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The Unanticipated Costs and Consequences of Federal Reserve Regulation of Debit Card Interchange Fees

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I. INTRODUCTION AND SUMMARY OF FINDINGS

Americans currently use debit cards and credit cards for nearly 82% of their payments and purchases, almost double the share as recently as 2003.[2] In 2022, they used debit cards 98 billion times for payments totaling $4.34 trillion and credit cards 55.3 billion times for payments totaling $5.42 trillion.[3]

The U.S. economy now runs on electronic payments, and every purchase and sale depends on an intricate network that involves not only consumers and merchants, but also the merchants' banks, the banks that issue the debit and credit cards and maintain their cardholders' accounts, and network processors such as Visa and MasterCard that intermediate the electronic exchanges.

Merchants bear much of the costs of this payment system through "interchange fees" they pay to the card-issuing banks and network processors. The network processors, working with the card-issuing banks, set the fees for credit card sales using formulas that depend on the value of the sale and the credit lines and rewards provided by the issuing bank.[4] Under the Dodd-Frank Act of 2009, the Federal Reserve caps interchange fees for purchases by debit cards issued by large banks (assets of $10 billion and more) based on a baseline fee of 21 cents, 0.05% of a sale's value, and a 1-cent charge to cover banks' fraud prevention operations.

The regulation creates large disparities in a sale's interchange fees based on whether the consumer makes the purchase with a debit card or a credit

1 We gratefully note the support for our research provided by the Progressive Policy Institute. The analyses, conclusions, and views in this report are solely those of the authors.

2 Board of Governors of the Federal Reserve System (2024-B); Gerdes, Walton, Liu, and Parke (2005).

3 Board of Governors of the Federal Reserve System (2025).

4 Interchange rates also apply to non-bank issuers, principally credit unions.

card. For a $40 retail purchase with a Visa or MasterCard debit card, merchants pay and card-issuing banks receive a fee of 23 cents, versus fees of 67 cents to 94 cents for the same $40 sale using a Visa or MasterCard credit card.[5]

The debit card fee cap is intended to lower retail prices based on merchants passing along their interchange fee cost savings to consumers. It has not happened: A thorough review finds that several developments have precluded merchants from passing along such savings to consumers. Firstly, the savings are much less than expected. The Federal Reserve formula produced no savings for small debit card sales of $5 or $10; instead, the baseline fee produces interchange costs for such purchases that exceed the average profit margins for retail operations. The regulation also led card-issuing banks to recoup some foregone revenues from debit card transactions by enhancing the appeal and use of their credit cards, and increased credit card use with higher, unregulated interchange fees from this dynamic and other changes have offset much of the merchants' savings from the capped fees for debit card sales.

The net savings from regulating the interchange fee costs only for purchases by debit card and the increased credit card use cannot support any meaningful price cuts for all purchases, and charging less only for debit-card sales would alienate credit card and cash customers. While merchants are legally permitted to offer discounts, the Federal Reserve Bank of Atlanta reports that merchants in 2023 provided discounts for only 2.6% of payments by debit card, 3.6% of cash payments, and 4.5% of credit card payments.[6]

According to a survey of merchants one year after the regulation took effect, 1.2% passed along any savings, 21.6% raised their prices, and 77.2% made no price adjustments.[7] Drawing on another decade of evidence, a series of economic studies have found that the cap's impact on consumer prices "appears negligible,"[8] finding "little evidence" of any consumer savings[9] or that any benefits were "unmeasurable."[10]

Analysts also find that the cap led to unanticipated increases in bank fees and charges. The case for the regulation focused on the dynamic between a merchant's costs for a debit card sale and consumer prices, but electronic payments occur in a "two-sided market" that also involves exchanges between merchants and the banks that issue debit and credit cards and manage their cardholders' accounts. The card-issuing banks subject to the cap responded to their foregone debit card interchange revenues by increasing other consumer charges for monthly accounts, overdrafts, and ATM use, and by limiting access to no-fee accounts.

Banks also enhanced the consumer appeal for their credit cards with higher, unregulated interchange fees by increasing the rewards and cashback payments they provide for using their credit cards. Based on changes in how consumers pay for their retail purchases, it apparently worked. By total numbers, the share of retail sales by credit card nearly doubled from 2012 to 2024, while the share of cash payments fell by more than half, and the share by debit card increased little.[11] Measured by the total value of retail payments, the share by credit card also jumped sharply, while the share

5 Hayashi, Routh, Baird, and Schertzer (2024); Hayashi, Routh, Baird, and Schertzer (2024-A).
6 Federal Reserve Bank of Atlanta (2024).
7 Wang, Schwartz, and Mitchell (2014).
8 Mukharlyamov and Sarin (2025).
9 Mukharlyamov and Sarin (2019).
10 Bourke (2024).
11 Hayashi, Routh, Baird, and Schertzer (2024); Hayashi, Routh, Baird, and Schertzer (2024-A)

by cash payments fell substantially, and the share by debit card declined. As the number and value of cash retail sales fell sharply in this period, new credit card inducements likely attracted many former cash-paying consumers. (See Table 1, below.)

The use of credit cards with rewards and cashback payments does clearly differ by household income: Less than half of Americans with incomes under $25,000 have credit cards, compared to 89% of those with incomes of $50,000 to $100,000 and 97% with incomes over $100,000.[12] Data also show that 90% of Asian Americans and 86% of White Americans have credit cards, versus 70% of Black Americans and 74% of Hispanic Americans.[13]

Even so, access to reward cards is based mainly on credit scores, not incomes. A 2018 study from the Federal Reserve Board found only a modest correlation between income and credit scores,[14] a finding supported by a later study issued by the American Bankers Association.[15] The authors of the Federal Reserve analysis further established that credit scores at every income level range from excellent to poor, confirming that "income is not a strong predictor of credit scores, or vice versa."[16]

The two-sided market dynamics in banking charges, however, have disproportionately burdened lower-income and minority Americans. Higher banking fees based on a threshold monthly balance affected 70% of accountholders in the lowest income quintile versus 3% in the highest quintile,[17] and the number of households citing high bank account fees as a reason for not maintaining a bank account jumped 81%.[18] As a result, the unanticipated effects of the debit card regulation on banking fees and access to bank accounts created a barrier for some lower-income households to establish sound credit scores needed for bank loans, as well as access to credit cards with rewards and cashback payments.

Drawing on a decade of evidence, we can also gauge the impact of the debit card cap and the two-sided market dynamics on merchants' total interchange fee costs. First, we measured the growth trends in debit card and credit card use in the years leading up to the cap and applied those trends to their use from 2012 to 2022 under the cap. In this alternate scenario, based on relative growth rates prior to the cap, debit card purchases in 2022 would have been $1.4 trillion greater, and credit card purchases would have been $1.4 trillion less.

To estimate the accompanying effects on merchants' total interchange costs, we determined the current average credit card interchange rate and the current average rate for debit card sales issued by banks exempt from the cap as a proxy for the unregulated debit card interchange rate. Next, we applied those rates to the alternate scenario. This analysis found that under the alternative scenario, the cap and market responses reduced merchants' debit card interchange costs in 2022 by $37.4 billion while their fee costs for credit card sales increased by $25.2 billion. This tells us that the increased use of credit cards, with their higher interchange fees, offset 67.4% of merchants' cost savings from the cap on debit card interchange fees. In addition, the major beneficiaries of the net savings have not been local

12 Board of Governors of the Federal Reserve System (2024).

13 Ibid.

14 Beer, Ionescu, and Li (2018).

15 American Bankers Association (2021).

16 Beer, Ionescu, and Li (2018).

17 Mukharlyamov and Sarin (2025).

18 Board of Governors of the Federal Reserve System (2024); Mukharlyamov and Sarin (2019).

merchants and their customers but large national retail chains and their shareholders. Sales by retailers with revenues of $100 million and more account for 72.5% of all consumer purchases, including 54% of retail sales by chains with more than $2.5 billion in annual revenues,[19] and the 10 largest U.S. retailers alone account for nearly 30% of all retail sales.[20]

Despite these lessons from the regulation of debit card interchange fees, Congress is considering another proposal to help consumers by lowering merchants' credit card interchange costs. The proposal would require that merchants choose between using the Visa or MasterCard processing network or their smaller competitors, before transacting each credit card sale. Given the extensive experience and analysis of unintended adverse effects from capping debit card interchange fees, this change is also unlikely to benefit American consumers.

