

# Cash in the 21<sup>st</sup> Century

Talk About Payments Webinar

Federal Reserve Bank of Atlanta

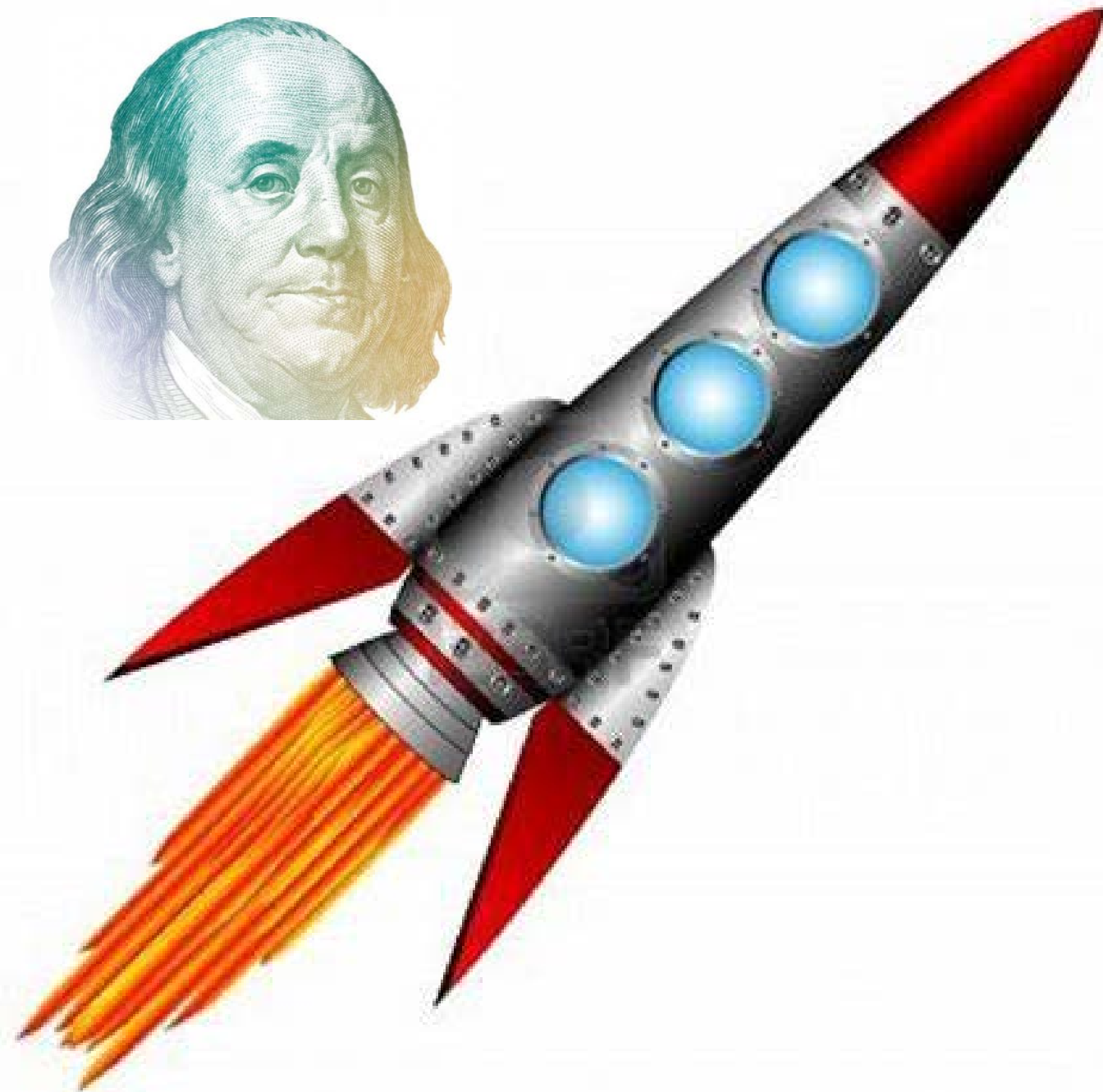
October 10, 2019



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# CASH IN THE 21<sup>ST</sup> CENTURY

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Data from Federal  
Reserve surveys

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# Today's presenters



Oz Shy  
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FRB Atlanta



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FRB Atlanta



Shaun O'Brien  
Senior Policy Consultant  
FRB San Francisco

# Tickets

Purchase Tickets / Add Value  
Credit / Debit Cards Only



**MBTA FARES**

**Tickets & Passes**

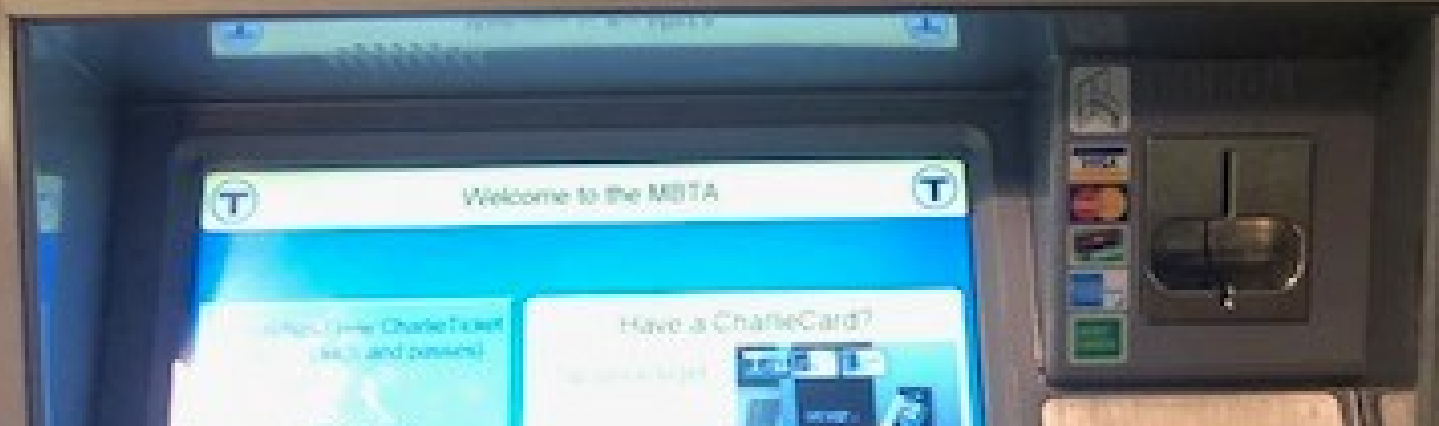
	Commuter Rail	Orange Line	Blue Line	Green Line	Silver Line
<b>Single Ride</b>					
CharlieCard	\$1.75	\$2.25	\$2.25		
CharlieTicket	\$2.00	\$2.75	\$2.75		
Senior/65+	\$0.80	\$1.00	\$1.00		
Student	\$0.80	\$1.00	\$1.00		
<b>PASSES</b>					
1-Day	\$12.00	\$12.00	\$12.00		
7-Day	\$71.25	\$71.25	\$71.25		
Monthly	\$103.00	\$104.50	\$104.50		

\* CharlieCards can be obtained from all 16 authorized service agents. Transfer is not within two hours of paying your fare (Peak Period and Rush Hour).  
\* CharlieCard and CharlieTicket fare when accompanied by an adult.  
\* Reduced fare passes are available to eligible students, senior age 65 and over, persons with disabilities, and disabled veterans. Contact MBTA for more information. Call 617-222-3224, 617-452-0346 (TDD).  
\* Complete fare information can be found at [mbta.com](http://mbta.com).

**NO CASH**  
Credit / Debit Cards Only

**Senior / Student / Disabled**

	Commuter Rail	Orange Line	Blue Line	Green Line	Silver Line
<b>Single Ride</b>					
CharlieCard	\$0.80	\$1.00	\$1.00		
CharlieTicket	\$0.80	\$1.00	\$1.00		
Student	\$0.80	\$1.00	\$1.00		
Senior/65+	\$0.80	\$1.00	\$1.00		
<b>PASSES</b>					
1-Day	\$6.00	\$6.00	\$6.00		
7-Day	\$35.63	\$35.63	\$35.63		
Monthly	\$51.50	\$52.25	\$52.25		





