

EEA Meeting – August 26, 2014

Gender, Confidence, and Financial Literacy

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The growing importance of financial literacy

A new economic landscape

Major changes that increase individuals' responsibility for their financial well-being

- **Changes in the pension landscape**
 - More individual accounts
- **Changes in the labor markets**
 - Workers change jobs often
 - Skill-based wage differentials
- **Changes in the financial markets**
 - More complexity
 - More opportunities to borrow & in large amounts



The “great risk shift”

Risk shift from the government and employers to individuals

How well-equipped are people to make these decisions?



Big project on financial literacy

Started this project many years ago. Our questions

1. How well-equipped are people to make financial decisions?
2. Are there vulnerable groups?
3. Does financial literacy matter?
4. What can be done to promote financial literacy?

Financial Literacy Programme funded by EIB Institute

Bringing together an international team

The Financial Literacy Programme brings together research teams in 9 countries:

United States
Netherlands
Germany
Italy
Sweden
Switzerland
Turkey
Spain
Portugal



Project Website:

<http://www.globalfinancialliteracyproject.org/>

First question

How well-equipped are people to make financial decisions?

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

Use three financial literacy questions

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) Don't know (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) Don't know (DK)
- iv) Refuse to answer

Financial Literacy around the World

(FLat World)

Evidence from 13 countries:

- ❖ USA
- ❖ Netherlands
- ❖ Germany
- ❖ Italy
- ❖ Russia
- ❖ Sweden
- ❖ New Zealand
- ❖ Japan
- ❖ Australia
- ❖ France
- ❖ Switzerland
- ❖ Romania
- ❖ Canada



How much do Americans know?

Distribution of responses across the U.S. population (2009 FINRA 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 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 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.

Findings: The world is *flat*

Similar patterns across countries

- **Financial illiteracy is widespread in the population**
 - **Less than half of the population can answer three basic questions**
- **Risk diversification is most difficult concept**
 - **Similar pattern of responses across countries**
 - **Prevalence of “do not know” answers**
- **Some groups are less likely to answer correctly**
 - **Similar pattern of responses across countries**
 - **Women are less likely to answer correctly**