II. THE GROWTH OF ELECTRONIC PAYMENTS AND HOW INTERCHANGE FEES SUPPORT THEIR USE

Credit cards and debit cards have gradually superseded cash and bank checks as modes of payment for retail purchases because they are more convenient and secure.[21] The first credit cards were created in the early 20th century by a few department stores and oil companies, limited to their customers' purchases at their stores. It was several more decades before Diners Club and American Express issued the first non-store charge cards, limited to travel and entertainment purchases. The modern credit and debit card systems began in 1966, when Bank of America created the first general purpose credit card (that later became Visa), a consortium of California banks created the first MasterCard credit card, and the Bank of Delaware introduced the first debit card for its account holders. Debit cards achieved broad use in the following decade when banks issued debit cards with the Visa and MasterCard brands and introduced ATM machines for debit customers.[22]

By 2024, Americans used credit cards and debit cards for nearly two-thirds of their purchases and payments.[23] Here is what happens when anyone uses a bank debit card or credit card for a retail purchase.[24] The merchant sends the data on the purchase to its own bank through a processing service, and the merchant's bank routes it to the Visa, MasterCard, or other payment network.[25] The network sends the data to the bank that issued the credit card or debit card and holds the user's bank account, and that bank evaluates the transaction based on the funds in the cardholder's account for debit cardholders or the credit line for credit cardholders, and also applies fraud prevention protocols. On these bases, the bank authorizes (or does not authorize) the transaction to the merchant's bank through the payment network and transfers the full amount from its client's bank account to the merchant's bank account after deducting an "interchange fee" from the merchant's payment.[26]

The interchange fee funds the cost of managing each transaction and often other bank services

19 Census Bureau (2025).
20 Deloitte (2025).
21 Kiernan (2015); Miller (2024).
22 Ibid.
23 Bayeh, Nardone, O'Brien, and Phelps (2025).
24 Mead and Blackwell (2011).
25 The bank issuing debit cards to customers with accounts must contracts with two payment networks, either MasterCard or Visa and an one such as Pulse, NYCE, and STAR.
26 Association for Financial Professionals (2025).

associated with the card. Since October 2011, the federal government has regulated those fees for debit card purchases and not for credit card purchases based on an amendment to the Dodd-Frank Wall Street Reform and Consumer Protection Act sponsored by Senator Richard Durbin (the "Durbin Amendment") and enacted July 21, 2010. It directed the Federal Reserve to assess the costs that large banks (those with assets of more than $10 billion) incur related to a customer's debit card transaction and then cap the associated fee based on those costs.[27] The Federal Reserve devised a formula that, since October 1, 2011, has limited those fees, per purchase, to 21 cents plus 0.05% of the transaction's value and 1 cent for a bank's fraud protection operations.

Under this formula, a $40 purchase by debit card carries a 23-cent interchange fee, whether the purchase occurs in person or over the internet, while the fee for credit card transactions remains unregulated. Depending on the credit card, a $40 transaction by credit card today involves an interchange fee of 67.2 cents to 94 cents for an in-person purchase and 82 cents to $1.14 for an internet purchase.[28]

The goal of the cap regulation was to lower costs for merchants who, hopefully, would pass along some of the savings to consumers through lower prices. Nearly 15 years of experience and data show that a range of market responses doomed the effort. For several economic reasons, the cap did not induce merchants to reduce prices, and card-issuing banks offset their foregone revenues by raising a range of costs for their cardholders. They also shifted their marketing to credit cards with unregulated fees that, for merchants, have offset most of their savings from the debit card cap.

The Benefits of Electronic Payment Systems

These efforts and market responses matter a great deal because the economic savings and other benefits derived from people's pervasive use of debit cards and credit cards are significant. Two decades ago, analysts determined that using debit cards and credit cards instead of cash saved merchants and consumers an average of 16.5 seconds per purchase.[29] The Federal Reserve reports that in 2022, Americans used debit cards or credit cards for 153.3 billion transactions, suggesting savings of 703 million hours each for merchants and their customers.[30] At the current average earning rate for privately-employed Americans of $36.09 per hour (April 2025), using debit cards and credit cards will save consumers and merchants each at least $25.4 billion this year in the value of time saved.[31]

Electronic payments also involve lower operational costs than cash payments, which require multiple handling and usually are hand-deposited in a merchant's bank account. For customers, convenience and ease of record keeping also motivate people's increasing preferences for paying by debit card or credit card. Americans used electronic payments for retail purchases an average of 16.6 times each month in 2022, or 199 times annually, compared to an average of 4.7 monthly purchases by cash or 56 times annually.[32] Americans' access to debit cards and credit cards requires maintaining a relationship with a card-issuing bank, an important reason 96% of U.S.

27 See, for example, Grossman (2024).
28 Hayashi, Routh, Baird, and Schertzer (2024-A).
29 Smart Card Alliance (2004).
30 Federal Reserve Payments Study (2025).
31 Federal Reserve Bank of St. Louis (2025-A).
32 Cubides and O'Brien (2024)

households maintained some relationship to a bank in 2024.[33] The Federal Reserve also reports that in 2022, Americans used debit and credit cards for nearly $9.8 trillion in purchases and payments, $4.34 trillion by debit card and $5.42 trillion by credit card.[34]

Many people also have psychological reasons for choosing to use a debit card compared to a credit card, or vice versa. Studies have found that people tend to use debit cards to discipline impulses to "overspend" and thereby avoid fees and interest payments on unpaid balances. Conversely, many people use credit cards and their revolving credit lines to cover expenditures they are unwilling or unable to postpone. The particularly fast-growing use of credit cards is also associated with the highly valued reward points or cash-back payments linked to most credit cards,[35] and 92% of Americans with at least one credit card in 2022 used cards that provided such rewards or payments.[36]

Consumers also have fewer protections from fraudulent use of a lost debit card than a lost credit card.[37] The Federal Trade Commission cautions that if a person loses a debit card, and a malicious actor finds it or the information tied to it, that actor can withdraw the person's funds or use the card or information to make purchases. Account holders are responsible for up to $50 in unauthorized debit charges if they report their lost or stolen card within two business days of learning about the loss or theft, up to $500 if they report it within 60 days, and all unauthorized charges or withdrawals after the 60-day period.[38] If a debit or credit card account is hacked, the account holder is not liable for charges or withdrawals reported within 60 days of receiving an account statement.

Whichever card people prefer, analysts have found that their use increases people's personal spending and the economy's associated growth by giving Americans easy and efficient access to their funds or lines of credit, so they can buy when they choose instead of waiting for paychecks. Naturally, merchants also benefit directly from increased spending.[39] A 2016 study calculated that the use of debit and credit cards raised GDP from 2011 to 2015 by 0.12% annually. On that basis, their use instead of cash accounted for $35 billion in GDP in 2024.[40] The lines of bank credit provided for credit cardholders, but not debit card users, also increase spending. Higher overall retail spending also increases federal, state, and local tax revenues and reduces the government's costs to mint, produce, and process paper currency and coins.

III. THE IMPACT OF THE INTERCHANGE FEE CAP ON DEBIT CARD AND CREDIT CARD USE

Since the Federal Reserve capped debit card interchange fees, credit card use has grown much more rapidly than debit card use. From 2012 to 2024, the share of credit card purchases increased 85%, the share of debit card purchases rose only 3%, and the share of cash purchases fell 60%. When the debit fee cap took hold in 2012, Americans used debit cards for 36.5% of their purchases, cash for 34%, and credit cards for 23% (Table 1 below). By 2024, Americans used credit

33 Federal Deposit Insurance Corporation (2024). Eighty-one% had full banking relationships.

34 Board of Governors of the Federal Reserve System (2024).

35 Zinman (2004).

36 Cubides and O'Brien (2024).

37 Murray (2023); and Holzhauer (2025).

38 Federal Trade Commission (2025); Consumer Financial Protection Bureau (2025).

39 A study of Danish consumers found they were willing to pay 37% more for beer or coffee drinks when they could use their debit cards rather than cash. Runnemark, Hedman, and Xiao (2015).

40 Zandi, Koropecky, Singh, and Matsiras (2016).

cards for 43% of their purchases, debit cards for 38%, and cash for 14%. As a share of the value of retail payments, the value of credit card purchases increased 63%, the value of debit card purchases fell 7%, and the value of cash purchases fell 62%. By 2024, credit cards covered 49% of the value of all retail purchases, debit cards covered 33%, and cash covered 6%.

TABLE 1. NUMBER AND VALUE OF PAYMENTS BY PAYMENT FORM AS A SHARE OF RETAIL PAYMENTS, 2012-2024[41]

NUMBER OF PAYMENTS BY CREDIT CARD, DEBIT CARD, AND CASH AS A SHARE OF ALL RETAIL PAYMENTS						
FORM	2012	2015	2017	2020	2022	2024
CASH	34.1%	32.0%	29.2%	19.6%	16.6%	13.7%
CREDIT	23.3%	29.1%	28.5%	35.1%	40.3%	43.2%
DEBIT	36.5%	35.6%	37.6%	40.1%	38.9%	37.7%
VALUE OF PAYMENTS BY CREDIT CARD, DEBIT CARD, AND CASH AS A SHARE OF ALL RETAIL PAYMENTS						
CASH	16.4%	13.5%	10.3%	5.9%	6.3%	6.3%
CREDIT	29.8%	43.2%	40.2%	34.2%	47.0%	48.7%
DEBIT	35.6%	31.5%	32.5%	27.9%	30.0%	33.0%

Congress and the Federal Reserve are substantially responsible for these shifts. By capping the interchange fees for debit card transactions but not for those by credit card, they created a disincentive for card-issuing banks covered by the regulation to encourage debit card use and strong incentives for them to attract more credit card accounts. Those banks responded by ending rewards tied to their customers' debit card purchases and expanding the availability and size of the rewards and cash back payments linked to their credit card purchases. Federal Reserve analysts noted that "such rewards may play an additional role in the shift toward credit cards, specifically as compared to debit cards or cash."[42]

As we have noted, many economic factors contributed to the large-scale shift to electronic payments and the dominant movement to credit cards that enable consumers to increase their spending, and thereby also receive rewards and cash back.[43] Notably, young people with little credit history and more limited discretionary income have become major users of debit cards: In 2023,

41 Bayeh, Nardone, O'Brien, and Phelps (2025).

42 *Ibid.*

43 Credit card debt also increased as the use of the card grew sharply. Americans' outstanding balances on their credit cards rose steadily since the interchange fee cap was applied to debit card purchases, from $700 billion in 2011 to $1,210 billion in 2024[43] or by 2.1% annually after inflation. Federal Reserve Bank of St. Louis (2023).

