

# **Millennial Mobile Payment Users: A Look into their Personal Finances and Financial Behaviors**

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## Introduction

- This analysis is focused on 18 – 34 year old individuals
- Most diverse generation
  - Minorities are broadly represented (38%)
- Millennials are highly educated
  - 37% have at least a bachelor's degree
- Will soon make up the largest share of the labor market
  - By 2025, 3 out of 4 workers globally will be Millennials
- Financially, they have faced the Great Recession early in their lives and careers, and struggled with large increases in the cost of education.
- Cohort with the largest proportion of fintech users.
- We aim to build a comprehensive profile of mobile payment users and understand how fintech is connected to users' financial behavior.



### **2015 National Financial Capability Study (NFCS)**

- Online nationally representative sample of more than 27,000 respondents
- Commissioned by FINRA Investor Education Foundation
- Offers unique information on financial literacy and capability
- The sample of Millennials contains 7,894 observations

### **2016 GFLEC Mobile Payment Survey**

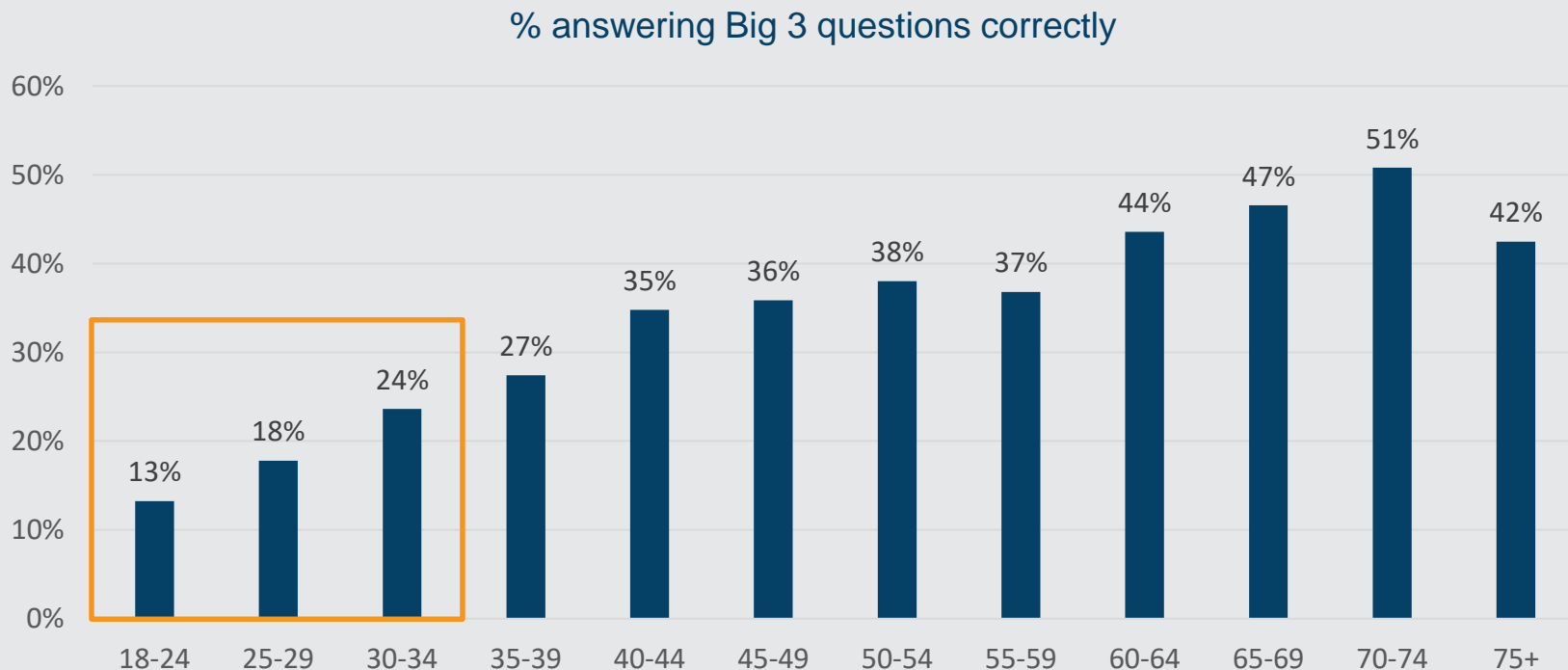
- GFLEC fielded an independent survey, including questions from the NFCS and a set of additional questions to enrich the analysis
- Amazon's Mechanical Turk platform
- The sample size is 2,007 Millennials

