The Federal Reserve Payments Study 2016: Recent Developments in Consumer and Business Payment Choices

A Federal Reserve System publication

The 2016 *Federal Reserve Payments Study* (2016 study) is the sixth in a series of triennial studies conducted since 2001 by the Federal Reserve System to estimate aggregate trends in noncash payments in the United States using data collected from surveys of depository institutions, payment networks, issuers, and processors.[1] The 2016 study covers the total number and value of all noncash payments estimated to have been made in 2015 in the United States by consumers and businesses. Businesses are defined in the study to include for-profit and not-for-profit, private enterprises, as well as federal, state, and local government agencies.[2]

The data that accompany this brief supplement the initial release of data in December 2016 with more details for 2015 on core noncash payment types, allocations of checks written by counterparty and purpose, and information about emerging and innovative payment initiation services and payment methods.[3] This brief highlights key details revealed by the new data, including (1) differences between consumer and business payment choices in 2015 and changes over the 15-year period since 2000; (2) the adoption and intensity of use of different types of general-purpose payment cards in 2015, along with more recent changes since 2012; and (3) the growth in selected alternative payment initiation methods and services, such as payments initiated via a mobile device (i.e., mobile wallet), payments through specialized services for person-to-person payments, and the use of online (or e-commerce) payment authentication services to help verify the payer and secure the payment information.

Key Findings

- Since 2000, consumers and businesses have substantially changed their payment choices, with check payments primarily being replaced with card payments and electronic transfers via the automated clearinghouse (ACH) system. In 2015, checks written accounted for 13.4 percent of noncash payments and 15.4 percent of their value, compared with 57.8 percent of noncash payments and 66.7 percent of their value in 2000.
- In 2015, households wrote 7.1 checks per month, on average, 36.9 percent of the 19.3 checks they wrote per month in 2000. During the same period, total noncash payments per household expanded. In 2015, households made 78.6 noncash payments per month, on average, about 94.7 percent more than the 40.3 noncash payments they made per month in 2000.

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1 This brief was produced by Geoffrey R. Gerdes, Jonathan Hamburg, and Xuemei (May) Liu of the Board of Governors of the Federal Reserve System. The authors wish to thank Daniel Nikolic for excellent research assistance. The authors also wish to acknowledge the joint collaborative work effort of the 2016 study team members from the Federal Reserve Bank of Atlanta—specifically, the Retail Payments Risk Forum and the Retail Payments Office—staff from Blueflame Consulting, LLC, of Melrose, Mass., and staff from the Global Insights office of McKinsey and Co. The data collection and research discussed in this brief are sponsored by the Federal Reserve System.

2 Although government entities often behave differently than private businesses, most survey questions asked respondents to include government payments in business payments. Private businesses and government entities are believed to exhibit distinctly different payments behavior compared to consumers. The Federal Reserve Banks process and can distinguish payments conducted by the U.S. Treasury and many federal agencies, but a discussion of such payments is out of the scope of this brief.

3 See Board of Governors of the Federal Reserve System and Federal Reserve System, *The Federal Reserve Payments Study 2016* (Washington: Board of Governors, December 2016), www.federalreserve.gov/newsevents/press/other/2016-payments-study-20161222.pdf.

- In 2015, businesses wrote 24.1 checks per month, on average, about 36.5 percent of the 66.0 checks they wrote per month in 2000. Businesses also made 29.8 ACH transfers per month, on average, in 2015, 222.0 percent of the 13.4 ACH payments they made per month in 2000. In 2015, businesses made 73.6 noncash payments per month, on average, 92.6 percent of the 79.5 noncash payments they made per month in 2000. While total noncash payments per business fell somewhat, the combined value of business ACH transfers and business checks written reached $148.54 trillion in 2015, which alone was more than double the real value of *total* ACH transfers and checks written in 2000 ($73.78 trillion). In 2015, businesses made about 19.7 card payments per month, on average. The total value of business card payments was quite small, however, relative to other business payment types.
- The aggregate ranking in 2015 of the number of payments by payment type differed substantially between consumers and businesses. The top four consumer payment types were non-prepaid debit cards, general-purpose credit cards, checks, and ACH debit transfers.[4] In contrast, the top four business payment types were ACH credit transfers, checks, general-purpose credit cards, and non-prepaid debit cards.
- Payments made with general-purpose credit cards and with non-prepaid debit cards each grew faster than other payment types from 2012 to 2015, in terms of both percentage growth and growth by number. Despite this rapid growth, there was relatively little change in the number of payments per active card—that is, per card with at least one purchase per month—during the same period. For consumer non-prepaid debit cards, the average number of payments per active card rose slightly, from 21.9 payments per month in 2012 to 22.8 in 2015. For consumer general-purpose credit cards, the average number of payments per active card fell slightly, from 10.1 payments per month in 2012 to 8.6 in 2015. There were about 14.9 and 15.2 payments per month per active business general-purpose credit and non-prepaid debit card, respectively, in 2015. Business credit card payments were down from 18.3 payments per active card in 2012, while business payments per active non-prepaid debit card were relatively flat.
- New data on consumer general-purpose credit card spending show that 60.4 percent of all accounts (and 76.1 percent of all balances) included at least some debt revolving between statement periods, while the remaining 39.6 percent of all accounts (and 23.9 percent of all balances) were being paid in full at the end of each month, or had no current spending, on average, across the months in 2015.
- Growth in payments using alternative payment services and methods was high from 2012 to 2015. Compared to the total number and value of noncash payments, however, the total number and value of payments using these service and methods remained low.

