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Abstract

The Durbin Amendment to the Dodd-Frank financial reform legislation capped debit card interchange fees for banks with assets of $10 billion. Credit card and prepaid card interchange fees were not regulated. The cap, which took effect on October 11, 2011, cut the average interchange fee for covered banks from $0.50 to $0.24 per transaction.

The cap reduced annual revenues from interchange fees by between $6 billion and $8 billion. Covered banks have recouped these losses in indirect ways. In particular, they have:

- Reduced the availability of fee-free current accounts. The total number of banks offering free current accounts fell by 50% between 2009 and 2013. In comparison, fee-free banking actually *increased* at banks not subject to the Durbin Amendment.
- More than doubled the minimum monthly holding required on fee-free current accounts between 2009 and 2012, from around $250 to over $750.
- Doubled average monthly fees on (non-free) current accounts between 2009 and 2013, from around $6 to more than $12.
- These fee increases and loss of access to free checking contributed to an increase in the unbanked population of approximately 1 million people, mainly among low-income families.
- Consumers have shifted their payment usage from debit cards to credit and prepaid cards, which were not subjected to price controls.

Most large retailers have seen significant cost reductions as a result of the Durbin Amendment, yet to date there is no evidence that those cost savings have been passed-through to consumers. Interchange fees have increased for merchants that make small-ticket transactions, as networks have eliminated discounts that they previously received, and smaller merchants have not seen any reduction in their merchant discount rates. Thus, while consumers have seen large and immediate increases in the cost of bank accounts, to date there is no evidence of reduced prices at the pump or checkout. We estimate that as a result of the Durbin Amendment, there will be a transfer of $1 billion to $3 billion annually from low-income households to large retailers and their shareholders, which have been the primary beneficiaries of the Durbin Amendment to date.

Keywords: Durbin Amendment, Credit Cards, Debit Cards, Prepaid Cards, Free Checking, Unbanked.

JEL Codes: D1, G2, K2

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Price Controls on Payment Card Interchange Fees: The U.S. Experience

By Todd J. Zywicki, Geoffrey A. Manne & Julian Morris [1]

Introduction

In 2009, the U.S. Congress passed the "Durbin Amendment" to the Dodd-Frank financial reforms. In October 2011, the Durbin Amendment was implemented by a Federal Reserve rulemaking that effectively halved the debit card "interchange fee" that may be charged by banks with over $10 billion in assets. This paper assesses the emerging data on Durbin's effects and provides an in-depth review of the actual U.S. experience with the Durbin Amendment.

The paper begins with a brief discussion of the role and benefits of payment cards. It then proceeds to a description of the Durbin Amendment's interchange fee caps, followed by an assessment of the effect of the caps on bank customers, comparing the differential effect on customers of banks subject to the caps versus those that are not subject to them. This leads to a discussion of the wider effect of the caps, with particular focus on the effect on poorer households, on the quality of banking services, and on the usage of different types of payment cards.

The Role and Benefits of Payment Card Usage

Electronic payments are rapidly replacing nineteenth century payment technologies such as cheques and traveller's cheques. By enabling faster, more secure, traceable transactions, payment cards have been a key element in promoting greater integration of the world economy. Indeed, the entire growth of e-commerce and Internet shopping would be inconceivable without the modern payment card network.

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Ubiquitous use of payment cards has reduced liquidity and other constraints that previously limited consumer purchases to the amount of money in their wallet. Both consumers and merchants benefit: consumers by being able to make purchases that otherwise wouldn't have been possible and merchants by making sales that otherwise wouldn't have happened. These benefits result primarily from three factors:

1. Ticket lift: merchants "ticket lift" occurs because consumers are not constrained in making purchases by the amount of money in their wallet (or the need to make a trip to the bank or cash machine).[2] This relaxation of liquidity constraints benefits merchants significantly—for example, short-term sales and special discounts will be more effective if consumers are not limited by their cash on hand.

2. Faster throughput & greater efficiency: For a significant range of transaction sizes, payment cards enable businesses to process transactions more rapidly than cash and other payment methods;[3] for many transactions, payment cards are approximately twice as fast as cash (and cheques are even slower). At the same time, the infrastructure required to support electronic payments is less cumbersome, piggybacks in part on existing communications networks, and reduces the need for physical security of currency (e.g., armoured cars and safes).

3. Outsourcing of credit risk: Credit cards enable retailers to off-load the cost and risk of offering their own credit operations. This has enabled small businesses to flourish and grow, enabling them to compete with larger companies without the need to run their own, expensive credit operations.

When all of these benefits to merchants are taken into account, payment cards are likely less costly for merchants than cash for a wide range of transactions.[4] Indeed, when McDonald's made the decision to accept payment cards, its stock value increased 2.7 per cent on the news, an indication that these benefits to merchants are of even relatively low price items are substantial.[5]

These benefits to merchants and consumers translate into wider benefits to society. A study by the ECB of 13 EU representative countries estimated that if all retail payments in the EU were

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[2] Tamara E. Holmes, *Credit cards can make you fat*, BANKRATE (Jul. 4, 2007), http://www.bankrate.com/brm/news/cc/20070704_credit_cards_fat_a1.asp ("According to a new survey commissioned by Visa, 82 per cent of respondents said fast food purchases made with debit or credit cards are more convenient than dealing with cash. And 68 per cent say using payment cards is faster than paying with cash. Importantly, 77 per cent say they can buy exactly what they want because they are not limited by the cash they have available.").

[3] Indeed, to the extent that payment cards enable consumers to self-checkout or to pump gas without going into the store, this not only reduces the usage of employee time but potentially frees up employees for more highly-valued tasks, such as customer service assistance.

[4] Anne Layne-Farrar, *Are Debit Cards Really More Costly for Merchants? Assessing Retailers' Costs and Benefits of Payment Instrument Acceptance* 57 (Charles River Associates Working Paper, Sept. 9, 2011), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1924925.

[5] Ari Weinberg, *McDonald's Goes Plastic*, FORBES (Mar. 25, 2004), http://www.forbes.com/2004/03/25/cx_aw_0325mcd.html.

made electronically, EU countries on average would save almost 1 per cent of GDP. [6] In some countries, the savings might be far greater: In Hungary, where approximately 73 per cent of retail payments are made in cash, the savings of going electronic are estimated at approximately 1.5 per cent of GDP. The savings in Spain (74% cash), Lithuania (80% cash), Malta (82% cash), Italy (86% cash), Romania (93% cash), Bulgaria (95% cash) and Greece (97% cash) would presumably be similar or even greater.[7]

Increasing the usage of electronic payments can also reduce tax evasion and other illegal activity. Unlike cash, electronic payments create a trail that can aid the government in collecting taxes and restraining illegal activity, while at the same time providing law-abiding citizens with proof of their compliance. In fact, a 2012 study by Value Partners shows that higher levels of electronic payments usage is associated with a smaller shadow economy and less corruption.[8]

In short, greater use of electronic payments is good for the economy, good for the fiscal solvency and fairness of the country, and good for consumers and businesses. And all of these benefits are made possible by banks and the payment card networks, which enable the transactions between merchants and consumers to occur.

Banks act as both issuers (providing payment services for consumers) and acquirers (providing payment services for merchants). Meanwhile, payment networks (such as Visa or MasterCard) link together the issuing and acquiring banks through increasingly sophisticated and secure networks. Expansion of the use of these electronic payment systems has necessitated considerable investment on the part of the banks and the payment card networks. These investments have been funded by interchange fees, which in the U.S. amounted to approximately $20 billion in 2009 (i.e. before the Durbin Amendment).[9] It is important to bear this in mind when evaluating the merits and drawbacks of introducing caps on interchange fees.

The American Experience under the Durbin Amendment

The United States experience with the Durbin Amendment provides a useful test case for understanding the costs of interchange fees and interchange fee price controls, as well as for predicting what the likely effect will be for the EU of price controls, for several reasons:

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[6] Heiko Schmiedel, Gergana Kostova, and Wiebe Ruttenberg, The Social and Private Costs of Retail Payment Instruments: A European Perspective, European Central Bank Occasional Paper Series No. 137 (September 2012), http://www.ecb.europa.eu/pub/pdf/scpops/ecbocp137.pdf

[7] Ibid.

[8] Francesco Burelli, Charles Palmer, and Marco La Bianca, "Evaluating the social cost of cash: with recommendations for Brazil, Columbia, and Mexico," London: Value Partners (June 2013).

[9] Dirk Lammers, *Judge Rejects Injunction in SD Debit Fee Lawsuit*, ABC NEWS (April 5, 2011), http://abcnews.go.com/Business/wireStory?id=13296091.

1. By examining the effects of the Durbin Amendment on banks covered by the fee caps (those with $10 billion or more in assets) across time, we should gain insights into the likely dynamics of the imposition of similar restrictions in the EEA.
2. The bright-line cut-off between covered and exempt banks (those with under $10 billion in assets) enables us to see how banks subject to the regulation responded compared to a control group that was not subject to it.
3. Because the Durbin Amendment applies only to debit cards but not similar substitute payment devices—credit cards and prepaid cards—the effect of interchange fee price controls on transaction volume and card usage can be examined by comparison to these unregulated alternatives.

The Basics of the Durbin Amendment

Passed as part of the 2009 Dodd-Frank Wall Street Reform and Consumer Protection Act, the so-called Durbin Amendment (named after its primary sponsor, Senator Richard Durbin), provides that the amount of any interchange transaction fee that any covered issuer (banks with more than $10 billion in assets) may charge on a debit card must be "reasonable and proportional to the cost incurred by the issuer with respect to the transaction."[10]

As interpreted by the Federal Reserve Board in a subsequent rule-making issued in June 2011, this cut the allowable interchange fee on a debit transaction to an average of $0.21 plus 5 basis points of the transaction value, plus an additional $0.01 for fraud protection.[11] This had the effect of cutting the average interchange fee for covered banks from $0.50 to $0.24 per transaction, or approximately 52 per cent.[12] In short, by defining allowable costs to exclude many of the necessary costs of operating a debit card program, the Durbin Amendment has effectively transformed debit card operations from a profit centre to a "loss centre" for covered banks.[13]

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[10] 15 U.S.C. § 16930-2(a)(2) (2012).

[11] Debit Card Interchange Fees and Routing, 12 CFR § 235.5 (2012), *available at* http://cfr.regstoday.com/12cfr235.aspx.

[12] The average fee charged by exempt banks fell slightly as well, from $0.45 to $0.43. Fumiko Hayashi, *The New Debit Card Regulations: Initial Effects on Networks and Banks*, *in* FEDERAL RESERVE BANK OF KANSAS CITY ECONOMIC REVIEW FOURTH QUARTER 90-91 (2012), *available at* http://www.kansascityfed.org/publicat/econrev/pdf/12q4Hayashi.pdf. At covered banks, interchange fees on signature debit declined from 59 cents to 24 cents per transaction and PIN declined from 34 cents to 23 cents. At exempt banks signature debit fell from 54 cents to 51 cents and PIN from 32 to 31 cents. *Id.*

[13] Retailer interest groups have continued to criticize the Federal Reserve's rule, arguing that it defined the recoverable costs too broadly, and that the Fed must set a still-lower fee. Thus far the effort has been unsuccessful, and the Fed's rule was recently upheld against a legal challenge by a coalition of merchants in *NACS v. Bd. of Governors of the Fed. Reserve Sys.*, No. 13-5270, (D.C. Cir. Mar. 21, 2013).