## Section 1

# Financial Literacy and Personal Finances

## The Current Situation for Millennials

## Financial literacy across age



Source: 2015 NFCS

- Financial knowledge increases very slowly with age/cohort
- Less than 1/4 know 3 basic concepts by age 34 even though most important decisions are made well before that age

## Millennials borrowing on their assets and investments

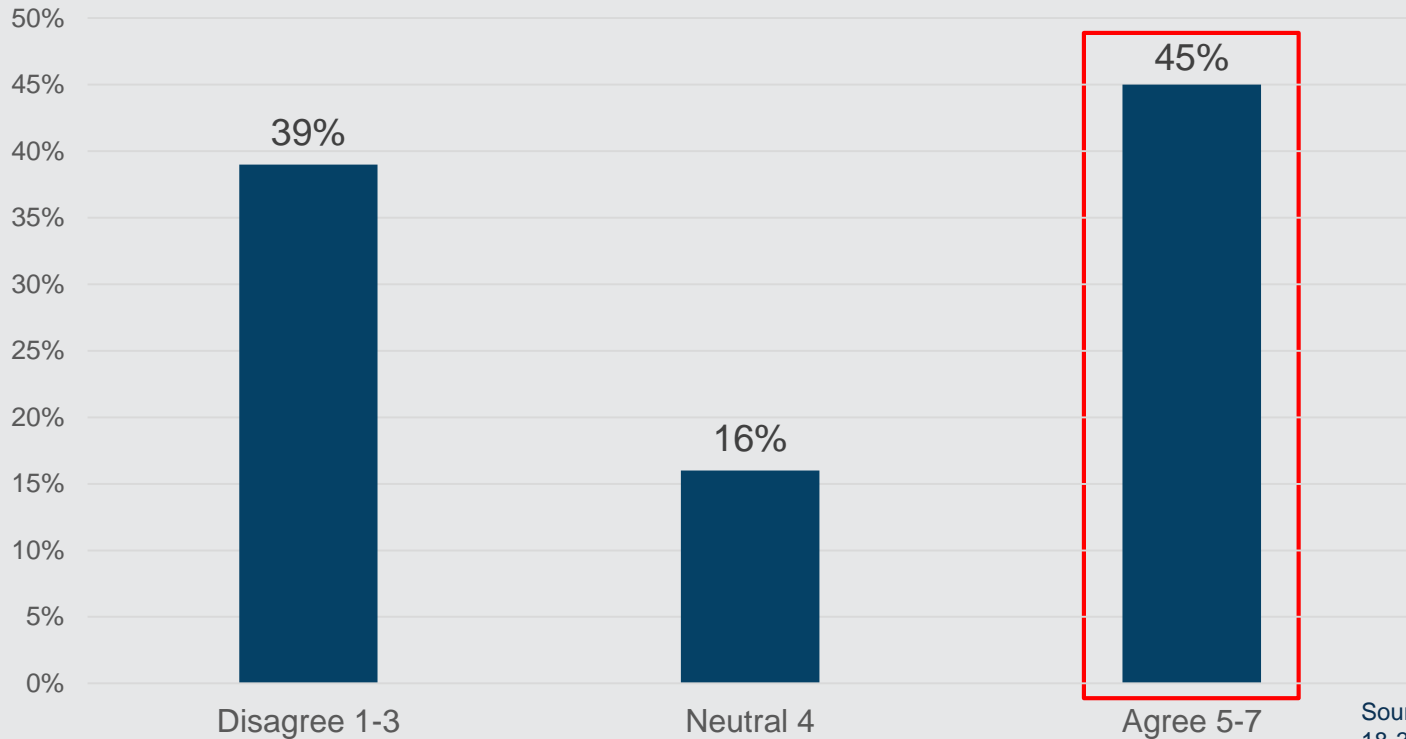
Have a checking account	86%
<i>Overdrew from their checking account</i>	<i>26%</i>
Own a home	38%
<i>Have a mortgage on their home</i>	<i>63%</i>
Have a self-directed retirement account	33%
<i>Took a loan from their retirement account (in the 12 months prior to the survey)</i>	<i>23%</i>
<i>Made a hardship withdrawal from their retirement account (in the 12 months prior to the survey)</i>	<i>20%</i>
<i>Either took a loan or made a hardship withdrawal</i>	<i>27%</i>
Have a college degree	37%
<i>Have an outstanding student loan</i>	<i>39%</i>
Have at least one credit card	70%
<i>Expensive credit card behavior (fee for late payment, over-the limit fee, fee for cash advance)</i>	<i>46%</i>

