

## Financial education in the digital age: What are the challenges for investment?

Paris, Maison du Barreau – Monday, June 20th 2016

# **Financial Literacy in Europe**

(Gianni Nicolini<sup>1</sup>)



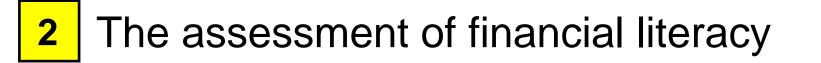
<sup>1</sup>Associate professor of Finance University of Rome "Tor Vergata" (Rome, Italy) - Faculty of Economics <sub>1</sub> mail: gianni.nicolini@uniroma2.it







## Financial literacy and financial behaviors







Financial literacy and financial behaviors in European countries



## Financial literacy and Financial behaviors





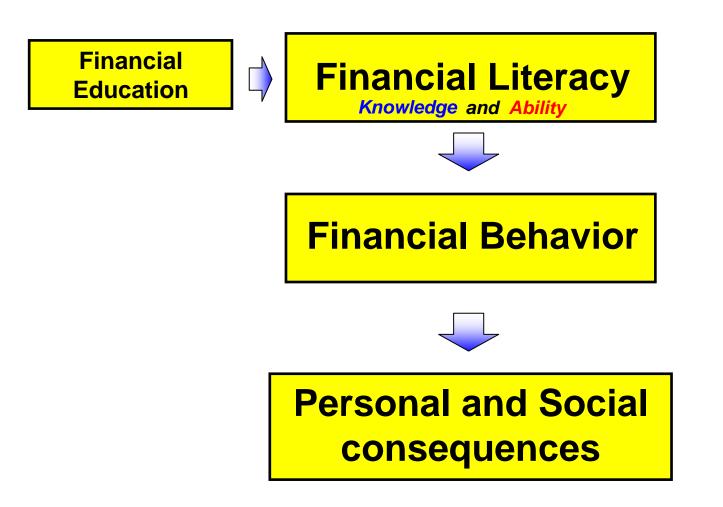
- 1992 "The **ability** to make informed judgements and to make effective decisions regarding the use 2007 and management of money" (Noctor, Stoney and Stradling 1992)
- 2000 "The **ability** to read, analyse, manage and communicate about the personal financial conditions that affect material wellbeing" (Vitt et al. 2000)
- 2001 *"Financial literacy is a basic knowledge that people need in order to survive in a modern society"* (Kim 2001)
- 2001 "Financial literacy is the **ability** to interpret, communicate, compute, develop independent judgement, and take actions resulting from those processes in order to thrive in our complex financial world" (Danes and Habermann 2007)

- *"Financial literacy is the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being"* (US FLEC 2007, Jump\$tart Coalition 2007)
- 2010 *"Financial literacy consists of both knowledge and application (ability) of human capital specific to personal finance"* (Huston 2010)
- 2010 "Financial literacy is a measure of the degree to which one understand key financial concepts (knowledge) and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions" (Remund 2010) 3



## Financial literacy and Financial behaviors

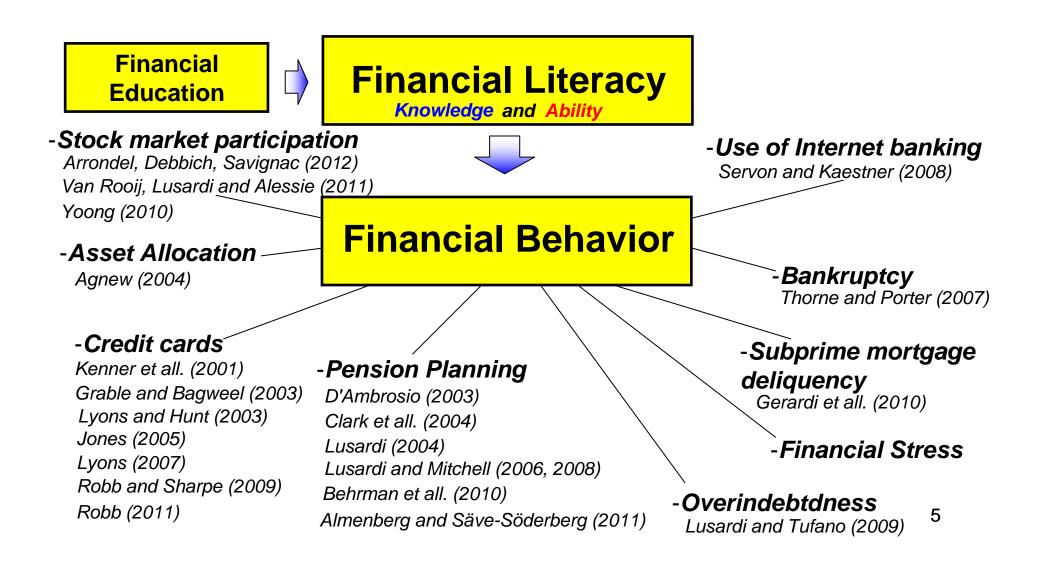






## Financial literacy and Financial behaviors





The assessment of financial literacy



## "How do we measure Financial Literacy?"

AUTORITÉ

DES MARCHÉS FINANCIERS

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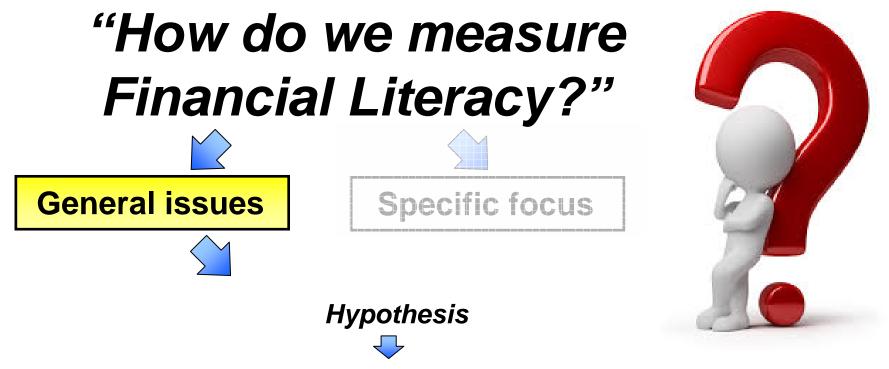
# "How do we measure Financial Literacy?"







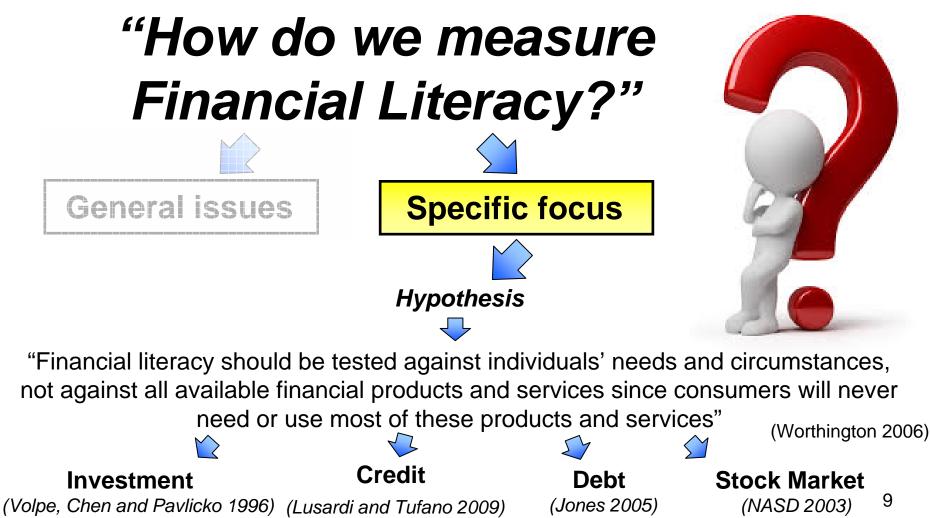




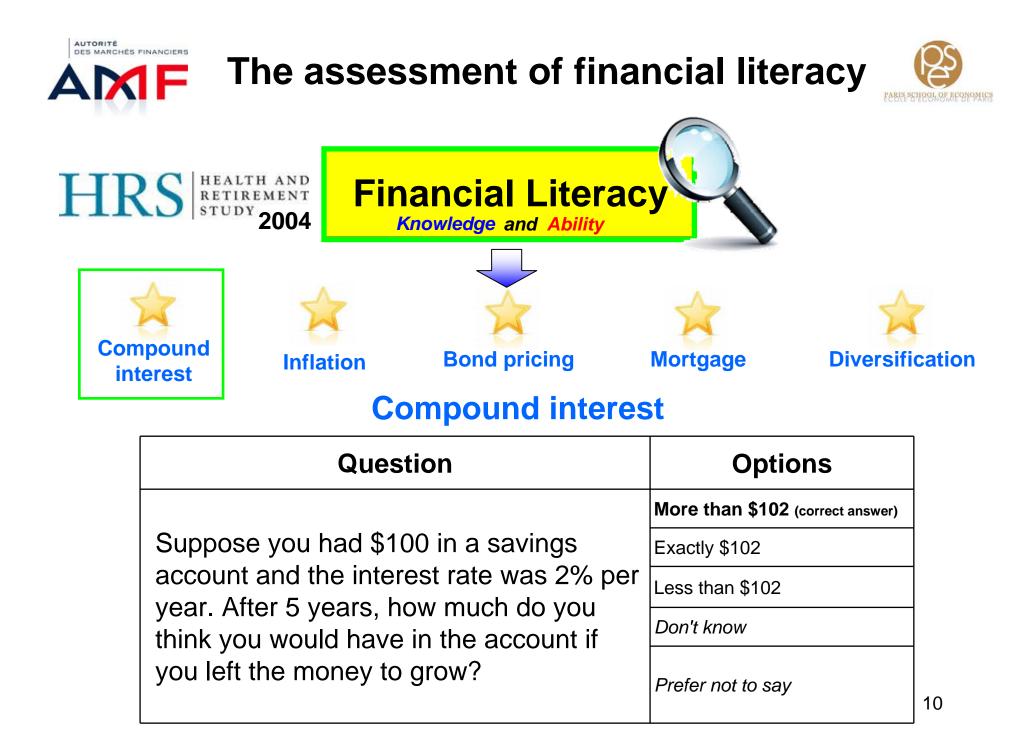
A wide range of topics such as budgeting, saving, borrowing, investing, etc. must be analysed because all are relevant for consumers.

