Research Data Reports

No. 15-8

Consumers' Use of Overdraft Protection

Claire Greene and Mi Luo

Abstract:

In mid-2010, an amendment was passed to Regulation E, which implements the Electronic Fund Transfer Act, requiring financial institutions to ask consumers whether or not they want overdraft protection for automated teller machine (ATM) transactions and everyday purchases made with a debit card. This Research Data Report studies the short-term impact of this amendment by examining consumers' adoption of overdraft protection, the incidence of overdrawing at least once within a 12-month period, and the incidence of paying a fee for overdrawing, before and after the opt-in rule took effect.

We find that for fall 2014 compared with fall 2009:

- A greater proportion of people with a checking account said they have "overdraft protection," as broadly defined in the survey questionnaire.
- A smaller proportion of checking account owners overdrew their account balances at least once in the prior 12 months.
- A smaller proportion of those who did so were charged a fee.

These findings are statistically significant, but the economic impact is small. The data do not show a strong and immediate response to the implementation of the opt-in rule. Rather, mild trends may reflect the impact of the rule but might also reflect other economic factors.

Keywords: Overdraft protection, overdraft, Survey of Consumer Payment Choice, checking account

JEL codes: G28, G21

Claire Greene and Mi Luo are members of the Consumer Payments Research Center in the research department of the Federal Reserve Bank of Boston. Claire Greene is a payments analyst. Mi Luo is a graduate research assistant. Their e-mail addresses are claire.m.greene@bos.frb.org and mi.luo@bos.frb.org. This paper, which may be revised, is available on the web site of the Federal Reserve Bank of Boston at http://www.bostonfed.org/economic/rdr/index.htm.

We thank Mingzhu Tai, David Zhang, and Xiaojia (Lizzy) Zhang for excellent research assistance. Suzanne Lorant, Scott Schuh, and Robert Triest provided helpful comments. The authors are responsible for any errors.

This version: November 16, 2015

1. Introduction

New rules established in mid-2010 require financial institutions to ask consumers whether or not they want overdraft protection of automated teller machine (ATM) transactions and everyday purchases made with a debit card. The rules prohibit financial institutions from charging consumers fees for paying overdrafts on ATM and "one-time debit card transactions," unless a consumer consents to the overdraft service for those types of transactions. Institutions must provide a notice that explains their overdraft services, the associated fees, and the consumers' choices. [1]

Before the rule took effect, banks and credit unions had been allowed to provide this type of overdraft service without consumer consent. As financial institutions acquired the technology to automate approvals for overdrafts, it became increasingly common for these institutions to allow customers to overdraw their bank accounts via debit card and ATM withdrawals and to charge a fee for the privilege. In the mid-2000s, an increase in ATM transactions and purchases made with debit cards coincided with an increase in the incidence of overdrawing and an associated increase in fees collected from consumers. Using a 2006 sample of accounts at banks supervised by the Federal Deposit Insurance Corporation (FDIC), the FDIC found that 49 percent of overdraft fees were due to one-time debit card transactions, for example, ATM withdrawals or purchases of groceries.[2] For 1,157 banks in the FDIC survey on fee income, insufficient funds (NSF)-related fee income totaled $1.97 billion, or 74 percent of service charges on deposit accounts.[3]

With the rule change, financial institutions are required to ask account holders to affirmatively consent to having these everyday transactions covered, that is, they are required to "opt in" to overdraft protection. This Research Data Report uses data from the 2008–2014 Surveys of Consumer Payment Choice (Schuh and Stavins 2015) to look at consumer behavior before and after the rule took effect in 2010. It examines consumers' adoption of overdraft

[1] Board of Governors of the Federal Reserve System (2009). The final rules were issued on November 12, 2009, as an amendment to Regulation E, which implements the Electronic Fund Transfer Act.
[2] Federal Deposit Insurance Corporation (2008): v.
[3] Table VIII-3 page 60 FDIC (2008).

protection, incidence of overdrawing at least once in a 12-month period, and incidence of paying a fee for overdrawing.

The remainder of this report is organized as follows: Section 2 summarizes relevant research. Section 3 describes our data source. Section 4 reports on consumers' election of overdraft protection and use of overdrawing. Section 5 explores overdrawing in the context of payment instrument preference. Section 6 reports on income and overdraft protection. Section 7 summarizes.

2. Background

In the decade before the opt-in rule was enacted, overdraft fees as a proportion of depository institutions' income increased. The average overdraft fee rose about 11 percent between 2000 and 2007, according to the U.S. Government Accountability Office (GAO 2008). Also, overdrafts became more prevalent as financial institutions acquired the ability to automate approvals, which had previously been done on an ad hoc basis. According to the GAO report, between 2000 and 2006 the portion of banks' and thrifts' noninterest increased from 24 percent to 27 percent of total income while credit unions' noninterest income increased from 11 percent to 14 percent. (Income from noninterest sources includes overdraft fees.)