Note: Borrowing on assets and investments conditional on having the assets and investments.

Source: 2015 NFCS;  
18–34 year old

## Perceived over-indebtedness

How strongly do you agree or disagree with the following statement?  
"I have too much debt right now."



Source: 2015 NFCS;  
18-34 year old

*Note:* Percentages do not add up to 100% because "don't know" and "prefer not to say" answers are excluded.

## Section 2

# Mobile Payment Users vs. Non-Users



## Users of mobile payments

How often do you use your mobile phone to pay for a product or service in person at a store, gas station, or restaurant (e.g., by waving/tapping your mobile phone over a sensor at checkout, scanning a barcode or QR code using your mobile phone, or using some other mobile app at checkout)?

- Frequently
  - Sometimes
  - Never
  - Don't know
  - Prefer not to say
- Users
- Non-users

39% of Millennials in the NFCS  
and 49% in the GFLEC Mobile  
Payment Survey reported using  
mobile payments

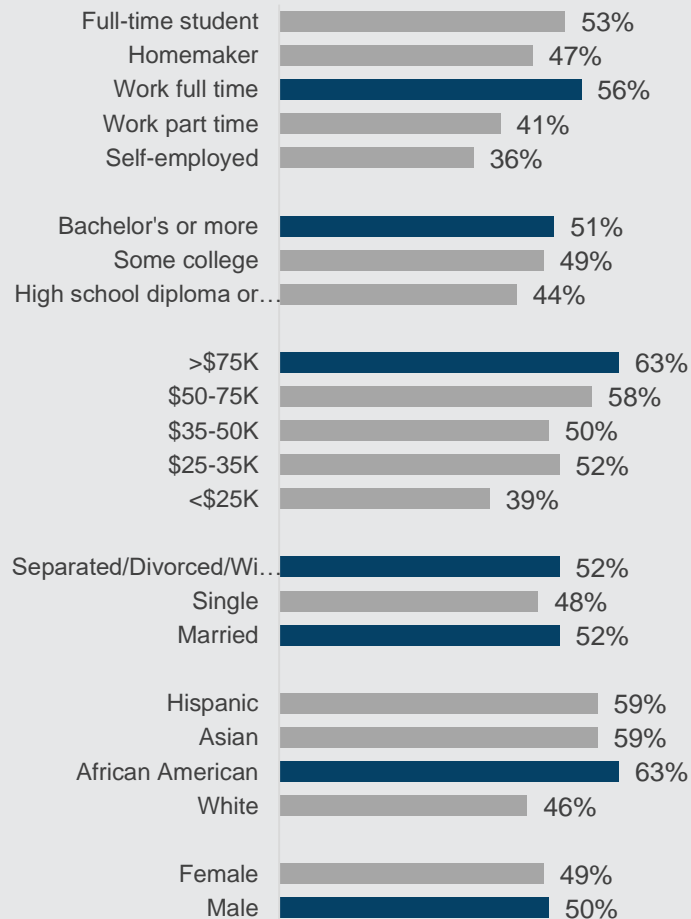
*Note:* Individuals who indicated “Don’t know” or “prefer not to say” were excluded from the analysis. Sample of 7,894 observations in the NFCS and 2,007 in the GFLEC Survey.