The Changing Payments Landscape

Taken together, prepaid and non-prepaid debit cards, credit cards, ACH credit and debit transfers, and checks compose a core set of noncash payment types commonly used today by consumers and businesses in the United States. These core noncash payment types are used both in traditional ways, such as in-person purchases and payroll deposits, and in relatively new ways, such as mobile and e-commerce payments.

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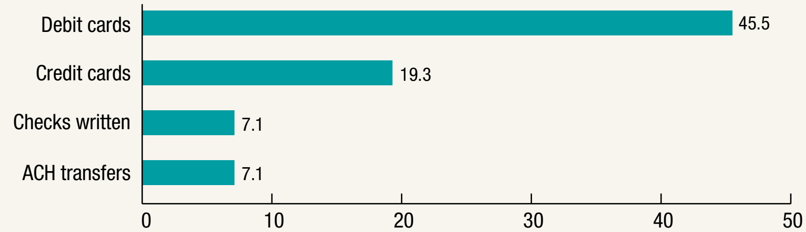
[4] Consumers wrote more checks than they initiated ACH debit transfers. By agreement, some of those checks were converted to ACH debit transfers by the payee, which were then cleared and settled through the ACH system instead of the check system. In 2015, about 2.1 billion of these checks were converted to ACH debit transfers, more than enough for the number of consumer ACH debit transfers to exceed the number of consumer checks paid where checks were cleared and settled, through the check system.

Figure 1. Number of consumer noncash payments by type, per household, per month, 2015



Note: ACH is automated clearinghouse. Debit card includes non-prepaid debit, general-purpose prepaid, and private-label prepaid (including electronic benefits transfers). Credit card includes general purpose and private label.

Since the first version of the triennial study in 2001, the Federal Reserve has been tracking the use of checks and other noncash payments, with a particular focus on checks. Over this 15-year period, cards, ACH payments, and alternative payments that primarily clear and settle through card and ACH networks have collectively overtaken checks' former dominance of noncash payments in the United States by both number and value.[5] As a consequence, the focus of the triennial study has expanded to include more details on cards and ACH payments, as well as alternative payments.

Since 2000, both the number and value of noncash payments have exhibited significant growth. By number, noncash payments grew from 72.4 billion payments in 2000 to 144.1 billion in 2015, for a growth rate of 4.7 percent per year. By value, noncash payments grew from \$75.87 trillion in 2000 to \$177.85 trillion in 2015 (both in 2015 dollars), for a real growth rate of 5.8 percent per year.[6]

To understand the payment choices that underlie this growth, it is helpful to compare the growth and changing composition of consumer payments and business payments separately.[7] Consumer noncash payments in 2015 are estimated to have totaled 117.5 billion transactions with a value of \$28.18 trillion. To gain perspective on changes over time, data on the total number of consumer transactions can be restated on a basis of the number per household per month, corresponding to the average number of monthly payments for households. In 2015, consumers wrote 7.1 checks per household per month and made 45.0 debit card payments, 19.3 credit card payments, and 7.1 ACH payments (figure 1). In 2000, consumers wrote 19.3 checks per household per month and made 6.6 debit card payments, 12.4 credit card payments, and 2.0 ACH payments. Thus, over the 15-year period from 2000 to 2015, consumer checks per household per month declined by 12.2 checks (6.4 percent per

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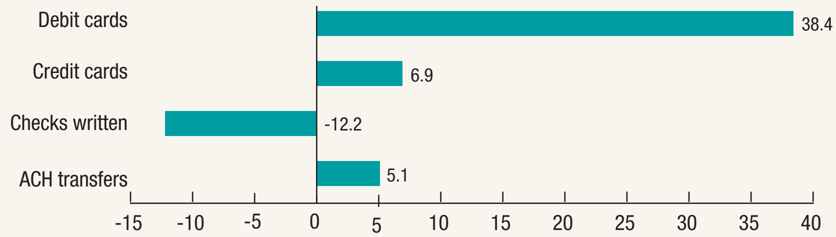
5 The data and analysis in this brief do not include large-value funds transfers over interbank wire systems. Wire transfers represent a relatively small number of payments that are used in some commercial transactions and many high-value financial transactions.