FLat World

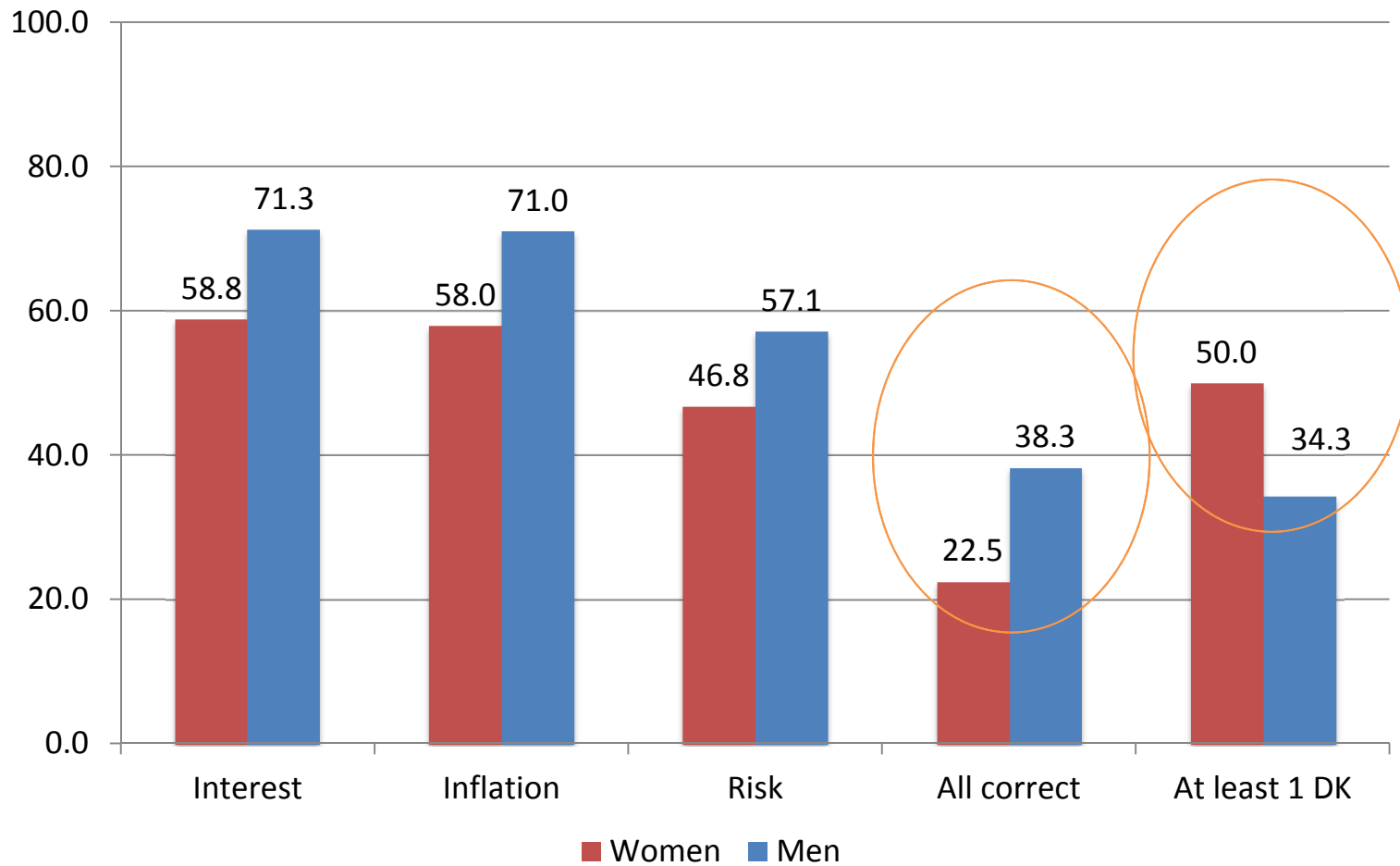
Similar patterns across countries

- **Financial literacy is low among women**
- **Women answer in the same way across countries; they say they “do not know”**

