



How Consumers Get Cash: Evidence from a Diary Survey

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Abstract:

Most research on payment instruments focuses on how consumers pay or spend their money using a wide variety of payment instruments including cash. This report focuses on the inverse of the question of spending, that is, how do consumers obtain cash? Data from the 2017 Diary of Consumer Payment Choice shows that, over a three-day period, about 21 percent of survey respondents get cash via various methods, such as getting cash from a family member or friend, using an ATM, getting cash back at retail, visiting a bank teller, etc. We find that consumers mostly get cash from family and friends, followed by ATM withdrawals, and the average amount they get is around \$100. The median is \$40, and, in about half of the cases, consumers get cash in exact multiples of \$20. Friday is the most popular day for getting cash in any way, while day-of-week differences are less pronounced for ATM withdrawals.

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The views expressed here are those of the authors and not necessarily those of the Federal Reserve Bank of Atlanta or the Federal Reserve System. Any remaining errors are the authors' responsibility.

Introduction

Data collected on how consumers pay in the United States find that, on average, consumers carry \$60 in their pocket, purse, or wallet (Greene and Stavins 2018). How do consumers get that cash?

Most research on payment instruments focuses on how consumers spend their money using payment instruments including cash. Stavins and Wu (2017) find that consumers who prefer noncash payment methods switch to cash for low-value transactions. In general, cash use at the point-of-sale remains strong in most countries. A study by Bagnall et al. (2016) compares payment diaries from seven countries and show that cash still dominates low-value transactions, especially lower than \$25. Khiaonarong and Humphrey (2019) measure the demand for cash in 11 countries. Further studies on cash use include Schuh and Stavins (2010); Arango, Huynh, and Sabetti (2015); Bounie, Francois, and Waelbroeck (2016); Wakamori and Welte (2017). Chen, Huynh, and Shy (2019) show how the decision of whether or not to pay with cash is influenced by the burden of receiving coins as change.

Other research looks at when consumers choose to restock their supply of cash. Briglevics and Schuh (2014) find that getting cash is costly relative to the benefits of having it and that, with more payment instruments available, individuals are less likely to make withdrawals. Rodrigues and Esteves (2010) use ATM transaction data to analyze calendar effects present in ATM withdrawals. Carbó-Valverde and Rodríguez-Fernández (2014) explore the relationship between debit card transaction volumes at the ATM and the point-of-sale.

The decision of whether or not to get cash is outside the scope of this research. Instead, we focus on *where and from whom* consumers get cash (from another person or an ATM, for example, called “location” in this paper) and their funding source, such as assets they own (like a bank account or prepaid card) or a payment or gift from another person.

The study of consumer payment choice involves a classification of payment methods such as cash, credit cards, debit cards, prepaid cards, and paper checks. Data on “how consumers pay” and “how they receive cash” are collected by consumer surveys in which consumers list all the payment instruments they have, whether and how they use them at the point of sale and to pay bills and other people, and their source of funding. In particular, diary surveys record, either in real time or by the end of each day, all consumers' payment-related activities (receiving and spending), including dollar amount, spending type, merchant type, and payment method as well as money transfers in general. In addition, they record sources of receiving cash and ATM cash withdrawals in particular, the subject of this paper.

The data are taken from the 2017 Diary of Consumer Payment Choice (DCPC). The DCPC is a collaboration of the Federal Reserve Banks of Atlanta, Boston, Richmond, and San Francisco (Cash Product Office). The data are publicly available for downloading from the [Federal Reserve Bank of Atlanta](#) and are summarized in Kumar, Maktabi, and O’Brien (2018) and Greene and Stavins (2018). Similar surveys are conducted by the Bank of Canada (see Henry, Huynh, and Shen 2015).

In this paper (and also in the diary survey itself), the term “location” (coded as `cw_location`) refers not necessarily to a physical location but to *where and from whom* the respondent received the cash. More precisely, respondents chose from nine “locations”: 1. ATM, 2. Cash back at a retail store, 3. Bank teller, 4. Family or friend, 5. Check cashing store, 6. Employer, 7. Cash refund from returning goods, 8. Payday lender, and 9. Other location.

Similarly, the term “funding” or “funding source” (coded as *cw_source*) refers to nine possible sources of *funding*: 1. Primary checking account, 2. Other checking or savings account, 3. Salary wages or tips, 4. Cashing a check, 5. Credit card cash advance, 6. Primary general purpose reloadable (GPR) prepaid card cash withdrawal, 7. Other prepaid card cash withdrawal, 8. Another person, and 9. Other source.

Finally, a note about using weights. The diary data contains weights for each respondent that can be used to match the data with the adult (18 and older) U.S. populations. We generally indicate when the reported statistics are computed with and without weights. Statistics on small subsamples are reported without weights, because these subsamples may be correlated with some demographic variables upon which the weights are computed.

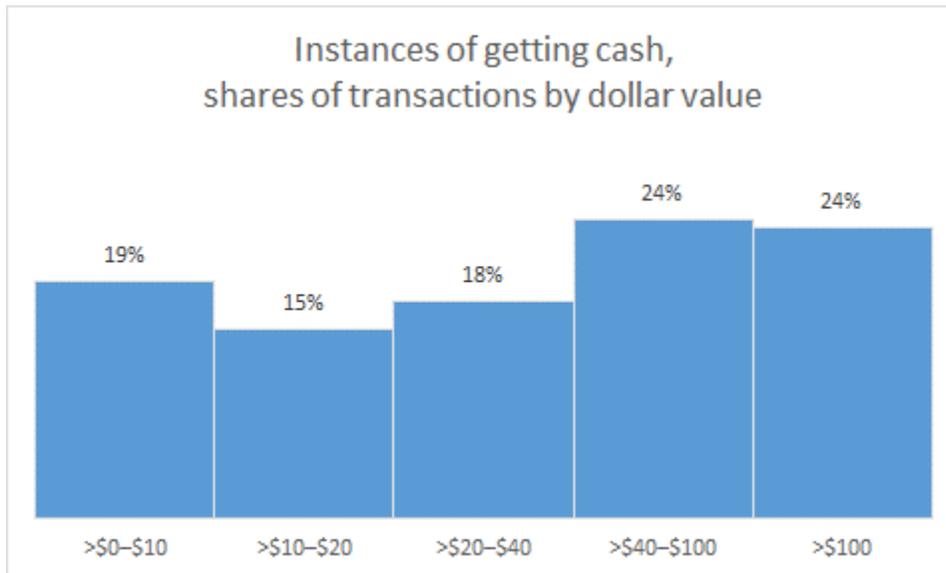
Half the time, consumers get \$40 in cash or less

The 2017 DCPC includes 14,707 transactions reported by 2,543 different respondents. Transactions include purchases, bill payments, person-to-person (P2P) payments, transfers to accounts owned by respondents, deposits of cash and deposits by other means, and instances of getting cash. Each respondent reported three days of transactions, making a total of 7,629 “consumer days” that were reported for October 2017. That is, approximately 250 consumers were reporting transactions for each day of the month.