The Effect of the Durbin Amendment on Covered Banks and Bank Customers: Restricted Access to Free Current Accounts and Higher Bank Fees

The Durbin Amendment permits covered banks to recover only the incremental costs related to debit card transactions; it prohibits recovery in interchange fees for many of the other costs related to debit card operations, such as customer service, data services, branch networks, card-issuance, fraud and loss protection and the like. Unsurprisingly, revenue from debit card interchange fees have fallen as a result of the implementation of the legislation's fee caps. After Durbin went into effect, revenues from interchange fees are estimated to have fallen by between $6.6 billion and $8 billion annually.[14]

Confronted with a loss of billions of dollars in interchange fee revenues, banks and credit unions have had to make up for the lost revenue by increasing the cost and reducing the quality of bank accounts for consumers. Initially, some banks tried to recover the excluded costs from those customers who use debit cards through the direct imposition of a monthly debit card fee of $3-$5 in order to cover the capital and fixed costs of providing debit card services.[15] After much public outcry, however, banks retreated on the imposition of a debit card fee.

This does not mean, of course, that the need for issuers to cover these costs disappeared—instead, banks sought to cover the lost revenue through indirect means. As a recent report from the United States Congressional Research Service concluded, "Preliminary evidence suggests that, since 2009, some consumers experienced either higher charges or less availability of retail payment services provided by depository institutions," identifying the effect of the Durbin Amendment as one of the factors contributing to those effects.[16]

The primary way in which banks have sought to recoup the lost revenue seems to have been through higher bank fees and reduced access to free current accounts. Access to free current accounts, which had increased from less than 10 per cent of all accounts in 2001 to 76 per cent by 2009 (primarily as a result of the replacement of cheques by debit cards), fell dramatically. According to a Bankrate.com study, only 39 per cent of banks offered free current accounts in

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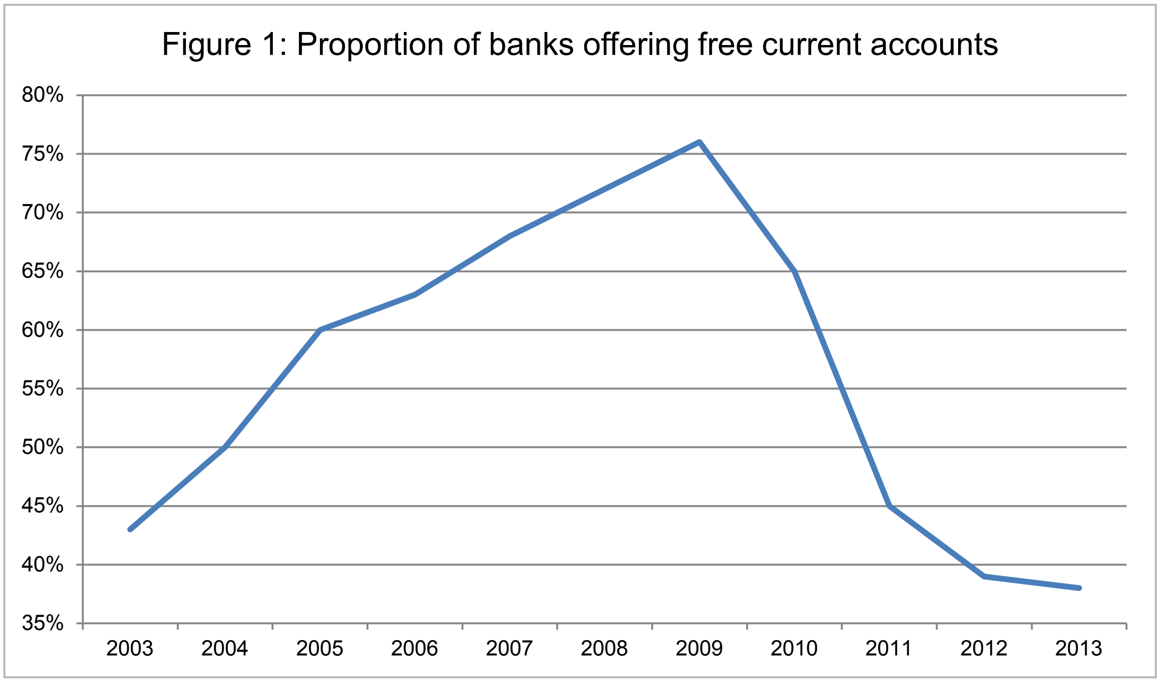
[14] Bradley G. Hubbard, *The Durbin Amendment, Two-Sided Markets, and Wealth Transfers: An Examination of Unintended Consequences Three Years Later* 20 (Working Paper, May 20, 2013), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2285105.

[15] *See, e.g.*, Tara Siegel Bernard, *In Retreat, Bank of America Cancels Debit Card Fee*, NEW YORK TIMES (Nov. 1, 2011), http://www.nytimes.com/2011/11/02/business/bank-of-america-drops-plan-for-debit-card-fee.html ("The bank, the nation's second-largest, said it was abandoning its plan to charge customers a $5 fee to use their debit cards for purchases.").

[16] Darryl E. Getter, *Recent Trends in Consumer Retail Payment Services Delivered by Depository Institutions* 1 (Congressional Research Service, Jan. 16, 2014), *available at* http://www.fas.org/sgp/crs/misc/R43364.pdf.

2012 down from 45 per cent in 2011, and down by almost half from 76 per cent in 2009.[17] The trend has continued, and it appears that only 38 per cent of banks offered free current accounts in 2013.

Figure 1 shows the trend line for free current accounts between 2003 and 2013 according to bankrate.com.[18]



Source: Bankrate.com

In addition, both the minimum balance necessary to avoid monthly maintenance fee and the size of those monthly fees have risen dramatically since the passage of the Durbin Amendment – as shown in figures 2 to 5.[19] An annual survey by Moneyrate.com found that average maintenance fees had risen to $12.08 by 2012 – see figure 4.[20]

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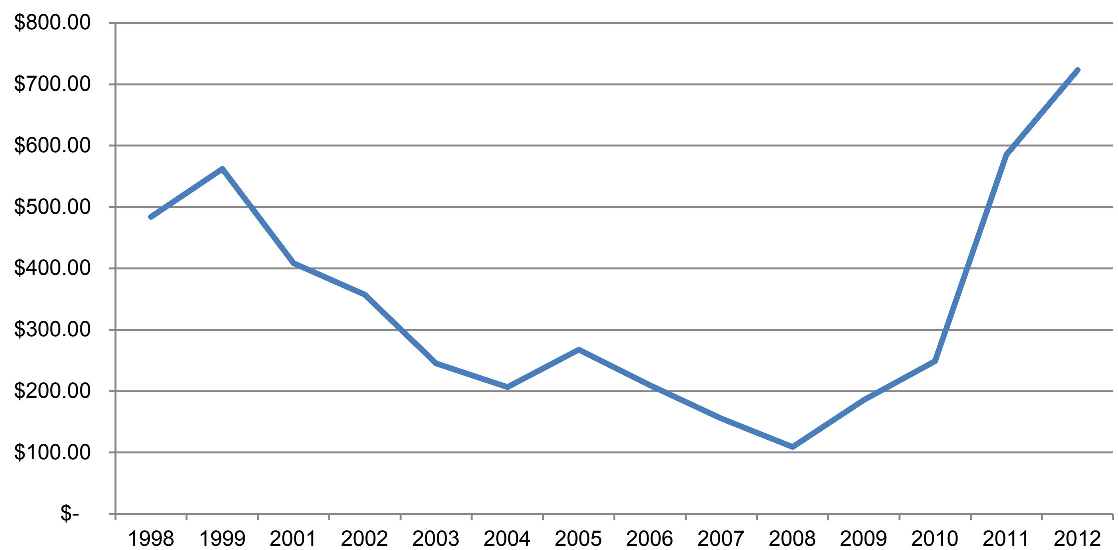
[17] *Compare* Claes Bell, *Checking Fees Rise to Record Highs in 2012*, BANKRATE (Sept. 24, 2012), http://www.bankrate.com/finance/checking/checking-fees-record-highs-in-2012.aspx#slide=2 and Claes Bell, *Abracadabra, free checking disappears!*, BANKRATE (Sept. 26, 2011), http://www.bankrate.com/finance/checking/abracadabra-free-checking-disappears.aspx. These numbers appear to include all banks, not just Durbin banks. As noted below, the drop was even more significant for Durbin banks.

[18] Claes Bell, *Checking Account Fees Rise but Less Steeply*, BANKRATE (2013), http://www.bankrate.com/finance/checking/checking-account-fees-rise-but-less-steeply-1.aspx.

[17] *Id.*

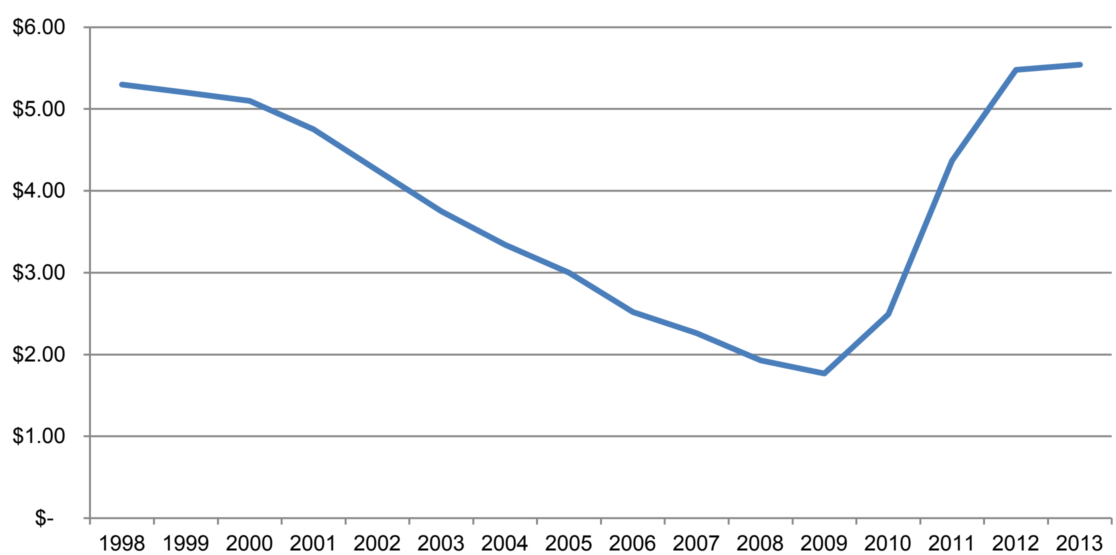
[20] Richard Barrington, "Bank Fees Survey mid-2012: Checking and ATM costs jump again," *available at*: http://www.money-rates.com/research-center/bank-fees/mid-2012.htm

Figure 2: Average minimum holding required to avoid fees (noninterest-bearing accounts)

