Financial Literacy and Personal Finance: An Overview

Annamaria Lusardi
Stanford University

**Boot Camp
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Session 2: Measurement of financial literacy – part I

How it started

Motivated by changes in the economic system:

- Changes in the pension system: people are in charge of their own pension

This is why Olivia Mitchell and I started working on financial literacy: People have to plan for their retirement, do they know how to do it?

Many more reasons to work on financial literacy

Not just changes in the pension system:

- Student loans: How to finance education

- Complexity of financial instruments, including new ones (crypto assets)

- Easy access to credit, buy now pay later

- Fintech, buy with a click

- Increase in risk, including climate problems (ex: CA fires) and wars

The importance of measurement

- Critically important to measure to be able to understand a topic

    - Kuznets set up national income accounting, which was instrument for measuring GNP

- No measure on financial literacy existed that could be linked to other variables

- The field did not exist

Measuring financial literacy: The Big Three

- Olivia Mitchell and I were able to add three questions in a module in the Health and Retirement Study (HRS) in 2004

- We considered the fundamental concepts at the basis of financial decision-making

- This small number made it possible to have these questions in many national surveys around the world

Measuring financial literacy: The ABCs

These are the questions I designed jointly with Olivia Mitchell.

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

How much do Americans know?
(Lusardi and Mitchell, Journal of Pension Economics and Finance (JPEF), 2011)

Distribution of responses across the U.S. population
(2009 National Financial Capability Study)

	Responses			
	Correct	Incorrect	DK	Refuse
Interest rate	64.9%	20.5%	13.5%	1%
Inflation	64.3%	20.2%	14.2%	1.3%
Risk diversif.	51.8%	13.3%	33.7%	1.2%

NB: Only about 1/3 correctly answer all 3 questions. About 1/3 do not know about risk diversification.

Main findings

- We cannot take financial literacy for granted even in the country with the most developed financial markets

  - High proportion of incorrect and DK answers even in simple questions

- Risk diversification is what people know the least

- High proportion of "do not know" answers.

Added these questions to national surveys in other countries

- How do countries compare?

- Are there many similarities?

- What do people know the most and least?

We learned a lot from international comparisons. When I moved to the George Washington University, I founded GFLEC (Global Financial Literacy Excellence Center)

How much do Germans know?
(Bucher-Koenen & Lusardi, JPEF 2011)

Distribution of responses across the German population
(2009 SAVE)

	Responses		
	Correct	*Incorrect*	*DK*
Interest rate	82.4%	6.7%	11%
Inflation	78.4%	4.6%	17%
Risk diversif.	61.8%	5.9%	32.3%

NB: About half (53.2%) correctly answer all 3 questions. About 1/3 do not know about risk

How much do Canadians know?
(Boisclair, Lusardi and Michaud, JPEF 2017)

Distribution of responses across the Canadian population
(2012 Canadian Securities Administrators Survey)

	Responses		
	Correct	*Incorrect*	*DK*
Interest rate	77.9%	13.2%	8.8%
Inflation	66.2%	17.7%	16.1%
Risk diversif.	59.3%	9.4%	31.3%

NB: Less than half (42.5%) correctly answer all 3 questions. About 1/3 do not know about risk.

International evidence on financial literacy

- Initial evidence from 15 countries:

