

Board of Governors of the Federal Reserve System



2013 Interchange Fee Revenue, Covered Issuer Costs, and Covered Issuer and Merchant Fraud Losses Related to Debit Card Transactions

September 18, 2014

Highlights

Card Use

- Payment card networks processed 53.7 billion debit and general-use prepaid card transactions valued at \$2.07 trillion in the United States during 2013; dual-message networks processed 65.4 and 63.8 percent of the total by volume and value, respectively, with single-message networks processing the rest.
- Total transaction volume grew by 6.8 percent between 2012 and 2013, slower than the average per year growth of 10.2 percent between 2009 and 2012.
- Dual-message networks experienced faster transaction volume growth than single-message networks between 2012 and 2013, with growth rates of 9.1 and 2.6 percent, respectively.
- Card-not-present transaction volume grew substantially faster than card-present transaction volume between 2012 and 2013, with growth rates of 18.1 and 5.2 percent, respectively. However, card-not-present only accounted for 13.0 percent of transaction volume in 2013. As in previous years, the average transaction value for card-not-present transactions, \$70.32 in 2013, was more than twice as high as for card-present transactions.
- The volume of transactions processed by issuers that are exempt from the interchange fee standard in Regulation II grew by 8.4 percent between 2012 and 2013, faster than the growth of 5.9 percent for transactions processed by issuers that are covered by the interchange fee standard.
- The growth in the volume of prepaid card transactions slowed significantly from 36.2 percent per year between 2009 and 2012 to 4.7 percent between 2012 and 2013.

Interchange fees, network fees, and incentives

- Average interchange fees per transaction for debit and general-use prepaid cards have not changed materially since the fourth quarter of 2011, when Regulation II took effect. In 2013, interchange fees totaled \$16.33 billion.
- Network fees totaled \$5.48 billion in 2013, a growth of 8.3 percent since 2012. Acquirers paid 57 percent of these fees; issuers paid the rest. Payments and incentives offered by networks totaled \$1.25 billion in 2013, a growth of 1.6 percent since 2012. Issuers received 64 percent of these payments and incentives; acquirers and merchants received the rest.

Fraud

- Industrywide fraud losses to all parties of debit and general-use prepaid card transactions are estimated to have totaled \$1.57 billion in 2013.
- Average fraud losses as share of transaction value increased slightly from 7.8 basis points to 8.0 basis points.

Issuer Costs

- Average authorization, clearing, and settlement (ACS) costs, excluding issuer fraud losses, across issuers covered by the interchange fee standard in Regulation II, calculated on a transaction-weighted basis, fell to \$0.044 in 2013, down from \$0.050 in 2011.
- The base interchange fee standard in Regulation II of 21 cents plus 5 basis points times the value of a transaction exceeded average per-transaction ACS costs, including issuer fraud losses, for 63.5 percent of covered issuers and 99.3 percent of covered transactions in 2013, down slightly from 66.0 and 99.6 percent, respectively, in 2011.

Background

The Electronic Fund Transfer Act requires the Federal Reserve Board (Board) to biennially publish data on costs incurred, and interchange fees charged or received, by debit card issuers and payment card networks.¹ The Board conducted its first data collection in 2010, collecting data from payment card networks and issuers for calendar year 2009. The information from the first data collection assisted the Board in developing Regulation II, and was included in a report published in June 2011.² The second report, published in March 2013, concerned data for the calendar year 2011.³ The present report is the third report in the series.

Regulation II establishes an interchange fee standard under which no issuer with consolidated assets of \$10 billion or more may charge or receive an interchange fee for an electronic debit transaction greater than 21 cents plus 5 basis points times the value of that transaction. An issuer that is subject to the standard may be eligible to receive up to an additional 1 cent adjustment to the interchange fee it charges or receives if the issuer meets certain fraud-prevention standards. Government-administered payment programs and certain reloadable general-use prepaid cards are exempt from this interchange fee limitation.

The Board's Data Collection Process

The Board conducts two surveys to collect information about the debit card industry. The Payment Card Network (PCN) survey is conducted every year and surveys payment card networks that process debit card transactions. The Debit Card Issuer (DCI) survey is conducted every two years and surveys issuers that are subject to the interchange fee standard in Regulation II.

The surveys distinguish between general-use prepaid cards and other debit cards. Prepaid cards are cards, other payment codes, or devices that are issued on a prepaid basis in a specified amount, whether or not that amount may be increased or reloaded, in exchange for payment. General-use prepaid cards, covered by the PCN and DCI surveys, can be redeemed upon presentation at multiple unaffiliated merchants.⁴ Although Regulation II defines prepaid cards as a subset of debit cards, for ease of exposition, this report uses the term “debit card” to mean cards excluding prepaid cards, and uses the term “prepaid card” to mean general-use prepaid cards that are covered by the definition of debit card in Regulation II. The surveys exclude cards that can access only automated teller machine (ATM) networks and cannot be used to make point-of-sale transactions.

¹ 15 U.S.C. 1693o-2(a)(3)(B) (2014).

² See 76 Fed. Reg. 43394 (Jul. 20, 2011).

³ The reports and survey instruments are available at www.federalreserve.gov/paymentsystems/regii-data-collections.htm.

⁴ This feature contrasts with private-label prepaid cards, which can be used only at an individual merchant or a group of affiliated merchants.

The surveys also distinguish between dual-message and single-message networks. A dual-message network typically uses separate messages to authorize and clear a transaction. These networks normally process signature-authenticated transactions, although some transactions, such as small-value purchases, may not require any cardholder authentication. In some instances, a dual-message network may use a single message to authorize and clear a given transaction and may require the entry of a personal identification number (PIN) for cardholder authentication in that transaction. A single-message network uses a single message to authorize and clear a transaction. These networks normally process PIN-authenticated transactions, although some transactions, such as small-value purchases, may not require any authentication.

Payment Card Network Survey

The latest iteration of the PCN survey was conducted by the Board in early 2014. All 15 network companies that process debit card transactions completed the survey, reporting data for calendar year 2013.⁵ In addition to using data from the PCN survey for this report, the Board used the data to calculate the information it published in May 2014 on the average interchange fees received by issuers across different payment card networks.⁶

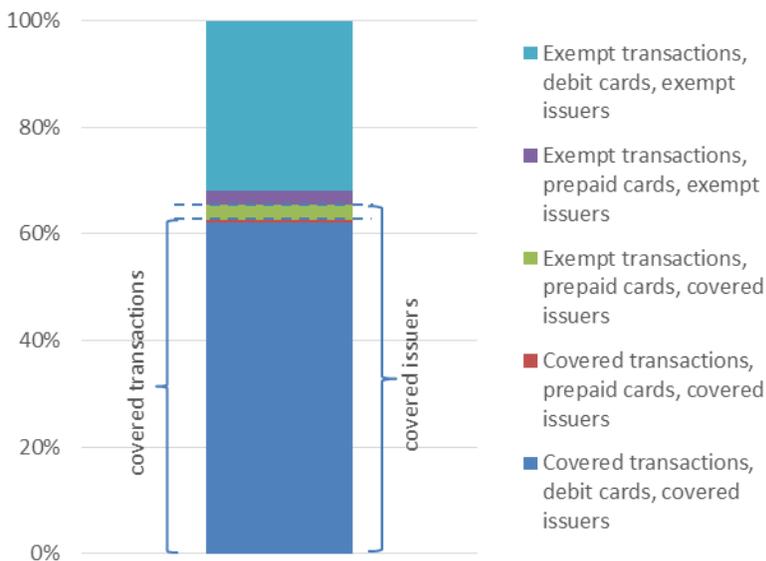
As in previous years, the PCN survey asked respondents to break out the information by issuers covered by the interchange fee standard (covered issuers) and issuers exempt from the interchange fee standard (exempt issuers), as well as to distinguish between prepaid card transactions that were covered or exempt from the interchange fee standard. The PCN survey conducted in early 2014 asked respondents to provide additional information about exempt prepaid transactions. Specifically, respondents were asked to distinguish between exempt prepaid transactions that were initiated with cards issued by exempt issuers and those initiated with cards issued by covered issuers. This more detailed data for 2013 allowed the measurement of prepaid and debit card transactions that were covered by or exempt from the interchange fee standard.⁷ As exhibit 1 illustrates, the difference between the transaction volume of covered issuers, which includes transactions initiated with exempt prepaid cards issued by covered issuers, and the volume of covered transactions, which excludes those transactions, was less than 3 percent of transaction volume in 2013. This report will discuss both measures.

⁵ The survey instructed network companies that had both dual-message and single-message networks to provide separate responses for each network. Similarly, if a network company processed both single-message and dual-message transactions over a single network, the survey instructed the network company to provide separate responses for each type of transaction performed over the network. Based on these reporting conventions, there were 19 total responses to the PCN survey.

⁶ Information on average interchange fees is available on the Board's public website at www.federalreserve.gov/paymentsystems/regii-average-interchange-fee.htm.

⁷ In previous years, it was only possible to distinguish between transactions initiated with cards issued by issuers who were covered by or exempt from the standard.

Exhibit 1: Composition of transaction volume in 2013



Debit Card Issuer Survey

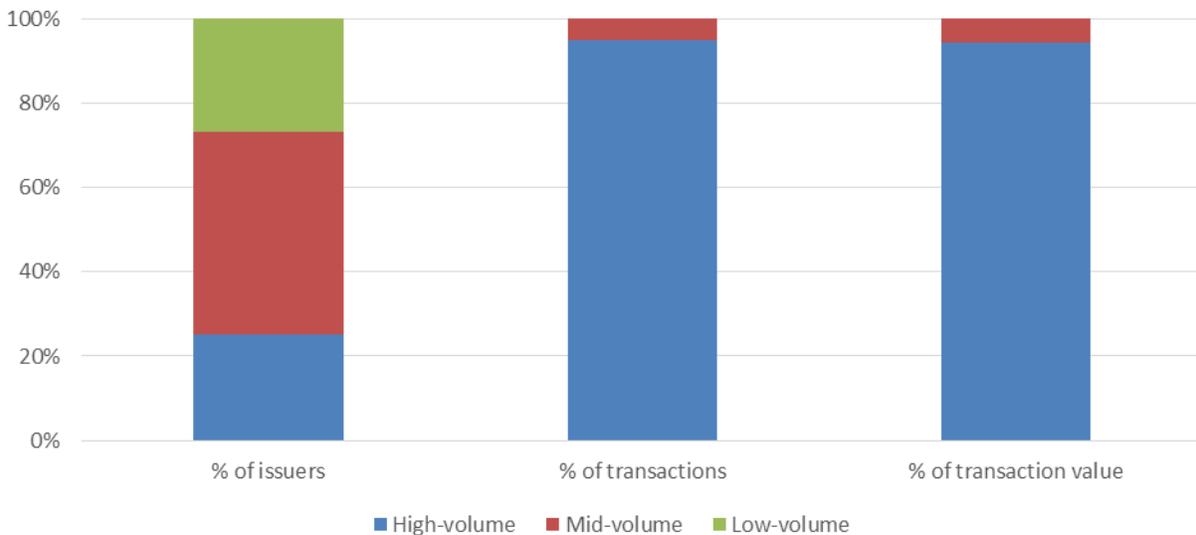
The latest iteration of the DCI survey was conducted by the Board in early 2014, asking covered issuers to report data for calendar year 2013.⁸ Respondents ranged from the largest debit card issuers in the country to issuers with sizable assets but very small debit card programs. The DCI survey asked for information related to the volume and value of debit and prepaid card transactions; the incidence of and losses related to debit and prepaid card fraud; ACS costs and other costs associated with a particular debit card transaction; fraud-prevention and data security costs; and interchange fee revenue. The DCI survey instructed respondents to provide the requested information separately for debit card

⁸ The Board distributed surveys to holding companies of covered financial institutions. These financial institutions included bank and thrift holding companies with consolidated assets of at least \$10 billion; independent commercial banks, thrifts, and credit unions with assets of at least \$10 billion; and U.S. branches and agencies of foreign banking organizations with worldwide assets of at least \$10 billion. Assets were computed using the Consolidated Financial Statements for Bank Holding Companies (FR Y-9C; OMB No. 7100-0128), the Consolidated Reports of Condition and Income (Call Reports) for independent commercial banks (FFIEC 031 & 041; OMB No. 7100-0036) and for U.S. branches and agencies of foreign banks (FFIEC 002; OMB No. 7100-0032), the Thrift Financial Reports (OTS 1313; OMB No. 1550-0023) for thrift holding companies and thrift institutions, and the Credit Union Reports of Condition and Income (NCUA 5300/5300S; OMB No. 3133-0004) for credit unions. The ownership structure of banking organizations was established using the Federal Financial Institutions Examination Council's National Information Center structure database. Participation was mandatory for institutions that had debit card programs in 2013. Institutions that indicated that they did not have a debit card program in 2013 were not required to complete a survey. Institutions that did not have debit card programs were typically either foreign banking organizations or other financial institutions with large nonbank affiliates that do not provide retail banking services.

transactions processed over dual-message networks, debit card transactions processed over single-message networks, and, for issuers with prepaid card programs, prepaid card transactions.⁹

One hundred thirty one covered issuers responded to the 2013 DCI survey, the same number that responded in 2011. Exhibit 2 illustrates the composition of responses: 25 percent of the respondents processed more than 100 million debit card transactions in 2013 (high-volume issuers), while 27 percent processed fewer than 1 million debit card transactions in 2013 (low-volume issuers). The remaining 48 percent of respondents processed between 1 million and 100 million transactions in 2013 (mid-volume issuers). The composition of respondents by transaction volume changed only slightly since 2011 when, out of a total of 131, two fewer issuers were classified as high-volume and two more were classified as low-volume; the number of mid-volume issuers did not change. In 2013, as in 2011, high-volume issuers accounted for 95 and 94 percent of transactions by volume and value, respectively, mid-volume issuers accounted for another 5 and 6 percent by volume and value, and low-volume issuers accounted for less than 0.1 percent of transactions by volume and value.

