

Retirement Planning and Financial Literacy around the World

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Relevance

A new economic landscape

Individuals are increasingly in charge of their financial well-being

- **Changes in the pension landscape**
 - More individual accounts
- **Changes in the labor markets**
 - Increased mobility
- **Changes in the financial markets**
 - Increased complexity

The “great risk shift”

Increase in individual responsibility

- Risk shift from the government and employers to individuals
- How well-equipped are people to make these decisions?

Prepared for increased individual responsibility?

Do individuals know the basic concepts to make saving decisions, such as plan for retirement?

Aim: Assess knowledge of basic concepts, the *abc's* of financial knowledge

The journey of 3 simple questions

Measuring financial literacy

- **How to measure financial literacy?**
- **Theory: Saving and investing**
 - ❖ Life-cycle model of saving
 - ❖ Portfolio choice
 - Present value of lifetime resources
 - ✓ Interest compounding
 - ✓ Real versus nominal values
 - Risk diversification

Three main questions

1. How much (or little) do individuals know?

Assess basic knowledge

2. Who knows the least?

Identify vulnerable groups

3. Does financial literacy matter?

Effect of financial literacy on retirement planning

Measuring Financial Literacy (I)

To test numeracy and understanding of interest rates, we asked:

“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?”

- i) more than \$102
- ii) exactly \$102
- iii) less than \$102
- iv) don't know (DK)
- v) refuse to answer

Measuring Financial Literacy (II)

To test understanding of inflation, we asked:

“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...”

- i) more than today
- ii) exactly the same as today
- iii) less than today
- iv) DK
- v) Refuse to answer

Measuring Financial Literacy (III)

Finally, to test understanding of risk diversification, we asked:

“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.”

- i) true
- ii) false
- iii) DK
- iv) Refuse to answer

The Journey of Three Questions

Surveys in which these questions were added

- 1. 2004 Health and Retirement Study (age: 50+)**
- 2. 2007-2008 National Longitudinal Study of Youth (age: 23-28)**
- 3. 2008 American Life Panel (all age groups)**
- 4. 2009 Financial Capability Study (all age groups)**
- 5. National surveys in 7 other countries**

Financial Literacy around the World (FLat World)

These questions have been added to national surveys in:

- ❖ The Netherlands
- ❖ Germany
- ❖ Italy
- ❖ Sweden
- ❖ Russia
- ❖ New Zealand
- ❖ Japan

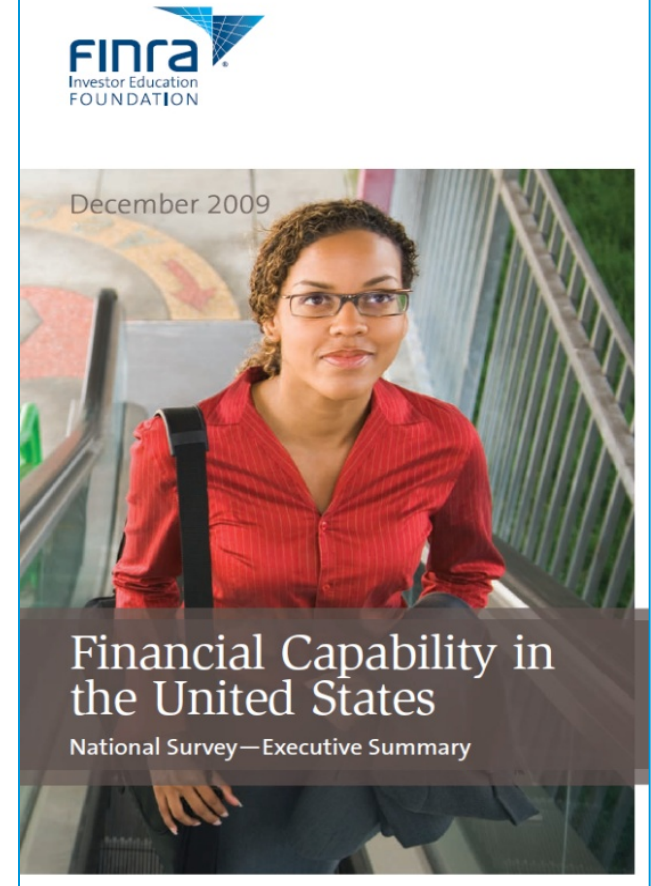


See special issue on financial literacy of
the *Journal of Pension Economics and
Finance*, October 2011

US: 2009 National Financial Capability Study

The National Financial Capability Study includes three linked surveys:

1. **National Survey**: Nationally projectable telephone survey of 1,488 American adults
2. **State-by-State Survey**: Online survey of approximately 28,000 respondents (roughly 500 per state + DC)
3. **Military Survey**: Online survey of 800 military personnel and spouses



How much do Americans know?

Distribution of responses across the U.S. population (2009 National Survey)

	Responses			
	<i>Correct</i>	<i>Incorrect</i>	<i>DK</i>	<i>Refuse</i>
Interest rate	65%	21%	13%	1%
Inflation	64%	20%	14%	2%
Risk diversif.	52%	13%	34%	1%

NB: Only 30% correctly answer all 3 questions; less than half (46%) got the first two questions right.

How much do Japanese know?

Distribution of responses in the Japanese population (2010 SLPS)

	Responses			
	<i>Correct</i>	<i>Incorrect</i>	<i>DK</i>	<i>Refuse</i>
Interest rate	71%	15%	13%	1%
Inflation	59%	11%	28%	2%
Risk diversif.	40%	3%	56%	1%

NB: Only **27%** correctly answer all 3 questions; **less than half (49%)** got the first two questions right.

How much do Germans know?