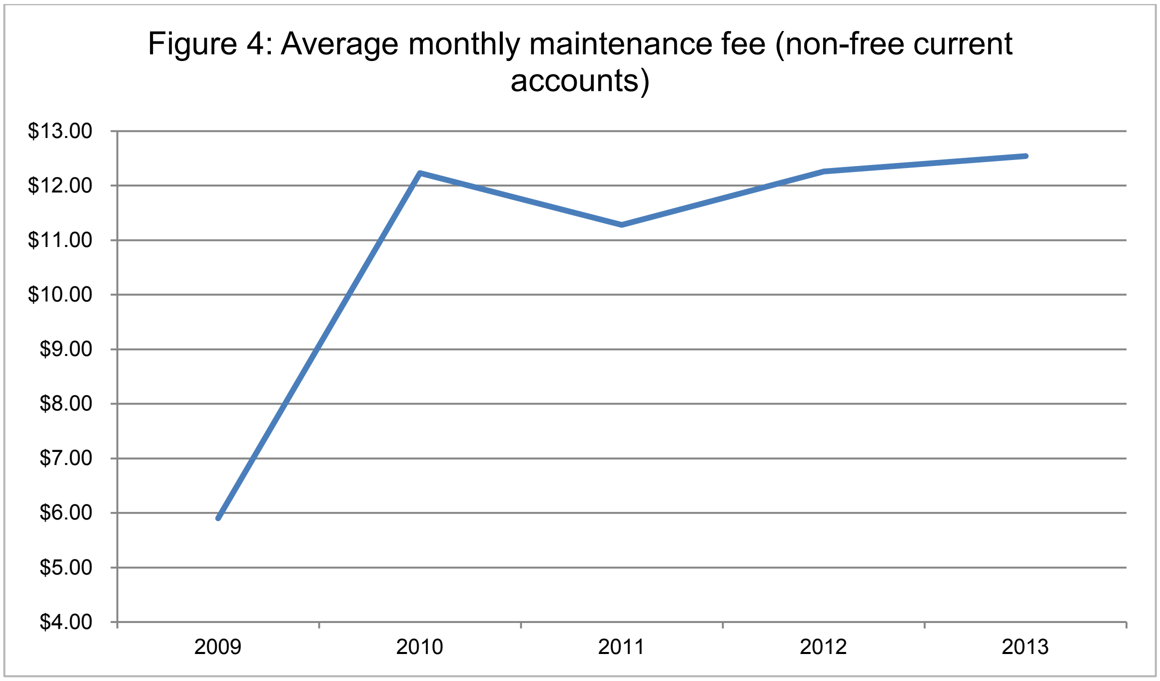


Source: Bankrate.com

Figure 3: Average monthly maintenance fee if average monthly minimum not met (noninterest-bearing accounts)



Source: Bankrate.com



Source: Moneyrate.com

Banks also added new and higher fees on services such as ATM withdrawals and replacement of lost cards.[21] All told, a typical lower income bank customer who previously qualified for a free current account but, after Durbin, no longer meets the minimum monthly balance requirement, is likely paying around $12 in monthly fees, as well as an additional $1 or more in ATM fees. That's an annual cost of around $160.

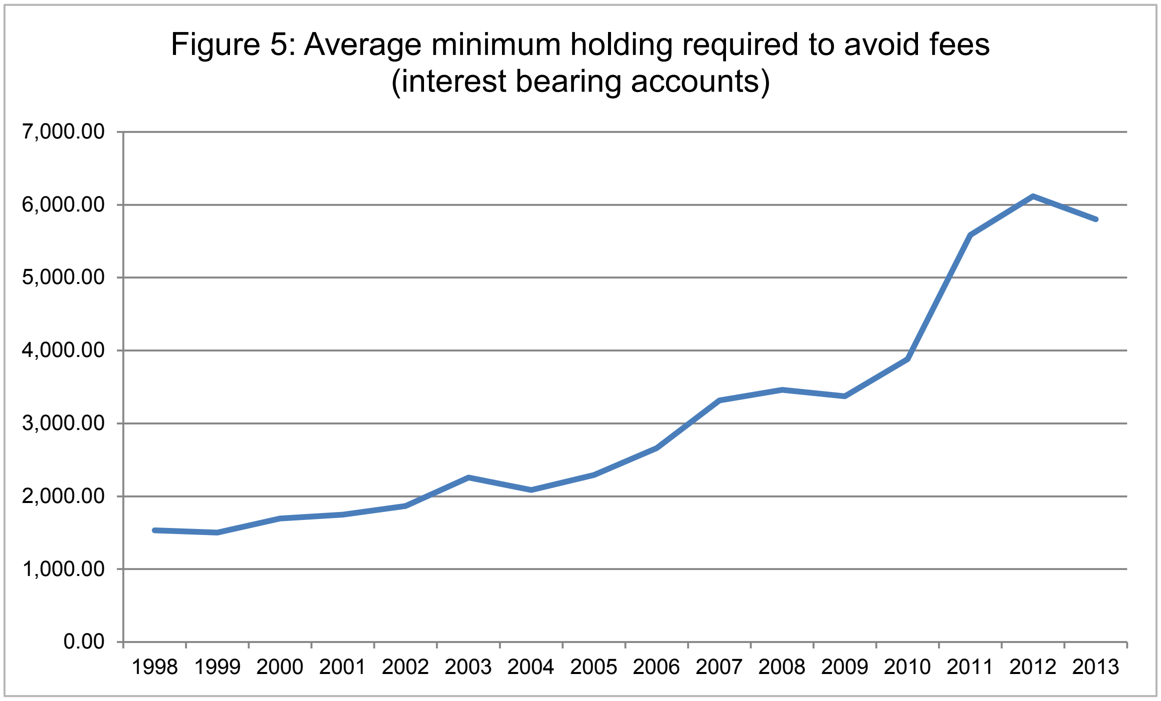
These consequences are consistent with Canada's experience with debit card regulation. Since 1996, Canada's debit card system has effectively operated as a government-mandated monopoly,[22] which is able to recover only basic operating costs through a per-transaction "switch fee".[23] As a result, nearly all the costs of building and maintaining the debit card network are borne by banks and cardholders. Not surprisingly, then, free current accounts are rare in Canada, as are accounts with unlimited free debit transactions. Even accounts with minimum balance require-

[21] *Id.*

[22] *See* Ian Lee, Geoffrey A. Manne, Julian Morris, & Todd J. Zywicki, *Credit Where It's Due: How Payment Cards Benefit Canadian Merchants and Consumers, and How Regulation Can Harm Them* 12-14 (Macdonald-Laurier Institute Publication, Oct. 2013), *available at* http://www.macdonaldlaurier.ca/files/pdf/MLIPaymentCardRegulation10-13Draft5.pdf.

[23] As of 1 February 2014 that fee was C$0.006362. See: http://www.interac.ca/en/interac-about/interac-fees.

ments have substantial minimums and, even then, don't necessarily offer unlimited debit transactions.[24]



Source: Bankrate.com

The Effect of the Durbin Amendment on Covered Banks Compared to Uncovered Banks

Further evidence on the role of the Durbin Amendment in increasing consumer bank fees is provided by comparing trends for free current accounts and bank fees at large banks subject to the Durbin Amendment with smaller banks that are exempt from the Durbin Amendment. Examining this evidence, it is clear that the decline in free current accounts and increase in bank fees has been almost exclusively limited to those large institutions subject to the Durbin Amendment.

An important study by Federal Reserve economist Richard Sullivan demonstrates the point definitively by finding that, although large banks imposed new fees on consumers and restricted access to free current accounts after the imposition of the Durbin Amendment, exempt banks actually *increased* access to free current accounts over the same period.[25] Sullivan finds that in the post-Durbin period, the share of banks subject to the Durbin Amendment that offered free

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[24] *See, e.g.*, Account Selector Tool, FINANCIAL CONSUMER AGENCY OF CANADA, http://itools-ioutils.fcac-acfc.gc.ca/STCV-OSVC/acst-osco-eng.aspx.

[25] *See* Richard J. Sullivan, *The Impact of Debit Card Regulation on Checking Account Fees*, *in* FEDERAL RESERVE BANK OF KANSAS CITY ECONOMIC REVIEW FOURTH QUARTER 65-66.

current accounts fell "sharply" from 51 per cent in 2011 to 27 per cent in 2012. By contrast, among banks in the control group exempt from the Durbin Amendment, "the share offering free [current accounts] rose from 37 per cent in 2011 to 44 per cent in 2012." As Sullivan concludes, "Regulated banks were more likely to raise current account fees, but exempt banks were more likely to reduce or eliminate fees."[26]

Other analysts have reached the same conclusion with respect to the effect of the Durbin Amendment, using several different metrics to measure the level of free current accounts. According to the consumer public interest group US PIRG, for example, in 2012 only 24 per cent of large banks still offered free current accounts, while over 60 per cent of smaller banks did.[27] Using a different definition of free current accounts, banking sector consultants Moebs Services reports that the percentage of free current accounts fell from 81.5% in 2009 to 59.1% in 2014 and that while roughly 60% of medium-sized banks still offered free current accounts in 2014, less than 20% of large banks did so.[28]

A survey taken during summer 2012 by MoneyRates.com found that while about half of the current accounts at small banks charged no fees, only 22 per cent of those at very large banks (over $25 billion) did so.[29] Moreover, monthly maintenance fees were on average higher at large banks than at small banks.[30] And over 70 per cent of the fifty largest credit unions (only four of which are sufficiently large to fall under the Durbin Amendment) still offer free current accounts.[31] In other words, the decline in free current accounts and increase in bank fees correlates almost perfectly with the Durbin Amendment and is not well-explained by other factors, such as the recession or lingering effects of the banking crisis.[32]

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[26] *Id.* at 1-2. Sullivan found that there was an overall increase of free current accounts because exempt banks expanded free current accounts more rapidly than regulated banks retracted it. He does not suggest, however, that price controls on large banks were a causal factor in the increase in free current accounts by exempt banks

[27] U.S. PIRG EDUCATION FUND, BIG BANKS, BIGGER FEES 2012: A NATIONAL SURVEY OF FEES AND DISCLOSURE COMPLIANCE 1 (2012), *available at* http://www.uspirg.org/sites/pirg/files/reports/USPIRG_Big_Banks_Bigger_Fees_0.pdf.

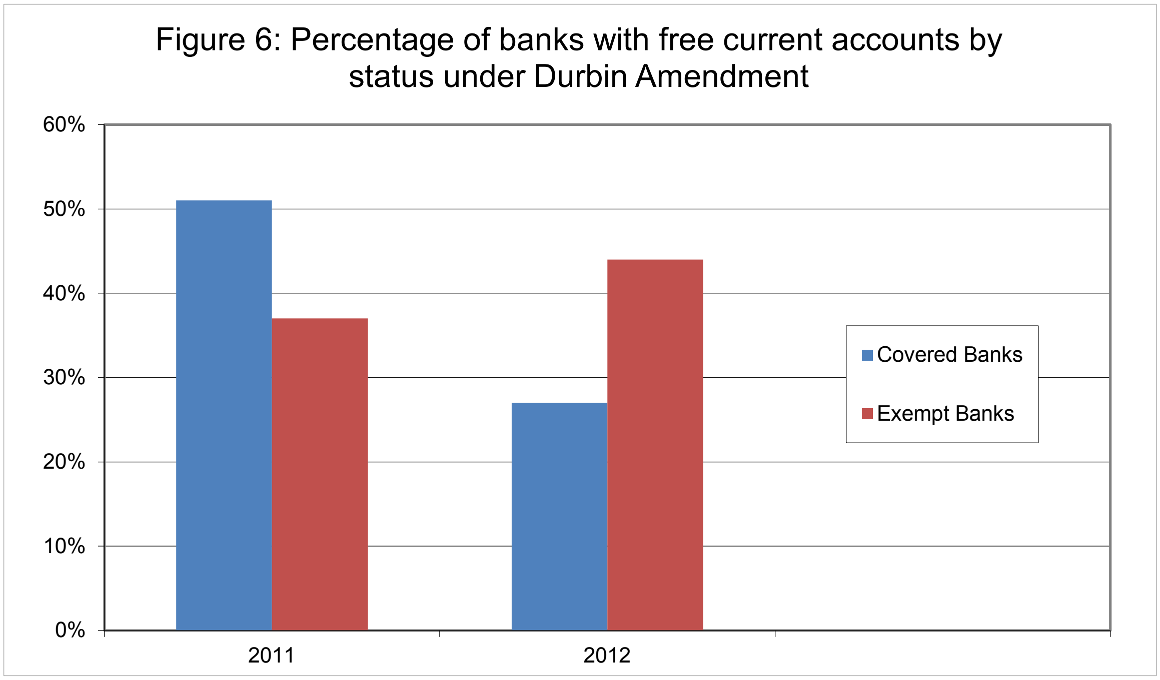
[28] Moebs Services, *Free Checking Declines Significantly in 2013 per Moebs Study* (Feb. 4, 2014), http://www.moebs.com/Portals/0/pdf/Press%20Releases/140204%20M$%20PR%20Mini%20Survey%20Free%20Ckg%20v2.1%20(3).pdf.