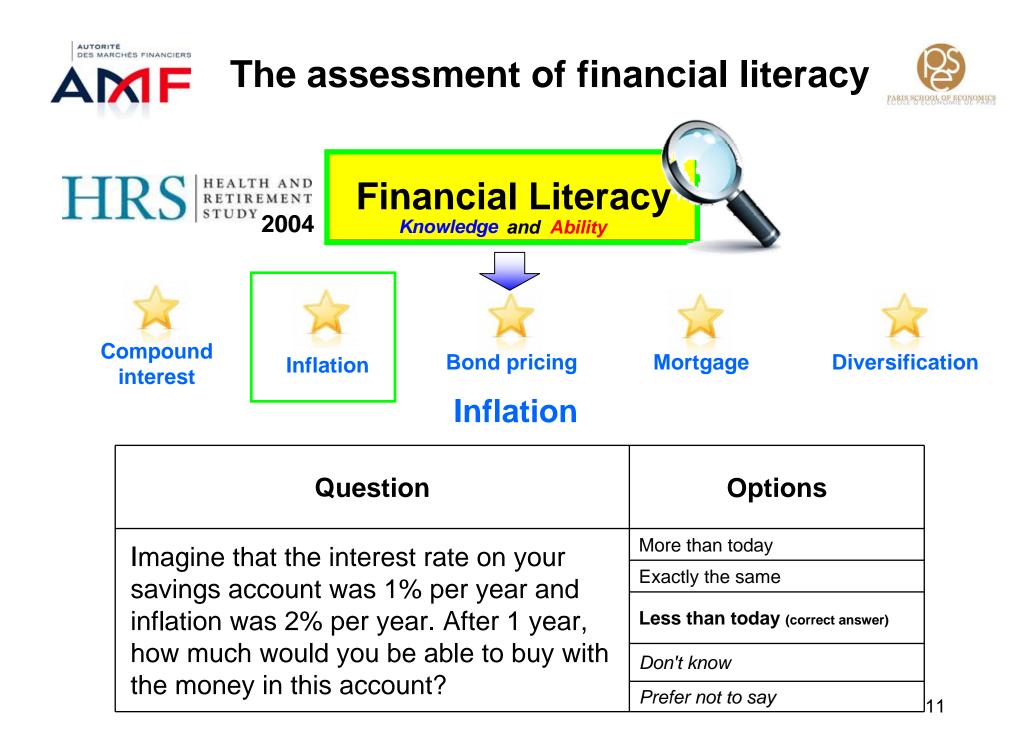
(Remund 2010; Chen and Volpe 2002; Financial Fitness for Life 2008; Jump\$tart Coalition for Personal Financial Literacy 2008; National Endowment for Financial Education 2006; National Foundation for Credit Counseling 2008; U.S. Department of Treasury 2006, FSA 2006, ANZ 2008)





(Muller and Weber 2008)