Of the 14,707 transactions, 659 were instances of getting cash. Some respondents got cash more than once; a total of 532 respondents received cash. That is, 4.5 percent of the reported transactions were instances of getting cash, and 21 percent of respondents got cash at least once during their three-day diary reporting period. Dividing the instances of getting cash (659) by the number of days on which respondents reported (7,629) and then multiplying by 31 days shows that on average each respondent gets cash about 2.68 times per month.

The average dollar value of cash obtained, by instance of obtaining cash, was \$108 (\$119 weighted); the median was \$40. In most cases, respondents got less than \$100. More precisely, three-quarters of the instances of getting cash were for amounts of \$100 or less. In one out of three times, consumers obtained \$20 or less in cash.

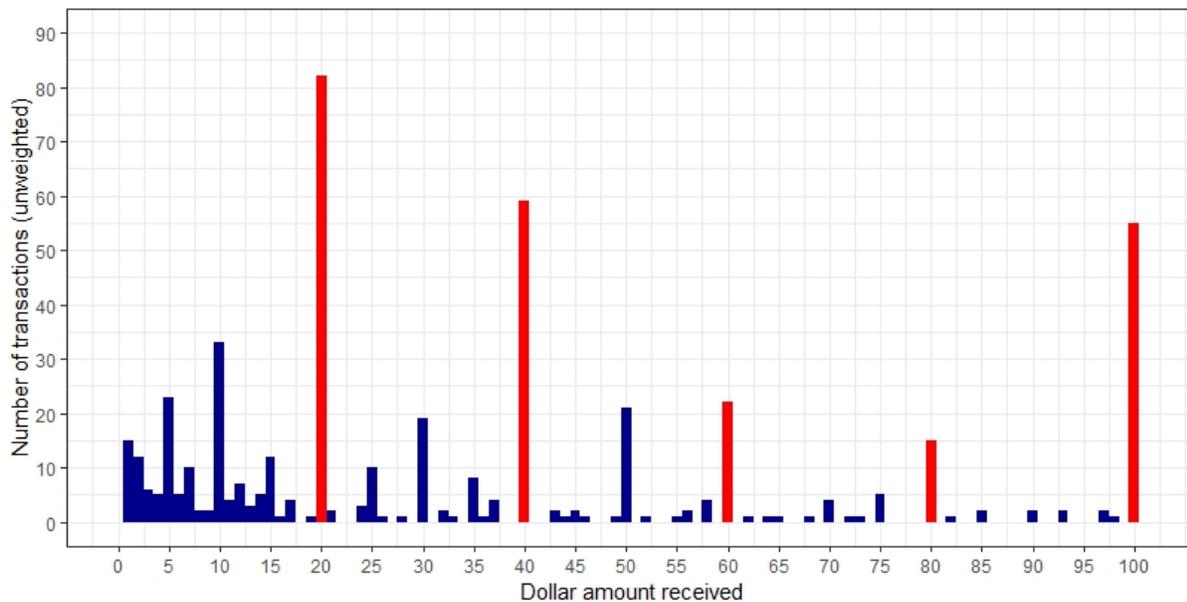
Figure 1: More than half the time, consumers got less than \$40 in cash
 Percentage of transactions, by dollar value



Source: 2017 DCPC. Data are weighted.

More than half (51 percent, or 53 percent weighted) of the instances of getting cash were in multiples of \$20. In 76 percent (both weighted and unweighted) of instances, respondents received \$100 or less. This homing on \$20 denominations likely is related to the denomination most commonly dispensed by ATMs in the United States. (For a discussion of the effect of currency denominations dispensed by ATMs on payment instrument use, see Shy 2019.)

Figure 2: Most instances of getting cash are in multiples of \$20
 Distribution of transactions \$100 and less



Notes: Of the 659 transactions reported, 503, or 76 percent, were for \$100 or less.

Source: 2017 DCPC. Results are not weighted.

One in five (19.4 percent) of the respondents who got cash got it more than once during their three diary days; one respondent received cash eight times over the three-day reporting period. For those instances (where respondents received cash more than once), the average dollar value of cash obtained was \$117.4 (\$172.7 weighted) and the median was \$40.

Consumers mostly get cash from family and friends

Most cash is received from family and friends. More than one-third of the time, consumers got cash from a family member or friend (35 percent of transactions), followed by from an ATM one-fifth of the time (21 percent). Also by value, family or friend is the most popular way of getting cash (27 percent). Getting cash from an employer is second-most-popular by value (25 percent). All these percentages are weighted.

“Locations” for getting cash include family or friend, ATM withdrawals, an employer, cash back at a retail store, and bank teller. For some instances of getting cash, either respondents did not specify the location or it was used too infrequently to be relevant (“other” in the chart below). Respondents also got cash from employers (13 percent), as cash back at a retail store (13 percent), and from a bank teller (9 percent); all three percentages are weighted.

