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
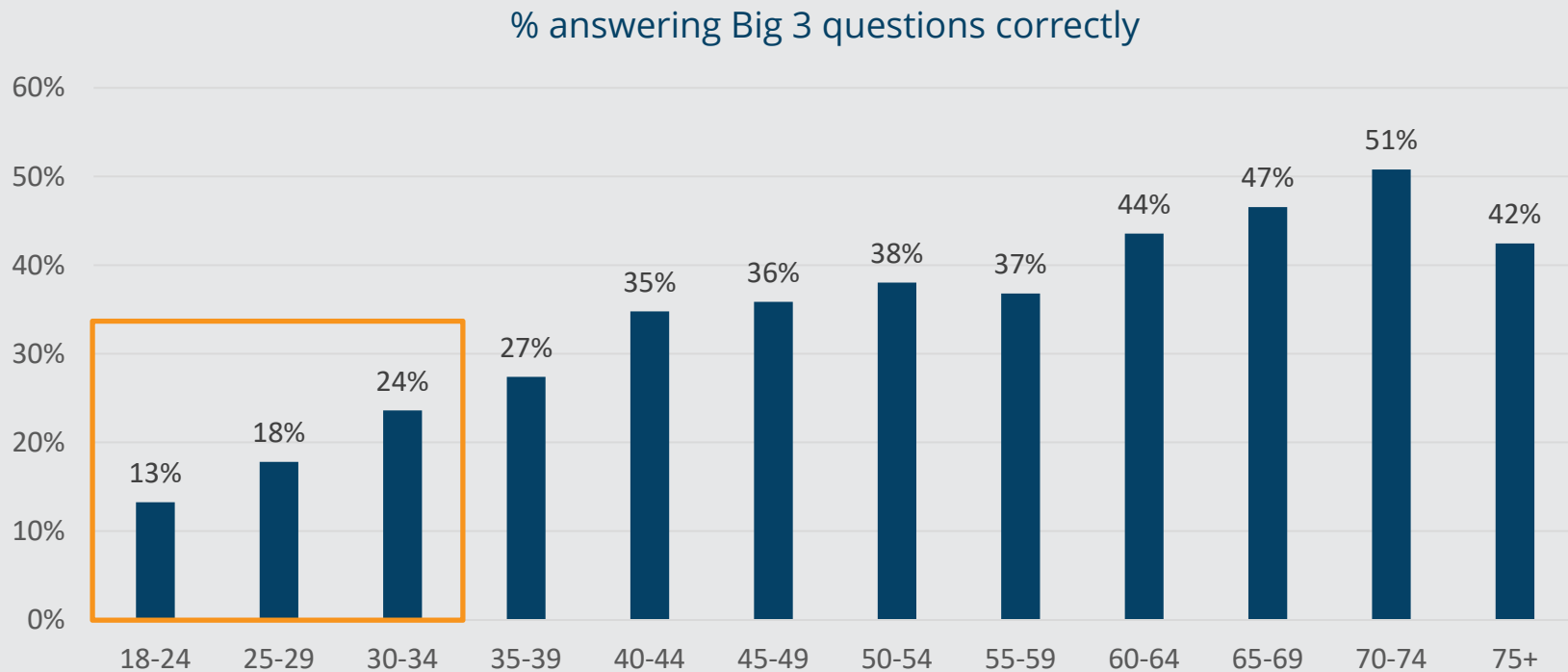- The sample of Millennials contains 7,894 observations

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

Financial Literacy and Personal Finances

The Current Situation for Millennials

Financial literacy across age

% answering Big 3 questions correctly

| Age	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
%	13%	18%	24%	27%	35%	36%	38%	37%	44%	47%	51%	42%

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

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Financial literacy among Millennials

