Financial Literacy and Wellbeing: Evidence from Six Years of Data

Annamaria Lusardi
The George Washington University
Academic Director, GFLEC

Mid Sweden University, December 13, 2022
Happy Santa Lucia!
Topics I will cover

1. Basic facts about financial literacy
2. The importance of heterogeneity
3. Linking financial literacy to well-being
4. Implications for future research, policy and programs
Basic facts about financial literacy
Measuring personal finance knowledge

- The TIAA Institute-GFLEC Personal Finance Index (*P-Fin Index*) is an annual barometer of knowledge and understanding which enable sound financial decision-making and effective management of personal finances.

- The *P-Fin Index* relates to common financial situations that individuals encounter and can be viewed as a gauge of “working knowledge.”

- In addition to personal finance knowledge, it provides information on financial well-being indicators.

- Data is collected since 2016 on a representative sample of Americans (age 18+).
What is unique: 8 functional areas of personal finance

The index is based on responses to 28 questions, with three or four questions for each of the eight functional areas (from National Standards for Finlit).

The *P-Fin Index’s* 28 questions cover eight functional areas:

1. Earning  
2. Saving  
3. Consuming  
4. Investing  
5. Borrowing  
6. Insuring  
7. Comprehending risk  
8. Go-to information sources
Anna saves $500 each year for 10 years and then stops saving additional money. At the same time, Charlie saves nothing for 10 years but then receives a $5,000 gift which he decides to save. If both Anna and Charlie earn a 5% return each year, who will have more money in savings after 20 years?

- Anna
- Charlie
- Anna and Charlie will have the same amount
- Don’t know
- Refuse to answer

Results:
- Correct: 52%
- Incorrect: 26%
- Don’t Know: 22%
- No Answer: 0%

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
## Financial literacy: A failing grade

<table>
<thead>
<tr>
<th>% of P-Fin Index questions answered correctly</th>
<th>Distribution of correct answers to P-Fin Index questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td><strong>22-28 correct (76%-100%)</strong> 18%</td>
</tr>
<tr>
<td></td>
<td><strong>15-21 correct (51%-75%)</strong> 33%</td>
</tr>
<tr>
<td></td>
<td><strong>8-14 correct (26%-50%)</strong> 26%</td>
</tr>
<tr>
<td></td>
<td><strong>0-7 correct (&lt;26%)</strong> 23%</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
Financial (il)literacy is holding steady: 2017-2022

<table>
<thead>
<tr>
<th>% of P-Fin Index questions answered correctly</th>
<th>Distribution of correct answers to P-Fin questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 49%</td>
<td>2017 16%</td>
</tr>
<tr>
<td>2018 50%</td>
<td>2018 16%</td>
</tr>
<tr>
<td>2019 51%</td>
<td>2019 18%</td>
</tr>
<tr>
<td>2020 52%</td>
<td>2020 20%</td>
</tr>
<tr>
<td>2021 50%</td>
<td>2021 18%</td>
</tr>
<tr>
<td>2022 50%</td>
<td>2022 18%</td>
</tr>
</tbody>
</table>

- 22-28 correct (76%-100%): 2017 16%, 2018 16%, 2019 18%, 2020 20%, 2021 18%, 2022 18%
- 15-21 correct (51%-75%): 2017 32%, 2018 35%, 2019 35%, 2020 33%, 2021 34%, 2022 33%
- 8-14 correct (26%-50%): 2017 32%, 2018 28%, 2019 27%, 2020 30%, 2021 28%, 2022 26%
- 0-7 correct (<26%): 2017 20%, 2018 21%, 2019 20%, 2020 17%, 2021 20%, 2022 23%