39% of Americans ages 18 to 24 used debit cards compared to 20% of people ages 65 and older.[44] However, policymakers' decisions to apply new regulation that caps debit card fees have led to additional factors that affect people's personal choices about how to pay for their purchases, and also burden some people and benefit others.

The Extent of the Economic Incentives for Card Issuers to Focus on Credit Cards

The extent of the incentives for card-issuing banks to favor marketing for their credit cards over their debit cards is clear in the large disparities in their interchange fees. The interchange charges tied to credit card use vary from card to card, based on the rewards offered, a user's line of credit, the payment network, and other factors. Accordingly, a 2024 study by the Federal Reserve Bank of Kansas City found that an in-person $40 retail purchase paid for with a MasterCard credit card carried interchange fees for the card-issuing bank ranging from 67.2 cents to 90 cents, compared to the 23-cent capped fee for the same in-person $40 purchase with a MasterCard debit card.[45] A bank's interchange revenues from a $40 purchase, therefore, ranged from 44.2 cents to 67 cents more with a MasterCard credit card than with a MasterCard debit card, a difference of 92% to 191%.

The disparities between using a Visa credit card versus a Visa debit card are comparable. The $40 retail purchase in 2024 with a Visa credit card carried fees ranging from 67.2 cents to 94 cents, compared to the 23 cents for that purchase with a Visa debit card.[46] A bank's interchange revenues from the $40 purchase with a Visa credit card were 44.2 cents to 71 cents greater than for the same purchase with a Visa debit card, a difference of 92% to 209%.

Notably, before the cap, interchange rates were substantially higher for transactions by credit card versus debit card, and the rates for credit card purchases changed little in the first decade under the cap (2011 to 2021).[47] The large differences in interchange fee rates under the cap reflect the reduced rates for debit card sales under the cap, although the rates for Mastercard credit card transactions also increased modestly in 2022.[48]

The current disparities in those rates are greater for e-commerce purchases, which now account for 16.2% of retail sales.[49] The interchange fee for a $40 e-commerce purchase in 2024 ranged from 88 cents to $1.14 using MasterCard credit cards and from 82 cents to $1.06 using Visa credit cards, versus the 23-cent fee using MasterCard or Visa debit cards. So, a bank's interchange revenues from a $40 Internet purchase were 65 cents to 91 cents greater using a MasterCard credit card than a MasterCard debit card, a difference of 283% to 396%. Those revenues from the same web purchase with a Visa credit card were 59 cents to 83 cents more than with a Visa debit card, a difference of 257% to 361%.

There are hybrids of credit and debit cards, such as "signature debit cards," that allow a purchaser to choose "credit" at the point of sale and sign

44 Cubides and O'Brien (2024). As expected, the use of debit cards also declines with rising income while credit card use increases with income, although credit card access relies largely on a person's credit score, not income. Low-income households ($25,000 or less) pay by debit card for 33% of their retail purchases and by credit cards for 11%. Among average-income households ($50,000 to $75,000), debit card use rises to 40% and credit card use rises to 26%. Higher-income households ($100,000 to $150,000) use debit cards for 24% of their retail transactions and credit cards for 39%.

45 Hayashi, Routh, Baird, and Schertzer (2024). Data; Board of Governors of the Federal Reserve System (2024-B).

46 *Ibid.*

47 Hayashi, Routh, Baird and Schertzer (2024). Data.

48 *Ibid.* The fee for a $40 sale by MasterCard credit cards increased 4.1% in 2022 and onward, although the fee for the same sale by a $40 Visa credit card sale declined nearly 9%.

49 Federal Reserve Bank of St. Louis (2025).

a receipt for verification, though the funds are transferred directly from the cardholder's account like a debit card purchase. For interchange fee purposes, the merchant must treat the sale as a credit card transaction and pay interchange fees greater than those of a regular debit card and less than those of a regular credit card.[50]

The economics of using debit cards and credit cards differ in other respects. About 18% of credit cardholders pay annual membership fees, including many holding American Express cards,[51] and unpaid balances are subject to late fees and interest charges. The charges for debit card use are generally limited to monthly fees for the bank accounts tied to the cards. Those costs may be offset for credit card users by the reward points or cash-back payments offered by nearly all credit cards, which are often financed by the credit card interchange revenues.[52]

Since the use of credit cards and access to the rewards depend on a bank providing an unsecured monthly line of credit, such use and access often are based on credit scores, a measure estimating a person's ability to make on-time payments; and credit scores are modestly correlated to income, race, and ethnicity.[53] The Federal Reserve reports that in 2023, the share of households with credit cards increased with income.[54] Among households with incomes above $100,000, 97% had credit cards (and access to rewards) compared to 75% with incomes of $25,000 to $50,000 and 46% with incomes of $25,000 or less. Similarly, 86% of White households and 90% of Asian households had credit cards compared to 74% of Hispanic households and 70% of Black households.[55]

TABLE 2. ACCESS TO CREDIT CARDS AND HOUSEHOLDS CARRYING CREDIT CARD BALANCES, BY INCOME AND RACE AND ETHNICITY, 2023

	CREDIT CARDHOLDER	CREDIT CARD BALANCE
FAMILY INCOME		
LESS THAN $25,000	46%	56%
$25,000-$49,999	75%	60%
$50,000-$99,999	89%	52%
$100,000 OR MORE	97%	37%

50 In 2024, the interchange fee for a $40 in-person purchase with a MasterCard signature debit card was 43 cents, versus the 23-cent capped fee with a regular debit card. The charge for the same purchase with a Visa signature debit card was 47 cents to 61 cents, compared to 23 cents. The fee for the $40 e-commerce purchase ranged from 81 cents to 90.4 cents with a Mastercard signature card and 81 cents to 90.4 cents with a $40 Visa signature debit card. Board of Governors of the Federal Reserve System (2024-B).

51 Shy and Stavins (2022).

52 Zinman (2004); Cubides and O'Brien (2024); also, Beer, Ionescu, and Li (2018).

53 While interchange fees cover most of the cost of electronic payment transactions, interest and late fees on unpaid credit card balance cover much of the banks' credit card system costs, including incentives.

54 Board of Governors of the Federal Reserve System (2024).

55 *Ibid.* The Federal Reserve Bank of Boston found comparable race and ethnicity disparities. Shy and Stavins (2022).

	CREDIT CARDHOLDER	CREDIT CARD BALANCE
RACE/ETHNICITY		
WHITE	86%	42%
BLACK	70%	72%
HISPANIC	74%	59%
ASIAN	90%	24%

IV. HOW AMERICANS PAY FOR DIFFERENT TYPES OF RETAIL PURCHASES

When the Federal Reserve analyzes how Americans pay for retail goods, it divides the retail sector into three major segments: 1) grocery and convenience stores; 2) gasoline stations; and 3) general merchandise retail stores, covering everything else.[56] In 2024, debit cards, credit cards, and cash accounted for 94% of all purchases, by value, at grocery and convenience stores, 95% at gasoline stations, and 81% at general merchandise stores.[57]

Significant differences have developed in people's use of debit cards, credit cards, and cash across the three segments since the cap took effect. In 2012, the number and value of debit card purchases exceeded those by credit card in two of the three retail segments (the exception was the value of purchases at general merchandise and other stores). (See Tables 3A and 3B below.) By 2024, the number and value of credit card purchases exceeded those by debit cards in all three segments. In addition, the disparities in the number and total value of general merchandise purchases by credit cards versus debit cards were very substantial by 2024 (47% versus 35% and 52% versus 26%), as were the gaps in the value of retail transactions at gasoline stations (45% versus 38%).