Answers to 5 financial literacy questions
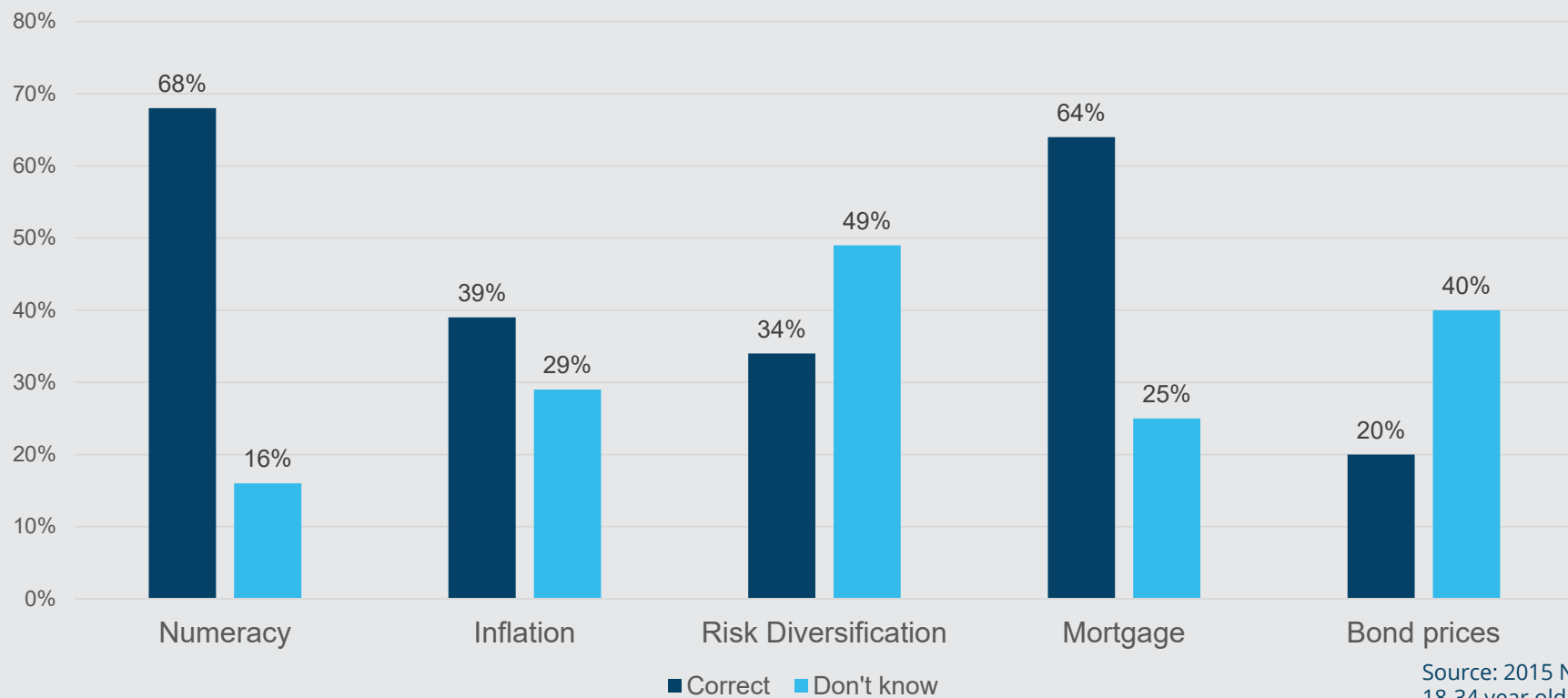
Only 18% answered the Big 3 questions correctly (numeracy, inflation and risk diversification)
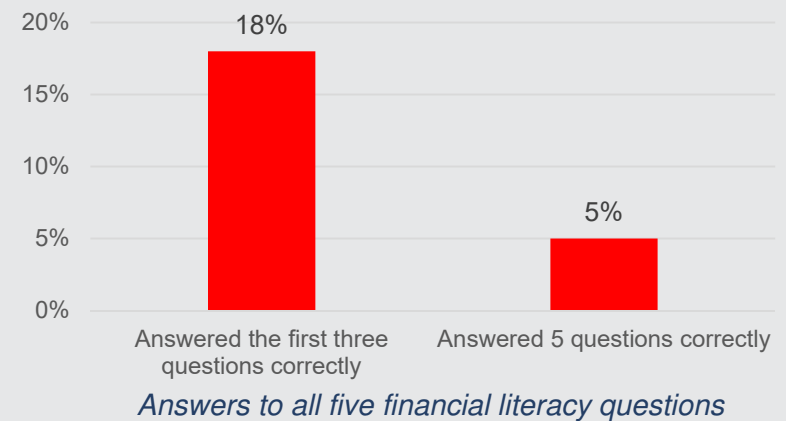
Source: 2015 NFCS; 18-34 year old

