

# Financial Literacy and Financial Fragility: Evidence to Understand the COVID-19 Crisis.

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**GW, GFLEC, and Italian Financial Education Committee**

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# The importance of measurement

- Measuring financial literacy
- Measuring financial fragility

Question:

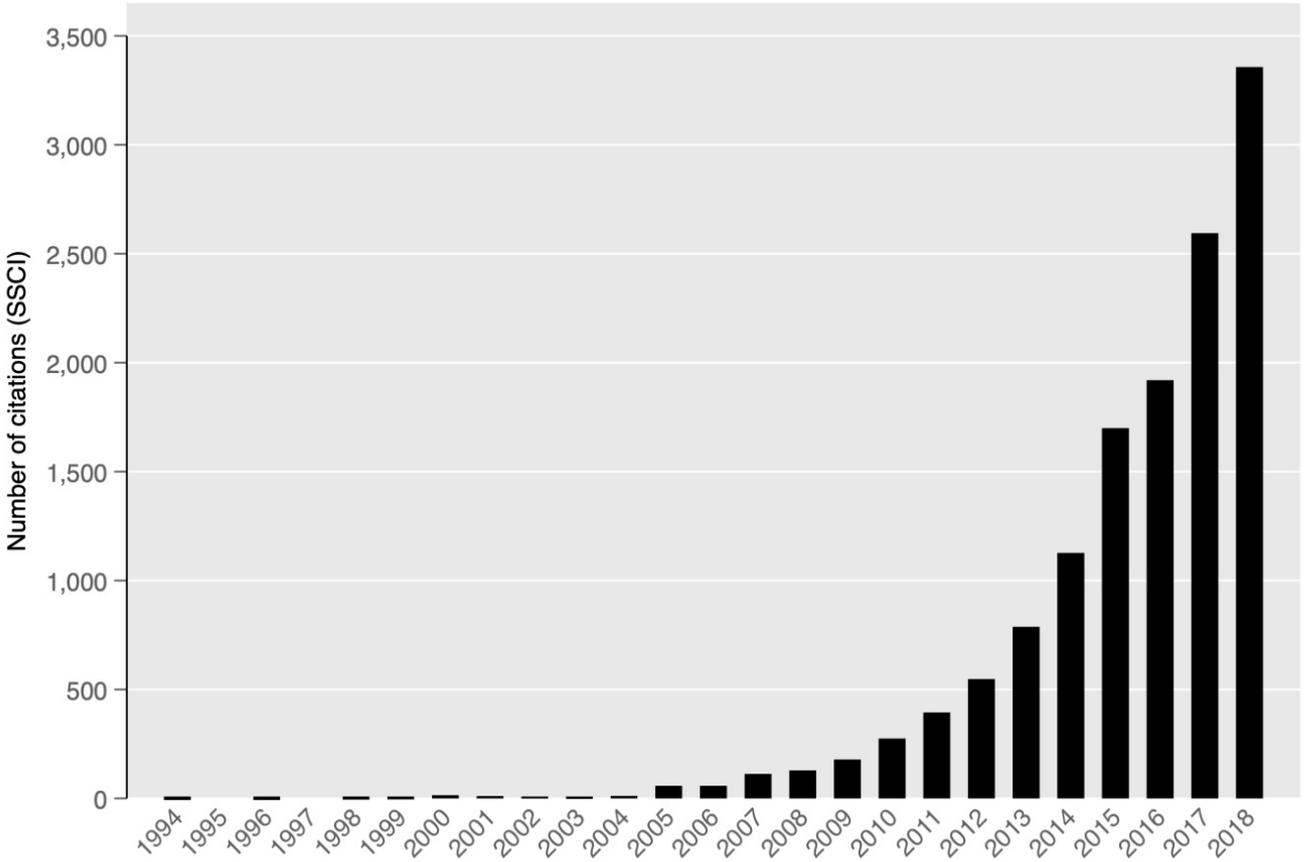
- How can families cope with this current crisis and how can we build a more resilient society?