TABLE 3A. SHARE OF THE NUMBER OF RETAIL TRANSACTIONS BY SEGMENT AND MAJOR FORMS OF PAYMENT[58]

	GENERAL MERCHANDISE			GROCERY & CONVENIENCE STORES			GASOLINE STATIONS		
	DEBIT	CREDIT	CASH	DEBIT	CREDIT	CASH	DEBIT	CREDIT	CASH
2012	32%	28%	26%	39%	19%	39%	38%	27%	33%
2024	35%	47%	9%	39%	41%	16%	39%	40%	19%

56 Microdata for the 2025 Diary of Consumer Payment Choice. Bayeh, Nardone, O'Brien, and Phelps (2025).

57 *Ibid.*

58 *Ibid.*

TABLE 3B. SHARE OF THE VALUE OF RETAIL TRANSACTIONS BY SEGMENT AND MAJOR FORMS OF PAYMENT[59]

	GENERAL MERCHANDISE			GROCERY & CONVENIENCE STORES			GASOLINE STATIONS		
	DEBIT	CREDIT	CASH	DEBIT	CREDIT	CASH	DEBIT	CREDIT	CASH
2012	25%	33%	9%	47%	26%	20%	37%	31%	26%
2024	26%	52%	3%	40%	45%	9%	38%	45%	12%

By the Federal Reserve's accounting, all e-commerce sales are considered part of the general merchandise segment. Accordingly, as the e-commerce share of retail transactions increased from 2.2% in 2004 and 5.6% in 2012 to 16.2% in 2024,[60] the e-commerce share of the retail purchases in the general merchandise segment jumped from 2% in 2000 to 12.2% in 2012 and 31.6% by 2022.[61] Notably, a substantial portion of e-commerce retail purchases are not subject to the interchange fee cap. Digital wallet apps such as Apple Pay, Google Pay, and PayPal account for 39% of e-commerce purchases, and credit cards account for another 31%, while debit cards (including prepaid cards) account for only 18% of those internet retail sales.[62] While the precise distribution of credit, debit, bank account, and prepaid card purchases using digital wallets is unknown, we can estimate that e-commerce retail purchases account for 11% of all debit card payments and 13% of all credit card payments.

V. CAPPING INTERCHANGE FEES FOR DEBIT PURCHASES FAILED TO BENEFIT CONSUMERS

For consumers, debit cards and credit cards are close substitutes as a mode of payment. The most likely explanation for the recent dominance of credit card payments, therefore, is incentives for consumers to favor using credit cards, especially the increased rewards for credit card purchases and the higher fees for maintaining the accounts tied to their debit cards. Both incentives are market responses to their reduced revenues from capped debit card interchange fees and increased revenues from unregulated credit card interchange fees.

Nevertheless, Congress maintained that merchants would benefit from the reduced debit card fees and pass along some of their cost savings in lower prices for consumers, a rationale generally accepted at the time by analysts, including myself and many at the Federal Reserve.[63] The Federal Reserve arrived at the cap by analyzing the average fee per debit card transaction by banks with $10 billion or

59 *Ibid.*
60 Ibid.
61 Federal Reserve Bank of St. Louis (2025).
62 Census Bureau (2022).
63 Shapiro (2013).

more in assets, and that handled 64% of debit card transactions,[64] ranking the banks by those fees, and setting the cap at the median fee.[65] Perhaps they assumed that most banks would accept the cap's impact on their revenues since the cap was based on their median costs. Accordingly, many early studies focused on the merchants who paid the fees and the potential benefits for consumers who indirectly financed them through the prices they paid, and a 2012 study from the Federal Reserve Bank of Richmond estimated that the regulation would save merchants $5.1 billion to $7.4 billion that they could pass along to their customers.[66]

With more than a decade of new data and analysis, it is evident that those consumer benefits never materialized. To begin, using the affected banks' median costs to set the cap left half of those banks with above-median costs with direct losses from transacting their debit card customers' payments, inducing them to raise other fees on those customers. The 21-cent base interchange fee for all debit purchases also precluded merchants' cost savings for most smaller retail transactions, because the new interchange fee represented nearly all their potential profits on those sales or even more. The capped fee for a $5.00 debit card sale, 22.25 cents, represents 4.45% of the sale, and the 22.5 cent fee for a $10.00 purchase represents 2.25% of that sale. The average net profit for retail establishments in early 2025 was 4.6% for general retail and 2.0% for grocery and supermarket retailers,[67] and surveys find that 24% of Americans use debit cards for purchases of $5.00 or less and 31% for purchases of $10.00 or less.[68] As a result, the Federal Reserve's formula for the cap made small retail sales money-losers for millions of merchants. Far from enabling them to pass along savings, the cap virtually requires them to *raise* prices for billions of small sales to remain profitable.

To be sure, the average debit card retail purchase in 2024 cost $69.90, with a capped interchange fee of 25.5 cents or 0.365% of the sale.[69] Yet numerous studies based on data from the past decade have been unable to find consumer savings for those and larger purchases. In retrospect, the expectations of consumer benefits were based on a framework focused mainly on the expected economic behavior of the merchants who pay the fee — namely, when the cap lowered their interchange fee costs for debit card sales, normal competition would force them to pass along at least some of their savings to their customers.

This approach ignored or discounted basic features of retail operations. To begin, the vast majority of retail sales use modes of payment unaffected by the regulatory cap, including 32% of payments by credit cards, 16% by cash, and 22% by bank checks, ACH transfers, mobile payment apps, and other forms of payment.[70] The cap reduced merchants' costs only for about one-third of their retail sales and one-quarter of all payments. They could pass along the net savings from the cap of those sales after taking account of losses on small debit card sales, but that could mean charging debit card customers less than other customers for the same item, an approach the other customers would strongly resist. Alternatively, they could reduce the prices for all purchases regardless of the payment mode

64 Board of Governors of the Federal Reserve System (2023).
65 Bird (2024).
66 Wang (2012).
67 New York University Stern School of Business (2025).
68 Segal (2019).
69 Foster, Greene, and Stavins (2025).
70 Bayeh, Berhan, Cubides, and O'Brien (2024).

and associated interchange fees, based on their net cost savings from the capped interchange fees. But this approach also could increase their operating costs and provide, at best, very marginal savings for consumers, and then only if consumers exerted strong competitive pressures for extremely small benefits.

The data show that merchants chose neither option. A survey in the policy's early years found that 77.2% of merchants made no price adjustments, 21.6% responded by raising prices, and only 1.2% lowered prices.[71] With additional years of data, economists generally concluded that the policy led to no price gains for consumers. A 2019 study found "little evidence of across-the-board consumer savings;"[72] a 2024 analysis found that "any pass-through savings to consumers (in lower prices for goods and services) remain unmeasurable;"[73] and a 2025 report found that the consumer impact of the reduced fees "appears negligible."[74]

VI. THE CAP BURDENS AMERICAN CONSUMERS WITH ADDITIONAL BANKING COSTS

With no evidence of consumer savings from retailers passing along any cost savings from the cap, recent analysis has focused on a larger framework that also takes account of the responses from the companies that operate the debit card payment systems. The primary actors here are the banks that issue most debit cards, transfer payments from their debit cardholders' accounts to the merchants' banks and collect the interchange fees. The secondary actors are Visa, MasterCard, and other networks that work with the banks and other financial institutions, such as Discover, that issue debit cards and run the networks that intermediate between those banks, the merchants, and the merchants' banks. (American Express issues credit cards and operates its own network, but does not offer debit cards.)

From this broader view, electronic payment systems are "two-sided markets" with banks on one side, merchants on the other side, and electronic payment network service providers in the middle. In such a market, the banks, facing regulation that reduced their revenues, looked elsewhere to recoup those losses.[75] The economics are straightforward: when a government regulation reduces an industry's revenues but not its associated costs, the companies affected have strong incentives to offset the effects by generating additional revenues from their customers and cutting costs by reducing services for their customers. Shortly after the Federal Reserve applied the cap, some economists cautioned that the debit card issuing banks could respond by raising the fees they charged to maintain their debit cardholders' accounts and reducing benefits tied to those accounts.[76]

Such responses were inevitable for at least half of the banks covered by the regulation based on the Federal Reserve's decision to set the cap at the *median cost* of transacting debit card payments, which left half of those banks with direct losses from transacting their debit card customers' payments, inducing them to raise other fees. This is what happened, and it was not limited to half of the affected banks. One early study reported that

71 Wang, Schwartz, and Mitchell (2014).
72 Mukharlyamov and Sarin (2019).
73 Bourke (2024).
74 Mukharlyamov and Sarin (2025).
75 For early theoretical analysis of two-sided markets, see Rochet and Tirole (2003) and Rochet and Triole (2004).
76 Hayashi and Maniff (2014); also, Hayashi (2021).