Perceived versus actual financial knowledge

Perceived Financial Knowledge

71%
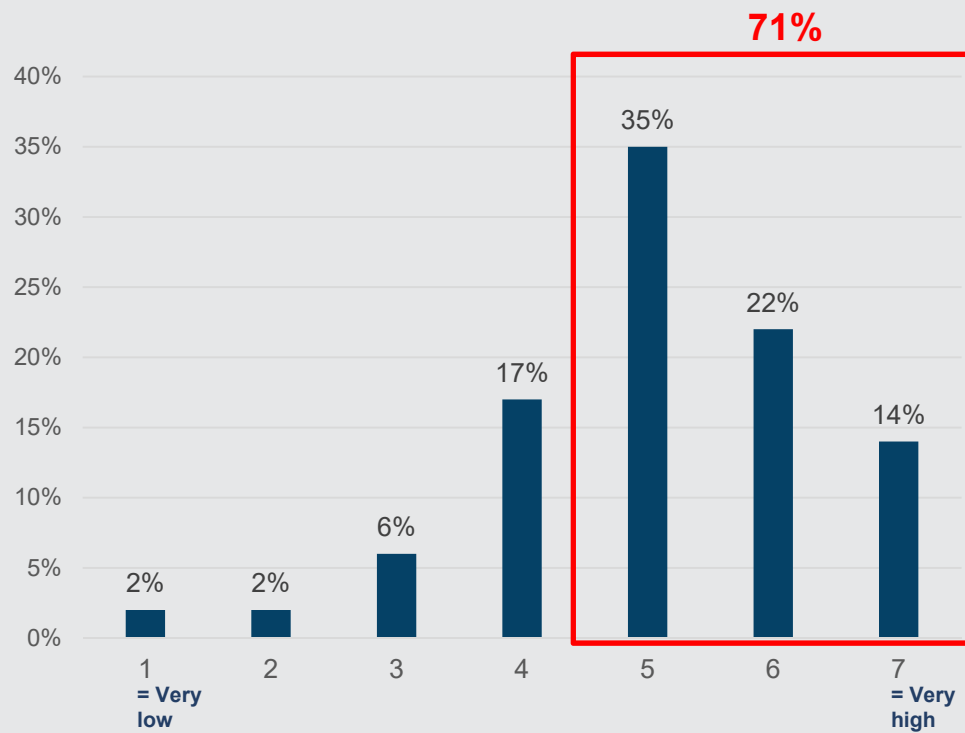
How would you assess your overall financial knowledge?