Table 1: Consumers mostly get cash from family and friends
Locations for getting cash, share of instances, 2017

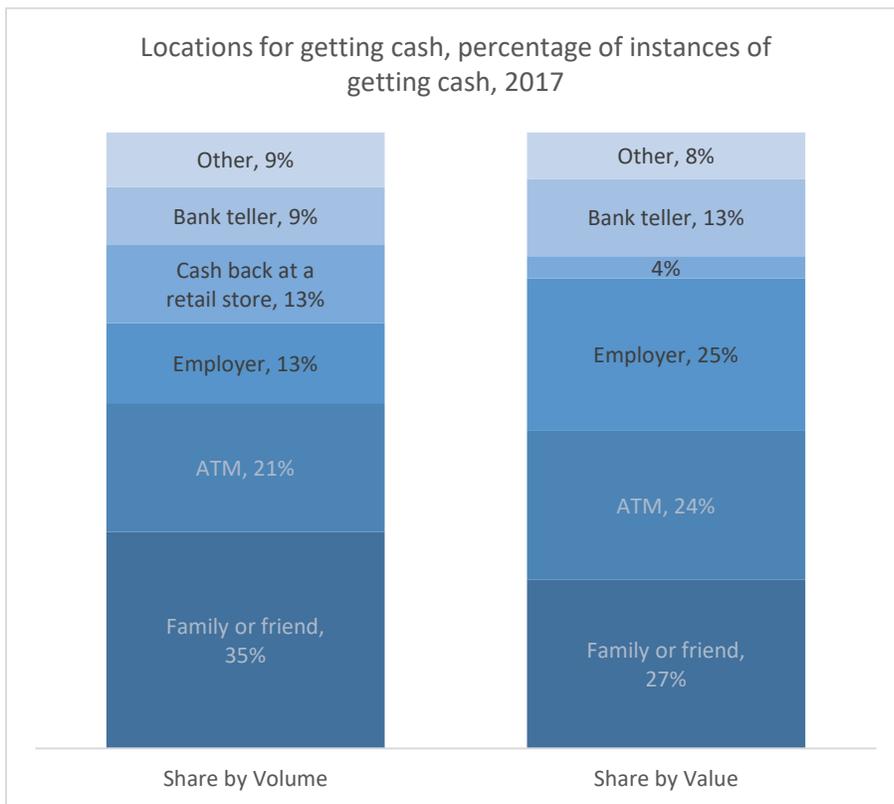
Location	Volume shares	Value shares	Average value
Family or friend	35.12%	27.41%	92.84
ATM	20.94%	24.14%	137.16
Employer	12.98%	24.72%	226.62
Cash back at a retail store	12.71%	3.65%	34.19
Bank teller	9.35%	12.53%	159.42
Other	8.67%	7.44%	102.08

Notes: The average dollar value for all transactions is \$109 (\$119 weighted). Categories representing less than 0.20 percent shares are omitted (cash refund from returning goods, payday lender, check cashing store).

Source: 2017 DCPC. Results are weighted.

For the largest amounts of cash, respondents mostly turned to employers, with an average dollar value of cash received of \$227. At bank tellers and ATMs, consumers also received average dollar values greater than the overall average: \$159 and \$137, respectively. Consumers received smaller amounts from family or friends (\$93) and, notably, cash back at a retail store (\$34). All these dollar amounts are weighted. The amount of cash received at a retail store is constrained by the store’s limits, so the amount of cash received in this way is not necessarily at the discretion of the consumer.

Figure 3: By value, ATMs and employers are also important sources for cash
Locations for getting cash, shares of instances, 2017



Notes: Categories representing less than 0.20 percent shares are omitted (cash refund from returning goods, payday lender, check cashing store).

Source: 2017 DCPC. Results are weighted.

Comparing shares of locations by volume to shares by value (Figure 3), the value shares for getting cash from employers, ATMs, and bank tellers are higher than the corresponding volume (that is, number) shares. Like cash by volume, most cash by value is received from family or friends, followed by employer, ATM, and bank teller. The three most common locations for getting cash—family or friend, ATM, and employer—together account for 69 percent of instances of getting cash by volume and 76 percent by value. The greatest difference between the volume share and the value share is for cash back at retail (13 percent versus 4 percent, respectively), again reflecting the dollar value limits on these transactions. All the above percentages are weighted.

By volume, the most common funding source is another person; by value, a checking or savings account

For more than 40 percent of the value of the cash obtained, consumers got cash from a bank account they owned, either their primary checking account or another checking or savings account. The next most popular funding source for cash by value was as a payment from another person (29 percent), followed by salary, wages, or tips (16 percent), and prepaid cards (two types, which sum to 5 percent).

By volume (number), the most common funding source is another person: 36 percent of transactions. Note, however, that the other funding sources are mostly owned by the person getting the cash:

checking or savings account; salary, wages, tips; prepaid card; and cashing a check together comprise more than half of the volume of all the instances of getting cash. All the above percentages are weighted.

Table 2: By value, consumers mostly fund cash from their primary checking account
Funding sources for getting cash, shares of instances (volume and value), 2017

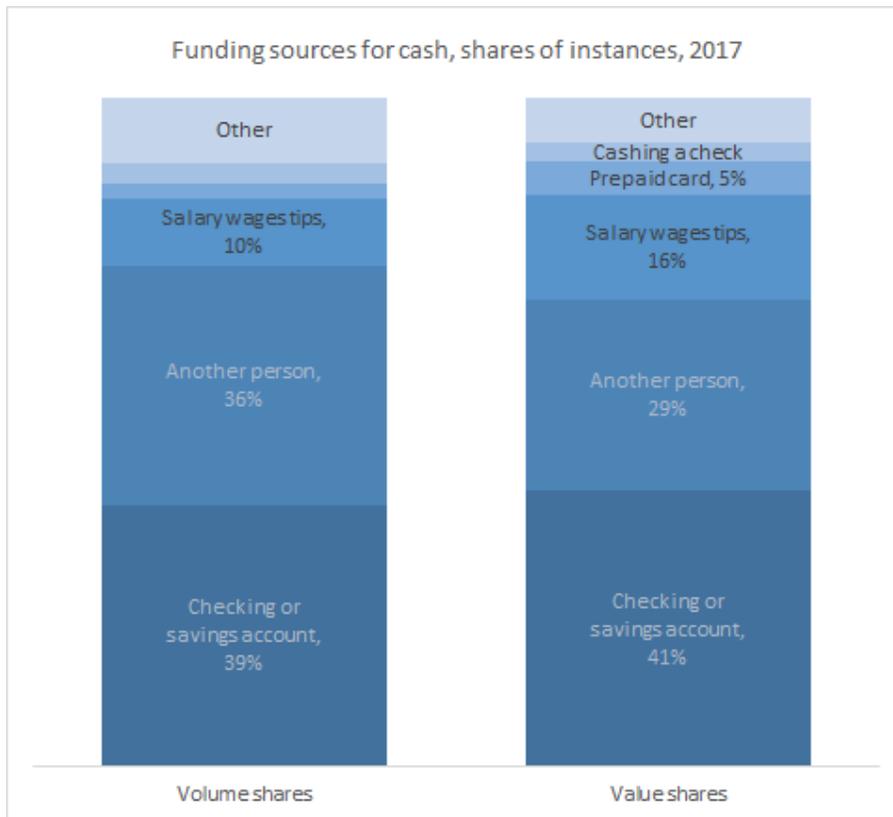
Funding source	Volume shares	Value shares	Average value
Primary checking account	33.79%	37.52%	\$132.07
Another person	35.80%	28.71%	\$95.38
Salary wages or tips	10.16%	15.73%	\$184.09
Other checking or savings account	5.27%	3.73%	\$84.08
Cashing a check	3.01%	2.80%	\$110.55
Primary GPR prepaid card cash withdrawal	0.73%	2.65%	\$433.99
Another prepaid card cash withdrawal	1.54%	2.22%	\$171.92
Credit card cash advance	0.10%	0.05%	\$61.83
Other source	9.60%	6.60%	\$81.74

