

Financial Literacy and Personal Finance: An Overview

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Boot Camp
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Session 5: Financial literacy and financial behavior



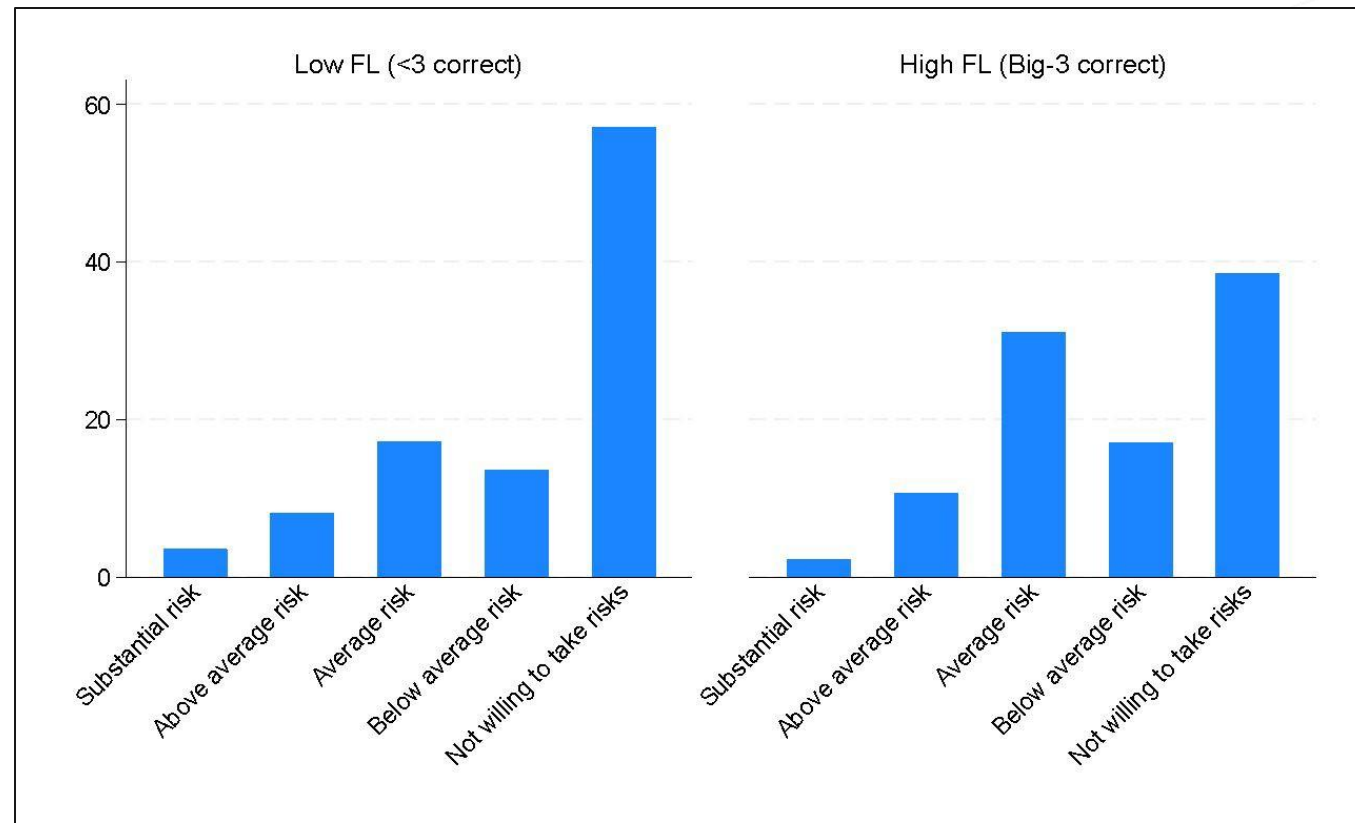
Questions from a personal finance approach

- Can people use their financial literacy in effective ways?
- How do they make financial-decisions?
- Is financial knowledge conducive to behaviors that build financial security?

Risk taking behavior (CES data)

High FL: more willing to take up (modest) risks

Willingness to take financial risk
(percentage of consumers, by literacy)



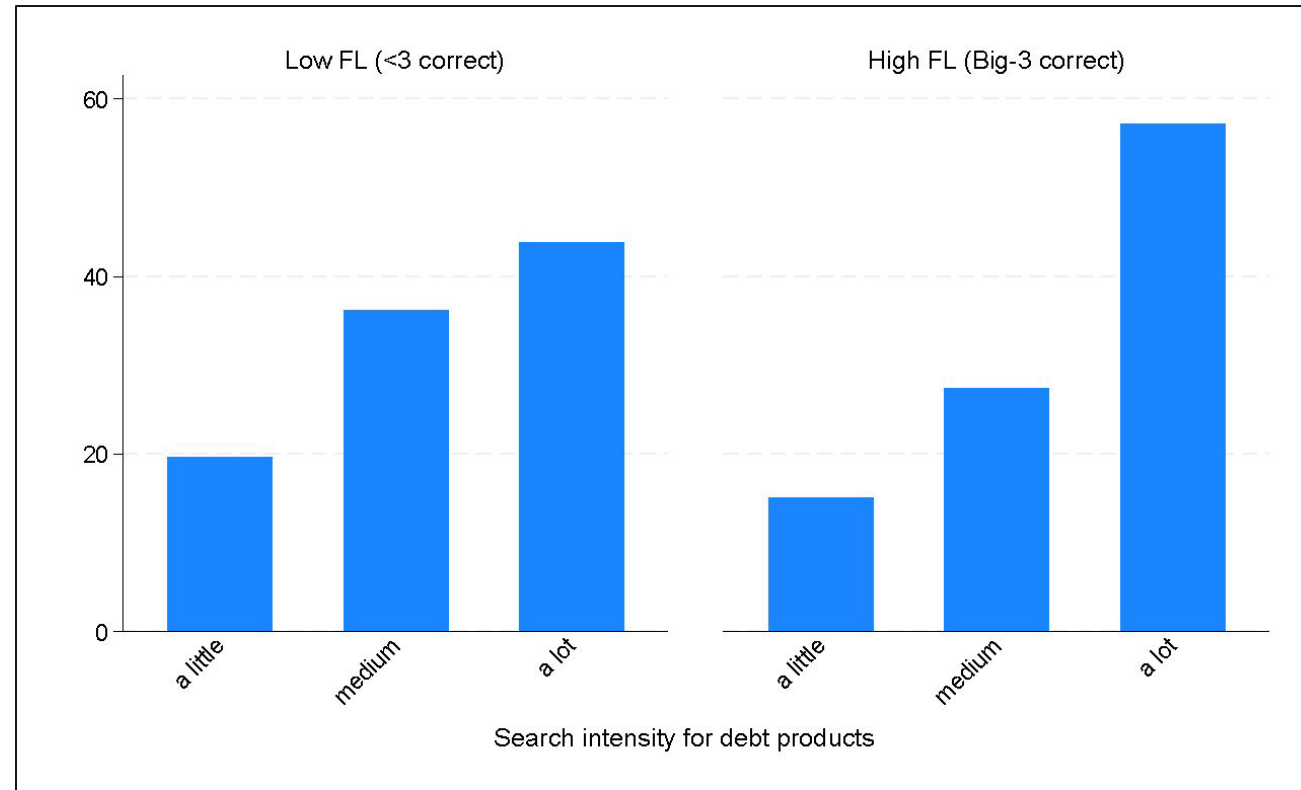
Source: ECB Consumer Expectations Survey, authors' calculations.