What do people know the most and the least

<table>
<thead>
<tr>
<th>Category</th>
<th>% of P-Fin questions answered correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrowing</td>
<td>60%</td>
</tr>
<tr>
<td>Saving</td>
<td>58%</td>
</tr>
<tr>
<td>Consuming</td>
<td>52%</td>
</tr>
<tr>
<td>Go-to info sources</td>
<td>49%</td>
</tr>
<tr>
<td>Earning</td>
<td>48%</td>
</tr>
<tr>
<td>Investing</td>
<td>47%</td>
</tr>
<tr>
<td>Insuring</td>
<td>45%</td>
</tr>
<tr>
<td>Comprehending risk</td>
<td>36%</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
In the US, consumer prices rose 7.7 percent in the year through October 2022, higher than data since the 1990s.
Knowledge about Inflation: One of the Big Three

Akiko has $1,000 in savings that earns a 2% rate of return over the course of the year. The inflation rate during the year is 3%. Which statement is true?

• She can afford to buy fewer things at the end of the year.
• She can afford to buy more things at the end of the year.
• It’s not clear whether she can afford to buy more things or fewer things at the end of year.
• Don’t know
• Refuse to answer

Results:
Correct 54%
Incorrect 21%
Don’t Know 26%
No Answer 1%

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
“Calculated risk”?

Which of the following indicates the highest probability of getting a particular disease?

• There is a one-in-twenty chance of getting the disease
• 2% of the population will get the disease
• 25 out of every 1,000 people will get the disease
• Don’t know
• Refuse to answer

Results:
Correct 28%
Incorrect 19%
Don’t Know 53%
No Answer 0%

The importance of heterogeneity
Demographic variation: Women and knowledge

% of P-Fin questions answered correctly

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>45%</td>
<td>55%</td>
<td></td>
</tr>
</tbody>
</table>

Distribution of correct answers to P-Fin questions

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>22-28 correct</td>
<td>12%</td>
<td>25%</td>
</tr>
<tr>
<td>15-21 correct</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>8-14 correct</td>
<td>29%</td>
<td>23%</td>
</tr>
<tr>
<td>0-7 correct</td>
<td>26%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
A gender gap in every topic..

% of P-Fin questions answered correctly

- **Borrowing**: Female 55%, Male 66%
- **Saving**: Female 53%, Male 64%
- **Consuming**: Female 50%, Male 54%
- **Earning**: Female 45%, Male 51%
- **Information**: Female 45%, Male 54%
- **Investing**: Female 40%, Male 54%
- **Insuring**: Female 41%, Male 49%
- **Risk**: Female 32%, Male 40%

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
..and in answering “Do not know”

% of P-Fin questions answered with “don’t know”

- **Borrowing**: Female 17%, Male 24%
- **Saving**: Female 18%, Male 26%
- **Consuming**: Female 19%, Male 16%
- **Earning**: Female 29%, Male 36%
- **Information**: Female 26%, Male 33%
- **Investing**: Female 25%, Male 36%
- **Insuring**: Female 24%, Male 31%
- **Risk**: Female 24%, Male 34%

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
Gender differences in finlit: From Global Finlit Survey

In most economies around the world, men have a better understanding of basic financial concepts than women.

Source: S&P GFLS.
Fearless Woman: Financial Literacy and Stock Market Participation

Tabea Bucher-Koenen (ZEW, U of Mannheim)
Rob Alessie (U of Groningen)
Annamaria Lusardi (The George Washington University and GFLEC)
Maarten van Rooij (DNB)
Large variation in financial literacy across demographics

<table>
<thead>
<tr>
<th>Demographic</th>
<th>% of P-Fin questions answered correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than HS</td>
<td>31%</td>
</tr>
<tr>
<td>High school</td>
<td>38%</td>
</tr>
<tr>
<td>Some college</td>
<td>49%</td>
</tr>
<tr>
<td>College degree</td>
<td>65%</td>
</tr>
<tr>
<td>HH income</td>
<td></td>
</tr>
<tr>
<td>&lt; $25k</td>
<td>30%</td>
</tr>
<tr>
<td>$25k-$49k</td>
<td>38%</td>
</tr>
<tr>
<td>$50k-$99k</td>
<td>51%</td>
</tr>
<tr>
<td>$100k-plus</td>
<td>60%</td>
</tr>
<tr>
<td>Employed</td>
<td>53%</td>
</tr>
<tr>
<td>Retired</td>
<td>52%</td>
</tr>
<tr>
<td>Unemployed/disabled</td>
<td>37%</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
Where changes happened over time:
Toward an unequal path