# JEL Codes: Financial literacy is now a research field. A good addition to Personal Finance

D14 Household Saving • Personal Finance

G53 Financial Literacy

# Citations to the term “financial literacy” over time (from Kaiser et al. meta-analysis, 2020)



# Long lines at the food banks at the start of the pandemic



# 2019 Government shutdown

Federal workers line up for free meals, visit food banks as shutdown hits Day 28



62% of federal workers say they used up all or most of their savings during the government shutdown

**The Shutdown Showed How Precarious Americans' Finances Really Are**



**Government shutdown exposed Americans' deep savings crisis**



# Financial literacy: the ABC of personal finance

## The Big Three

1. “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
2. “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
3. “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

# Financial Literacy around the World (FLat World)

- Evidence from 15 countries:

- ❖ USA
- ❖ The Netherlands
- ❖ Germany
- ❖ Italy
- ❖ Russia
- ❖ Sweden
- ❖ New Zealand
- ❖ Japan
- ❖ Australia
- ❖ France
- ❖ Switzerland
- ❖ Romania
- ❖ Chile
- ❖ Canada
- ❖ Finland



These 3 questions are now in the 2016 US Survey of Consumer Finances and many more surveys

# Main findings

- Level of financial literacy strikingly low
- Findings are similar across countries

Question:

- Does financial literacy matter?

## Financial literacy: the ABC of personal finance (cont.)

### The Big Five (The Big Three plus two)

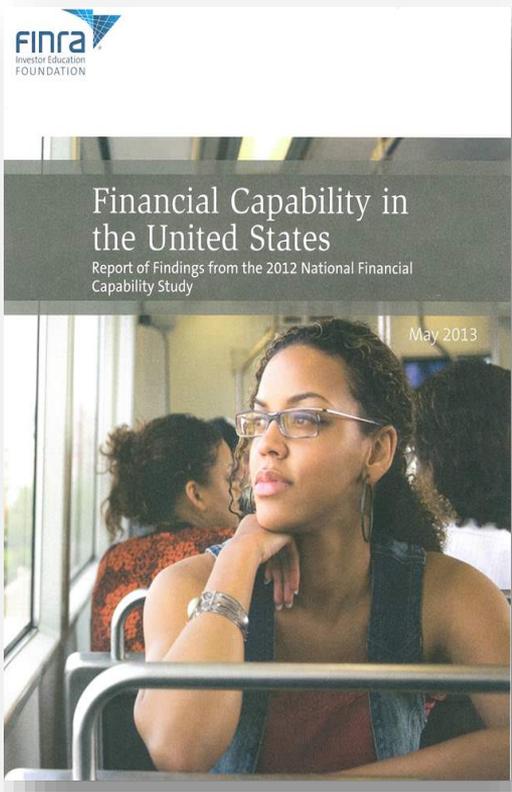
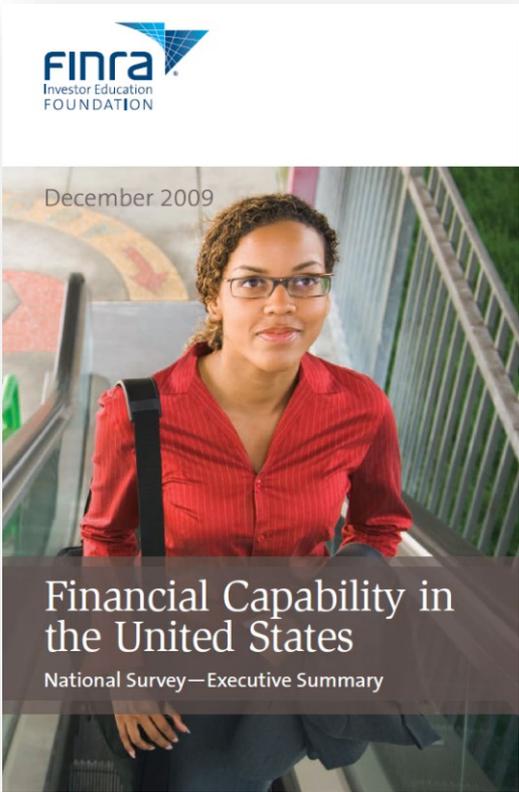
4. “If interest rates rise, what will typically happen to bond prices?”

- They will rise
- They will fall
- They will stay the same
- There is no relationship between bond prices and the interest rate
- Don't know
- Refuse to answer

5. “A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.”