Distribution of responses across the German population (2009 SAVE)

	Responses			
	<i>Correct</i>	<i>Incorrect</i>	<i>DK</i>	<i>Refuse</i>
Interest rate	82%	7%	11%	0%
Inflation	78%	5%	17%	0%
Risk diversif.	62%	6%	32%	0%

NB: About half (53%) correctly answer all 3 questions; 72% got the first two questions right.

How much do Germans know?

Distribution of responses across people living in East versus West Germany

	Responses			
	<i>West G.</i> <i>(correct)</i>	<i>East G.</i> <i>(correct)</i>	<i>West G.</i> <i>(DK)</i>	<i>East G.</i> <i>(DK)</i>
Interest rate	85%	78%	9%	15%
Inflation	82%	72%	14%	23%
Risk diversif.	66%	54%	28%	41%

NB: Less than half (45%) correctly answer all 3 questions in East Germany

How much do Dutch know?

Distribution of responses across the Dutch population (2010 DNB Household Survey)

	Responses			
	<i>Correct</i>	<i>Incorrect</i>	<i>DK</i>	<i>Refuse</i>
Interest rate	85%	5%	9%	1%
Inflation	77%	8%	14%	1%
Risk diversif.	52%	13%	33%	2%

NB: Less than half (45%) correctly answer all 3 questions; 73% got the first two questions right.

Measuring Financial Literacy (Sweden)

To test understanding of interest compounding, respondents were asked:

“Suppose you had SEK 200 in a savings account and the interest rate is 10% per year and is paid in the same account. How much will you have in the account after 2 years?”

- i) Your calculation (correct answer is SEK 242)
- ii) don't know (DK)

How much do Swedish know?

Distribution of responses in the Swedish population (FSA, 2010)

	Responses			
	<i>Correct</i>	<i>Incorrect</i>	<i>DK</i>	<i>Refuse</i>
Interest rate	35%	49%	16%	n.a.
Inflation	60%	24%	16%	n.a.
Risk diversif.	68%	13%	19%	n.a.

NB: Only **21%** correctly answer all 3 questions; **only 27%** got the first two questions right.

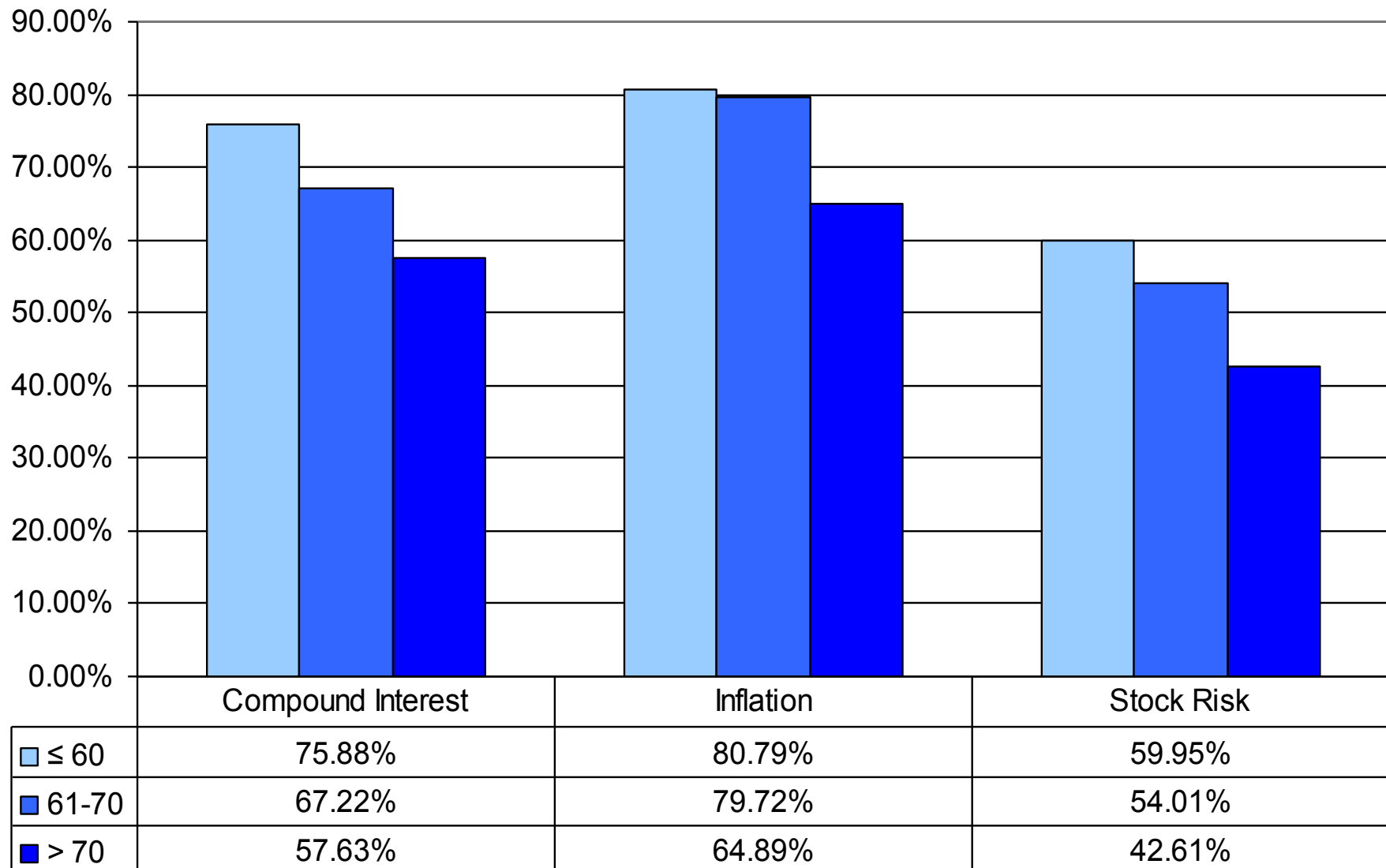
Financial Literacy around the World (FLat World)