Notes: **Which of the following statements comes closest to the amount of financial risk you are willing to take when you save or make investments?** Weighted estimates. Pooled Nov. 2022 and Nov. 2023 data.

Shopping for best debt products

❖ High FL: more shopping for best debt products

Shopping around for debt products (in percent of consumers, by literacy)



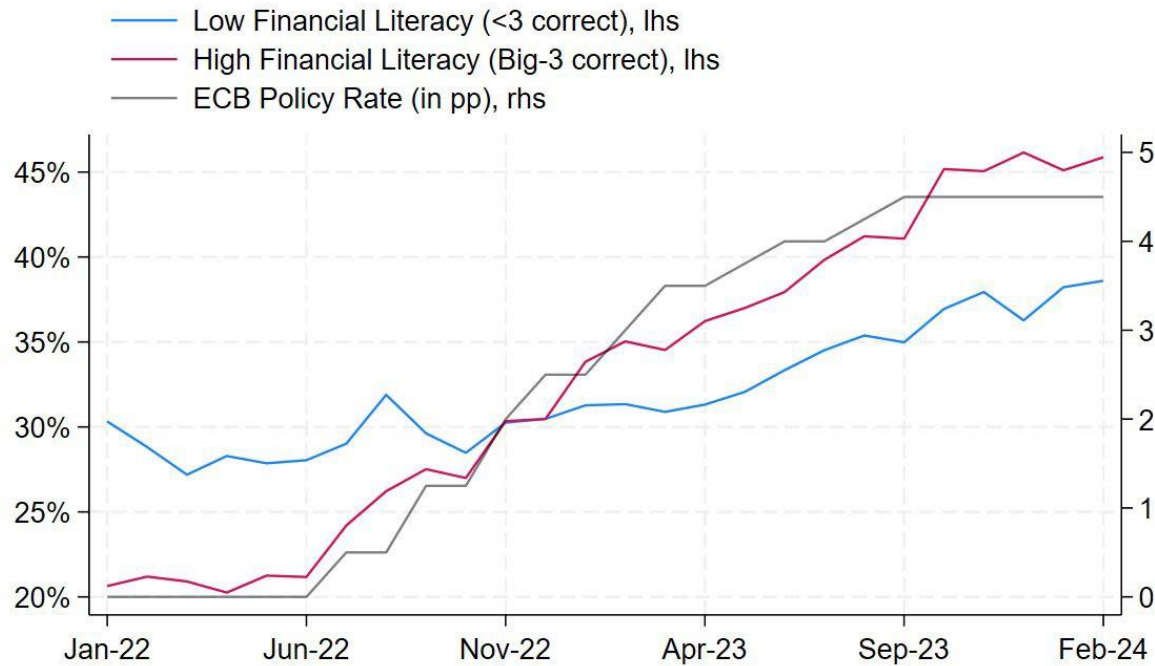
Source: ECB Consumer Expectations Survey, authors' calculations.

Notes: Consumers are asked **“When making major decisions about borrowing money or obtaining credit, some people search for the very best terms while others don’t. What best describes you and your household?”** on a 11-point-scale from 0 (no searching) to 10 (A great deal of searching). Answers are grouped to a little (0 to 3), medium (4 to 6) and a lot (7 to 10) of searching. Weighted estimates. Pooled Nov. 2022 and Nov. 2023 data.

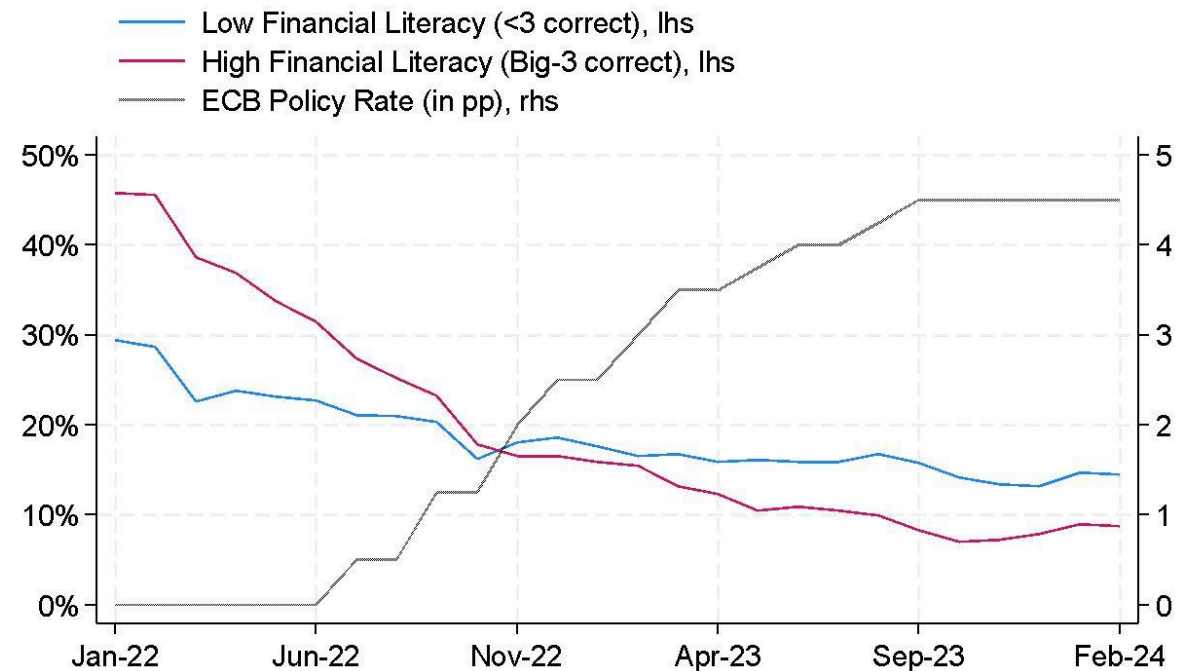
Good time to save and borrow

- ❖ High FL: better sense of good timing; more aligned with interest rates (IR) developments

Good time to **save** (yes)
(percentage of consumers, by literacy)



Good time to **borrow** (yes)
(percentage of consumers, by literacy)



Source: ECB Consumer Expectations Survey, latest data: Feb. 24. Authors' calculations.