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

# Collecting new data: the National Financial Capability Study (NFCS)



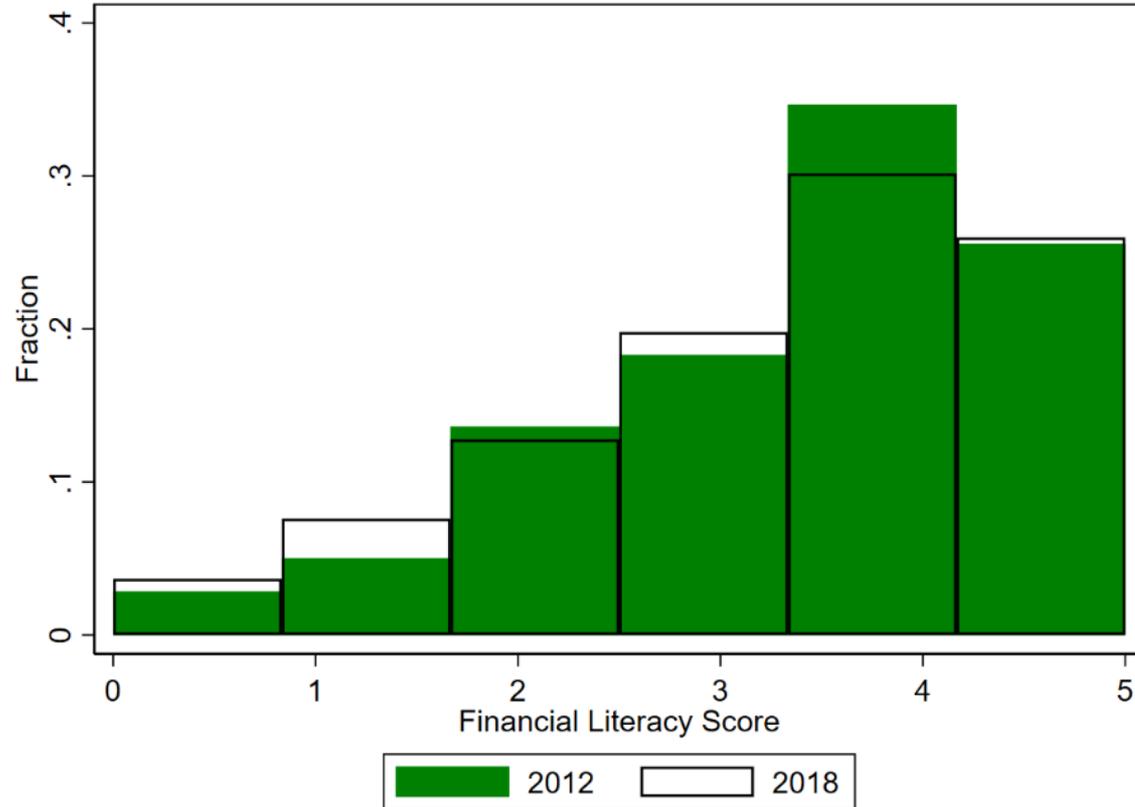
# Financial literacy over time (from Angrisani et al., 2020)

**Fraction of Correct Responses across waves: Evidence from the American Life Panel (questions are from the NFCS)**

	2012		2018	
	Correct	Don't know	Correct	Don't know
Interest rate question	88%	6%	86%	6%
Inflation question	76%	10%	76%	11%
Bond price question	36%	41%	35%	44%
Mortgage question	86%	7%	84%	10%
Risk diversification question	67%	27%	62%	33%

# Financial literacy over time

Distribution of Financial Literacy across Years



# Financial literacy over time

## Change in Financial Literacy by Age/Cohort

Age Cohort	Change in Financial Literacy
18 – 34	-0.014
35 – 44	-0.159*
45 – 54	-0.046
55 – 64	-0.144
65 and older	-0.165***