These questions have also been added to surveys in:

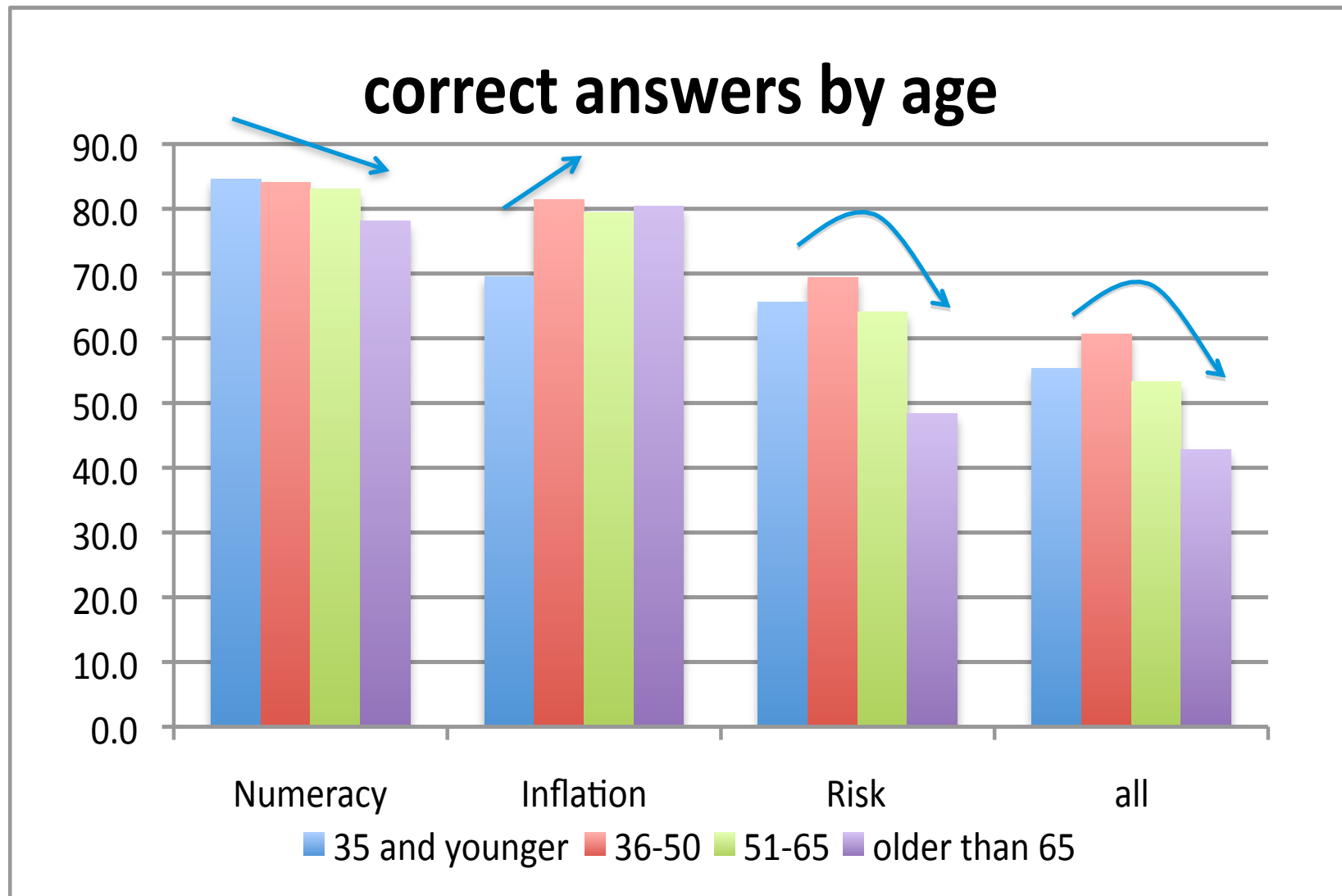
- ❖ India
- ❖ Indonesia
- ❖ Sri Lanka
- ❖ Mexico
- ❖ Chile
- ❖ Working to add other countries (Colombia, Australia Spain)