6 For a discussion of consumer and business payments in 2000, see Geoffrey R. Gerdes and Jack K. Walton II, "The Use of Checks and Other Noncash Payment Instruments in the United States," *Federal ReserveBulletin* 88 (August 2002), 360–74, www.federalreserve.gov/pubs/bulletin/2002/0802_2nd.pdf. While some credit and debit card payments were made by businesses in 2000, this analysis follows the authors' assumptions that, in 2000, all debit and credit card payments were made by consumers. Some data reported in that article have been revised. See Geoffrey R. Gerdes, Jack K. Walton II, May X. Liu, and Darrel W. Parke, "Trends in the Use of Payment Instruments in the United States," *Federal Reserve Bulletin* (Spring 2005), 180–201, www.federalreserve.gov/pubs/bulletin/2005/spring05_payment.pdf.

7 Classification methods for consumer and business payments are based on either institutional records or, in the case of checks, data on the characteristics of a sample of individual checks. Some blurring of consumer and business payments cannot be avoided. For example, small business owners may use consumer accounts to conduct some or all of their business transactions. The effect and size of errors in classification could vary over time and across payment types.

Figure 2. Changes in the number of consumer noncash payments by type, per household, per month, 2000–15



Note: ACH is automated clearinghouse. Debit card includes non-prepaid debit, general-purpose prepaid, and private-label prepaid (including electronic benefits transfers). Credit card includes general purpose and private label.

year), ACH transfers grew by 5.1 (8.8 percent per year), credit card payments grew by 6.9 (3.0 percent per year), and debit card payments grew by 38.4 (13.7 percent per year) (figure 2).

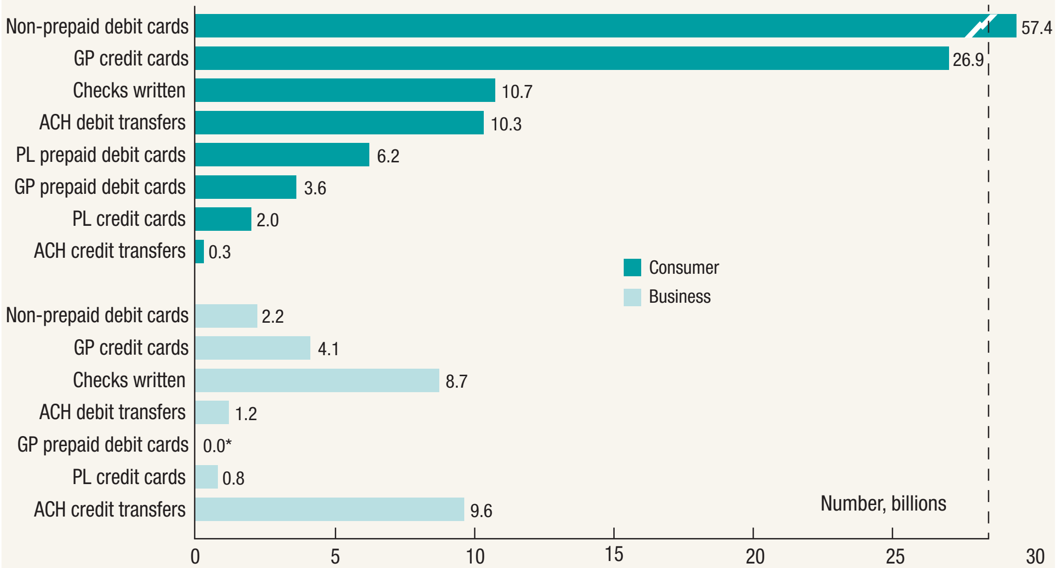
In 2015, households made 78.6 noncash payments per month, on average, compared with only 40.3 per month in 2000, an increase of 4.5 percent per year. This corresponds to 117.5 billion consumer payments in 2015 compared with only 50.7 billion in 2000. The substantial increase in the number of consumer noncash payments suggests that, not only were consumer payment choices shifting away from checks for both purchases and bill payments, but there also likely was significant replacement of consumer cash payments as well. The most common cash and check replacements over the period were everyday in-person electronic payments enabled by expanding consumer interest in using and merchant acceptance of cards. Further erosion of check and cash use was likely driven by the increasing importance of remote payments using cards, and online banking bill payment websites that often replaced checks with ACH transfers. These shifts in payment choice reflect more fundamental factors in consumer behavior, such as changes in shopping, purchasing, and bill-payment habits, as well as various socioeconomic factors such as income, wealth, and age.