Notes: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.10

## Measuring *financial fragility*

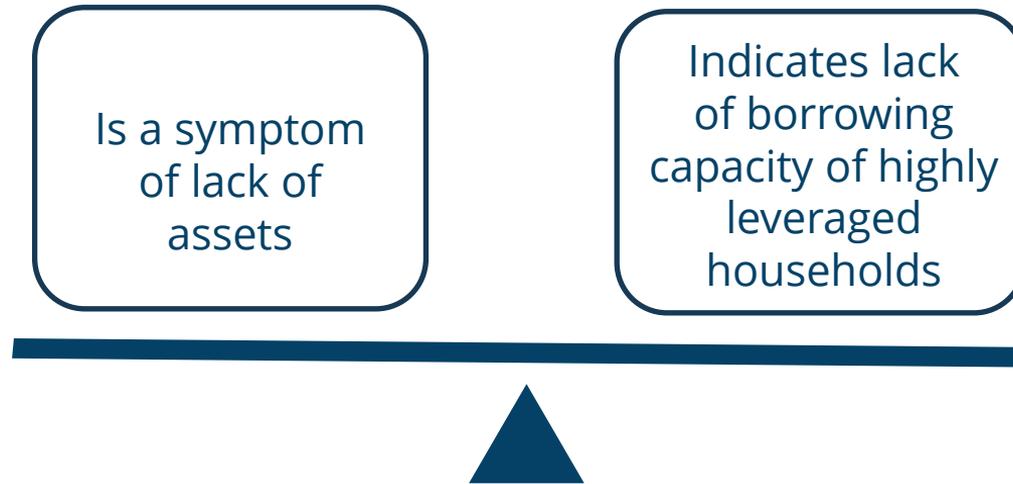
- How **confident** are you that you could come up with **\$2,000** if an unexpected need arose **within the next month**?
  - I am certain I could come up with the full \$2,000.
  - I could probably come up with \$2,000.
  - I could probably not come up with \$2,000.
  - I am certain I could not come up with \$2,000.
  - Don't know.
  - Prefer not to say.



People with these responses are classified as financially fragile.