% point change in P-Fin questions answered correctly, 2017 to 2022

- Males: +4%
- Females: -3%
- Age:
  - 18-29: +4%
  - 30-44: +5%
  - 45-59: -1%
  - 60-plus: -3%
- HH income:
  - < $25k: -4%
  - $25k-$49k: -7%
  - $50k-$99k: 0%
  - $100k-plus: +1%

Who knows about inflation?

% of answer correctly for “Inflation” question

- **Men**: 61%
- **Women**: 47%
- **18-29**: 48%
- **30-44**: 48%
- **45-59**: 56%
- **60+**: 60%
- **<$25K**: 29%
- **$25-50K**: 39%
- **$50-100K**: 54%
- **>$100K**: 67%

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
What we learn from basic facts

• Very low levels of financial literacy
  - Do not take financial literacy for granted

• Financial illiteracy is widespread
  - Changing behavior requires more than small interventions

• Financial Large heterogeneity across demographic subpopulations
  - One size does not fit all
Financial literacy and financial well-being
A simple measure of the cost of financial illiteracy

Average hours per week spent thinking about and dealing with issues and problems related to personal finances

<table>
<thead>
<tr>
<th>% of P-Fin questions answered correctly</th>
<th>All adults</th>
<th>Workers while on the job</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 26%</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>26%-50%</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>51%-75%</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>76%-100%</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

People spend an average of 7h per week thinking about and dealing with financial issues and problems. An average of 3h per week occur at work.

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
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.
The face of financial fragility
Financial fragility: What does it measure?

Is a symptom of lack of assets

Indicates lack of borrowing capacity of highly leveraged households
Financial fragility in America before the pandemic

Financial Fragility Over Time

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

- < 26%: 32%
- 26%-50%: 43%
- 51%-75%: 65%
- 76%-100%: 79%

% of P-Fin questions answered correctly

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
Financial literacy and being constrained by debt

Those with greater financial literacy are less likely to be debt constrained.

% for whom debt and debt payments do not prevent adequately addressing other financial priorities

<table>
<thead>
<tr>
<th>% of P-Fin questions answered correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 26%</td>
</tr>
<tr>
<td>26%-50%</td>
</tr>
<tr>
<td>51%-75%</td>
</tr>
<tr>
<td>76%-100%</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
Financial literacy and retirement planning

Those with greater financial literacy are more likely to save and plan for retirement.

<table>
<thead>
<tr>
<th>% of non-retirees who save for retirement on a regular basis</th>
<th>% of non-retirees who have tried to determine how much they need to save for retirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 26%</td>
<td>&lt; 26%</td>
</tr>
<tr>
<td>36%</td>
<td>17%</td>
</tr>
<tr>
<td>76%-100%</td>
<td>61%</td>
</tr>
</tbody>
</table>

% of P-Fin questions answered correctly

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
## The relationship between retirement planning and financial literacy

<table>
<thead>
<tr>
<th></th>
<th>Model 1 Retirement Planning</th>
<th>Model 2 Retirement Planning</th>
<th>Model 3 Retirement planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 50% of P-Fin questions correct</td>
<td>0.125*** (0.023)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total # of questions correct</td>
<td>0.011*** (0.002)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was offered financial education</td>
<td></td>
<td>0.074*** (0.021)</td>
<td></td>
</tr>
<tr>
<td>Demographic controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>2,507</td>
<td>2,507</td>
<td>2,507</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.183</td>
<td>0.192</td>
<td>0.176</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2022); non-retirees.
The relationship between financial resilience (being able to cope) & financial literacy