[29] Richard Barrington, *Bank Fees Survey EOY 2012: Online banks resist rising fees*, MONEYRATES (Feb. 18, 2013), http://www.money-rates.com/research-center/bank-fees/eoy-2012.htm.

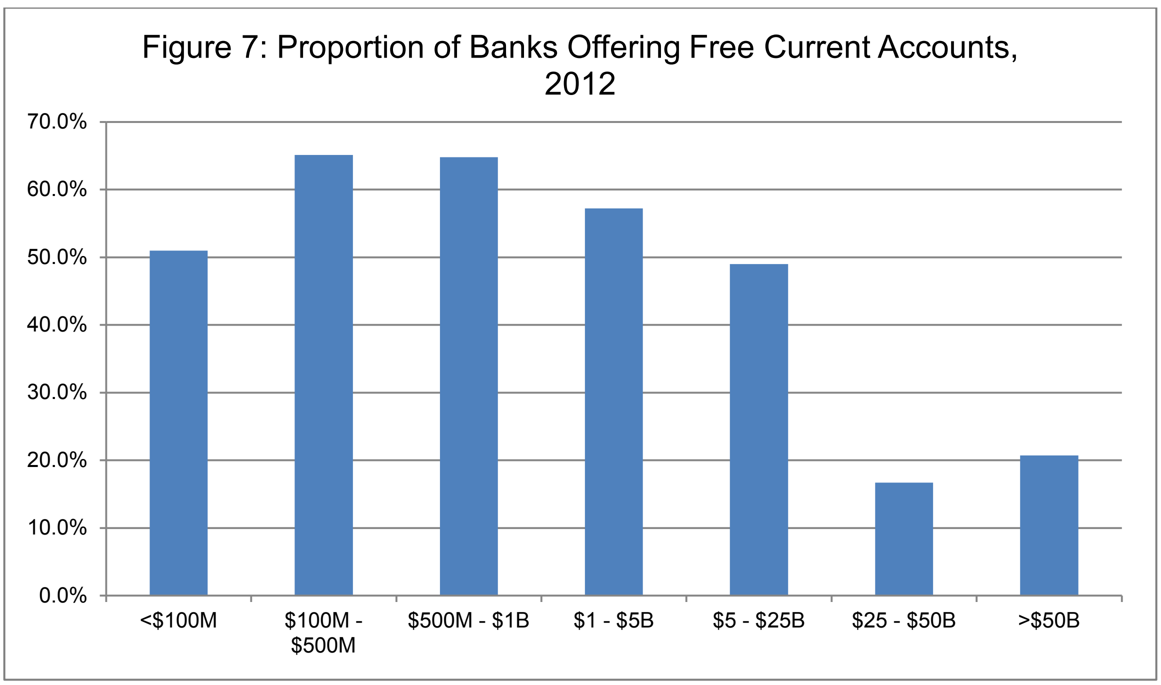
[30] *See* Richard Barrington, *Bank Fees Survey EOY 2013: Big Banks Equal Big Fees*, MONEYRATES (Feb. 24, 2014), http://www.money-rates.com/research-center/bank-fees/.

[31] Allison Ross, *Free Checking Flourishes at Credit Unions*, BANKRATE (2014), http://www.bankrate.com/finance/checking/want-free-checking-check-out-credit-unions-1.aspx.

[32] In fact, the increasing fees and reduction in rewards has been limited only to debit cards issued by Durbin-covered banks. There is no corresponding increase in fees for credit cards or prepaid cards during this period, controlling for other factors (such as new regulations on credit cards that increased costs). Indeed, fees for prepaid cards have fallen



Source: Sullivan Study



Source: Moebs Survey

dramatically in both number and size during this same period. *See* Todd J. Zywicki, *The Economics and Regulation of Network Branded Prepaid Cards*, 65 FLA. L. REV. 1477 (2013), *available at* http://www.floridalawreview.com/wp-content/uploads/5-Zywicki.pdf.

The Effect of the Durbin Amendment on Low-Income Consumers: Higher Research by Kay, Manuszak, and Vojtech confirms the dramatic consequences for regulated banks as a result of the Durbin Amendment and the effect that had on consumers.[33] Comparing the fourth quarter of 2010 (well before Durbin Amendment became effective) to the fourth quarter of 2011 (the quarter immediately after it became effective), they estimate that the Durbin Amendment had an immediate effect of reducing interchange fee income by 34%.[34] On the other hand, they found that covered banks recouped 30 per cent of this lost interchange income through higher deposit fees. Moreover, many banks chose to phase in new fees gradually, so this single-quarter recoupment would understate the full effect of pass-through of lost interchange fee revenue to bank consumers. Despite some claims to the contrary,[35] *it is unambiguous that banking fees and other fees rose after the passage of the Durbin Amendment and that eligibility for free current accounts declined*.

Costs and More Unbanked Households

But the negative impact of the Durbin Amendment to the average consumer pales in comparison to the tragic consequences it has had for many low-income consumers. Because of the destruction of free current accounts and the imposition of new banks fees following the Durbin Amendment, many consumers who had been brought into the banking system during the growth in free current accounts throughout the 2000s have now found themselves thrown back out of the banking system.

For example, Bank of America's CEO stated that the bank will focus on the top 20 per cent of its most profitable customers and get rid of the unprofitable ones.[36] J.P. Morgan Chase estimated that new regulations on overdraft programs and price controls on debit card interchange fees made unprofitable 70 per cent of customers with less than $100,000 in deposits, which required

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[33] Benjamin Kay, *et al*., *Bank Profitability and Debit Card Interchange Regulation: Bank Responses to the Durbin Amendment* 15 (Boston Fed. Res. Working Paper, Mar. 2014), *available at* http://www.bostonfed.org/payments2014/papers/Cindy_M_Vojtech.pdf.

[34] Note that this is a measure of the change in interchange fee *income*, not the interchange rate. So that if the volume of debit card transactions was increasing during this period, the loss of revenue would be smaller than the marginal reduction in revenues per transaction. Indeed, they find that interchange fee revenue for exempt banks increased on average almost 10 per cent during this same period, suggesting some exogenous factor driving interchange fee transactions. Moreover, when they convert the figures to annual data, they find an estimated 40 per cent decline in interchange fee income. *Id.* at 25.

[35] *See, e.g.,* European Commission, *Payment Services Directive and Interchange fees Regulation: frequently asked questions*, Memo/13/719 (Jul. 24, 2013), at 11, *available at* http://europa.eu/rapid/press-release_MEMO-13-719_en.htm.

[36] *See* Claes Bell, *Prepaid Debit: Oasis for Unbanked?*, BANKRATE (Jan. 11, 2012), http://www.bankrate.com/financing/banking/prepaid-debit-oasis-for-unbanked/.

the bank either to raise fees, reduce costs and services, or shed unprofitable customers.[37] One industry analyst estimated that if debit card revenues fell 50% as a result of the Durbin Amendment and overdraft fees fell 30% as a result of new regulations, approximately 40% of bank customers would become unprofitable, including most of those with incomes under $40,000 per year.[38] Thus, the effect appears to have been highly regressive, an ironic (albeit predictable[39]) consequence of reforms that were supposedly intended to benefit consumers.

Further evidence comparing free current account offerings by covered and exempt banks from the Sullivan study mentioned above corroborates this conclusion. As the study notes:

> Market characteristics that differ statistically between exempt banks that added or dropped free [current accounts] include…per capita income…. The per capita income in the markets of banks in the exempt sample that added free [current accounts] is $22,943, compared with $21,213 in the markets of banks in the exempt sample that dropped free [current accounts].[40]

At the same time, while only a single bank in the study's sample of covered banks actually added free current accounts,

> Banks in the regulated sample that dropped free [current accounts] serve markets have a relatively high net migration (0.47 per cent), and a relatively low share of population with at least a high school education compared with the single regulated bank in the sample that added free [current accounts].[41]

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[37] *See* Dan Fitzpatrick & David Enrich, *Big Bank Weighs Fee Revamp*, WALL ST. J. (Mar. 1, 2012), http://online.wsj.com/article/SB10001424052970204571404577253742237347180.html.

[38] *See* Theodore Iacobuzio, *Innovative Strategies for Dealing with No-Longer-Profitable Customers*, MASTERCARD ADVISORS U.S. INSIGHTS (2010), *available at* http://insights.mastercard.com/position-papers/innovative-strategies-for-dealing-with-no-longer-profitable-consumers-us/. Although Iacobuzio's estimate of a 50% drop in debit card revenues as a result of the Durbin Amendment appears to be largely accurate, overdraft revenues have not dropped by 30%. From a high of $37 billion in 2009, overdraft revenue fell to under $32 billion in 2011 but rose in 2012. *See* Kevin Wack*, Overdraft Revenue Makes First Climb in Three Years: Report*, AM. BANKER (Mar. 18, 2013), *available at* http://www.moebs.com/Portals/0/pdf/Articles/31_Moebs.American%20Banker.3.18.13.Overdraft%20Revenue%20Makes%20First%20Climb%20in%20Three%20Years_Report.pdf. For a review of various new regulations on overdraft protection in the United States, see Todd J. Zywicki, *The Economics and Regulation of Bank Overdraft Protection*, 68 WASH. & LEE L. REV. 1141, 1155-62 (2012).

[39] Both historical and economic analysis of hundreds of years of experience with the imposition of price controls in consumer credit markets has demonstrated that the invariable effect of such regulations is regressive in their impact, as they tend to reduce the profitability of serving lower-income consumers and to shift capital toward more-profitable higher-income consumers. *See* THOMAS DURKIN, GREGORY ELLIEHAUSEN, MICHAEL STATEN, AND TODD J. ZYWICKI, CONSUMER CREDIT AND THE AMERICAN ECONOMY (Oxford University Press, Forthcoming 2014).

[40] Sullivan Study, supra note 25, at 20-21.

[41] *Id.* at 25.

According to a Survey by the Federal Deposit Insurance Corporation, the number of unbanked households in America surged by almost 1 million between 2009 and 2011, an increase of about 10 per cent.[42] While nearly every demographic group saw *some* increase in the number of unbanked households, the effect was felt disproportionately by the poor. Thus, the number of unbanked unemployed households increased by 3.4 percentage points and the number of unbanked lower-income households (income below $50,000) increased 1.4 percentage points. By comparison, the number of unbanked households overall increased by only 0.6 percentage points and the number of unbanked higher-income households increased by only 0.2 percentage points. Of course many more of the unbanked were already poorer households.[43]

In turn, by helping to drive low-income consumers out of the mainstream banking system, the Durbin Amendment has forced low-income consumers to make greater use of alternative financial services providers, such as cheque-cashers, pawn shops, payday lenders, and other high-cost financial services that cater to the unbanked. Given the high cost of these services, it is possible that the effective cost for many low-income consumers of the Durbin Amendment is even greater than even the dramatic increase in bank fees suggests.