## Measurement: Beyond assets

Financial fragility measures 2 aspects of personal finance

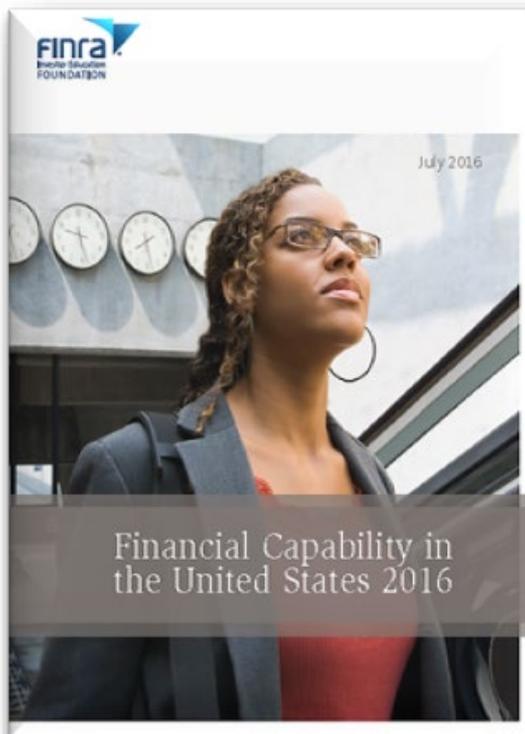


# Collecting data over time

## 2011 Brookings Papers on Economic Activity



## 2015 FINRA National Financial Capability Study

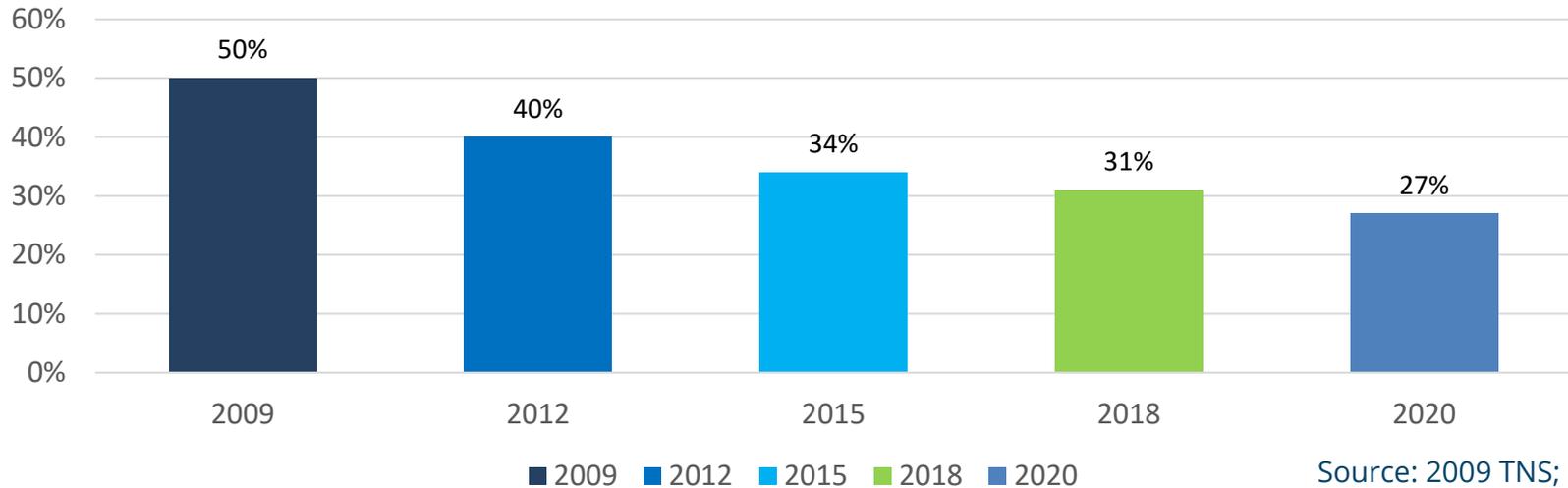


## 2020 TIAA Institute-GFLEC Personal Finance Index



# Our long term research

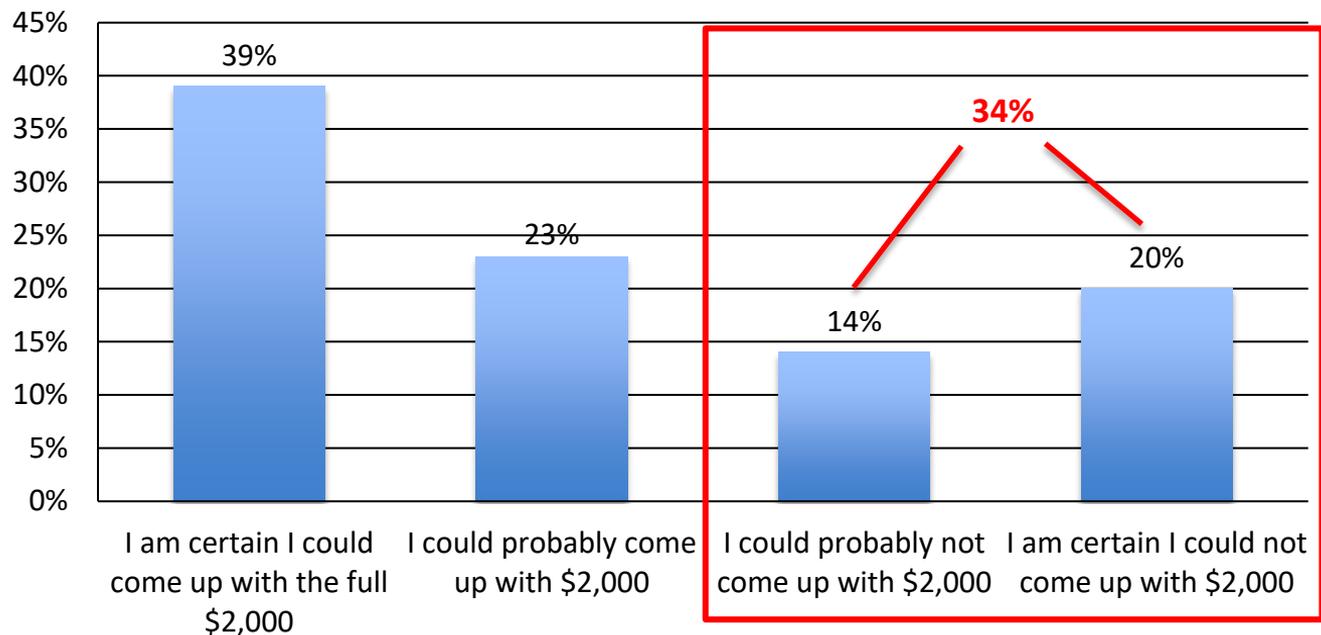
## Financial Fragility Over Time



Source: 2009 TNS; 2012, 2015, & 2018 NFCS, 2020 P-Fin Index

- Financial fragility is declining over time
- But more than 1 in 4 Americans cannot deal with a mid-size shock
- Averages hide large differences in the population

# Financial fragility in the US in 2015



Note: Percentages do not total 100 percent because “do not know” and “prefer not to say” answers are not reported in the figure.