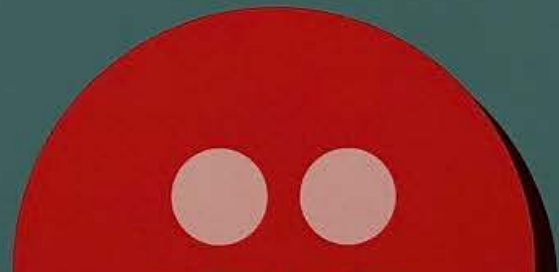


# WE ARE GOING CASHLESS!



June 1st, 2018

**TEAM SAFETY**



Going cashless is safer for our staff





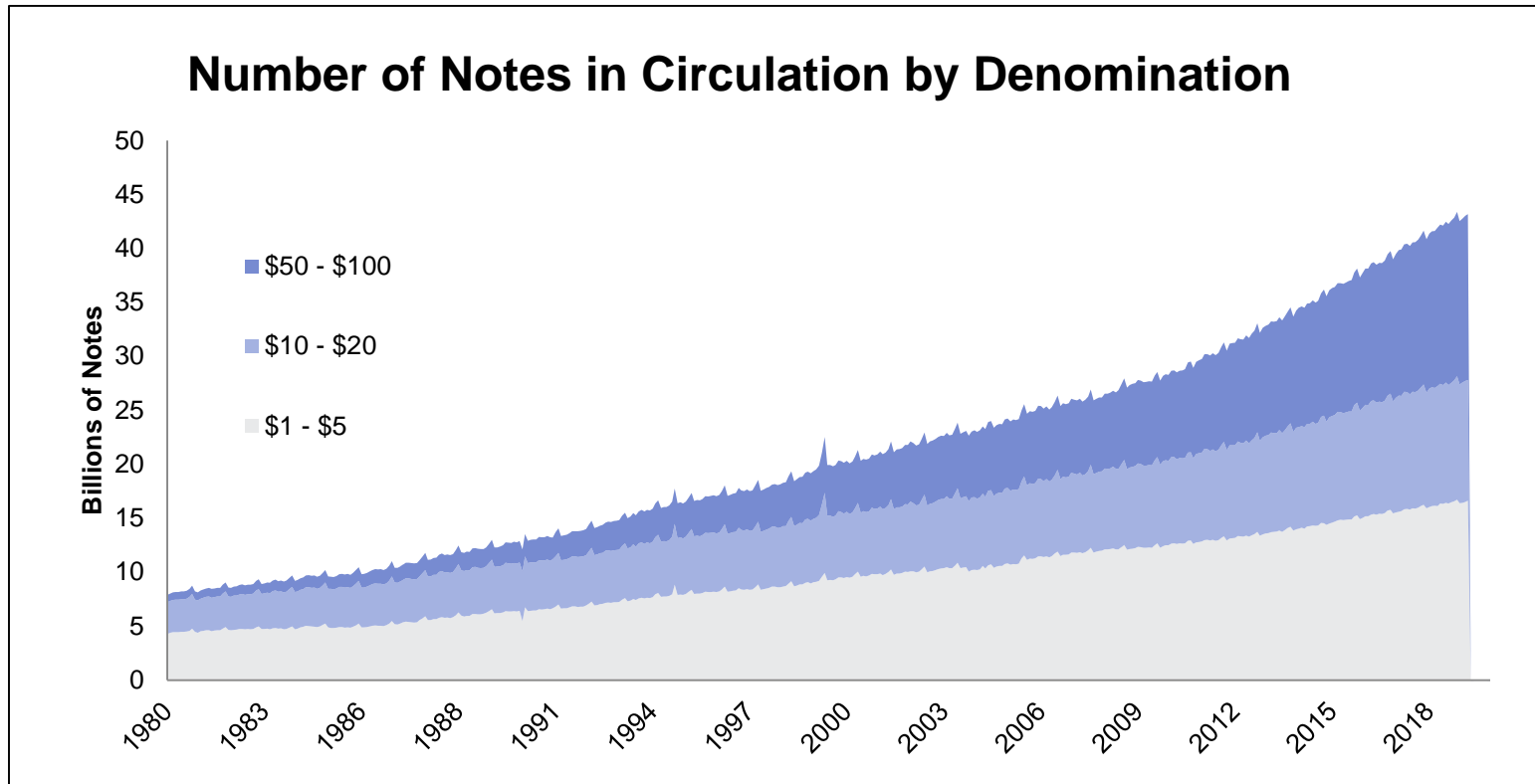
# A brief history of cash



- Earliest coins: Lydia (Western Turkey), 7<sup>th</sup> century BCE
- First paper bills: China, ~800 CE
- Europe catches up: Paper money printed in Sweden, 1661



# Demand for cash continues rise

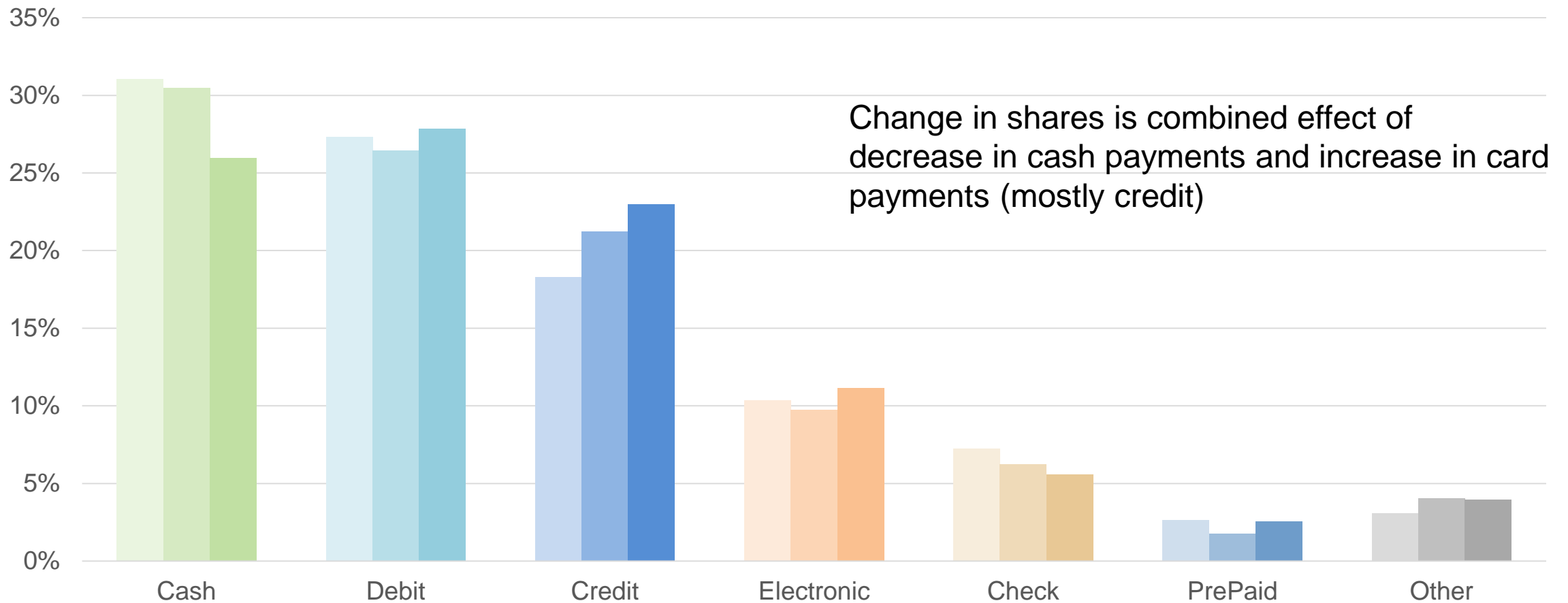


As of April 2019, U.S.  
currency in circulation  
reached  
**1.68 trillion**  
worldwide

**5.4% increase** over  
2018

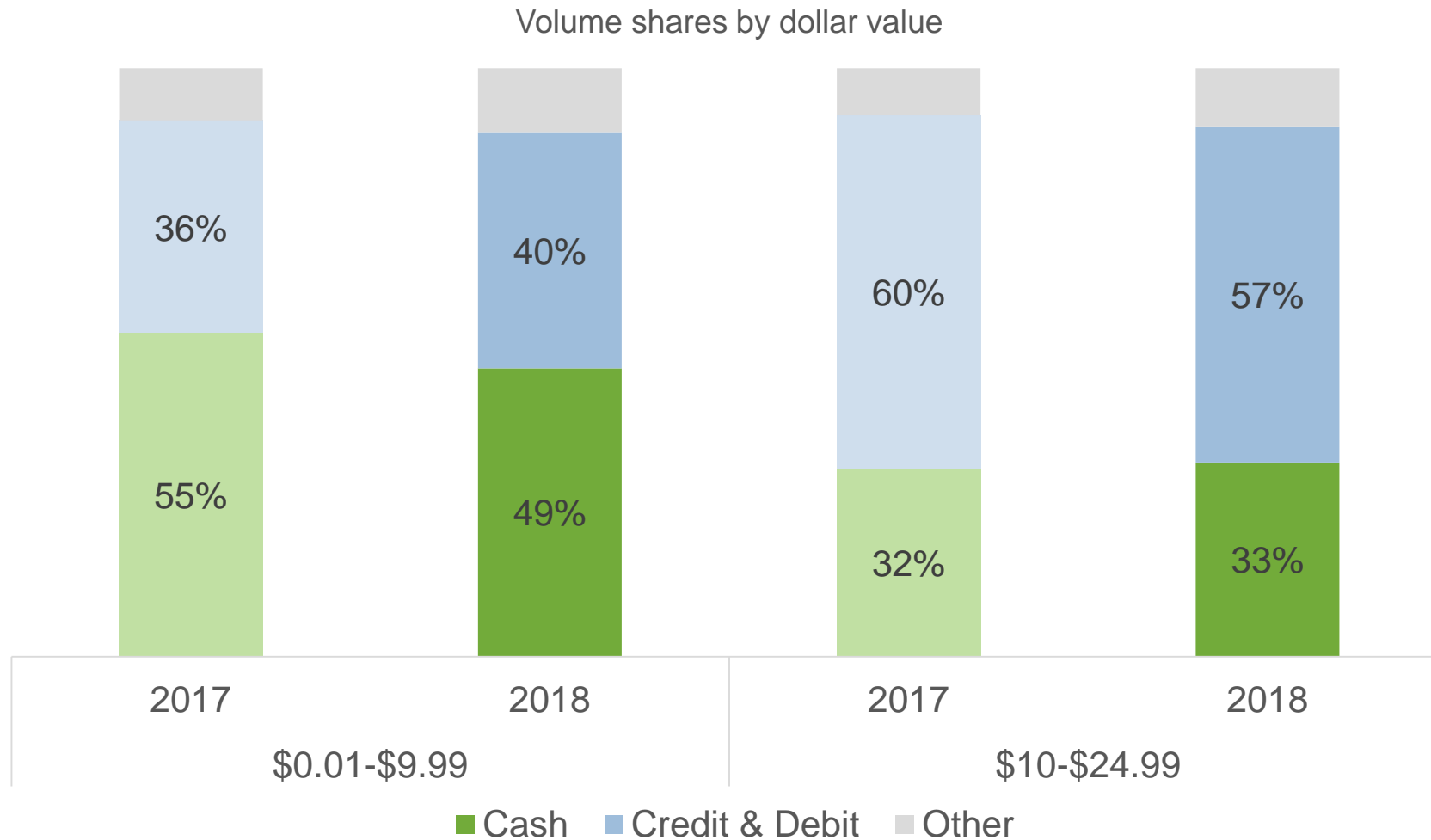
# Consumer's share of payments made in cash dropped 5 percentage points, 2016–2018

Shares of Payment Instrument Usage, volume, 2016–2018  
(2018 shaded darkest)



Source: Diary of Consumer Payment Choice.