Businesses are estimated to have made 26.6 billion noncash payments in 2015 compared with 21.2 billion in 2000, an increase of 1.5 percent per year. Business payments have also displayed a substantial shift over the period, primarily in the replacement of checks with ACH payments and, to a smaller extent, increases in card use. In 2015, businesses made 32.8 percent of their noncash payments using checks, compared with 83.1 percent in 2000.

Using data from the U.S. Census, we estimated that in 2015 there were 30.2 million employer and nonemployer businesses, compared with just 22.2 million in 2000.[8] This substantial increase in the number of businesses was led by an increase in the number of nonemployer firms of about 7.8 million, concurrent with a decrease in the number of employees at employer firms of about 7.0 million. It is possible to compare payments per business per month in the same way as previously done for households. However, substantial and complex transformations in business organization make the data per business less comparable. Using the census figures, we calculated that businesses made about 73.6 noncash payments per month, on average, in 2015, compared with 79.5 per month in 2000, a decline of 0.5 percent per year. It is unlikely that the decline in the number reflects a meaningful drop in the intensity with which businesses use noncash payments, especially in light of the substantial increase in the value of noncash business payments. The value of business ACH transfers and business checks totaled

[8] The number of employer firms from 2014 was used as a substitute in the calculation of total businesses in 2015 because a 2015 figure was not available. The difference is likely to be a small fraction of the total. All other data were from the corresponding years. Nonemployer firms include individuals, partnerships, and corporations.

Figure 3. Number of consumer and business noncash payments, by type, 2015



Note: PL is private label; GP is general purpose; ACH is automated clearinghouse; PL prepaid card includes electronic benefits transfers. Business PL prepaid debit card transactions were assumed to be zeros for 2015.

* 41.2 million.

$148.54 trillion in 2015, which alone is more than double the value of total ACH transfers and checks in 2000 ($73.78 trillion in real 2015 dollars).

Comparing Consumer and Business Noncash Payment Choices

New data allow additional detailed comparisons of consumer and business payments in 2015 and reveal significant differences in their payment choices (figure 3). For consumers (and in the aggregate), non-prepaid debit cards were by far the most common payment type in 2015. Consumers used non-prepaid debit cards more than twice as often as credit cards, which were the second most common type. Checks, which are often still used for everyday purchases and bill payments, were in third place with consumers, but only when measured by the number of checks they wrote. In addition to the everyday payments supported by cards, consumers often pay bills through electronic bank transfers originated through the payee's bank using ACH debit transfers, which were the fourth most common type of consumer payment.[9] Some checks written for in-person purchases and for bill payments are "converted to ACH," which means they are used as a source document to initiate an ACH debit transfer. There were 2.1 billion checks converted to ACH in 2015. Hence, if rankings were assigned according to clearance and settlement method instead of payer choice, consumer ACH debit transfers would rank third, and consumer checks fourth.[10]

Businesses, in contrast, displayed distinctly different rankings of payment types. Businesses used ACH credit transfers most frequently in 2015 to make their payments, including payroll-

[9] Like checks written to businesses that are then deposited and collected by the payee's bank, consumer bank accounts generally accept electronic ACH debit transfers for bill payments and other payments to businesses.

[10] Although some small number of business checks were converted to ACH debit transfers, all ACH-converted checks are assumed to have been consumer checks.

payments to employees and payments to other businesses, followed, in descending order, by checks, general-purpose credit cards, and non-prepaid debit cards. Direct control afforded by ACH credit transfers fits well with the payment practices of large businesses, as credit transfers are often tailored to manage large amounts of funds and complex relationships, while controlling both internal and external risks.[11]

Checks, ranked first for businesses in 2012 but second in 2015, continue to be preferred for some business payments because of historical practices within industries as well as technical features of legacy systems, such as the integration of checks with information services and financial controls. Meanwhile, the faster collection of checks made possible by the Check Clearing for the 21st Century Act and digital imaging technologies have speeded up the availability of funds.

Overall, card payments were the most common payment type in 2015, but the average values of such payments were considerably lower than for the other payment types (figure 4). The card networks have historically tailored their systems to support convenient consumer use for everyday payments at retail merchants, and card usage likely reflects consumer shopping patterns at in-person or online merchant locations. Cards are now also being used by consumers (and perhaps some businesses) to make relatively small-value bill payments.[12] The cost of accepting cards, however, especially for payments that are large in value, makes cards less attractive to businesses for high-value purchases and bill payments than ACH transfers and checks. Because business payments tend to be higher in value across all payment-type classifications, the relative cost of using different payment types may help explain why businesses are using cards less than other types of payment.