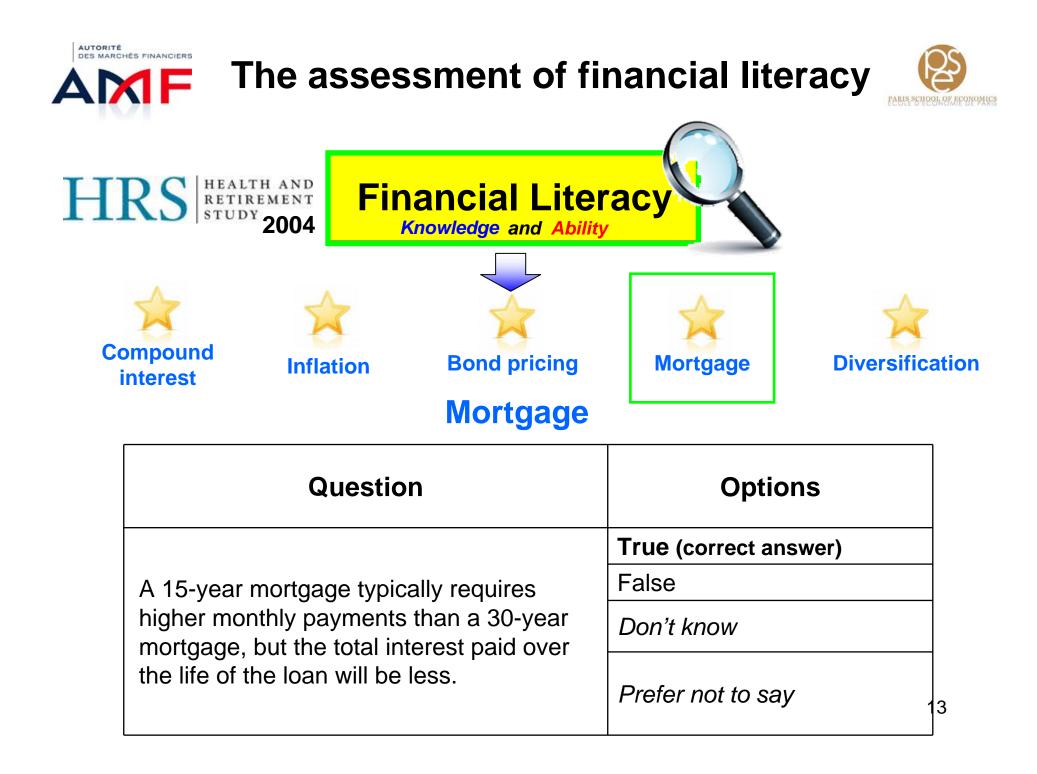


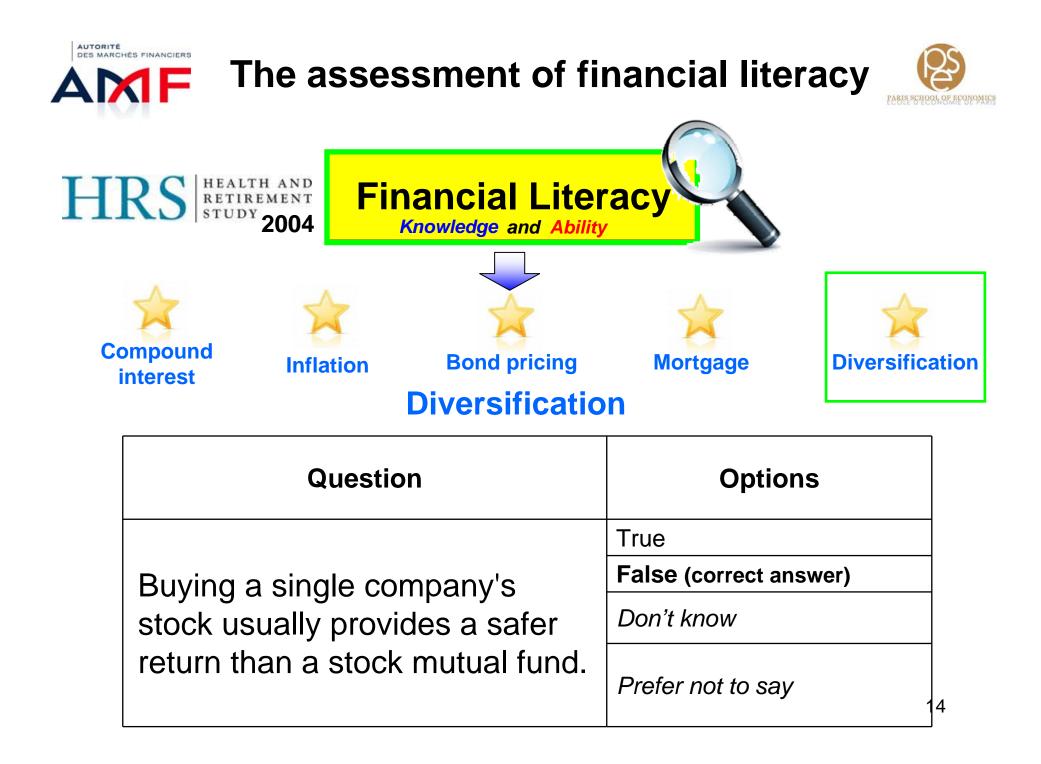


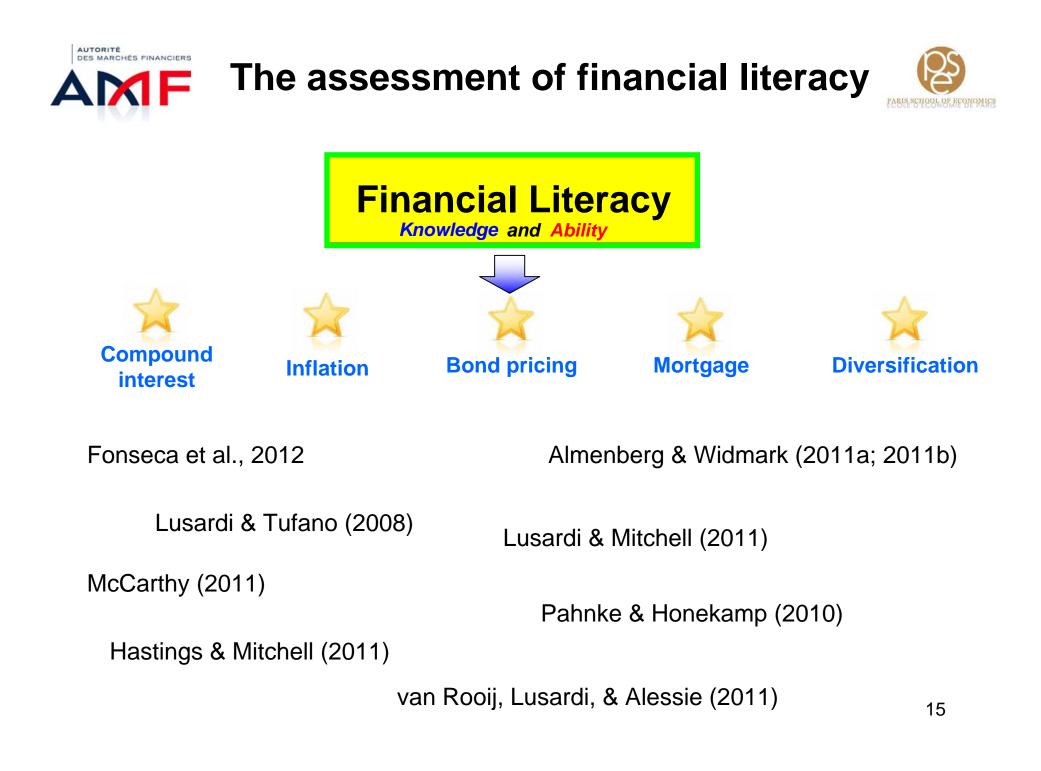


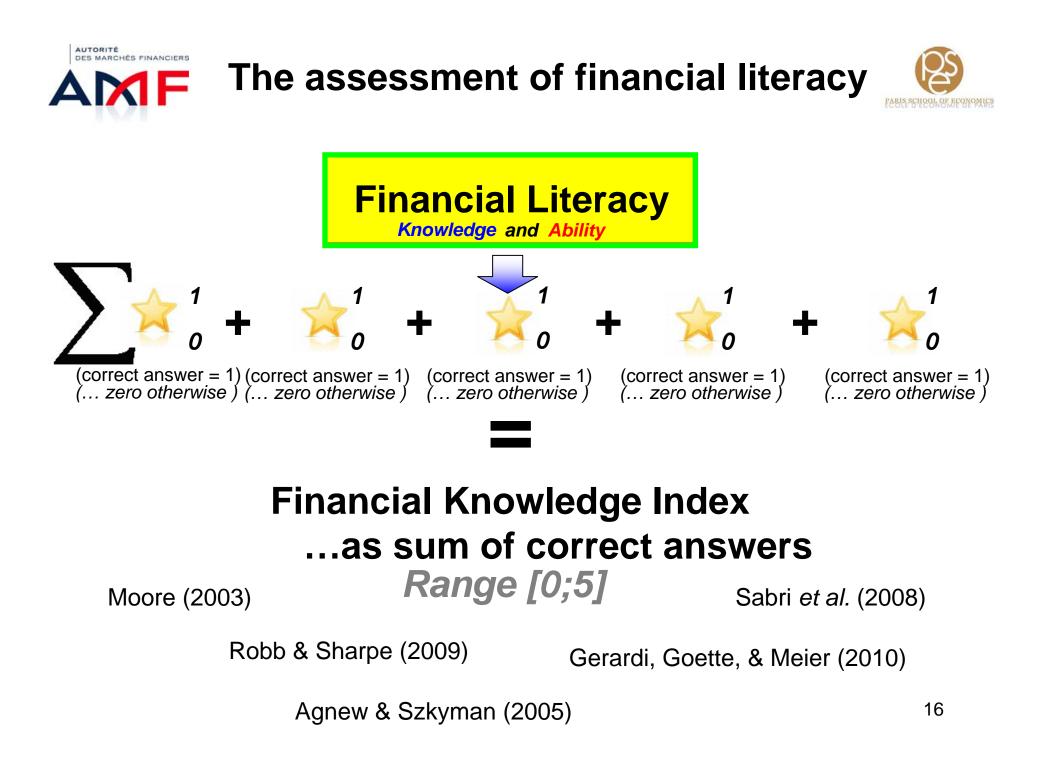
#### **Bond pricing**

Question	Options
	They will rise
If interest rates rise, what will typically happen to bond prices?	They will fall (correct answer)
	They will stay the same
	There is no relationship between bond prices and the interest rate
	Don't know
	Prefer not to say 12







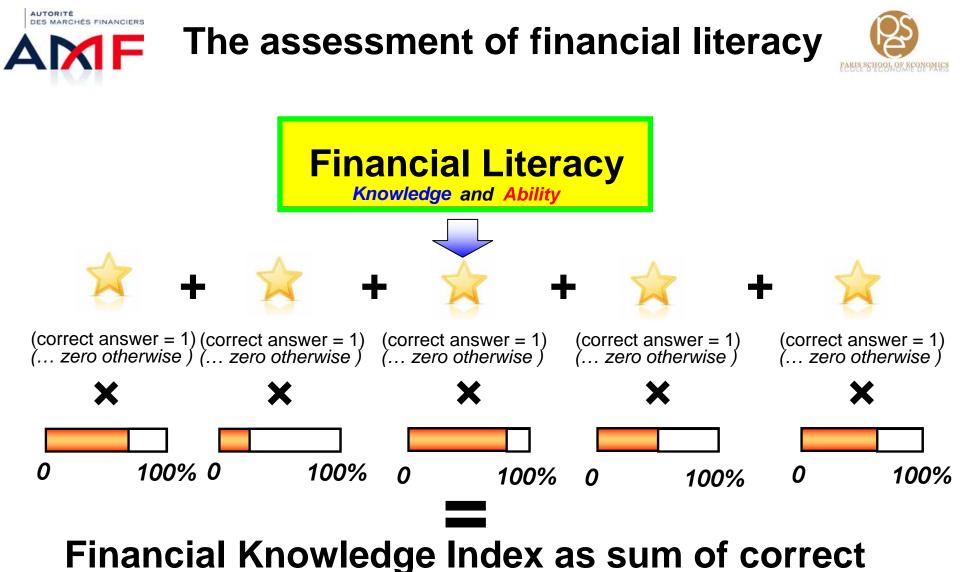




#### Are all the answers rights? Yes =1, No = 0 Dummy var [0;1]

Lusardi and Mitchell (2011)

Almenberg and Säve-Söderberg (2011)



answers... weighted by their difficulty

Lusardi, Mitchell, & Curto (2012)



The assessment of financial literacy



*"How do we measure Financial Literacy?"* 

## "Are we measuring financial literacy in the best way?"





AUTORITÉ **AMF** Financial literacy in European countries Do different topics have different relevance in difference countries? The relevance of the topic "Do you know how to drive on a frozen ground?"

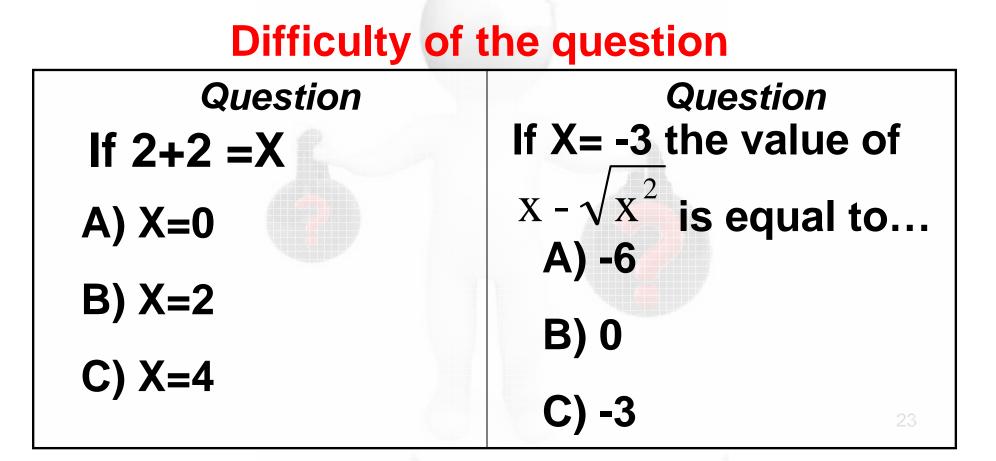


# Are we using items (questions) with the same difficulty?





## Are we using items (questions) with the same difficulty?







# Are we using items (questions) with the same difficulty?

... and other technicalities... (wording, guessing, etc...)