Exhibit 2: Composition of covered issuers and transaction volume/value of covered issuers in 2013

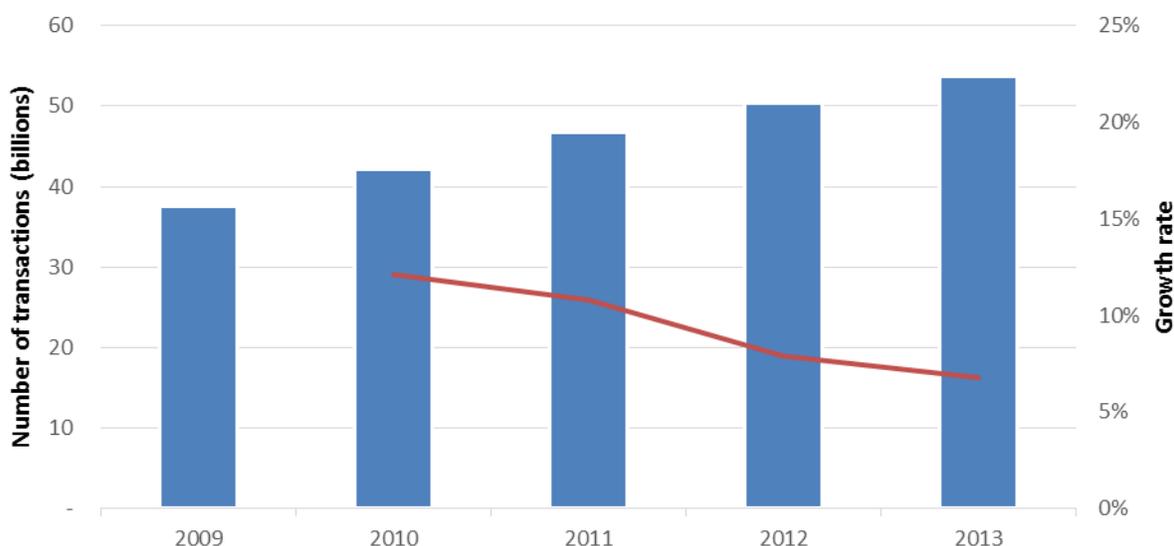


⁹ Unlike the PCN survey, the DCI survey did not distinguish between general-use prepaid cards that were covered by the interchange fee standard and those that were exempt.

Discussion

Card Use¹⁰

Exhibit 3: Volume and growth rate of purchase transactions over time



NOTE: The left vertical axis is associated with the bars representing the volume of transactions in each year. The right vertical axis is associated with the line between years and represents the growth in volume of transactions since the previous year. The number of transactions in 2010 is an interpolation from 2009 and 2011 values because no survey data were collected for 2010.

Payment card networks processed 53.7 billion purchase transactions in 2013, a 6.8 percent increase from the 50.3 billion purchase transactions processed in 2012 (see exhibit 3).^{11,12} Over the same period, the total value of purchase transactions increased 5.5 percent from \$1.96 trillion to \$2.07 trillion. Both growth rates were lower than in previous years: transaction volume grew at an average annual rate of

¹⁰ Both the PCN survey and DCI survey asked respondents for data pertaining to the number and value of purchase transactions on debit cards in 2013. A comparison of data from the two surveys suggests a high level of consistency across network and issuer responses: the total number and value of transactions reported in the DCI survey differed from the number and value of transactions reported for covered issuers in the PCN survey by less than 0.3 percent. Because the DCI survey only includes covered issuers, the figures reported in this section come from PCN survey data.

¹¹ The 2013 Federal Reserve Payments Study estimates that 50.1 billion debit and general-purpose prepaid card transactions took place in 2012, a difference of less than 0.5 percent compared to the PCN survey. A summary of the study is available on the Federal Reserve Bank Services website at www.frbservices.org/files/communications/pdf/research/2013_payments_study_summary.pdf.

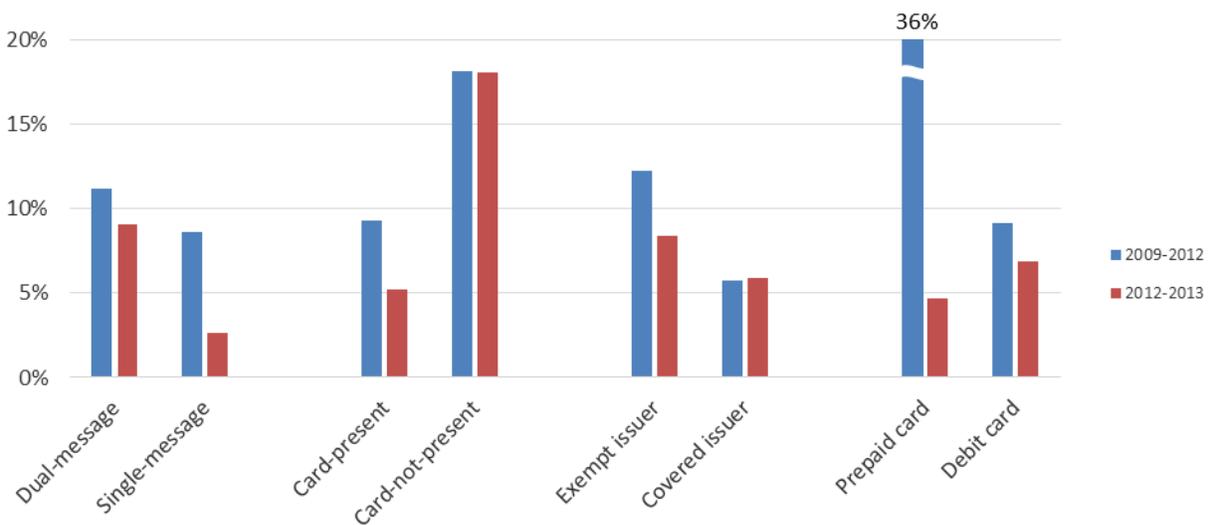
¹² Purchase transactions include transactions that are later charged back or returned. Purchase transactions exclude ATM transactions and any card activity in which value was not transferred between a cardholder and a merchant, such as denials, errors, or authorizations that did not clear or were not presented for settlement. Prepaid card transactions exclude funds loads to card accounts.

10.2 percent between 2009 and 2012, whereas transaction value grew an average of 11.0 percent annually over the same period.

A small fraction of purchase transactions resulted in chargebacks and returns.¹³ In 2013, chargebacks represented less than 0.02 percent of transactions, and returns represented about 0.75 percent of transactions. Together, chargebacks and returns totaled 0.41 billion transactions (\$25.1 billion in value); purchase transactions net of chargebacks and returns totaled 53.33 billion (\$2,044.8 billion in value).

Exhibit 4 examines growth rates in transaction volume across different categories of transactions for the 2009-2012 and 2012-2013 periods. The category that grew most consistently over these two time periods was card-not-present transactions, which grew by 18.1 percent between 2012 and 2013, substantially faster than card-present transactions over the same period (5.2 percent).¹⁴

Exhibit 4: Average annual growth rate in transaction volume, by transaction category



NOTE: Exempt/covered issuer breakdown was first collected in 2011; the 2009-2012 growth rate for exempt/covered issuers thus corresponds to the growth rate between 2011 and 2012.

Another category that experienced a high level of growth was transactions processed by dual-message networks, which experienced growth in volume of 9.1 percent between 2012 and 2013, only slightly slower than over the 2009-2012 period. The rate of growth between 2012 and 2013 was substantially

¹³ In a purchase transaction, value is transferred from the cardholder to the merchant in exchange for goods or services. In a chargeback transaction, the issuer reverses a purchase transaction (due, for example, to customer disputes, fraud, processing errors, authorization issues, or non-fulfillment of copy requests), in whole or in part, and value is transferred from the merchant to the cardholder. In a return transaction, the merchant reverses a purchase transaction (due, for example, to the return of goods by the cardholder), in whole or in part, and value is transferred from the merchant to the cardholder.

¹⁴ Card-not-present transactions include Internet, telephone, and mail order transactions.

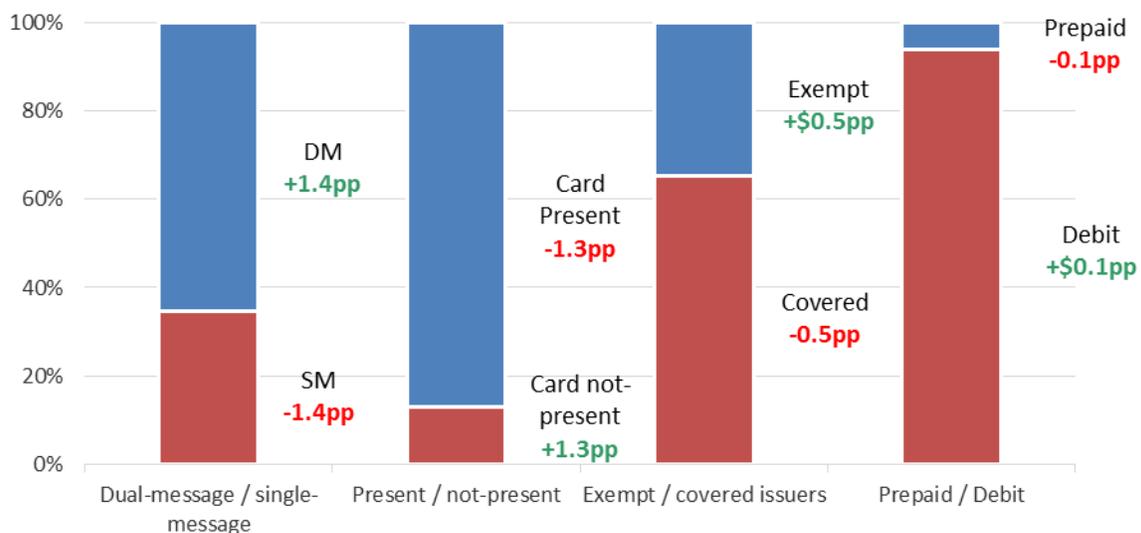
higher than that for the volume of transactions processed by single-message networks over the same period: 2.6 percent.

Transactions initiated with cards issued by exempt issuers continued to grow faster, on an average annual basis, than transactions initiated with cards issued by covered issuers: they grew by 8.4 and 5.9 percent, respectively, between 2012 and 2013, compared with average annual growth rates of 12.2 and 5.8 percent, respectively, between 2011 and 2012.

The growth rate in prepaid card transactions volume slowed substantially, from an annual average rate of 36.2 percent between 2009 and 2012 to only 4.7 percent between 2012 and 2013. The 2012-2013 period marked the first time since the PCN survey began that growth in debit card transactions, at 6.9 percent, outpaced that in prepaid cards.

In 2013, transactions processed over dual-message networks accounted for 65.4 percent of debit card transaction volume, with transactions processed over single-message networks accounting for the remaining 34.6 percent (see exhibit 5). The proportion of transactions processed over dual-message networks grew by 1.4 percentage points between 2012 and 2013, reflecting the difference in growth rates between the two types of networks. Similarly, the share of card-not-present transactions out of total transaction volume increased by 1.3 percentage points to 13.0 percent between 2012 and 2013, reflecting the much faster growth rate of card-not-present transactions compared with card-present transactions. The split between transactions processed by covered and exempt issuers changed little since 2012, with transactions processed by exempt issuers rising by 0.5 percentage points to 34.6 percent of transactions volume. Finally, the split between prepaid cards and debit cards was largely unchanged from 2012, with prepaid card transactions accounting for 5.9 percent of transaction volume in 2013.

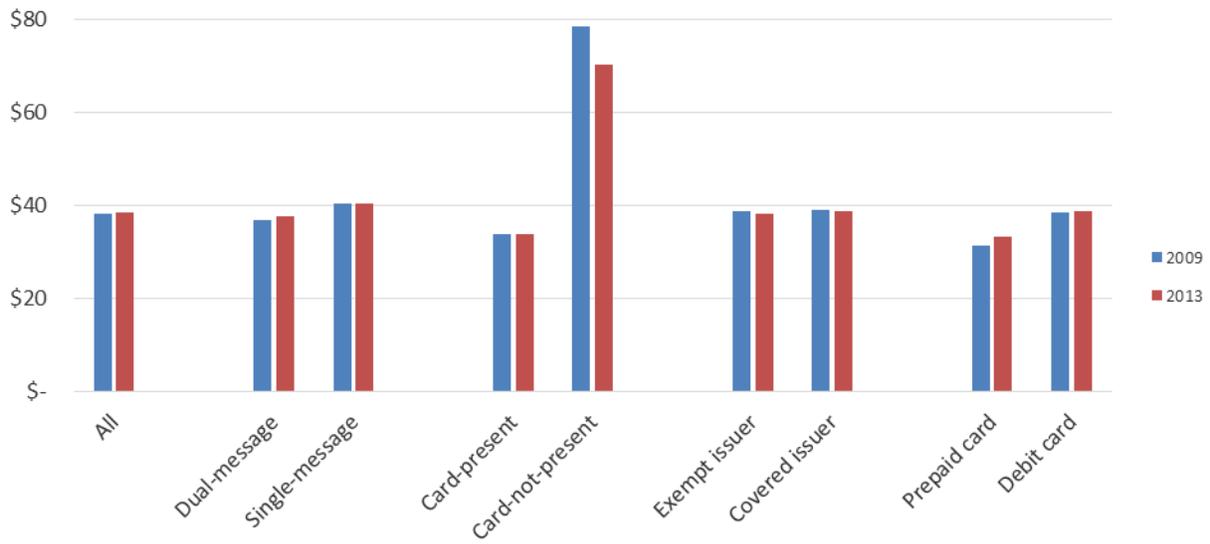
Exhibit 5: Composition of total transaction volume in 2013, by transaction category



NOTE: Values reported alongside the columns represent per-category change relative to 2012; pp is percentage points. DM is dual-message; SM is single-message.

As shown in exhibit 6, the average transaction value did not differ greatly in 2013 among transaction categories, with one exception: card-not-present transactions, whose value at \$70.32 was more than double that for card-present transactions, with a value of \$33.75. Average transaction values did not change much between 2009 and 2013 for most transaction categories, again with the exception of card-not-present transactions: the average transaction value for this type of transaction fell by over \$8 between 2009 and 2013.