While some of the rise in the numbers of the unbanked might be explained on factors other than the Durbin Amendment (such as the banking crisis, recession, and new regulations of overdraft fees), the fact that the increased fees and reduced access to free current accounts occurred primarily at large banks suggests a predominant role for the Durbin Amendment in driving low-income consumers out of the mainstream financial system.[44] As Scott Strockoz, Deputy Regional Director of the Federal Deposit Insurance Corporation, put it:

> Consumers were supposed to see lower retail prices due to the implementation of the Durbin Amendment. In many cases, consumers are seeing higher prices for low cost items or no savings at all. Further, banks are increasing or implementing fees on tradi-

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[42] FEDERAL DEPOSIT INSURANCE CORPORATION, 2011 FDIC NATIONAL SURVEY OF UNBANKED AND UNDERBANKED HOUSEHOLDS 10 (Sept. 2012) ("FDIC Survey"), *available at* http://www.fdic.gov/householdsurvey/2012_unbankedreport.pdf; *see also* Lee, Manne, Morris & Zywicki, *supra* note 22, at 16.

[43] FDIC Survey, *id*, at 14-17.

[44] This result—that many low-income consumers are being forced to increase their usage of high-cost alternative financial service providers—is especially ironic, in that some advocates have claimed that low-income consumers are those who are most likely to benefit from interchange fee price controls because of purported reductions in retail prices for cash payers. *See* Scott Schuh, Oz Shy, & Joanna Stavins, *Who Gains and Who Loses from Credit Card Payments? Theory and Calibrations* (The Federal Reserve Bank of Boston Public Policy Discussion Paper 10-03, Aug. 31, 2010), *available at* http://www.bos.frb.org/economic/ppdp/2010/ppdp1003.pdf. While the validity of that claim is open to question on its own terms, it is especially unlikely to be valid with respect to those consumers who are driven out of the mainstream financial system by the higher fees and other offsets produced by the Durbin Amendment.

tional bank products and services thereby increasing consumer cost. Consumers either have to pay the fees, find a new bank that doesn't charge those fees, or end their banking relationship and use an alternative financial service provider for their "banking" needs. In certain instances, these providers charge more in fees than a traditional bank but they do not adequately disclose these fees in advance so the consumer ends up paying more to a check casher or a payday lender than they would to their bank. It is unlikely consumers will see any tangible benefits from the Durbin Amendment.[45]

The Effect of the Durbin Amendment on Banking Services: Reduced Quality Debit and Banking Services

The Durbin Amendment negatively affected consumers in other ways. Many affected banks eliminated or scaled back their debit card reward programs,[46] representing a *de facto* increase in the cost of banking for those who had previously had rewards cards.[47] Moreover, the Durbin Amendment is likely to slow further improvements in card quality in the United States, especially with respect to security. Thus, for example, recent high-profile data breaches involving payment cards (such as the recent breach involving Target department stores) have provoked new calls for increased security for payment cards, such as the adoption of chip and PIN technology and the like. But doing so would require upgrades to equipment throughout the system, as well as the issuance of new cards to consumers. Unlike magnetic stripe cards which can be produced and provided to consumers for pennies, more advanced cards are much more expensive to issue (and replace when necessary).[48] Moreover, the cost of issuing new cards to consumers is unlikely to be recoverable under the Durbin Amendment, meaning that bank card consumers (rather than retailers) will likely be forced to bear most of the cost of upgraded security procedures. As a result, it is possible that the Durbin Amendment will dampen the adoption of future security improvements for consumers.[49]

In addition, the negative effect of the Durbin Amendment has been felt by bank consumers in other ways. Following the imposition of the Durbin Amendment, for example, one major regional bank announced that it was closing 55 in-store branches in order to reduce costs in light of

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[45] Scott D. Strockoz, *Dodd-Frank and the Durbin Amendment – Is It Working as Intended?*, at ii (Capstone Strategic Project for the American Bankers Association Stonier Graduate School of Banking (2012) , *available at* http://www.abastonier.com/stonier/wp-content/uploads/2012-Capstone-Strokoz.pdf.

[46] Getter, *supra* note 16, at 10.

[47] In Australia this reduction in rewards was actually an *intended* effect of imposing interchange fee price controls. *See* discussion *infra* at 25-28.

[48] *See* Todd Zywicki, *The Economics of Credit Card Security*, THE VOLOKH CONSPIRACY (Jan. 21, 2013), http://www.volokh.com/2014/01/21/economics-credit-card-security/ (summarizing estimates).

[49] *See* Todd Zywicki, *Durbin's Innovation Killer*, THE AMERICAN (Jun. 11, 2011), http://www.american.com/archive/2011/june/durbin2019s-innovation-killer.

new regulations.[50] Moreover, more than 9,000 bank branches have closed since 2009,[51] disproportionately in low-income neighbourhoods[52]. News reports also indicate that large banks have closed branches more rapidly than smaller banks. Meanwhile, "many banks ended debit card reward programs, so part of the mitigation came from a reduction in expenses."[53]

What is especially notable about the ways in which the costs of the Durbin Amendment have been offset—higher bank fees, reduced access by low-income consumers, and reduced quality and services—is that these adjustments are highly non-transparent to consumers as to their causes. Thus, to the extent that price controls on interchange fees are supposedly designed to make the costs of payment cards more transparent, it is not automatic that they will do so. As noted above, when banks did try to make the Durbin Amendment's effect transparent by imposing a fee specifically on debit cards, public pressure forced them to retreat. Instead, they recovered their costs indirectly through the means mentioned. In the end, it is not obvious that the overall transparency of the cost of payment cards was improved.

The Effect of the Durbin Amendment on Payment Card Usage

A second way of measuring the effect of the Durbin Amendment is to consider the larger social effects of the Durbin Amendment and, in particular, what effect the forced redistribution of costs from retailers to bank consumers has had on the level of debit card usage.

As a matter of economic theory, it is ambiguous whether redistributing costs from merchants to consumers would increase, decrease, or leave unaffected the volume and pattern of payment card usage: While the reduction in interchange fees would make merchants more willing to accept payment cards, the increased cost and reduced quality (such are reduced rewards) would make consumers less likely to use payment cards relative to less-expensive or higher-quality alternatives.[54]

Thus, because of these offsetting effects, it is an empirical question whether forcibly reducing interchange fees will increase or decrease payment card usage overall. In particular, the effect on overall card usage of price controls will depend on a multitude of local factors, such as the exist-

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[50] IBC Bank, *IBC In-Store Branch Closures*, (Sept. 22, 2011), https://www.ibc.com/en-us/Pages/In-storeBranchClosures.aspx.

[51] Saabira Chaudhuri, *U.S. Banks Prune More Branches*, WALL STREET JOURNAL (Jan. 27, 2014), http://online.wsj.com/news/articles/SB10001424052702303277704579347223157745640.

[52] *Brank Pruning Takes Root in CT*, HARTFORD BUSINESS (Feb. 24, 2014), http://www.hartfordbusiness.com/article/20140224/PRINTEDITION/302209929/branch-pruning-takes-root-in-ct.

[53] Kay, *et al.*, *supra* note 33, at 16.

[54] *See* Santiago Carbo Valverde, Sujit Chakravorti, & Francisco Rodriguez Fernandez, *Regulating Two-Sided Markets: An Empirical Investigation* (Federal Reserve Bank of Chicago Working Paper 2009-11, Nov. 19, 2009), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1511809.

ing degree of payment card penetration, the relative cost of alternative payment devices (including non-electronic payments), levels of crime and tax evasion, the average size of transactions, and even non-obvious factors such as prevailing local labour wage rates, which affects the relative cost of more labour-intensive payments systems such as cash.[55]

Indeed, because consumers are typically more sensitive to price in their choice of payment device than are merchants, it is predictable that increases in costs to consumers of some payment devices relative to others will have a greater effect on shifting payment patterns than comparable increases to merchants.[56] The greater price sensitivity of consumers is precisely why issuers offer them rewards and other inducements. It is also why regulators in Australia reduced interchange fees on credit cards: in order to try to reduce credit card rewards and thereby to encourage consumers to shift to alternative payment devices.[57] In some cases, however, reducing rewards or otherwise making electronic payments more expensive may lead to higher usage of cash[58] and a reduction in issuing bank and payment network investment and innovation.[59]

In the United States, in fact, the evidence suggests that by making debit cards more expensive for consumers, the overall effect of the Durbin Amendment has been to *reduce* debit card usage relative to alternatives.

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[55] Valverde, et al., observe that although interchange fee price controls can theoretically increase the use of electronic payments under certain specific situations, it instead "may only result in redistribution of surplus among participants, most notably between banks and merchants. In other words, interchange fee regulation would not necessarily improve social welfare," *id.* at 27-28, especially in economies where penetration of electronic payments is high already.

[56] *See* David S. Evans, *Payments Innovation and Interchange Regulation: How Inverting the Merchant-Pays Business Model Would Affect the Extent and Direction of Innovation* 164, *in* DAVID S. EVANS, INTERCHANGE FEES: THE ECONOMICS AND REGULATION OF WHAT MERCHANTS PAY FOR CARDS (2011).

[57] Robin A. Prager, *et al.*, *Interchange Fees and Payment Card Networks: Economics, Industry Developments, and Policy Issues* 47 (Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board, Finance and Economics Discussion Series No. 2009-23, 2009), *available at* http://www.federalreserve.gov/PUBS/FEDS/2009/200923/200923pap.pdf. The central premise, however, that interchange fees were known to be excessively high at that time, is faulty in itself. For an explanation, *see* Todd J. Zywicki, *The Economics of Payment Card Interchange Fees and the Limits of Regulation* (ICLE Financial Regulatory Program White Paper Series, June 2, 2010), *available at* http://www.laweconcenter.org/images/articles/zywicki_interchange.pdf.

[58] Andrew Ching & Fumiko Hayashi, *Payment Card Rewards Programs and Consumer Payment Choice* 18 (Federal Reserve Bank of Kansas City, Working Paper 06-02, 2006), *available at* http://www.kc.frb.org/PUBLICAT/PSR/RWP/Ching_Hayashi_Paper.pdf.

[59] Steve Worthington, *Regulatory Interventions and Their Consequences in the Australian Payment System* 35 (Australian Centre for Financial Studies Commissioned Paper Series, Oct. 28, 2013), *available at* http://bit.ly/1hxcODg. In addition, this innovation-dampening effect has persisted in Australia. For example, it has been argued that Australia's interchange fee regulation has held back adoption of more secure payment technologies, such as chip & PIN cards. *See* UK Cards Association, *Regulation of Interchange Fees*, http://www.theukcardsassociation.org.uk/what_we_think/regulation_interchange_fees.asp.

In response to the Durbin Amendment, regulated banks ramped-up marketing efforts to persuade their customers to switch from debit cards to credit cards, and introduced a range of new prepaid card products.[60] As a result, the growth in debit card usage has actually slowed since the imposition of the Durbin Amendment.[61]

This should hardly have been a surprise. In Australia the imposition of price controls led to a marked increase in the use of non-regulated credit cards: the market share of the three-party schemes operated by American Express and Diner's Club rose by 46 per cent following interchange regulation.[62] Since these cards cater to higher-income, higher-spend consumers, many wealthier consumers in Australia have been able to escape the higher costs and negative effects of interchange fee caps, imposing the bulk of the costs on lower-income consumers.[63] Meanwhile, the higher merchant fees associated with these cards will have offset some of the cost savings experienced by merchants due to the fee caps on other cards.