Some of this increase is attributable to the increasing adoption of technology that enabled banks to use automated procedures to approve debit card payments at the point of sale. In 2006, 41 percent of all NSF and overdraft transactions at banks with programs where the bank used automated procedures to approve overdrafts were related to debit card transactions at the point of sale, according to the FDIC.[4]

In the years after the 2010 rule change, overdraft revenue has remained a source of consumer banking revenue. A Consumer Financial Protection Bureau (CFPB) survey of large banks conducted in 2011 found that overdraft and NSF fees from consumer accounts made up

[4] FDIC (2008): v.

37 percent of total deposit account service charges.[5] In a further analysis of transactions data, the CFPB found that overdraft and NSF fees consituted more than half of net checking account fees for a sample of accounts at large banks for the 18 months ending June 2012.[6] The CFPB analyzed transactions for two million accounts that averaged at least one debit card transaction per month at banks with total assets of more than $10 billion. Beginning with the March 31, 2015, call reports, banks with more than $1 billion in assets are required to break out overdraft fees from other service charges on deposit accounts.[7] During the first quarter of 2015, according to data obtained from the FDIC and reported in *American Banker*, for the 626 banks that reported, overdraft charges represented 34 percent of deposit account service charges or about 5 percent of noninterest income.[8]

Survey research finds that consumers are ambivalent about overdrawing their accounts. Many consumers report that they want important transactions, like the rent or mortgage, to be paid. At the same time, they dislike paying fees for trivial payments like the cost of a bag of chips. Responses to a survey sponsored by the Federal Reserve Board reflect this ambivalence. The split opinion of respondents who had overdrawn was 50/50: Half said they would have preferred the bank to reject the transaction. Half said they wanted the transaction honored and were willing to pay the fee.[9] In a 2011 survey of banks, the CFPB found that the accounts of owners who had opted in to overdraft protection had higher rates of involuntary closure than accounts whose owners had not opted in.[10] In spring 2012, about one-third of consumers who had overdrawn their bank accounts closed their accounts due to overdraft fees, Pew found.[11] A March 2014 report by the Federal Reserve Board found that, of people who recently received a payday loan, 24 percent deposited the proceeds in order to avoid an overdraft charge.[12]

---

[5] CFPB (2013): 15.

[6] CFPB (2014): 8. The average amount of overdraft and NSF fees was $5.21 per account per month.

[7] Federal Register 79 no. 9 (January 14, 2014) New data items on consumer account balances.

[8] Kevin Wack "Banks' Reliance on Overdraft Fees Varies Widely, Data Shows." *American Banker* (May 28, 2015).

[9] Macro International Inc. (2009): v. The Federal Reserve Board sponsored consumer testing before implementing the opt-in rules in 2009. Primary financial decision-makers in their households were asked about overdrawing.

[10] CFPB (2013): 34. This report is based on bank-level data. CFPB (2014) is based on individual accounts and transactions.

[11] Pew (2012): 7.

[12] Board of Governors of the Federal Reserve System (2014): 8.

Other work provides insights into the small group of consumers who often overdrew their accounts. Using individual bank account data of 39 banks in 2006, the FDIC found that customers with 10 or more NSF transactions accounted for 84 percent of the reported fees. In 2011, a CFPB survey of banks (not account-level data) found that between 14 percent and 28 percent of consumers incurred more than 10 overdraft or NSF fees. [13] Follow-up by the CFPB found that 8.3 percent of account holders who overdrew more than 10 times per year were responsible for 73.7 percent of overdraft fees.[14] A survey by the Pew Center on the States found that in the year ending in spring 2012, 14 percent of consumers had overdrawn their account(s) 6 to 10 times.[15]

3. Data Source

The Survey of Consumer Payment Choice (SCPC), which is conducted annually during the fall (mostly in October) provides a snapshot of consumer payment behavior before and after the opt-in overdraft rules took effect (in the 2009 and 2011 surveys, respectively). Since the SCPC collects information from consumers, it provides a complementary perspective that can amplify studies conducted by the FDIC in 2006 and the CFPB in 2011, both of which collected information from financial institutions.[16]

The Survey of Consumer Payment Choice describes overdrawing in broad terms, focusing on the negative bank balance. Therefore, the SCPC definition is broader than the definition in the opt-in regulation: it includes the nonrecurring transactions covered by the regulation and also automatic bill pay and online and paper checks (not covered by the regulation).[17] A consumer's balance might become negative in various ways: if the consumer writes a paper check, pays a bill online, uses a debit card to buy groceries, and/or withdraws cash from an ATM. The opt-in rule addresses only these last two examples.