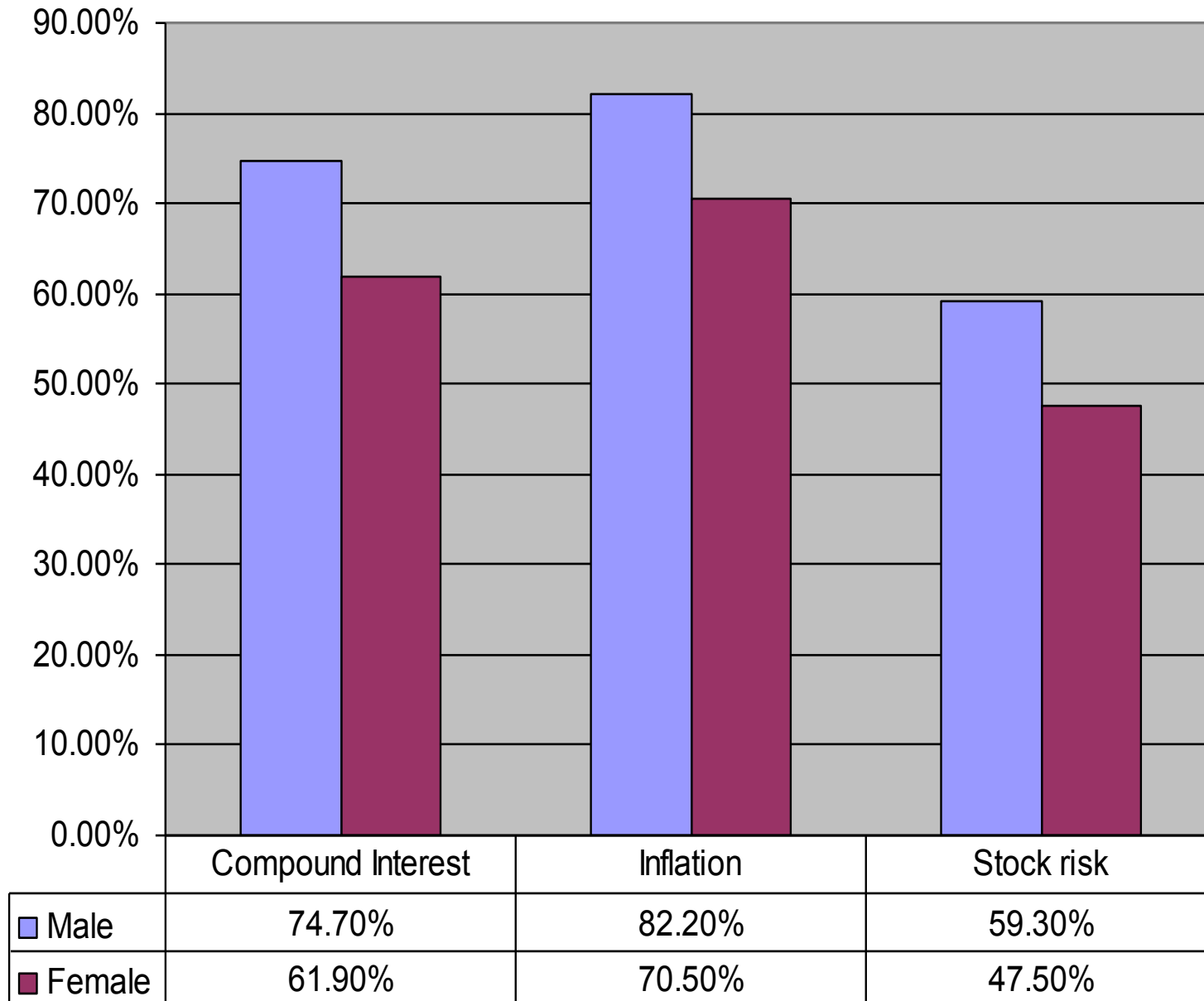
Financial Literacy and Age: U.S. HRS (50+)



