pricing With Realistic Market Assumptions

Even if card acceptance fees were inefficiently high, reducing those fees through regulation or shifting those fees to cardholders could make the situation worse. The FRBB authors do not even claim to show that fees are at inefficient levels, and their analysis does not provide any means of determining the overall impact on consumer welfare.

Two-sided market economic theory, however, predicts that shifting costs from one side of the market to the other – as regulation or surcharging would – would leave the market less efficient if demand elasticities differ between the two markets. If card markets are reasonably competitive and thus presumptively efficient, any regulatory intervention is likely to do more harm than good.¹⁵³

To understand the anticompetitive effect, consider a chess club that when charging a uniform dues level for all players has a membership that is (1) disproportionately low-skill players and (2) lower in number than the club could efficiently accommodate. The club organizers therefore decide to offer free admission to high-skilled players, while increasing the dues charged to low-skilled members of the club. This differential pricing (1) attracts more high-skilled players, (2) makes the club more desirable for low-skilled players who thus attend more often, and (3) increases membership and utilization of club facilities. By attracting more high-skilled players through differential pricing, the club functions more efficiently and thus all of its members benefit. To be sure, low-skilled players bear a greater percentage of the cost of operating the club than high-skilled players. But the club provides more value to them, *i.e.* the chance to play against and

¹⁵³ Katz, *supra* note 39, at 17 (explaining that surcharging can undo the effects of interchange fees). Alan Frankel has questioned this justification for the no-surcharge rule, arguing that if merchants want to encourage additional card use, they could easily do so themselves through point-of-sale discounts and other incentives. Frankel & Shampine, *supra* note 38, at 647. But merchants face conflicting incentives. The benefits that they receive from credit cards are often infra-marginal, such as an overall increase in spending levels not directly tied to individual transaction purchase decisions. Merchants benefit at the margin only when the cardholder would not make the purchase without the card. If the customer would make the purchase in all events, a merchant may experience a marginal benefit from the use of another means of payment, but an infra-marginal loss if cardholders stopped carrying credit cards altogether. See Adam Levitin, *Priceless? The Competitive Costs of Credit Card Merchant Restraints*, 55 UCLA L. REV. 1321, 1348-49, 1353 (2008).

learn from higher-skilled players.

The chess club with differential pricing corresponds to the existing credit card market in which merchants, like low-skilled players in the example, pay a higher percentage of the costs of the payment system than necessary to recover the marginal cost of serving them. Using the FRBB authors' terminology, the chess club's pricing policy would transfer wealth from low-skilled players to high-skilled players. But by choosing to frequent the club in greater numbers, the low-skilled players demonstrated that they preferred the club with differential pricing to the less expensive club with a single price. Merchants' willingness to accept credit cards in ever increasing numbers within the card systems' existing pricing models communicates the same message.

Regulation or surcharging in the card market would disrupt this presumptively efficient pricing mechanism by shifting some costs onto cardholders. A similar disruption might occur in the chess club if the meeting organizers surcharged high-skilled players by, for example, charging them more for refreshments at club meetings, undoing the benefit of the differential pricing. High-skilled players enticed to join the club by *no dues* policy would soon realize that they were paying more for refreshments. The meeting organizer, like a merchant surcharging card transactions, negates the benefit of the no dues policy. High-skilled players would quit and the club would thus end up back where it started – with an inefficiently low number of members all paying the same entry fee.

The competitively set merchant fees, combined with a no-surcharge rule preventing merchants from undermining the efficiency-enhancing purpose of the card systems' differential pricing policies, is a presumptively efficient pricing mechanism. Just as high-skilled chess players would quit the club if short-sighted meeting organizers surcharged their refreshments, cardholders would reduce their use of cards if regulators forced banks to increase fees to cardholders or if merchants passed on acceptance fees through surcharging. And if card acceptance costs ever did reach inefficiently high levels, merchants would have options. They could stop accepting credit cards or particular brands of cards; they could offer cash discounts; and they could offer their own reward programs to entice consumers to use the merchant's preferred means of payment.

C. Additional Concerns with Surcharging

Even putting aside the likelihood that regulation or surcharging would undermine efficient differential card-system pricing, surcharging would be unlikely to increase consumer welfare. First, a surcharging scheme would impose substantial costs on a merchant that may outweigh any card-acceptance fee reduction. Programming systems and training employees to implement such a scheme would be a costly endeavor with uncertain potential returns. These costs would be borne by all of the merchant's customers.

Second, even if surcharging were costless and could be implemented without stoking customer dissatisfaction, merchants would be unlikely to use the tactic efficiently. If there were an inefficient overcharge by the card system, a surcharge could theoretically improve efficiency. But it would be virtually impossible for a merchant to know how much of a surcharge would be necessary to counteract the overcharge. Because efficient pricing in two-sided markets reflects the relative elasticities between the two customer bases – not the marginal cost of providing service to the merchant – the merchant would not have the information necessary to determine how much of the card acceptance fee to shift to cardholders without undoing the pro-competitive benefits of differential pricing.