The number of noncash payments exhibited substantial change over the three-year period between 2012 and 2015 (figure 5). The total increase in consumer non-prepaid debit card payments of 11.7 billion outweighed increases in all other consumer payment categories combined. The increase in all other increasing payment types was only 9.1 billion and was collectively only 7.4 billion when the 1.8 billion decline in consumer checks written is included in the sum. Most of the increase of the remaining consumer payments came from general-purpose credit cards, which grew by 6.0 billion payments.

For businesses, ACH credit transfers, behind checks in 2012, exhibited an increase of 1.3 billion payments between 2012 and 2015. This increase nearly equaled the combined increase in non-prepaid debit and general-purpose credit card business payments, both of which grew by 0.7 billion.

General-Purpose Card Payments

General-purpose, or “network-branded,” cards were the most common payment type, accounting for over 65.5 percent of all noncash payment transactions in 2015, up from 60.5 percent in 2012. Combined data collected from card networks and depository institutions provide a detailed picture of how these general-purpose payment cards, including credit cards, non-prepaid debit cards, and prepaid debit cards, were used by consumers and businesses and how usage has changed from 2012 to 2015.

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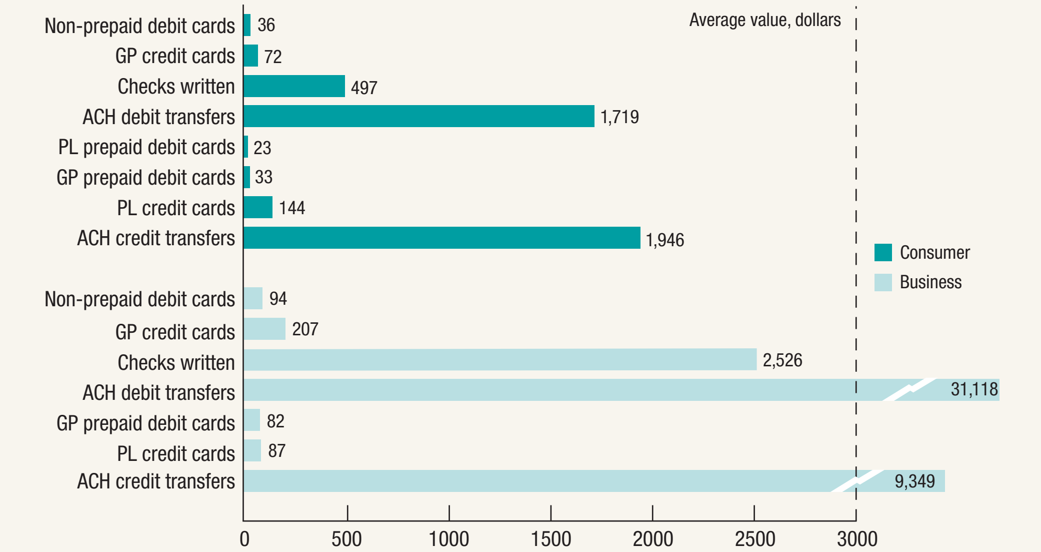
[11] Although businesses often allow or encourage consumers to pay bills using ACH debit transfers drawn from consumer accounts, it is common practice for businesses to mitigate risk by blocking ACH debits to their own accounts, a service that is normally not available for consumer accounts.

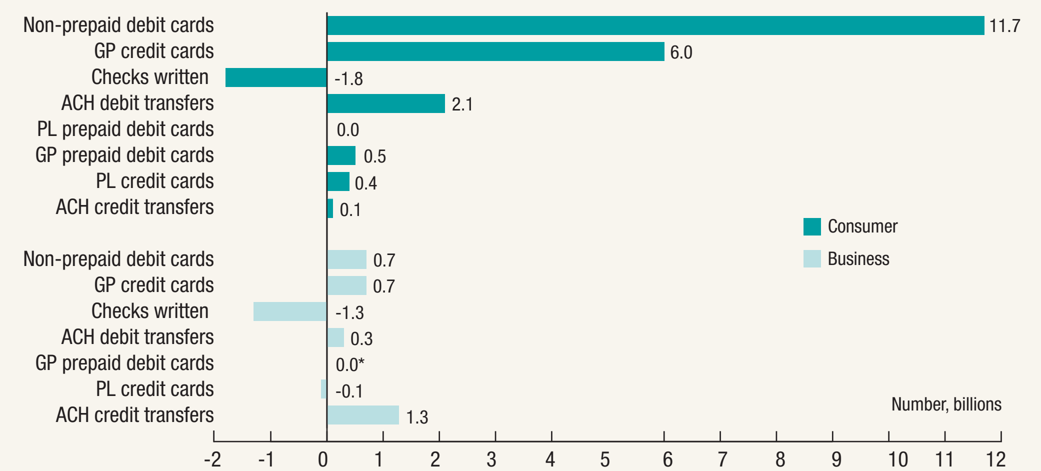
[12] For example, in 2015, there were 1.4 billion recurring bill payments made with non-prepaid debit cards, with an average value of $59, and 1.7 billion recurring bill payments made with general-purpose credit cards, with an average value of $78.