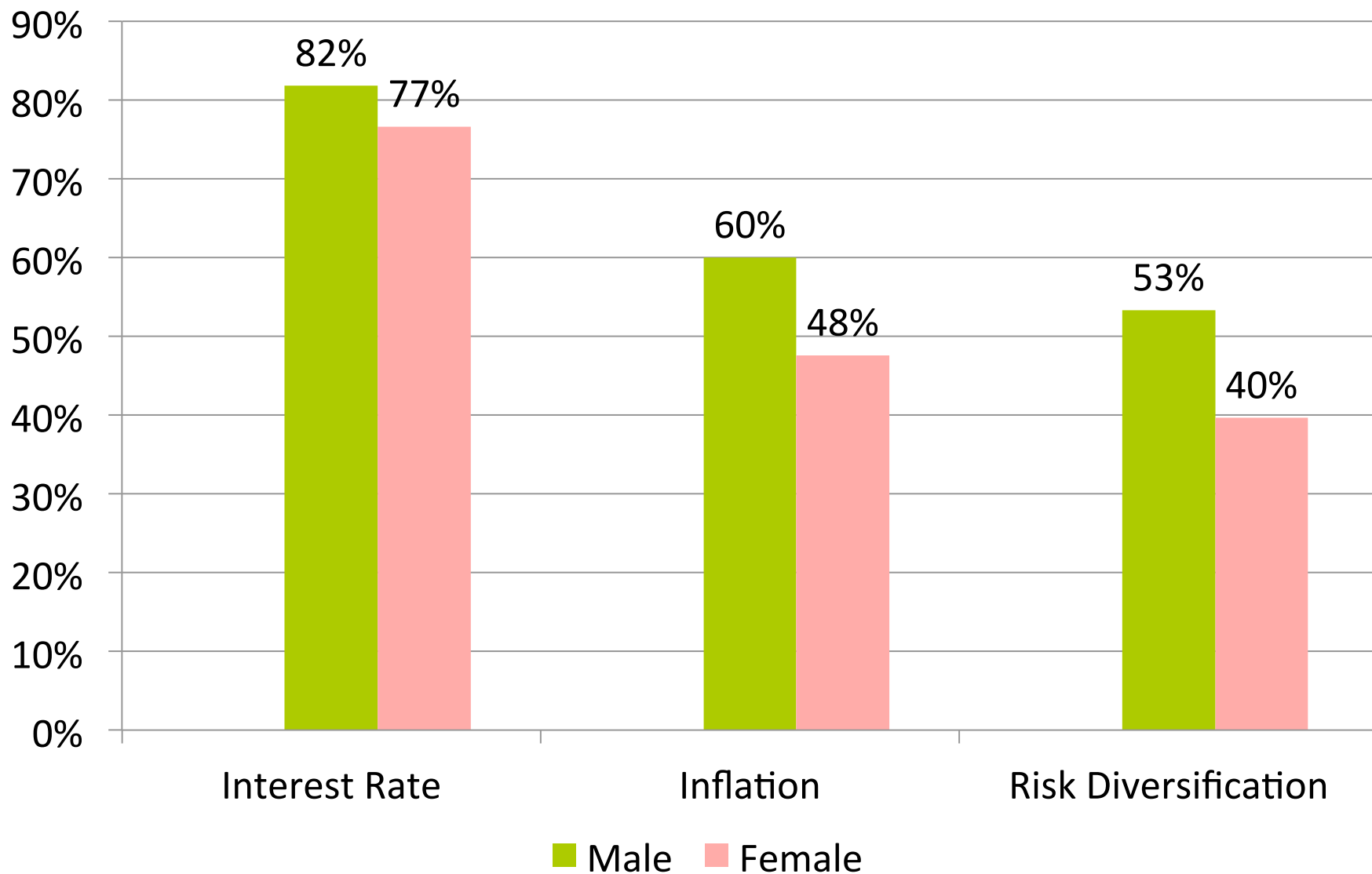
Financial Literacy and Age: Germany



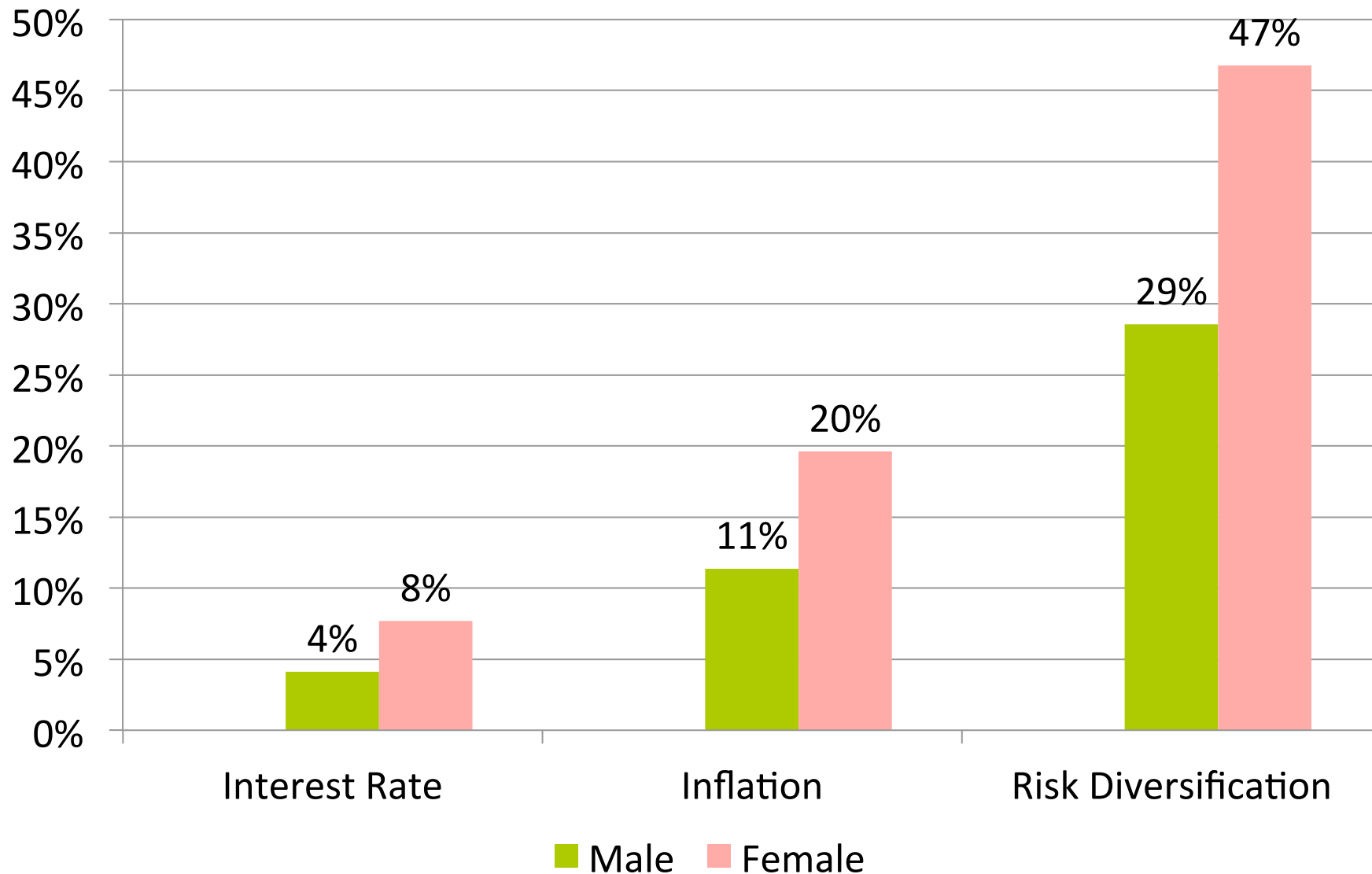
Financial Literacy and Gender: U.S. HRS (50+)



Financial literacy and gender (age: 23-28, U.S. NLSY)



“Do not know” responses by gender (age: 23-28, US)