The effect on payment card usage in the U.S. has been clear:

1. Credit card usage has risen more rapidly than debit card usage, reversing a multi-year trend, as the rapid growth in debit card payments between 2006-2009 slowed between 2009-2012.[64]

2. As the Federal Reserve found in its 2013 payments study, credit card payment volume grew 7.9 per cent between 2009-2012, after having experienced a decline from 2006-2009.[65] "In 2012, there was a $7.7 billion shift in consumer spending from debit cards to credit cards."[66] Moreover, even though credit card spending is rising, credit card revolving balances have de-

[60] *See* Todd Zywicki, *The Dick Durbin Bank Fees*, WALL ST. J. (Sept. 29, 2011), *available at* http://online.wsj.com/news/articles/SB10001424052970204831304576597173130633798?KEYWORDS=zywicki&mg=reno64-wsj.

[61] FEDERAL RESERVE, THE 2013 FEDERAL RESERVE PAYMENTS STUDY RECENT AND LONG-TERM PAYMENT TRENDS IN THE UNITED STATES: 2003 – 2012 SUMMARY REPORT AND INITIAL DATA RELEASE RESEARCH 7 (December 19, 2013), *available at* http://www.frbservices.org/files/communications/pdf/research/2013_payments_study_summary.pdf.

[62] Worthington, *supra* note 59, at 8-9.

[63] Moreover, because American Express already typically has higher interchange fees than Visa and MasterCard—and a very high degree of co-branding—the substitution of high-income, high-spend consumers to American Express tends to exacerbate any alleged regressive redistributive effect of payment cards. *See* Iris Chan, Sophia Chong, & Stephen Mitchell, *The Personal Credit Card Market in Australia: Pricing over the Past Decade*, *in* RESERVE BANK OF AUSTRALIA BULLETIN (Mar. 2012), *available at* http://www.rba.gov.au/publications/bulletin/2012/mar/7.html.

[64] *See* Zywicki, *The Economics and Regulation of Network Branded Prepaid Cards*, *supra* note 32, at 1483-84.

[65] FED PAYMENTS STUDY, *supra* note 61.

[66] First Data, *Credit Card Issuers Face Challenges Amid Opposing Consumer Trends*, http://www.firstdata.com/en_us/insights/card-issuer-challenges-amid-opposing-trends.html (Feb. 6, 2014).

clined over the same period,[67] which suggests that the shift from debit cards to credit cards has largely been for transactional purposes, rather than credit.

3. As the FDIC's Scott Strockoz noted in an academic case study of the Durbin Amendment, "In 2011, in preparation for the effective date of Durbin, banks began an intense push to have their customers choose credit cards over debit." He continued, "The tactics appear to be working as credit card purchases climbed 10.6 per cent in the 3rd quarter of 2011, after an 8.6 per cent jump and a 9 per cent increase in the first and second quarters of 2011, respectively. Over the same three quarters, growth in debit card usage dropped from 9.5 per cent to 8.3 per cent and then to 5.9 per cent. Overall, this represents a 27.8 per cent increase in credit card purchases, and a 23.7 per cent decrease in debit card purchases in 2011."[68]

4. The substitution of credit card usage for debit cards is especially striking in light of the fact that between 2009 and 2012, the percentage of Americans with credit cards declined 5 percentage points, meaning that credit card usage was increasing despite a dramatic drop in the number of people with credit cards.[69]

5. Prepaid card usage has exploded (in part because of the destructive effect of the Durbin Amendment on access to bank accounts).[70] As Fitch Ratings noted earlier this year, Federal Reserve data indicates that "general purpose prepaid card payments have been the fastest-growing payment method in the U.S. for the last several years. Between 2009 and 2012, the number of prepaid card transactions grew by an annual rate of 33.5%, far outstripping similar rates for other types of noncash payment."[71] Moreover, Fitch observed, "The growing popularity of prepaid cards is, in part, a consequence of the Durbin Amendment, which reduced the amount of interchange revenue earned by banks for debit card transactions. To help offset the revenue decline, many banks reinstituted fees on checking accounts and cancelled associated reward programs. The checking fees are burdensome to low-balance account holders, and many have closed accounts and looked for alternative banking products."[72]

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67 *Id.*

68 Strockoz, *supra* note 45, at 13-14.

69 CONSUMER FINANCIAL PROTECTION BUREAU, CARD ACT REPORT: A REVIEW OF THE IMPACT OF THE CARD ACT ON THE CONSUMER CREDIT MARKET (Oct 1., 2013), *available at* http://files.consumerfinance.gov/f/201309_cfpb_card-act-report.pdf. *See also* Glenn B. Canner and Gregory Elliehausen, *Consumer Experiences with Credit Cards*, 99 FEDERAL RESERVE BULLETIN 1, 10, Table 2 (Dec. 2013).

70 *See* Zywicki, *The Economics and Regulation of Network Branded Prepaid Cards*, *supra* note 32.

71 Fitch Ratings, *Prepaid Card Volumes Rising as Payment Methods Evolve*, (Feb. 13, 2014), https://www.fitchratings.com/gws/en/fitchwire/fitchwirearticle/Prepaid-Card-Volumes?pr_id=820555.

72 *Id.*; *see also* Odysseas Papadimitriou, *In Retrospect, Durbin Amendment Was Flawed From the Start*, AMERICAN BANKER, http://www.americanbanker.com/bankthink/in-retrospect-durbin-amendment-was-flawed-from-start-1054229-1.html (Nov. 8, 2012) ("[P]rojections show that consumers will load $117 billion onto prepaid cards in 2013 – a 200% increase from 2010. The rise of the prepaid card…likely indicates that any savings merchants derive from the [Durbin Amendment] will be somewhat short-lived, since lower costs imposed by banks will incentivize consumers to increasingly use financial products whose swipe fees have not been regulated, like prepaid cards and credit cards.").

6. In fact, prepaid was the fastest-growing category of payments (compared to debit, credit, ACH, and cheque), growing by 15.8 per cent annually from 2009-2012.

Figure 8 encapsulates these trends in debit, credit and prepaid card usage. Although Figure 8 shows a clear change in payment card transaction volume trends over time, because it smooths payment trends across three-year periods it tends to obscure the discrete effect of the Durbin Amendment in changing consumer payment patterns.

Isolating the period immediately after the Durbin Amendment took effect highlights these trends more clearly. Using data on payment volume (rather than transaction volume),[73] Figure 9 shows the trends in usage of credit and debit instruments from immediately prior to Durbin's implementation through Q2 2013 (the last date for which our data were available) in quarterly increments. In particular, Figure 9 shows a decline in debit card payment volume over the first few quarters following implementation.

Although debit card transaction volumes subsequently began to rise again, they did not recover to their previous level until the end of 2012 and their overall trajectory since the Federal Reserve rule came into effect has been lower than it was previously. Credit card payment volume, by contrast, reversed its downward trend of the previous several years and continued to grow at a rate substantially faster than debit.

Moreover, recall that the growth in credit card purchase volume was growth in *transactional* use of credit cards, not revolving, as outstanding credit card balances actually declined during this period. Thus, not only did credit cards reverse their decline at precisely the time the Durbin Amendment became effective, they did so in a particular way: by a growth in transactional use. Meanwhile, debit cards which had grown dramatically in popularity prior to the Durbin Amendment, not only slowed, but reversed their growth in the post-Durbin era. All of this is consistent with the hypothesis that price controls on debit cards led to a decline in the growth of debit card usage and shift of consumers to less-expensive and higher-quality alternatives.