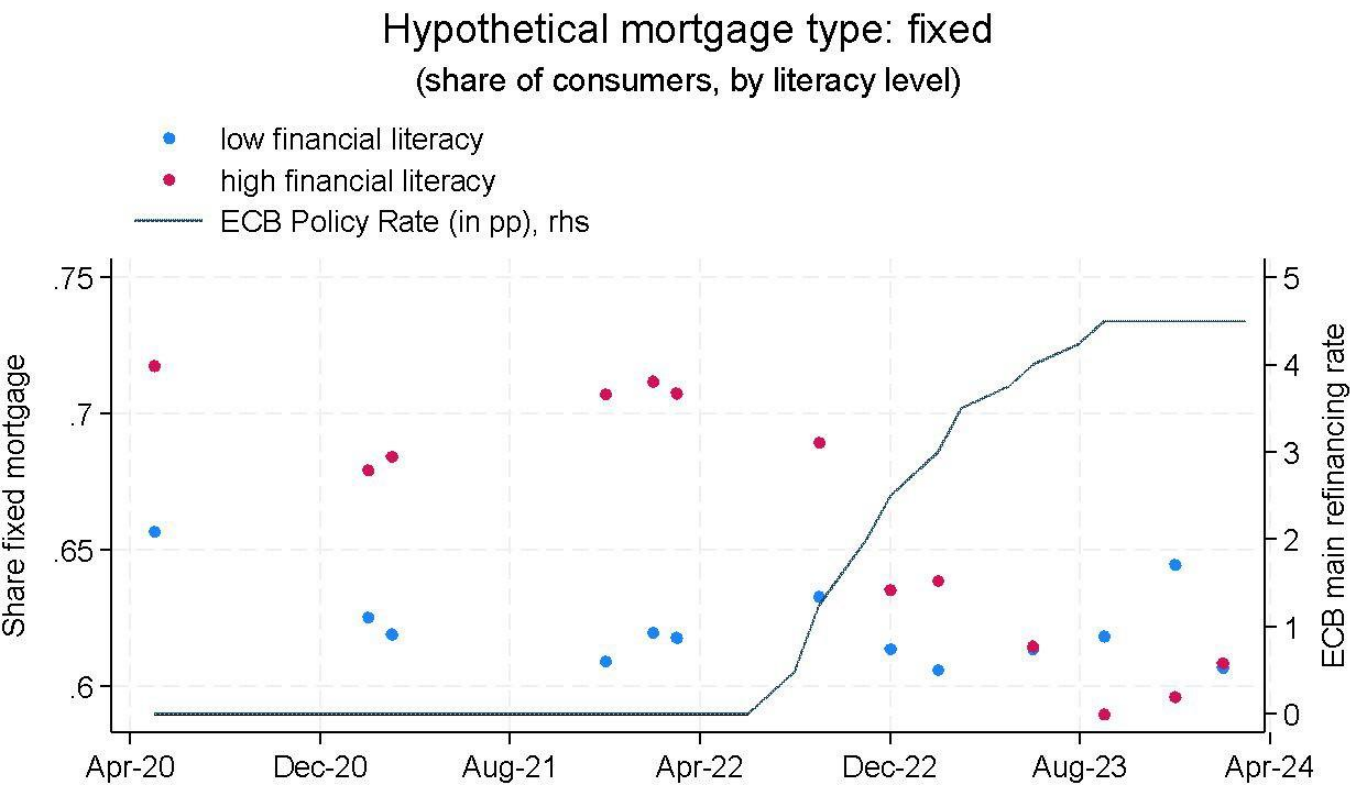
Notes: Each month in the CES Consumers are asked “**Generally speaking, do you think now is a good time or a bad time to ...?**”

(i) “**Save money in savings accounts**” (ii) “**Borrow money from a bank**” on a 5-point-scale from “very bad” to “very good”.

Weighted estimates.

FRMs vs ARMs across IR environments

❖ Low FL: favor FRMs in a high IR environment



Fixed mortgage (yes/no)	
Big 3 correct	0.08*** (0.008)
after July 22'	-0.00 (0.005)
Big 3 correct # after July 22'	-0.08*** (0.009)
R-2	0.02
N	173,727
Country dummies	Yes

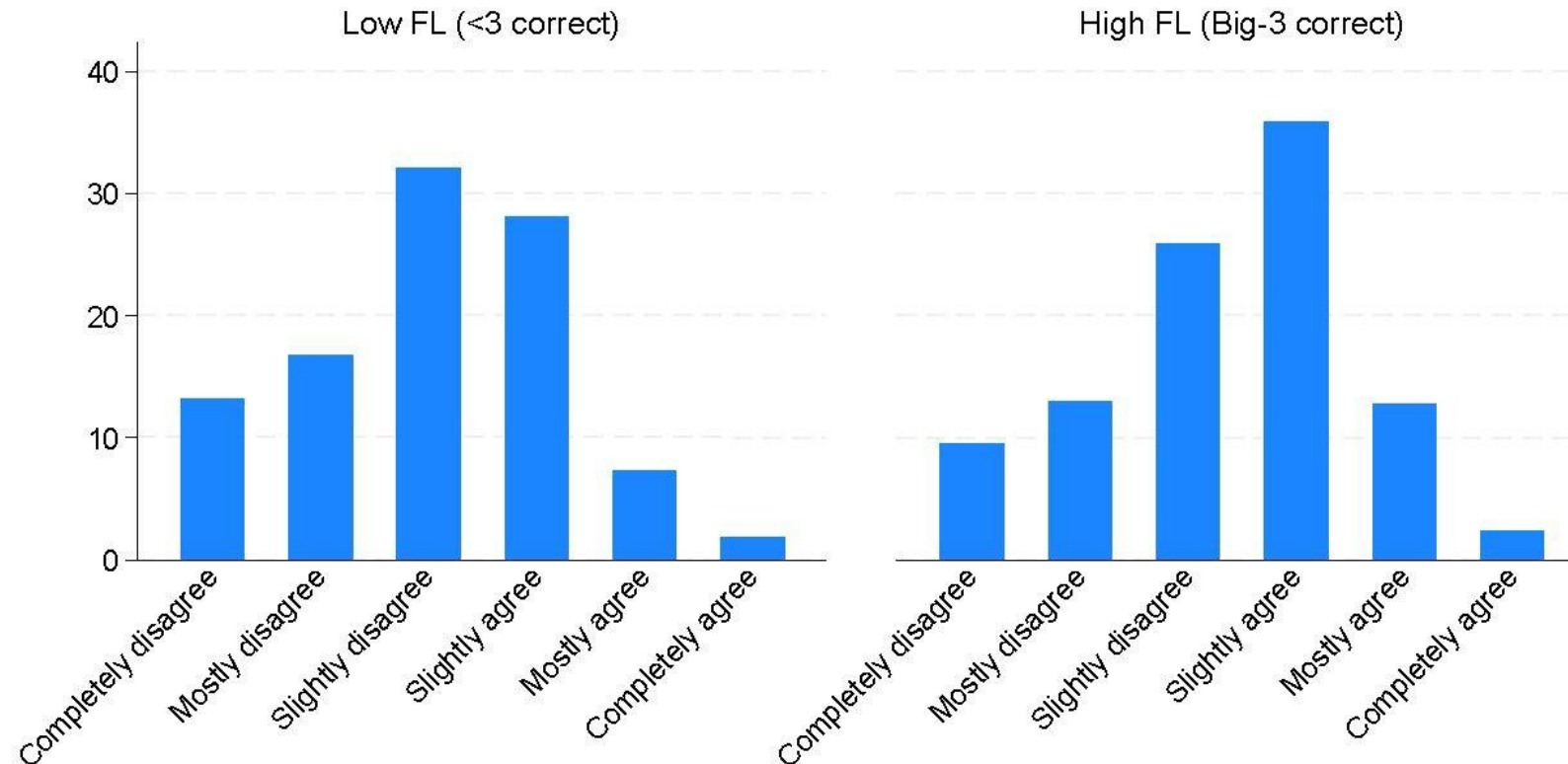
Source: ECB Consumer Expectations Survey, latest data: Feb. 2024, authors' calculations.