Source: 2017 DCPC. Results are weighted.

As noted above, the average dollar value of all cash received was \$109 (\$119 weighted). Note that the average dollar value of cash consumers get from their primary checking account and also from salary/wages/tips is higher than the average value of that received from another person.

Figure 4: Checking and savings accounts are consumers’ most likely funding source of cash

Funding sources for cash received, shares of instances (volume and value), 2017



Notes: Categories representing less than 0.20 percent shares are omitted (credit card cash advance).
 Source: 2017 DCPC. Results are weighted.

Comparing value shares by funding source to volume shares (Figure 4), the funding and value shares are similar for a bank account owned by the respondent (41 percent by value and 39 percent by volume). Notably, the value share for salary, wages, and tips exceeds the volume share (16 percent by value compared to 10 percent by number), reflecting the high average dollar value of wages received (\$184).

Funding could constrain where consumers get cash

For getting cash, the question of location and funding is a chicken-and-egg question: which comes first, the choice to get cash from a bank account or the choice to use an ATM, for example? Sometimes the funding source is a factor in limiting the consumer’s options for location of cash. For example, if the funding source were another person, one would not be likely to use an ATM to get cash. Conversely, if the funding source were a GPR prepaid card, one would not be likely to cash it in with an employer. (There can be exceptions, of course.)

One-third (33 percent) of incidents of obtaining cash (volume share) are funded by the respondent’s primary checking account. Of these instances, more than half (56 percent) are effected via an ATM, 21

percent via cash back at retail, and 14 percent by visiting a bank teller. Similarly for a *secondary* checking or a savings account, 53 percent of these instances of obtaining cash are through an ATM.

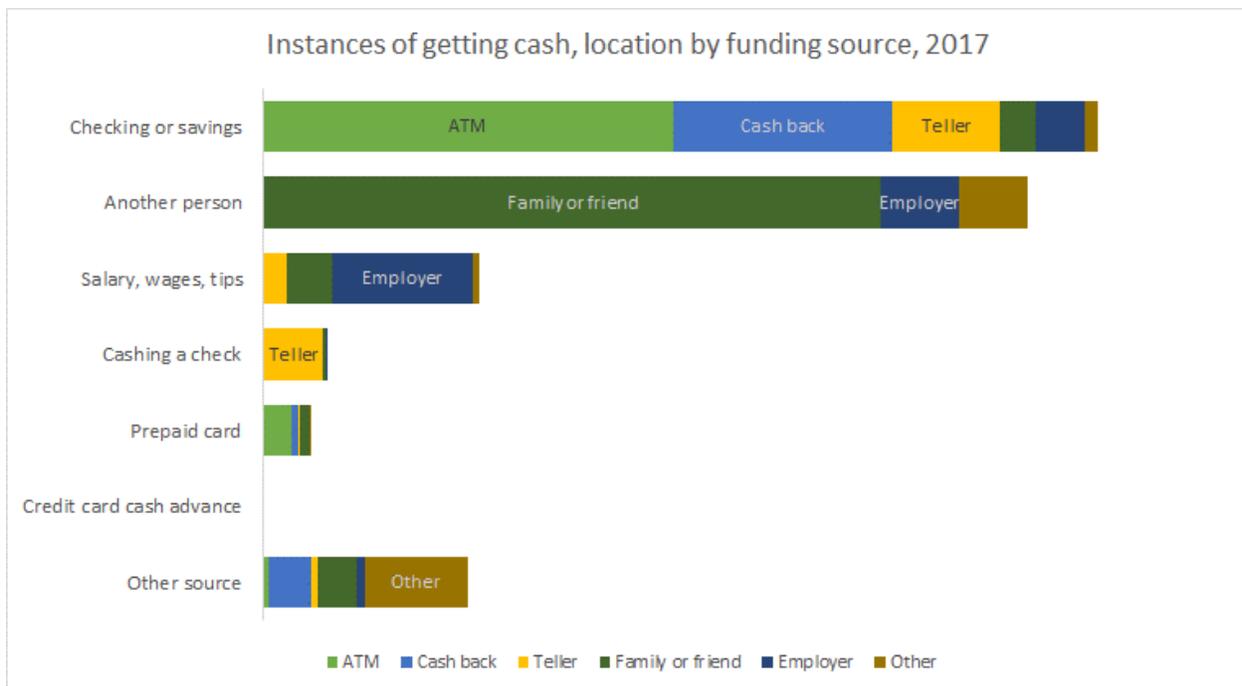
When the funding source is another person, 81 percent come from family and friends and 10 percent from employers. When the funding is salary, wages, and tips, 65 percent of instances of obtaining cash come from an employer and 21 percent from family and friends. For check cashing, 94 percent of the instances of obtaining cash involve a bank teller.