Actual Financial Knowledge

Answers to all five financial literacy questions

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

Source: 2015 NFCS; 18-34 year old

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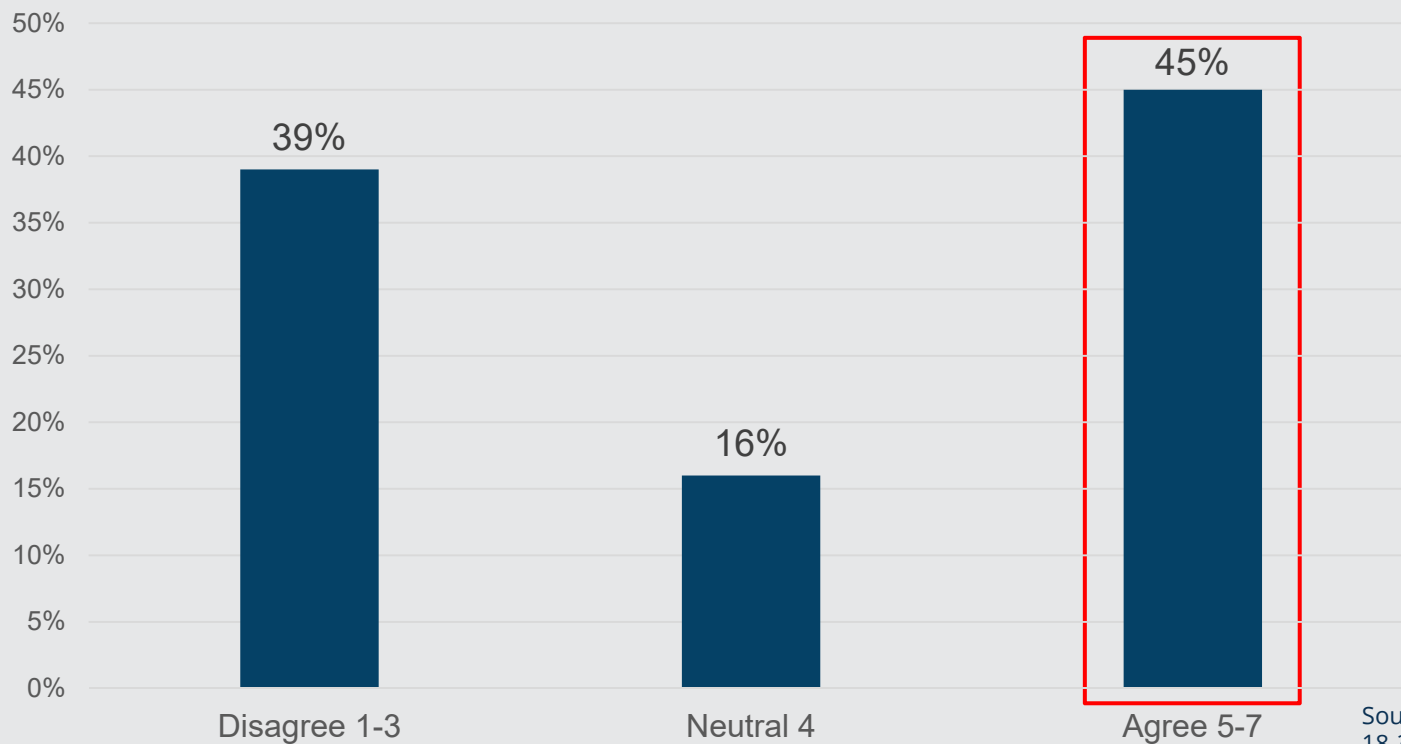# Millennials borrowing on their assets and investments