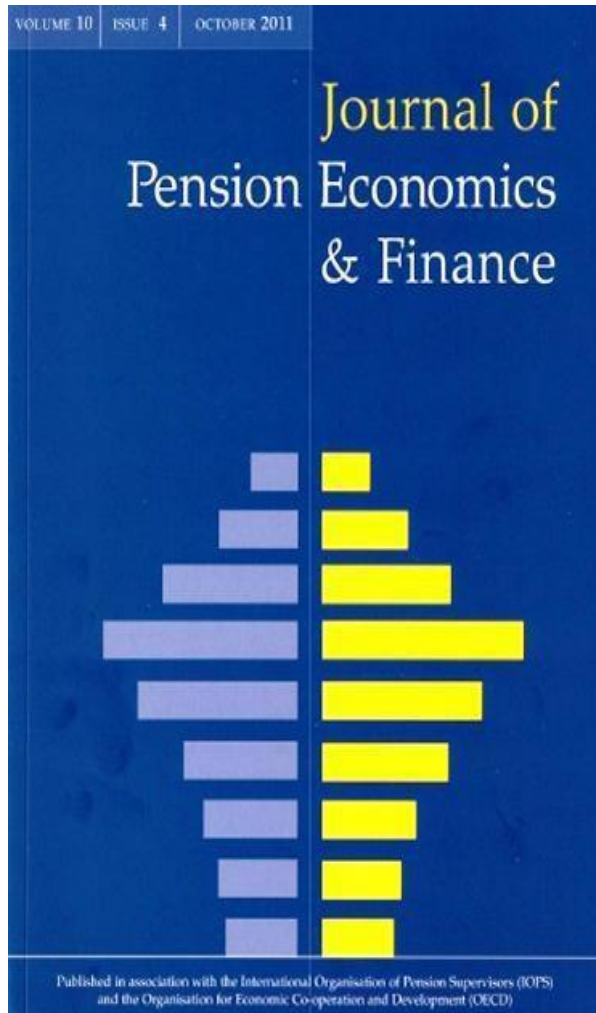|	
❖ USA	❖ Australia
❖ Germany	❖ France
❖ The Netherlands	❖ Switzerland
❖ Italy	❖ Romania
❖ Russia	❖ Chile
❖ Sweden	❖ Finland
❖ New Zealand	❖ Canada
❖ Japan	

Using the Big Three, we have found that financial literacy is low in both developed and developing economies

Main findings across countries

- Strikingly similar findings across countries

  - Low percentage of people who know the Big Three

- Risk diversification is what people know the least

- Do not know answers play an important role

Special issue of JPEF, October 2011

VOLUME 10 | ISSUE 4 | OCTOBER 2011

Journal of Pension Economics & Finance

Published in association with the International Organisation of Pension Supervisors (IOPS) and the Organisation for Economic Co-operation and Development (OECD)

We published a paper for each participating country (8 countries)

Examines the link between financial literacy and retirement planning

They are the most cited papers of *JPEF*

We had other special issues in other journals

Another good journal where to publish work on financial literacy

International comparison, cont.

- Evidence from other countries and updating the evidence <u>with a focus on inflation</u> (special issue of the *Journal of Financial Literacy and Wellbeing*, 2023)

  - ❖ Latin America (Peru and Uruguay)
  - ❖ Eastern Europe (9 countries)
  - ❖ Singapore
  - ❖ **Finland**
  - ❖ **Italy**
  - ❖ **Japan**
  - ❖ **US**

FLW

Journal of Financial Literacy and Wellbeing

Cambridge.org/FLW

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How much do Americans know? New evidence

Distribution of responses

(2021 National Financial Capability Study)

	Responses		
	Correct	*Incorrect*	*DK*
Interest rate	69.4%	14.2%	15.4%
Inflation	53.1%	27.9%	23.1%
Risk diversif.	41.5%	12.5%	45.2%

NB: Less than 1/3 (28.5%) correctly answer all 3 questions. About 45% do not know about risk.

BIG Five: Two more questions (added in 2009)

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
Do not know
Prefer not to say

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
 Do not know
 Prefer not to say

Some comments

- The Big Three and Big Five had two different objectives

- We designed richer measures of financial literacy, but not many were used internationally

- In 2014, we were able to collect data on financial literacy around the world (5 questions but around the Big Three topics)

Who knows the least?

Financial literacy in America (2021 NFCS), by age

Hump-shaped profile across age/cohorts

Financial literacy by income and education

Financial literacy and
income...

... and education.