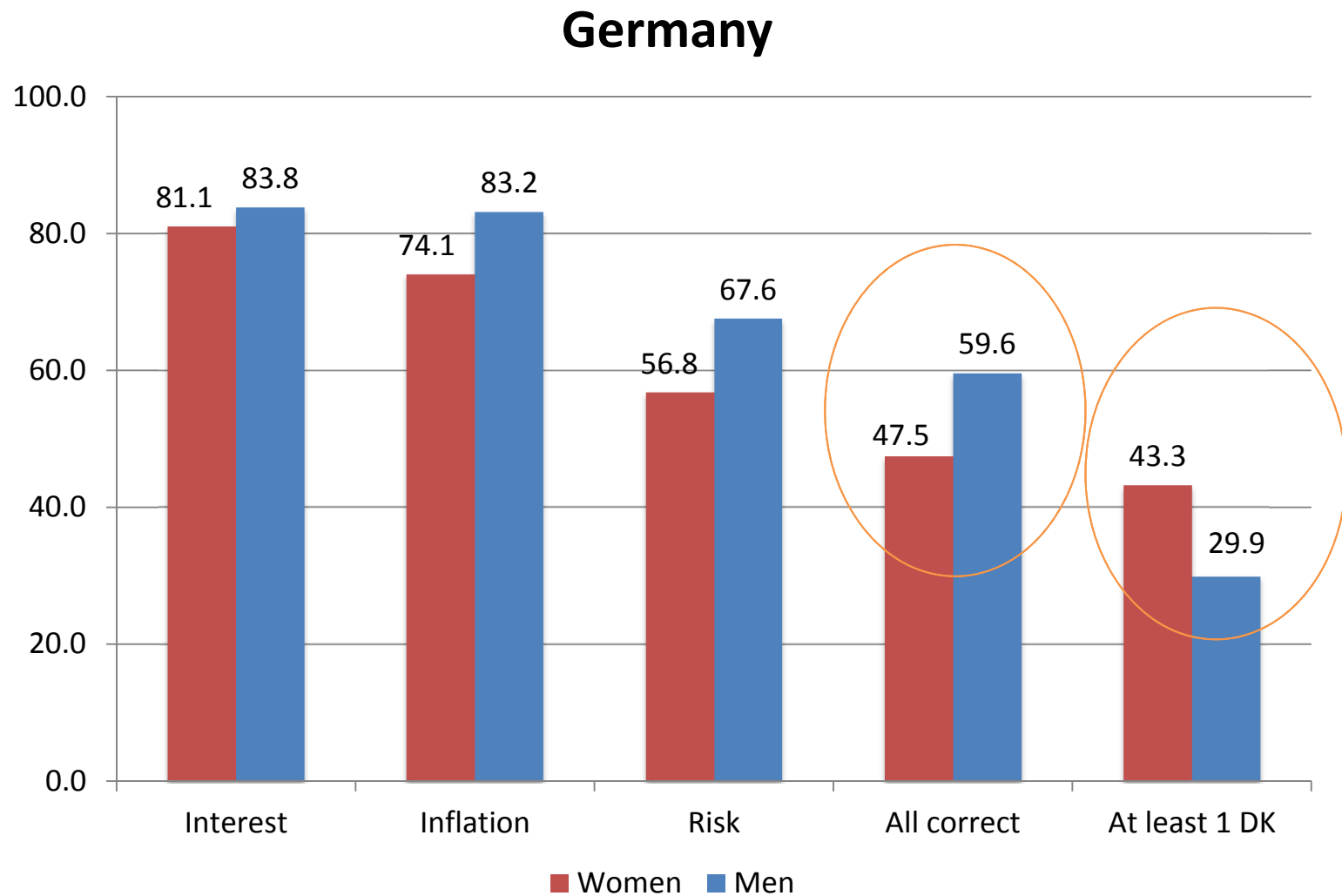


Gender differences in financial literacy

United States

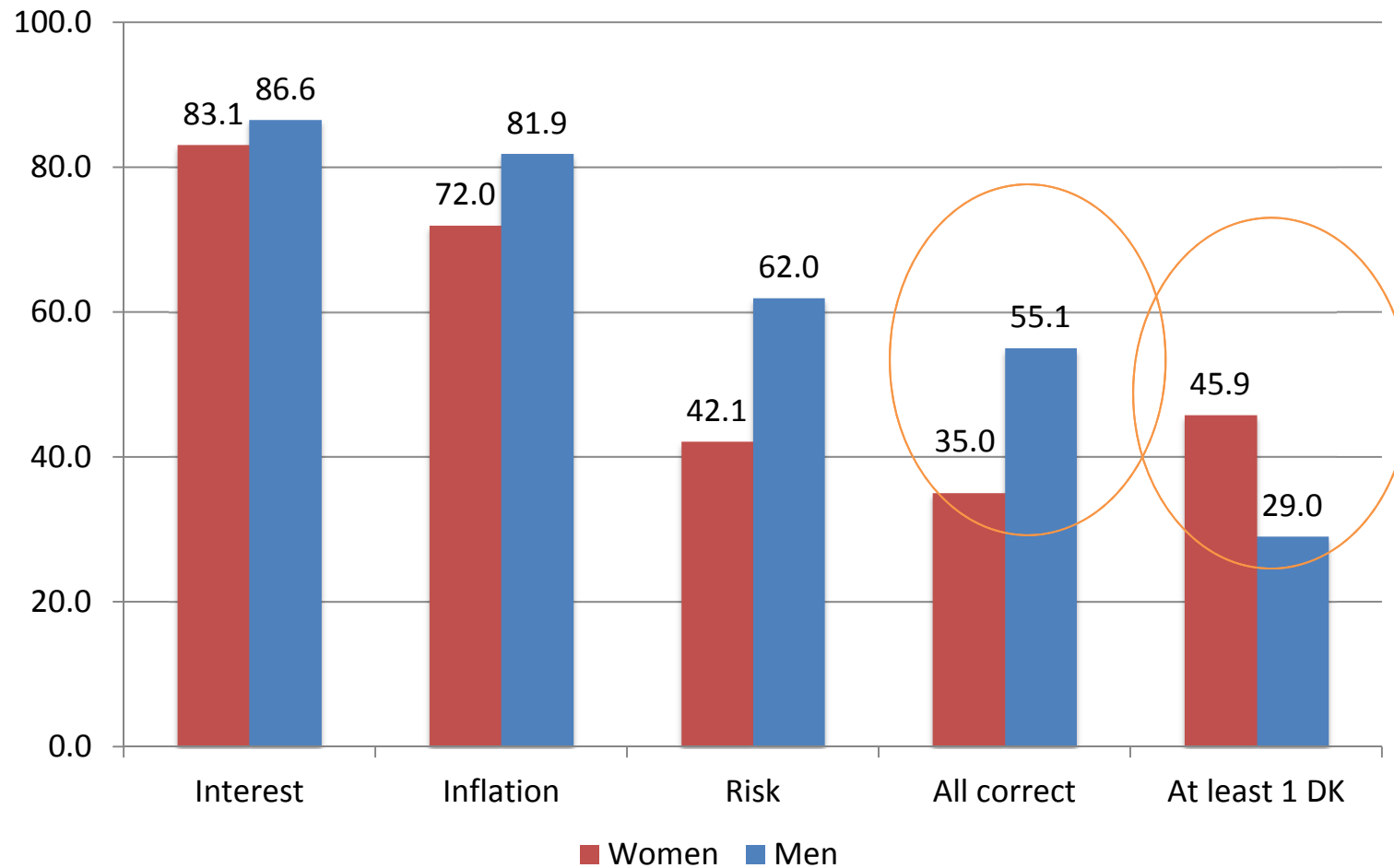


Gender differences in financial literacy



Gender differences in financial literacy

The Netherlands



Gender differences in financial literacy

Our paper: How financially literate are women? An overview and new insights

- **Finds a consistent pattern of responses across countries**
- **Provides an in-depth analysis of gender differences in financial literacy**
- **Looks at East-West Germany**
- **Looks at young and old women**
- **Looks at other measures of financial literacy**
- **Considers self-assessed measures of financial literacy**
- **Discusses whether fin advice can be a substitute for financial literacy**