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

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

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
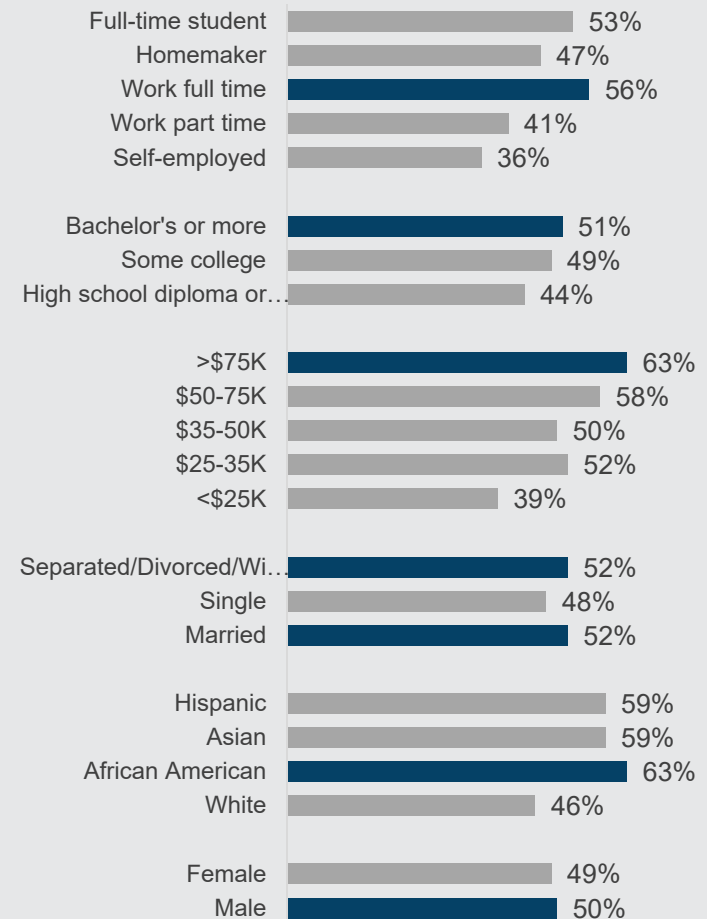
Note: Individuals who indicated "Don't know" or "prefer not to say" were excluded from the analysis. Sample of 7,894 observations in the NFCS and 2,007 in the GFLEC Survey.
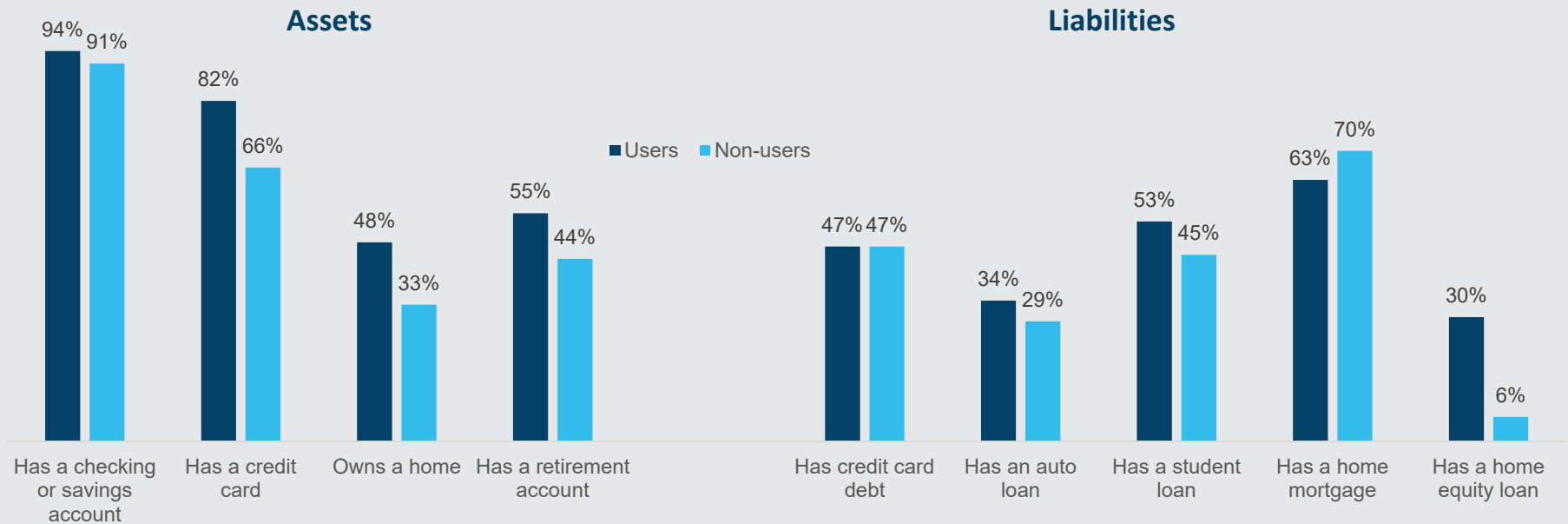
Demographics of mobile payment users

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"