#### Question

Buying a single company's stock usually provides a safer return than a stock mutual fund.

A) True

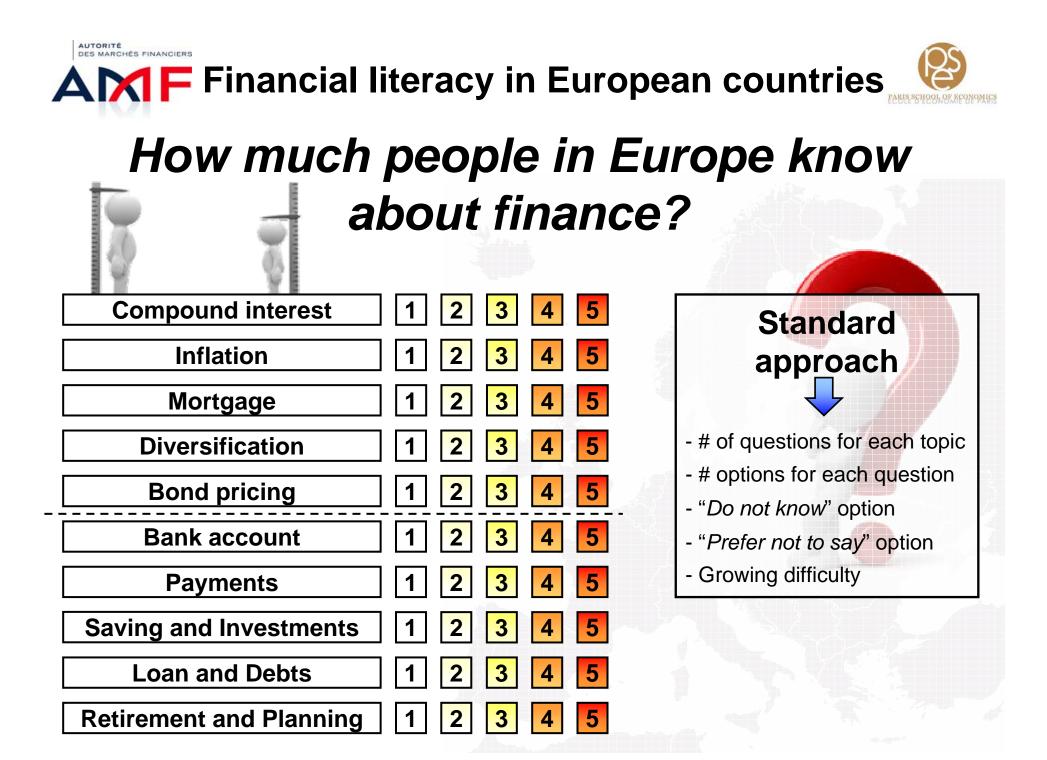
B) False

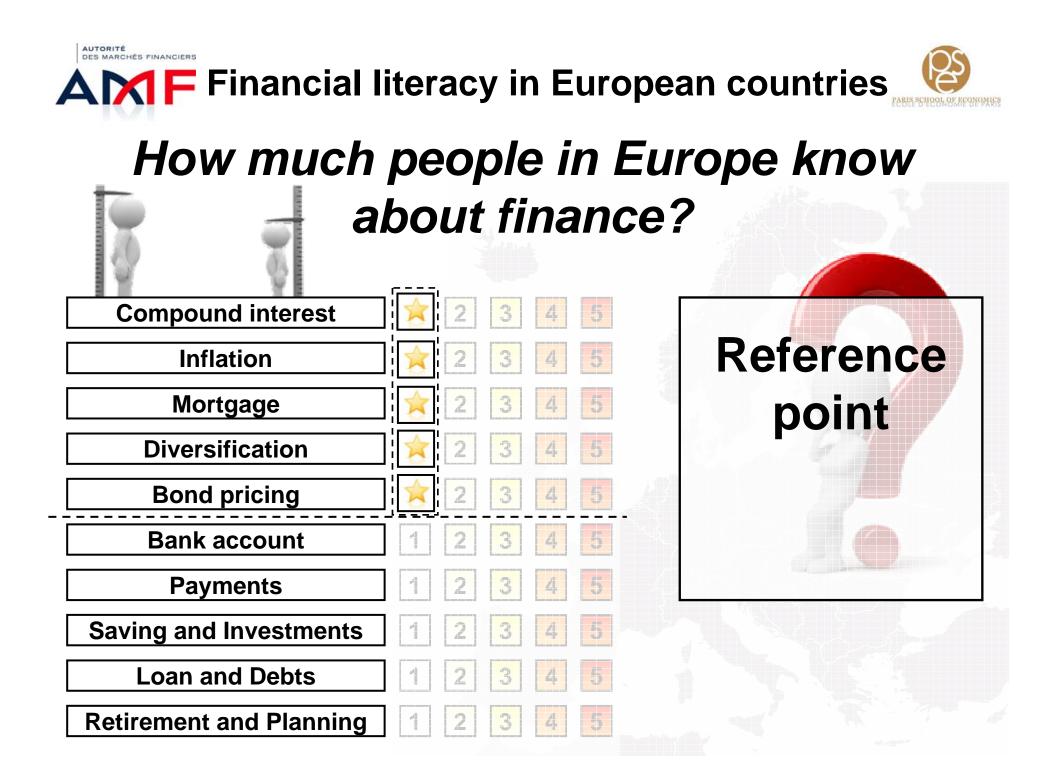
#### Question

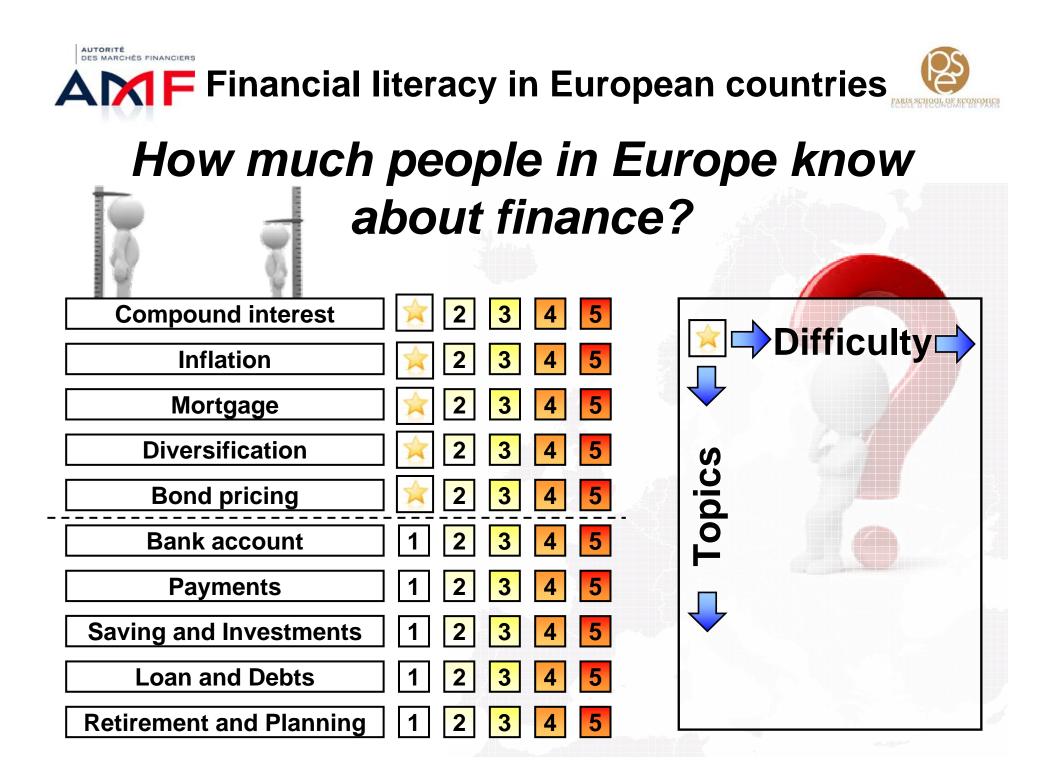
Buying a single company's stock usually provides...