When funded by GPR prepaid cards, 60 percent of withdrawals are executed at ATMs and 14 percent are obtained as cash back at retail stores. Note that about one-quarter of instances of getting cash using other prepaid cards comes from family and friends, presumably as a result of receiving a prepaid card as a gift.

Most check cashing happens at a bank teller. The data contain no instances of respondents using a check cashing store.

Figure 5: Funding could be related to how cash is obtained

For example, when funded by a checking or savings account, cash is mostly obtained at the ATM, as cash back at retail, or from a bank teller



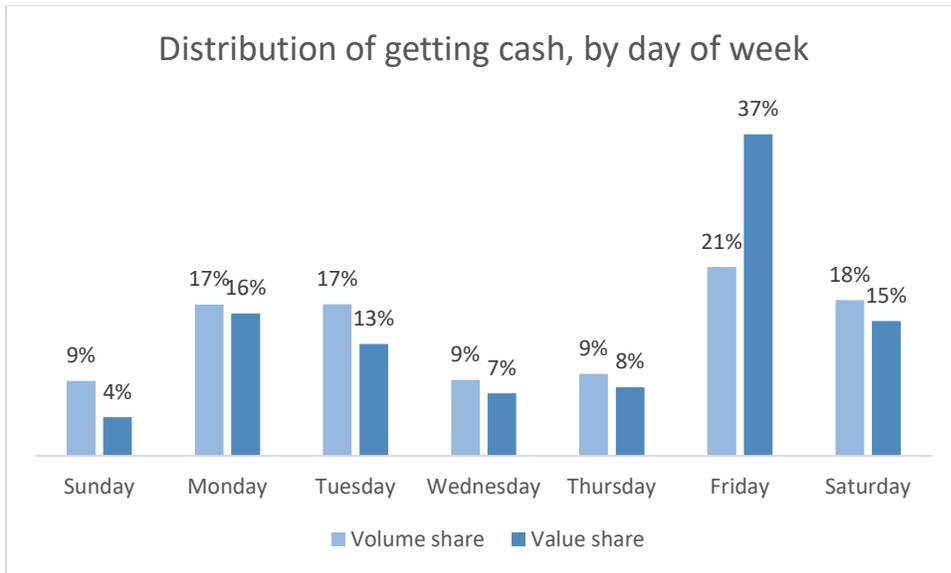
Notes: Percentage shares of all instances are by number. "Other" includes cash refund, payday lender, and check cashing store. For details, see Appendix Table 1.

Source: 2017 DCPC. Results are weighted.

When do consumers get cash?

By both volume and value, Friday is a popular day to get cash and Sunday is less popular. The largest share of cash withdrawals by value, 37 percent, was on Fridays. The smallest share, 4 percent, was on Sundays. By volume, Sundays, Wednesdays and Thursdays also are equally unpopular for getting cash.

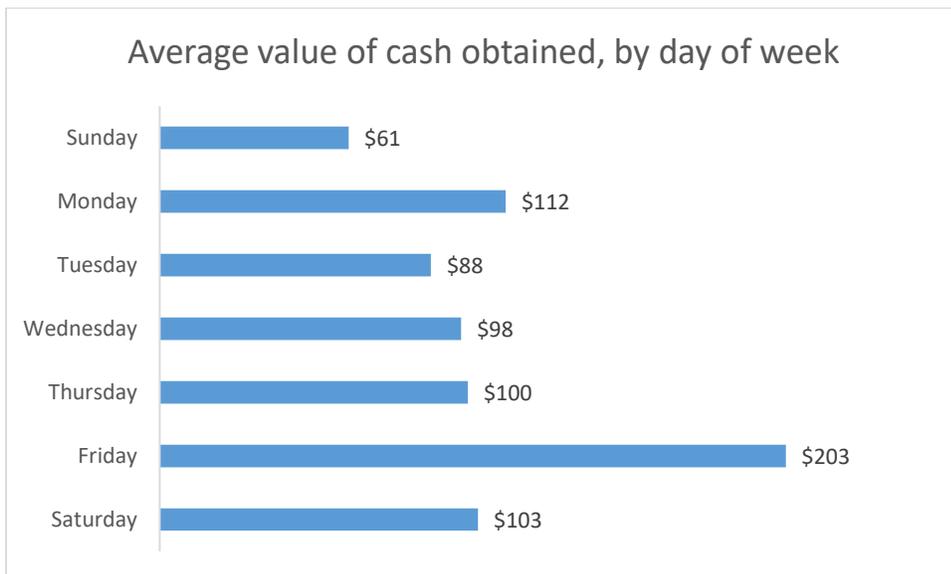
Figure 6: Almost 40 percent of incidents of obtaining cash, by dollar value, happen on Fridays
 Distribution of getting cash, by day of week



Source: 2017 DCPC. Results are weighted.

In addition, the average amount of cash received is the highest on Fridays and the lowest on Sundays (\$203 compared \$61).

Figure 7: Consumers get the largest amounts of cash on Fridays
 Average value of cash obtained, by day of week



Source: 2017 DCPC. Results are weighted.