[13] CFPB (2013): 5.
[14] CFPB (2014): 11.
[15] Pew (2012): 4.
[16] FDIC (2008); CFPB (2013).
[17] However, some banks implemented the rule by requiring consumers to opt in to all types of overdrawing.

The 2009–2015 SCPC defines overdraft protection as follows:

> Overdraft protection is a service that your bank provides when you make a transaction that exceeds your account balance.
>
> Overdraft protection covers the difference between the transaction amount and your account balance, and therefore you will avoid a fee from the retailer or merchant for having insufficient funds.
>
> Overdraft protection can be activated by linking a savings account or credit card to your checking account, or through overdraft insurance for instance.[18]

For consumers, depending upon their financial institution and type of account, "overdraft protection" can have different meanings and different costs. Different banks implemented the opt-in rules differently. Some implemented the rules exactly as described in the new regulation. Others went further and implemented a blanket policy of denying overdrafts for nonrecurring and ATM transactions. Some required opt-in for both types of overdrawing, one-time debit payments and ATM withdrawals, as well as for the other ways of overdrawing (by writing a check, paying with a bank account number, using online banking bill pay, or scheduling recurring bill payments using a debit card). This means that consumers who responded to the survey may have interpreted the term "overdraft protection" in various ways.

All consumers with a bank account (either checking or savings), were asked the following question in the 2008–2015 SCPC:

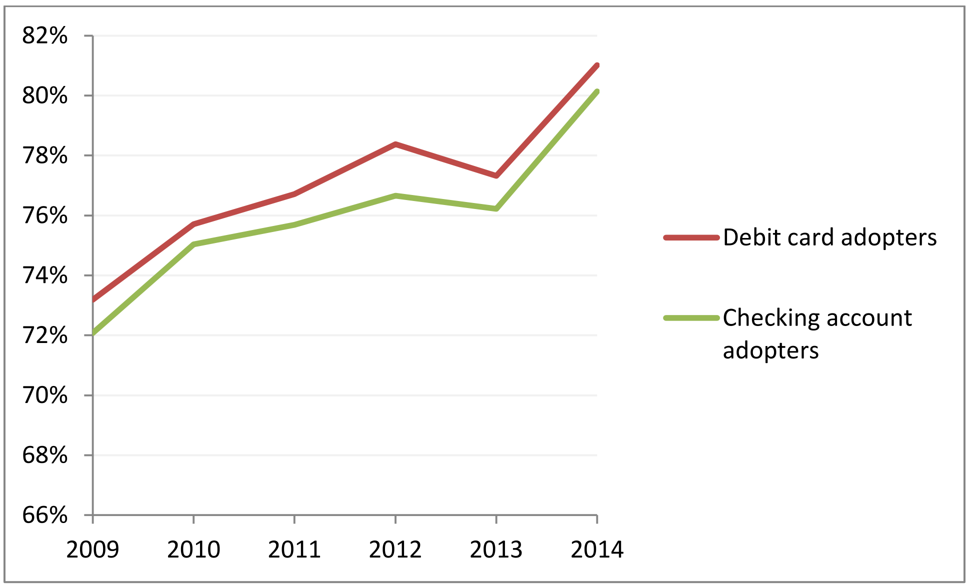
> "During the past 12 months, did you overdraw any of your bank accounts?"

The multiple-choice responses included "Yes, and I paid an overdraft fee," "Yes, but I did not pay an overdraft fee," and "No." For this response option, "fee" could include not only a fee for a loan or credit advance but also a fee to transfer funds from a savings account to a checking account (which typically would be a lower dollar amount than a fee for a loan or credit advance).

[18] In 2008, the question was different: "Is your primary checking account (the one you use most often) linked to one of your savings accounts at the same bank to allow your bank to transfer money between accounts when you overdraw your account? (This feature is called overdraft protection.)" Due to this difference, 2008 data are excluded from the analysis in this Research Data Report.

4. Adoption and Use of Overdraft Protection

Consumers' responses about their adoption of overdraft protection differed slightly between 2009 and 2011. In both 2009 (before the opt-in requirement took effect) and 2011 (after the opt-in requirement took effect), most checking account adopters reported that they had overdraft protection, as defined broadly by the SCPC. In 2011, 76 percent of consumers with a checking account had elected overdraft protection, compared with 72 percent in 2009. These differences, while statistically significant, are relatively small in economic importance. Figure 1 shows that the trend of more checking account owners reporting that they have overdraft protection continued through 2014.

