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Financial Fragility: Evidence and Implications

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Introduction

Financial fragility is the ability to cope with *emergency expenses* (such as a car or house repair, medical bill, or small legal expense) in a *short* timeframe

Background:

- Lusardi A., Schneider D., Tufano P., 2011. Brookings Paper on Economic Activity.
- This measure was piloted in the 2009 TNS Global Economic Crisis Study.
- In 2009 almost 50% of U.S. households were classified as financially fragile.

Objectives

- Investigate financial fragility among American households.
- Identify vulnerable subgroups of the population.
- Analyze the characteristics that make these subgroups financially fragile.
- Characterize the underlying factors of financial fragility.
- Investigate long-term implications.

Key Findings

- A broad cross-section of the population is financially fragile.
    - Not only a problem of the young, low-income, and low-education.
    - Still prevalent in a recovering economy, not only a result of the recession.
- Financial fragility is multi-faceted; underlying factors are low asset levels, high debt, and low financial literacy.
    - Most relevant literature focuses on precautionary savings and asset levels.
    - This measure is a good proxy for the resources people have and can access.
    - Debt and debt management, in addition to asset levels, affect ability to manage short-term shocks.
- Financial Fragility has short- and long-term consequences.
    - Short-term financial setbacks in the face of an emergency.
    - Financially fragility is associated with lower likelihood of planning for retirement.

Data and Financial Fragility Measure

2015 National Financial Capability Study – NFCS (1)

- Online nationally representative sample of more than 25,000 respondents
- Commissioned by FINRA Investor Education Foundation
- Offers unique information on financial literacy and capability
- It started in 2009, financial fragility question asked in 2nd wave in 2012 and 3rd wave in 2015
- Main source of data used for regression analysis (because of its sample size, and design of financial literacy and financial fragility questions).

2015 National Financial Capability Study – NFCS (2)

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

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2015 Survey of Household Economics and Decisionmaking – SHED (1)

- Online survey of more than 5,000 respondents
- Designed by the Federal Reserve Board
- It has been conducted annually since 2013
- The data provide a snapshot of financial situations and expectations of households
- Ability to cope with shocks asked in all three waves
- The SHED data substantiate the results obtained with the NFCS, and provide more insight into the debt and asset composition, and credit and financial behavior of individuals.

2015 Survey of Household Economics and Decisionmaking – SHED (2)

Suppose that you have an emergency expense that costs $400. Based on your current financial situation how would you pay for this expense?

- Put it on my credit card and pay it off in full at the next statement
- With the money currently in my checking/savings account or with cash
- Put it on my credit card and pay it off over time
- Using money from a bank loan or line of credit
- By borrowing from a friend or family member
- Using a payday loan, deposit advance, or overdraft
- By selling something
- I wouldn't be able to pay for the expense right now
- Other

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Focus groups

Goal:

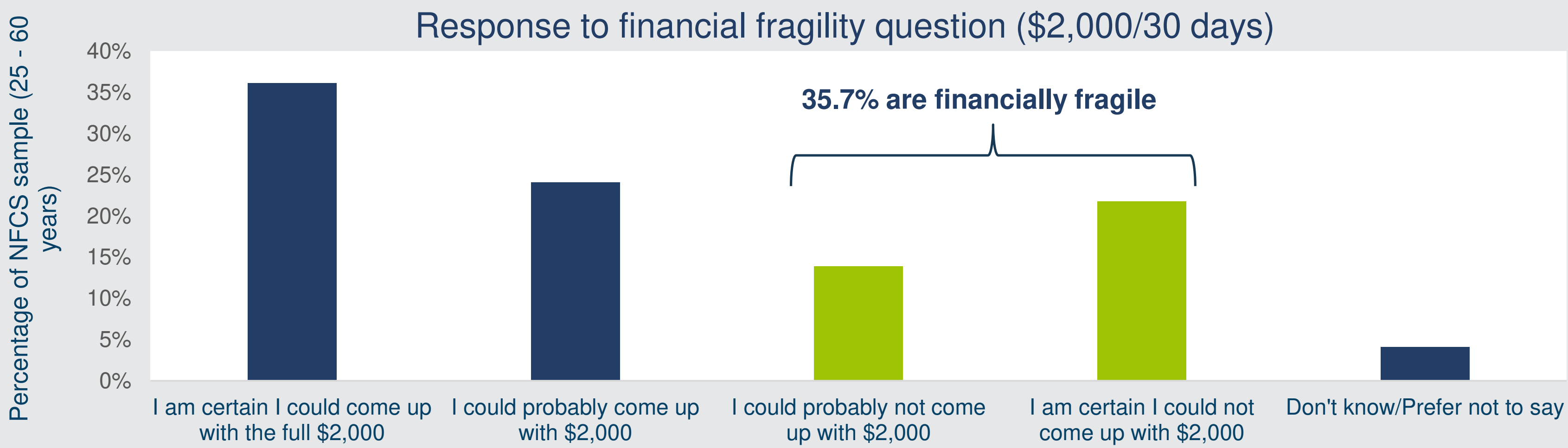
- To complement the quantitative analysis
- To gain a deeper understanding of financial fragility: The individuals' feeling and perception about financial fragility and the factors that they associate with being financially vulnerable.