Work in progress

SAMPLE: DNB Household Panel (DHS), online survey representative of Dutch households

We include panel members who are household heads and their partners, age 18 and older

DESIGN: Financial literacy questions asked twice

First survey (May 2012): Financial literacy questions including a “do not know” option

Second survey (June /July 2012): Same questions without a “do not know” option

After each question in June/July ask for confidence in the answer

Our sample

May wave: N = 1,748

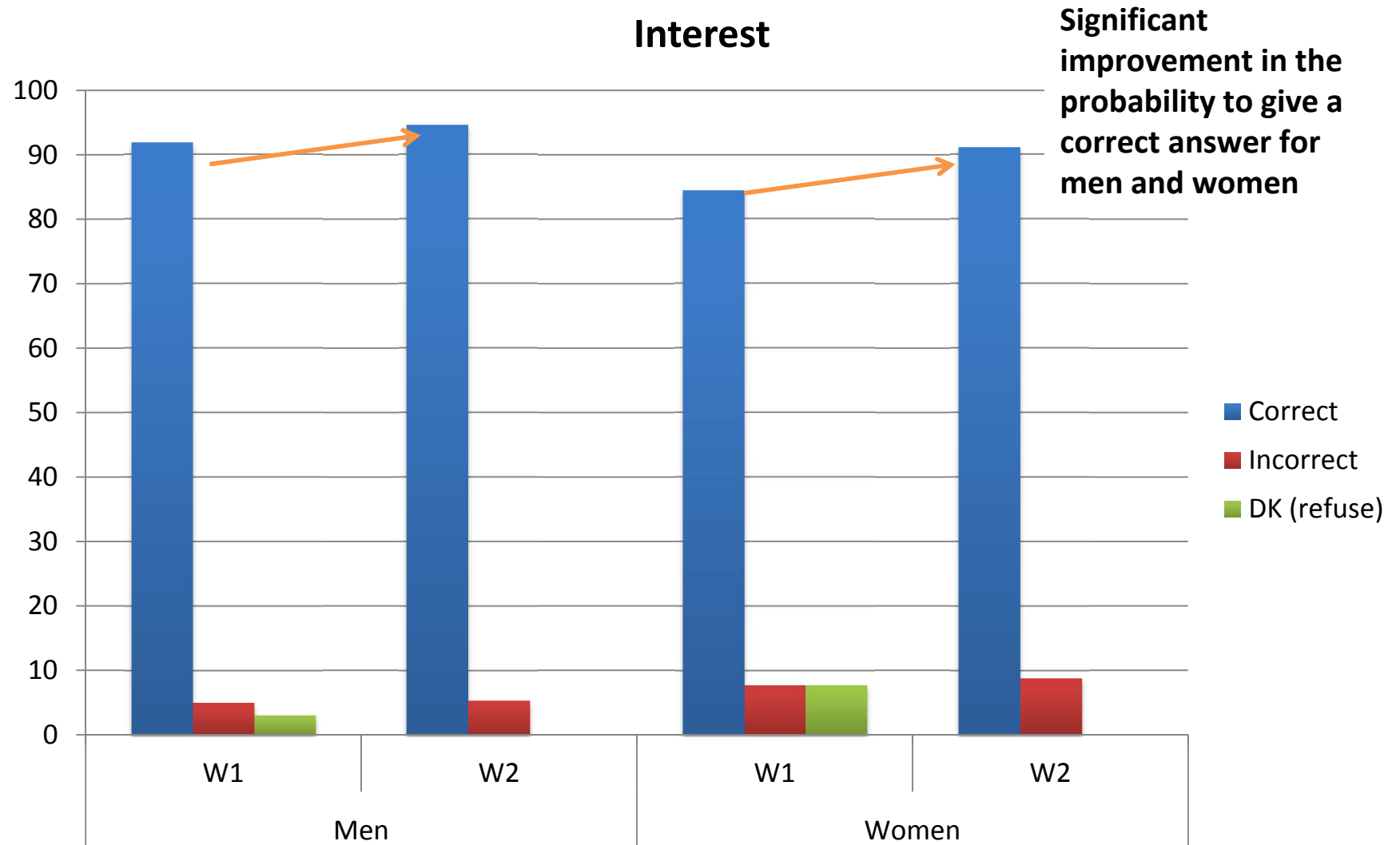
June/July wave: N = 1,973

Sample for the analysis: complete questionnaire in both waves, N = 1,528

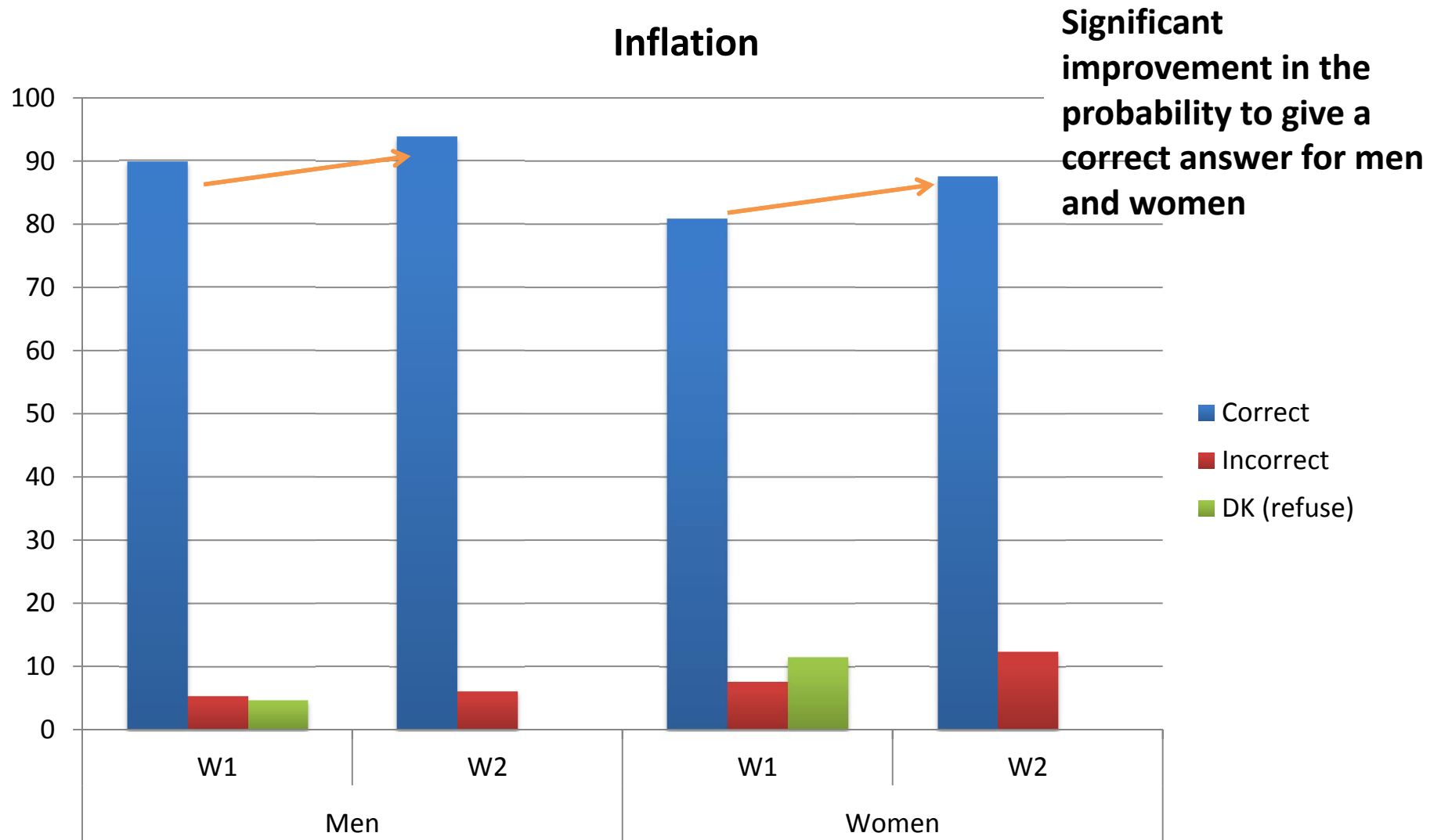
Attrition: No significant effects of gender or financial literacy on dropping out after May wave

Learning: Answers to financial literacy do not differ significantly from participants in both waves.