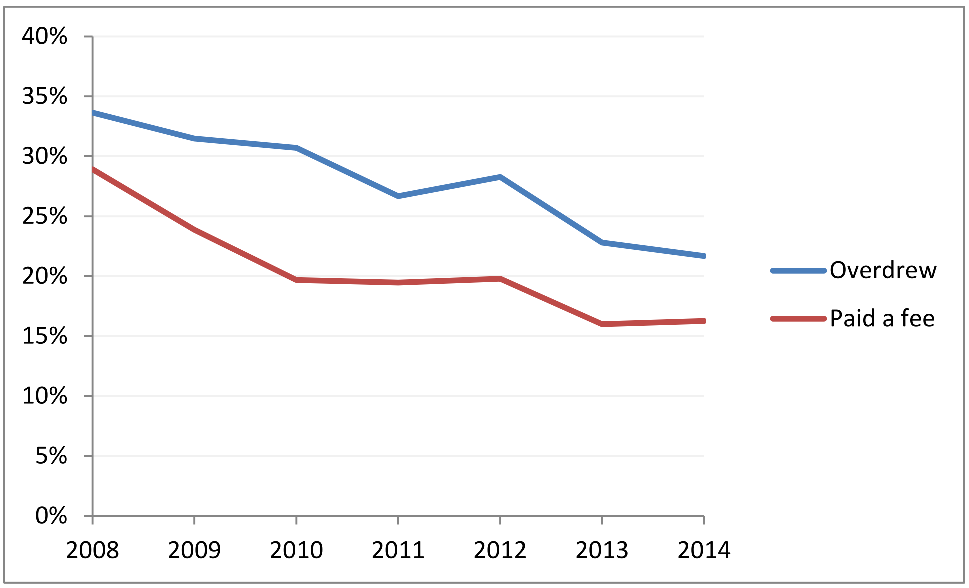


Source: 2009–2014 SCPC, Federal Reserve Bank of Boston.
Note: 2008 omitted because the survey question is not comparable. Final rules were released 11/12/2009 and took effect 7/1/2010.

Figure 1: Checking account holders' adoption of overdraft protection

The change in consumers' responses to the survey questions about having overdraft protection may have been influenced by increased awareness. Consumers may have learned about overdraft protection from news reports. From 2008 through 2010, overdrafts were frequently in the news:

- In May 2008, the Federal Reserve Board proposed rules requiring that consumers be asked to opt in for overdraft protection for ATM withdrawals and "everyday" (that is, nonrecurring) debit card transactions.
- In November 2008, the FDIC issued its report, "Study of Bank Overdraft Programs."
- In March 2009, Bank of America announced it would deny overdrafts for purchases made with debit cards and, therefore, would no longer charge overdraft fees on debit card purchases.[19]
- Throughout fall 2009, other banks followed with modifications to their overdraft programs.
- The Fed's final rule on opt-in overdraft was published in November 2009 and became effective in summer 2010.



Source: 2008–2014 SCPC, Federal Reserve Bank of Boston.
Note: 2008 included because the relevant survey question is comparable.

Figure 2: Checking account holders who overdrew at least once during the year ending in October

Compared with 2009, in all the ensuing years more consumers reported having overdraft protection while a smaller percentage of consumers reported overdrawing. In 2009, 31 percent of checking account owners reported that they had overdrawn at least once in the prior 12 months. In 2011, the percentage of checking account owners who reported that they had overdrawn at least once in the prior 12 months was 27. Figure 2 shows that the declining trend

[19] Martin (2010).

of checking account owners reporting that they had overdrawn at least once in the prior 12 months continued through 2014. Figures 1 and 2 reveal no sharp change around the time of the opt-in rule in consumers with overdraft protection or in the incidence of overdrawing. The mild trends in Figures 1 and 2 may partly reflect the impact of the policy change, but they may also or alternatively reflect other economic factors.

As noted above, it is possible that consumers became more aware of overdraft protection and overdrawing after the rules took effect. Such awareness might also have made consumers less likely to overdraw. Other research suggests that consumer awareness can affect overdrawing behavior. A 2012 survey by the Pew Center on the States found that most consumers overdraw "by mistake."[20] Subsequently, a 2012 survey by Pew reported that 52 percent of consumers who had been charged for a debit card overdraft did not believe that they had opted in.[21] Using a small sample of account data, Fusaro (2010, p. 27) estimates that 79 percent of overdrafts are due to the random nature of household expenditures. Some research has found that simply answering a question about overdrawing has educational value. Consumers who recently answered a question about overdrawing were less likely to overdraw, all other things being equal.[22] Other work discounts the idea that limited attention is the cause of overdrawing. In an analysis of prepaid card owners, Hayashi and Cuddy (2014) find that a higher share of consumers who overdraw frequently had opted in to low-balance alerts. A survey by Novantas (2015) finds that consumers who overdraw frequently (more than 10 times per month) are more likely to use account management tools than consumers who overdraw less frequently (between once and 10 times per month.