FLat World

Similar patterns across countries

1. Financial literacy is lowest among

Young

Old

Women



2. Women answer in the same way across countries; they say they “do not know”

Richness of information

Using the data across countries, we studied

1. The geography of financial literacy

US states

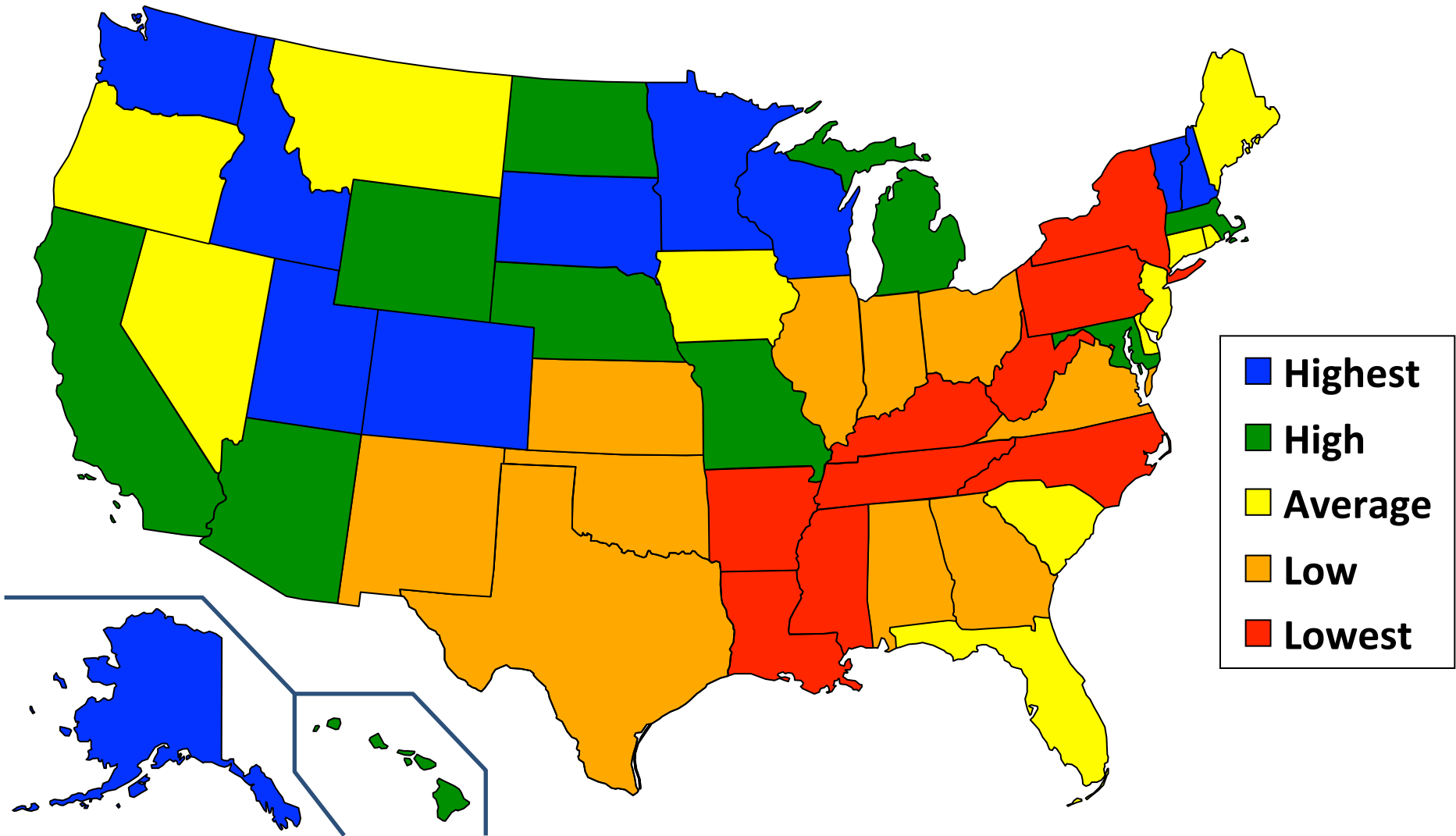
Italian regions

Urban versus rural areas in Russia

2. Financial literacy and race

3. Financial literacy and religion

A Financial Literacy Index by State

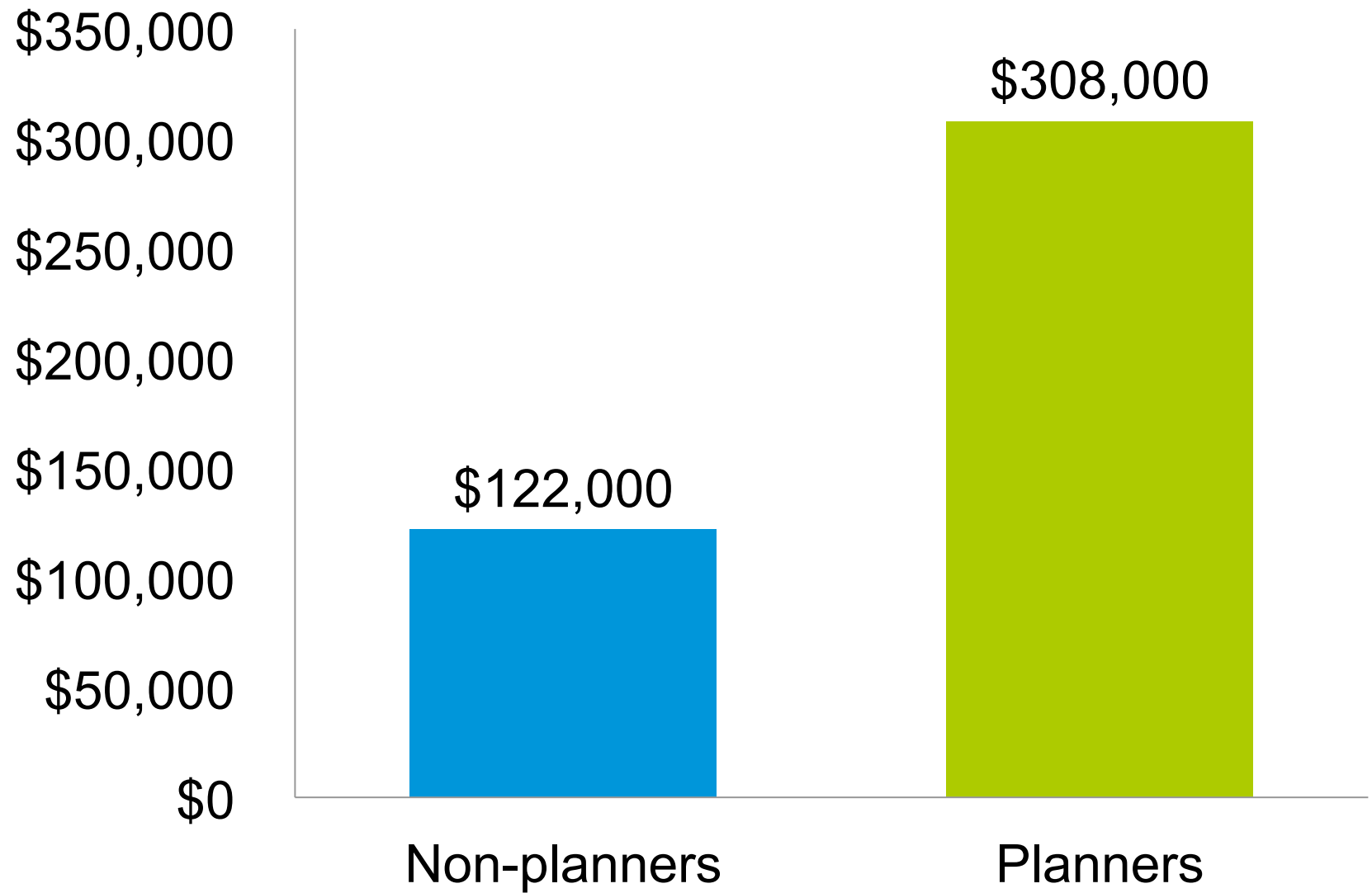


Does financial literacy matter?

- The effect of financial literacy on retirement planning
- Planning: Forward looking behavior predicted by the life-cycle model
- Planning is a strong predictor of wealth

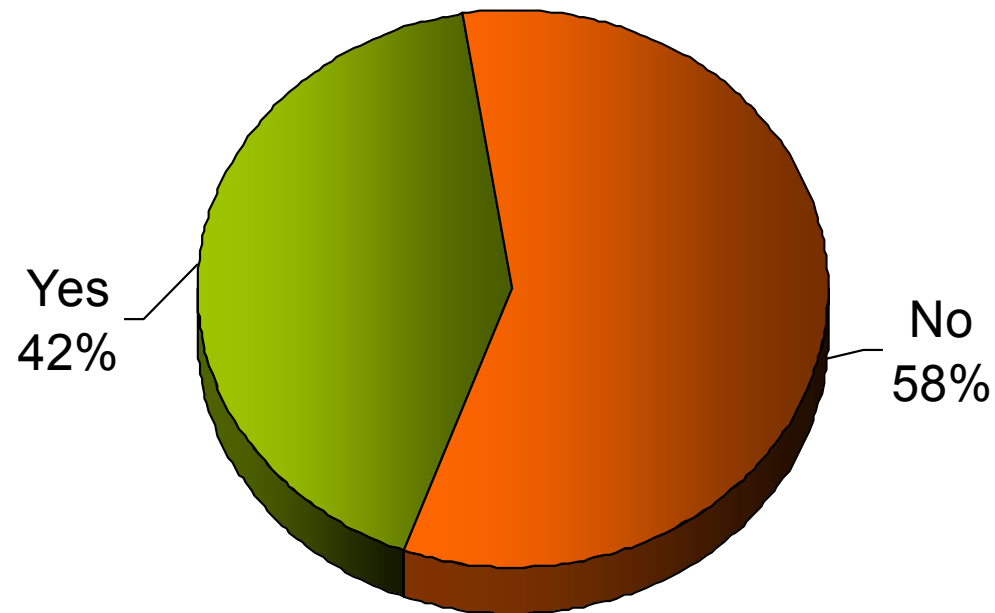
Planning and wealth (HRS 2004)

Median Net Worth



Planning ahead: Most Americans don't

Have you ever tried to figure out how much you need to save for retirement?



Retirement Planning in the Netherlands

How much have you thought about retirement?

- A lot 17.1**
- Some 52.4**
- Little 21.9**
- Hardly at all 7.0**
- DK/Refusal 1.7**

Planning: Thinking “a lot” or “some”

Measures of retirement planning