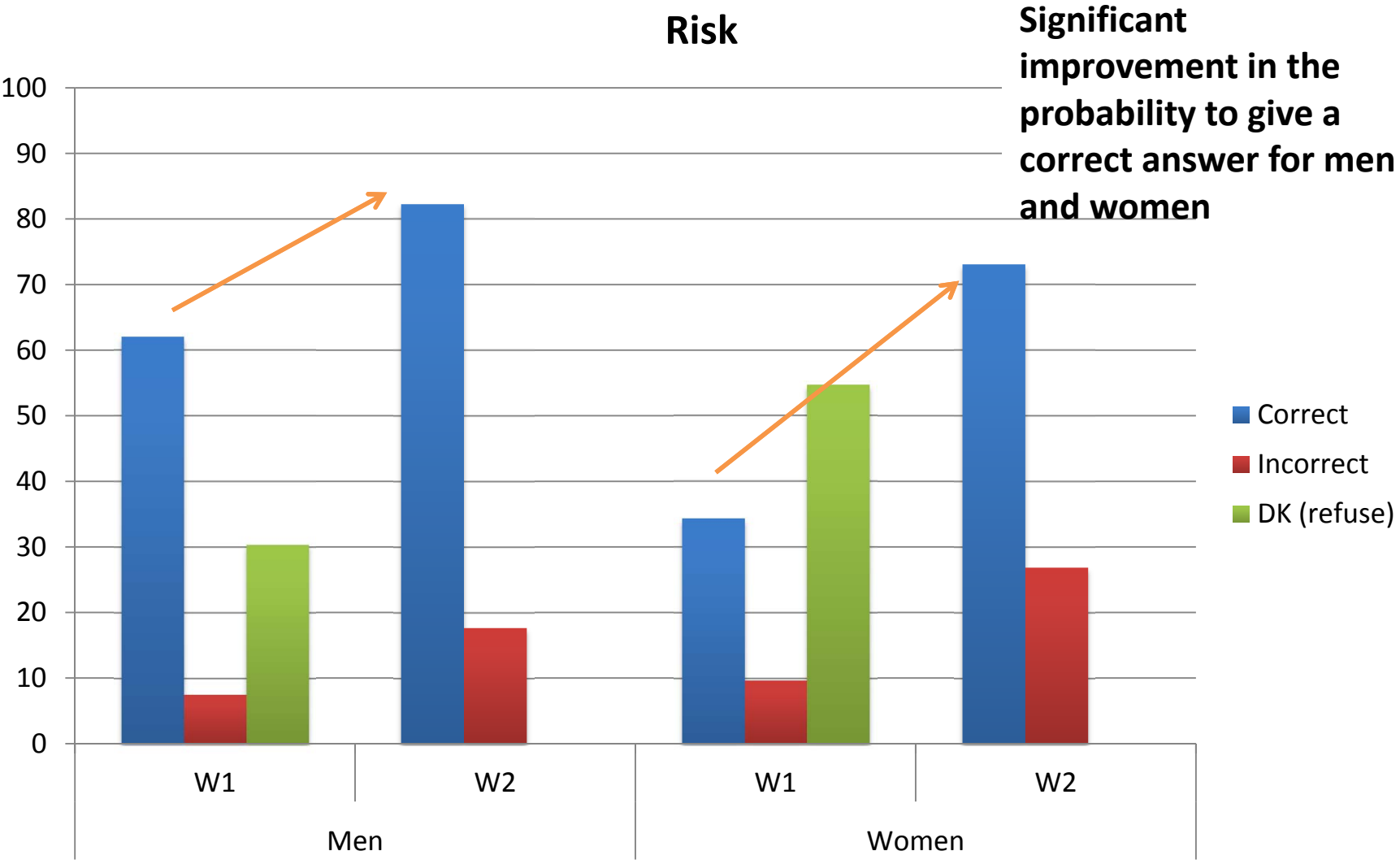
Answers waves 1 & 2, interest question, by gender