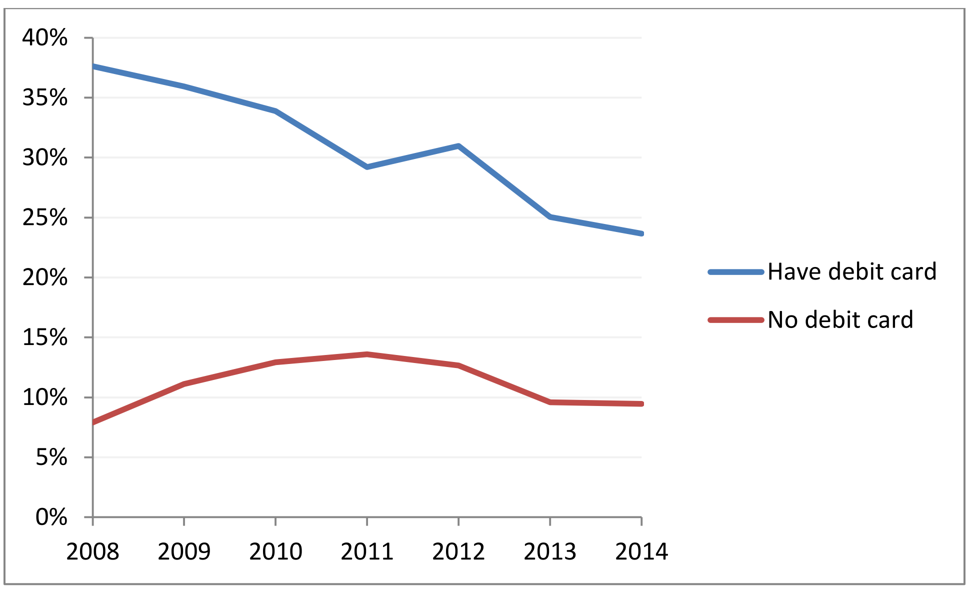
In 2011, 19 percent of consumers who overdrew at least once reported paying a fee, compared with 24 percent in 2009 (Figure 2). The percentage of consumers who paid a fee continued to decline, to 16 percent in 2014.[23] While choosing to adopt or use overdraft

[20] Pew (2012): 4.
[21] Pew (2014): 5.
[22] Stango and Zinman (2014).
[23] In 2013, 16 percent of bank account holders paid a fee, a finding comparable to the Pew finding that 15 percent of Americans paid some fee. Pew (2014): 1.

protection is a consumer's choice, paying a fee is determined by bank policies, so paying a fee (or not) does not necessarily reflect a change in consumer behavior.

5. Payment Instrument Preferences and Overdrawing

The change in the incidence of overdrawing is attributable to changed behavior by debit card holders. After the debit opt-in rule took effect, the SCPC found that debit card holders who overdrew at least once in the prior 12 months declined between 2009 and 2011, from 36 percent to 29 percent. This decline is statistically significant. This trend continued through 2014 (Figure 3). (Among those who did not have a debit card, the percentage of those who overdrew in the prior 12 months increased from 11 percent to 14 percent, but this increase was not statistically significant.)

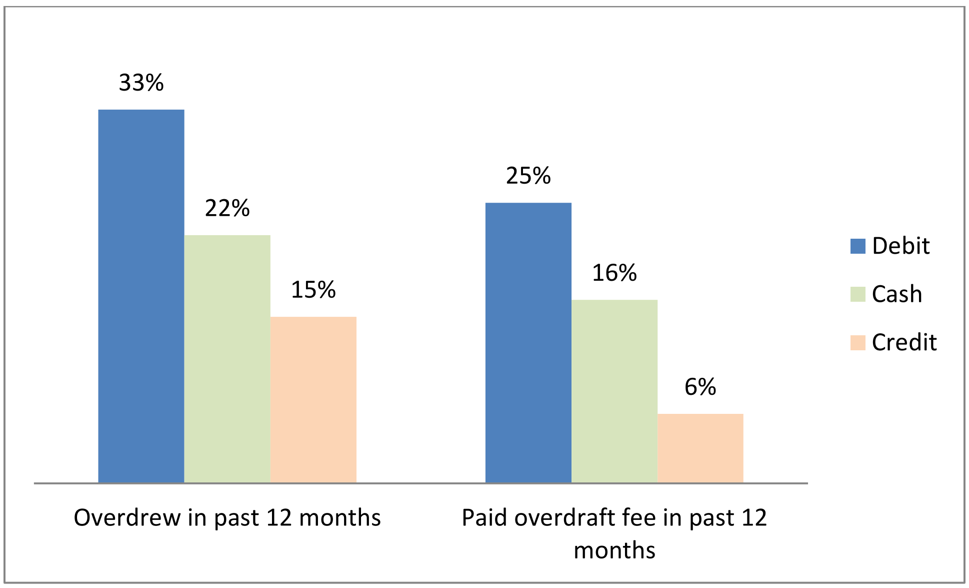


Source: 2008–2014 SCPC, Federal Reserve Bank of Boston.