Exhibit 6: Average transaction value, by transaction category



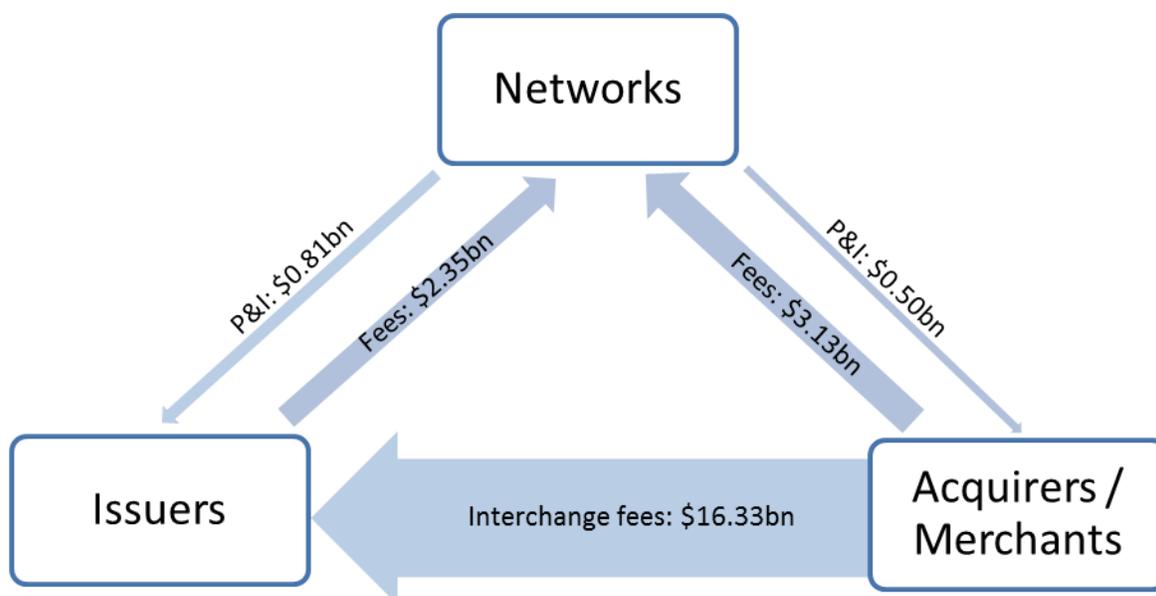
NOTE: Exempt/covered issuer breakdown was not available in 2009; 2011 figures are reported instead.

Interchange fees, network fees, and incentives

Exhibit 7 shows the main fees, payments and incentives exchanged among networks, issuers, and acquirers. These transfers vary widely from network to network; thus, the totals and averages reported in this section serve only as a general characterization of network practices. Moreover, payments and incentives are usually bilateral arrangements between a network on one side and a merchant, acquirer, or issuer on the other. The figures reported in this section, calculated from network-reported totals, do not reflect the heterogeneity of these bilateral arrangements.

The total value of interchange fees transferred from acquirers to issuers is by far the highest transfer of value: \$16.33 billion in 2013.¹⁵ Network fees paid by issuers and acquirers in 2013 were \$2.35 billion and \$3.13 billion, respectively, and in each case were considerably higher than the payments and incentives received from the networks by issuers and acquirers/merchants: \$0.81 billion and \$0.50 billion, respectively.

Exhibit 7: Fees and payments/incentives among networks, issuers, and acquirers in 2013

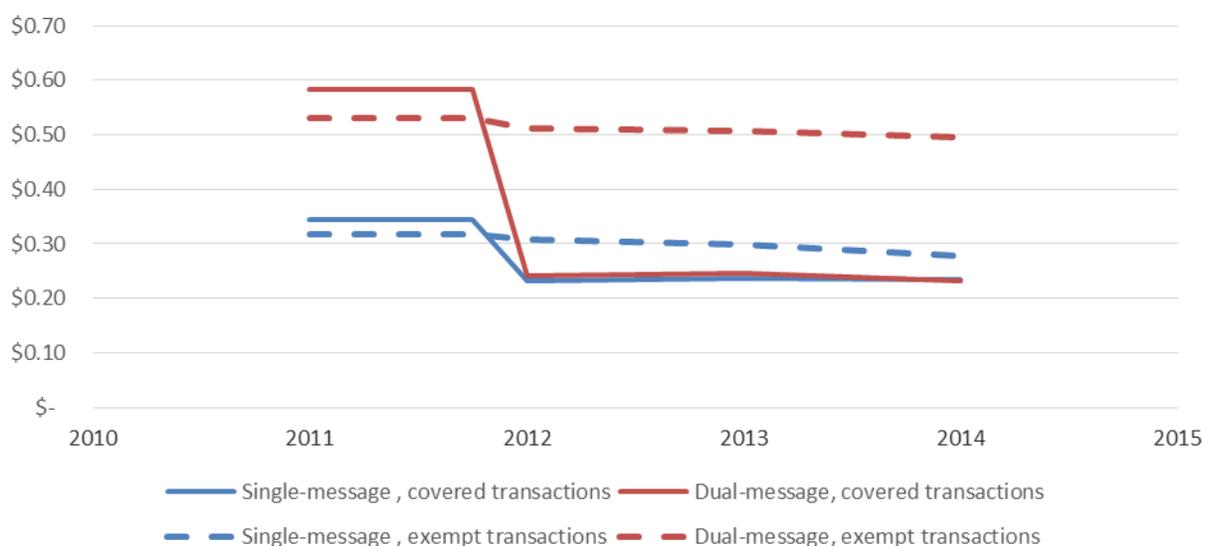


NOTE: P&I is payments and incentives; bn is billions. The arrows represent the source and recipient of fees, payments, and incentives, rather than the actual path the money takes.

¹⁵ Interchange fees are those fees set by the network, charged to acquirers, and received by issuers as part of a debit card transaction. The acquirer typically passes these fees on to the merchants so interchange fees can be thought of as a cost to merchants and as revenue to debit card issuers. Network processing fees are total fees charged by payment card networks for services that are required for the network processing of transactions and do not include any fees for optional services related to transaction processing that may be provided by a payment card network or an affiliate of a payment card network, or any network fees that are not directly linked to the processing of transactions, such as membership or license fees.

Exhibit 8 illustrates the evolution of average interchange fees over time, depending on the network type and whether transactions were subject to the interchange fee standard. The average interchange fee per covered transaction in 2013 was the same for transactions processed over dual-message networks and single-message networks: \$0.23. In both cases, the values were below the \$0.24 maximum that an issuer could receive on an average covered transaction.¹⁶ The average interchange fee per exempt transaction processed over dual-message networks was considerably higher than that for covered transactions (\$0.50 versus \$0.23), whereas the average interchange fee per exempt transaction processed over single-message networks was only slightly higher than that for covered transactions (\$0.28 versus \$0.23). None of these values have changed materially since Regulation II took effect.

Exhibit 8: Average interchange fees over time, by network type and transaction status

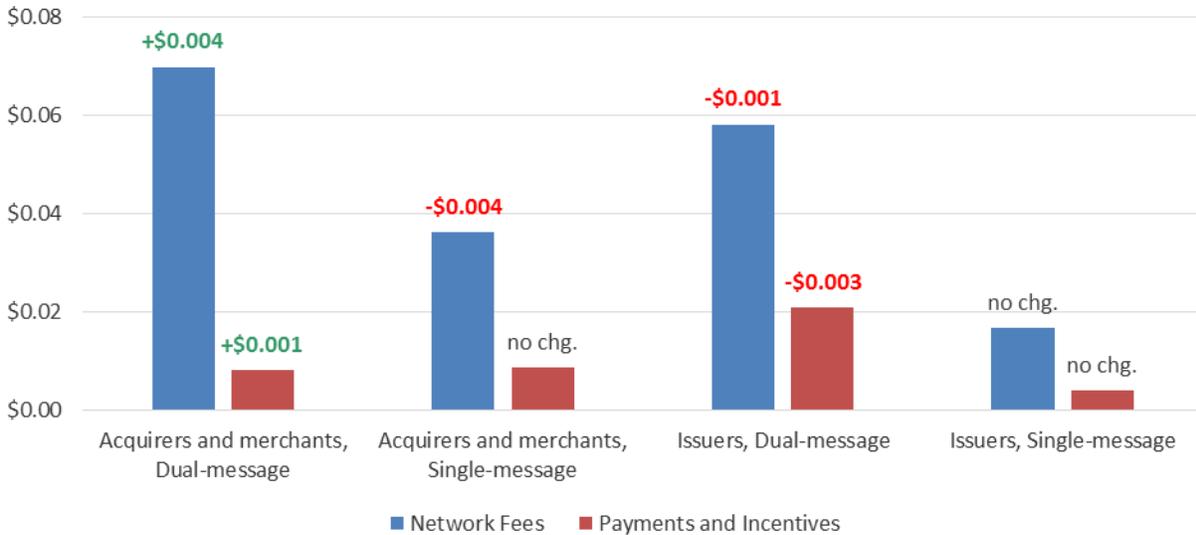


NOTE: Values for each period are represented by a data point at the end of the time period: end of year for 2011:Q4, 2012, and 2013 data, and end of Q3 for Q1 to Q3 2011 data. Figures for 2013 represent a covered/exempt transaction breakout; for prior years they represent a covered/exempt issuer breakout.

The fees charged by networks and the payments and incentives paid by networks are illustrated in exhibit 9. Overall, both acquirers and issuers paid more in 2013 in network fees than they received from the networks in payments and incentives. Network fees paid by acquirers were higher, on average, than those paid by issuers, whereas fees paid to dual-message networks were higher than fees paid to single-message networks. Although payments and incentives from single-message networks equaled 24 percent of their network fees for both issuers and acquirers/merchants, payments and incentives from dual-message networks constituted a much higher percentage of their network fees for issuers (36 percent) than for acquirers/merchants (12 percent).

¹⁶ For the average \$39 transaction, the interchange fee standard, plus the \$0.01 fraud-prevention adjustment, is \$0.24.

Exhibit 9: Per-transaction network fees and payments/incentives in 2013, by network type and payor/recipient



NOTE: Values reported above the columns represent per-category change relative to 2012; although payments and incentives are received by both acquirers and merchants, network fees are paid by acquirers and are not directly paid by merchants.

Exhibit 10: Per-transaction network fees and payments/incentives for issuers and merchants/acquirers over time, by network type and payor/recipient

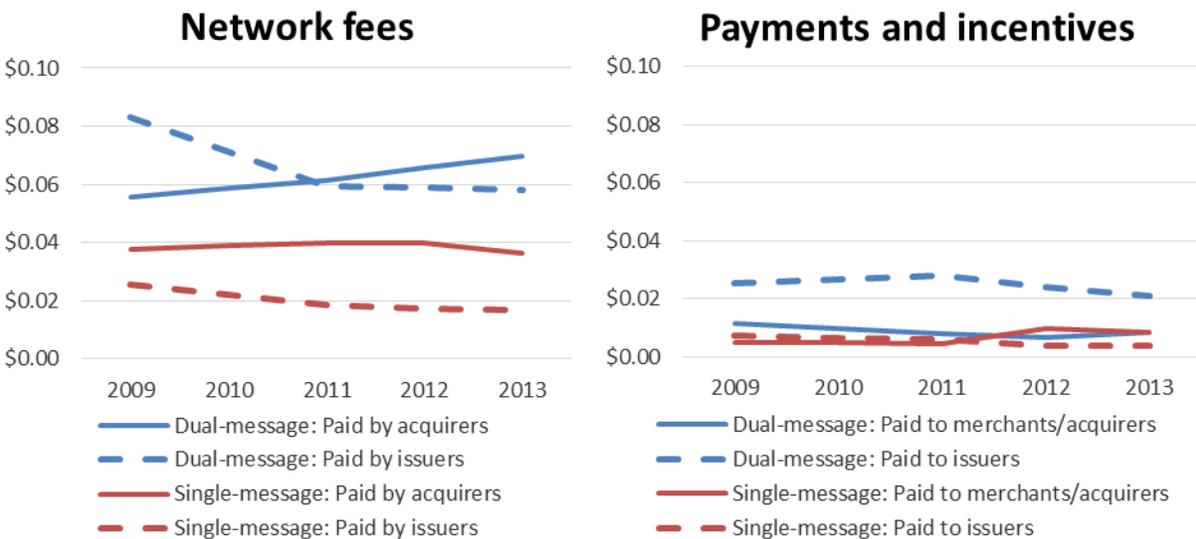
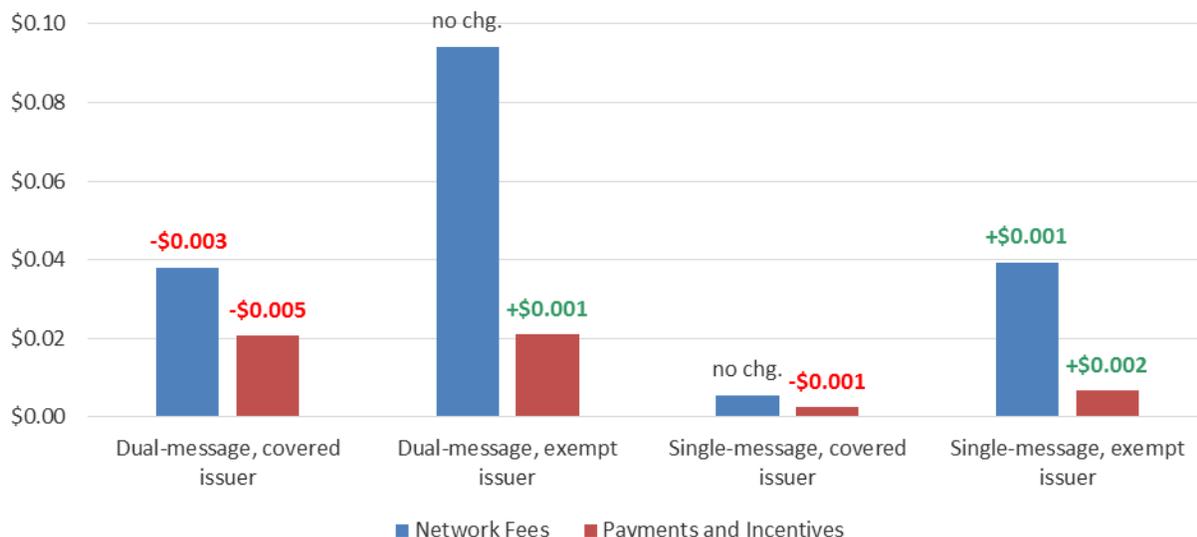


Exhibit 10 shows trends in network fees and payments/incentives since 2009. In 2009, dual-message networks paid more than twice as much on a per-transaction level as single-message networks in

payments and incentives to merchants and acquirers. By 2013, however, the level of per-transaction payments and incentives to merchants and acquirers was almost equal between the two types of networks. In addition, for dual-message networks, issuers paid higher fees on a per-transaction basis than acquirers in 2009; by 2013, acquirers' fees on a per-transaction level had surpassed those for issuers.