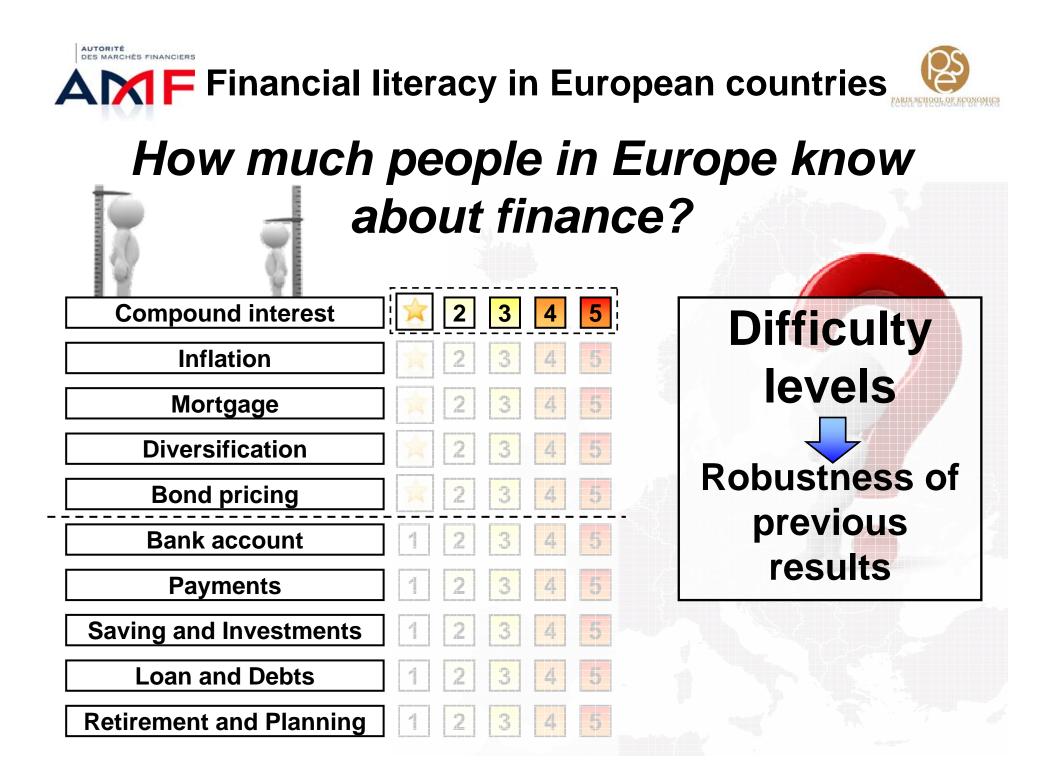
- A) ... a safer return than a stock mutual fund
- B) ... the same return of a single bond
- C) ... more risk than a mutual fund
- D) ... a tax-shield benefit