Notes: On ad-hoc basis the CES asks consumers “**Suppose you have to take out a mortgage to finance the purchase of a house/apartment today. Which one of the following types would you choose?**” Respondents can choose from: “An adjustable rate mortgage”, “A fixed rate mortgage” or “A mixed mortgage loan” with short explainers on the types of mortgages. Weighted estimates. Data depicted is pooled from Belgium, Germany, Spain, France, Italy, and the Netherlands.

Effectiveness of CB policies

- ❖ High FL: more likely to understand CB policies

The ECB policy decisions to raise interest rates ensure overall price stability
(percentage of consumers, by literacy)

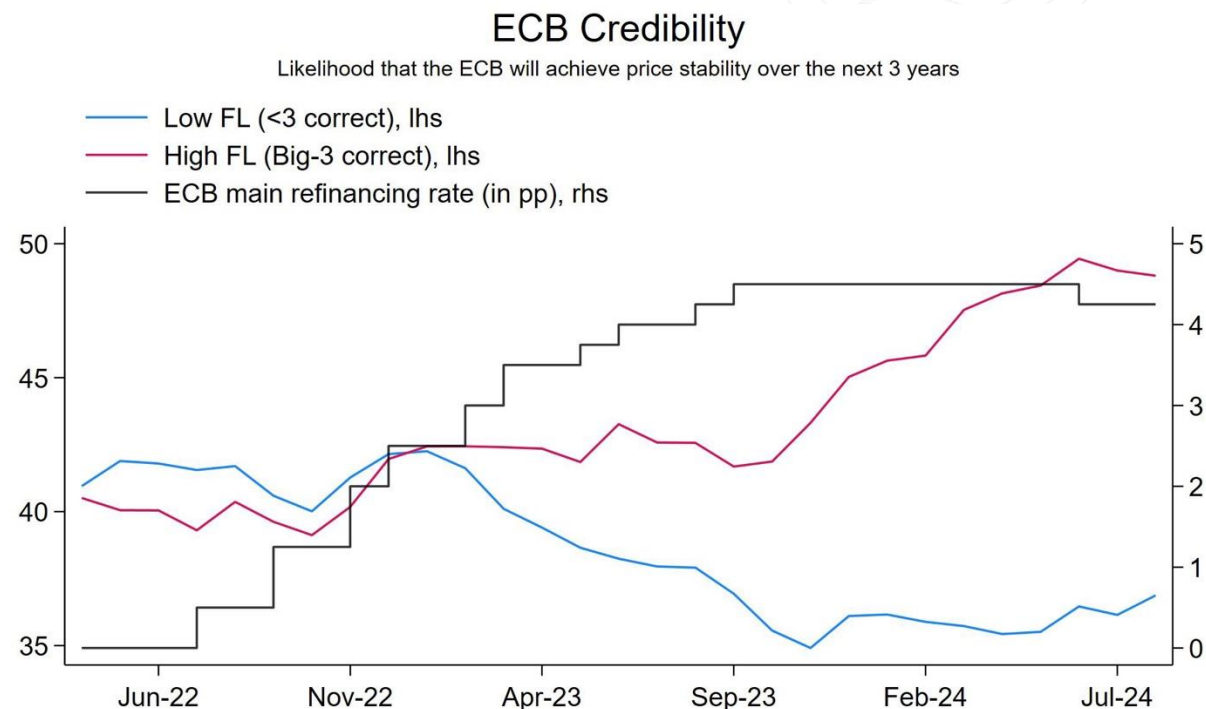
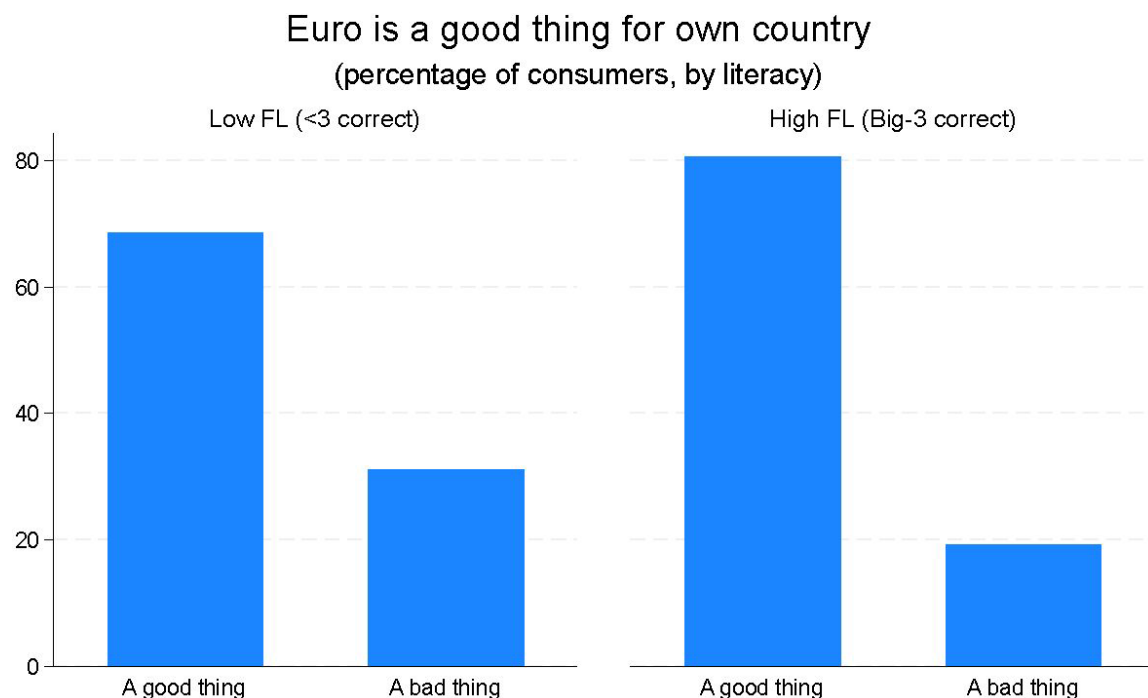


Source: ECB Consumer Expectations Survey. Authors' calculations.