Exhibit 11 looks further into network fees, payments, and incentives between issuers and networks, and how they differed between covered and exempt issuers in 2013. Although payments and incentives represented between 45 and 55 percent of network fees paid by covered issuers, the corresponding value was much lower for exempt issuers: between 17 and 22 percent. This difference may be in part due to the fact that, in general, covered issuers settle more transactions than exempt issuers and are more likely to receive volume discounts to their network fees.

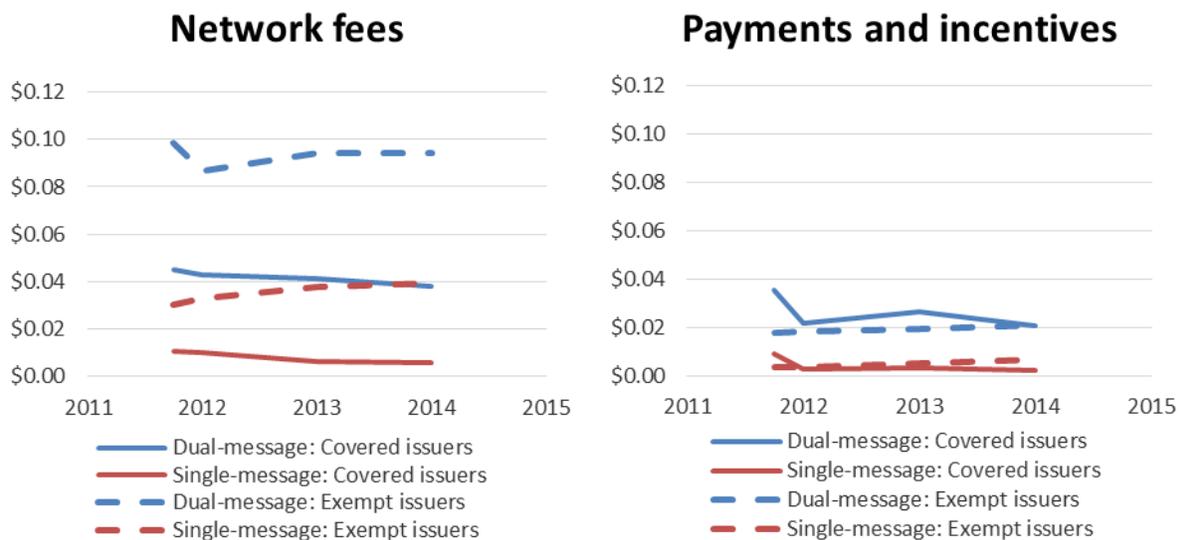
Exhibit 11: Per-transaction network fees and payments/incentives for issuers in 2013, by network type and issuer status



NOTE: Values reported above the columns represent per-category change relative to 2012.

Exhibit 12 examines how network fees, payments, and incentives for covered and exempt issuers have changed since 2011. A large change came with the introduction of Regulation II, following which payments and incentives paid to covered issuers by both types of networks fell substantially on a per-transaction basis. The other types of payments and incentives, as well as network fees, have not changed substantially between 2011 and 2013.

Exhibit 12: Per-transaction network fees and payments/incentives for issuers over time, by network type and issuer status



Fraud^{17,18}

Fraud losses to all parties are estimated to have increased between 2011 and 2013. Using responses from covered issuers and networks, the Board estimates that industrywide fraud losses to all parties of debit card transactions totaled approximately \$1.57 billion in 2013.¹⁹ This figure represents an increase of 13.1 percent compared with 2011.²⁰ About \$1.30 billion of these estimated losses arose from debit card transactions processed over dual-message networks (henceforth: dual-message debit transactions), \$0.21 billion arose from debit card transactions processed over single-message networks (henceforth: single-message debit transactions), and \$0.06 billion arose from prepaid card transactions.²¹

¹⁷ The 2013 Federal Reserve Payments Study provides additional fraud statistics on card-present and card-not-present transactions.

¹⁸ Unless noted otherwise, the information on fraud losses in this section is based on responses of covered issuers to the DCI survey and, thus, reflects the experience of covered issuers related to fraudulent debit card transactions.

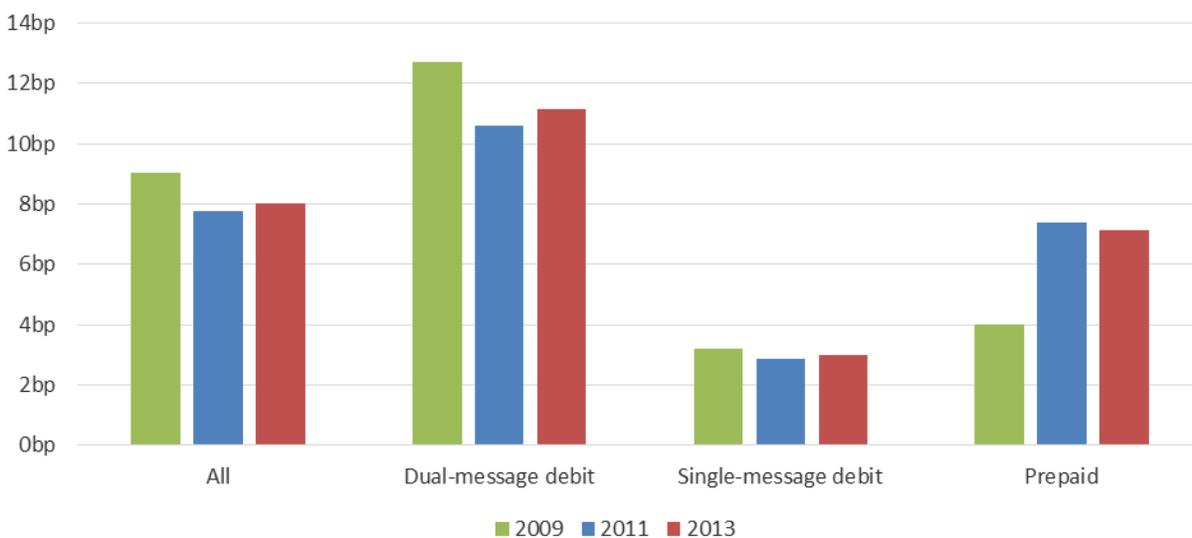
¹⁹ Industry-wide fraud losses were extrapolated from data on average fraud losses per transaction by transaction type, as reported by covered issuers in the DCI survey, and aggregate transaction volumes by transaction type, as reported in the PCN survey. The calculation assumes a constant average fraud loss per transaction across covered and exempt issuers for each transaction type.

²⁰ Because per transaction fraud losses increased only slightly between 2011 and 2013, the growth in estimated overall fraud over this period is driven mostly by a 9.1 percent increase in the number of debit card transactions processed over dual-message networks, and a corresponding 4.2 percent increase in the average fraud loss per transaction for this type of transaction.

²¹ Fraudulent use of single-message debit cards may be via ATM cash withdrawals; respondents were instructed to exclude the incidence of and losses from fraudulent ATM withdrawals for these statistics. The 2013 Federal Reserve Payments Study estimates that 1.3 million unauthorized ATM withdrawals occurred in 2012 with a total value of \$0.3 billion.

Exhibit 13 illustrates that fraud losses to all parties as a share of transaction value increased slightly for total debit and prepaid card transactions between 2011 and 2013. This increase was preceded by a substantial fall between 2009 and 2011. This trend was also true for both dual-message debit transactions and single-message debit transactions. Prepaid card transactions exhibited the opposite trend: fraud losses as a share of transaction value rose substantially between 2009 and 2011, and then decreased slightly between 2011 and 2013. In 2013, fraud losses as a share of transaction value were lowest for single-message debit transactions (equivalent to a \$0.01 loss on a \$40 transaction), with losses on prepaid cards almost twice as high and on dual-message debit transactions almost four times as high.

Exhibit 13: Fraud losses as a share of transaction value, by transaction category

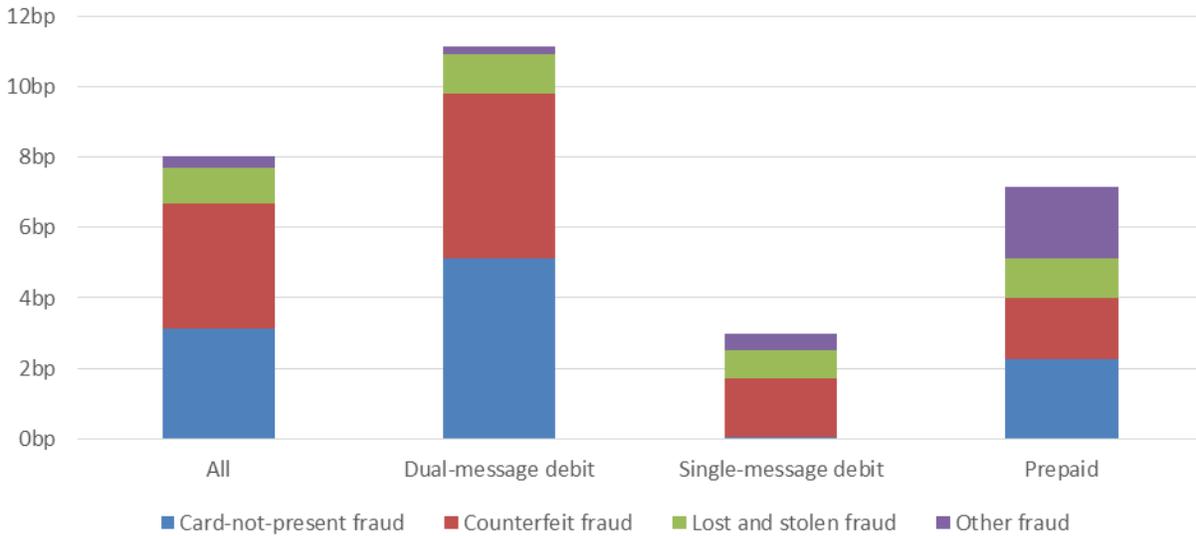


NOTE: bp is basis points.

Exhibit 14 illustrates the breakdown, by fraud type, of 2013 fraud losses to all parties expressed as a share of transaction value. Lost and stolen fraud losses constituted a very similar percentage of the transaction value across the different transaction types, ranging between 0.79 and 1.12 basis points. For dual-message debit and prepaid transactions, the remainder of the fraud losses that respondents categorized was evenly split between counterfeit fraud and card-not-present fraud. Fraud losses due to counterfeit fraud for single-message debit transactions was very similar to prepaid card transactions, at 1.67 and 1.73 basis points, respectively. For single-message debit transactions, card-not-present fraud was very low at 0.06 basis points. This low level of fraud was partly driven by the fact that single-message transactions rarely take place online where most card-not-present fraud originates, and partly because fraud losses as a share of transaction value were substantially lower for single-message card-

not-present transactions (8.4 basis points) than for dual-message card-not-present transactions (14.0 basis points).

Exhibit 14: Level and composition of fraud losses as a share of transaction value in 2013, by transaction category



NOTE: bp is basis points.

Although overall fraud losses as a percentage of transaction value did not change much between 2011 and 2013, there were substantial changes in the incidence of fraud, as well as in average losses per fraudulent transaction. Exhibit 15 illustrates that fraud incidence rose between 2011 and 2013 for each transaction type. For both categories of debit card transactions this rise represents a return to fraud incidence levels similar to 2009, following a drop in 2011. This movement contrasts with prepaid card transactions, for which fraud incidence rose by 12.1 percent between 2011 and 2013, following a 22.5 percent rise between 2009 and 2011. Overall, in 2013 fraud incidence for prepaid card transactions remained considerably higher than for single-message debit transactions, but not as high as for dual-message debit transactions.