# Cash share for small-dollar payments dropped 2017-18



Source: 2018 Diary of Consumer Payment Choice.

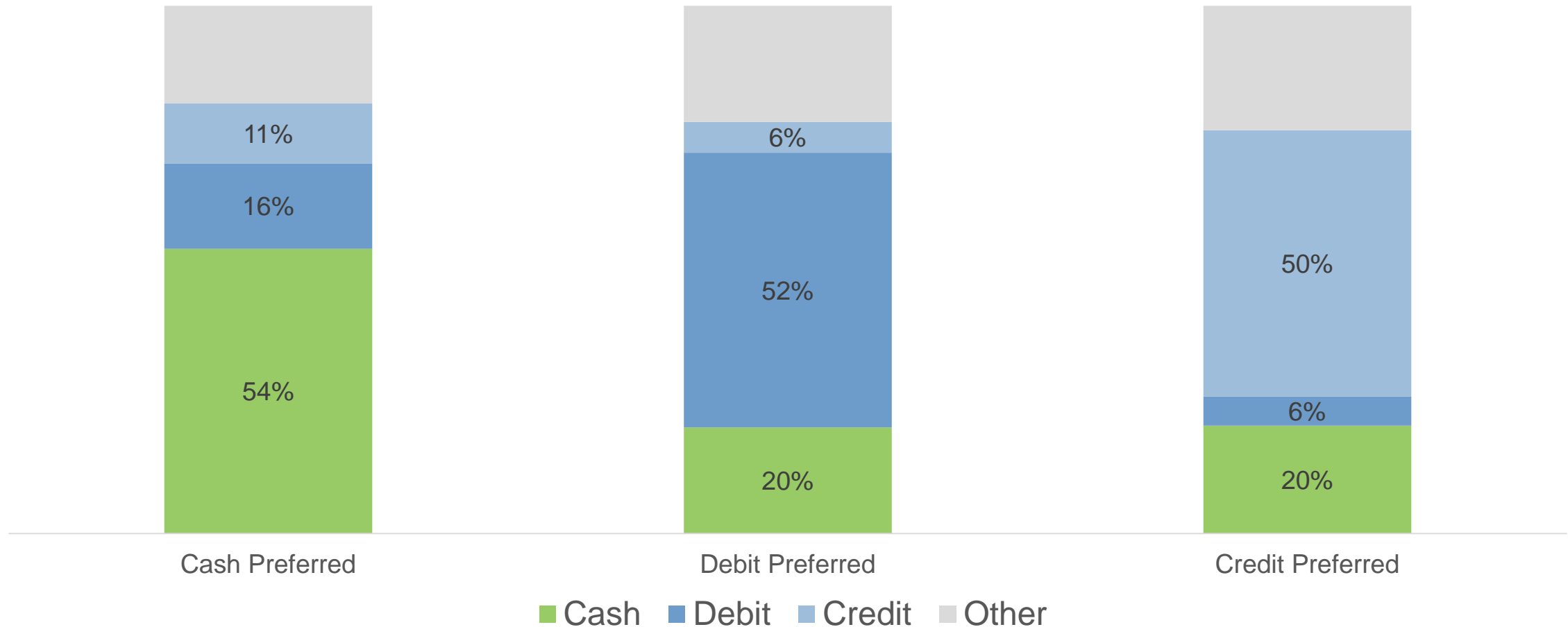




# Everyone

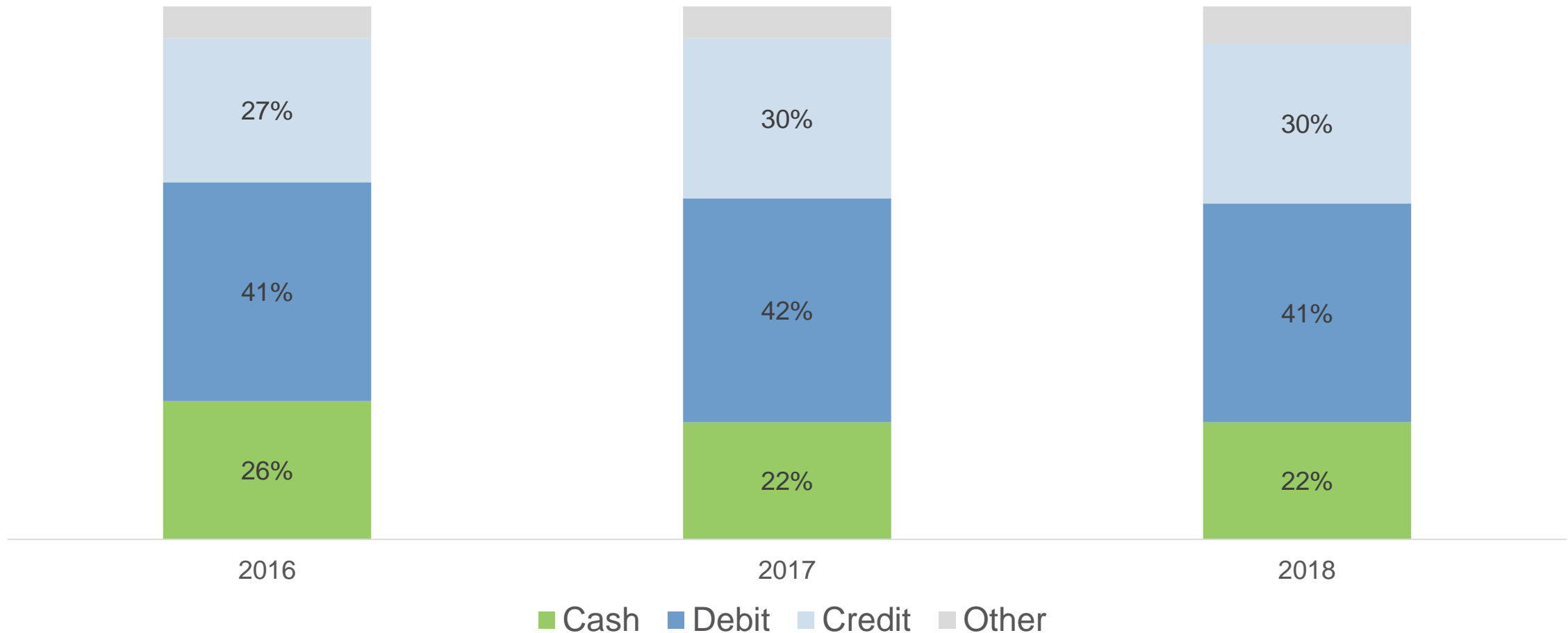
# Cash prefer-ers use **cash** more than others

Payment use (volume shares) by stated preference



# Preferences shifting away from **cash**

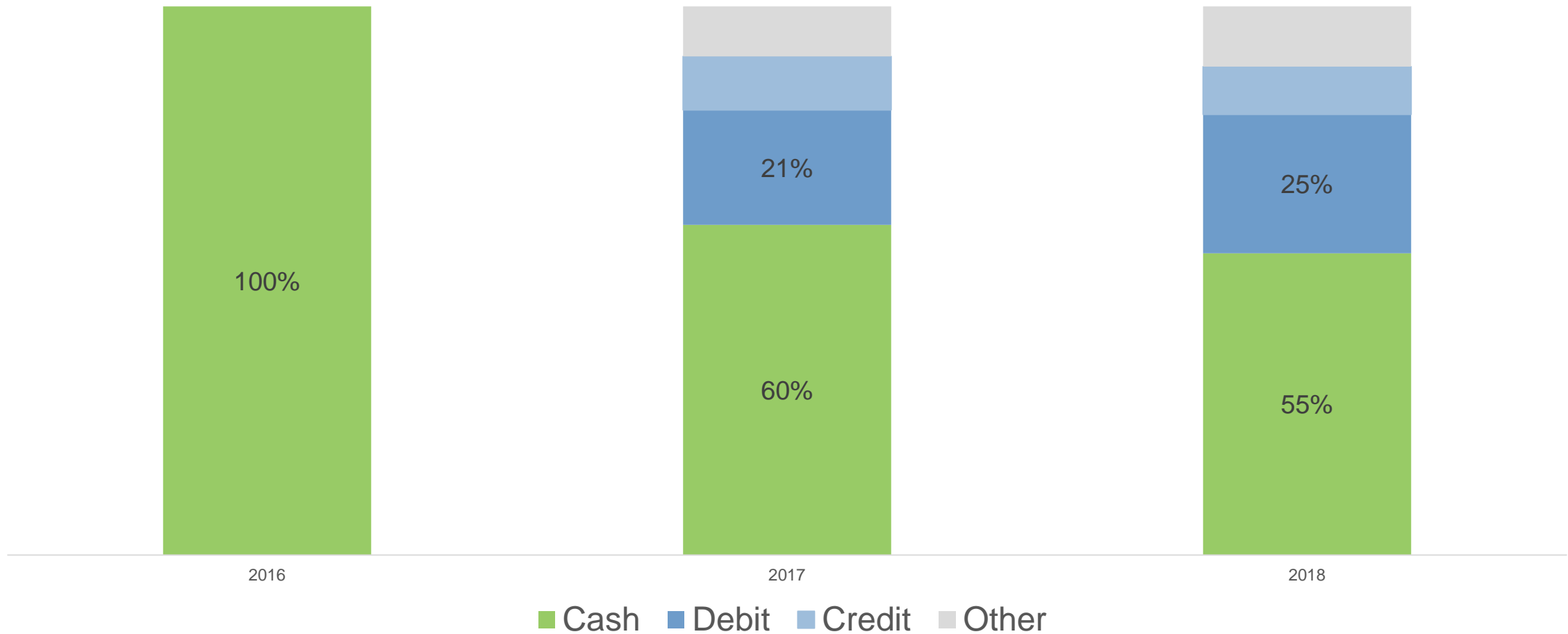
Shares of consumers preferring each payment instrument



Source: 2018 Diary of Consumer Payment Choice.