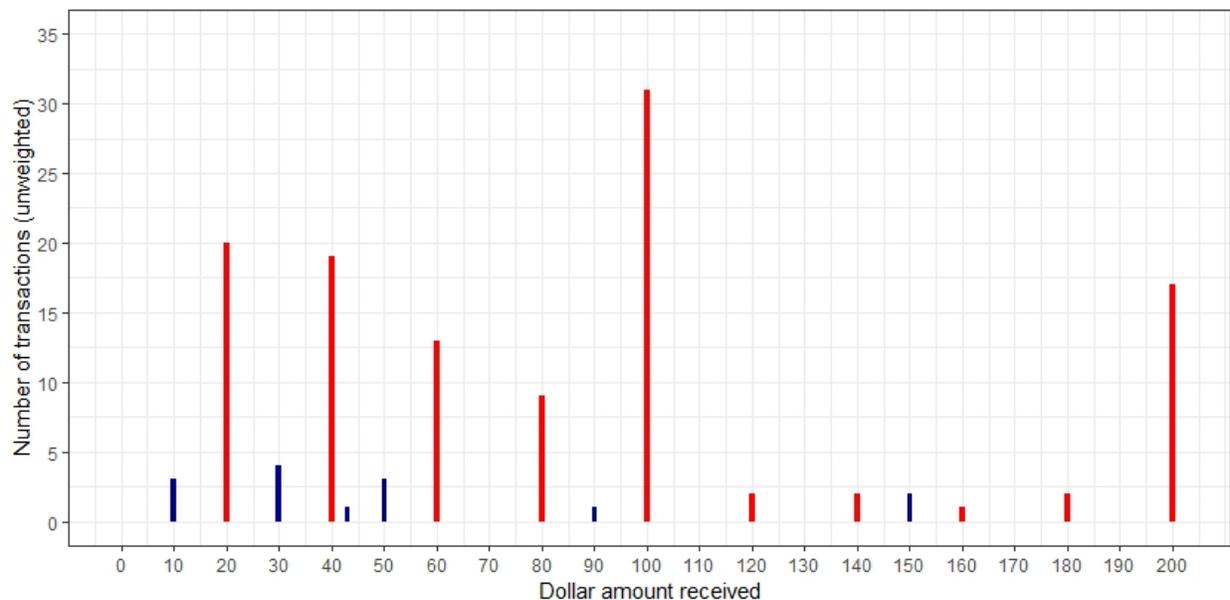
Are ATM withdrawals different from other ways of getting cash?

Of the 659 times when consumers got cash, there were 150 ATM withdrawals by 140 different respondents. As noted above, ATMs are the second most-popular way of getting cash by volume (number) and third most-popular by value. The average dollar value of cash from ATMs was \$119 (\$137 weighted), slightly higher than the overall average of \$109 (\$119 weighted). The median value was \$100, substantially more than the median of all methods, \$40.

Many ATMs in the United States dispense cash only in multiples of \$20. Eighty-nine percent of the ATM withdrawals are in multiples of \$20, compared to 51 percent of all instances of getting cash (and 40 percent when ATM withdrawals are excluded).

Figure 8: About 90 percent of ATM withdrawals are in multiples of \$20

Distribution of ATM withdrawals of \$200 and less

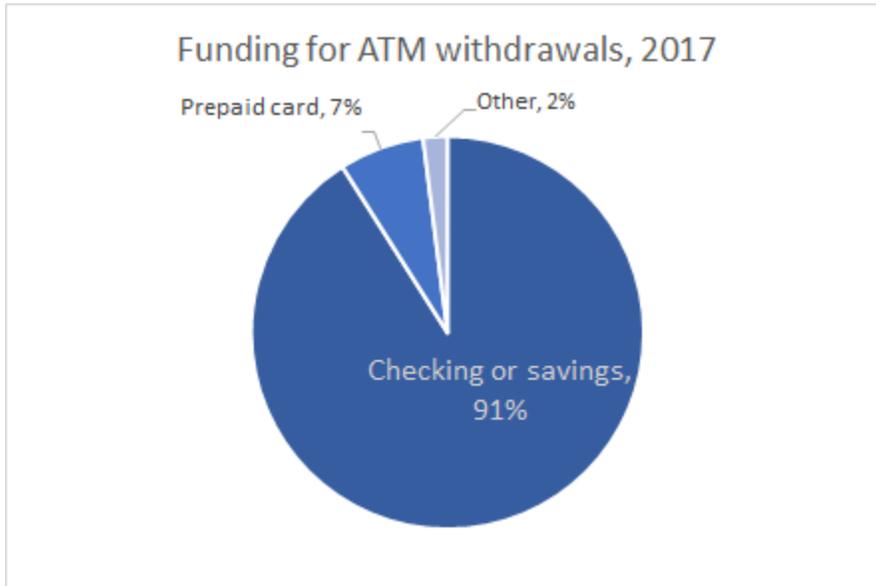


Source: 2017 DCPC

Unlike the other locations for getting cash, ATMs are available 24/7. This availability could be relevant to the days on which consumers withdraw cash. Generally, ATM withdrawals vary less with the day of the week, by both number and value, compared to other ways of getting cash. The shares of ATM withdrawals on Monday, Tuesday, Friday, and Saturday are about the same, for example: around 20 percent each. Sunday, Wednesday, and Thursday are still much less likely days for getting cash (see Figure 10 and Appendix Table 3).

As noted above, about 40 percent of all instances of getting cash are funded from a checking or savings account. For ATM withdrawals, the most popular funding source overall—getting cash from a person—is unavailable. As one might expect, the share funded by a checking or savings account is more than double for ATM withdrawals: 93 percent (91 percent weighted). In addition, 4 percent of ATM withdrawals are funded by respondents' primary GPR prepaid card and other prepaid cards combined (7 percent weighted). The average dollar value of ATM withdrawals from a checking or savings account is \$115 (\$119 weighted); the median is \$100. For ATM withdrawals from a prepaid card (either type, primary GPR card or other), the average dollar value is \$280 (\$411 weighted) and the median is \$300.

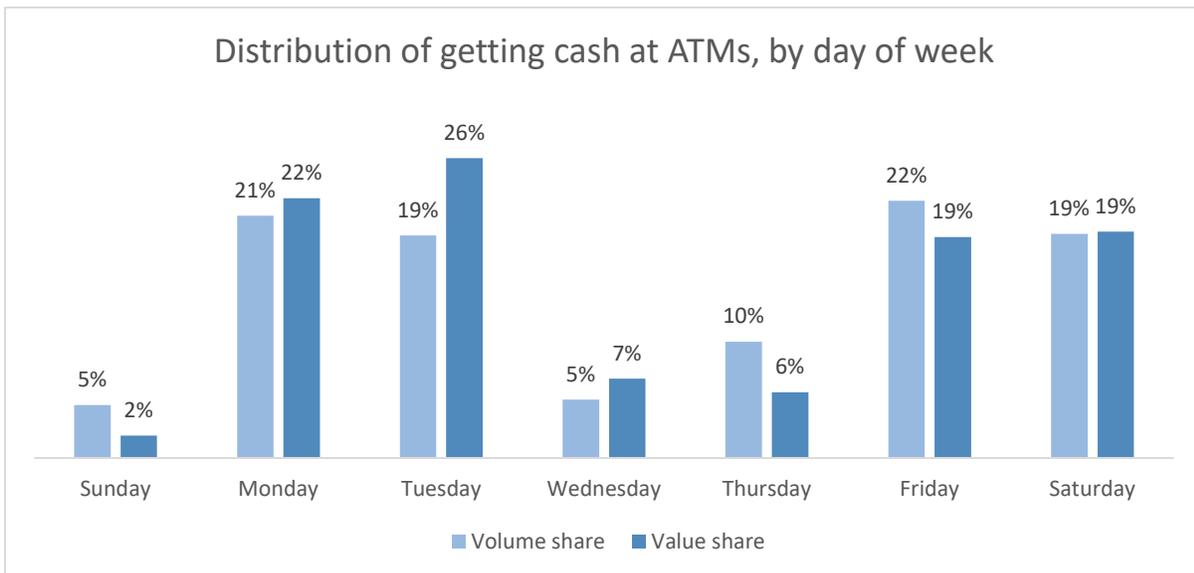
Figure 9: Most ATM withdrawals are funded from a bank account
 Funding sources for ATM withdrawals, percentage of withdrawals