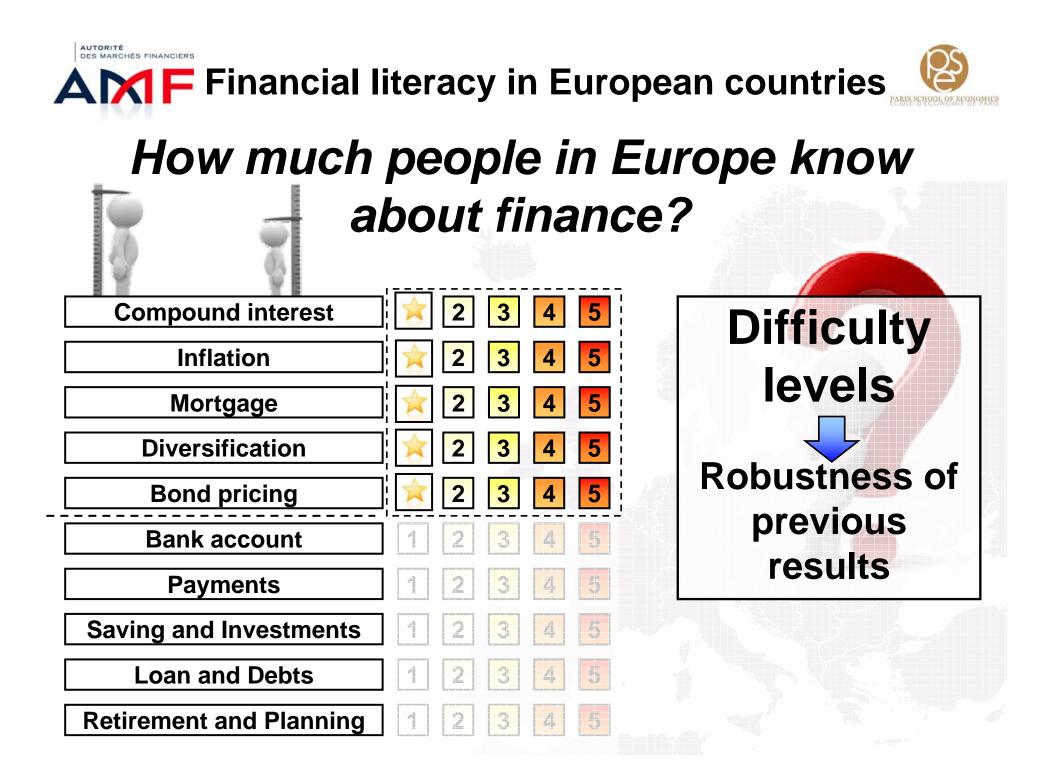


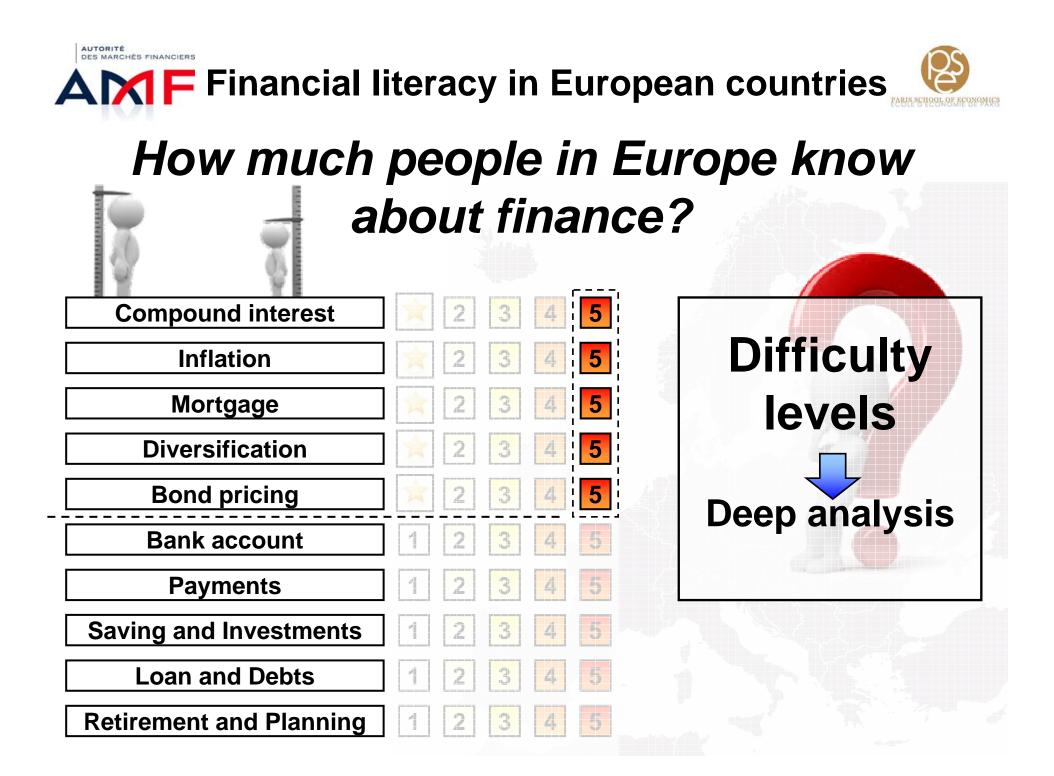


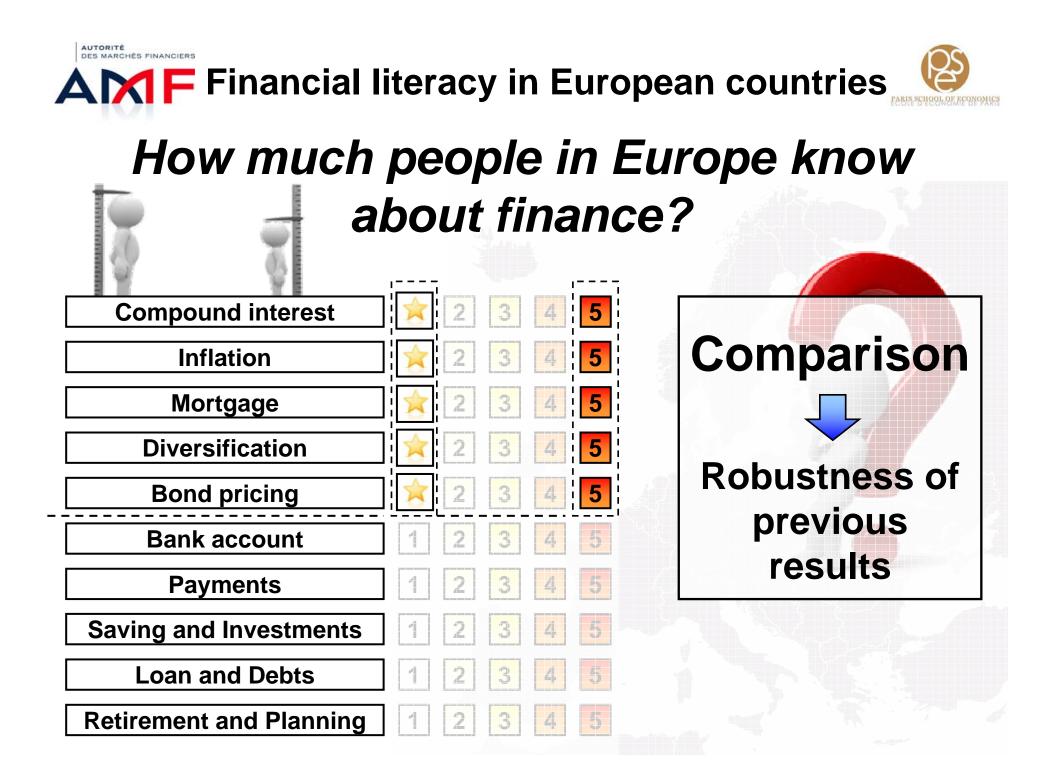


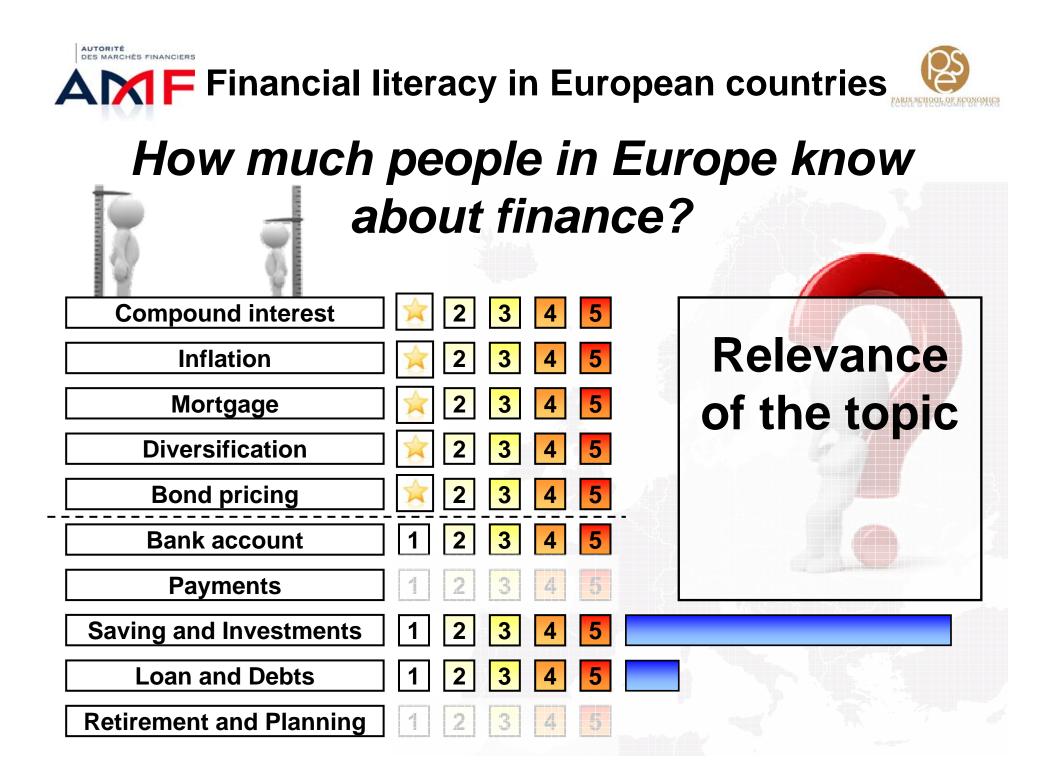


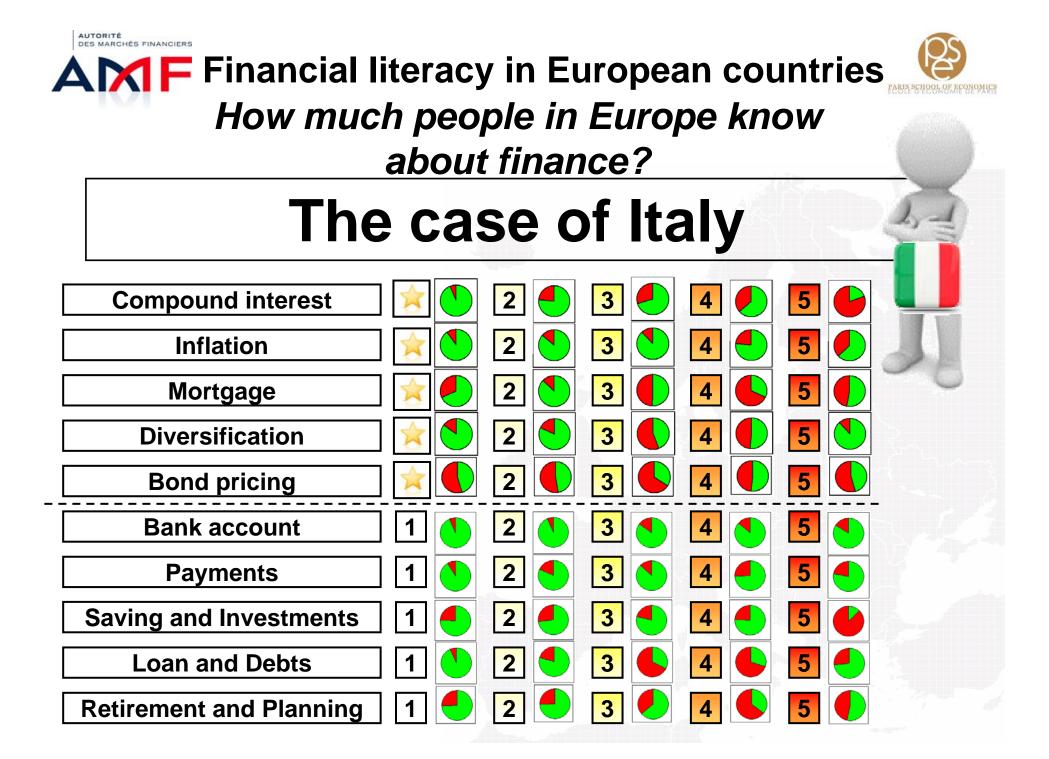












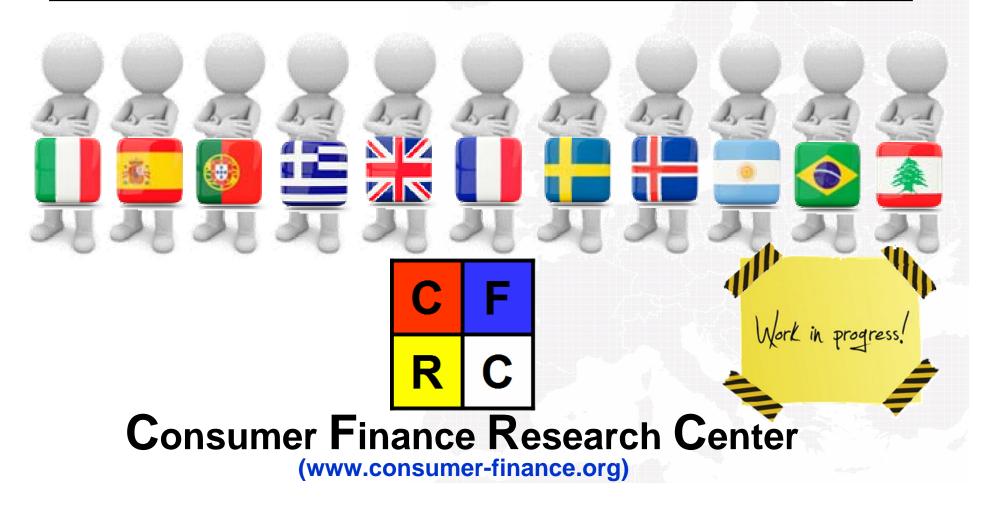
AUTORITÉ DES MARCHÉS FINANCIERS



AMF Financial literacy in European countries

How much people in Europe know about finance?