# Cash switchers lean toward **debit**

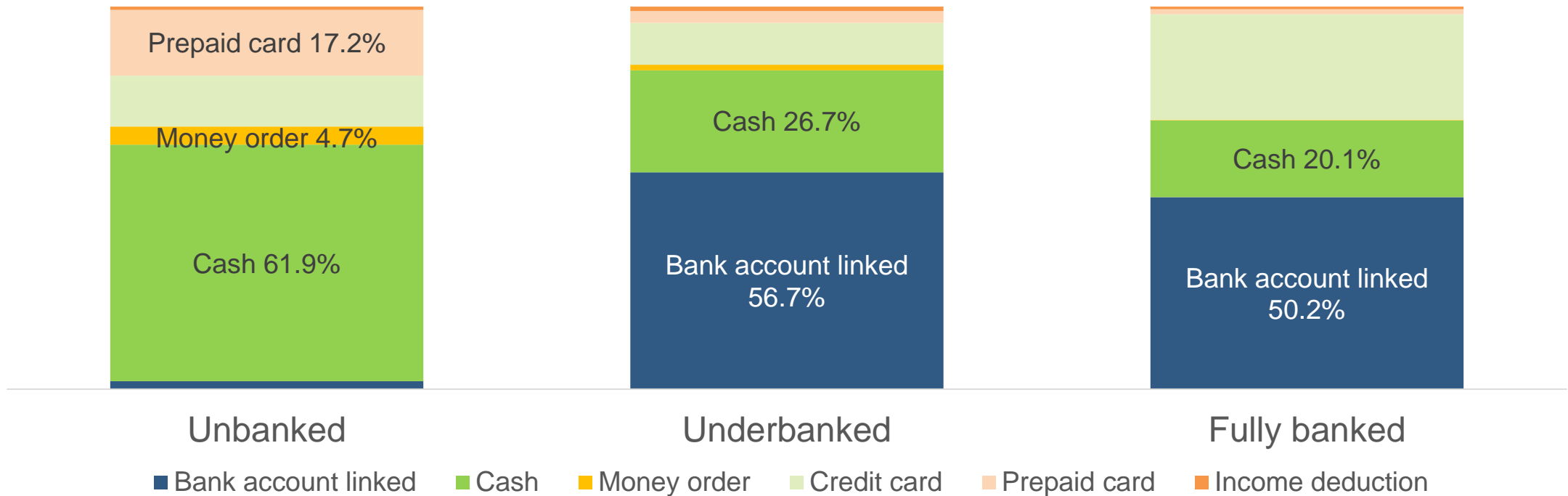
Of consumers preferring cash in 2016, shares preferring cash in later years



Source: 2018 Diary of Consumer Payment Choice.

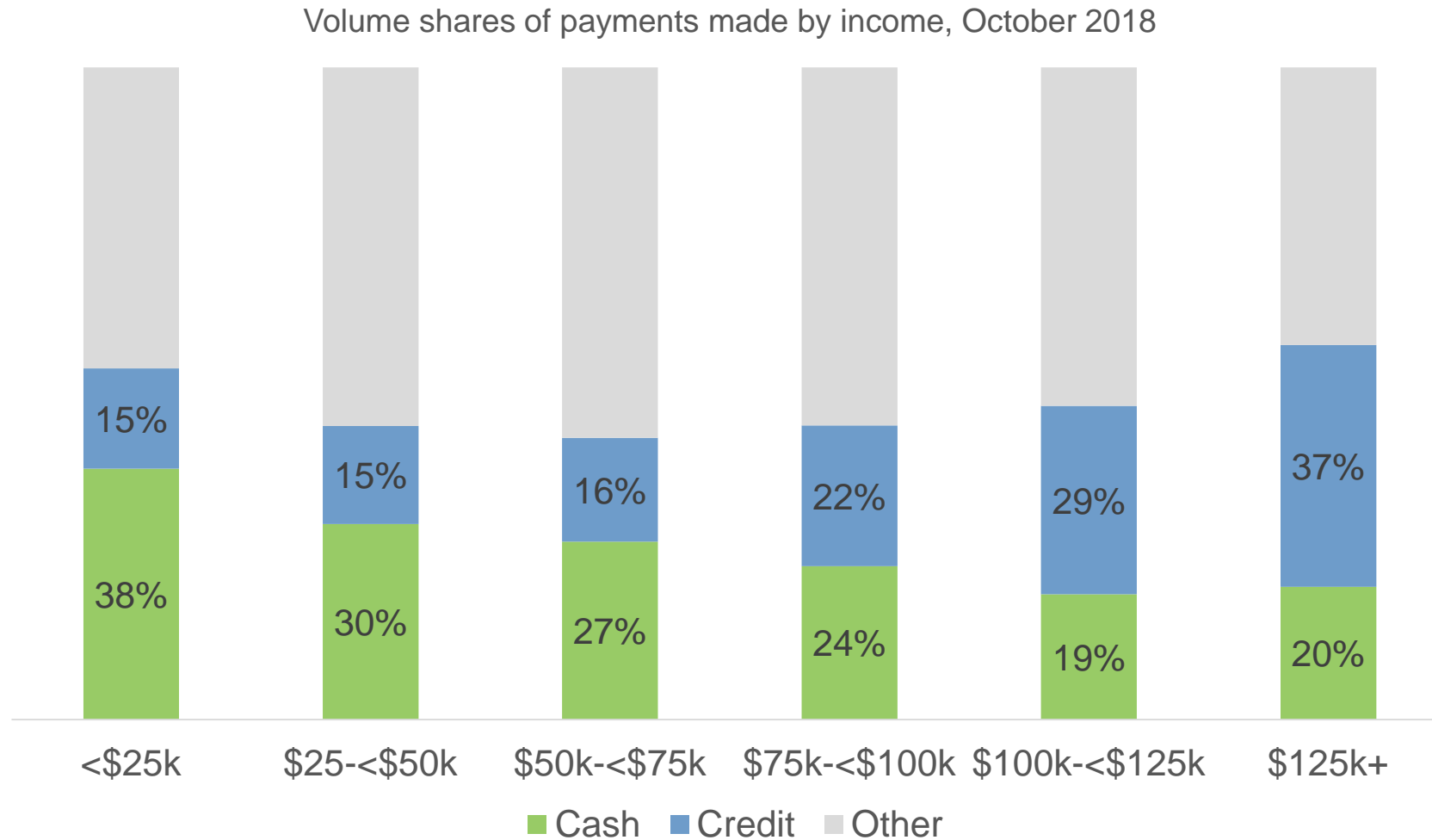
# Unbanked make most payments with **cash**; underbanked are similar to banked consumers