- Having a financial goal/financial plan and how much have thought about financial planning (New Zealand)
- Having a saving plan (Japan)
- Pension plan participation (Italy)
- Participation in individual private pension plans (Russia)

Does financial literacy matter?

Empirical model:

- $\text{Planning} = \alpha + \beta \text{ Fin Literacy} + \theta X + u$

Financial Literacy is a choice variable:

- How to assess causality: does financial literacy cause retirement planning
 - ✓ Exposure to financial education in high school
 - ✓ Financial experiences of siblings and parents

Financial literacy and retirement planning (US)

	OLS estimates	OLS estimates	IV estimates
All 3 correct	0.091*** (0.04)		
# of correct answers		0.051** (0.02)	0.277**(0.14)
Demographics	yes	yes	yes

Financial literacy and retirement planning (NL)

	OLS estimates	OLS estimates	IV estimates
All 3 correct	0.126** (0.03)		
# of correct answers		0.101** (0.02)	0.175*(0.045)
Demographics	yes	yes	yes

Financial literacy and retirement planning

	OLS estimate (US)	OLS estimates (NL)
Q1: Interest rate correct	0.042 (0.036)	0.173**(0.053)
Q2: Inflation correct	0.009 (0.035)	-0.0062 (0.046)
Q3: Risk diversification correct	0.078** (0.036)	0.142** (0.031))
Demographics	yes	yes