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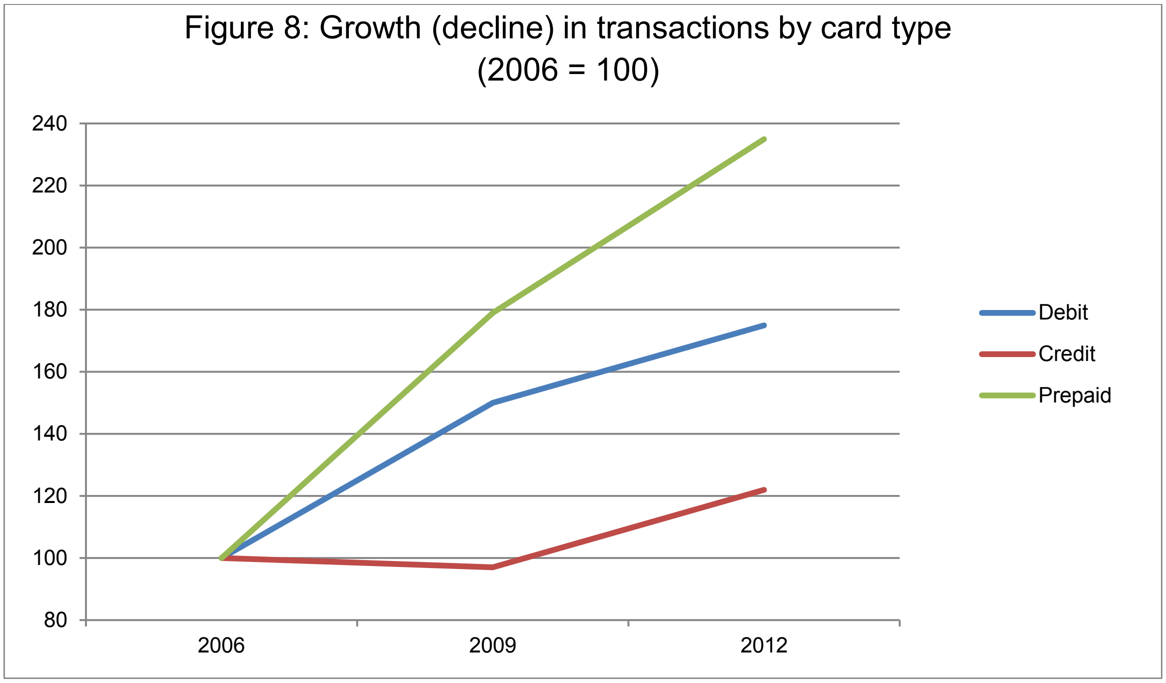
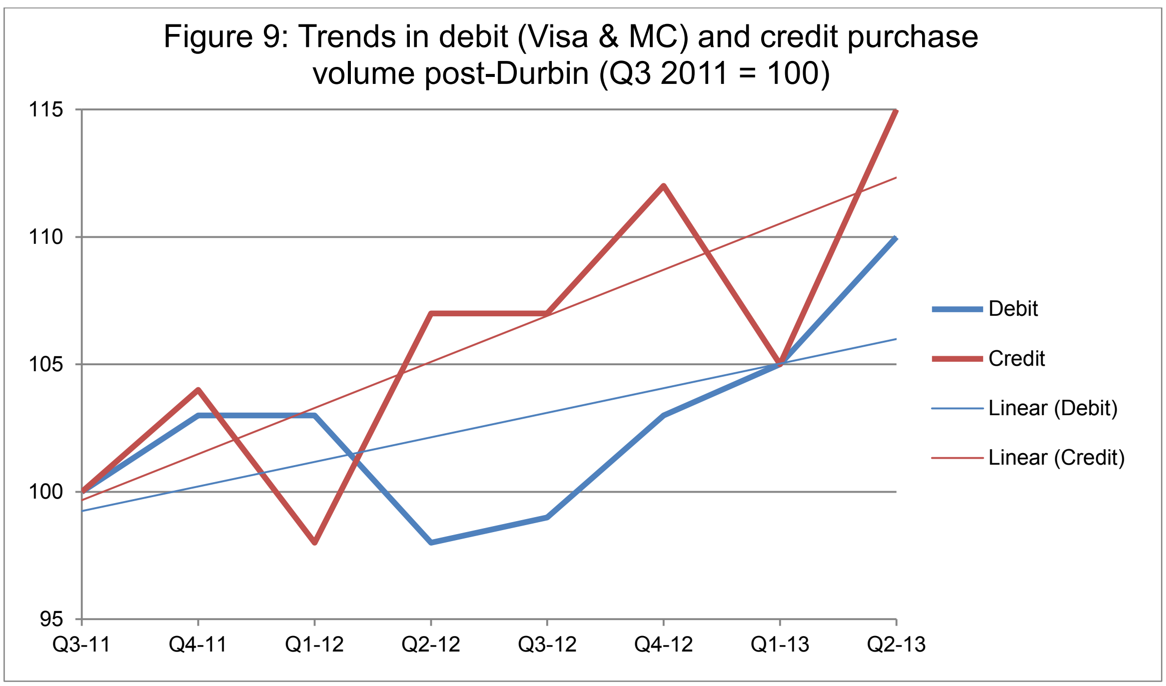
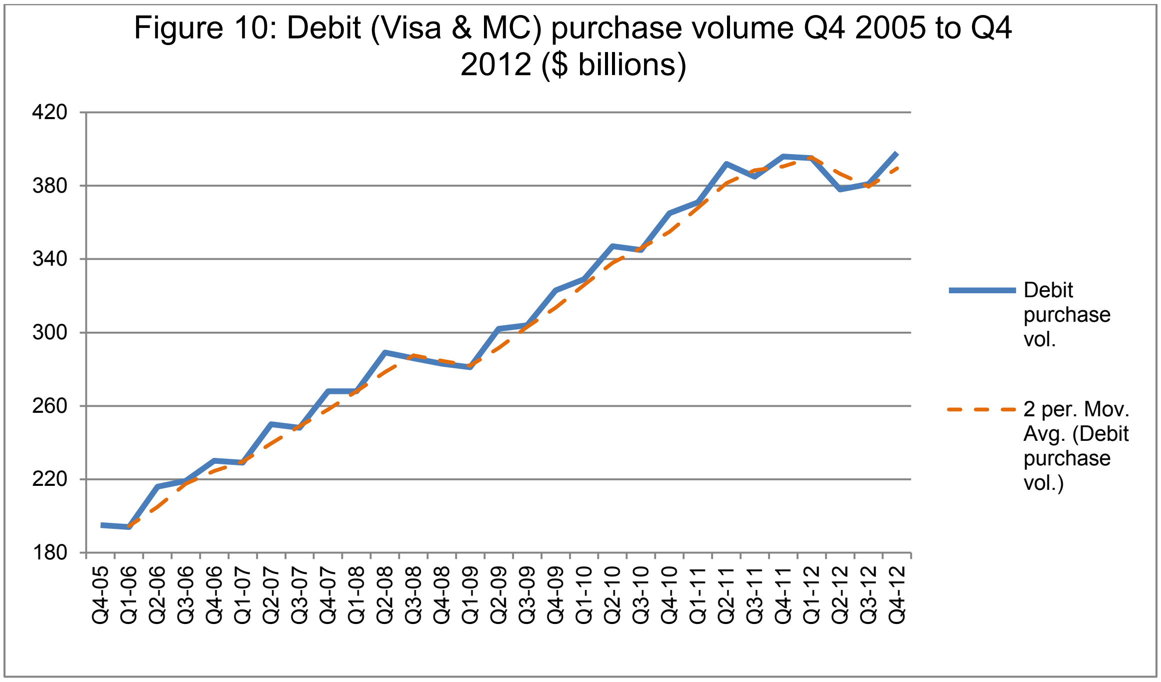
[73] PaymentsSource.com data, available at www.paymentssource.com/statistics. We use payment volume data rather than transaction volume data for two reasons. First, we were able to find more thorough data for this period on payment volume. Second, because part of the effect is, as we noted, a function of the use of credit cards to replicate debit (that is, transactional rather than revolving use), the payment volume data may give a slightly more accurate picture. In principle, however, the trends should be the same regardless, and our review of the available evidence from other sources suggests that they are.



Source: 2013 Federal Reserve Payments Study



Source: PaymentsSource.com



Source: PaymentsSource.com

In fact, as shown in Figure 10, debit card purchase volume had a long, steady, and steep upward trend in usage for many years, pausing only briefly during the financial crisis before resuming its upward ascent. Only the imposition of the Durbin Amendment was able to stop debit's upward trajectory, causing a flattening in debit card usage beginning in 2011 and continuing into 2012. It is difficult to provide any other explanation for this arrest in the seemingly unstoppable upward trend in debit except for the Durbin Amendment.[74]

Some politicians may believe that it is desirable social policy to raise the costs of electronic payments to consumers and thus encourage a shift to alternative payment devices. But because of the differential effects on debit card usage on the one hand, and credit and prepaid cards on the other, raising the cost to consumers of certain payments devices relative to others (including non-electronic payments such as cash and cheques) will likely reduce consumer usage of electronic payments.

[74] By contrast, growth in credit card usage stopped for several years beginning with the onset of the financial crisis and remained stagnant for several years thereafter, even declining by some measures. But the flattening of debit card growth around the effective date of the Durbin Amendment is mirrored by an upward trend in credit card usage beginning at the same time that debit usage levels off (as Figure 8 suggests).

The Effect of the Durbin Amendment on Retail Prices (Pass-Through of Reduced Interchange Fees to Retail Customers)

There is little doubt that the Durbin Amendment had a major effect on consumers—and would-be bank customers—as issuers have, in various ways, passed on some of the costs of reduced interchange fee receipts, as discussed above. But what has happened to the parties who previously were paying those fees (i.e. merchants)—have they passed on their savings?

The interchange fee is actually paid by the acquiring bank—that is, the bank that collects money on behalf of merchants. Those acquiring banks cover that fee and other costs by charging merchants a "merchant service charge" or MSC.[75] So, it is instructive to look at what happened in the U.S. to MSCs following the implementation of the Durbin Amendment.

We calculated the average pass through rate (weighted by transaction volume) for a sample of small and medium size merchants. Using data on MSC, interchange fees and gross acquirer margins for a sample of 1,000 merchants in 23 different sectors, we found that the weighted average per-transaction MSC fell by only 0.02%, from 1.99% to 1.97%– as shown in figure 11.[76] The reason is that, although the weighted average interchange fee fell from 1.07% to 0.74% in this group, nearly all the difference (93%) was captured by the acquiring banks – and only 7% passed through to merchants. Meanwhile, the acquirer's weighted average margin rose from 0.58% to 0.89%.

The fact that MSCs for small and medium size merchants were not reduced significantly in the year after the Durbin Amendment came into effect is likely a result of the different ways in which MSCs are calculated for large and small merchants, which makes the rates charged to smaller merchants less responsive to changes (both increases and decreases) in interchange fees. Over time, it can be expected that small and medium size merchants will see somewhat lower interchange fees, although it is not clear how long that will take or how completely their MSCs will decline in the end. [77] Still that reality is consistent with the predictions of knowledgeable observers, which is that even if merchants do pass-through savings in lower retail prices, that pass-through is typically slower and less-complete for merchants than for banks.

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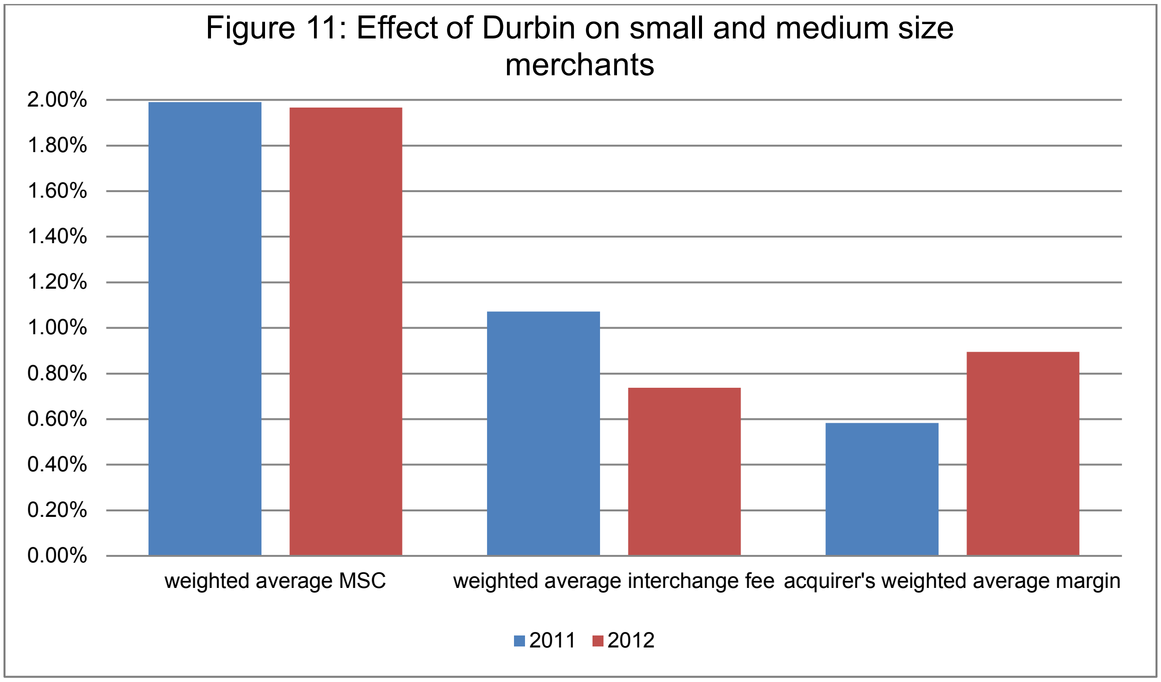
[75] In the U.S. the MSC is called the merchant discount rate. We use the European term here.

[76] To calculate the weighted average for each of the 23 sectors included in that survey, we used data from MasterCard on all transaction volumes over the period May 2012 to October 2013. In that dataset, the 23 sectors represented 95% of all of MasterCard transactions.

[77] See e.g.: http://digitaltransactions.net/news/story/2872, accessed 5/16/2014.

Thus, a merchant with annual turnover of $3,000,000 who obtains the average net reduction in MSC would save only $730 per year as a result of the Durbin Amendment.[78] To put that into perspective, suppose that the retailer has 20 employees and that each of them now pays an additional $6 per month for their bank account. Even if the retailer passed on all his savings to his employees, they would still be worse off.



Source: authors' calculations based on data from MasterCard

Alternatively, the retailer could pass on his savings to his customers. Let's suppose he is a general retailer with 500 loyal customers who do their weekly shopping in his store, each spending $115 per week. Each of them would then save approximately $0.12 per month – scant compensation for those customers paying $6 to $12 per month in extra bank fees.

By contrast with Small and medium merchants, most large merchants are likely to have done well by the Durbin Amendment, for three reasons: first, they will have been able to use their greater bargaining power to negotiate a more significant reduction in merchant service charge; second, their greater market power means they will have less incentive to pass through any savings to consumers; third, the fact that smaller merchants have experienced almost no reduction in their MSC means that they have no savings to pass onto consumers, and thus that large retailers

[78] Average sales of Subchapter S Corporation retail firms were approximately $3 million in 2007; they are presumably a little higher today, but $3 million is likely a good first approximation. (See: http://smallbiztrends.com/2010/11/how-much-money-do-small-business-owners-make.html, accessed 5/3/2014).

have experienced limited price competition from small retailers that would force them to pass-through their own savings.