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 50% of P-Fin questions correct</td>
<td>0.079*** (0.018)</td>
<td>0.007*** (0.001)</td>
<td>0.012 (0.016)</td>
</tr>
<tr>
<td>Total # of questions correct</td>
<td>0.007*** (0.001)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was offered financial education</td>
<td>0.012 (0.016)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demographic controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>3,377</td>
<td>3,377</td>
<td>3,377</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.187</td>
<td>0.190</td>
<td>0.181</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
## The relationship between debt variable and financial literacy

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Not debt-constrained</strong></td>
<td><strong>Not debt-constrained</strong></td>
<td><strong>Not debt-constrained</strong></td>
</tr>
<tr>
<td>&gt; 50% of P-Fin questions correct</td>
<td>0.061*** (0.016)</td>
<td>0.003** (0.001)</td>
</tr>
<tr>
<td>Total # of questions correct</td>
<td>0.003** (0.001)</td>
<td>-0.014 (0.015)</td>
</tr>
<tr>
<td>Was offered financial education</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Demographic controls</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>3,519</td>
<td>3,519</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.108</td>
<td>0.106</td>
</tr>
</tbody>
</table>

Source: TIAA Institute-GFLEC Personal Finance Index (2022).
Implications for research, policy and programs
Making financial education effective

We need large and scalable programs

1. Financial education in the workplace (for the adults)
2. Financial education in school and college
Research says that financial education works

Financial education affects financial knowledge and downstream behaviors

Tom Kaiser, Annamaria Lusardi, A.A., Lukas Menkhoff, Carly Urban

Abstract

We study the rapidly growing literature on the causal effects of financial education programs in a meta-analysis of 76 randomized experiments with a total sample size of over 160,000 individuals. Many of these experiments are published in top economics and finance journals. The evidence shows that financial education programs have, on average, positive causal treatment effects on financial knowledge and downstream financial behaviors. Treatment effects are economically meaningful in size, similar to those realized by educational interventions in other domains, and robust to accounting for publication bias in the literature. We also discuss the cost-effectiveness of financial education interventions.
Citations of the term “financial literacy” over time

Last paper included in Fernandes et al. (2014)
New meta-analysis

Our study includes 76 RCTs (vs. 13) from 33 countries (vs. 8) with over 160,000 (vs. 23,000) individuals across the lifespan.

The sample include many low-income countries/target groups. The effects are measured after 30 weeks, on average, and up to more than two years.
Research–based workplace financial education programs

Our workplace financial wellness webpage describes the financial wellness programs we have designed based on our research.

[Image: workplace financial wellness webpage]

[QR Code: For updates and guidance related to managing personal finances during COVID-19 / Coronavirus]
Teaching personal finance
Personal finance course at GW since 2013

- Personal Finance courses for undergraduate and graduate students
- Extensive coverage of risk and risk management
- Paying attention to gender and other differences in financial literacy
- Material available on our website
It’s time to teach personal finance in every college/university
We need more finlit research
Financial literacy is a research field officially
The G53 Network

The G53 Network comprises a diverse group of researchers from all over the world with a track record of research excellence and promoting financial literacy and personal finance.

Our members are appointed as Research Fellows or Research Associates, depending on their seniority in the field.
The first journal for the financial literacy field

First issue in 2023

- Submission is now available

- Special issues will be launched soon
Concluding remarks

- Data tell us how critical low the level of financial literacy is, in particular among specific groups.
- Financial literacy can be linked to financial well-being.
- Research-based solutions are needed.
- Submit your papers to the FLW Journal!
Thank you!

If you have any questions, please send them at alusardi@gwu.edu.

For more info visit www.gflec.org.

Follow us on social media and stay informed.