The effects of financial literacy in other countries

Similar effects in other countries

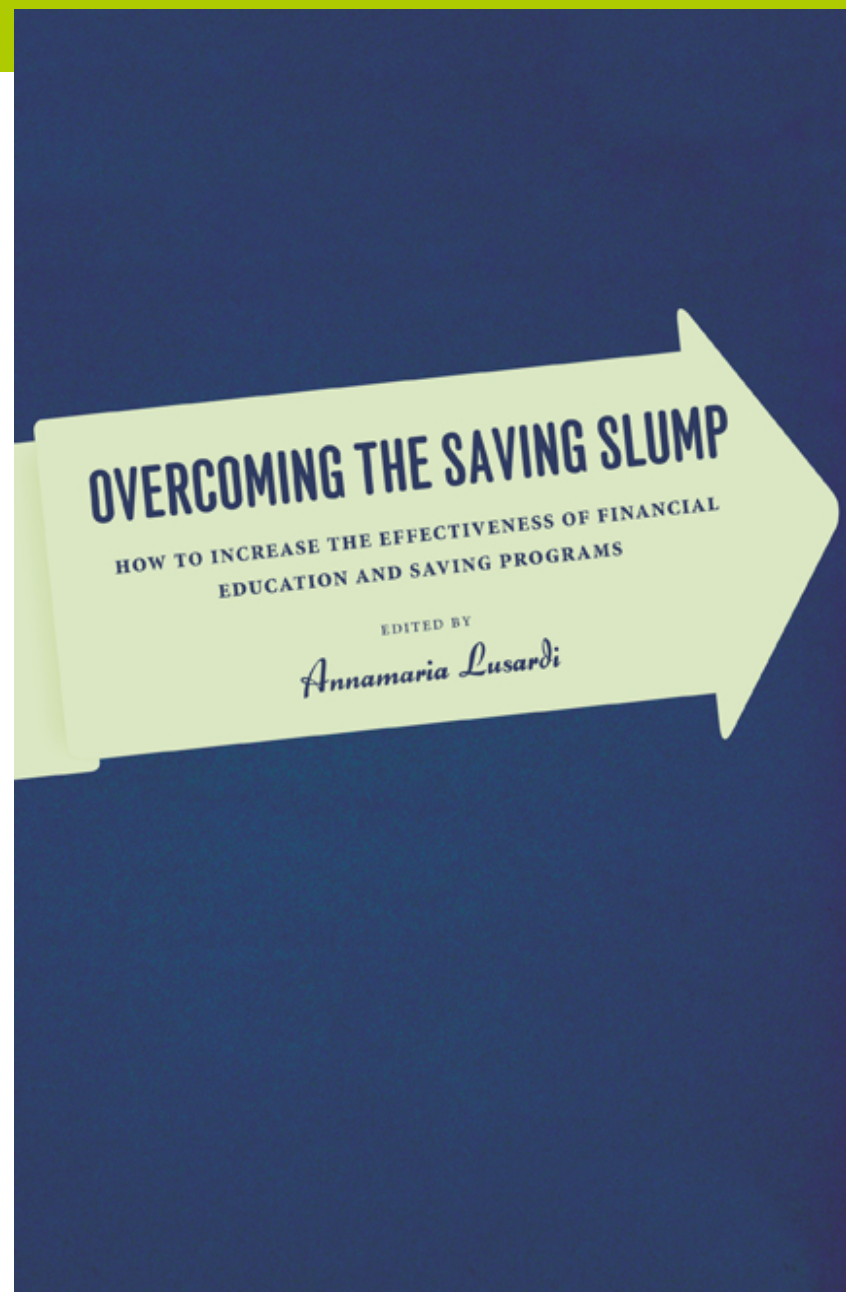
- 1. Financial literacy affects retirement planning, participation in pension plans, and retirement expectations**
- 2. Empirical estimates are stronger in the Netherlands**

Implications for financial education

How to increase the effectiveness of financial education and saving programs

New book joint wt O. Mitchell

Financial Literacy: Implications for Retirement Security and the Financial Marketplace
Oxford U. Press 2011



Ideal venues to provide education

Where to provide financial education

Employer-provided financial education

- Most people are at work

Financial education in school

- Most young people are in school
- We need education *before* individuals engage in financial contracts

Financial education in the activities that people do

- Financial literacy games

Your Team's Financial Fitness Kit



The Employer Checklist

Ten key steps to financial fitness, divided into basic, intermediate and advanced stages

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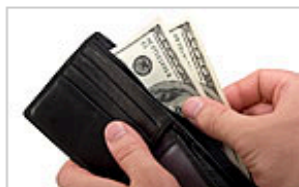
The recent financial crisis has taught us many things. Chief among the lessons learned is that financial illiteracy is widespread and that the consequences of making poor financial decisions are severe. Decisions about how much to save to secure a comfortable retirement, how to invest, and how to protect wealth are overly complex. Without guidance, employees may end up without the financial fitness necessary to meet short- and long-term goals.

EMPLOYEE CORNER



Employee Checklist

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The Financial Health Quiz

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The Experts

Punam Anand Keller and **Annamaria Lusardi** bring an impressive amount of research and experience to help you

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About the Program

Two toolkits—one for employers and one for employees—designed to empower employees to understand and meet their financial goals.

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have been used since the Exchange moved to its current location in 1903. Visit our history page to learn more fascinating facts. [MORE](#)



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Concluding comments

Financial *literacy* is a necessary skill, like reading and writing

- **Need to equip individuals with tools to make decisions**
 - Individuals are increasingly in charge of their financial well-being across the world
- **Cost of financial illiteracy at both the individual and macro level: Lack of retirement savings**
 - The importance of financial education