Exhibit 15: Incidence of fraudulent transactions as a percentage of total transactions, by transaction category

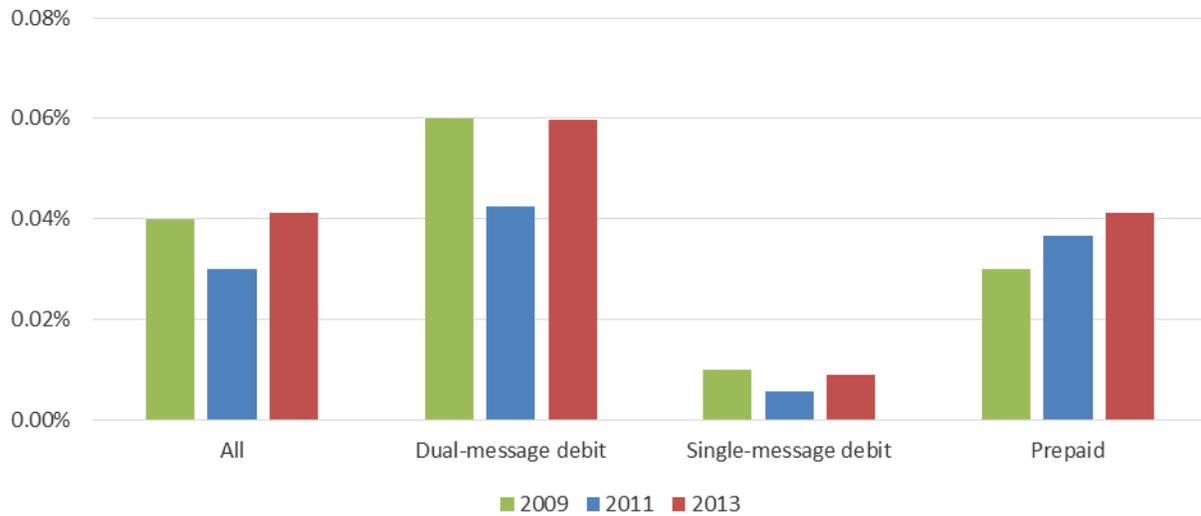
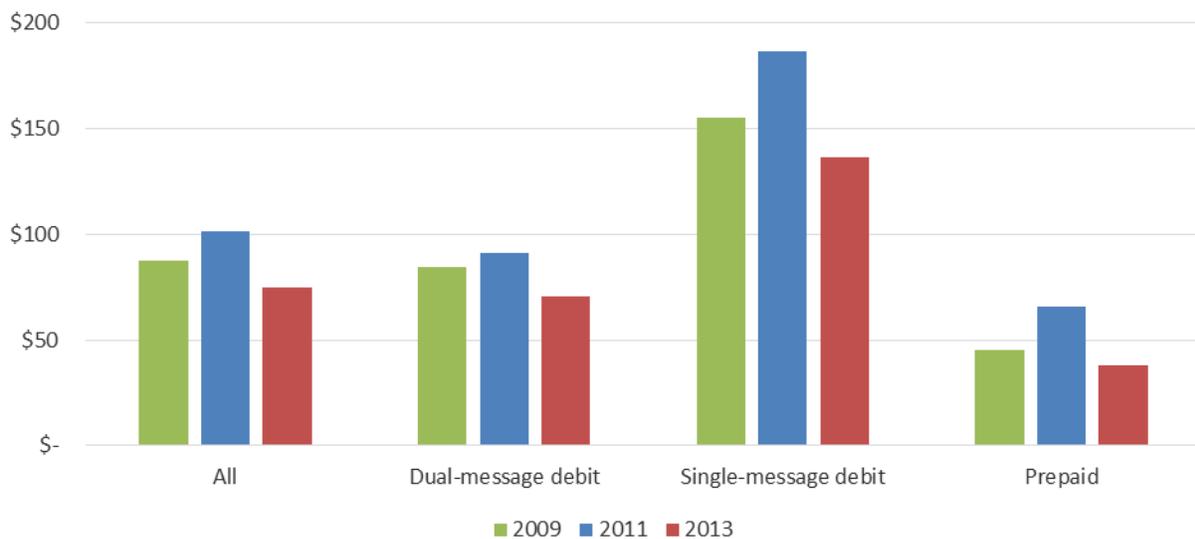


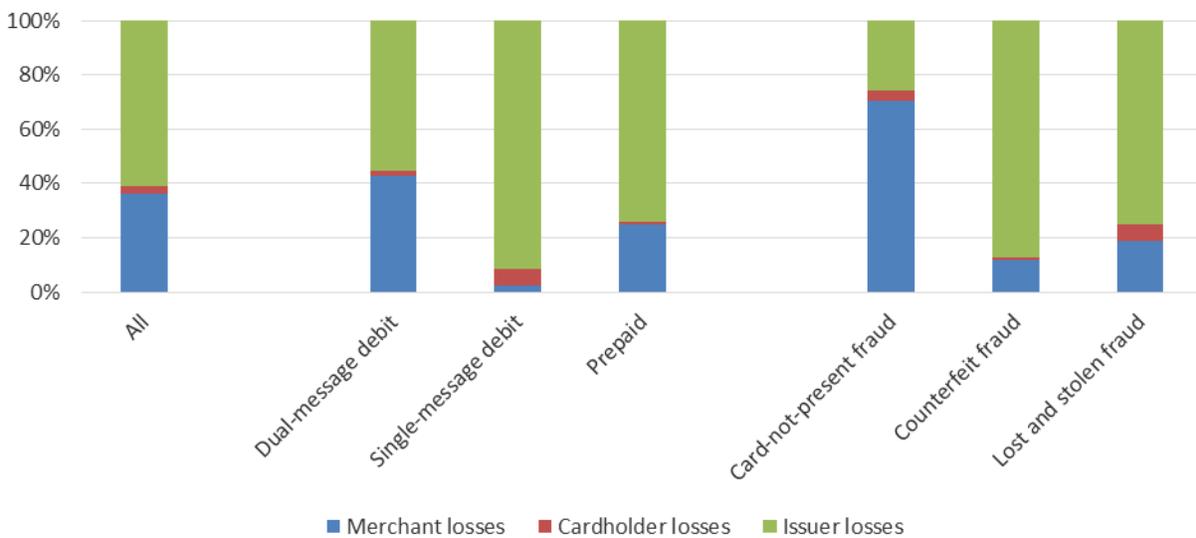
Exhibit 16 shows that the average loss per fraudulent transaction decreased substantially between 2011 and 2013, following an increase between 2009 and 2011. The net result is that average loss per fraudulent transaction decreased between 2009 and 2013 across all transaction categories. Moreover, the fall in average loss per fraudulent transaction explains why, even though incidents of fraud became more common between 2011 and 2013, fraud losses as a share of transaction value increased only slightly over this period.

Exhibit 16: Average loss per fraudulent transaction, by transaction category



In 2013, the majority of fraud losses were absorbed by issuers and merchants (61 percent and 36 percent, respectively); cardholders absorbed only 3 percent of losses (see exhibit 17).²² Although cardholder losses were low across different types of fraud and different types of transactions (between 1 and 6 percent), the percentage of losses covered by merchants and issuers varied greatly. At one extreme, merchants covered only 2 percent of losses incurred on single-message debit transactions, with issuers covering 92 percent; at the other extreme, merchants covered 70 percent of losses on card-not-present transactions, whereas issuers covered only 26 percent. The only category for which a large change was recorded relative to 2011 data was lost and stolen fraud, for which issuers' share of losses rose by 8 percentage points and merchants' share of losses fell by 7 percentage points.

Exhibit 17: Composition of fraud losses in 2013, by transaction category and fraud type



²² The vast majority of all fraud losses were absorbed by issuers, merchants, and cardholders. The data presented on merchant fraud losses assumes that acquirers passed on to merchants virtually all of the fraud losses that issuers charged back to acquirers. Data were not collected on fraud losses absorbed by networks, which are assumed to be negligible.

Issuer costs

As illustrated in exhibit 18, average per transaction ACS costs, excluding issuer fraud losses, have gradually decreased since 2009 for all types of transactions, falling to \$0.044 in 2013.^{23,24} In 2013, costs of processing prepaid card transactions (\$0.103) were twice as high as the costs of processing dual-message debit transactions (\$0.051) and more than four times as high as the costs of processing single-message debit transactions (\$0.024). This relationship, with prepaid card transactions being the most costly, has remained unchanged since 2009.

Exhibit 18: Average ACS costs, excluding issuer fraud losses, by transaction category

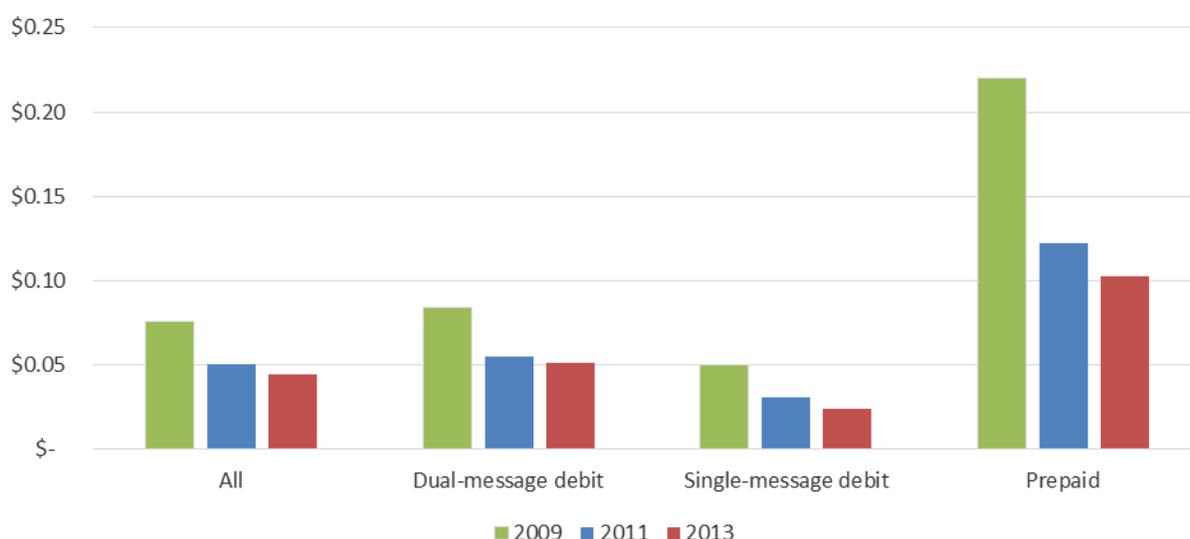


Exhibit 19 shows that although average ACS costs, excluding issuer fraud losses, have fallen between 2011 and 2013, the distribution of ACS costs across covered issuers has become more uneven during the period. This movement is illustrated by the gap between ACS costs for the issuers at the 75th and 25th percentile, which grew from \$0.29 in 2011 to \$0.35 in 2013.

²³ ACS costs include transactions monitoring costs, in-house costs, third-party processing fees, network processing fees, and fraud losses. Fraud losses, which generally result from an issuer's authorization, clearance, or settlement of a particular transaction that later turns out to be fraudulent, are addressed in the previous section of this report and are not included in the issuer ACS costs reported here unless noted otherwise. Issuers were instructed not to include costs related to corporate overhead, account relationships, rewards programs, non-sufficient funds handling, non-sufficient funds losses, cardholder inquiries, card production and delivery, fraud-prevention costs that are not incurred as part of authorization, costs associated with funds loads (or deposits), or costs of account set-up and maintenance. Issuers were instructed to include costs for purchase transactions, chargebacks, and other non-routine transactions.

²⁴ Unless otherwise noted, average ACS costs in this section are calculated on a transaction-weighted basis.

Exhibit 19: Distribution of average ACS costs, excluding issuer fraud losses, across issuers

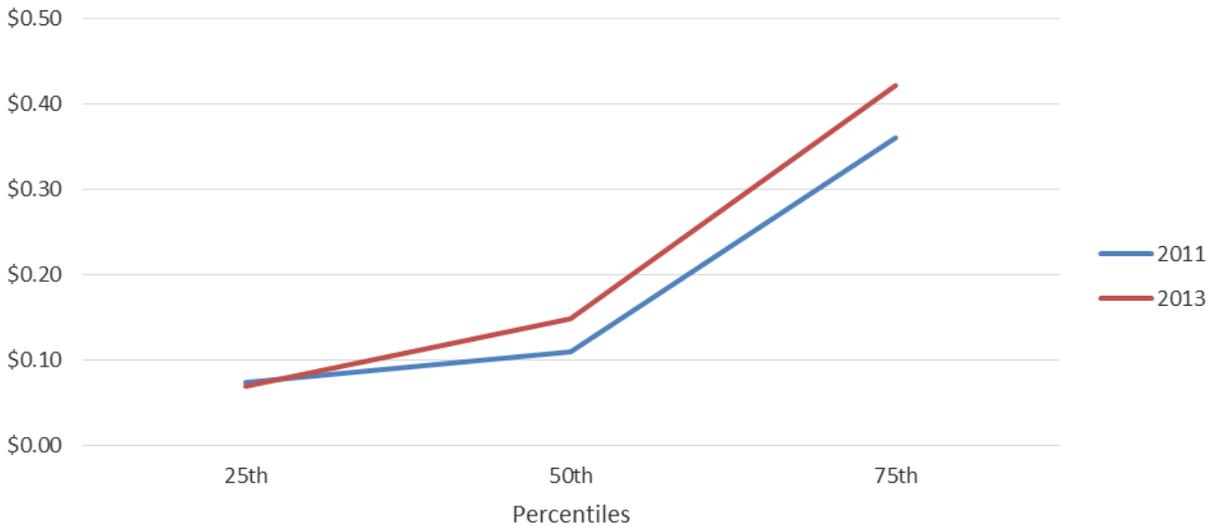
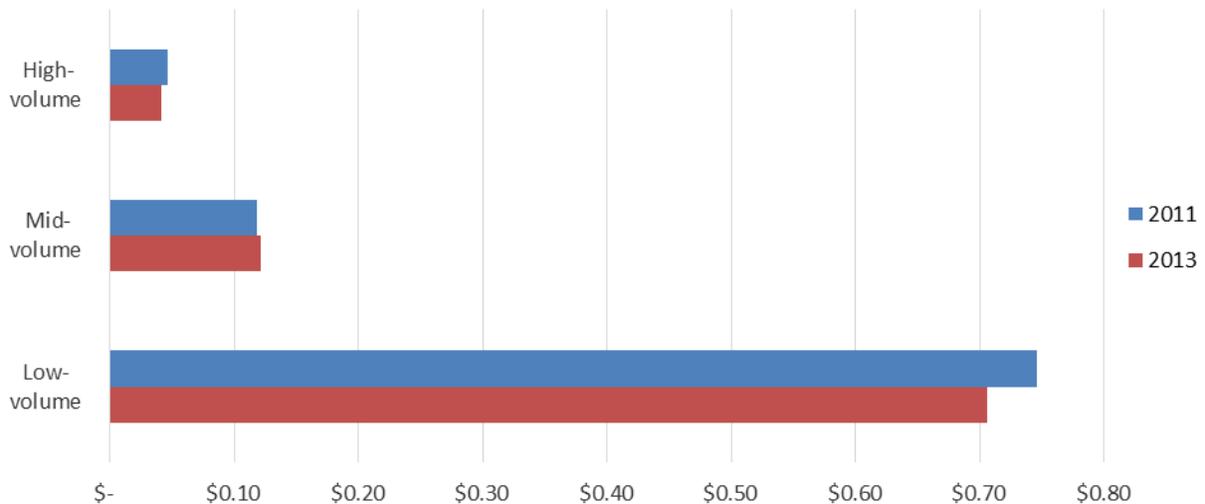


Exhibit 20 illustrates that although average ACS costs, excluding fraud losses, have decreased since 2011 for both high-volume and low-volume issuers, they increased slightly for mid-volume issuers.²⁵ What remained unchanged is that high-volume issuers had substantially lower per-transaction costs compared with low-volume and mid-volume issuers: in 2013, average ACS costs for mid-volume issuers (\$0.122) were almost three times as high as for high-volume issuers (\$0.041), whereas costs for low-volume issuers (\$0.706) were more than 17 times higher.