Set-up:

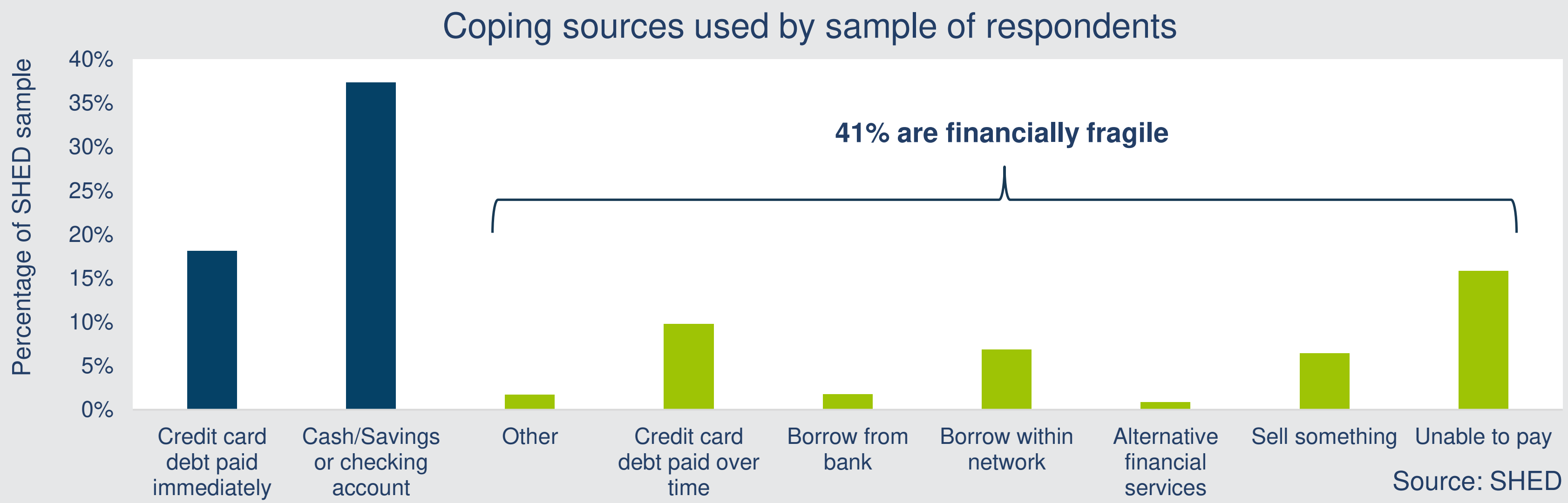
- The **screening criteria** for respondents included:
    - Financially fragile: "I could probably not come up with $2,000" or "I am certain I could not come up with $2,000"
    - Have primary or shared responsibility for bill paying in their household
    - Represent a mix of races/ethnicities in each group
- Demographic oversamples: women, young people and blue-collar workers.
- Two focus groups were conducted in each of three cities: Austin, Baltimore, and Cincinnati. Each focus group had 12 participants.
- Conducted in May and June 2017

Empirical Findings

Financial fragility in the U.S.