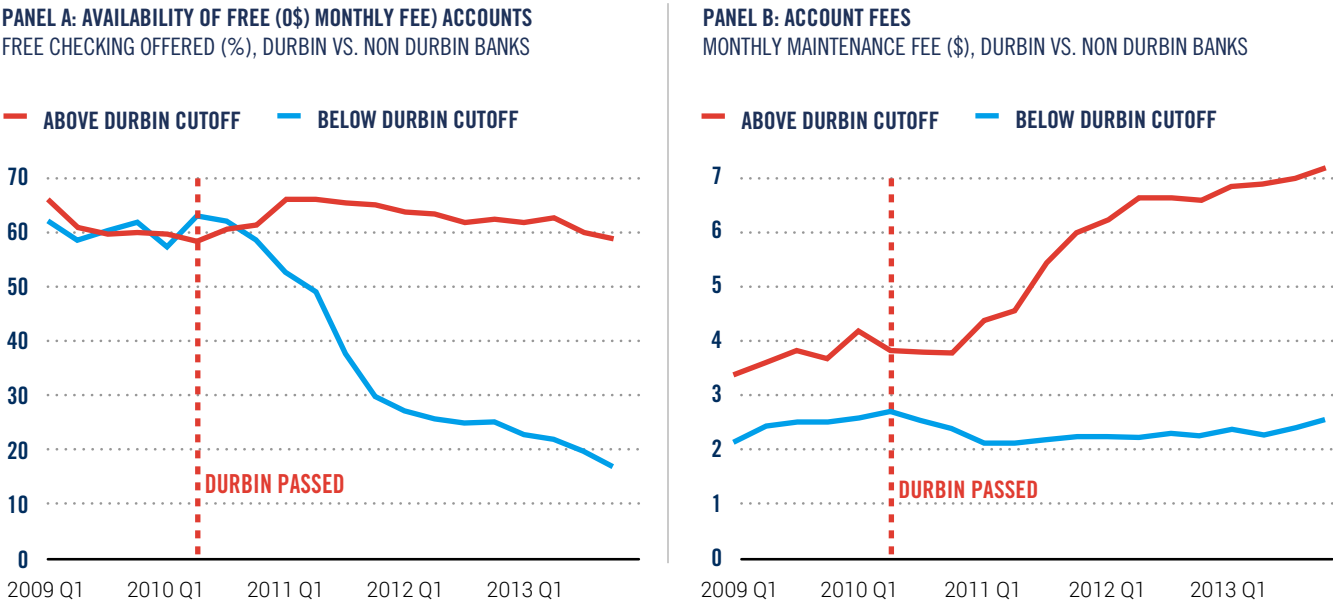
as the regulation reduced the revenues of affected banks by the authors' estimate of $6 billion to $8 billion, banks responded by not only raising fees to maintain their debit cardholders' accounts but also limiting the availability of free checking accounts, increasing minimum balance requirements for those accounts, reducing access to debit accounts by lower-income customers, and raising fees for overdrafts and ATM access.[77] Another early study estimated that the present discounted value of consumer losses associated with these changes could total $22 billion to $25 billion and outweigh any potential price reductions by merchants based on the cap.[78]

Subsequent studies from Federal Reserve economists similarly found that affected banks moved quickly to replace foregone revenues from the regulation by reducing their consumers' access to free accounts by 42% and increasing minimum balance requirements by 30%.[79] Another study of banks covered by the cap regulation also found that in the first year, the share of free checking accounts fell from 58% to 28%, the average monthly fees for checking accounts rose from $4.30 to $6.65, or 55%, and the monthly minimum balances to avoid monthly fees rose from $1,049 to $1,339, or 33%.[80] By yet another accounting, those measures offset 42% of the covered banks' foregone revenues from the cap regulation.[81]

Higher fees to offset foregone revenues from an interchange fee cap are not limited to the United States. A study covering Spain and Australia, as well as the United States, found that Higher fees to offset foregone revenues from an interchange fee cap are not limited to the United States. A study covering Spain and Australia, as well as the United States, found that capped merchant interchange fees were followed by increased fees for banking customers in all three countries.[82] Economists also found that the higher fees sometimes were not limited to banks subject to the interchange fee cap: Some banks with less than $10 billion in deposits, and therefore exempt from the cap, also raised account maintenance fees.[83] Overall, however, in the first three years of the cap regulation, the exempt banks overall responded by cutting account fees and expanding access to free accounts. (See Figure 1 below.) Differences between the early responses by covered banks versus those exempt from the cap illustrate mainly the large decline in access to free accounts by the covered banks and the large increases in their monthly maintenance fees.

77 Zywicki, Manne, and Morris (2014).
78 Evans, Chang, and Joyce (2013).
79 Manuszak and Wozniak (2017).
80 Mukharlyamov and Sarin (2025.
81 Bourke (2024).
82 Gorka (2019).
83 Manuszak and Wozniak (2017).

FIGURE 1. ACCESS TO FREE ACCOUNTS AND MONTHLY ACCOUNT MAINTENANCE FEES, BANKS COVERED BY THE INTERCHANGE FEE CAP REGULATION VERSUS THOSE EXEMPTED[84]



Analysts also found that these economic dynamics disproportionately affected lower-income households. One recent study reported that higher bank account fees based on average monthly balances affected 70% of account holders in the lowest income quintile compared to 3% in the highest decile.[85] As a result, use of debit cards by lower-income consumers has declined.[86] The regulation also may have increased the number of unbanked Americans. In 2023, 31% of unbanked households cited high monthly fees and 42% cited minimum balance requirements as their main reason for not having a bank account.[87]

The history of the Durbin Amendment attests that Congress intended to use the cap to help American consumers by shifting part of merchants' interchange fee costs from merchants to banks, on an expectation that merchants would pass along part or all their savings. More than a decade of evidence and analysis has established that the effort did not result in lower prices for consumers, and as expected from the economics of two-sided markets, banks also responded to regulation that reduced their revenues but not their costs by raising fees and reducing bank services in ways that have left tens of millions of American consumers worse off.

VII. THE IMPACT OF THE CAP ON DEBIT CARD INTERCHANGE FEES ON CREDIT CARD USE

The economics of the two-sided market led to additional responses that also offset most of any cost savings for merchants from the cap. The primary factor was consumer responses to the economic decision by the affected banks to encourage greater credit card use, with their unregulated interchange fees and revolving

84 *Ibid.*

85 Mukharlyamov and Sarin (2025).

86 Kay, Manuszak, and Vojtech (2018).

87 Federal Deposit Insurance Corporation (2024).

lines of credit, by increasing the marketing and inducements for their credit cards.[88] Based on retail transaction data, Americans' use of credit cards rose substantially since the cap took effect, and their use of debit cards remained broadly static despite the sharp decline in the use of cash and a steady decline in the use of bank checks, ACH transfers, and other modes of payment (Table 5 below). In 2012, just after the interchange fee cap first took effect, the value of debit card purchases exceeded the value of credit card purchases by nearly 6 percentage points or 19%; 12 years later, credit card payments exceeded debit card payments by 16 percentage points or 48%.

TABLE 5. VALUE OF RETAIL PURCHASES BY FORM OF PAYMENT, 2012-2024[89]

	2012	2017	2022	2024
DEBIT CARD	35.6%	32.5%	30.0%	33.0%
CREDIT CARD	29.8%	40.2%	47.0%	48.7%
CASH	16.4%	10.3%	6.3%	6.3%
OTHER	18.2%	17.1%	16.8%	11.9%

There are also income-based differences in people's use of debit cards and credit cards for their retail purchases. Low-income households ($25,000 and less) use debit cards for 33% of retail purchases and credit cards for only 11%, compared to higher-income households ($100,000 to $150,000) that use debit cards for 24% of their purchases and credit cards for 39%.[90] There are some age-based differences as well in people's use of debit cards, but not their use of credit cards. Some 39% of Americans ages 18 to 24 use debit cards compared to 20% of those ages 65 and older, while young people and older people are equally likely to use credit cards (31% versus 30%).[91]

Americans' dramatic shift away from cash followed clearly from the advantages of electronic payments and steady increases in the shares of households with some relationship with a bank, now 96%.[92] Based on these factors, debit cards and credit cards are virtual substitutes for people's retail purchases. As noted earlier, people's personal psychology about their spending affects their choices between using debit cards, credit cards, or both.[93] Economic considerations also affect those choices, chiefly the rewards and cash back payments linked to credit cards but not to most debit cards. Among Americans with at least one credit card in 2022, 92% used cards providing those benefits,[94] and Federal Reserve analysts

88 Smith (2014).
89 Federal Reserve Bank of Atlanta (2025).
90 *Ibid.*
91 *Ibid.*
92 Federal Deposit Insurance Corporation (2024).
93 Zinman (2004).
94 Cubides and O'Brien (2024).

found that "such rewards may play an additional role in the shift toward credit cards specifically as compared to debit cards."[95]

Americans' sharply increased use of credit cards and broadly stable use of debit cards may also involve Americans opting for cards with revolving credit lines as they increased their retail spending since 2012.[96] As e-commerce has increased, concerns about fraudsters gaining access to debit accounts also may have favored increased credit card use. Additionally, several major national and regional retailers also partnered with credit card issuing banks and the network processors in issuing the retailers' branded credit cards, which could have contributed to the increased relative use of credit cards.