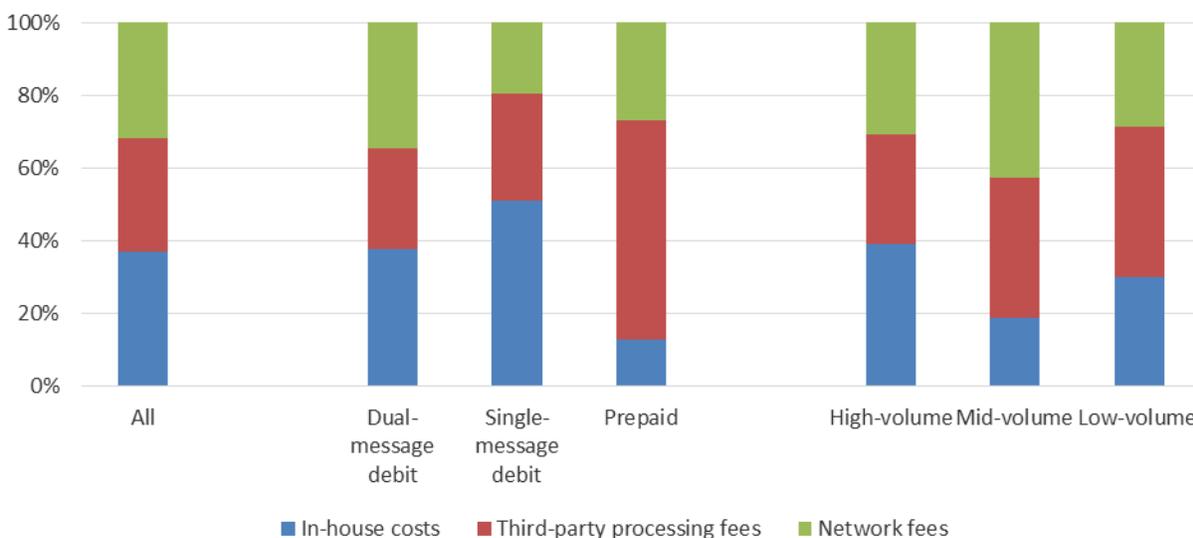
Exhibit 20: Average ACS costs, excluding issuer fraud losses, by issuer size



²⁵ Breakdown by issuer volume is not available for 2009 data.

Exhibit 21 illustrates the breakdown of 2013 ACS costs among three categories distinguished by the survey: in-house costs, third-party processing fees, and network fees.^{26,27} Overall, the split was largely even among the three, with in-house costs accounting for slightly more (37 percent) than third-party processing fees and network fees (31 and 32 percent, respectively). The split, especially between in-house costs and third-party processing fees, varied across different transaction types and issuer sizes. Across transaction types, both dual-message and single-message debit transactions involved a higher percentage of in-house costs compared to prepaid card transactions. Across issuer sizes, high-volume issuers incurred a higher percentage of in-house costs compared to mid-volume and low-volume issuers. These splits have not changed markedly since the data collection began.²⁸

Exhibit 21: Composition of average ACS costs, excluding issuer fraud losses, in 2013, by transaction category and issuer size



NOTE: Breakdown excludes costs of transactions monitoring, which were not allocated to in-house costs and third-party processing fees.

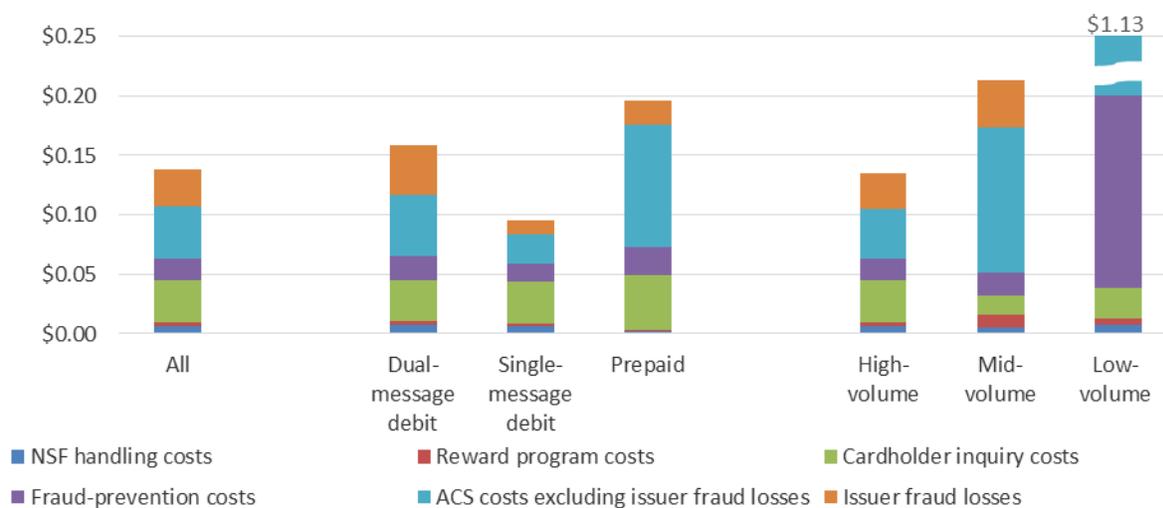
²⁶ In-house costs are ACS costs that are not outsourced to third parties and include costs incurred by the card issuer or its affiliated processor (that is, a processor in the same holding company). Third-party processing fees are fees paid to external service providers for services related to the authorization, clearance, and settlement of debit card transactions that are performed by those service providers on behalf of the debit card issuer. Service providers may include payment card networks or affiliates of payment card networks to the extent that such parties provide optional services related to transaction processing. They do not include other fees charged by a payment card network or an affiliated processor for services that are required for the network processing of transactions.

²⁷ The 2013 DCI survey did not request that transactions monitoring costs be broken out into in-house costs and third-party processing fees. As a result, the breakdown of costs into in-house costs, third-party processing fees, and network fees does not include transactions monitoring costs.

²⁸ The breakdown by issuer size has only been collected since 2011, all other data has been collected since 2009.

Exhibit 22 illustrates how ACS costs, excluding issuer fraud losses, compared with other costs borne by issuers that are directly related to their debit card activities. ACS costs, which averaged \$0.044 in 2013, constituted 32 percent of overall debit card costs, including issuer fraud losses, for an average issuer. At the same time, ACS costs were the most variable of the different cost categories, as seen across transaction types and issuer volume. By comparison, non-sufficient funds handling (NSF), reward program, and cardholder inquiry costs did not vary substantially across the different categories.²⁹ Fraud-prevention costs were also consistent across all categories except low-volume issuers, whose per-transaction fraud-prevention costs were considerably higher than those for high-volume and mid-volume issuers.³⁰

Exhibit 22: Covered issuer costs per transaction in 2013, by transaction category and issuer size³¹



²⁹ Costs associated with cardholder inquiries include costs associated with cardholder communication with a debit card issuer related to specific debit card transactions, such as inquiries about transactions details, errors, and potential fraudulent activity. These do not include inquiries that are not related to specific debit card transactions, such as account balances, rewards programs, credit card transactions, and ATM transactions. Rewards and other incentives costs are incentive payments given to cardholders as a result of particular debit card transactions. Costs associated with non-sufficient funds handling are the costs of handling of events in which an account does not have enough funds to settle an authorized debit card transaction between the time of authorization of that transaction and the settlement of that transaction.

³⁰ Fraud-prevention and data security costs are costs related to activities aimed at identifying and preventing debit card fraud; costs related to the monitoring of the incidence of, reimbursements received for, and losses incurred from debit card fraud; costs related to responding to suspected and realized debit card fraud in order to prevent or limit losses; costs incurred in securing the data processing and communications infrastructure of debit card operations; and costs incurred in the development or improvement of fraud-prevention technologies.

³¹ A substantial portion of low-volume issuers did not submit data on non-ACS costs. Thus, figures for this group of issuers should be analyzed with caution.

Exhibit 23 illustrates how total average per-transaction costs decreased from \$0.18 in 2011 to \$0.14 in 2013, driven by cost decreases in all categories except issuer fraud losses. Reward program costs fell the most, almost 90 percent between 2011 and 2013. Cardholder inquiries and ACS costs also decreased substantially (by 20 and 12 percent, respectively), whereas NSF and fraud-prevention costs fell by 6 percent each.

Exhibit 23: Covered issuer costs per transaction, by type of cost

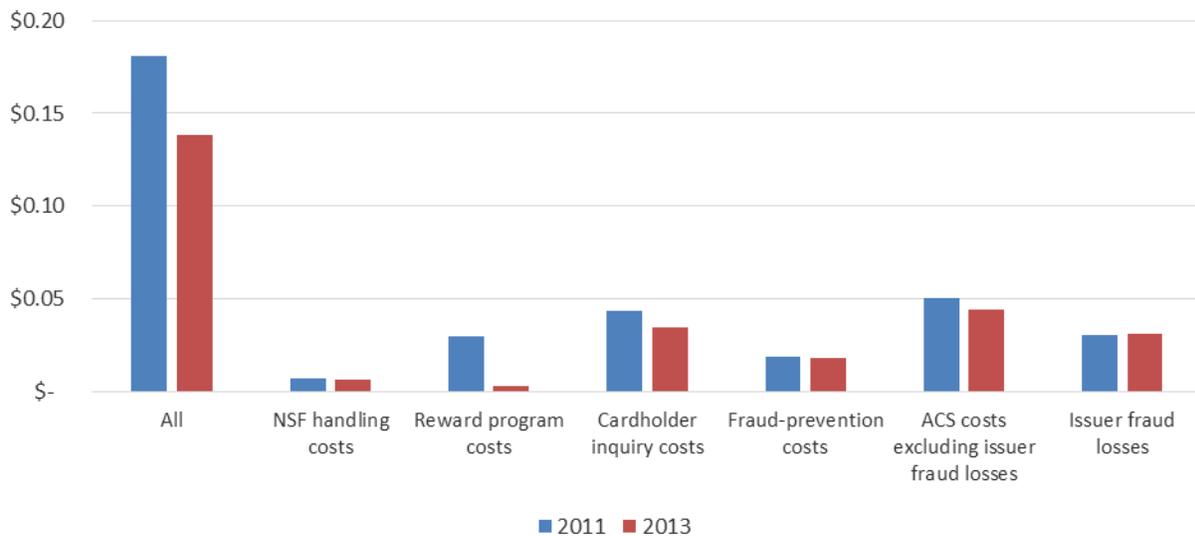


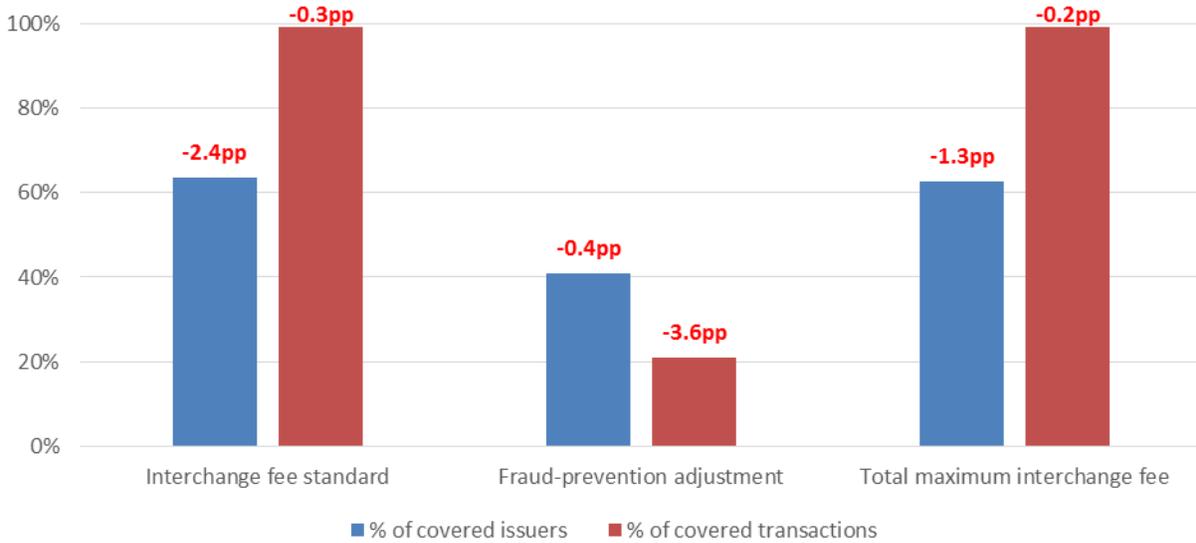
Exhibit 24 shows the percentage of covered issuers for which ACS costs, including issuer fraud losses, were less than or equal to the interchange fee permitted by the interchange fee standard. The percentage of issuers with per-transaction ACS costs, including issuer fraud losses, below the permissible amount was 63.5 percent in 2013, down from 66.0 percent in 2011. The percentage of transactions associated with these issuers was much higher in both years: 99.3 percent in 2013, slightly lower than 99.6 percent in 2011. The difference between these two measures is driven by the fact that issuers for which ACS costs, including fraud losses, were higher than the maximum allowable interchange fee process relatively low transaction volumes.

As exhibit 24 further shows, the percentages of both covered issuers and covered transactions with per-transaction fraud-prevention costs below the 1 cent permitted by the fraud-prevention adjustment were substantially lower. In 2013, 40.8 percent of covered issuers representing 20.9 percent of covered transactions had fraud-prevention costs less than or equal to 1 cent, both of which are slight declines from the values for 2011.³² The differences between these measures and those for the interchange fee standard reflect heterogeneity in fraud-prevention costs across covered issuers and the generally weaker relationship between fraud-prevention costs and issuer size.