## Demographics of mobile payment users

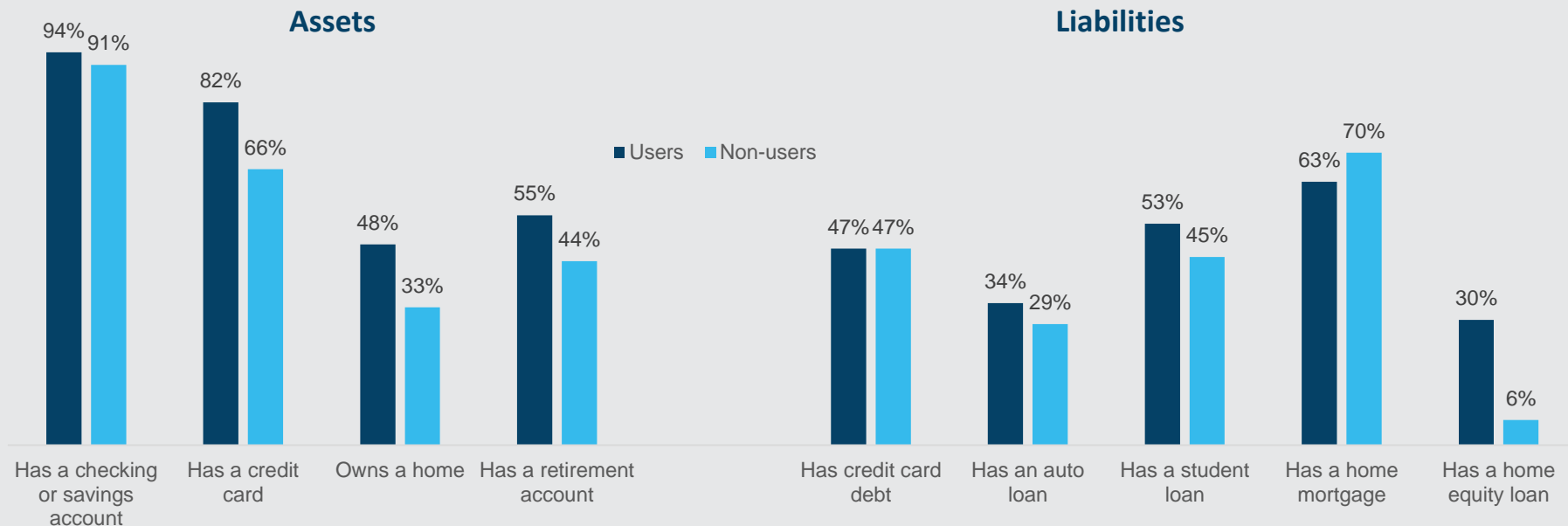
The average mobile payment user, according to the GFLEC Mobile Payment Survey is:

- educated (Bachelor's or more),
- male (more pronounced in NFCS),
- working full time,
- has high income,
- is more likely to be married
- and to belong to a minority ethnic group.

Source: 2016 GFLEC Mobile Payments Survey. Statistics read as "50% of 18-34 year old males use mobile payments"



## Assets and liabilities of users compared to non-users



Source: 2015 NFCS; 18–34 year old

Mobile payment users hold more assets than non-users, i.e., are more likely to

- have a checking or savings account
- have at least one credit card
- have a home
- have a retirement account

Millennial mobile payment users are more likely to hold nearly every form of debt compared to non-users. Users are more likely to have:

- auto loans
- student loans
- home equity loans

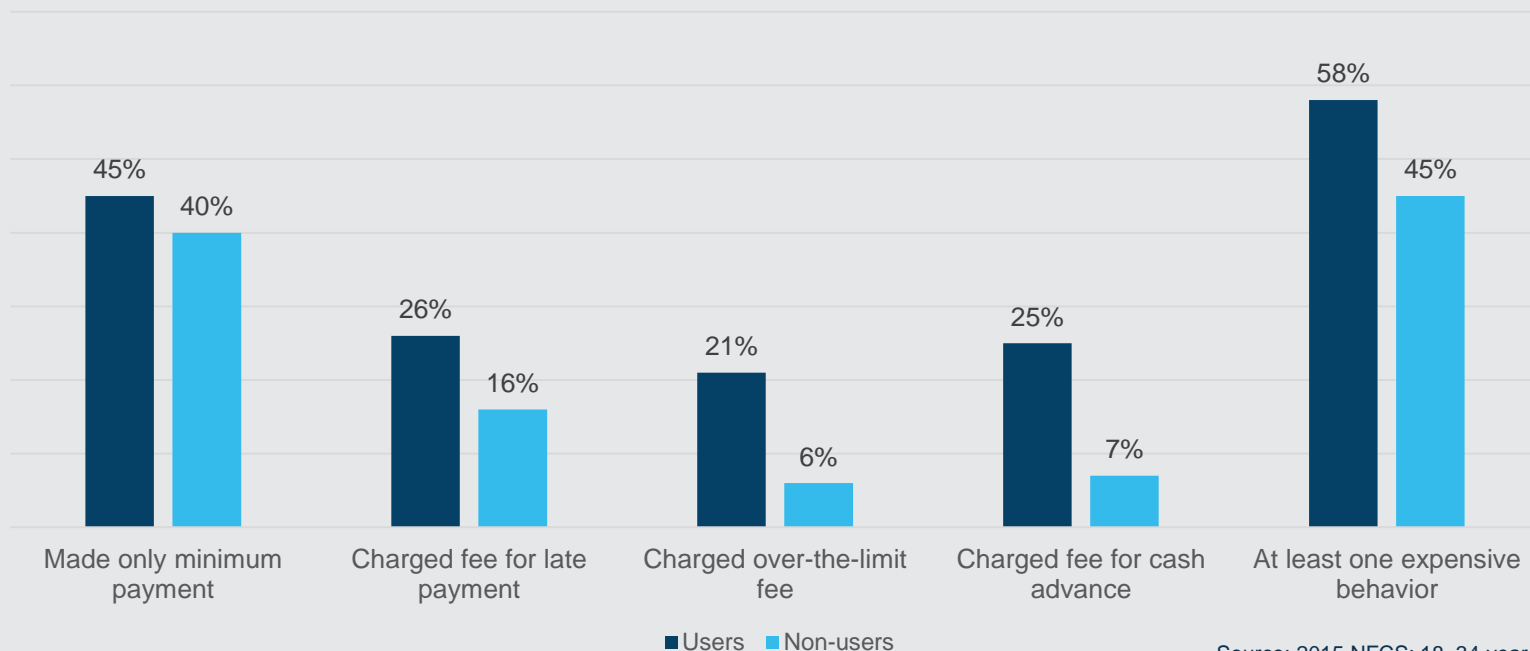
## Financial behavior

Users of mobile payments are busy and financially active individuals. They more often work full time, are more educated, have higher incomes and more assets.

### Expectation

- Given the characteristics of users, one might expect they are more financially secure and have better financial management practices.
- Because factors such as being employed, having higher incomes, and better education are usually linked to better financial outcomes.

## Credit card management (in the past 12 months)



Source: 2015 NFCS; 18–34 year old

- Mobile payment users more often own at least one credit card, yet data show that they are much more likely to pay fees on these cards.
- Credit cards are the most prevalent source of funding for mobile payments (over  $\frac{3}{4}$  of users reporting that their mobile payment is funded through their credit card).