Notes: "Other includes 0.7% cash advance from credit card. For detail, see Appendix Table 1.
 Source: 2017 DCPC. Results are weighted.

Figure 10: ATM withdrawals vary somewhat less with day of week, compared to other ways of getting cash

Distribution of getting cash at ATMs, by day of week



Source: 2017 DCPC. Results are weighted.

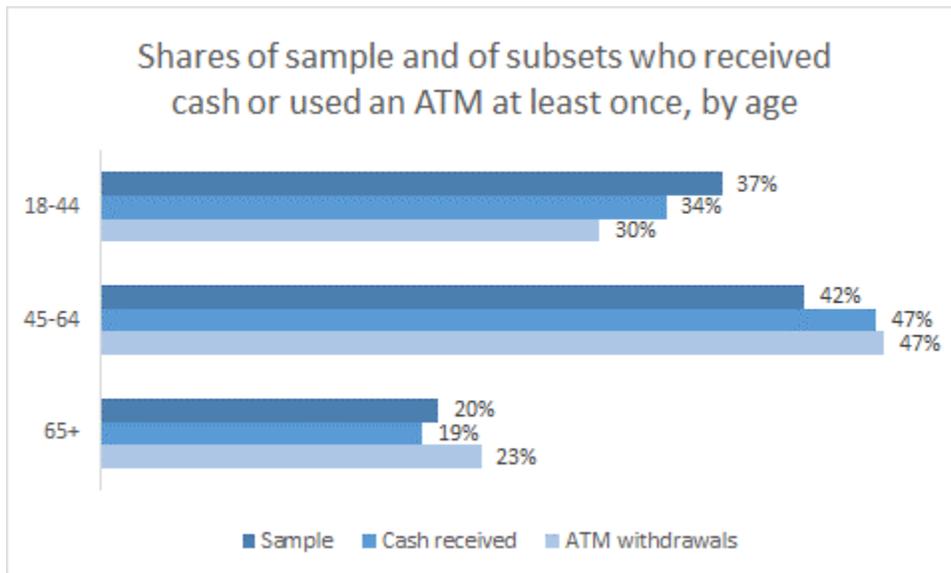
Do people of all ages get cash?

Prior research finds that people of all ages carry and use cash, although younger people carry and use less. People between the ages of 25 and 44 use cash for about one-quarter of their transactions; people

45 and older use cash for about one-third of transactions. The younger group (25–44) carries between \$35 and \$50 in cash, less than the median \$60 of cash carried for all consumers 18 and older (Kumar, Maktabi, and O’Brien 2018).

We find that, compared to their share in the sample, respondents 18 to 44 are a smaller share of respondents who got cash at least once during their three-day reporting periods. For each age group younger than 44, its share of incidents of getting cash (volume share, that is, by number) was less than the share of respondents in the sample (see Figure 11; for detail, see Appendix Table 4). However, the differences are small and may not be statistically significant. The 18–44 age group includes Gen Z, millennials, and some Gen Xers.

Figure 11: By age, shares of those getting cash differ from shares by age in sample



Notes: For example, for the entire sample, 37% of respondents belong to the age group 18–44. Of the sample restricted to those who got cash, 34% belong to the age group 18–44. More detailed age breakdowns are reported in Appendix Table 4. Source: 2017 DCPC. Results are not weighted.

Whatever the age group, getting cash from family and friends is almost always the most common way to get cash. For respondents in each of the four decades between 25 and 64, respondents most often got cash from a family member or friend. Respondents younger than 45 got cash from ATMs less often than their share in the sample might suggest. Respondents younger than 45 were 37 percent of the sample and just 30 percent of those who got cash.

Is household income related to how consumers get cash?

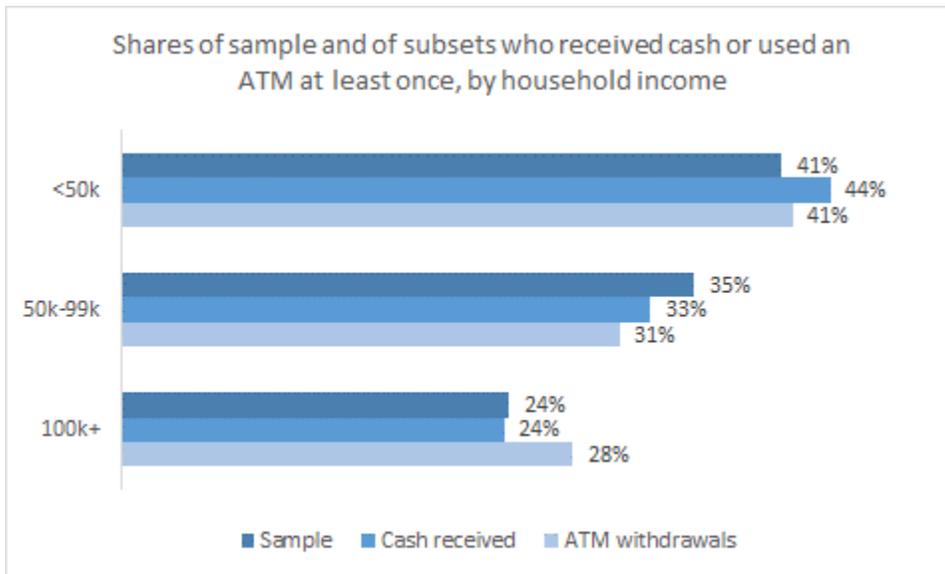
Prior research has shown that lower-income consumers use cash for a higher percentage of their transactions than do higher-income consumers (Connolly and Stavins 2015, Greene and Shy 2015). Given this difference in how consumers pay, one might wonder whether or not lower-income consumers behave differently when it comes to getting cash.