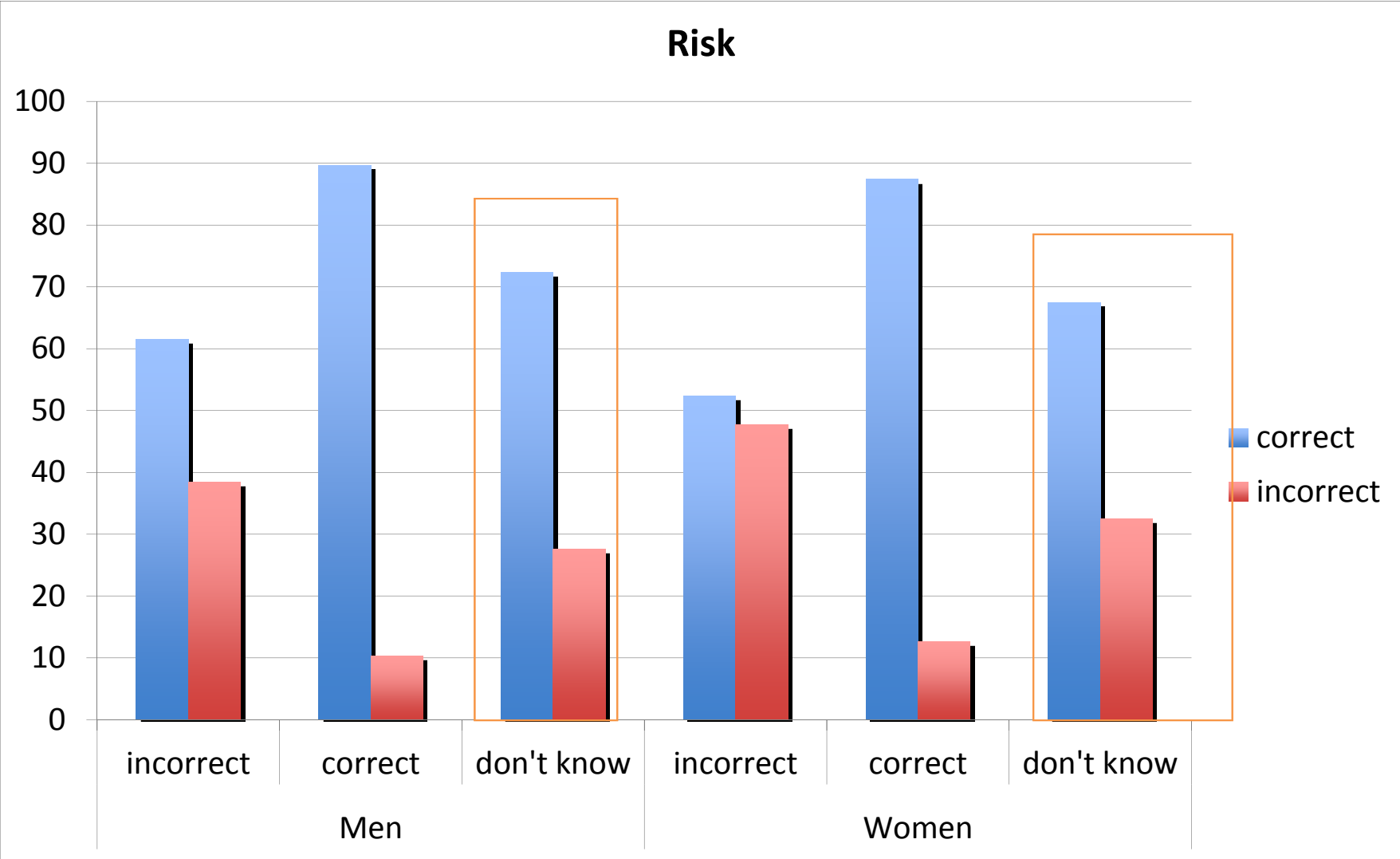
Answers waves 1 & 2, inflation question, by gender