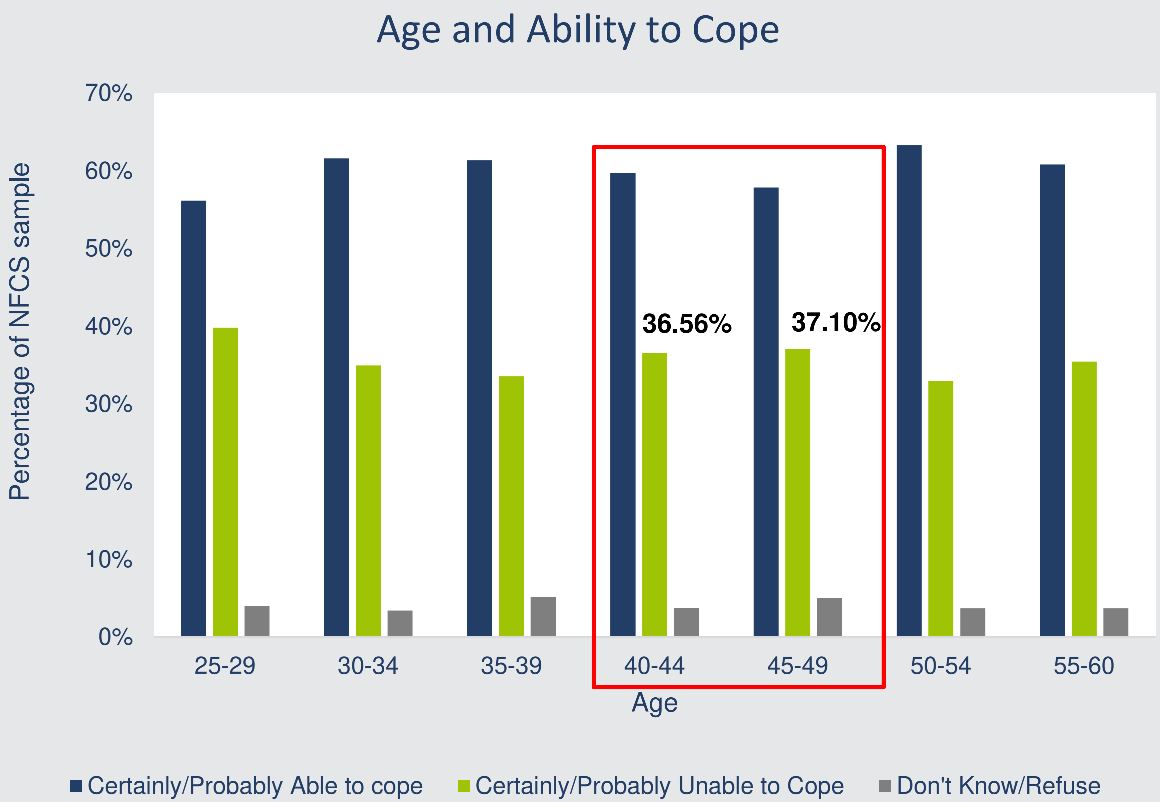


Source: NFCS 2015



Source: SHED 2015

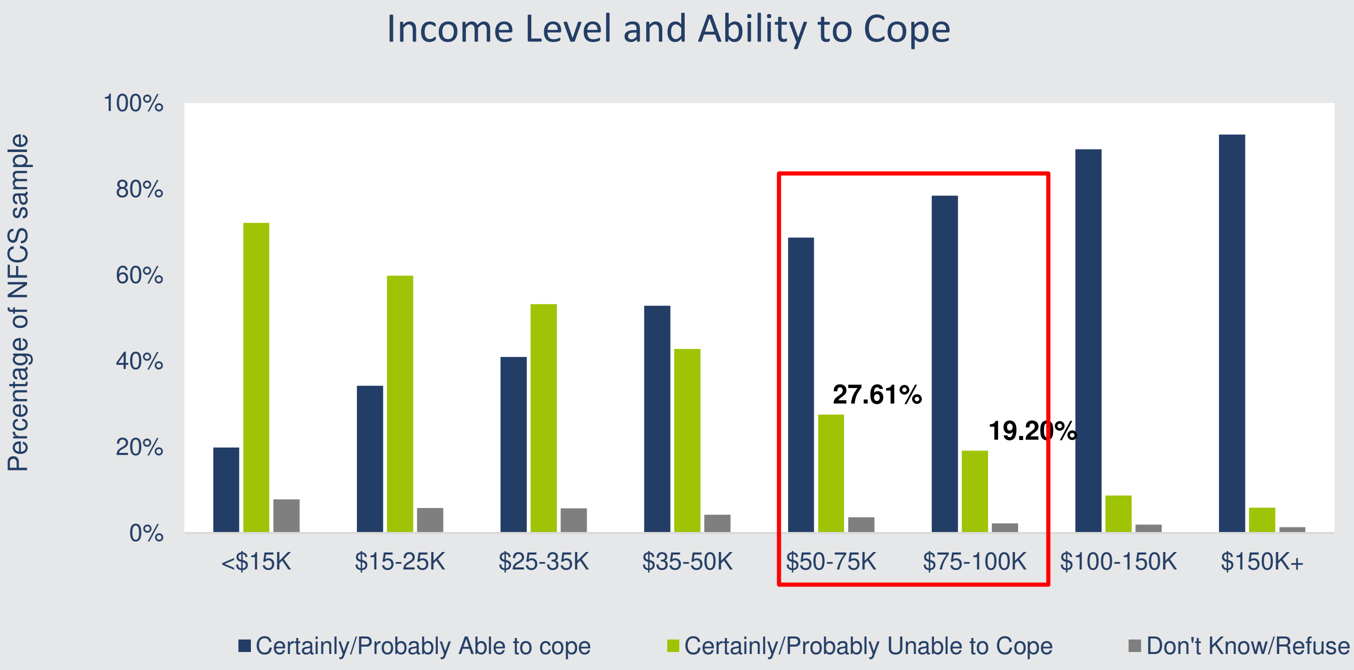
Financial fragility across age



Source: NFCS 2015

- Equal distribution across age