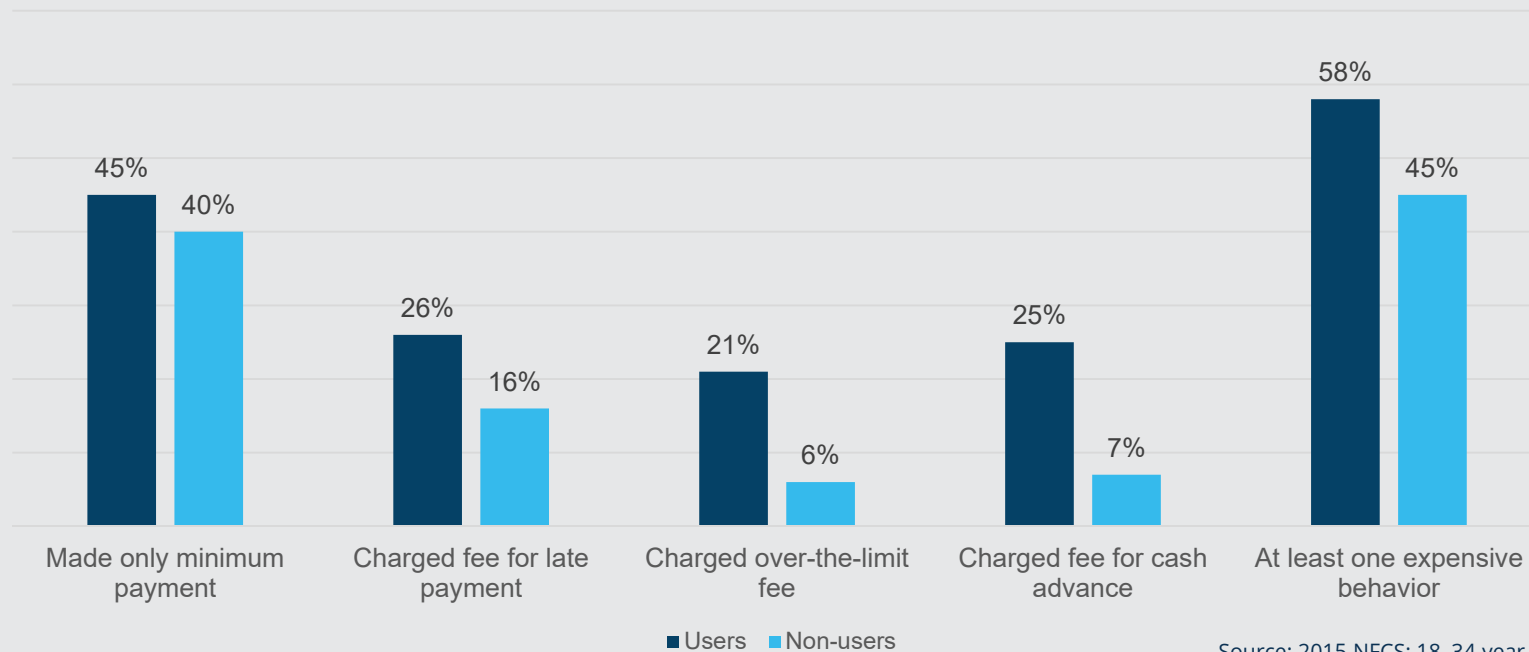| Category	Percentage
Full-time student	53%
Homemaker	47%
Work full time	56%
Work part time	41%
Self-employed	36%
Bachelor's or more	51%
Some college	49%
High school diploma or…	44%
>$75K	63%
$50-75K	58%
$35-50K	50%
$25-35K	52%
<$25K	39%
Separated/Divorced/Wi…	52%
Single	48%
Married	52%
Hispanic	59%
Asian	59%
African American	63%
White	46%
Female	49%
Male	50%

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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)

Chart data:

| Behavior	Users	Non-users
Made only minimum payment	45%	40%
Charged fee for late payment	26%	16%
Charged over-the-limit fee	21%	6%
Charged fee for cash advance	25%	7%
At least one expensive behavior	58%	45%

■ Users ■ Non-users

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 ¾ of users reporting that their mobile payment is funded through their credit card).

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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).

Overdraws checking account
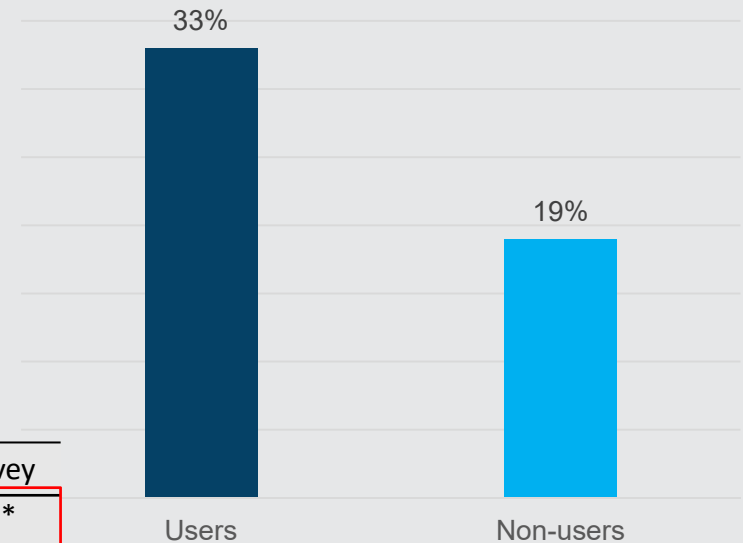
Source: 2015 NFCS; 18–34 year old