Even so, Federal Reserve data on the value of payments by debit cards versus credit cards from 2000 to 2022 support the major role of the Durbin cap. Before it took effect, the value of debit card payments increased from $348 billion in 2000 to $1.6 trillion in 2009, or 360%, while the value of credit card payments increased from $1.28 trillion to $1.92 trillion, or 50%.[97] (Federal Reserve data do not include 2010 and 2011.) After the debit card fee cap took effect, credit card payments increased more and grew faster than debit card payments: Credit card payments grew from $2.55 trillion in 2012 to $5.42 trillion in 2022, or 112.5%, while debit card payments rose from $2.1 trillion to $4.34 trillion, or 106.7%.[98]

VIII. THE NET IMPACT OF DEBIT CARD REGULATION ON MERCHANTS' INTERCHANGE COSTS

As a thought experiment, we considered a scenario in which Congress and the Federal Reserve had not capped debit card interchange fees, and credit card and debit card payments from 2012 to 2022 had continued to grow at their relative rates from 2000 to 2009.[99] The sharp decline in cash payments is also assumed, since the analysis focuses on the relative growth rates of debit and credit card use. Using non-linear growth rate modeling, we found that the value of credit card payments in 2022 would have been $4.03 trillion instead of $5.42 trillion, and the value of debit card payments would have been $5.73 trillion instead of $4.34 trillion. Assuming pre-cap growth rates, the value of debit card payments in 2022 would have been $1.39 trillion more, and the value of credit card payments would have been $1.39 trillion less.

95 *Ibid.*

96 People's outstanding credit card balances rose from $700 billion in 2011, before the Durbin cap, to $1,210 billion in 2024. Federal Reserve Bank of New York (2025). People's greater use of credit cards has not increased the economic burden on households: Credit card debt as a share of post-tax income increased from 2011 to 2019 by only 1.9% total and then declined 4.6% from 2019 to 2024. (Federal Reserve Bank of St. Louis, 2023.)

97 Board of Governors of the Federal Reserve System (2025).

98 *Ibid.*

99 We used non-linear growth rate modeling to establish the relative growth rates of debit and credit card use, by value, from 2000 to 2009, and applied the results to the period from 2012 to 2022.

TABLE 6A. VALUE OF DEBIT CARD AND CREDIT CARD PAYMENTS, ACTUAL AND ALTERNATIVE SCENARIO

	2000	2009	2012	2022
DEBIT CARD	$0.35 trillion	$1.60 trillion	$2.10 trillion	$4.34 trillion
CHANGE	*460%*		*106.7%*	
DEBIT CARD	$1.28 trillion	$1.92 trillion	$2.55 trillion	$5.42 trillion
CHANGE	*50%*		*112.5%*	
ALTERNATIVE SCENARIO				
DEBIT CARD	$0.35 trillion	$1.60 trillion	$2.35 trillion	$5.73 trillion
CHANGE	*357%*		*238%*	
DEBIT CARD	$1.28 trillion	$1.92 trillion	$2.30 trillion	$4.03 trillion
CHANGE	*50%*		*75.2%*	

By this analysis, the regulatory cap and the market's responses both directly and more generally reduced potential debit card payments in 2022 by 24.3% [($4.34 – $5.73)/$5.73 = -0.243) and increased credit card payments in 2022 by 34.5% [($5.42 - $4.03)/$4.03 = 0.345], relative to the payments if the pre-cap trends had continued. Efforts by card-issuing banks to encourage American consumers to use their credit cards, with unregulated interchange fees in this two-sided market, instead of debit cards with the regulated fees for large issuers, were broadly successful.

Using these scenarios, we also can estimate the net effect of the debit card fee cap on merchants, including their savings from the cap and their additional interchange fee costs from the associated increase in credit card use. We will see that the higher merchant costs associated with credit card payments have offset most of the reduced merchant costs from the cap on debit card interchange fees.

As noted earlier, credit card interchange fees vary greatly based on the type of card, the card's benefits, and the merchant's industry.[100] A recent data dashboard from the Electronic Payments Coalition study calculated that the weighted interchange rate for credit card payments in 2023 was 1.8% of credit card payments.[101] Federal Reserve data show that the weighted interchange rate for debit card payments covered by the cap was 0.47% of those debit payments, 1.21% for debit card payments exempt from the cap, and 0.73% for all debit card purchases.[102] Federal Reserve data also show that by value, the debit

100 People's general access to credit is also sensitive to demographics, especially race and class. Bakker, DeLuca, English, Fogel, Hendren, and Herbst (2025).
101 Electronic Payments Coalition (2024).
102 Board of Governors of the Federal Reserve System (2025-A).

card issuing banks covered by the cap handle 64.3% of all debit card charges, and banks exempt from the regulation handle the remaining 35.7% of those payments.[103]

Based on these data, we calculate first that the total interchange fees for all debit card payments, regulated and not regulated, totaled $31.6 billion in 2022, compared to $97.2 billion for all credit card payments. Under the alternative scenario, with debit card payments in 2022 aligned with their growth trends from 2000 to 2009 before the regulated cap was in place, and assuming the unregulated average debit card fee in 2022 would be the rate charged by banks exempt from the cap, merchants' total interchange coats for debit card payments in 2022 would have been $69.0 billion (Table 7 below). Under this alternate scenario, with the value of credit card payments in 2022 based on their growth trends from 2000 to 2009 and using the current weighted 1.8% interchange rate for those payments, interchange fees for credit card payments in 2022 would have cost merchants $72.0 billion.

In a world with no cap on debit card interchange fees and credit card and debit card payments and transactions that maintained their growth trends prior to the regulation, total interchange fees for debit card transactions in 2022 would have cost merchants $37.4 billion more, and their total fees for credit card transactions would have cost them $25.2 billion less.

TABLE 7. INTERCHANGE FEE COSTS FOR DEBIT CARD AND CREDIT CARD PAYMENTS, 2022, ACTUAL AND ESTIMATED FOR AN ALTERNATIVE SCENARIO

	ACTUAL	ALTERNATIVE	DIFFERENCE
DEBIT CARD	$31.6 billion	$69.0 billion	+ $37.4 billion
COVERED BANKS	*($13.0 billion)*	*($44.3 billion)*	*(+ $31.4 billion)*
EXEMPT BANKS	*($18.6 billion)*	*($24.6 billion)*	*(+ $6.0 billion)*
CREDIT CARDS	$97.26 billion	$72.0 billion	- $25.2 billion
TOTAL	$128.8 billion	$141.0 billion	$12.2 billion

These results provide a meaningful measure of how much the interchange fee regulation and the market's responses to it affected merchants' total interchange fee costs. In 2022, by this accounting, the increase in interchange fee costs from the higher volume of credit card sales and their higher interchange rates compared to debit cards offset 67.4% of the savings for merchants from the cap on debit card fees (25.2 / 37.4 = 0.674). Those developments, therefore, offset all but $12.2 billion of merchants' reduced costs from the cap.

This analysis does not include other factors that also reduced the regulation's benefits, notably the regulatory formula's impact on retail merchants' margins and losses for small sales. It does not

103 Ibid.

include the higher fees and other bank account-related costs for millions of people, nor the regulation's failure to deliver lower retail prices for consumers. To be sure, it also does not include changes in the shares of transactions and their value by credit cards and debit cards unrelated to the regulatory cap and the responses by the card-issuing covered banks.

IX. SHAREHOLDERS OF NATIONAL RETAILERS ARE MAJOR BENEFICIARIES OF INTERCHANGE FEE REGULATION

On balance, the regulation produced modest net cost savings for merchants. Since the retail sector is markedly concentrated, those savings mostly benefited national retail chains and their shareholders, not local merchants.

Concentration in American retail has increased significantly since the 1990s. A 2015 study found that from 1997 to 2007, the share of retail sales transacted by the 20 largest retail chains increased from 18.5% to 25.4%.[104] By 2023, the 10 largest retailers alone had sales totaling nearly $1.6 trillion or 28.6% of U.S. retail sales.[105] (The 10 giant retailers were Walmart, Costco, Amazon, Kroger, Home Depot, CVS, Walgreens, Target, Lowe's, and Albertsons.) Food sales are the most highly concentrated segment of U.S. retail. A Department of Agriculture study found that the 20 largest national chains of supermarkets and grocery stores (NAICS 445110) and warehouse clubs and superstores (NAICS 452311) accounted for 64% of all retail food purchases in 2019,[106] led by Walmart, Amazon, Costco, and Kroger.[107]

Across all retail segments, the Census Bureau reports that in 2022, retail sales by national retailers with revenues of $2.5 billion and more accounted for 54% of all retail revenues, and sales by retailers with revenues of more than $100 million accounted for 72.5% of all retail revenues.[108] (See Table 8 below.)

TABLE 8. U.S. RETAIL SALES BY COMPANY SIZE, 2022

COMPANY SIZE BY REVENUES	TOTAL REVENUES	SHARE OF REVENUES
Less than $100 million	$1,881 billion	27.5%
$100 million to $1 billion	$940 billion	13.7%
$1 billion to $2.5 billion	$328 billion	4.8%
$2.5 billion and more	$3,702 billion	54.0%
Total	$6,851 billion	100.0%

104 Hortacsu and Syverson (2015).
105 Deloitte (2025). The analysis excluded gasoline stations owned by oil and gas companies.
106 Zeballos, Dong, and Islamai (2023).
107 Progressive Grocer (2022).
108 Census Bureau (2025).