# Who are the most financially fragile?

## Millennials (age 18-34)

- 43% of Millennials are financially fragile



## Women

- 39% of American women are financially fragile vs. 28% of men



## Middle-Income (income \$25K-\$75K)

- 33% of middle-income people are financially fragile\*

\* Age 25-60, 2015 NFCS



Source: 2015 NFCS

...but also



## Upper Middle Class

29% of people with income between \$50K and \$100K are financially fragile<sup>1</sup>

<sup>1</sup> Sample age 25-60



## College Graduates

25% of college graduates age 25-60 are financially fragile

## Fully Employed

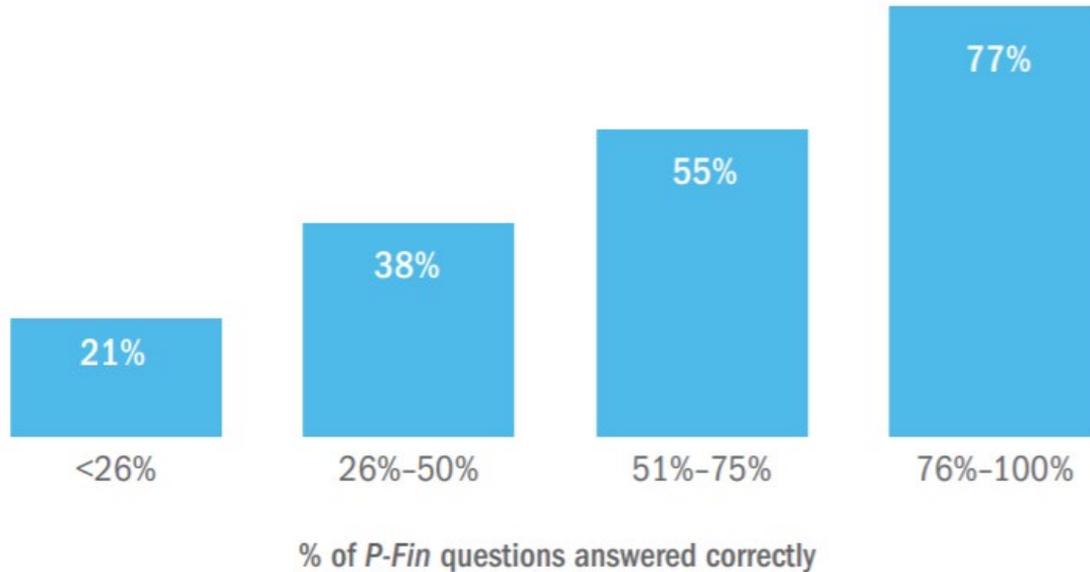
31% of fully employed people are financially fragile<sup>2</sup>

<sup>2</sup> Sample age 25-60

# Financial literacy and financial fragility (2020 Personal Finance Index)

Those with greater financial literacy are less likely to be financially fragile.

% who could certainly come up with \$2,000 if an unexpected need arose within the next month