Figure 4. Average value of consumer and business noncash payments, by type, 2015



Note: PL is private label; GP is general purpose; ACH is automated clearinghouse; PL prepaid card includes electronic benefits transfers. Business PL prepaid debit card transactions are assumed to be zeros for 2015.

Figure 5. Changes in the number of consumer and business noncash payments, by type, 2012–15

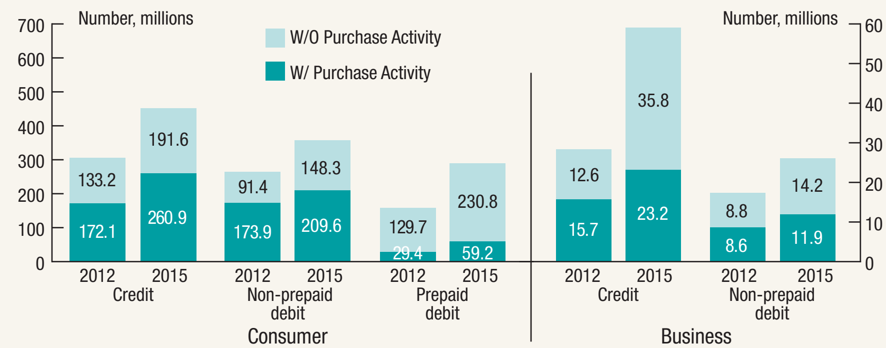


Note: PL is private label; GP is general purpose; ACH is automated clearinghouse; PL prepaid card includes electronic benefits transfers. All GP prepaid debit card payments are assumed to have been made by consumers in 2012. Business PL prepaid debit card payments are assumed to be zeros in both 2012 and 2015.

* Decline of 26.2 million.

The data show that adoption of general-purpose cards has increased, as the number of cards with and without purchase activity has increased significantly across all types between 2012 and 2015 (figure 6). Among consumer cards with purchase activity, credit cards grew at more than twice the rate of non-prepaid debit cards from 2012 to 2015 (14.8 percent and 6.7 percent per year, respectively), opening a significant gap between the two card types. In 2012, the number of active credit and non-prepaid debit cards stood roughly equal at

Figure 6. Number of general-purpose consumer and business cards, with and without purchase activity, by card type, 2012 and 2015



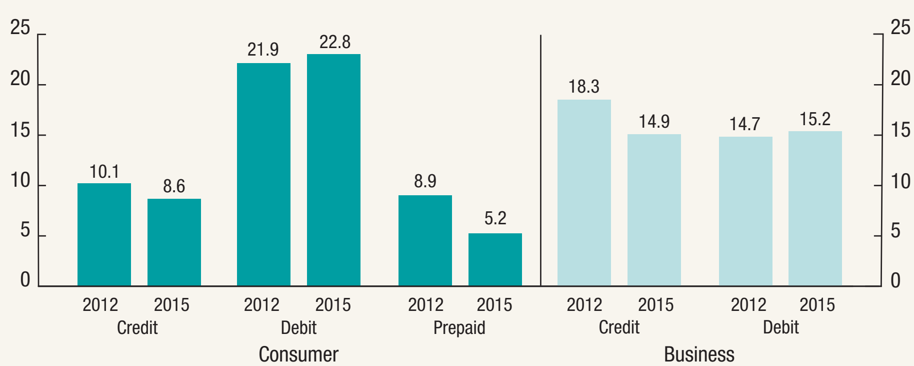
172.1 million and 173.9 million, respectively. By 2015, however, active credit cards had reached 260.9 million, exceeding the number of non-prepaid debit cards by 51.2 million.

The number of general-purpose prepaid debit cards also increased substantially from 2012 to 2015. In both years, the number of prepaid cards without purchase activity was quite high compared with the number of cards with purchase activity, reflecting some of the different ways in which these cards are used compared with credit and non-prepaid debit cards.