Notes: In March 2023 consumers were asked **how much they agree or disagree with the following statement “The ECB policy decisions to raise interest rates ensure overall price stability.”**. Weighted estimates.

Trust in euro and the ECB

- ❖ High FL: higher support for the euro/ higher ECB credibility



Source: ECB Consumer Expectations Survey. Left panel: **“Generally speaking, do you think having the euro is a good or a bad thing for the country you currently live in? (i) A good thing (ii) A bad thing (iii) Can’t decide (iv) Don’t Know”**; Right panel: **“How likely do you think it is that the European Central Bank (ECB) will maintain price stability in the euro area economy over the next 3 years?”** (slider 0 to 100)

**Does financial knowledge
affect behaviors?**



Financial fragility in America

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



Measuring financial fragility (*Lusardi, Schneider and Tufano, BPEA, 2011*)

How **confident** are you that you could come up with **\$2000** 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.

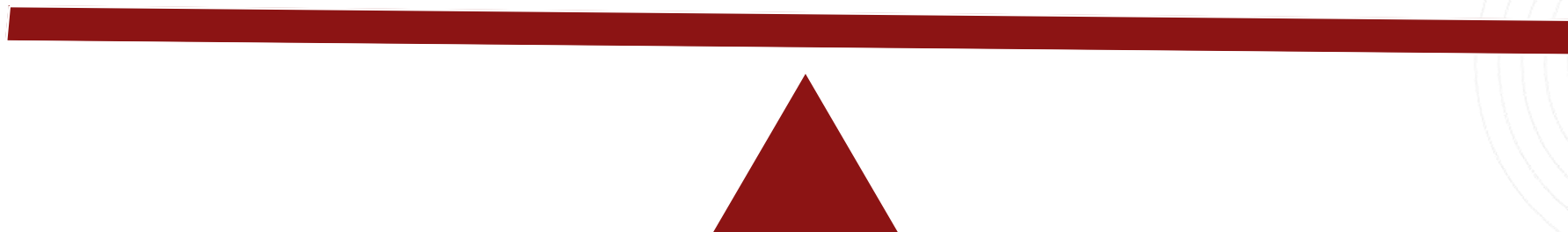


Respondents are classified as financially fragile.

Financial fragility: What does it measure?

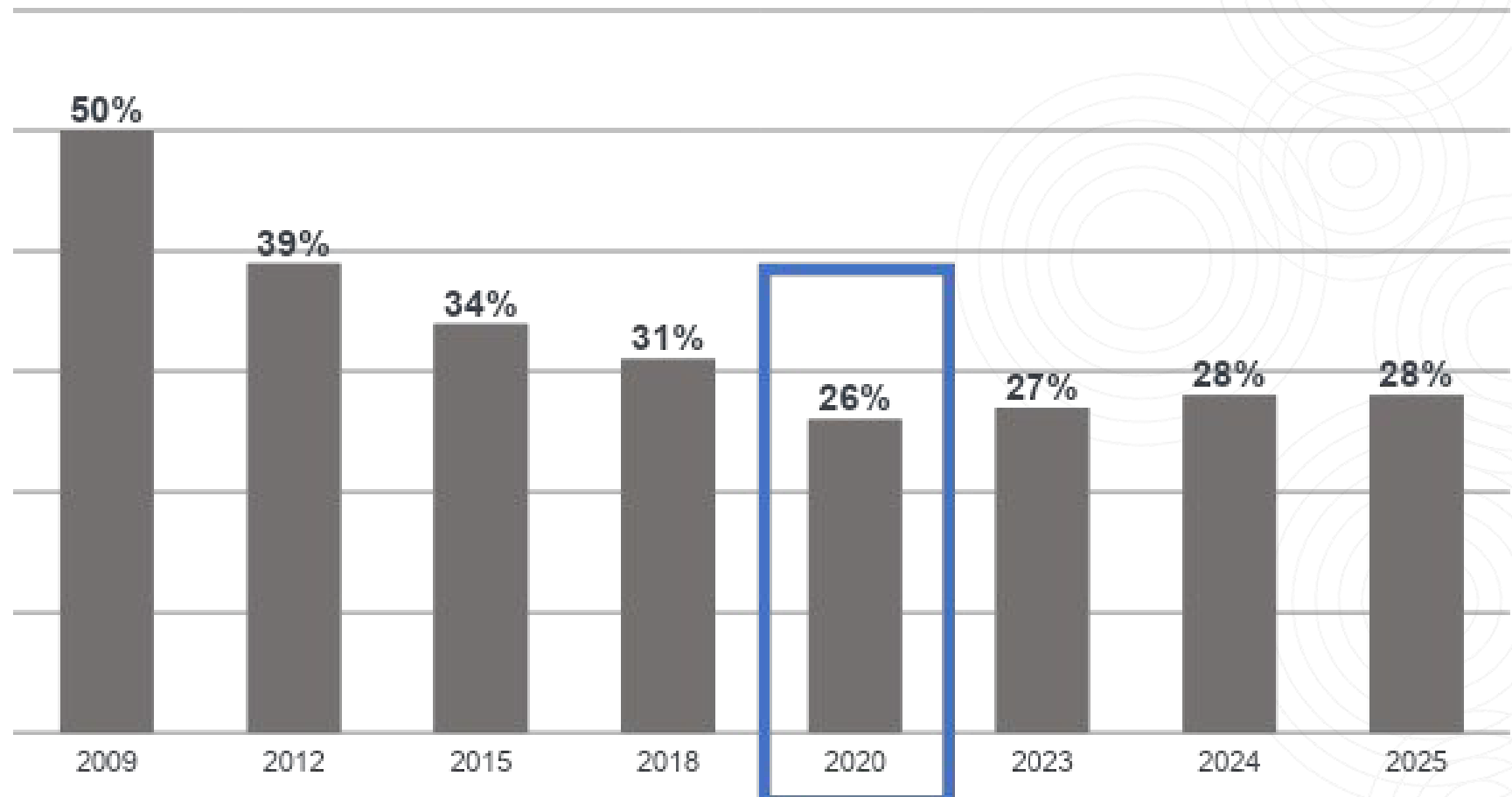
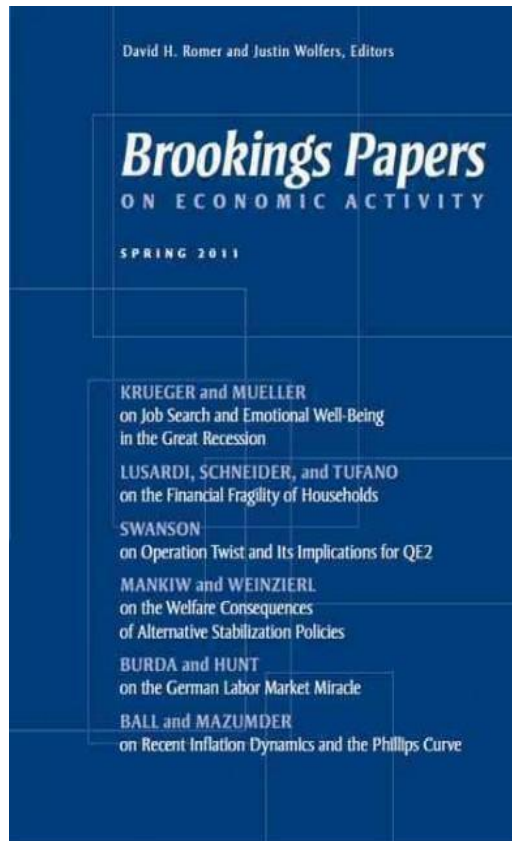
Is a symptom
of lack of
assets