Volume shares of payments, by banking status



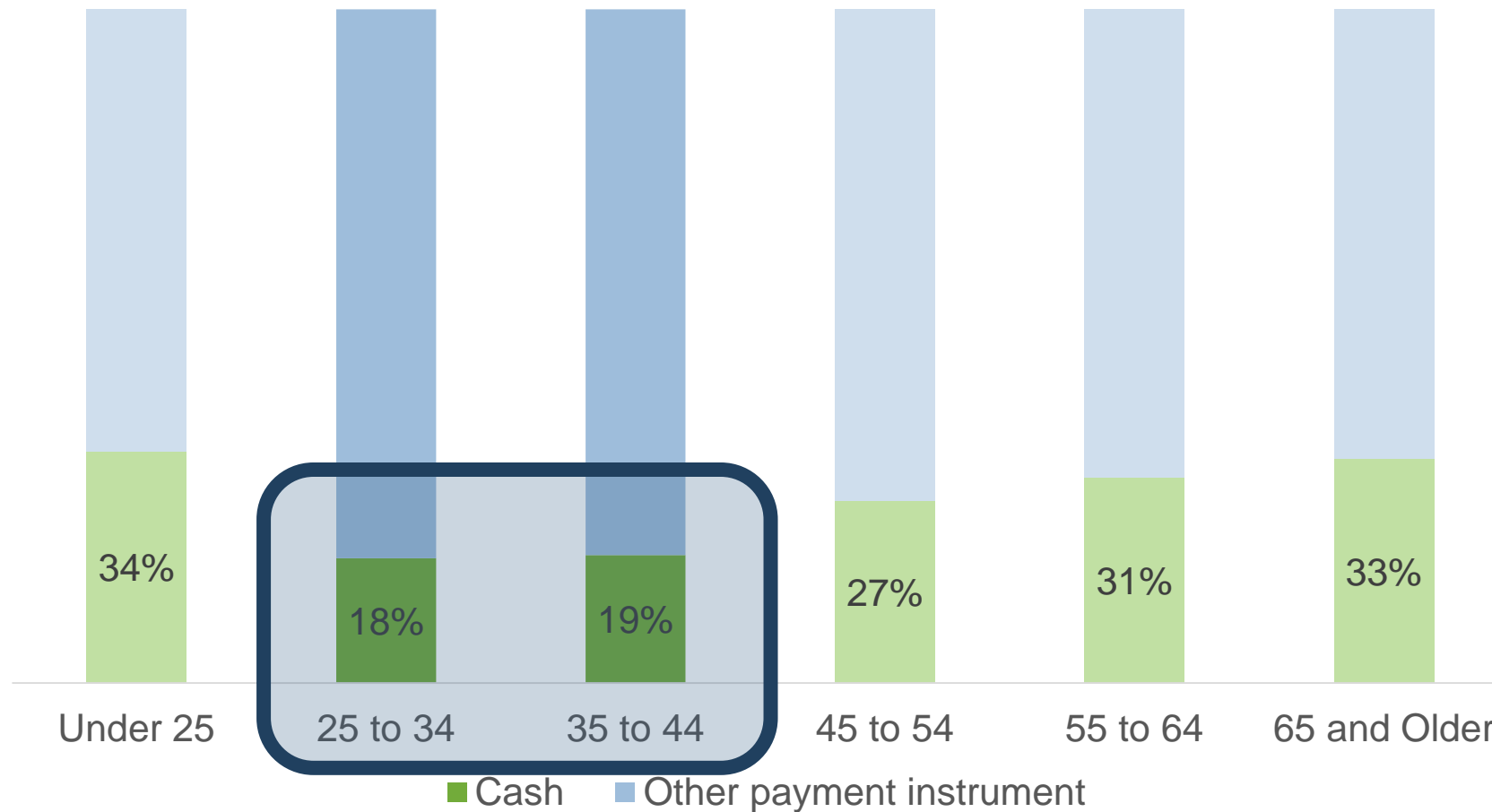


# Lower income correlates to cash use, higher income to credit card use



# Millennials used cash relatively less often than others: ages 24–38 in 2018

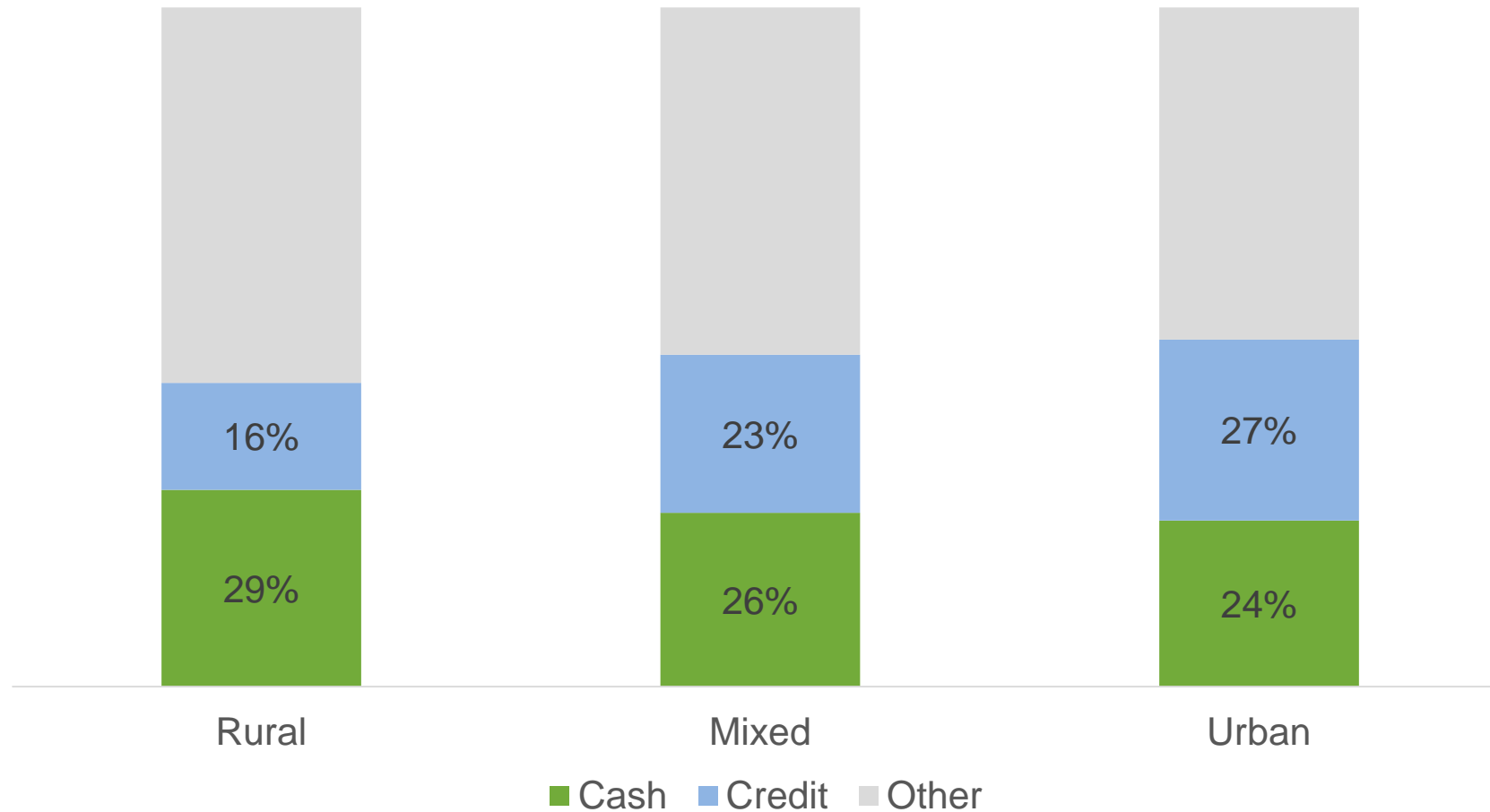
Volume shares of payments made using cash, by age, October 2018



Source: 2018 Diary of Consumer Payment Choice.

# Urban households used credit cards more, # of cash transactions similar

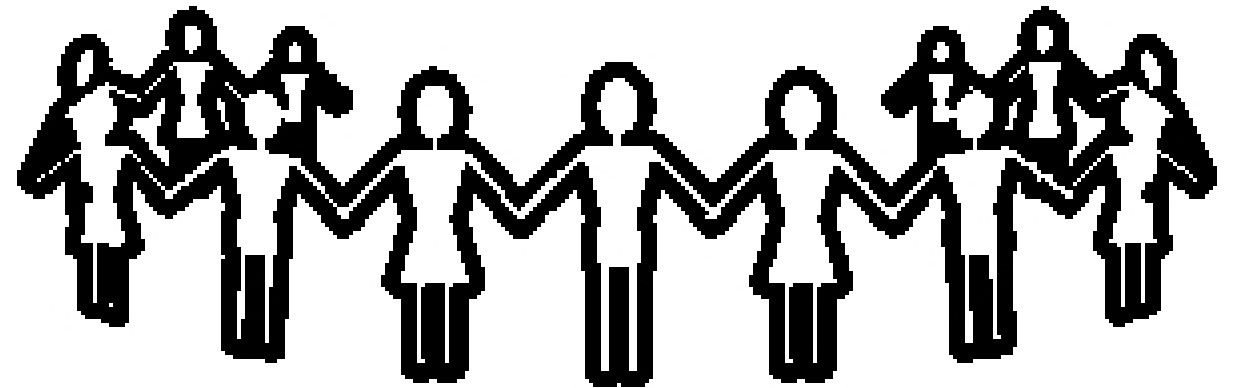
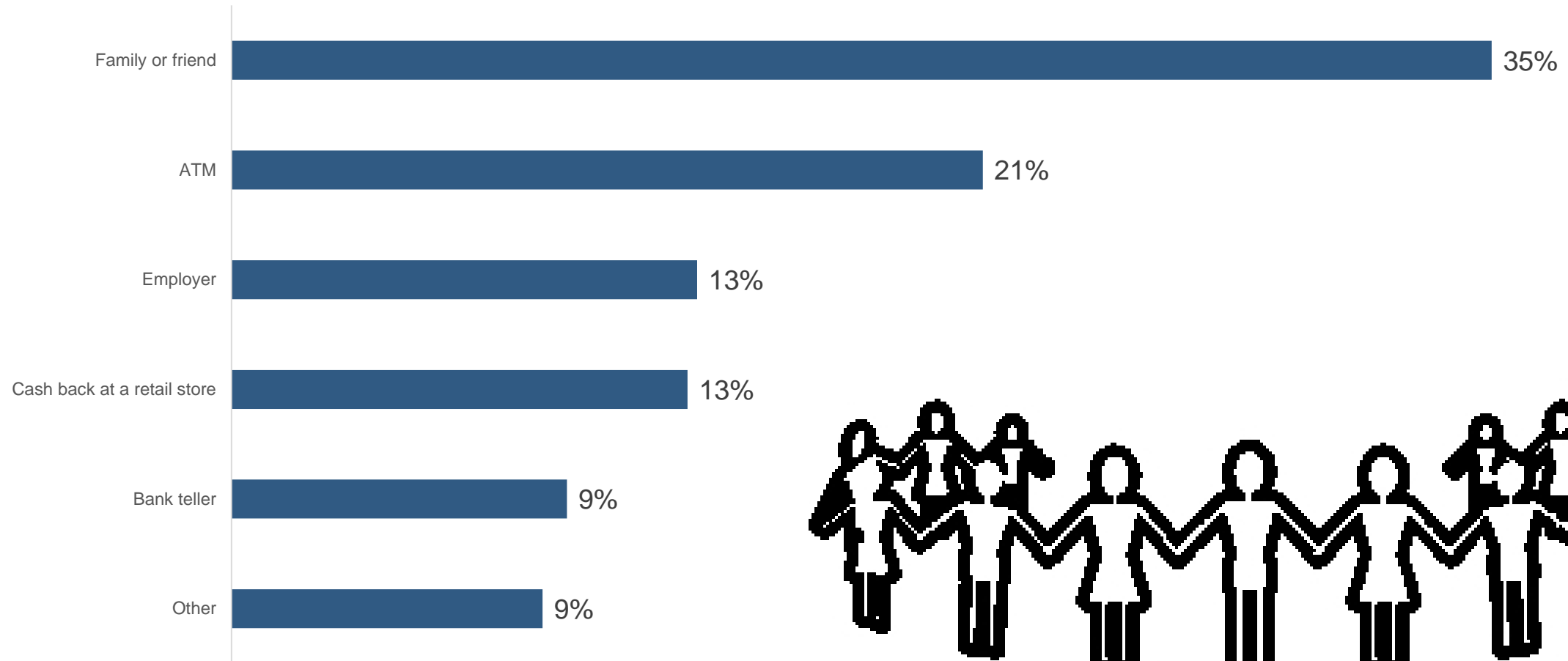
Volume shares of payments made by community type, October 2018



Source: 2018 Diary of Consumer Payment Choice.