The net benefits for America's merchants from the interchange fee cap for debit card purchases are both far less than expected and highly concentrated among the nation's large retail chains and their shareholders, not among local merchants and their customers.

X. A PROPOSAL TO INDIRECTLY REGULATE CREDIT CARD INTERCHANGE FEES

In the last Congress, Senator Durbin, the chief sponsor of the debit card interchange fee regulation, introduced the Credit Card Competition Act of 2023 (CCCA) that aims to lower credit card interchange costs by increasing competition among the payment networks. The CCCA proposal, expected to be reintroduced in the current Congress, would direct large credit card issuing banks (those with more than $100 billion in assets) to equip all future cards with as technology to enable merchants to choose between two alternate payment networks for each transaction, and only one of those two networks can be Visa or MasterCard.[109] Visa and MasterCard's current agreements with card-issuing banks generally require that their cards run on the Visa or MasterCard network and bar merchants from processing sales by those cards through other networks.[110]

CCCA supporters reason that mandating greater competition among processing networks would reduce merchants' credit card interchange costs by as much as one percentage point and thereby ultimately lower prices for consumers.[111] Advocates of the Durbin Amendment, of course, had similar expectations. Based on our experience with that regulation, some analysts expect similar market responses if the CCCA becomes law. The CCCA follows Regulation II in seeking to lower merchants' costs by reducing the revenues of card issuers without lowering the costs of the payment system. In two-sided markets, such cost-shifting induces the side facing reduced revenues to recoup those losses elsewhere, as debit card issuing banks did by raising banking fees and reducing free banking services in response to the Durbin cap on their debit interchange fees.

Given these two-sided market dynamics, a Congressional Research Service (CRS) study of the proposal noted that credit card issuing banks could offset any foregone interchange revenues by reducing rewards and/or raising fees on credit cardholders and their accounts.[112] The CCCA could also result in higher interest rate charges for consumers with unpaid credit card balances. Many merchants also would bear the costs of adapting their systems and practices to engage with an alternative network,[113] and there is no evidence that merchants would pass along any net interchange fee savings in lower prices.

The CRS analysis raised additional concerns based on two-market responses.[114] The affected banks would have substantial leverage with the small networks to negotiate favorable terms for themselves that could preclude meaningful savings for merchants. Small networks also have fewer resources to invest in advanced payment protection technologies on an ongoing basis, potentially raising new security issues that could incline merchants to prefer the large, established networks. For this and other reasons, many merchants at the time of each transaction are

109 S.1838 - Credit Card Competition Act of 2023 (2023).
110 Scott (2023).
111 Oxford Economics (2025).
112 Scott (2024).
113 Allen (2025).
114 Scott (2023).

likely to stick with the popular Visa and MasterCard networks everyone knows.

Market competition in processing electronic payments, as in most lines of business, is clearly desirable. Given the discouraging experience of regulating debit card interchange fees, trying to achieve greater competition in credit card network processing through the CCCA regulation may well prove equally disappointing. Based on the record of Regulation II, the CCCA risks substantial harm to many consumers by raising their banking costs and lowering the value they derive from using credit cards.

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References

American Bankers Association (2021). "The Benefits of Credit Card Rewards." https://www.aba.com/-/media/documents/reference-and-guides/the-benefits-of-credit-card-rewards-62121.pdf?rev=c4834a9b8efa499c9e50d788a0cd2d12.

Association for Financial Professionals (2025). "Interchange Fees Explained." https://www.afponline.org/training-resources/resources/articles/Details/interchange-fees-explained-what-they-are-and-how-they-work.

Bakker, Trevor, Stephanie DeLuca, Eric English, Jamie Fogel, Nathaniel Hendren, and Daniel Herbst (2025). "Credit Access in the United States." Center for Economic Studies. U.S. Census Bureau. https://www2.census.gov/library/working-papers/2025/adrm/ces/CES-WP-25-45.pdf

Bayeh, Berhan, Emily Cubides, and Shaun O'Brien (2024). "2024 Findings from the Diary of Consumer Payment Choice." The Federal Reserve System. Financial Services. https://www.frbservices.org/binaries/content/assets/crsocms/news/research/2024-diary-of-consumer-payment-choice.pdf

Bayeh, Berhan, Isaiah Nardone, Shaun O'Brien, and Hailey Phelps (2025). "2025 Findings from the Diary of Consumer Payment Choice." The Federal Reserve System. Financial Services. https://www.frbservices.org/binaries/content/assets/crsocms/news/research/2025-diary-of-consumer-payment-choice.pdf.

Beer, Rachel, Felicia Ionescu, and Geng Li (2018). "Are Income and Credit Scores Highly Correlated?" FEDS Notes. Board of Governors of the Federal Reserve System. https://www.federalreserve.gov/econres/notes/feds-notes/are-income-and-credit-scores-highly-correlated-20180813.html.

Bird, Ronald (2024). "How the Free Lunch Fallacy Feeds Payment Card Regulation." https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4964805

Board of Governors of the Federal Reserve System (2023). "Interchange Fee Revenue, Covered Issuer Costs, and Covered Issuer and Merchant Fraud Losses Related to Debit Card Transactions." https://www.federalreserve.gov/paymentsystems/files/debitfees_costs_2021.pdf

_____ (2023). "Survey of Consumer Finances." https://www.federalreserve.gov/econres/scfindex.htm

_____ (2024). "The Economic Well Being of U.S. Households, 2023." https://www.federalreserve.gov/publications/files/2023-report-economic-well-being-us-households-202405.pdf

_____ (2024-A). "Federal Reserve Payments Study, CY 2022," https://www.federalreserve.gov/paymentsystems/frps_previous.htm

_____ (2024-B). "Networks, Processors, & Issuers Payments Survey (NPIPS)." Federal Reserve Payments Study, CY 2022, Chart Data. https://www.frbservices.org/news/research/2025-findings-from-the-diary-of-consumer-payment-choice

_____ (2025). "Federal Reserve Payments Study, CY 2021 and 2022." https://www.federalreserve.gov/paymentsystems/frps_previous.htm

_____ (2025-A). "Regulation II (Debit Card Interchange Fees and Routing)." https://www.federalreserve.gov/paymentsystems/regii-about.htm

Bourke, Nick (2024). "How Proposed Interchange Caps Will Affect Consumer Costs." January 24, 2024. https://ssrn.com/abstract=4705853.

Bureau of Labor Statistics (2025). "Industries At a Glance: Retail Trade NAICS 44-45." https://www.bls.gov/iag/tgs/iag44-45.htm

Census Bureau (1997). "Sector 44-45--Retail Trade." https://www.census.gov/naics/resources/archives/sect44-45.html

_____ (2022). "Annual Retail Trade Survey." https://www.census.gov/programs-surveys/arts.html.

Consumer Financial Protection Bureau (2025). "§ 1005.6 Liability of consumer for unauthorized transfers." https://www.consumerfinance.gov/rules-policy/regulations/1005/6/#a.

Cubides, Emily and Shaun O'Brien (2024). "Findings from the Diary of Consumer Payment Choice." Board of Governors of the Federal Reserve. https://www.frbservices.org/news/research/2023-findings-from-the-diary-of-consumer-payment-choice#

Deloitte (2025). "Global Powers of Retailing 2025." https://www.deloitte.com/content/dam/assets-shared/docs/industries/consumer/2025/deloitte-global-powers-of-retailing-2025.pdf

Electronic Payments Coalition (2024). "EPC Q3 2024 Data Dashboard," October 10, 2024. https://electronicpaymentscoalition.org/resources/epc-q3-2024-data-dashboard/

Evans, David, Howard Chang, and Steven Joyce (2013). "The Impact of the U.S. Debit Card Interchange Fee Caps on Consumer Welfare: An Event Study Analysis." University of Chicago Coase-Sandor Institute for Law and Economics Research Paper No. 658. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2342593.