Figure 3: Percentage of checking account holders who overdrew in the 12 months ending in October

In 2014, owning a debit card continued to be correlated with overdrawing choices despite consumers' ability to opt out of overdrawing for one-time debit card purchases and ATM withdrawals. Checking account owners who owned a debit card were more likely to report that they had overdrawn at least once in the 12 months ending October 2014 than checking account owners who did not own a debit card: 23.6 percent versus 9.5 percent.

The connection of debit cards and overdrawing extends from ownership to use. In the year ending October 2013 (the most recent year for which payment-share data are available), checking account owners who paid primarily with debit were more likely to have overdrawn at least once than checking account owners who paid primarily with cash, credit cards, or other payment instruments. For checking account owners who reported that they made most of their payments with debit cards in a typical month, 33 percent overdrew at least once in the year ending October 2013. Twenty-two percent of checking account owners who typically make most of their payments with cash and 15 percent of checking account owners who typically made most of their payments with credit cards overdrew at least once during the same period (Figure 4).[24]

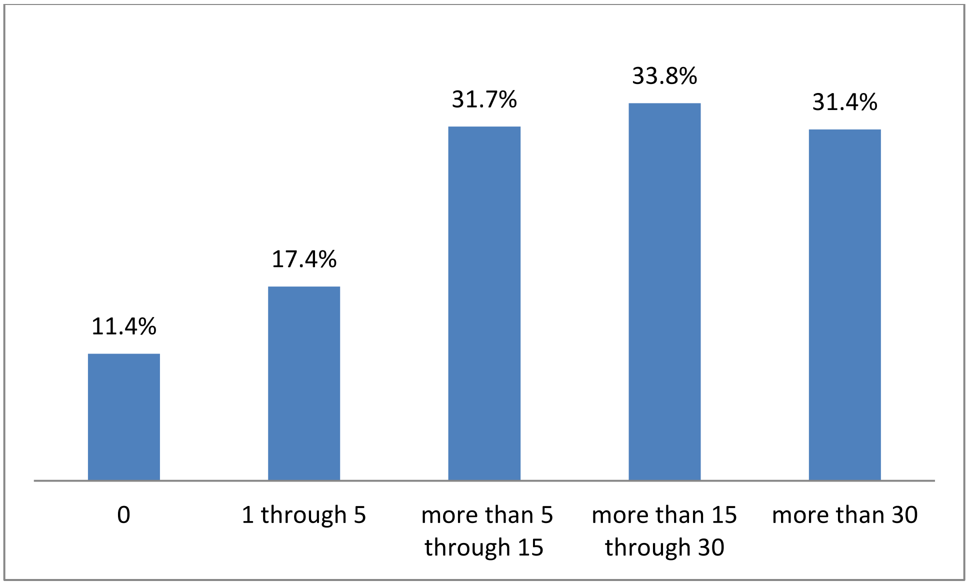


Source: 2013 SCPC, Federal Reserve Bank of Boston.

Figure 4: Percentage of checking account adopters who overdrew at least once in 12 months ending October 2013, by most-used payment method

Moving from share of transactions to number of transactions, checking account owners who made more transactions by debit card (absolute number) were more likely to have overdrawn at least once during the year than those who made fewer.

[24] Owning a credit card also is correlated with a lower probability of overdrawing. Regression analysis supporting this finding is available upon request.



Source: 2009–2013 SCPC, Federal Reserve Bank of Boston.