# We mostly get cash from family & friends

Volume shares of instances of getting cash, 2017



Source: "How Consumers Get Cash: Evidence from a Diary Survey."

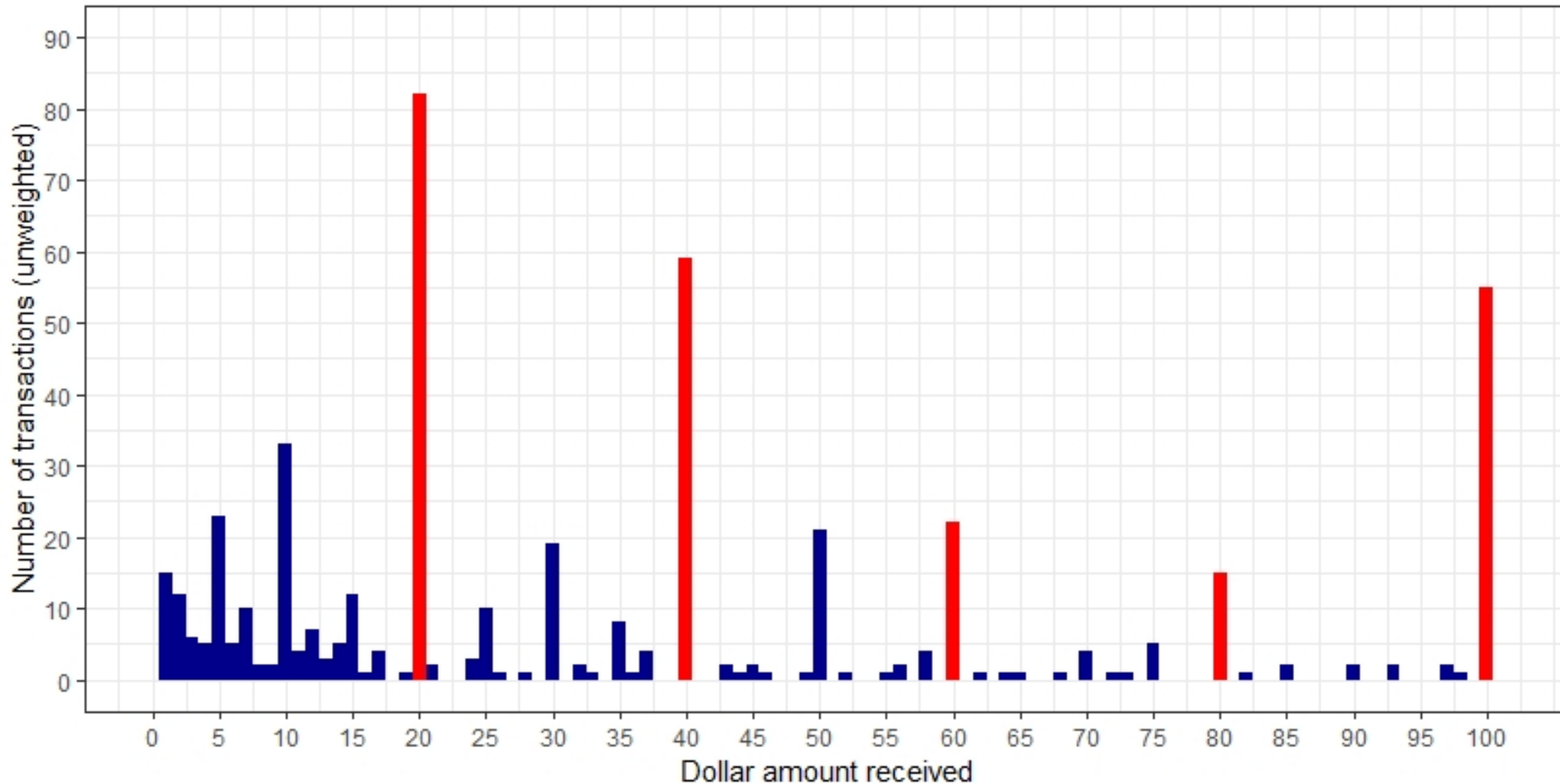
# By value, we get 40% of cash on Fridays



- On average, consumers get \$200 on Fridays
- We get the least cash by value on Sunday