- Fragility is slightly higher in the middle age group of 40- to 49-year-olds

Financial fragility across household income

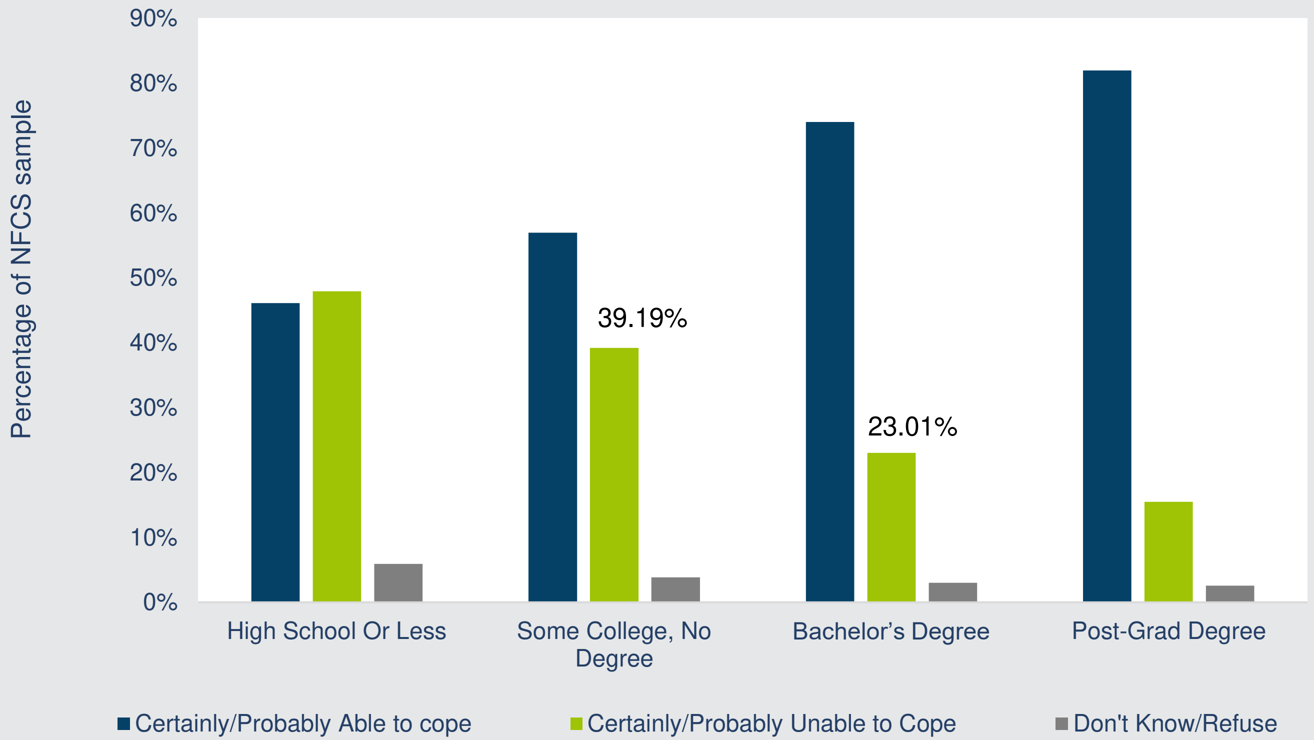


Source: NFCS 2015

Financial fragility falls with income but is still high for the middle-income households.