An assessment of the top twenty U.S. merchants by sales undertaken by Edgar, Dunn and Company on behalf of MasterCard found that they (or their acquirers) had saved in total approximately $116 million, on sales of approximately $16 billion—a saving of about 0.7% on sales. Assuming that the vast majority of these savings were passed through to the merchants, means the larger merchants saved 30 times as much per transaction as small merchants.

We should stress that these calculations are somewhat tentative because of the relatively small sample of merchants in each case, the use of data that includes both covered and exempt banks and, in the case of the SMEs, extrapolates by using data on all transactions. But we believe that the order of magnitude is correct; in other words the benefits to very large merchants on average are at least ten times as large as the benefits to small merchants.

But averages can hide important exceptions. In particular, even some large merchants suffered because of the relatively small value of each transaction: McDonald's, Redbox, Subway and Wendy's likewise saw their net revenue fall due to higher interchange fees.

The reason for this is that prior to the implementation of the Durbin Amendment payment networks had charged lower interchange fees for very small transactions. As banks attempted to recoup some of the lost revenue from the cap, the regulation acted as a "floor" as much as a "ceiling," bringing these previously lower rates up:

> [I]n response to the regulation, card networks eliminated the small-ticket discounts, and all transactions (except those on cards issued by exempt issuers) have to pay the maximum cap amount set by the regulation…. For merchants selling small-ticket items, this means that the cost of accepting the same debit card doubled or even tripled after the regulation.[79]

The effect, as the FDIC's Scott Strockoz observes, has been that "debit card interchange fees have increased by 12% for merchants on an average retail sale under $10. In contrast, those retailers with transactions averaging over $200 have seen a decrease in their interchange fees by 64%."[80]

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[79] Zhu Wang, *Debit Card Interchange Fee Regulation: Some Assessments and Considerations*, 98 ECON. Q. 159, 169 (2012).
[80] Strockoz, *supra* note 45, at 10.

While many larger merchants experienced reductions in their MSC as a result of the cap on debit interchange fees, there is little evidence of any of those savings being passed on to consumers.[81] This is in stark contrast to the apparently near-100% pass-through of *costs* by issuing banks onto consumers. One explanation for this is that, in general, more competitive industries will tend to see a greater percentage of savings passed through to consumers than will less competitive industries—and U.S. banks tend to be more competitive than large retailers.[82] In addition, the degree of pass-through will depend on how large the cost is to a particular industry. Thus, banks, which confront a significant loss of revenue for each consumer, will be more likely to pass-through their increased costs than will retailers, who may save only a few cents on each transaction (but an amount which, in aggregate, will be substantial).

Anecdotal evidence supports the conclusion that the big winners from the Durbin Amendment have been the shareholders of big box retailers. In one famous incident, during a stock analysts' phone call for Home Depot, the home improvement store chain's spokesman admitted that the Durbin Amendment was estimated to add $35 million per year to the chain's bottom line, with no indication that it expected to pass much, if any, of those savings on to consumers.[83]

Even if *all* of the interchange fee savings were passed on from banks to merchants and from merchants to consumers, based on average interchange fees, historical card usage patterns, and historical sales volumes, that would amount to about $8.3 billion in annual savings. While that sounds significant, it translates to a *maximum* retail price reduction of only 7 cents on a $40 purchase.[84] It is unlikely that the millions of low-income households forced to pay appreciably more in bank fees as a result of the Durbin Amendment will find solace in the speculative prospect that they might save a few pennies on next week's groceries.

In 2012, the average household spent $30,932 in total on food, apparel, transportation, entertainment, healthcare, and other items that could have been purchased using a payment card (out of a total household expenditure of $51,442).[85] If all of those items were purchased on debit cards and all were purchased from larger retailers and those larger retailers passed on all their savings (averaging 0.7%), then the average household would have saved $216.50. And that is the

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[81] ELECTRONIC PAYMENTS COALITION, WHERE'S THE DEBIT DISCOUNT: DURBIN PRICE CONTROLS FAIL TO RING UP SAVINGS FOR CONSUMERS (2011), *available at* http://bit.ly/1agseJX.

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

[83] In a 2010 Q4 Home Depot Inc. Earnings Conference call on February 22, 2011, Home Depot CFO Carol Tomé said, "On the Durbin side …, [b]ased on the Fed's draft regulations, we think the benefit to The Home Depot could be $35 million a year."

[84] Hayashi, *supra* note 12, at 86.

[85] http://www.bls.gov/news.release/cesan.nr0.htm

absolute best case – and most unlikely – scenario. But now assume that average household has two earners, each with a bank account that was previously free but now costs $12 per month. In that case, the household's costs would have *risen* by $71.50 as a result of the Durbin Amendment. In other words, even in the best case, lower-middle income and poorer households who have lost access to a free current account—which is likely a majority—will be worse off after the Durbin Amendment.

But, in fact, available evidence suggests that merchants *have not* passed-through the entirety of their savings from the Durbin Amendment; rather, the benefits to consumers have been significantly attenuated and miniscule to non-existent to date: "According to a DRF survey, 41 per cent of retailers have no intention of passing these savings on to their customers, which is consistent with the suggestion that merchants, not consumers, have been the main beneficiaries of the interchange cap."[86]

The retail automotive gas industry offers a particularly instructive example. In the year following Durbin's implementation, gasoline retailers realized more than $1 billion in savings from reduced interchange fees. But "while this should mean savings of roughly 3 cents per gallon, no savings have been passed on to consumers."[87] This is particularly remarkable and instructive given that the retail gasoline industry is highly competitive, and at least one other study has demonstrated that gasoline excise taxes are almost instantly and fully passed-through to consumers.[88]

Meanwhile, as noted above, retailers of smaller ticket items in particular have seen *increased* interchange fee costs as a result of the Durbin Amendment, and there is anecdotal evidence that these fees are being passed on to consumers. One of these merchants, Redbox, which operates movie rental vending machines, raised its prices in the months following Durbin's implementa-

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[86] Hubbard, *supra* note 14 at 33.

[87] Patrick C. McGinnis, *Misguided Regulation Of Interchange Fees: The Consumer Impact Of The Durbin Amendment*, 25 LOYOLA CONSUMER L. REV. 285, 296-97 (2013) (citing Victor Nava & Anthony Randazzo, *Durbin Swipe Fee Watch V: Gas Retailers*, REASON FOUNDATION BLOG (Apr. 23, 2012), http://reason.org/blog/show/durbin-swipe-fee-watch-v-gas-retail).

[88] *See* James Alm, *et al*., Perfect Competition, *Spatial Competition, and Tax Incidence in the Retail Gasoline Market*, FRC Report No. 112 (September 2005), *available at* http://www.issuelab.org/resource/perfect_competition_spatial_competition_and_tax_incidence_in_the_retail_gasoline_market.

tion by 20 per cent,[89] attributing the increase to "rising operational costs, including increased debit card fees."[90]

Although it is very difficult to measure overall pass-through of savings to consumers, it is possible to do so indirectly by examining the effect on profits. Using an event study methodology, David Evans, Howard Chang, and Steven Joyce derived an expected pass-through rate for both bank and retail consumers.[91] Examining the evidence, they conclude that the pass-through of the revenue loss to bank consumers is expected to be much larger than the pass-through of retailers' savings. In particular, they estimate that consumers will lose a total of between $22 billion and $25 billion in net present value terms (that is, the total net cost to consumers, now and in the future, with future effects discounted), as a result of the Durbin Amendment.[92]

These conclusions are bolstered by a decade of experience with interchange price controls in Australia, where there is still *no* concrete evidence that merchant cost savings were passed through to consumers, much less that any pass-through of savings to retail consumers has exceeded the increased costs and reduced quality to cardholders.[93]

As noted above, most of these losses would be incurred by lower-income consumers. While it is impossible accurately to measure those losses, we can make an educated guess. In 2012, there were approximately 60 million households in the U.S. with income below $50,000 per year.[94] Suppose half of those households, or 30 million, previously had access to fee free current accounts. Now, suppose that half of those, or 15 million, pay $10 per month for a single checking account, while receiving no appreciable reduction in the cost of their purchases. The result would effectively be a transfer in wealth on the order of $1.8 billion per year from lower income consumers to the shareholders of big box retailers. Of course this is a rough estimate; allowing a reasonable margin of error, the transfer is likely between $1 billion and $3 billion per year.

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[89] Anthony Randazzo, *Durbin Swipe Fee Watch IV: Redbox Edition*, REASON FOUNDATION BLOG (Dec. 4, 2011), http://reason.org/blog/show/durbin-watch-iv-redbox-edition.

[90] McGinnis, *supra* note 87 at 298 (citing *General Questions: Price Change*, REDBOX, http://www.redbox.com/pricechange).

[91] David S. Evans, Howard Chang, & Steven Joyce, *The Impact of U.S. Debit Card Interchange Fee Regulation on Consumer Welfare: An Event Study Analysis* (Coase-Sandor Institute for Law and Economics Working Paper No. 658, Oct. 23, 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2342593.

[92] *Id.* at 6.

[93] In fact, all the Reserve Bank of Australia itself could muster in defence of its interchange fee caps earlier this year was: "[i]t is impossible…to measure exactly how these reductions in merchant service fees have flowed through into prices for consumers. However…, *it seems reasonable to assume* that they have mostly flowed through to lower retail prices for consumers." RESERVE BANK OF AUSTRALIA, SUBMISSION TO THE FINANCIAL SYSTEM INQUIRY 206 (March 2014) at 18, *available at* http://fsi.gov.au/files/2014/04/Reserve_Bank_of_Australia.pdf.

[94] Derived from U.S. Bureau of the Census 2012 Household Income: https://www.census.gov/hhes/www/cpstables/032013/hhinc/hinc01_000.htm

Conclusion

The evidence from the United States suggests that the effect of interchange fee regulation depends on many factors, especially the degree of competition in retail banking and in general retail. These factors and their complex interaction have led to predictable if unintended consequences, which have undermined the stated goals of the Durbin Amendment. In particular, the greater competitiveness in retail banking compared to general retail has ensured that Durbin's debit card interchange fee caps have caused significant net harm to consumers.[95]

Paradoxically, these specific problems arising from the Durbin Amendment have ultimately *mitigated* what could have been even more troubling consequences. Because the Durbin Amendment applies only to debit cards, for example, covered banks have been able to incentivize consumers to switch to credit cards to make up lost revenue, thus reducing the extent to which Durbin's effect on banks had to be spread across all bank consumers rather than on retailers and retail consumers directly. Similarly, because the Durbin Amendment applies only to banks with $10 billion or more in assets, customers at smaller banks have not experienced the full brunt of its ill effects. Meanwhile, the Durbin Amendment provides at least some allowance (albeit insufficient) for fraud prevention costs, thus mitigating to some extent the cost to banks from fraud losses.

Nevertheless, the available evidence suggests that Durbin has been bad for consumers, particularly those on lower incomes. For the majority of consumers, any savings in the form of reduced retail prices or other offsetting factors have so far likely been far smaller than the increase in costs they face as a result of Durbin. On net, Durbin has resulted in a significant transfer of wealth from lower income consumers and small merchants to the shareholders of large corporations.

[95] *See* Evans, *et al.*, *supra* note 91.