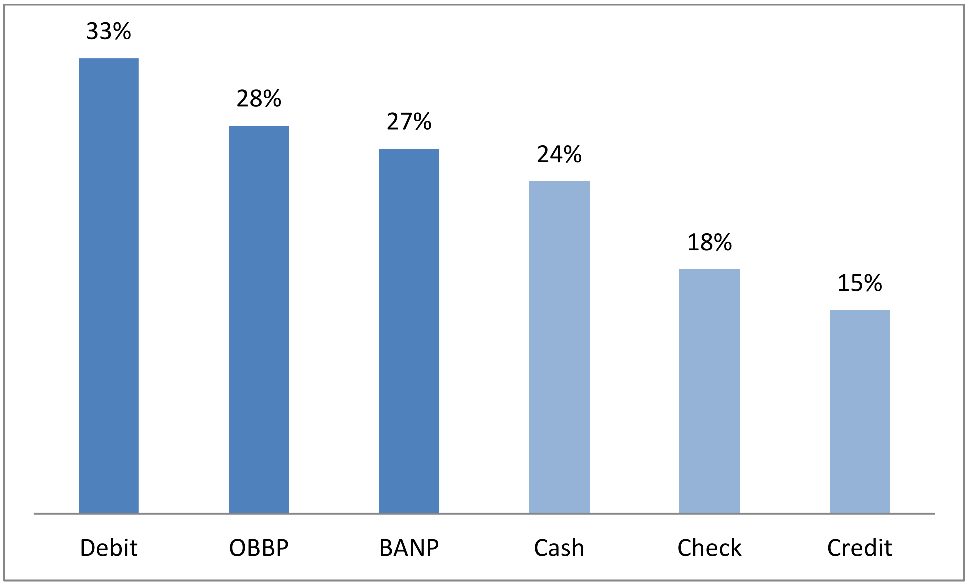
Figure 5: Percentage of checking account owners who overdrew at least once in year ending October 2013, by number of debit card payments in a typical month

Another lens through which to examine overdrawing is by type of transaction. In consumer testing of overdraft disclosures in 2009, household decision-makers thought differently about payments made by debit card than about payments made by check. Most said that check transactions were larger and "more important" and that they would want checks to be paid even if it meant being charged a fee.[25] Since 2009, the number of checks written has continued to decline; it is not necessarily the case anymore that consumers make "important payments" by check. Therefore, another way to increase understanding of "important payments" is to look at what consumers say about bills.

In 2013, 70 percent of checking account owners used one of three methods most often when paying bills. Thirty-seven percent of consumers said they paid most of their bills with a debit card. Thirty-three percent reported that they paid most of their bills electronically at their bank's bill-pay site (online banking bill pay, or OBBP) or by providing their checking account number at a vendor's website (bank account number payment, or BANP). Among consumers using any of these three payment methods to pay most of their bills, there was no statistically significant difference between the groups in the likelihood that they would have overdrawn in

[25] Macro International Inc. (2009): 8.

the preceding 12 months. In the three groups collectively, these electronic and debit-card bill payers were more likely to have overdrawn than people who mostly paid their bills by check or credit card (Figure 6).



Source: 2013 SCPC, Federal Reserve Bank of Boston.

Figure 6: **Percentage of checking account adopters overdrawing at least once in the 12 months ending October 2013, by most-used method for paying bills**

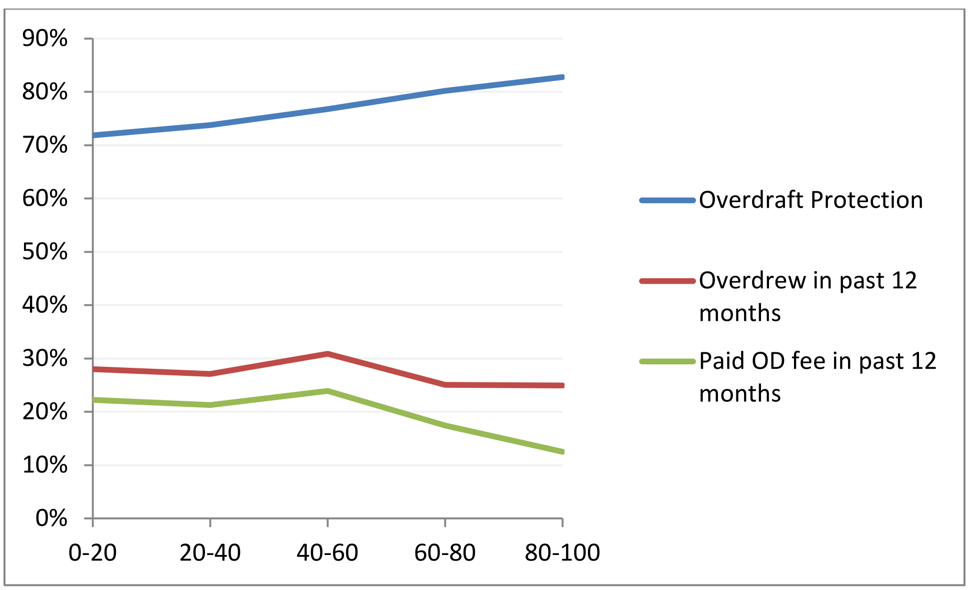
This pattern is similar when analyzed by the primary method of paying for purchases. For making purchases, checking account owners who used their debit card were more likely to have overdrawn at least once in the preceding 12 months than those who paid mostly by other methods. In 2013, 36 percent of U.S. adults used cash most often for purchases (by number of transactions), 31 percent used debit cards most, 21 percent used credit cards, and 8 percent checks. Thirty-three percent of these people who used their debit cards most overdrew at least once between October 2012 and October 2013, compared with 26 percent of checking account owners who used cash most, 22 percent of checking account owners who used checks most, and 13 percent of checking account owners who usedtheir credit card most for purchases.