As noted above, the three-day diary format complicates the comparison of the prevalence of certain behavior among the different consumer groups. That is, results may not be a good estimate of the U.S.

population as a whole, because events like getting cash may not be spread out equally across the month. Respondents with income less than \$50,000 got cash more often during their three diary days than their share in the sample might suggest. These respondents represent 41 percent of the sample and 44 percent of the respondents who got cash at least once. However, these differences are too small for the purpose of making general conclusions. They are about as likely as the sample as a whole to get cash from ATMs (see Figure 12).

In view of Appendix Table 5, respondents with household income less than \$25,000 used ATMs less during their three diary days than their share in the sample might suggest: they represent 17 percent of the sample and 10 percent of ATM withdrawals by number. Whatever their income, respondents tend to get similar amounts of cash. The median amount obtained ranges from \$40 to \$90, with no clear relationship to income.

Figure 12: By income, shares of those getting cash differ from shares by income in sample



Notes: For example, for the entire sample, 41% of respondents has household income less than \$50,000. Of the sample restricted to those who got cash, 44% belong to the group with household income less than \$50,000. More detailed age breakdowns are reported in Appendix Table 5.

Source: 2017 DCPC. Results are not weighted.

Conclusion

This research shows that in any given three-day period, about one-fifth of survey respondents get cash. We find that consumers mostly get cash from family and friends, followed by ATM withdrawals, and the average amount they get is around \$100. The median is \$40, and, in about half of the cases, consumers get cash in exact multiples of \$20. Friday is the most popular day for getting cash, although day-of-week differences are less pronounced for ATM withdrawals.

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Appendix

Appendix Table 1

Location and Funding Source, Instances of Getting Cash, 2017

Percentage shares by number

Location	Funding source								
	Another person	Primary checking	Salary, wages, tips	Other checking or savings	Cashing a check	Primary GPR card	Other prepaid card	Credit card cash advance	Other
ATM	0.00%	18.66%	0.00%	2.43%	0.00%	0.31%	0.61%	0.15%	0.61%
Cash back	0.30%	7.13%	0.00%	0.15%	0.00%	0.15%	0.30%	0.15%	2.13%
Teller	0.00%	4.55%	1.06%	1.37%	3.03%	0.00%	0.15%	0.00%	0.61%
Family or friend	25.65%	1.37%	2.28%	0.61%	0.46%	0.00%	0.61%	0.00%	3.04%
Employer	1.97%	0.91%	7.88%	0.00%	0.15%	0.00%	0.00%	0.00%	0.76%
Cash refund	0.15%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%
Payday lender	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.16%
Other	3.04%	0.61%	0.46%	0.00%	0.00%	0.15%	0.00%	0.00%	5.47%

Appendix Table 2

Distribution of instances of getting cash

Percentage shares by day of week

Weekday	Volume share	Value share	Average value of cash obtained
Sunday	8.53%	4.38%	\$61
Monday	17.20%	16.19%	\$112
Tuesday	17.21%	12.70%	\$88
Wednesday	8.64%	7.09%	\$98
Thursday	9.30%	7.80%	\$100
Friday	21.44%	36.53%	\$203
Saturday	17.68%	15.30%	\$103

Appendix Table 3
 Distribution of ATM withdrawals
 Percentage shares by day of week

Weekday	Volume share	Value share	Average value of ATM withdrawal
Sunday	4.50%	1.90%	57.72
Monday	20.64%	22.12%	147.01
Tuesday	18.96%	25.54%	184.73
Wednesday	4.98%	6.75%	185.89
Thursday	9.91%	5.60%	77.57
Friday	21.91%	18.81%	117.79
Saturday	19.10%	19.28%	138.47

Appendix Table 4
 Distribution by age
 In full sample 2017 DCPC, of those who got cash at least once, of those who made an ATM withdrawal at least once
 Percentages (not weighted)

Age group	Sample	Got cash at least once	Made at least one ATM withdrawal
18-24	2.87%	2.44%	1.43%
25-34	14.47%	13.35%	7.86%
35-44	20.02%	18.23%	20.71%
45-54	18.25%	21.24%	25.00%
55-64	24.07%	25.38%	22.14%
65-74	15.34%	14.66%	17.86%
75-84	4.40%	4.14%	5.00%
85-94	0.55%	0.56%	0.00%

Appendix Table 5

Distribution by income

In full sample 2017 DCPC, of those who got cash at least once, of those who made an ATM withdrawal at least once

Percentages (not weighted)

Household income	Sample	Got cash at least once	Made at least one ATM withdrawal
<\$5,000	2.81%	2.64%	2.14%
5000-7499	1.26%	1.13%	2.14%
7500-9999	1.70%	0.94%	0.71%
10000-12499	2.17%	3.02%	0.00%
1250-14999	1.94%	0.75%	0.71%
15000-19999	3.60%	4.53%	1.43%
20000-24999	3.36%	4.34%	2.86%
25000-29999	5.77%	5.47%	6.43%
30000-34999	5.34%	6.23%	9.29%
35000-39999	5.34%	6.79%	8.57%
40000-49999	7.47%	7.92%	7.14%
50000-59999	8.30%	8.68%	7.86%
60000-74999	12.53%	11.70%	10.00%
75000-99999	14.51%	12.26%	12.86%
100000-124999	9.80%	11.32%	12.86%
125000-199999	10.55%	9.25%	12.14%
200000-499999	3.28%	3.02%	2.86%
>=500000	0.28%	0.00%	0.00%