Source: 2021 NFCS
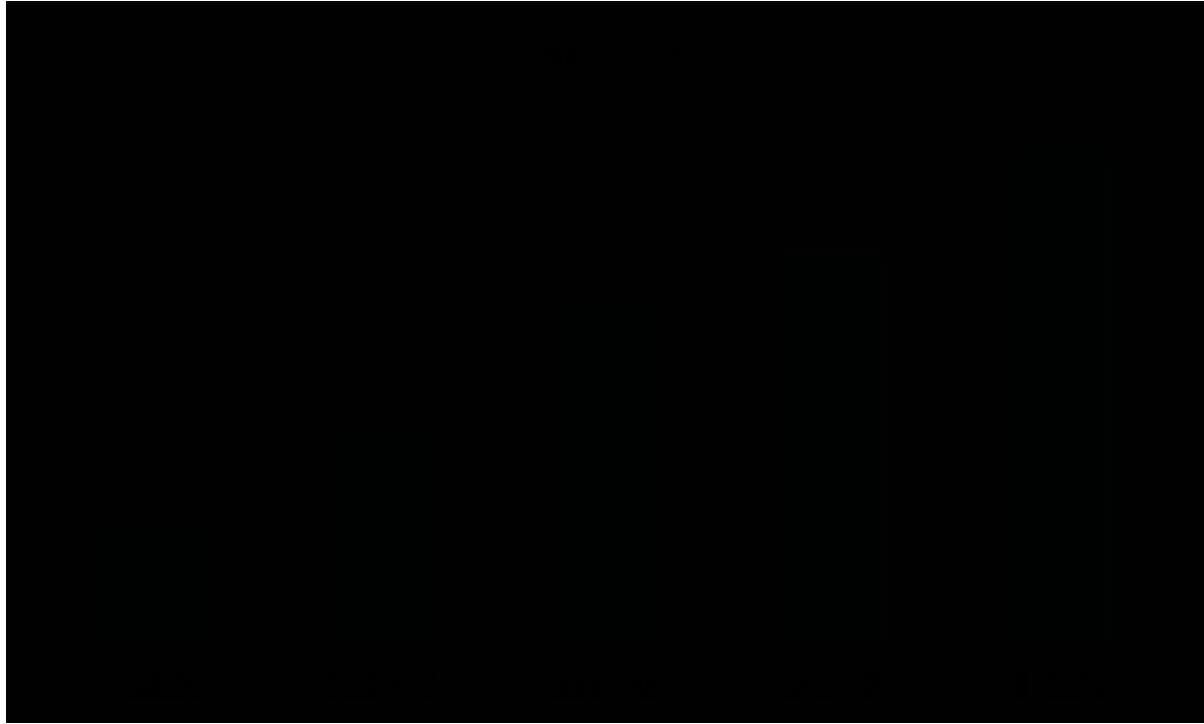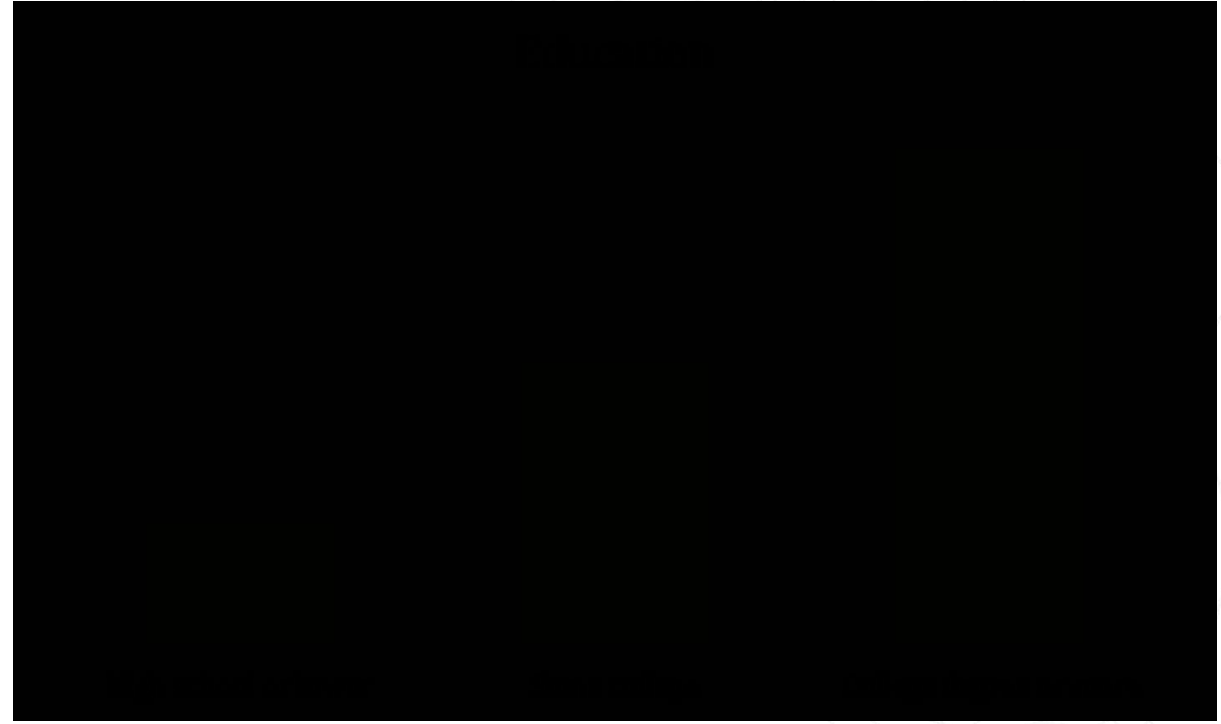
Explaining financial literacy
(Lusardi, Michaud and Mitchell, JPE 2017)