³² This calculation includes all covered issuers, but some of these issuers may not have been eligible for the fraud-prevention adjustment.

When combined ACS costs, including issuer fraud losses, and fraud-prevention costs are compared to the total amount allowed by the interchange fee standard plus the fraud-prevention adjustment, 62.5 percent of covered issuers representing 99.3 percent of covered transactions had combined costs lower than the total permissible interchange fee in 2013. Both of these values represent slight declines from 2011.

Exhibit 24: Percentage of covered issuers and transactions with ACS costs, including issuer fraud losses, and fraud-prevention costs in 2013 below the maximums permitted by Regulation II



NOTE: Values reported above the columns represent changes relative to 2011; pp is percentage points.

Tables

Table 1: Purchase transactions

	2013				
	Number (billions)		Value (\$ billions)		Average (\$)
All transactions	53.74		2,070		38.52
Non-prepaid debit card	50.58	94.1%	1,965	94.9%	38.85
Prepaid card	3.16	5.9%	105	5.1%	33.25
<i>Dual-message networks</i>	35.17	65.4%	1,320	63.8%	37.54
Non-prepaid debit card	33.03	93.9%	1,251	94.8%	37.88
Prepaid card	2.13	6.1%	69	5.2%	32.33
<i>Single-message networks</i>	18.57	34.6%	750	36.2%	40.36
Non-prepaid debit card	17.55	94.5%	713	95.2%	40.66
Prepaid card	1.03	5.5%	36	4.8%	35.15

Table 2: Card-present and card-not-present transactions

	2013				
	Number (billions)		Value (\$ billions)		Average (\$)
All transactions	53.74		2,070		38.52
Card-present	46.73	87.0%	1,577	76.2%	33.75
Card-not-present	7.01	13.0%	493	23.8%	70.32
<i>Dual-message networks¹</i>	35.17		1,320		37.54
Card-present	28.40	80.8%	848	64.2%	29.86
Card-not-present	6.77	19.2%	472	35.8%	69.78
<i>Single-message networks¹</i>	18.57		750		40.36
Card-present	18.33	98.7%	729	97.3%	39.77
Card-not-present	0.24	1.3%	21	2.7%	85.31

¹ Prepaid card transactions are included under both dual-message and single-message networks.

Table 3: Covered and exempt debit card transactions

	2013				
	<i>Number (billions)</i>		<i>Value (\$ billions)</i>		<i>Average (\$)</i>
All transactions	53.74		2,070		38.52
Covered transactions	33.69	62.7%	1,314	63.5%	39.00
Non-prepaid	33.41	99.2%	1,307	99.5%	39.11
Prepaid	0.28	0.8%	7	0.5%	25.39
Exempt transactions	20.05	37.3%	756	36.5%	37.70
Non-prepaid	17.17	85.6%	658	87.1%	38.32
Prepaid	2.88	14.4%	98	12.9%	34.02
Covered issuer	1.44	50.0%	47	47.7%	32.48
Exempt issuer	1.44	50.0%	51	52.3%	35.56
<i>Dual-message networks</i>	<i>35.17</i>		<i>1,320</i>		<i>37.54</i>
Covered transactions	21.65	61.6%	831	62.9%	38.37
Non-prepaid	21.41	98.9%	825	99.3%	38.52
Prepaid	0.24	1.1%	6	0.7%	24.82
Exempt transactions	13.52	38.4%	490	37.1%	36.22
Non-prepaid	11.62	86.0%	427	87.1%	36.70
Prepaid	1.90	14.0%	63	12.9%	33.27
Covered issuer	0.96	50.5%	31	48.6%	31.98
Exempt issuer	0.94	49.5%	32	51.4%	34.59
<i>Single-message networks</i>	<i>18.57</i>		<i>750</i>		<i>40.36</i>
Covered transactions	12.04	64.8%	483	64.5%	40.13
Non-prepaid	12.00	99.6%	482	99.7%	40.18
Prepaid	0.05	0.4%	1	0.3%	28.38
Exempt transactions	6.53	35.2%	266	35.5%	40.77
Non-prepaid	5.55	85.0%	231	86.9%	41.71
Prepaid	0.98	15.0%	35	13.1%	35.46
Covered issuer	0.48	49.0%	16	46.2%	33.47
Exempt issuer	0.50	51.0%	19	53.8%	37.38

Table 4: Interchange fee revenue

	2013			
	<i>Interchange fee revenue</i> (\$ billions)		<i>Fee per transaction</i> (\$) ¹	<i>Fee as % of transaction value</i> ¹
All transactions	16.33	-	0.30	0.79%
Non-prepaid debit card	14.99	92%	0.30	0.76%
Prepaid card	1.34	8%	0.42	1.28%
<i>Dual-message networks</i>	<i>11.71</i>	<i>72%</i>	<i>0.33</i>	<i>0.89%</i>
Non-prepaid debit card	10.69	91%	0.32	0.85%
Prepaid card	1.03	9%	0.48	1.49%
<i>Single-message networks</i>	<i>4.62</i>	<i>28%</i>	<i>0.25</i>	<i>0.62%</i>
Non-prepaid debit card	4.31	93%	0.25	0.60%
Prepaid card	0.32	7%	0.31	0.88%

¹ Interchange fee revenue is divided by the number or value of purchase transactions.

Table 5: Interchange fee revenue from covered and exempt debit card transactions

	2013			
	<i>Interchange fee revenue</i> (\$ billions)		<i>Fee per transaction</i> (\$) ¹	<i>Fee as % of transaction value</i> ¹
All transactions	16.33		0.30	0.79%
Covered transactions	7.82	48%	0.23	0.60%
Non-prepaid	7.76	99%	0.23	0.59%
Prepaid	0.06	1%	0.22	0.87%
Exempt transactions	8.51	52%	0.42	1.13%
Non-prepaid	7.23	85%	0.42	1.10%
Prepaid	1.28	15%	0.44	1.31%
Covered issuer	0.63	49%	0.44	1.34%
Exempt issuer	0.65	51%	0.45	1.28%
<i>Dual-message networks</i>	<i>11.71</i>		<i>0.33</i>	<i>0.89%</i>
Covered transactions	5.01	43%	0.23	0.60%
Non-prepaid	4.96	99%	0.23	0.60%
Prepaid	0.05	1%	0.22	0.88%
Exempt transactions	6.70	57%	0.50	1.37%
Non-prepaid	5.73	85%	0.49	1.34%
Prepaid	0.97	15%	0.51	1.54%
Covered issuer	0.48	49%	0.50	1.57%
Exempt issuer	0.49	51%	0.53	1.52%
<i>Single-message networks</i>	<i>4.62</i>		<i>0.25</i>	<i>0.62%</i>
Covered transactions	2.81	61%	0.23	0.58%
Non-prepaid	2.80	100%	0.23	0.58%
Prepaid	0.01	0%	0.24	0.84%
Exempt transactions	1.81	39%	0.28	0.68%
Non-prepaid	1.50	83%	0.27	0.65%
Prepaid	0.31	17%	0.31	0.88%
Covered issuer	0.15	48%	0.30	0.90%
Exempt issuer	0.16	52%	0.32	0.85%

¹ Interchange fee revenue is divided by the number or value of purchase transactions.

Table 6: Payments and incentives paid by networks

	2013			
	<i>Payments and incentives (\$ billions)</i>		<i>Payment per transaction (\$)¹</i>	<i>Payment as % of transaction value¹</i>
All transactions	1.25		0.023	0.06%
Paid to merchants/acquirers	0.45	36%	0.008	0.02%
Paid to issuers	0.81	64%	0.015	0.04%
<i>Dual-message networks</i>	<i>1.02</i>	<i>82%</i>	<i>0.029</i>	<i>0.08%</i>
Paid to merchants/acquirers	0.29	28%	0.008	0.02%
Paid to issuers	0.73	72%	0.021	0.06%
<i>Single-message networks</i>	<i>0.23</i>	<i>18%</i>	<i>0.012</i>	<i>0.03%</i>
Paid to merchants/acquirers	0.16	69%	0.009	0.02%
Paid to issuers	0.07	31%	0.004	0.01%

¹ Payments and incentives are divided by the number or value of purchase transactions.

Table 7: Payments and incentives paid to issuers by networks

	2013			
	<i>Payments and incentives (\$ billions)</i>		<i>Payment per transaction (\$)¹</i>	<i>Payment as % of transaction value¹</i>
All transactions	0.81		0.015	0.04%
Covered issuers	0.50	62%	0.014	0.04%
Exempt issuers	0.31	38%	0.017	0.04%
<i>Dual-message networks</i>	<i>0.73</i>	<i>91%</i>	<i>0.021</i>	<i>0.06%</i>
Covered issuers	0.47	64%	0.021	0.05%
Exempt issuers	0.27	36%	0.021	0.06%
<i>Single-message networks</i>	<i>0.07</i>	<i>9%</i>	<i>0.004</i>	<i>0.01%</i>
Covered issuers	0.03	43%	0.002	0.01%
Exempt issuers	0.04	57%	0.007	0.02%

¹ Payments and incentives are divided by the number or value of purchase transactions.

Table 8: Network fees

	2013			
	<i>Network fee payments (\$ billions)</i>		<i>Fee per transaction (\$)¹</i>	<i>Fee as % of transaction value¹</i>
All transactions	5.48		0.102	0.26%
Paid by acquirers	3.13	57%	0.058	0.15%
Paid by issuers	2.35	43%	0.044	0.11%
<i>Dual-message networks</i>	<i>4.50</i>	<i>82%</i>	<i>0.128</i>	<i>0.34%</i>
Paid by acquirers	2.45	55%	0.070	0.19%
Paid by issuers	2.04	45%	0.058	0.15%
<i>Single-message networks</i>	<i>0.98</i>	<i>18%</i>	<i>0.053</i>	<i>0.13%</i>
Paid by acquirers	0.67	69%	0.036	0.09%
Paid by issuers	0.31	31%	0.017	0.04%

¹ Network fees are divided by the number or value of purchase transactions.

Table 9: Network fees paid by issuers

	2013			
	<i>Network fee payments (\$ billions)</i>		<i>Fee per transaction (\$)¹</i>	<i>Fee as % of transaction value¹</i>
All transactions	2.35		0.044	0.11%
Covered issuers	0.93	40%	0.026	0.07%
Exempt issuers	1.42	60%	0.076	0.20%
<i>Dual-message networks</i>	<i>2.04</i>	<i>87%</i>	<i>0.058</i>	<i>0.15%</i>
Covered issuers	0.86	42%	0.038	0.10%
Exempt issuers	1.18	58%	0.094	0.26%
<i>Single-message networks</i>	<i>0.31</i>	<i>13%</i>	<i>0.017</i>	<i>0.04%</i>
Covered issuers	0.07	23%	0.006	0.01%
Exempt issuers	0.24	77%	0.039	0.10%

¹ Network fees are divided by the number or value of purchase transactions.

Table 10: Fraudulent debit card activity reported by covered issuers

	2013	
	Fraud as % of purchase transactions ¹	Average loss per fraudulent transaction (\$) ²
All transactions³	0.041%	75
Card-not-present fraud	0.022%	56
Counterfeit fraud	0.012%	112
Lost and stolen fraud	0.006%	71
Other fraud	0.002%	68
<i>Dual-message debit transactions</i>	<i>0.060%</i>	<i>71</i>
Card-not-present fraud	0.035%	56
Counterfeit fraud	0.017%	102
Lost and stolen fraud	0.007%	64
Other fraud	0.001%	123
<i>Single-message debit transactions</i>	<i>0.009%</i>	<i>136</i>
Card-not-present fraud	0.000%	94
Counterfeit fraud	0.003%	201
Lost and stolen fraud	0.003%	99
Other fraud	0.002%	88
<i>Prepaid transactions</i>	<i>0.041%</i>	<i>38</i>
Card-not-present fraud	0.016%	37
Counterfeit fraud	0.006%	81
Lost and stolen fraud	0.007%	37
Other fraud	0.013%	24

¹ Number of fraudulent transactions divided by the total number of purchase transactions.

² Total fraud losses to all parties (merchants, cardholders, and issuers) divided by the number of fraudulent transactions.

³ Only fraudulent activity reported by covered issuers is included. Prepaid fraud reported separately from single-message and dual-message debit fraud.

Table 11: 2013 fraud losses reported by covered issuers

	<i>All fraud¹</i>			<i>Card-not-present fraud²</i>			<i>Counterfeit fraud</i>			<i>Lost and stolen fraud</i>		
	<i>Loss per transaction (\$)³</i>	<i>Loss as share of transaction value (bp)⁴</i>		<i>Loss per transaction (\$)³</i>	<i>Loss as share of transaction value (bp)⁴</i>		<i>Loss per transaction (\$)³</i>	<i>Loss as share of transaction value (bp)⁴</i>		<i>Loss per transaction (\$)³</i>	<i>Loss as share of transaction value (bp)⁴</i>	
All transactions⁵	0.031	8.02		0.012	3.14		0.014	3.54		0.004	1.00	
Merchant losses	0.011	2.90	36%	0.009	2.21	70%	0.002	0.42	12%	<0.001	0.19	19%
Cardholder losses	<0.001	0.24	3%	<0.001	0.12	4%	<0.001	0.03	1%	<0.001	0.06	6%
Issuer losses	0.019	4.88	61%	0.003	0.81	26%	0.012	3.08	87%	0.003	0.75	75%
<i>Dual-message debit transactions</i>	<i>0.043</i>	<i>11.14</i>		<i>0.020</i>	<i>5.13</i>		<i>0.018</i>	<i>4.69</i>		<i>0.004</i>	<i>1.12</i>	
Merchant losses	0.018	4.75	43%	0.014	3.66	71%	0.003	0.69	15%	0.001	0.30	27%
Cardholder losses	<0.001	0.24	2%	<0.001	0.17	3%	<0.001	0.04	1%	<0.001	0.02	2%
Issuer losses	0.024	6.14	55%	0.005	1.30	25%	0.015	3.96	84%	0.003	0.79	71%
<i>Single-message debit transactions</i>	<i>0.012</i>	<i>2.98</i>		<i><0.001</i>	<i>0.06</i>		<i>0.007</i>	<i>1.67</i>		<i>0.003</i>	<i>0.79</i>	
Merchant losses	<0.001	0.07	2%	<0.001	0.02	31%	<0.001	0.01	1%	<0.001	0.01	1%
Cardholder losses	<0.001	0.18	6%	<0.001	<0.01	0%	<0.001	0.02	1%	<0.001	0.11	14%
Issuer losses	0.011	2.73	92%	<0.001	0.03	61%	0.007	1.64	98%	0.003	0.67	84%
<i>Prepaid transactions</i>	<i>0.020</i>	<i>7.14</i>		<i>0.006</i>	<i>2.26</i>		<i>0.005</i>	<i>1.73</i>		<i>0.003</i>	<i>1.12</i>	
Merchant losses	0.005	1.79	25%	0.004	1.37	61%	<0.001	0.26	15%	<0.001	0.11	9%
Cardholder losses	<0.001	0.07	1%	<0.001	0.01	0%	<0.001	0.01	1%	<0.001	0.01	1%
Issuer losses	0.015	5.28	74%	0.002	0.88	39%	0.004	1.46	84%	0.003	1.00	89%

¹ Card-not-present, counterfeit, and lost and stolen fraud losses do not necessarily sum to all fraud losses. Some fraud losses could not be categorized by issuers into the categories above but are still included under all fraud losses.