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

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

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

Source: 2015 NFCS; 18–34 year old
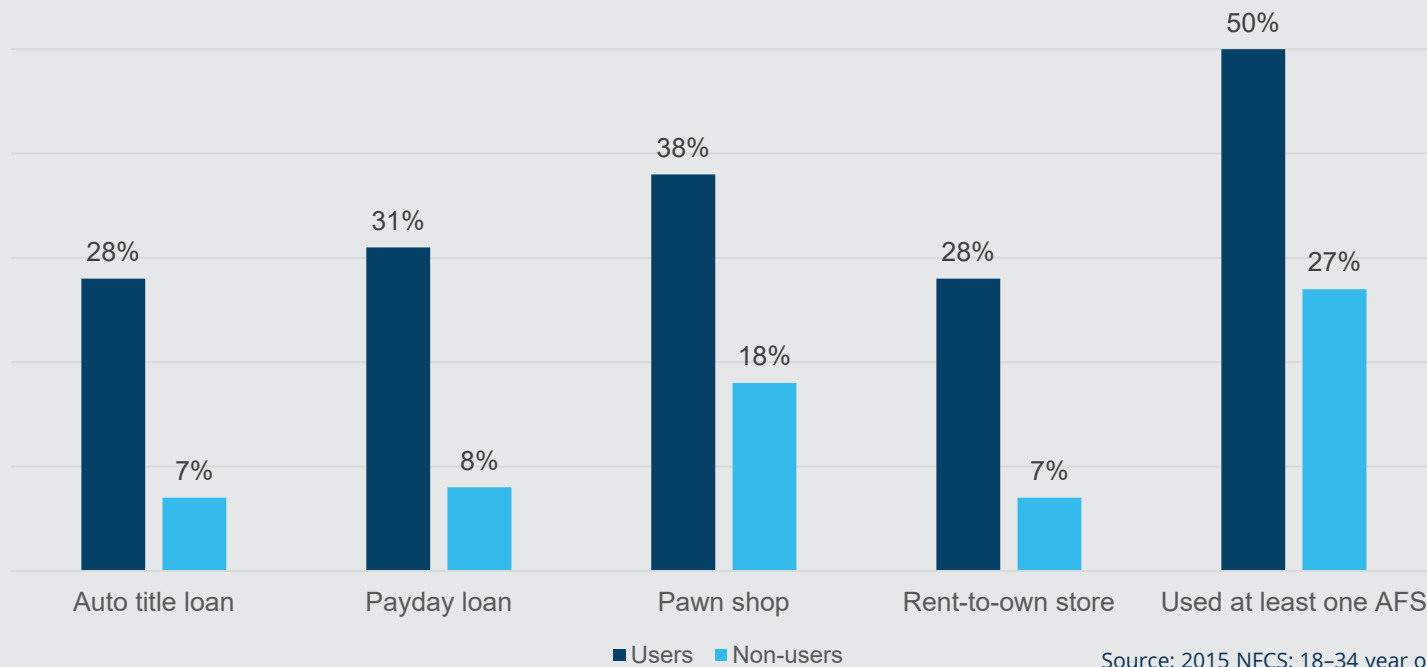
- AFS are very expensive forms of short-term borrowings that can charge APRs of 400% or even higher.
- Use of AFS is widespread among Millennials, but we also find that mobile payment users are much more likely to use AFS than those who do not use mobile payment.

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.