Indicates lack
of borrowing capacity
of highly leveraged
households



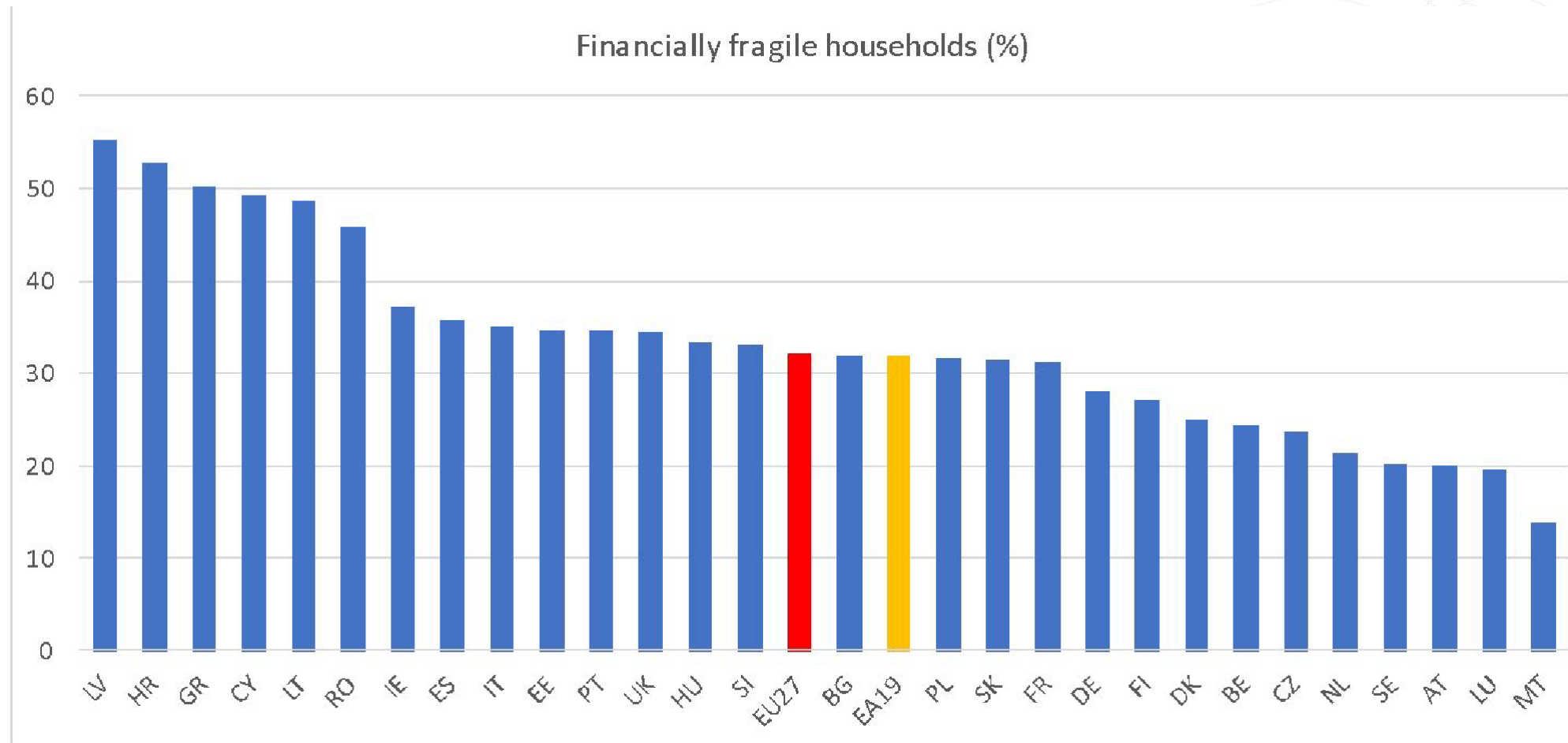
Financial fragility before and after the pandemic

Financial fragility over time



Source: 2009 TNS data; 2012, 2015 and 2018 NFCS data; 2020, 2023, 2024, 2025 P-Fin data.

Similar findings in Europe: 1/3 cannot face a shock (Demertzis, Domínguez-Jiménez and Lusardi, 2020)