Financial fragility across education levels

Education and Ability to Cope



Source: NFCS 2015

There is a substantial educational divide between those who attend college but do not receive a degree and those who receive at least a Bachelor’s degree.

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Regression Analysis

The full regression model is

$$F = \beta_0 + \beta_D' D + \beta_W' W + \beta_L L + \beta_S' S + \varepsilon$$

where

F: Financial fragility (dummy variable)

D: Demographic and family characteristics

- Age, gender, race or ethnicity, education, married, children

W: Job variables

- Income brackets, employment status

L: Financial literacy

- First three questions correct (interest, inflation, risk)

S: Financial distress variables

- Income shock (large unexpected drop in income in the previous 12 months)
- Outstanding medical bills (unpaid medical bills that are past due)

- Model 1 includes variables D and W; Model 2 includes D, W, and L; Model 3 is the full model
- Sample restriction:
  - Non-retired individuals age 25-60
  - “Do not know” and “refuse to answer” responses for the fragility question are excluded

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NFCS regressions – Age

Age (BL: 25-29 years)	Model 1	Model 2	Model 3
Age 30-34	0.024	0.026*	0.022
	(0.015)	(0.015)	(0.015)
Age 35-39	0.030**	0.034**	0.033**
	(0.015)	(0.015)	(0.015)
Age 40-44	0.059***	0.067***	0.068***
	(0.016)	(0.016)	(0.016)
Age 45-49	0.058***	0.068***	0.068***
	(0.016)	(0.016)	(0.016)
Age 50-54	0.011	0.022	0.025
	(0.015)	(0.015)	(0.015)
Age 55-60	-0.008	0.003	0.008
	(0.016)	(0.016)	(0.015)
Demographic variables	Yes	Yes	Yes
Job variables	Yes	Yes	Yes
Financial literacy	-	Yes	Yes
Financial distress	-	-	Yes
Observations	16,174	16,174	16,174
R^2	0.247	0.250	0.280

Source: NFCS 2015, 25- to 60-year-olds
Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

NFCS regressions – Education

	Model 1	Model 2	Model 3
Education (BL: is *“High school or less”)*			
Some college, no degree	-0.032***	-0.024**	-0.025**
	(0.011)	(0.011)	(0.011)
Bachelors’ degree	-0.094***	-0.079***	-0.071***
	(0.012)	(0.012)	(0.012)
Post-graduate degree	-0.099***	-0.080***	-0.073***
	(0.013)	(0.013)	(0.013)
Demographic variables	Yes	Yes	Yes
Job variables	Yes	Yes	Yes
Financial literacy	-	Yes	Yes
Financial distress	-	-	Yes
Observations	16,174	16,174	16,174
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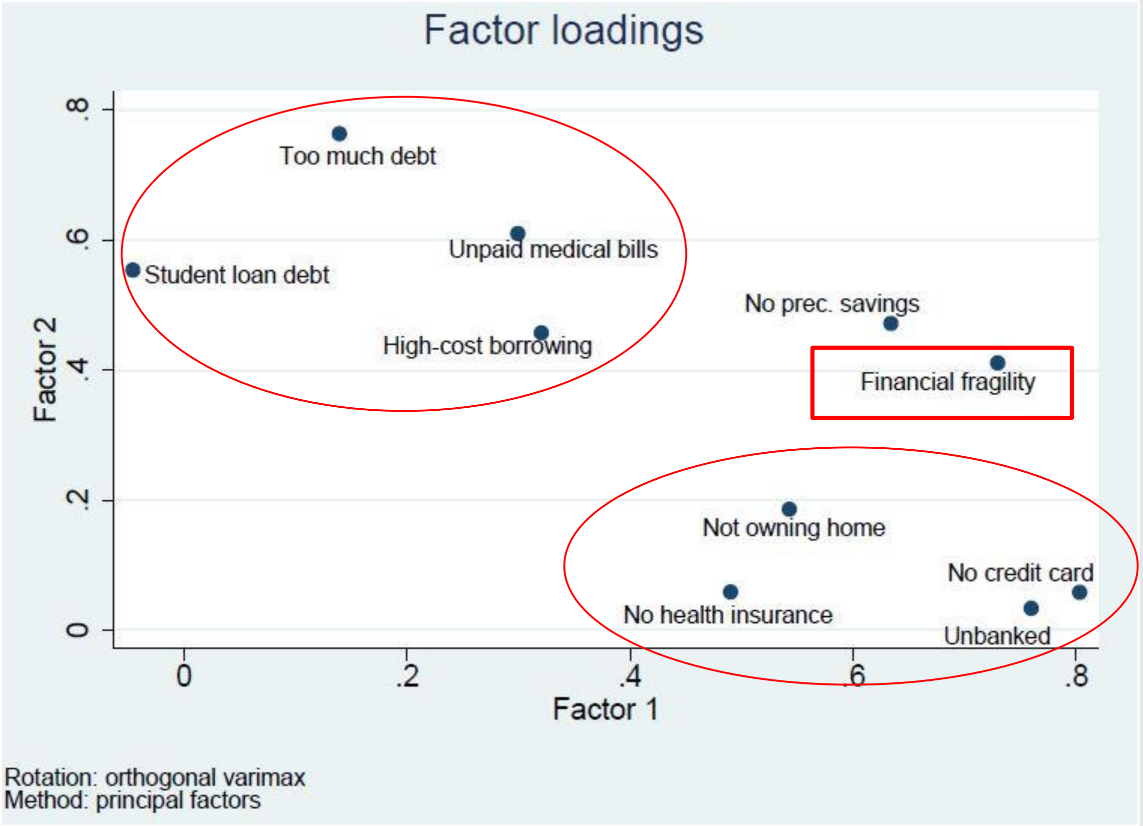
NFCS regressions – Financial literacy