General-purpose prepaid debit cards include non-reloadable versions used for gifts, rebates, and incentives and reloadable versions that can be used like non-prepaid debit cards or connected with specialized programs, including payroll or medical cards. There were an estimated 160.0 prepaid cards associated with 161.6 million non-reloadable *accounts* with total balances of $2.08 billion, of which 10.9 million cards had purchase activity, on average, during 2015. In contrast, there were an estimated 130.1 million prepaid cards associated with 96.7 million reloadable *accounts* with total balances of $30.22 billion, of which 48.4 million cards had purchase activity, on average, during 2015.

Despite the high and growing popularity of general-purpose credit cards, non-prepaid debit consumer cards exhibited substantially more intensive use than credit and other cards (figure 7). Among active consumer cards, non-prepaid debit cards were used for 22.8 payments per month, on average, more than two-and-a-half times as often as consumer credit cards, at

Figure 7. Number of payments per active general-purpose card, per month, by card type, 2012 and 2015



8.6 payments per month in 2015. The relatively high number of payments, combined with the smaller average value, suggests that non-prepaid debit cards are typically used for everyday payments. In contrast, credit cards may be used for everyday payments by some consumers and reserved for larger purchases by others.

As already seen, from 2012 to 2015, the number of payments and active cards for general-purpose consumer credit and non-prepaid debit increased substantially, even while the number of payments per active card remained relatively flat, suggesting a sort of balanced increase between cards and payments. At the same time, the number of credit card and transaction accounts associated with the cards did not show substantial increases. Different phenomena may explain this result. For example, new card users on existing accounts may have been added and begun to actively use cards for the same number of transactions as existing card users. Alternatively, existing cardholders may have increased the number of cards they use and the number of payments they make with those cards. Regardless, these findings suggest a strong influence of card adoption and new active card use on non-prepaid and credit card payments growth.

Among all general-purpose consumer cards, prepaid debit cards were the only category to exhibit a significant drop in intensity of use from 2012 to 2015. The number of active prepaid cards has increased substantially (26.3 percent per year), while the number of payments made by these active prepaid cards has increased relatively moderately (5.3 percent per year). This result could be related, in part, to a large number of relatively short-lived non-reloadable cards or to more reloadable cards being used for specialized purposes.

For businesses, the number of general-purpose credit and non-prepaid debit cards were also up substantially from 2012 to 2015, although in much smaller numbers than for consumers. Business credit and non-prepaid debit cards are used with similar intensity, in contrast to the lower intensity, on average, of credit card use by consumers. Nonetheless, the intensity of business credit card use dropped slightly between 2012 and 2015, while non-prepaid debit card use remained steady.

General-Purpose Credit Card Accounts and Balances

New data on the number of general-purpose credit cards accounts and the value of associated balances for 2015 shed some additional light on the different ways that consumers use credit cards. An estimated 286.4 million credit card accounts, or 2.3 accounts per household, with balances totaling $630.54 billion, or $5,061 per household, were held by consumers in 2015. The corresponding average account balance in 2015 was $2,202.

A portion of credit card balances is current spending during a statement period, which usually runs for a month, but may be due on different dates during the month, depending on the terms of each account. Some credit cards are specifically set up as charge cards, which generally means there is no set credit limit, but payment is due in full at a regular monthly payoff date. More typically, credit cards allow the account holder to carry a balance over time. At the end of each statement period, the account holder must make at least a minimum payment, and any remaining balance is carried over with interest, or "revolved," into the next period. For this type of account, users may also choose to pay off the entire or outstanding balance.[13]

Credit card users often can avoid paying interest by paying off balances in full that accumulate from current spending each month. Such accounts would contain a current balance only but

[13] The balance for any specific account can include different proportions of spending during the current period and spending carried over from past periods.

no revolving balance. An estimated 113.5 million consumer credit card accounts, or 39.6 percent, were paid in full (or had no current spending), on average, during 2015. Because these accounts include accounts with no spending, the estimate provides an upper bound on the number of credit card accounts that were being used for transactional purposes and not for borrowing. The monthly average balance, and thus current spending, in such accounts was $1,327, which provides a lower bound on the average balance of accounts with current spending only.

The remaining 172.9 million, or 60.4 percent, of credit card accounts were revolving in 2015, with a monthly average balance of $2,776. Some of these revolving accounts contained some current spending, and others contained no current spending but were being paid off over time.