Loan or withdrawal
- Users: 37%
- Non-users: 9%

Hardship withdrawal
- Users: 29%
- Non-users: 4%

Loan from account
- Users: 31%
- Non-users: 7%

■ Users ■ Non-users
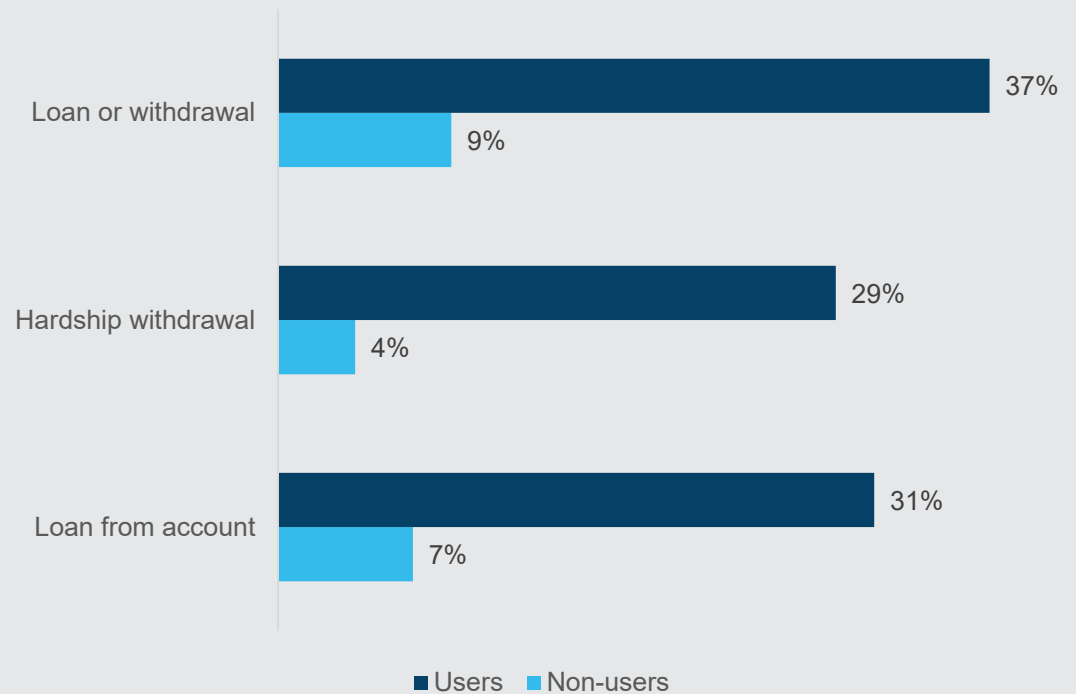
Source: 2015 NFCS; 18–34 year old

Financial literacy among mobile payment users

Big 3 financial literacy questions correct

Only 14% of Millennial mobile payments users are able to answer the big three financial literacy questions correctly.
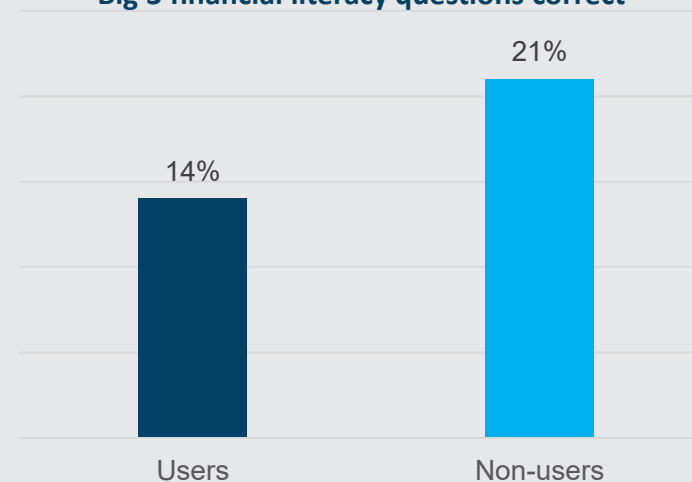
Uses mobile payments	NFCS Survey	GFLEC Survey
Basic financial literacy	-0.155*** (0.0138)	-0.149*** (0.0235)
Controls	Yes	Yes
Observations	7,894	2,006
R^2	0.073	0.077

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

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

Source: 2015 NFCS; 18–34 year old

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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***	0.173***	0.251***
	(0.0119)	(0.0120)	(0.0119)
Basic financial literacy	-0.0260*	-0.0658***	-0.0751***
	(0.0155)	(0.0156)	(0.0160)
Mobile payment*Basic financial literacy (Interaction)	-0.0685***	-0.130***	-0.166***
	(0.0259)	(0.0261)	(0.0272)
Controls	Yes	Yes	Yes
Observations	6,785	6,888	7,826
R^2	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 **ahasler@gwu.edu**

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