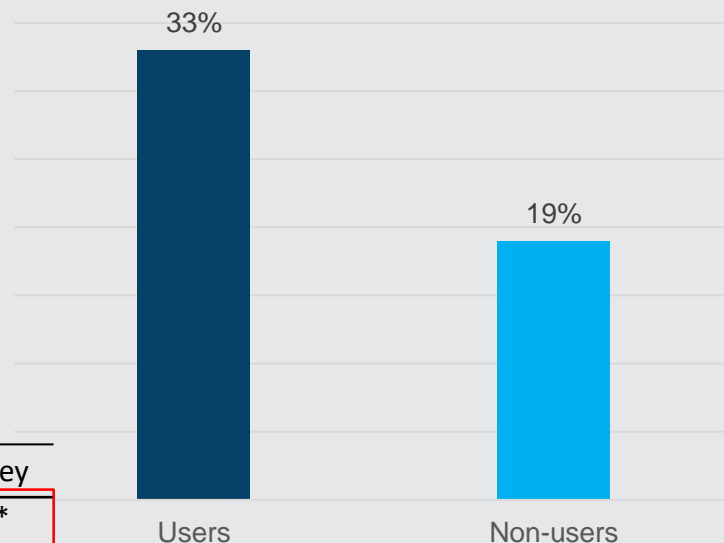
## Checking account management (in the past 12 months)

- Millennial mobile payment users are more likely to have a bank account.
- However, they are also more likely to report that they occasionally overdraw their checking account (which often incurs high penalty fees).

<i>Overdraws checking account</i>	NFCS Survey	GFLEC Survey
Uses m-payments	0.158*** (0.0108)	0.0509*** (0.0190)
Controls	Yes	Yes
Observations	6,888	1,864
R <sup>2</sup>	0.048	0.045

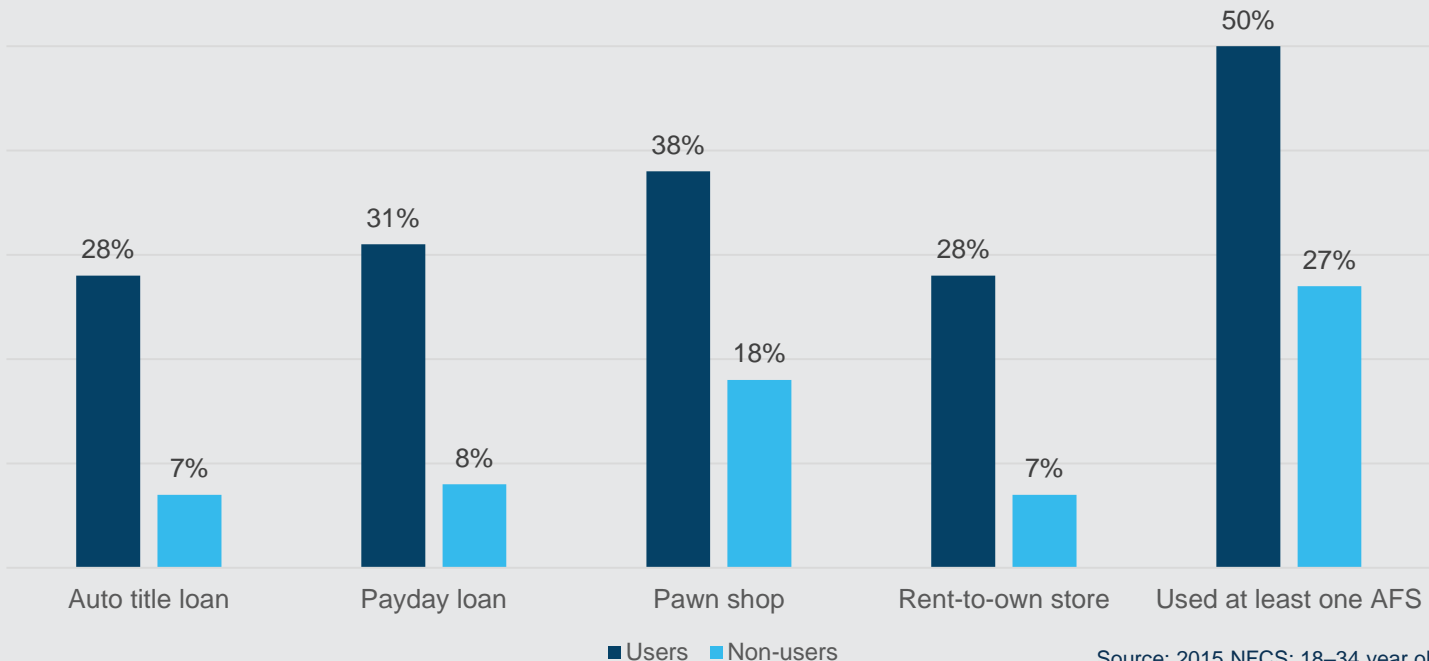
Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### Overdraws checking account