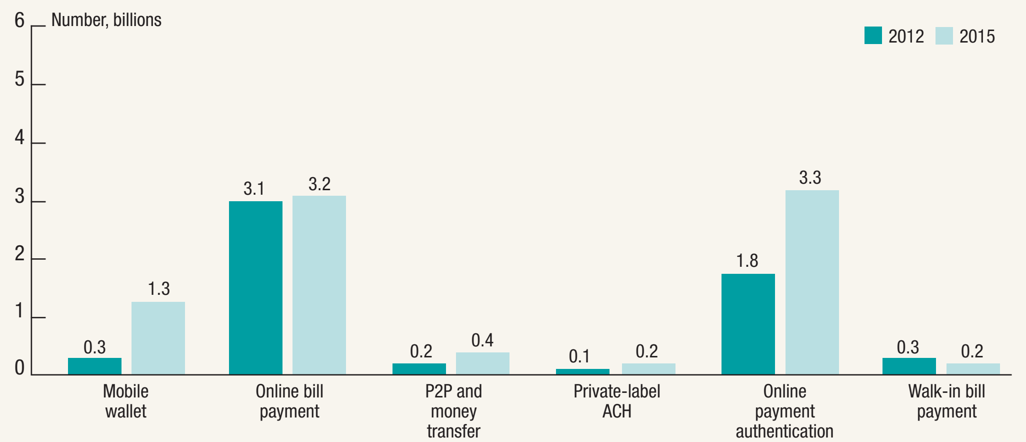
Alternative Payment Methods and Services

Over the years, the study has collected data on the number and value of various alternatives to traditional payment methods from major payment processors. Such payment types have been tracked in every iteration, including the first one. The categories surveyed for the 2016 study included person-to-person payments and money transfers (services that specialize in transferring funds between two individuals, usually featuring an online or e-mail based system), online and walk-in bill payments, mobile wallet payments, and online payment authentication methods. These services represent new, innovative, or atypical ways of making payments and can contribute to the understanding of trends in noncash payments (figure 8). Many of the processors, such as those providing mobile wallet services, settle their payments using a core payment type, such as ACH or general-purpose card networks.

The 2016 study data document several payment patterns:

- Mobile wallet payments—often involving a tap-and-go procedure with a smartphone at a merchant terminal—showed strong growth, increasing from 0.3 billion payments in 2012 to 1.3 billion in 2015, or 71.9 percent per year. As the name suggests, mobile wallets can be used to effect payment from one or more accounts, usually card accounts..

Figure 8. Number of payments using various alternatives to traditional payment methods, 2012 and 2015



Note: P2P is person to person; ACH is automated clearinghouse.

- Online bill payment services, initiated either through a depository institution or a biller's website or mobile app, grew slightly from 3.1 billion in 2012 to 3.2 billion in 2015. These payments are usually settled through ACH but may also be settled through card networks or sometimes even with a check. Underlying details within the category show a decline in bill payments through banking websites and apps and an increase in payments made directly to billers.
- Person-to-person and money transfer payment services, which provide alternatives to checks or cash, and payments using private-label ACH debit cards, which initiate an ACH from a card terminal and help merchants avoid card network fees, each roughly doubled from 2012 to 2015, but remained very low by number (0.4 billion and 0.2 billion in 2015, respectively).
- Payments using online payment authentication methods, which help to secure cardholder information provided online in various ways, grew from 1.8 billion in 2012 to 3.4 billion in 2015. Growth in the use of these methods may continue as remote payments increase and if concerns persist about authenticating cardholders and securing card and payment information in the remote environment .
- Walk-in bill payment, a method for paying bills in-person at a store, which rose in popularity from 2009 through 2012, showed a decline from 0.3 billion in 2012 to 0.2 billion in 2015.

When viewed in the context of the total number of noncash payments, these methods, while gaining traction, do not collectively constitute a significant number of payments at the current time. Nevertheless, these methods, along with the robust growth that they typically display, provide evidence about some of the innovative activity that is occurring in the U.S. payments market. In time, these services may grow in importance or fade as technology advances and payment habits change. With new ideas being proposed and tested at accelerating rates, such as real-time payments, the payments system will likely continue to evolve.

About the Study

The *Federal Reserve Payments Study* is a collaborative effort by staff members at the Federal Reserve Bank of Atlanta and the Federal Reserve Board to track and document developments in the U.S. payments system through the collection of quantitative survey data.

As in the previous studies, estimates reported in the 2016 study are based on information gathered in three survey efforts: the *2016 Depository and Financial Institutions Payments Survey;* the *2016 Networks, Processors, and Issuers Payments Surveys;* and the *2016 Check Sample Survey*.[14]

[14] The Federal Reserve System appreciates the efforts of survey respondents who provided the information summarized in this brief. This information enables policymakers, the payments industry, and the public to better understand payment trends and helps to inform strategies to foster further improvements in the payments infrastructure.

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