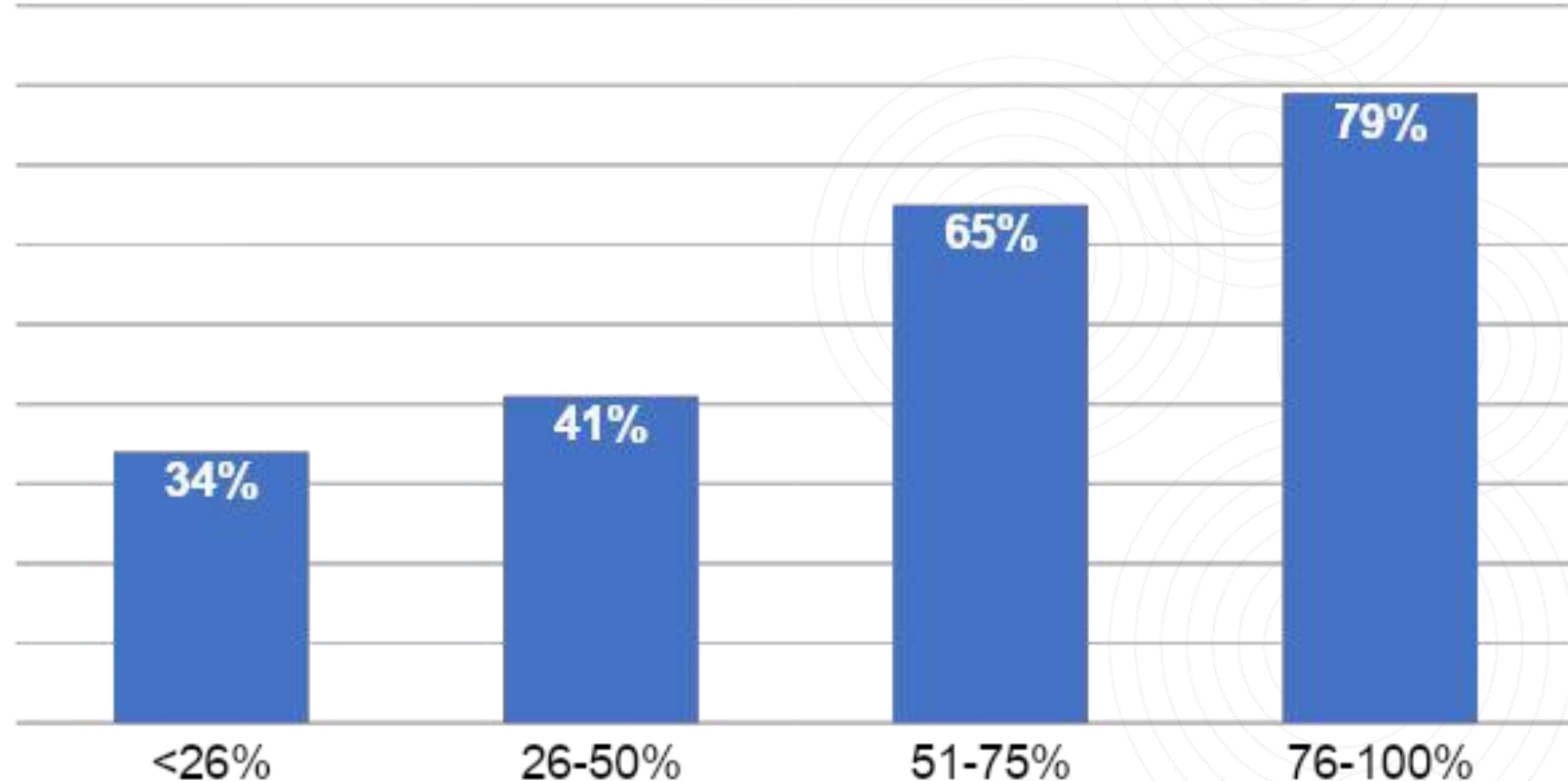


Source: EU-SILC 2018

Financial literacy and financial fragility

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 (2025).

The relationship between financial resilience (being able to cope) and financial literacy in 2025

	Model 1 <i>Financial Resilience</i>	Model 2 <i>Financial Resilience</i>	Model 3 <i>Financial Resilience</i>
>50% of P-Fin questions correct	0.085*** (0.019)		
Total # of P-Fin questions correct		0.007*** (0.001)	
Was offered financial education			0.045*** (0.017)
Demographic Controls	Yes	Yes	Yes
Observations	3,104	3,104	3,104
R-squared	0.142	0.144	0.138



Contents lists available at [ScienceDirect](#)

J. Account. Public Policy

journal homepage: www.elsevier.com/locate/jaccpubpol



Full length article

Resilience and wellbeing in the midst of the COVID-19 pandemic: The role of financial literacy



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ABSTRACT

Using the 2021 wave of the TIAA Institute-GFLEC Personal Finance Index (*P-Fin Index*), this paper provides an in-depth examination of the financial literacy of U.S. adults in the midst of the COVID-19 pandemic. Knowledge is troublingly low, with U.S. adults averaging a score of 50 percent on the twenty-eight questions that compose the *P-Fin Index*. Even more disturbingly, only 28 percent of U.S. adults correctly answered a question testing their ability to comprehend and compare probabilities. Financial literacy matters. Lower financial literacy is associated with increased time spent worrying about personal finances. After controlling for income, education, and key demographic information, the more financially literate are found to be more likely to be financially resilient, to plan for retirement, and to feel unconstrained by debt. These findings highlight the importance of financial knowledge, in particular in a time of crisis, and raise concerns about the public's ability to comprehend complex messages about risk during the pandemic.

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Robustness checks

- Similar results using different measures of precautionary savings
- Instrumenting for financial literacy tend to give even higher estimates than the OLS
- Relationship on financial literacy and financial fragility also holds at the macro level (use aggregated data across countries)

Debt and debt management

- ❖ High FL: less likely to have difficulty making payments on time

	Expected late payments							
	Rent		Mortgage		Loan		Utility bills	
Mean (share of resp.)	0.09		0.07		0.08		0.09	
Big-3 (correct)	-0.04*** (0.003)	-0.06*** (0.004)	-0.04*** (0.003)	-0.05*** (0.003)	-0.02*** (0.003)	-0.05*** (0.003)	-0.02*** (0.003)	-0.06*** (0.003)
Country and wave dummies	X	X	X	X	X	X	X	X
Demographic controls		X		X		X		X
R-2	0.06	0.02	0.05	0.03	0.06	0.03	0.10	0.04
N	113,402	113,402	105,857	105,857	110,042	110,042	190,683	190,683

Source: ECB Consumer Expectations Survey, authors' calculations.

Notes: Consumers are asked each quarter in the CES: “**Looking ahead over the next 3 months, do you expect that your household is likely to have difficulty making any of the following payments on time? Rent/ mortgage/ other loans/ utility bills**”. The table depicts marginal effects from a linear probability model with expected late payments of the respective item as dependent variable. Demographic controls include *age*, *gender*, *income*, *education*, *household size*, *financial fragility indicator*, and all regressions include *country* and *wave* dummies. Weighted estimates. Pooled quarterly data from April 2020 to March 2024.

Stock market participation

❖ High FL: significantly higher stock market participation

	Stocks (direct)		Mutual funds / ETFs		Pension Products		Pension Products	
Mean (share of resp.)	0.22		0.24		0.33		0.23	
Big-3 (correct)	0.15*** (0.006)	0.15*** (0.006)	0.20*** (0.006)	0.20*** (0.006)	0.24*** (0.007)	0.24*** (0.007)	0.10*** (0.006)	0.10*** (0.006)
Country and wave dummies	X	X	X	X	X	X	X	X
Demographic controls		X		X		X		X
R-2	0.04	0.04	0.09	0.09	0.09	0.09	0.03	0.03
N	52,633	52,633	52,638	52,638	52,540	52,540	52,708	52,708

Source: ECB Consumer Expectations Survey, authors' calculations.

Notes: The table depicts marginal effects from a **linear probability model with ownership of the respective asset** as dependent variable. Demographic controls include *age, gender, income, education, household size, financial fragility indicator*, and all regressions include *country* and *wave* dummies. Weighted estimates. Pooled data from Nov. 2021, Nov. 2022 and Nov. 2023.

Financial literacy and financial behavior

Financially literate individuals:

- are better prepared to cope with shocks
- are better at managing debt
- are more likely to invest in financial markets
- are more likely to plan for retirement

The findings in the P-Fin Index confirm the results in other studies using other measures of financial literacy.