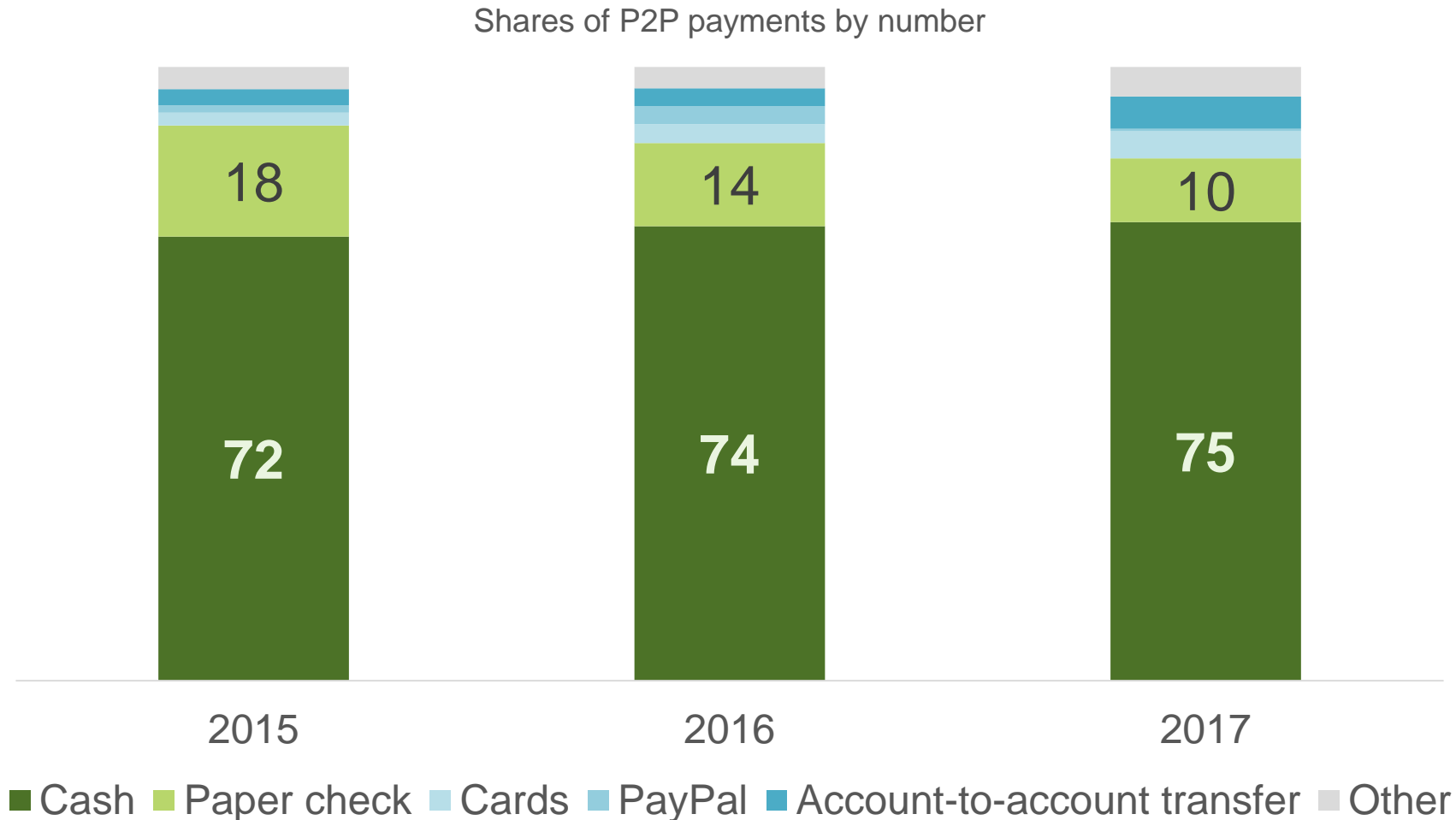


Mostly, we get cash in multiples of \$20



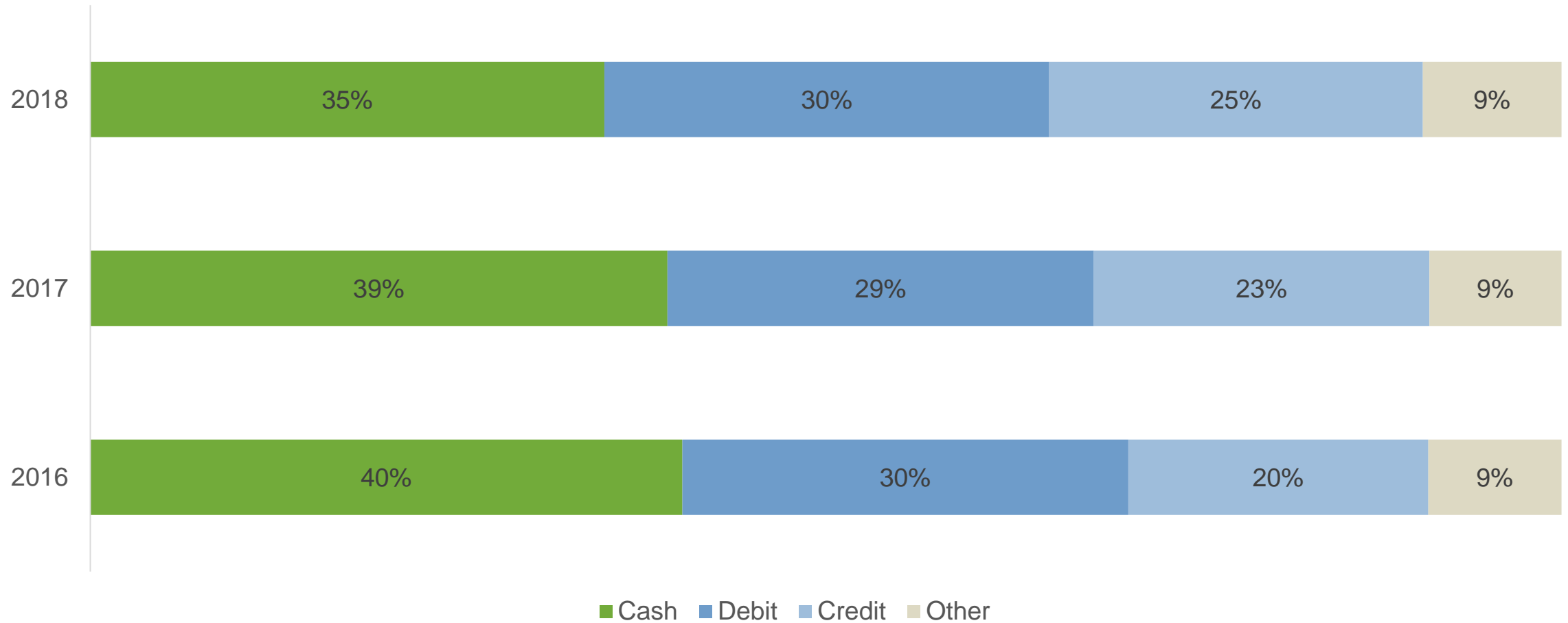
Source: "How Consumers Get Cash: Evidence from a Diary Survey."

# Cash used for 3/4 of P2P payments; New methods take share from checks



# For in-person payments, **Cash** is used most

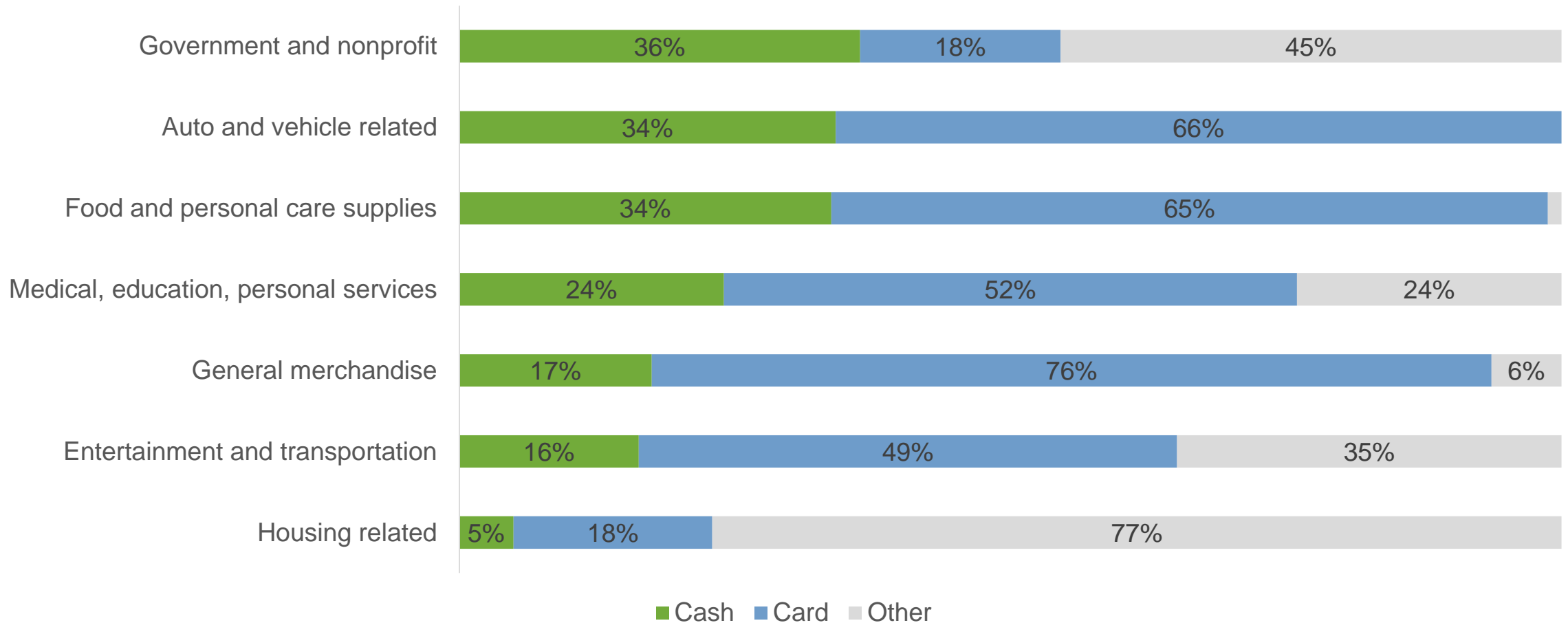
Shares of in-person payments by number



Source: Diary of Consumer Payment Choice.

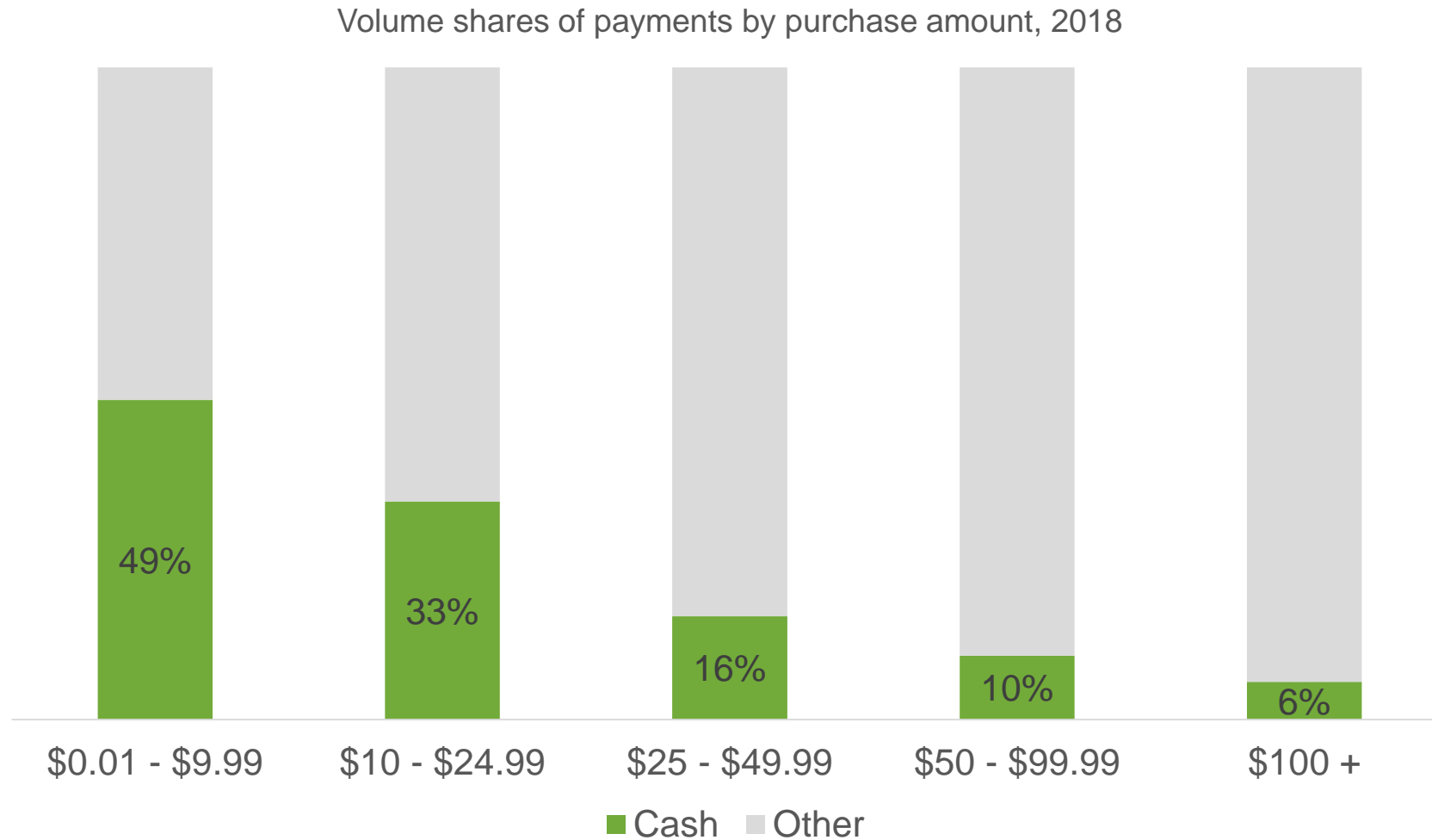
# Cash used for 1/3 of nonprofits, food, gas

Payment instrument use by payee type (volume shares), 2018



Source: 2018 Diary of Consumer Payment Choice.