6. Income and overdraft protection

In October 2014, 80 percent of checking account owners reported that they had overdraft protection, as defined broadly by the SCPC, indicating that consumers continued to elect this protection, even after they were explicitly offered the choice of opting out or in to overdraft protection for ATM and one-time debit card transactions.

As Figure 7 shows (using 2013 data, the most recent available for this analysis), higher-income consumers are more likely than others to have signed up for overdraft protection. Eighty-three percent of checking account owners in the top fifth of the household income distribution elected overdraft protection in 2013, compared with 72 percent of checking account owners in the bottom fifth.

Twenty-two percent of checking account owners overdrew their accounts during the 12 months ending in October 2014. About three-quarters of them paid a fee.[26] Compared with other households, households in the top two-fifths of the income distribution were less likely to overdraw (Figure 7). Figure 7 also shows that the wealthiest 20 percent of households who overdrew during the 12 months ended October 2013 were less likely to have paid a fee for overdrawing than other households who overdrew during that period.[27]



Source: 2013 SCPC, Federal Reserve Bank of Boston.

Figure 7: Percentage of checking account owners overdrawing in the 12 months ending October 2013, by household income (quintiles)

[26] Similarly, a CFPB survey of large banks found that between 22 percent and 28 percent of accounts open at any time during 2011 incurred overdraft or NSF fees. CFPB (2013): 21–22.
[27] Regression analysis supporting this finding is available upon request.

7. Summary

This Research Data Report examines what most consumers did at a time when overdrafts, bank fees, and overdraft protection were much in the news. It looks at all bank account holders, most of whom overdraw only occasionally.

From 2009 to 2014, we find an increase in the percentage of checking account adopters who said they have some kind of overdraft protection, as defined in the Survey of Consumer Payment Choice. We also find a decrease in the percentage of checking account adopters who overdrew at least once in the prior 12 months. From 2009 to 2011, the decline in the percentage of those who paid a fee for overdrawing was sharper than the decline in the percentage of those who withdrew more than they had in their bank account.

References

Board of Governors of the Federal Reserve System. 2009. Press release (November 12.)

Board of Governors of the Federal Reserve System. 2014. Consumers and Mobile Financial Services 2014 (March).

Consumer Financial Protection Bureau. 2013. CFPB Study of Overdraft Programs (June 2013).

Consumer Financial Protection Bureau. 2014. Data Point: Checking Account Overdraft (July 2014).

Federal Deposit Insurance Corporation. 2008. FDIC Study of Bank Overdraft Programs .

Fusaro, Marc Anthony. 2010. "Are "Bounced Check Loans" Really Loans? Theory, Evidence and Policy." *Quarterly Review of Economics and Finance* 50 No. 4 (November): 492–500.

Haslett, Kiah Lau, and Zuhaib Gull (SNL Financial). 2015. "Overdraft Shift Could Cost Smaller Banks Most." Banking Exchange.(June 26).

Hayashi, Fumiko, and Emily Cuddy. 2014. "Recurrent Overdrafts: A Deliberate Decision by Some Prepaid Cardholders?" Federal Reserve Bank of Kansas City Research Working Paper 14-08 (October).

Macro International Inc. 2009. "Design and Testing of Overdraft Disclosures: Phase Two." Calverton, Maryland (October 12).

Martin, Andrew. 2010. "Bank of America to End Debit Overdraft Fees." *New York Times.* (March 9).

Novantas. 2015. "Understanding Consumer Choice: A Review of Customer Overdraft Behaviors." *Novantas Review* 6(3).

Pew Center on the States. 2012. "Overdraft America: Confusion and Concerns about Bank Practices" (Ma).

Pew Charitable Trusts. 2014. "Overdrawn: Persistent Confusion and Concern about Bank Overdraft Practices" (June).

Schuh, Scott, and Joanna Stavins. 2015. "The 2013 Survey of Consumer Payment Choice." Federal Reserve Bank of Boston Research Data Report 15-4.

Stango, Victor, and Jonathan Zinman. 2014. "Limited and Varying Consumer Attention: Evidence from Shocks to the Salience of Bank Overdraft Fees." *Review of Financial Studies* 27, no. 4: 990-1030.

U. S. Government Accountability Office (GAO). 2008. "Bank Fees: Federal Banking Regulators Could Better Ensure That Consumers Have Required Disclosure Documents Prior to Opening Checking or Savings Accounts." Report to the Chairwoman, Subcommittee on Financial Institutions and Consumer Credit, Committee on Financial Services, House of Representatives (January).