# The network



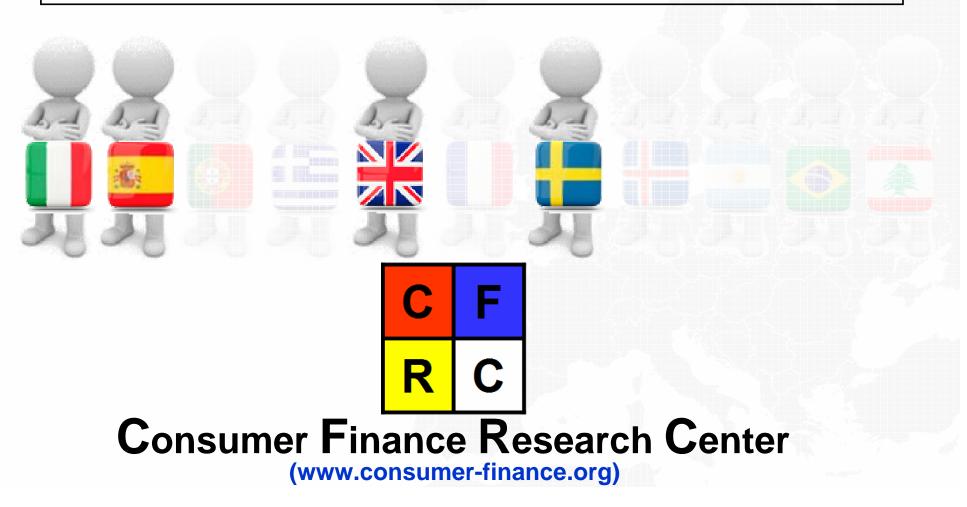
AUTORITÉ DES MARCHÉS FINANCIERS

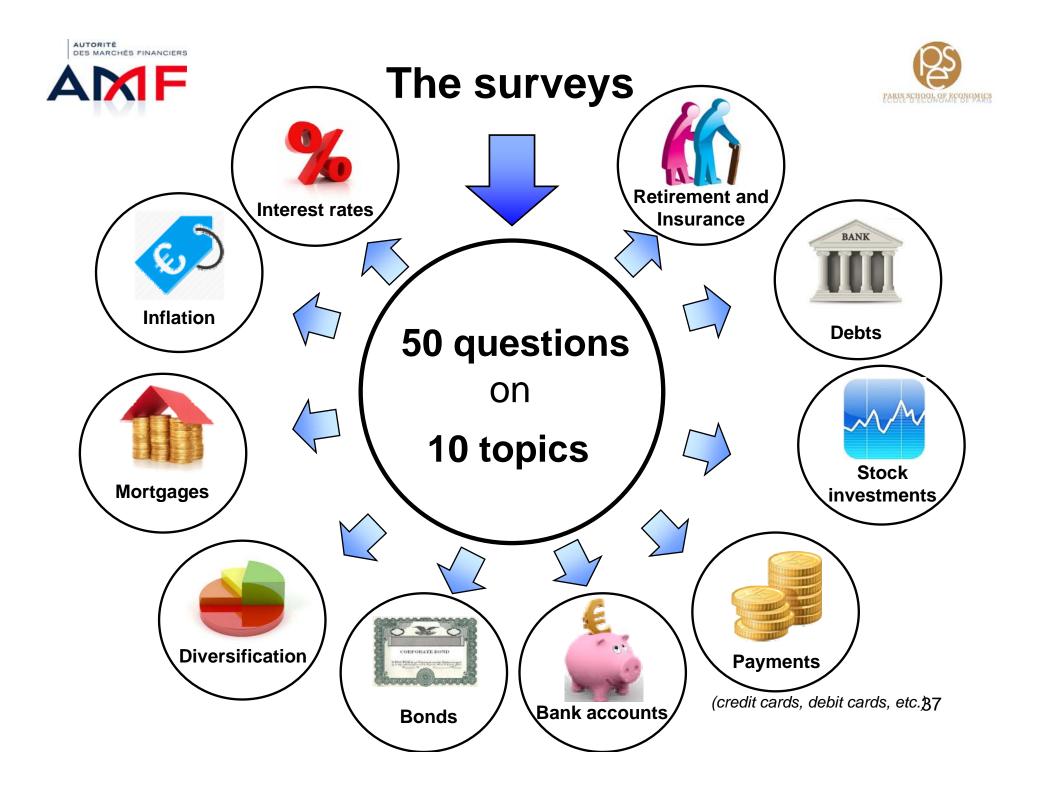


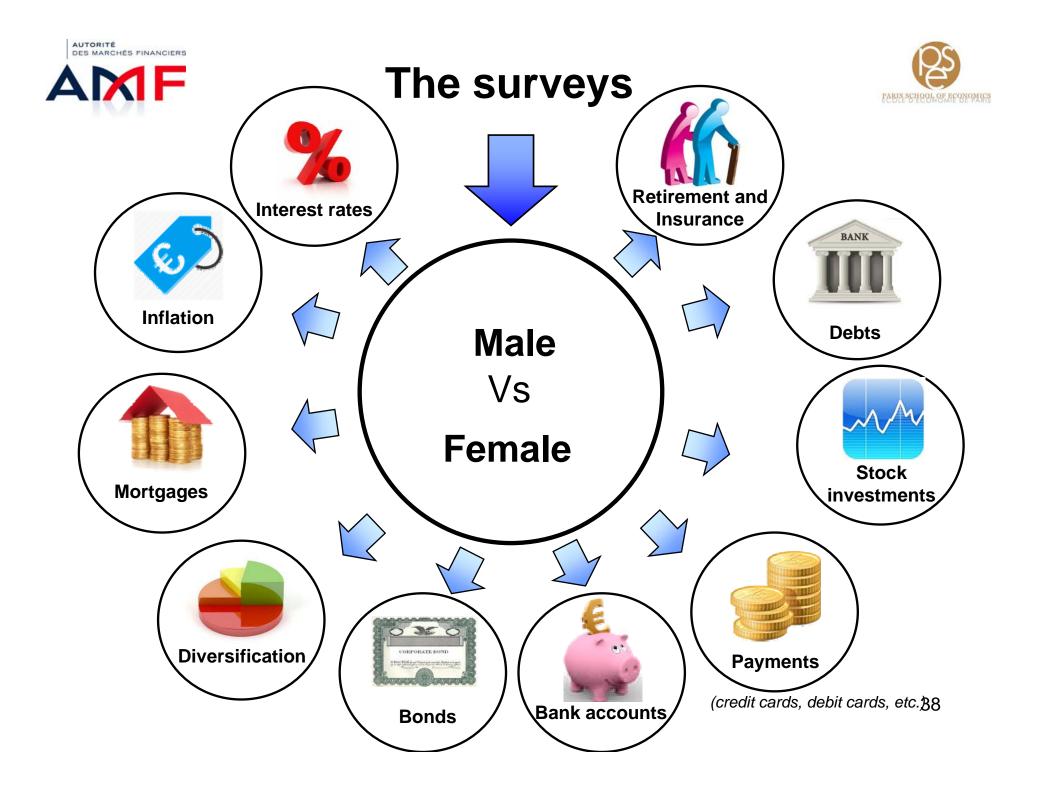
**AMF** Financial literacy in European countries How much people in Europe know

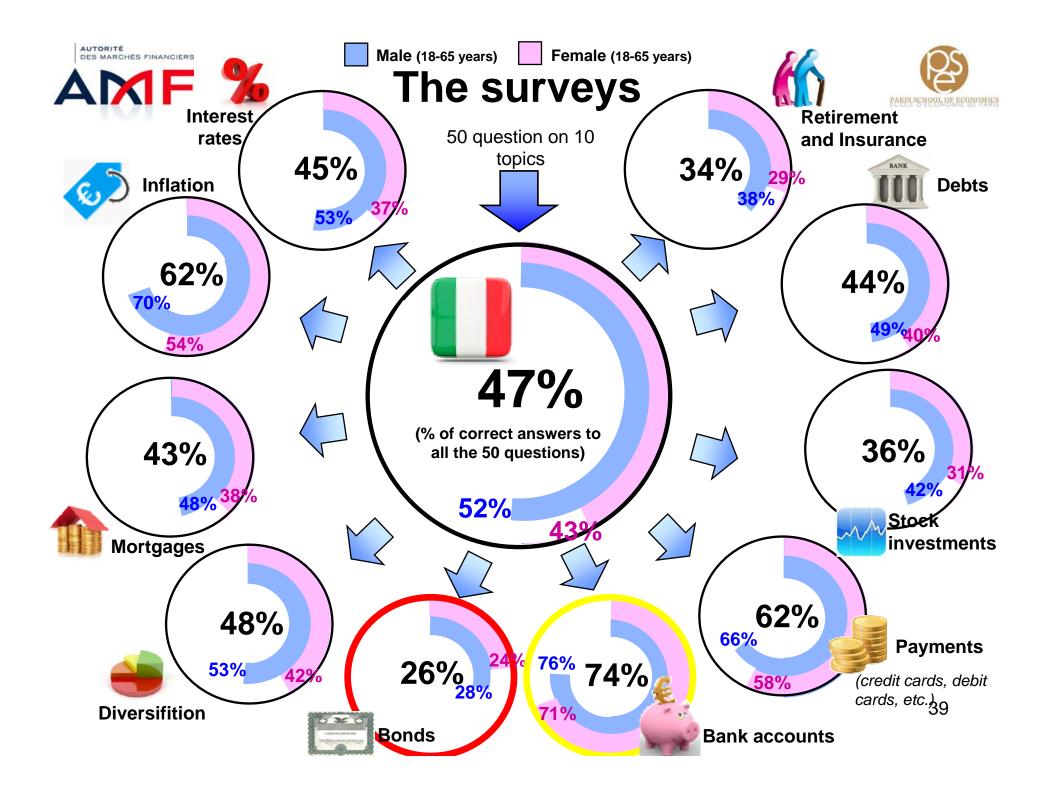
about finance?