	Model 1	Model 2	Model 3
Financial literacy		-0.063***	-0.041***
		(0.009)	(0.009)
Demographic variables	Yes	Yes	Yes
Job variables	Yes	Yes	Yes
Financial literacy	-	Yes	Yes
Financial distress	-	-	Yes
Observations	16,174	16,174	16,174
R^2	0.247	0.250	0.280

Source: NFCS 2015, 25- to 60-year-olds
Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

- People who are financially literate are more than 4 percentage points less likely to be financially fragile.
- This effect of financial literacy is independent of the effect that overall educational attainment has on fragility.
- Financial literacy is also discussed in focus group interviews, as the need for financial education and that participants do not seek financial advice because it is not tailored to their needs.

NFCS factor analysis – Underlying factors



Indicators for too much debt:

- High-cost borrowing
- Having student loans
- Perceived over-indebtedness
- Dealing with unpaid bills

Indicators for lack of assets:

- Lack of precautionary savings
- Lack of bank account and credit card
- Lack of assets such as house and retirement plan
- Lack of health insurance

- Include observable variables that proxy for financial fragility.
- Two main factors explain close to 100% of the total variance observed in the variables.
- Financial fragility is correlated with both factors.
- Fragility behaves similar to lack of precautionary savings.

Long-term implication of financial fragility

The full regression model is

$$\mathrm{R} = \beta_0 + \beta_F F + \beta_D' D + \beta_W' \mathrm{W} + \beta_L L + \beta_S' S + \vartheta$$

where

R: Retirement planning (dummy variable = 1 if tried to figure out how much to save for retirement)

F: Financial fragility (dummy variable)

D: Demographic and family characteristics

- Age, gender, race or ethnicity, education, married, children

W: Job variables

- Income brackets, employment status

L: Financial literacy

- First three questions correct (interest, inflation, risk)

S: Financial distress variables

- Income shock (large unexpected drop in income in the previous 12 months)
- Outstanding medical bills (unpaid medical bills that are past due)

NFCS regressions – Retirement planning

	Model
Financially fragile	-0.175***
	(0.011)
Education (BL: High school or less):	
Some college, no degree	0.063***
	(0.011)
Bachelor’s degree	0.111***
	(0.013)
Post-grad degree	0.104***
	(0.016)
Financial literacy	0.102***
	(0.010)
Demographic variables	Yes
Job variables	Yes
Financial literacy	Yes
Financial distress	Yes
Observations	16,107
R^2	0.181

Financially fragile people are less likely to plan for their retirement.

Source: NFCS 2015, 25- to 60-year-olds
Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

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Conclusion

- Financial fragility is prevalent among large demographic groups.
- Financial fragility can be attributed to lack of assets, high indebtedness, and lack of financial literacy.
- This simple question is a rich measure of the resources people have or have access to.
- Besides being less prepared to deal with emergency expenses in the short term, financial fragility also has repercussions for the long term.
- Recommendations:
  - Financial education in schools, colleges, and the workplace, especially targeting the vulnerable subgroups.
  - Tools that incentivize precautionary savings: Institutionalizing short-term savings in a manner similar to retirement accounts
  - Promoting financial planning to help reduce debt levels

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Thank you!

Questions? Contact me at **ahasler@gwu.edu**

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