² Card-not-present fraud losses may also be reported in another second category.

³ Fraud losses divided by the number of purchase transactions (both fraudulent and non-fraudulent).

⁴ Fraud losses divided by the value of purchase transactions (both fraudulent and non-fraudulent).

⁵ Only fraud losses reported by covered issuers are included.

Table 12: Covered issuers by 2013 volume

	<i>Number of covered issuers</i>		<i>% of transactions¹</i>	<i>% of transaction value¹</i>	<i>Average transaction value (\$)²</i>
All covered issuers	131				38.85
High-volume issuers (more than 100 million transactions)	33	25%	94.81%	94.20%	38.60
Mid-volume issuers (1-100 million transactions)	63	48%	5.17%	5.77%	43.32
Low-volume issuers (less than 1 million transactions)	35	27%	0.02%	0.04%	76.77

¹ The percentage of the total number or value of covered issuer transactions. Covered issuers represent about 65 percent of all debit card transactions.

² Average transaction values in this table are calculated from the debit card issuer survey. Average transaction values reported in Tables 1-3 are calculated from the payment card network survey. The 2013 average transaction value for all covered issuers calculated from the payment card network survey data is \$38.73.

Table 13: Average authorization, clearing, and settlement (ACS) costs, excluding issuer fraud losses, per transaction (\$)

	2013							
	All covered issuers		High-volume issuers		Mid-volume issuers		Low-volume issuers	
All transactions¹	0.044		0.041		0.122		0.706	
In-house costs	0.015	37%	0.015	39%	0.021	19%	0.189	30%
Third-party processing fees	0.013	31%	0.011	30%	0.042	39%	0.257	41%
Network fees	0.013	32%	0.012	31%	0.046	42%	0.180	29%
<i>Dual-message debit transactions¹</i>	<i>0.051</i>		<i>0.048</i>		<i>0.135</i>		<i>0.911</i>	
In-house costs	0.018	38%	0.017	39%	0.024	20%	0.234	27%
Third-party processing fees	0.013	28%	0.012	26%	0.049	40%	0.426	50%
Network fees	0.016	35%	0.015	34%	0.048	40%	0.190	22%
<i>Single-message debit transactions¹</i>	<i>0.024</i>		<i>0.023</i>		<i>0.070</i>		<i>1.844</i>	
In-house costs	0.011	51%	0.011	54%	0.013	20%	0.290	17%
Third-party processing fees	0.006	29%	0.006	29%	0.022	35%	0.723	43%
Network fees	0.004	19%	0.004	17%	0.028	45%	0.669	40%
<i>Prepaid transactions^{1,2}</i>	<i>0.103</i>		<i>0.102</i>		<i>0.420</i>			
In-house costs	0.012	13%	0.012	13%	0.014	3%		
Third-party processing fees	0.056	60%	0.055	60%	0.358	86%		
Network fees	0.025	27%	0.025	27%	0.047	11%		

¹ Total ACS costs include transactions monitoring costs. However, transactions monitoring costs are not included in the breakdown into in-house costs and third-party processing fees.

² Prepaid figures for low-volume issuers are not reported because of the small number of respondents in this category.

Table 14: Covered issuer costs per transaction (\$) and fraud losses as share of transaction value (bp)

	All covered issuers					High-volume issuers					Mid-volume issuers					Low-volume issuers				
	Transaction-weighted average	Issuer-weighted average	Issuer percentiles			Transaction-weighted average	Issuer-weighted average	Issuer percentiles			Transaction-weighted average	Issuer-weighted average	Issuer percentiles			Transaction-weighted average	Issuer-weighted average	Issuer percentiles		
			25 th	50 th	75 th			25 th	50 th	75 th			25 th	50 th	75 th			25 th	50 th	75 th
All transactions																				
ACS costs, excluding fraud losses ¹	0.044	3.426	0.069	0.149	0.422	0.041	0.062	0.039	0.052	0.076	0.122	0.254	0.079	0.149	0.239	0.706	12.194	0.443	1.253	3.469
Fraud-prevention costs ²	0.018	0.274	0.005	0.014	0.046	0.018	0.015	0.005	0.010	0.020	0.019	0.025	0.006	0.014	0.030	0.161	1.086	0.007	0.110	0.486
Cardholder inquiry costs ³	0.035	0.080	0.003	0.015	0.042	0.036	0.024	0.010	0.022	0.039	0.017	0.041	0.005	0.013	0.037	0.026	0.229	-	0.003	0.073
Reward program costs	0.003	0.013	-	-	<0.001	0.003	0.003	-	0.001	0.004	0.010	0.017	-	-	0.000	0.005	0.017	-	-	-
NSF handling costs ⁴	0.007	0.004	-	<0.001	0.004	0.007	0.006	0.001	0.004	0.008	0.006	0.003	-	<0.001	0.003	0.007	0.002	-	-	-
Issuer fraud losses	0.031	0.136	0.021	0.037	0.094	0.030	0.032	0.021	0.029	0.039	0.040	0.058	0.023	0.037	0.080	0.221	0.372	0.011	0.095	0.323
<i>Dual-message debit transactions</i>																				
ACS costs, excluding fraud losses ¹	0.051	2.905	0.061	0.106	0.195	0.048	0.078	0.042	0.070	0.093	0.135	0.188	0.080	0.157	0.201	0.911	27.101	0.577	1.764	13.388
Fraud-prevention costs ²	0.020	0.093	0.007	0.014	0.041	0.020	0.018	0.006	0.012	0.024	0.026	0.030	0.008	0.016	0.033	0.098	0.669	0.071	0.104	0.984
Cardholder inquiry costs ³	0.035	0.031	0.004	0.016	0.041	0.035	0.026	0.010	0.023	0.041	0.016	0.024	0.004	0.013	0.023	0.029	0.072	-	0.002	0.053
Reward program costs	0.003	0.007	-	-	<0.001	0.003	0.003	-	0.000	0.004	0.013	0.012	-	-	0.000	-	-	-	-	-
NSF handling costs ⁴	0.007	0.004	-	<0.001	0.006	0.007	0.007	0.002	0.005	0.010	0.007	0.003	-	-	0.002	-	-	-	-	-
Issuer fraud losses	0.042	0.074	0.028	0.043	0.092	0.042	0.045	0.033	0.040	0.053	0.053	0.078	0.031	0.059	0.111	0.191	0.121	-	0.048	0.218
<i>Single-message debit transactions</i>																				
ACS costs, excluding fraud losses ¹	0.024	6.771	0.034	0.062	0.153	0.023	0.042	0.017	0.036	0.056	0.070	0.142	0.040	0.075	0.149	1.844	49.234	1.848	2.495	17.373
Fraud-prevention costs ²	0.015	0.301	0.005	0.012	0.034	0.015	0.015	0.004	0.011	0.018	0.014	0.018	0.005	0.010	0.024	0.111	2.070	0.048	0.156	0.511
Cardholder inquiry costs ³	0.036	0.096	0.004	0.016	0.040	0.036	0.024	0.009	0.019	0.040	0.018	0.026	0.005	0.013	0.029	0.072	0.432	-	-	0.161
Reward program costs	0.002	0.007	-	-	-	0.002	0.002	-	-	0.001	0.003	0.004	-	-	-	0.004	0.024	-	-	-
NSF handling costs ⁴	0.007	0.003	-	-	0.003	0.007	0.007	0.001	0.003	0.009	0.003	0.002	-	-	0.002	-	-	-	-	-
Issuer fraud losses	0.012	0.190	0.002	0.012	0.046	0.012	0.014	0.004	0.009	0.015	0.018	0.060	0.004	0.018	0.065	0.122	0.822	-	0.013	0.172
<i>Prepaid transactions⁵</i>																				
ACS costs, excluding fraud losses ¹	0.103	0.395	0.092	0.168	0.310	0.102	0.251	0.093	0.166	0.278	0.420	0.561	0.052	0.246	0.412					
Fraud-prevention costs ²	0.023	0.540	<0.001	0.005	0.024	0.023	0.017	0.001	0.005	0.024	0.007	0.005	-	<0.001	0.002					
Cardholder inquiry costs ³	0.047	0.139	<0.001	0.051	0.190	0.047	0.124	0.008	0.062	0.195	0.002	0.057	-	<0.001	0.092					
Reward program costs	0.001	<0.001	-	-	-	0.001	<0.001	-	-	-	-	-	-	-	-					
NSF handling costs ⁴	0.002	0.004	-	-	-	0.002	0.006	-	-	0.002	-	-	-	-	-					
Issuer fraud losses	0.020	0.020	0.006	0.017	0.028	0.020	0.023	0.010	0.018	0.029	0.012	0.019	<0.001	0.017	0.028					
Covered issuer fraud losses (bp)⁶	4.88	11.24	3.03	5.09	8.92	4.76	4.76	3.26	4.10	5.41	7.65	7.92	3.74	5.60	10.63	18.95	23.14	<0.01	6.22	25.88
<i>Dual-message</i>	6.14	8.85	3.79	6.45	11.98	5.98	6.41	3.98	5.60	6.82	10.89	10.74	5.05	8.65	13.82	10.50	8.78	<0.01	2.71	8.92
<i>Single-message</i>	2.73	10.72	0.39	1.88	5.20	2.70	2.56	0.72	1.92	2.97	3.84	8.11	0.43	3.00	7.05	14.12	30.32	<0.01	0.30	9.10
<i>Prepaid⁶</i>	5.28	4.24	0.11	2.80	5.20	5.31	5.24	2.26	3.48	5.25	3.69	3.27	<0.01	0.14	4.31					

¹ Authorization, clearing, and settlement costs include transactions monitoring costs and exclude issuer fraud losses, which are reported separately. The transaction-weighted average for ACS costs excludes covered issuers that could not allocate among in-house, third-party, and network costs. The issuer-weighted average and issuer percentiles include all responses.

² Fraud-prevention costs include fraud-related cardholder inquiry costs and exclude transactions monitoring costs, which are counted as part of ACS costs.

³ Cardholder inquiry costs exclude fraud-related cardholder inquiry costs, which are counted as part of fraud-prevention costs.

⁴ Non-sufficient funds (NSF) handling costs.

⁵ Prepaid figures for low-volume issuers are not reported because of the small number of respondents in this category.

⁶ Covered issuer fraud losses for all transactions include covered issuers that could not allocate fraud losses among dual-message debit, single-message debit, and prepaid transactions.

Table 15: Covered issuers with costs/losses below the levels permitted by the interchange fee standard and fraud-prevention adjustment

	2011		2013	
	% of covered issuers ¹	% of transactions represented ²	% of covered issuers ¹	% of transactions represented ²
All covered issuers				
Total maximum interchange fee ³	63.8%	99.5%	62.5%	99.3%
Interchange fee standard ⁴	66.0%	99.6%	63.5%	99.3%
Fraud-prevention adjustment ⁵	41.2%	24.5%	40.8%	20.9%
<i>High-volume issuers</i>				
Total maximum interchange fee ³	100.0%	100.0%	100.0%	100.0%
Interchange fee standard ⁴	100.0%	100.0%	100.0%	100.0%
Fraud-prevention adjustment ⁵	44.8%	22.5%	48.2%	19.4%
<i>Mid-volume issuers</i>				
Total maximum interchange fee ³	75.6%	90.9%	65.1%	85.5%
Interchange fee standard ⁴	78.0%	92.7%	65.1%	85.5%
Fraud-prevention adjustment ⁵	52.2%	59.8%	42.3%	56.1%
<i>Low-volume issuers</i>				
Total maximum interchange fee ³	0.0%	0.0%	4.5%	9.1%
Interchange fee standard ⁴	4.0%	16.4%	9.1%	9.1%
Fraud-prevention adjustment ⁵	19.9%	36.1%	26.4%	33.0%

¹ Percentage of covered issuers in the relevant category with average ACS costs, including issuer fraud losses, and fraud-prevention costs below the level permitted by the interchange fee standard and the fraud-prevention adjustment. All covered issuers are included, but some of these issuers may not have been eligible for the fraud-prevention adjustment.

² Percentage of purchase transactions represented by covered issuers in the relevant category with average ACS costs, including issuer fraud losses, and fraud-prevention costs below the level permitted by the interchange fee standard and the fraud-prevention adjustment. All covered issuer transactions are included although certain prepaid transactions were exempt from the interchange fee standard.

³ Average ACS costs, including issuer fraud losses, plus fraud-prevention costs per transaction of 22 cents plus 5 basis points of the issuer's average transaction value or less.

⁴ Average ACS costs, including issuer fraud losses, per transaction of 21 cents plus 5 basis points of the issuer's average transaction value or less.

⁵ Average fraud-prevention costs per transaction of 1 cent per transaction or less.