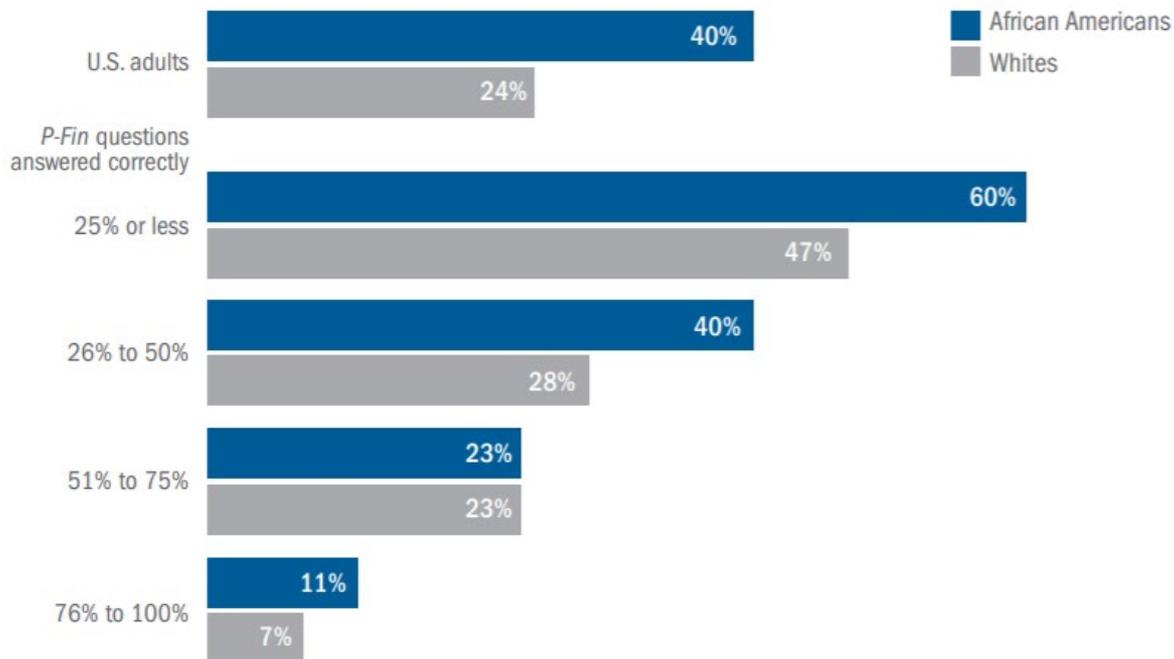


Source: TIAA Institute-GFLEC Personal Finance Index (2020).

# Financial literacy and financial fragility across race/ethnicity

African Americans with greater financial literacy are less likely to be financially fragile.

% who could certainly or probably not come up with \$2,000 if an unexpected need arose within the next month.



Source: TIAA Institute-GFLEC Personal Finance Index (2019).

# Financial literacy and financial fragility: ALP data

**Predictive Power of Financial Literacy for Future Outcomes (I)**

	<b>Can Meet \$2,000 Shock in 2018</b>	
<b>Explanatory Variables</b>	(1)	(2)
Financial Literacy	0.047*** (0.012)	0.047*** (0.012)
Demographics	x	x
Cognitive ability	x	x
Risk aversion		x
Planning attitude		x
Dep. Variable in 2012	0.366*** (0.031)	0.365*** (0.031)
Observations	1,094	1,094
R-squared	0.393	0.394

Demographics include gender, race, age, education, marital status, labor force status, and income. All explanatory variables are measured in 2012. Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

# Financial literacy and financial fragility: ALP data

## Predictive Power of Financial Literacy – Heterogeneity by Gender and Age

	Financial Outcomes in 2018 (dependent variables)
Financial Literacy in 2012	Can Meet \$2,000 Shock
Men	0.052** (0.022)
N	461
Women	0.042*** (0.015)
N	633
Age<55	0.046*** (0.016)
N	625
Age 55+	0.046** (0.019)
N	469
Income<\$60k	0.057*** (0.015)
N	578
Income>=\$60k	0.028 (0.021)
N	516

Separate regressions for men and women and for individuals below age 55 and age 55 or older are estimated. The set of controls is the same as in columns (2) of Tables 5 and 6. Robust standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

# A theoretical model to explain financial literacy and its effects on wealth



- In countries with well-developed financial markets, financial literacy provides a major advantage
- Financial literacy is a crucial determinant of wealth accumulation
- But also of wealth inequality: **30-40%** of U.S. retirement wealth inequality can be attributed to differences in financial knowledge

# New evidence from the pandemic: Financial literacy and fragility in Italy (June 2020)

Comitato per la programmazione  
e il coordinamento delle attività  
di educazione finanziaria

BVA Doxa

## EMERGENZA COVID-19: GLI ITALIANI TRA FRAGILITÀ E RESILIENZA FINANZIARIA



## Meeting the President of Italy, Sergio Mattarella, to report about our policy work



# Call for papers: *Journal of Behavioral and Experimental Finance*

## Call for Papers

for a special Issue of the Journal of Behavioral and Experimental Finance, titled

**“Recent developments in financial literacy and financial education”**



The [Journal of Behavioral and Experimental Finance](#) (JBEF) is calling for paper submissions for a special issue titled “Recent developments in financial literacy and financial education.” This special issue will collect innovative work in both financial literacy and financial education research. We particularly welcome submission of papers addressing the following topics:

- Experimental and quasi-experimental impact evaluations of financial education programs (e.g., in primary and secondary schools, colleges and universities, workplaces, or online)
- Behavioral lab or lab-in-the-field experiments testing mediation effects of financial literacy on behaviors
- Empirical research documenting the causal effect of financial literacy on investment behavior and outcomes
- Observational studies addressing potential endogeneity of financial literacy through novel identification strategies (such as new instrumental variables or new econometric models)
- Papers studying measurement models and survey questions measuring financial literacy, including international surveys and knowledge of specific topics (taxes, pensions, etc).

## Concluding remarks

- The importance of measurement
- Need more theory and more empirical work
- This research could inform policy and programs