Answers waves 1 & 2, risk question, by gender

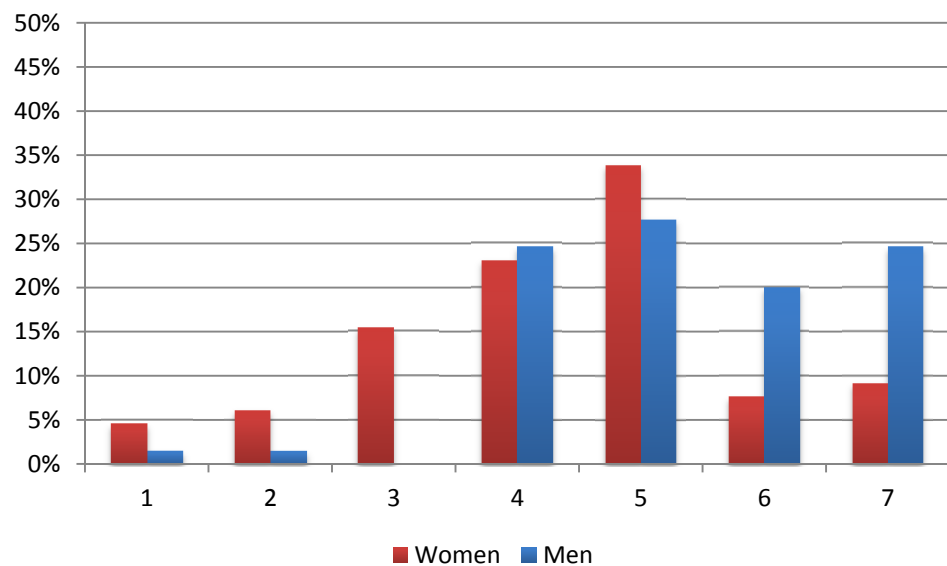


Answers in wave 2 conditional on answers in wave 1

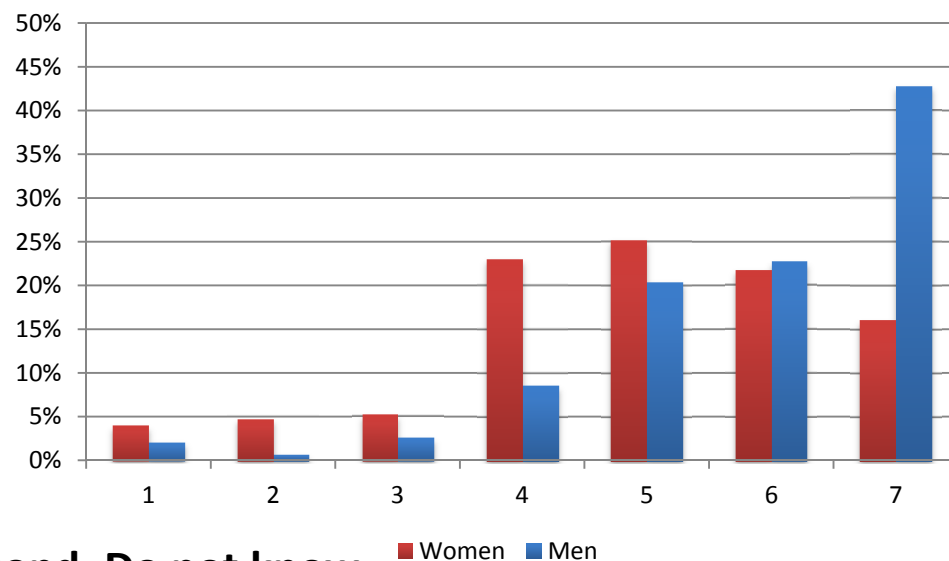


Confidence in wave 2 conditional on being correct, incorrect, or DK in wave 1. Risk diversification

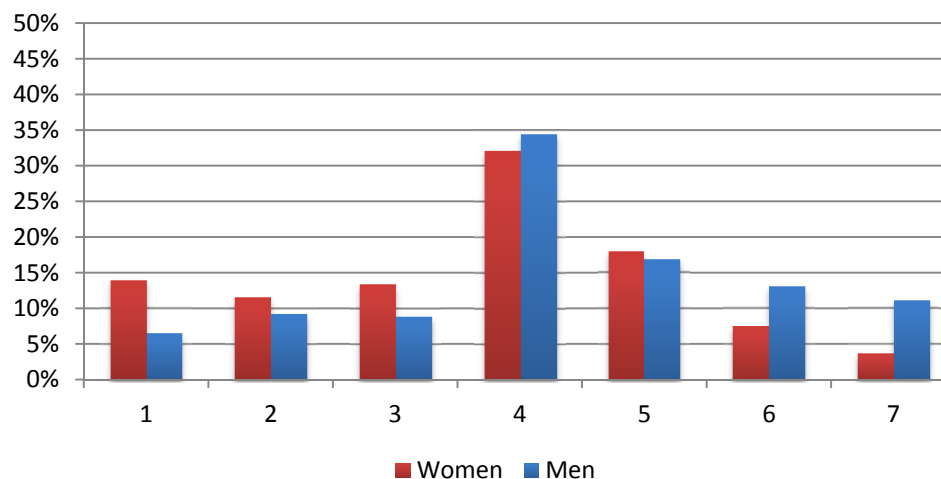
Confidence cond. Incorrect



Confidence cond. Correct



Confidence cond. Do not know



Gender and financial literacy between waves

Dependent variable = number of correct answers to finlit quest

	(1)	(2)	(3)	(4)
VARIABLES	July	May	July	May
Female	-0.253*** (0.0312)	-0.404*** (0.0393)	-0.196*** (0.0326)	-0.309*** (0.0399)
Constant	2.703*** (0.0198)	2.504*** (0.0261)	2.249*** (0.136)	1.709*** (0.176)
Other controls	no	no	yes	yes
Observations	1,528	1,528	1,528	1,528
R-squared	0.038	0.056	0.106	0.162
Robust standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

Does financial literacy matter?

Previous work published in the
*Journal of Financial
Economics* in 2011



Financial literacy & stock mkt participation

Financial literacy, gender, and stock market participation			
VARIABLES	(1)	(2)	(3)
Financial literacy		0.0541***	0.0914***
		(0.00973)	(0.0105)
Female	-0.137***	-0.0729***	-0.0469**
	(0.0207)	(0.0213)	(0.0212)
Constant	0.339***	0.101	0.145*
	(0.0162)	(0.0732)	(0.0754)
Financial literacy measure	n/a	July	May
Other controls	no	yes	yes
Observations	1,528	1,528	1,528
R-squared	0.023	0.125	0.146
Robust standard errors in parentheses clustered at the household level			
*** p<0.01, ** p<0.05, * p<0.1			

Summary

- Gender gap in financial literacy decreases but does not disappear when omitting the “do not know” option.
- Men and women responding “do not know” have high likelihood of giving a correct answer, but more women responded with DK in the first place.
- Women are much less confident, even if they answer correctly.
- Confidence can explain a substantial part, but not all, of the gender gap in financial literacy.
- Financial literacy and confidence are associated with financial decision making. They account for (part of) the gender gap in stock market participation.

Extensions

- Modelling response behavior to construct a measure of financial literacy using data from two waves
- More work to understand the sources of the gender differences in financial literacy
- More work using data from other countries
- Financial education programs tailored to women

Contact and sources of information

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