- These findings inspired Olivia Mitchell, Pierre-Carl Michaud, and I to work on a paper that was published in the JPE in 2017

- Who benefits from financial literacy? And what are the costs of acquiring financial literacy?

- Consider a life cycle model of saving with financial literacy. Financial literacy affects the return on savings. We have to spend time and effort in acquiring financial literacy

- Financial literacy is a choice variable and we can derive the "optimal" amount of knowledge.

Gender gap in financial literacy

Women are disproportionately more likely than men to respond to a question with "do not know."

Financial knowledge by gender
(% answering 3 Qs correctly)

	Women	Men
US	22%	38%
Netherlands	35%	55%
Germany	47%	60%
Canada	33%	51%
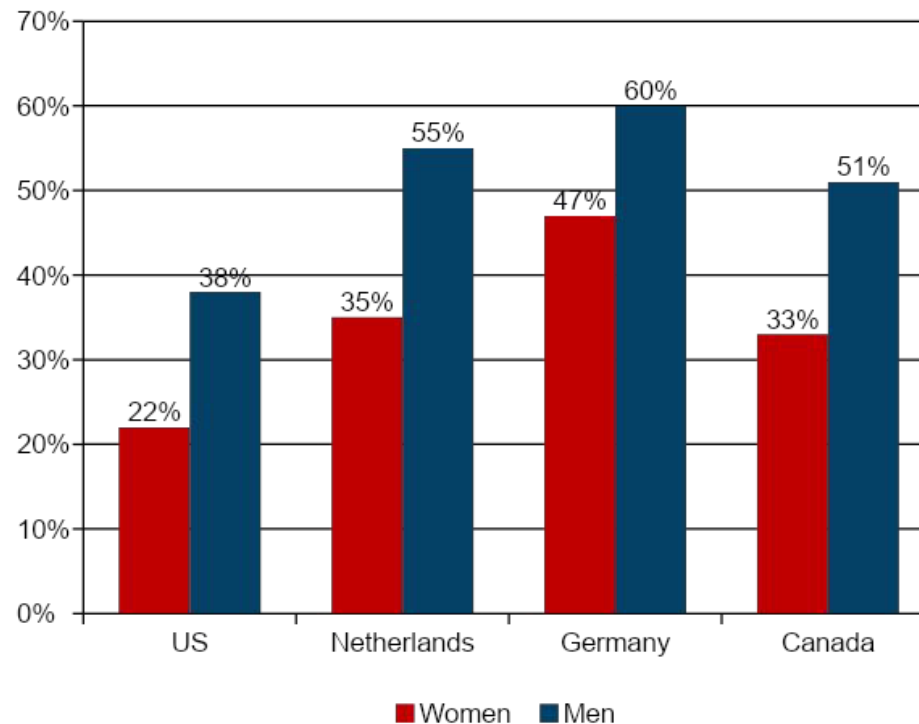
At least one "don't know" answer, by gender