Source: 2015 NFCS; 18–34 year old

## Use of Alternative Financial Services (in the past 5 years)

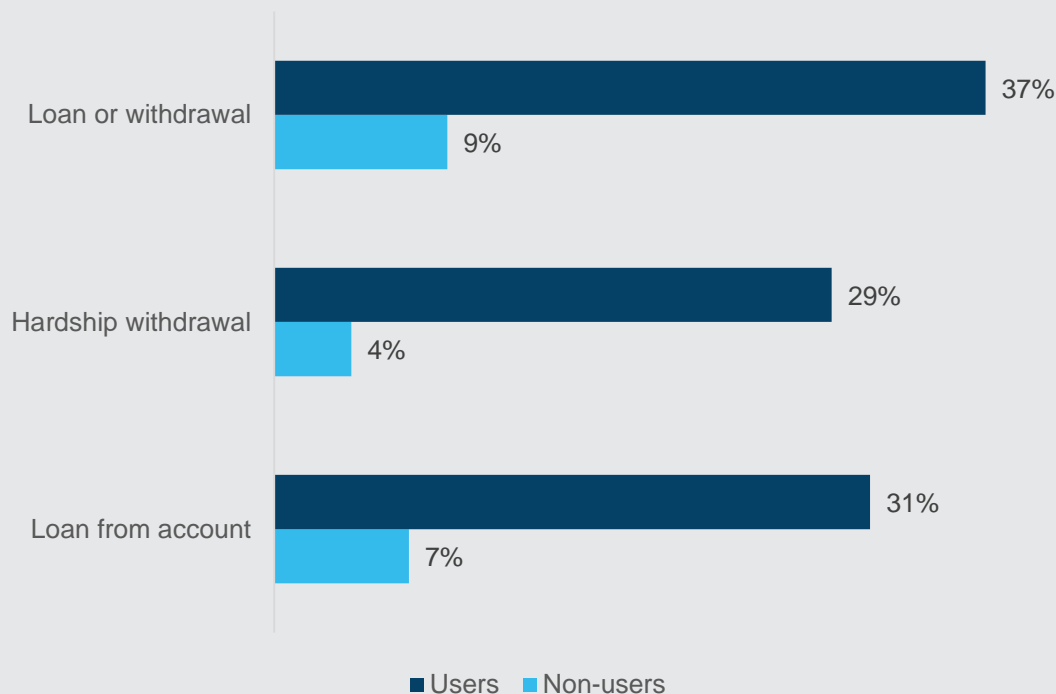


Source: 2015 NFCS; 18–34 year old

- AFS are very expensive forms of short-term borrowings that can charge APRs of 400% or even higher.
- Use of AFS is widespread among Millennials, but we also find that mobile payment users are much more likely to use AFS than those who do not use mobile payment.

## Retirement account management (in the past 12 months)

- Users of mobile payments also end up winding down on their retirement savings.
- This is concerning because they are taking out money early in the lifecycle – paying steep penalties and potentially jeopardizing long-term financial security.