Source: Lusardi and Mitchell (JEP 2023)

Estimating the effects of financial literacy

- Instrumental variables (IV) estimation
 - Hard to find good instruments
 - The IV estimates are always greater than the OLS estimates
- Example of IV estimates
 - School mandates
 - Being exposed to financial education in school or the workplace
 - Financial situation of oldest sibling
 - Parents understanding of financial matters

Experiments are the best way to assess effects of finlit/finedu

- Can address causality
 - Hard to find good instruments
- Can better control for many factors
 - Can do in labs
 - Often too much heterogeneity in the data

But tend to be expensive to do and also complex

JEP paper summarizes the research the past 20 years

Annamaria Lusardi and Olivia S. Mitchell

Journal of Economic Perspectives

Fall 2023

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The Importance of Financial Literacy: Opening a New Field

Annamaria Lusardi and Olivia S. Mitchell

People face complex financial decisions with potentially long-lasting consequences at all stages of life. As young people grow into adulthood, they make decisions about loans for college tuition, cars, and houses, along with how to manage credit cards, health and other kinds of insurance, and living within a budget. The shift from defined benefit to defined contribution retirement plans implies that ordinary people must now shoulder decisions about saving, investing, and more. Older people face decisions about how to manage risks and costs of aging, as well as drawing down their retirement assets. These decisions have only become more complex with the advent of new financial products (which, with the help of technology, one can access with a click), novel ways to make payments ("buy now, pay later"), risky instruments such as crypto assets, and most recently the rise of inflation. According to Google Trends, searches for how to budget or save for retirement have increased fourfold since 2004.

For these reasons and others, *financial literacy*, by which we mean people's knowledge of and ability to use fundamental financial concepts in their economic decision-making, matters and is more important than ever. The fact that so many people lack financial knowledge not only limits their ability to utilize their resources to the fullest, but also contributes to macroeconomic problems. Recent economic crises related to the subprime mortgage debacle and the COVID-19 pandemic

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For supplementary materials such as appendices, datasets, and author disclosure statements, see the article page at <https://doi.org/10.1257/jep.37.4.137>.

Recent studies on financial literacy using UAS data



RCT from UAS data (Clark et al., 2025)

- Innovative short online and scalable financial education program, similar to Lusardi et al. (2014) and Lusardi et al. (2015), with some implications for financial behavior.

Story 1 is about “compound interest”.

It is a story about a young couple making saving decisions.

It teaches the “Rule of 72” which is a simple way to help people calculate how many years it takes for an amount to double given a specific interest rate.

Story 2 is about “risk diversification”

It is a story about a couple discussing investment.

It teaches people the adage “do not put all of your eggs in one basket”.

Story 3 is about “inflation”

It is a story about two friends discussing shopping.

It teaches people that prices increase overtime and that we have to take inflation into account in our decisions.



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Journal of Economic Behavior and Organization

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Research Paper

Evaluating the effects of a low-cost, online financial education program[☆]

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ABSTRACT

We provide evidence on how a low-cost, online, and scalable financial education program influences older participants' financial knowledge. We test the program using a field experiment that includes short stories covering three fundamental financial education topics: compound interest, risk diversification, and inflation. Two surveys are administered eight months apart to measure the effects of those stories on middle-aged and older (45+) participants' short-term and longer-term knowledge and financial behavior. We show that the risk diversification story is the most effective at improving participants' knowledge, in both the short and longer terms. In the short term, reading the risk diversification story significantly increased the likelihood of correctly answering the related knowledge questions by 17–18 percentage points. The compound interest and inflation stories significantly increase participant knowledge in the short term, but the gain in financial literacy declines over time. Furthermore, timestamp data was used to show that the inflation story increased the time participants spent answering the related knowledge questions suggesting that exposure to our story boosted participants' attentiveness and interest in the topic. Over just an eight-month time period, the stories do not seem to have a significant effect on financial behaviors as measured by four financial distress indicators and a financial resilience index. Nevertheless, higher financial literacy is positively linked to better financial decision-making. The eight months might be too short to measure significant behavioral change; thus, further research is needed to prove the intervention's effect on financial behavior in the long run.

Evidence from UAS data (Clark et al., 2025)

- Someone who correctly answered all three questions was 11.4 p.p. less likely to be financially fragile, compared to a respondent who missed at least one question.
- Getting all three financial literacy questions correct also reduced the probability of reporting having too much debt, being financially dissatisfied, and having difficulty making ends (by 9.9, 4.7, and 11.8 p.p., respectively).
- Thus, financial literacy was strongly inversely related to people's financial distress outcomes pre-intervention, consistent with prior literature.

Table 9. How financial literacy influences financial distress indicators and resilience index

	(1)	(2)	(3)	(4)	(5)
	Financial fragility	Over- indebtedness	Financial dissatisfaction	Difficult ends meet	Financial Resilience Index
Financial literacy	-0.114*** (0.018)	-0.099*** (0.019)	-0.047** (0.019)	-0.118*** (0.022)	0.306*** (0.068)
Constant	0.213*** (0.029)	0.260*** (0.032)	0.187*** (0.029)	0.348*** (0.033)	4.233*** (0.105)
Observations	2122	2184	2212	2218	2218
R squared	.243	.106	.117	.157	.076

Financial literacy and stock market (Van Rooij et al., 2011)

- They used two special modules for the DNB (De Nederlandsche Bank) Household Survey (DHS), a panel data set covering a representative sample of the Dutch population and providing information on savings and portfolio choice.
- Financial literacy affects financial decision-making: Those with low literacy are more likely to rely on family and friends as their main source of financial advice. Most importantly, low-literacy individuals are less likely to invest in stocks.

Journal of Financial Economics 101 (2011) 449–472



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Financial literacy and stock market participation ☆

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ABSTRACT

We have devised two special modules for De Nederlandsche Bank (DNB) Household Survey to measure financial literacy and study its relationship to stock market participation. We find that the majority of respondents display basic financial knowledge and have some grasp of concepts such as interest compounding, inflation, and the time value of money. However, very few go beyond these basic concepts; many respondents do not know the difference between bonds and stocks, the relationship between bond prices and interest rates, and the basics of risk diversification. Most importantly, we find that financial literacy affects financial decision-making: Those with low literacy are much less likely to invest in stocks.

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Financial literacy and stock market (Van Rooij et al., 2011)

- Both the OLS and GMM estimates of financial literacy remain positive, statistically significant, and do not change appreciably in magnitude.
- *the reference group consists of those respondents who exhibit the highest degree of risk aversion, those respondents whose oldest sibling is in better financial condition and parents with the lowest understanding of financial matters (GMM (2)).

	OLS		GMM (1)		GMM (2)	
Advanced literacy index	0.0915***	(0.0145)	0.233*	(0.130)	0.188**	(0.0897)
Demographics and other control variables (see Table 7)	Yes	Yes	Yes	Yes	Yes	Yes
Observations	888		837		837	
R-squared	0.138		0.090		0.120	
p-Value test risk aversion coefficients=0	0.736		0.741		0.762	
Hansen J-test p-value			0.0204		0.0879	
F-statistic first-stage regression			12.72		9.114	
p-Value exogeneity test			0.324		0.289	

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

Translating research into action

We need large and scalable programs

- Financial education in school
- Financial wellness programs in the workplace
- Financial education in the community (media, libraries, museums, theaters, churches, town halls, or other places where people go to learn)