Federal Deposit Insurance Corporation (2024). "2023 FDIC National Survey of Unbanked and Underbanked Households." https://www.fdic.gov/household-survey#

Federal Reserve Bank of Atlanta (2025). "2024 Survey and Diary of Consumer Payment Choice." https://www.atlantafed.org/banking-and-payments/consumer-payments/survey-and-diary-of-consumer-payment-choice

_____ (2024). "After More Than a Decade, Merchant Steering with Discounts Remains Rare." https://www.atlantafed.org/blogs/take-on-payments/2024/06/24/after-more-than-decade-merchant-steering-w-discounts-remains-rare?item=2f3efbbd-6002-4365-a592-dd1743e8e8d4

Federal Reserve Bank of New York (2025). "Household Debt and Credit Report." https://www.newyorkfed.org/microeconomics/hhdc

Federal Reserve Bank of St. Louis (2023). "Is it troublesome that credit card debt has topped $1 trillion?" The Fred Blog. https://fredblog.stlouisfed.org/2023/12/three-measures-of-us-credit-card-debt/

_____ (2025). "E-Commerce Retail Sales as a% of Total Sales." FRED Blog. Louis. https://fred.stlouisfed.org/series/ECOMPCTSA/

_____ (2025-A). Average Hourly Earnings of All Employees." https://fred.stlouisfed.org/series/CES0500000003

Federal Trade Commission (2025). "Lost or Stolen Credit, ATM, and Debit Cards." Consumer Advice. https://consumer.ftc.gov/articles/lost-or-stolen-credit-atm-and-debit-cards

Foster, Kevin, Claire Greene, and Joanna Stavins (2025). "2024 Survey and Diary of Consumer Payment Choice: Summary Results." Research Data Report No. 25-1. Federal Reserve Bank of Atlanta. www.atlantafed.org/-/media/documents/banking/consumer-payments/survey-diary-consumer-payment-choice/2024/sdcpc_2024_report.pdf.

Gerdes, Geoffrey, Jack Walton II, May Liu, and Darrel Parke (2005). "Trends in the Use of Payment Instruments in the United States." Federal Reserve Bulletin. Spring 2005. https://www.federalreserve.gov/pubs/bulletin/2005/spring05_payment.pdf

Gorka, Jakob (2019). *Interchange Fee Economics: To Regulate or Not to Regulate?* Palgrave Macmillan.

Grossman, Glenn (2024). "The True Impact of Interchange Regulation: How Government Price Controls Increase Consumer Costs and Reduce Security." Cornerstone Advisors. https://protectinterchange.com/wp-content/uploads/2023/06/True-Impact-of-Interchange-Regulation_CornerstoneAdvisors_June_2023-1.pdf

Hayashi, Fumiko, and Jesse Maniff (2014). "Interchange fees and network rules: a shift from antitrust litigation to regulatory measures in various countries." Federal Reserve Bank of Kansas City. Payments System Research Briefing. https://ideas.repec.org/a/fip/fedkpb/00001.html

Hayashi, Fumiko (2021). "Cash or Debit Cards? Payment Acceptance Costs for Merchants." Federal Reserve Bank of Kansas City. https://www.researchgate.net/publication/353783087_Cash_or_Debit_Cards_Payment_Acceptance_Costs_for_Merchants.

Hayashi, Fumiko, Aditi Routh, Sam Baird, and Kennady Schertzer (2024) "Credit and Debit Card Interchange Fees Assessed to Merchants in the United States, August 2024 Update." Federal Reserve Bank of Kansas City. https://www.kansascityfed.org/Interchange%20Fees/documents/10842/US-IF-August-2024_revised_2.pdf

_____ (2024-A). Data. "Credit and Debit Card Interchange Fees Assessed to Merchants in the United States, August 2024 Update." Federal Reserve Bank of Kansas City. https://www.kansascityfed.org/research/interchange-fees-us/

Holzhauer, Brett (2025). "Here are 3 reasons why paying with a credit card is safer than a debit card or cash." CNBC.com. https://www.cnbc.com/select/why-paying-with-credit-card-safer-than-debit-cash/.

Hortaçsu, Ali, and Chad Syverson. "The ongoing evolution of US retail: A format tug-of-war." *Journal of Economic Perspectives* Vol. 29, No. 4. https://www.aeaweb.org/articles?id=10.1257/jep.29.4.89

Kay, Benjamin, Mark Manuszak, and Cindy Vojtech (2018). "Competition and complementarities in retail banking: Evidence from debit card interchange regulation." *Journal of Financial Intermediation*. Vol. 34. https://www.sciencedirect.com/science/article/abs/pii/S1042957318300184

Kiernan, John (2015). "When Were Credit Cards Invented? A Complete History." Mesa Community College. https://www.mesacc.edu/sites/default/files/pages/section/news/media-coverage/When%20Were%20Credit%20Cards%20Invented_%20A%20Complete%20History.pdf.

Manuszak, Mark, and Krzysztof Wozniak (2017). "The Impact of Price Controls in Two-Sided Markets: Evidence from US Debit Card Interchange Fee Regulation." FEDS Working Paper No. 2017-74. Board of Governors of the Federal Reserve System. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2999628.

Miller, Dan (2024). "When Were Debit Cards Invented?" SoFi.com. July 30, 2024. https://www.sofi.com/learn/content/when-were-debit-cards-invented/

Mukharlyamov, Vladimir, and Natasha Sarin (2019). "The Impact of the Durbin Amendment on Banks, Merchants, and Consumers." Penn Carey Law. University of Pennsylvania. https://scholarship.law.upenn.edu/faculty_scholarship/2046/

_____ (2025). "Price Regulation in Two-Sided Markets: Empirical Evidence from Debit Cards." Social Science Research Network. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3328579

Murray, Teresa (2023). "The dangers of debit cards." U.S. PIRG Education Fund. https://pirg.org/edfund/resources/the-dangers-of-debit-cards/

New York University Stern School of Business (2025). "Margins by Sector (US)." https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/margin.html

Progressive Grocer (2022). "The PG 100: Ranking Top Food Retailers in North America." https://progressivegrocer.com/pg-100-ranking-top-food-retailers-north-america

Rochet, Jean-Charles, and Jean Tirole (2003). "Platform Competition in Two-Sided Markets." *Journal of the European Economic Association*, Vol. 1, No. 4. https://academic.oup.com/jeea/article/1/4/990/2280902;

_____ (2004). "Two-Sided Markets: An Overview." IDEI-CEPR conference on Two-Sided Markets, Toulouse, January 2004. https://web.mit.edu/14.271/www/rochet_tirole.pdf.

Runnemark, Emma, Jonas Hedman, and Xiao Xiao (2015). "Do consumers pay more using debit cards than cash?" Electronic Commerce Research and Applications. Vol. 14, No. 5. https://research-api.cbs.dk/ws/files/45532821/jonas_hedman_do_consumers_pay_more_using_debit_cards_than_cash_postprint.pdf

Segal, Barri (2019). "Most Americans are still using cash or debit cards to pay for small purchases." https://www.creditcards.com/statistics/small-purchases-credit-cards-poll/

Shapiro, Robert (2013). "The Costs and Benefits of Half a Loaf: The Economic Effects of Recent Regulation of Debit Card Interchange Fees." https://www.sonecon.com/docs/studies/Report_on_Interchange_Fees-RShapiro-October_2013.pdf

Shy, Oz, and Joanna Stavins. 2022. "Who Is Paying All These Fees? An Empirical Analysis of Bank Account and Credit Card Fees." Federal Reserve Bank of Boston. Working Paper No. 22-18. https://doi.org/10.29412/res.wp.2022.18.

Smart Card Alliance, "Contactless Payments: Delivering Merchant and Consumer Benefits." A Smart Card Alliance Report. April 2004. PT-04002. https://www.securetechalliance.org/resources/lib/contactless_pmt_benefits_report.pdf

Smith, A. H. (2014). "Durbin's defect: The impact of post-recession legislation on low-income consumers." *New York University Law Review*. Vol. 89, No. 1. https://www.researchgate.net/publication/286698637_Durbin's_defect_The_impact_of_post-recession_legislation_on_low-income_consumers.

Wang, Zhu (2012). "Debit Card Interchange Fee Regulation: Some Assessments and Considerations." Federal Reserve Board Economic Quarterly. Vol. 98, No. 3. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2266079.

Wang, Zhu, Scarlett Schwartz, and Neil Mitchell (2014). "The Impact of the Durbin Amendment on Merchants: A Survey Study." Economics Quarterly. Vol. 100, No. 3. https://www.richmondfed.org/-/media/richmondfedorg/publications/research/economic_quarterly/2014/q3/pdf/wang.pdf

Worldpay (2025). "GPR 2025." https://www.worldpay.com/en/global-payments-report.

Zandi, Mark, Sophia Koropecky, Virendra Singh, and Paul Matsiras (2016). "The Impact of Electronic Payments on Economic Growth." Moody Analytics. https://usa.visa.com/content/dam/VCOM/regional/na/us/visa-everywhere/documents/the-impact-of-payment-cards-on-economic-growth.pdf

Zeballos, Eliana, Xiao Dong, and Ergys Islamaj (2023). "A Disaggregated View of Market Concentration in the Food Retail Industry." Economic Research Service. U.S. Department of Agriculture. https://ers.usda.gov/sites/default/files/_laserfiche/publications/105558/ERR-314.pdf?v=23175

Zinman, Jonathan (2004). "Why Use Debit Instead of Credit? Consumer Choice in a Trillion-Dollar Market." Federal Reserve Bank of New York. Staff Report No. 191. https://www.newyorkfed.org/research/staff_reports/sr191.html.

Zywicki, Todd, Geoffrey Manne, and Julian Morris (2014). "Price Controls on Payment Card Interchange Fees: The U.S. Experience." George Mason Law & Economics Research Paper, No. 14-18. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2446080.

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