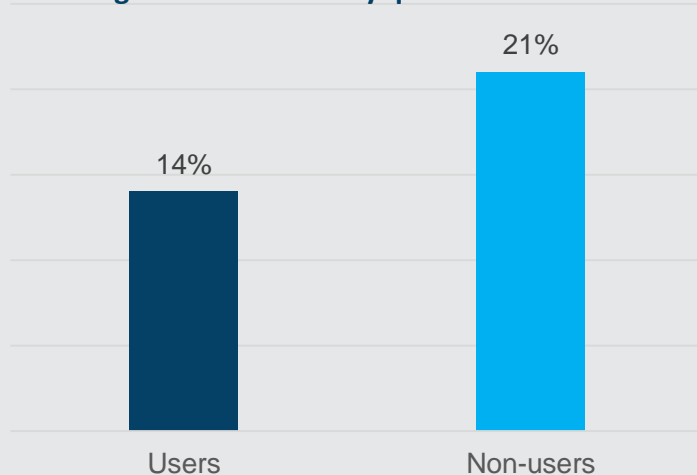
Source: 2015 NFCS; 18–34 year old



## Financial literacy among mobile payment users

Only 14% of Millennial mobile payments users are able to answer the big three financial literacy questions correctly.

Big 3 financial literacy questions correct



Source: 2015  
NFCS; 18–34 year  
old

<i>Uses mobile payments</i>	NFCS Survey	GFLEC Survey
Basic financial literacy	-0.155*** (0.0138)	-0.149*** (0.0235)
Controls	Yes	Yes
Observations	7,894	2,006
R <sup>2</sup>	0.073	0.077

A basic level of financial literacy is negatively associated with using mobile payments.

Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

## The role of financial literacy

	Spend more than they save	Occasionally overdraws checking account	Used at least one form of AFS
Uses m-payments	0.0747*** (0.0119)	0.173*** (0.0120)	0.251*** (0.0119)
Basic financial literacy	-0.0260* (0.0155)	-0.0658*** (0.0156)	-0.0751*** (0.0160)
Mobile payment*Basic financial literacy (Interaction)	-0.0685*** (0.0259)	-0.130*** (0.0261)	-0.166*** (0.0272)
Controls	Yes	Yes	Yes
Observations	6,785	6,888	7,826
R <sup>2</sup>	0.025	0.061	0.125

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: 2015 NFCS; 18–34 year old

- Financial literacy is negatively associated with each of the three financial behaviors.
- Interaction term is negative for all regressions and statistically significant.
  - Respondents who use mobile payments **and** are financially literate are much less likely to engage in each of these behaviors.
  - Large magnitude: Financially literate users are over 16 percentage points less likely to use AFS and 13 percentage points less likely to overdraw their checking account.

## Conclusion

- Millennials experience **low** financial literacy rates, even though they must make numerous financial decisions.
- Fin-tech activities are attracting segments of customers who have different needs and characteristics; providing **opportunities** for innovation that can be targeted by fin-tech developers.
- Important question: Does fin-tech increase the risk of financial **mismanagement**?
  - Study indicates that mobile payment users are at a much higher risk of poor money management compared to non-users (even after controlling for socio-demographic factors).
  - However, our data cannot be used to establish any causal link between use of mobile payment and financial outcomes.
- While mobile payment users are more likely to experience financial distress and display poor financial management, the result **reverses** for those who are financially literate.
- This highlights the important role of financial literacy in the expansion of the fin-tech industry and the fact that fin-tech should be viewed as a **complement** to, not a substitute for, financial literacy.

**Thank you!**

Questions? Contact me at **[alusardi@gwu.edu](mailto:alusardi@gwu.edu)**

# GFLEC

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## Financial literacy measure

### The Big Three

“Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?”

- ☒ More than \$102
- ☐ Exactly \$102
- ☐ Less than \$102
- ☐ Don't know
- ☐ Refuse to answer

“Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, with the money in this account, would you be able to buy...”

- ☐ More than today
- ☐ Exactly the same as today
- ☒ Less than today
- ☐ Don't know
- ☐ Refuse to answer

“Do you think the following statement is true or false?  
*Buying a single company stock usually provides a safer return than a stock mutual fund.*”

- ☐ True
- ☒ False
- ☐ Don't know
- ☐ Refuse to answer