Moreover, even if merchants could calculate the optimal surcharge, they would likely charge more because they would not internalize all of the cardholder's benefits of using a credit card. If credit cards cost more on a per transaction basis than other means of payment, then a merchant would prefer that its customers use credit cards only when they would not otherwise make the purchase with a cheaper payment device.¹⁵⁴ In setting the surcharge, then, a merchant would discount the value of card use to the infra-marginal consumer who would make the purchase with or without a card, but would legitimately prefer to use the card. Legitimate reasons to use a card include the desire not to carry cash and to retain sufficient funds on one's person or in a checking account for emergencies for which a credit card would not be an acceptable means of payment.

Ultimately, merchants would likely divide into roughly

¹⁵⁴ Wright, *supra* note 76, at 8-9; see Katz, *supra* note 39, at 55 (“surcharges might fail to be set at efficient levels even if acquiring and issuing were perfectly competitive”).

two camps: The first group, merchants in reasonably competitive markets, would likely find the costs of surcharging prohibitive.¹⁵⁵ The second group, merchants with substantial market power, might surcharge, but these merchants could potentially retain a significant portion of the card fee savings as profit rather than pass it on to their customers.¹⁵⁶ These merchants may even use the surcharging power to exact greater profits from those consumers who must use a credit card for a particular transaction.¹⁵⁷

A merchant with market power could thus do considerable competitive damage, and there is reason to believe that at least some merchants would exploit the opportunity. The possibility that most merchants would have the ability and incentive to wield a surcharging scalpel precise enough to cut out the bad, while preserving the good, is remote.

VIII. APPROPRIATE RESPONSES TO NEGATIVE CONSUMER WELFARE EFFECTS FROM REWARD CREDIT CARD USE

The FRBB authors recognize that their proposals would reduce the welfare of consumers currently collecting credit card rewards. But they believe that this loss would be outweighed by the gains of other consumers. Their analysis, however, does not confirm that their proposals would, on balance, help consumers. As this paper has shown, the predicted wealth transfer may not exist at all. If that is true, then credit card rewards serve a

¹⁵⁵ See Zhu Wang, *Market Structure and Credit Card Pricing: What Drives Interchange?*, 28 INT'L J. OF INDUS. ORG. 86, 95 (2010) (concluding that the no-surcharge rule “does not play a role” with respect to merchants in competitive markets).

¹⁵⁶ Julian Wright, *Optimal Card Payment Systems* 8 (Social Science Research Network, National University of Singapore, Working Paper, 2002) available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=278047 (explaining that “[w]hen surcharging is allowed, merchants with monopoly power will exploit their power by setting a price to extract surplus from inframarginal cardholders”).

¹⁵⁷ See Gans & King; *supra* note 102, at 25 (explaining that the no surcharge rule “can play an important, socially desirable, role in eliminating the ability of merchants to use the choice of payment instrument as a means of practicing price discrimination . . . [that] serves to distort the cost of transacting further away from its cost minimizing level”); Wang, *supra* note 155, explaining that no-surcharge rule can be welfare enhancing where it limits surcharging by merchants with market power); Wright, *supra* note 156, at 8.

valuable function in stimulating card use that effectively benefits all consumers. Encouraging merchants to surcharge could undo that benefit. Second, even if there is a wealth transfer, capping fees, as the FRBB authors admit, may itself undermine consumer welfare goals. And permitting surcharging may have little impact and could cause problems of its own. Merchants in competitive industries may avoid surcharging, just as they have refused to implement cash discounting schemes, because of the costs and likely customer backlash. Merchants with market power, by contrast, would likely surcharge. But these merchants may push the surcharge beyond the level of any cross-subsidy and retain the excess as profit rather than lowering their prices. Low income and unbanked individuals might be worse off in such a regime.

If regulatory intervention is deemed necessary, a more fruitful approach would be to foster banking relationships among those who currently do not have them. This strategy would have two prongs. First, informational programs could educate the unbanked about the availability and safety of banking services, including credit cards. Second, regulators could provide incentives to financial institutions to reach out to the currently unbanked.

Those who are currently outside the system may benefit far more from banking services, including credit cards of their own, than from potentially efficiency-defeating regulation designed to eliminate a cross subsidy that may not exist. Credit cards have very low or even negative costs to cardholders who do not run balances. The means of payment used today by those with no banking relationship, principally cash and money orders, impose significant costs that extend well beyond cross subsidies. The risk of uninsured loss through theft or otherwise is significant. In addition, while many checking accounts now impose no or minimal fees for depositing or writing a check, check cashing outlets, and those that sell money orders, impose substantial fees. And, of course, using these services is time consuming. Lastly, when the need to purchase on credit arises, an unbanked consumer is generally limited to expensive “payday” loans; the rigors of the pawn shop; or worse. Access to a credit card for unbanked individuals could reduce or eliminate these costs as well as any cross-subsidy.

CONCLUSION

It is quite difficult to make the case that regulatory

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intervention could right a social wrong inflicted on those who do not use credit cards. One cannot conclusively demonstrate that card use reduces consumer welfare, and even if it did, the potential cures would likely be worse than the disease. That regulators have not intervened in the many markets that display potential wealth transfer effects supports this view. And given the economics of two-sided markets governing payment system pricing, capping merchant fees or permitting surcharging would likely lead to inefficiencies that increase prices and decrease welfare. By contrast, legislation designed to extend the benefits of credit cards to those households not currently using them regularly would likely provide more certain and valuable benefits.