	Women	Men
US	50%	34%
Netherlands	46%	29%
Germany	43%	30%
Canada	47%	28%

Source: Flat World
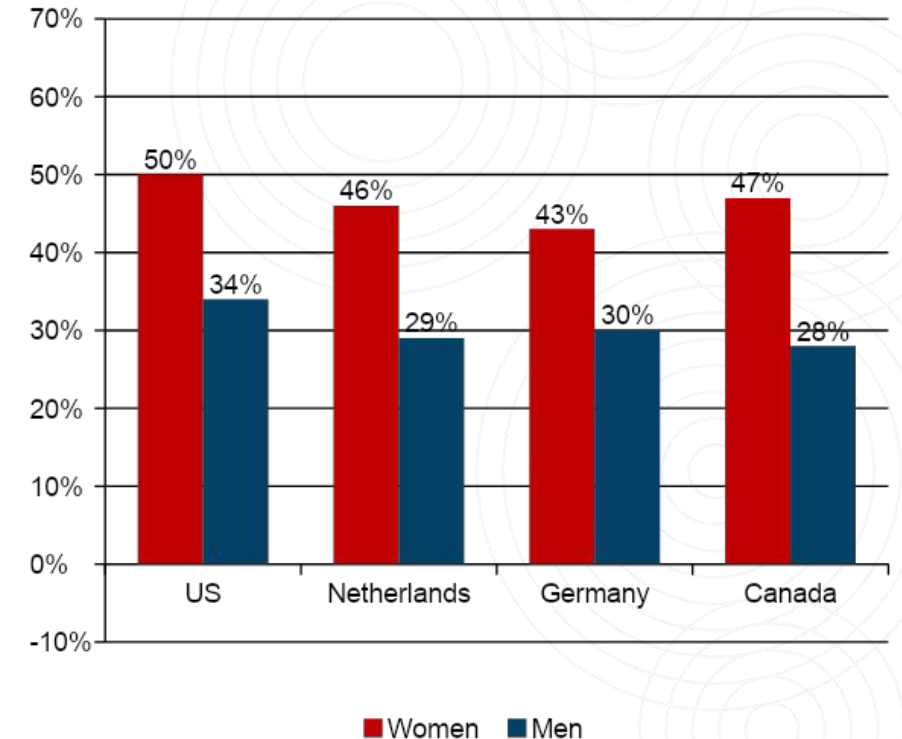
Focusing on gender differences

What happens if we take away the "do not know" option?

This is what we did in a project with data from the Dutch Central Bank using the Big Three.

- The gender difference shrinks but does not go away

- Women know more than they think they do, but they are not confident about their knowledge

- Both knowledge and confidence matter for financial behavior (investing in the stock market)

Bucher-Koenen, Alessie, Lusardi and van Rooij, 2025, "Fearless woman: Financial literacy, confidence and stock market participation." Published in *Management Science, 2024*

Fearless Woman: Financial Literacy, Confidence, and Stock Market Participation

Tabea Bucher-Koenen,[a,*] Rob Alessie,[b] Annamaria Lusardi,[c] Maarten van Rooij[d]

[a] University of Mannheim and ZEW-Leibniz Center for European Economic Research, 68161 Mannheim, Germany; [b] School of Economics and Business, University of Groningen, 9700 AV Groningen, Netherlands; [c] Stanford Institute for Economic Policy Research and Graduate School of Business, Stanford, California 94305; [d] European Central Bank and De Nederlandsche Bank, 1000 AB Amsterdam, Netherlands
*Corresponding author
Contact: tabea.bucher-koenen@zew.de, https://orcid.org/0000-0002-3901-3912 (TB-K); R.J.M.Alessie@rug.nl, https://orcid.org/0000-0002-5128-6753 (RA); alusardi@standford.edu, https://orcid.org/0000-0002-2378-7489 (AL); M.C.J.van.Rooij@dnb.nl (MvR)

Abstract. Women are less financially literate than men, and it has been difficult to determine whether this gap reflects a lack of knowledge or, rather, a lack of confidence. To address this important research question, we designed two survey modules that enable us to calculate the extent to which confidence matters for both financial literacy and behavior. We developed and estimated a model that provides a new measure of financial literacy and disentangles confidence from knowledge. We find that confidence accounts for about 30% of the gender difference in financial literacy. Moreover, both financial knowledge and confidence are linked to stock market participation. We also provide researchers with a method to account for confidence in regressions.

History: Accepted by Bo Becker, finance.

New data on the Big Three: ECB's Consumer Expectations Survey (CES)

- Data collection started in January 2020

- Unique data and information: combines data on financial literacy with data on household perceptions, expectations and behavior (incl. consumption, saving/ investing, borrowing)

- Mixed-frequency modular approach (monthly, quarterly, annual topical modules; special-purpose ad hoc surveys)

- For a description see: ECB Evaluation Report (OP, 2021) and Georgarakos and Kenny (JME, 2022)

Financial literacy – summary statistics

Share of consumers with high financial literacy
(percentage of consumers)