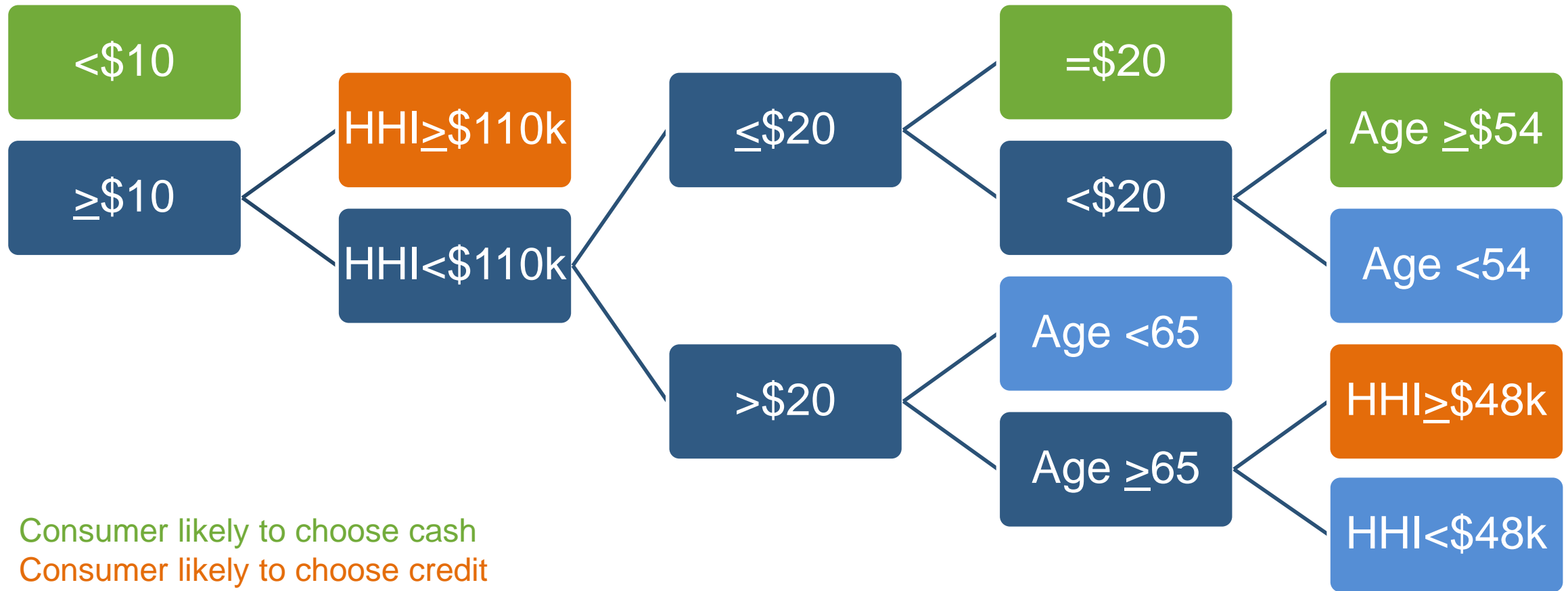
# Cash used for almost half of small-dollar purchases



Source: 2018 Diary of Consumer Payment Choice.



# What influences the choice to use cash?



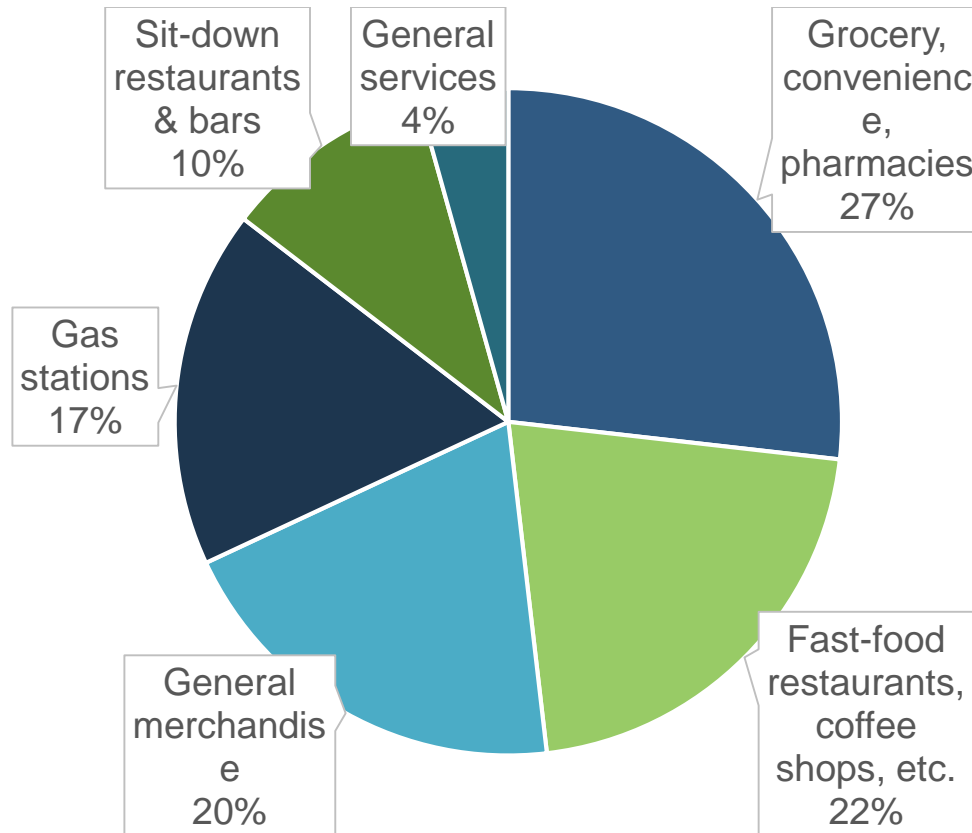
Consumer likely to choose cash

Consumer likely to choose credit

Consumer likely to choose debit

# Behavior differs at the point of sale

When paying in person...



choices differ with card ownership

Neither non-prepaid debit nor credit      **9/10** purchases in cash

Both non-prepaid debit and credit      **1/3** purchases in cash

At left, share of cash payments (volume) by merchant type  
Source: "Cashless Stores and Cash Users."

# Cash for paying

## Access

“I don't think we will ever be entirely cashless, maybe in large part because I don't know if we will ever be in a world that **every person** has a smartphone or a mobile device.”

PayPal CEO, WSJ, 2/20/2018

## Legislative action

### 1978

- [Massachusetts](#)

### 2019

- [Philadelphia](#)
- [New Jersey](#)
- [San Francisco](#)

### Proposed

- [Cash Buyer Discrimination Act](#)

# Cash for emergencies



Or glitches (September 2019, Harvard Square)



# Or merchant preference (July 2019, Boston)





# Surveys of U.S. consumers, 18+

- **Survey of Consumer Payment Choice, SCPC (2008-2019)**
  - Adoption of deposit accounts and payment instruments
  - Use (# per month) of payment instruments by 7 payment types
  - Respondents rate payment instruments on characteristics
- **Diary of Consumer Payment Choice, DCPC (2012, 2015-2019)**
  - Use (# and \$) of payment instruments for all payment types
  - Types of payees and consumer expenditures

# References and survey data

## References

[“2019 Findings from the Diary of Consumer Payment Choice”](#) by Raynil Kumar and Shaun O’Brien, Federal Reserve Bank of San Francisco Fednotes, June 2019.

[“Cash Me If You Can: The impacts of cashless businesses on retailers, consumers, and cash use”](#) by Claire Wang, Federal Reserve Bank of San Francisco, August 2019.

[“Cashless Stores and Cash Users”](#) by Oz Shy. Federal Reserve Bank of Atlanta Working Paper 2019-11, May 2019.

“Changes in U.S. Consumer Payments” by Shaun O’Brien. Federal Reserve Bank of San Francisco, forthcoming.

[“How Consumers Get Cash: Evidence from a Diary Survey”](#) by Claire Greene and Oz Shy, Federal Reserve Bank of Atlanta Research Data report 19-01.

[“How the ATM Affects the Way We Pay,”](#) by Oz Shy Federal Reserve Bank of Atlanta Working Paper 2019-02, February 2019.

[“Payment Instrument Adoption and Use in the United States, 2009-2013,”](#) by Consumers' Demographic Characteristics” by Sean Connolly and Joanna Stavins Federal Reserve Bank of Boston Research Data Report 15-6.

Kurz, Christopher, Geng Li, and Daniel J. Vine (2018). [“Are Millennials Different?”](#) Finance and Economics Discussion Series 2018-080. Washington: Board of Governors of the Federal Reserve System, <https://doi.org/10.17016/FEDS.2018.080>.

Judson, Ruth (2012). [“Crisis and Calm: Demand for U.S. Currency at Home and Abroad from the Fall of the Berlin Wall to 2011,”](#) International Finance Discussion Papers 1058. Board of Governors of the Federal Reserve System (U.S.).

## Fed consumer surveys

- [Survey of Consumer Payment Choice](#)
- [Diary of Consumer Payment Choice](#)
- [Survey of Consumer Finances](#)
- [Survey of Household Economics and Decisionmaking](#)
- [Survey of Consumer Expectations](#)
- [Consumers & Mobile Financial Services](#)
- [Federal Reserve Payments Study](#)

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