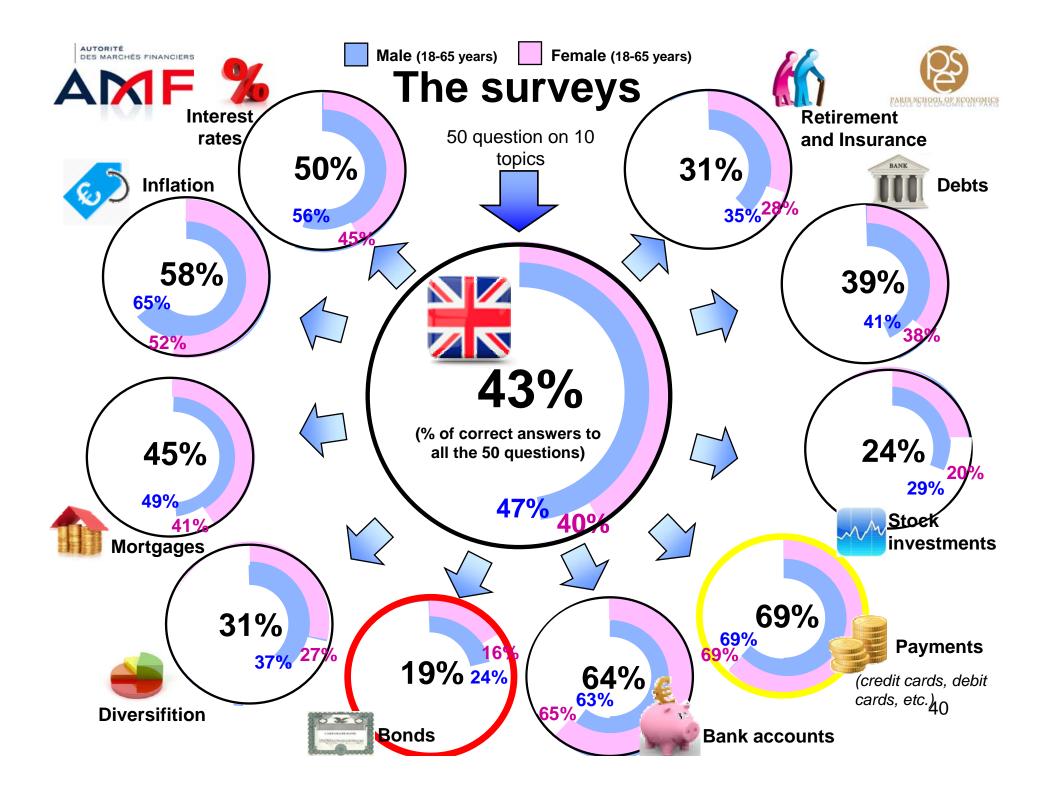
# The network

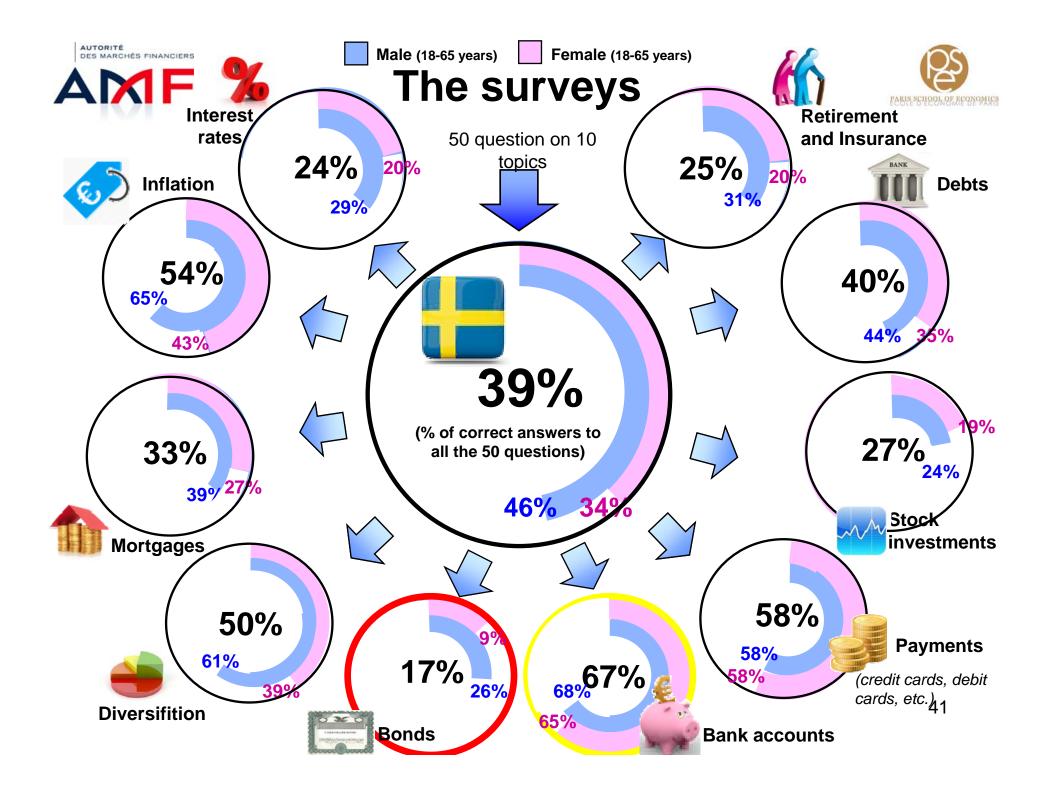


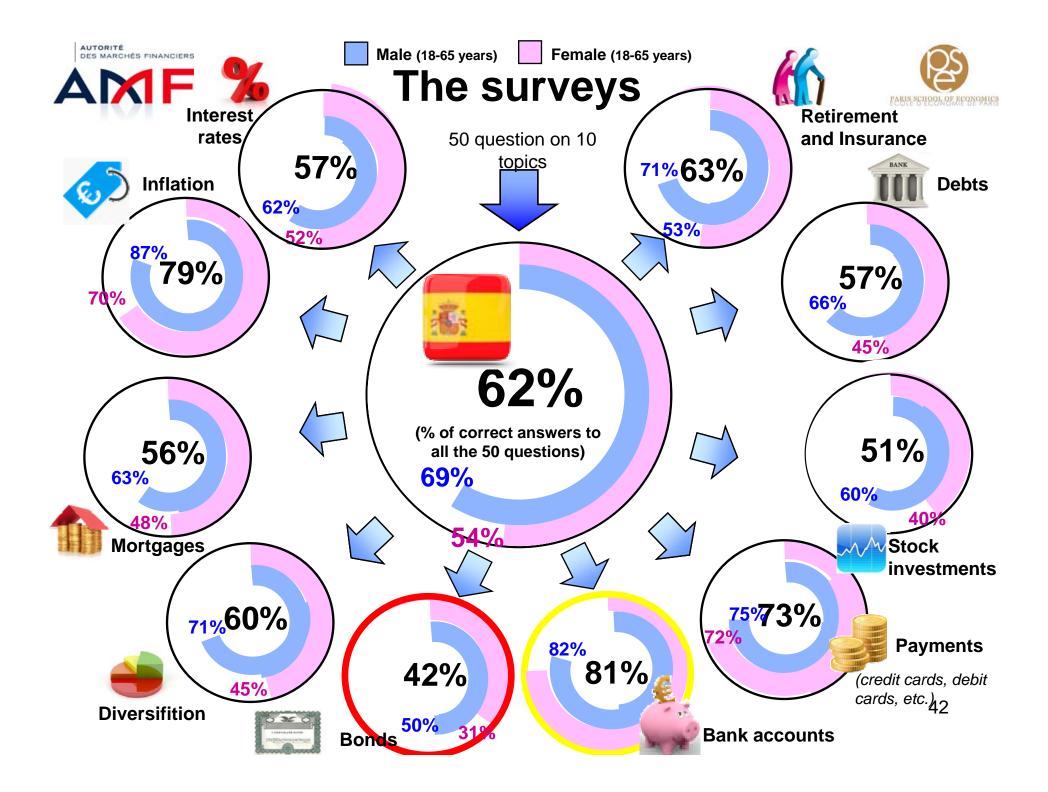


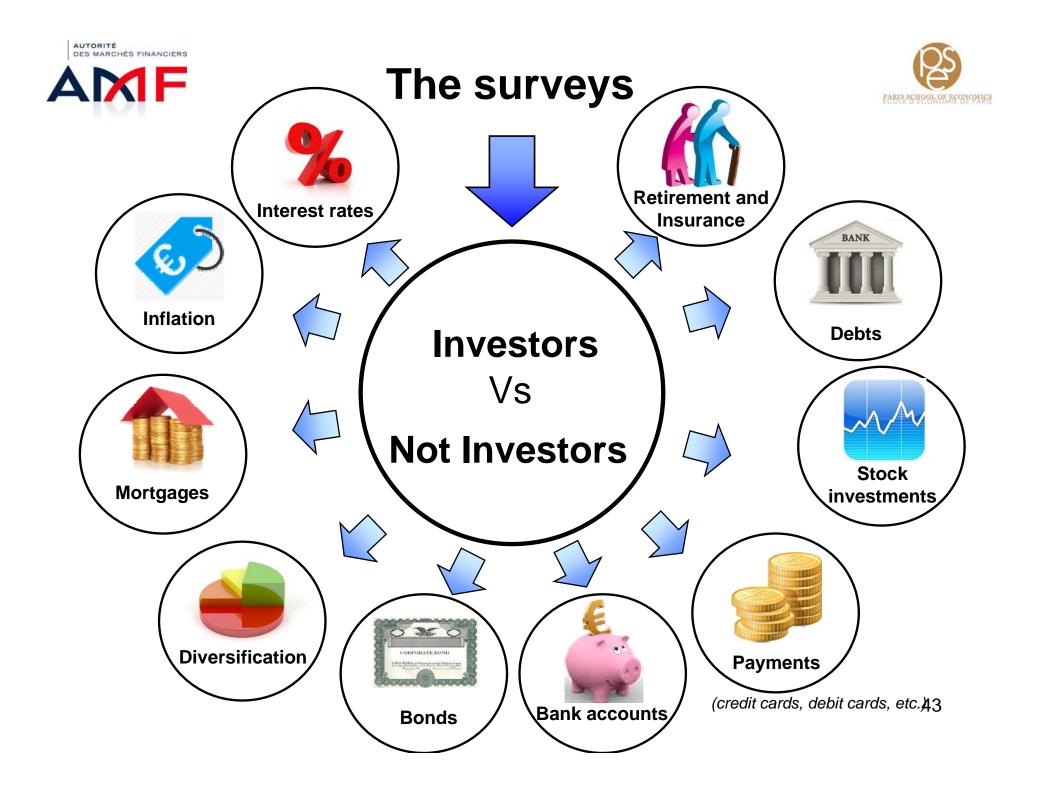


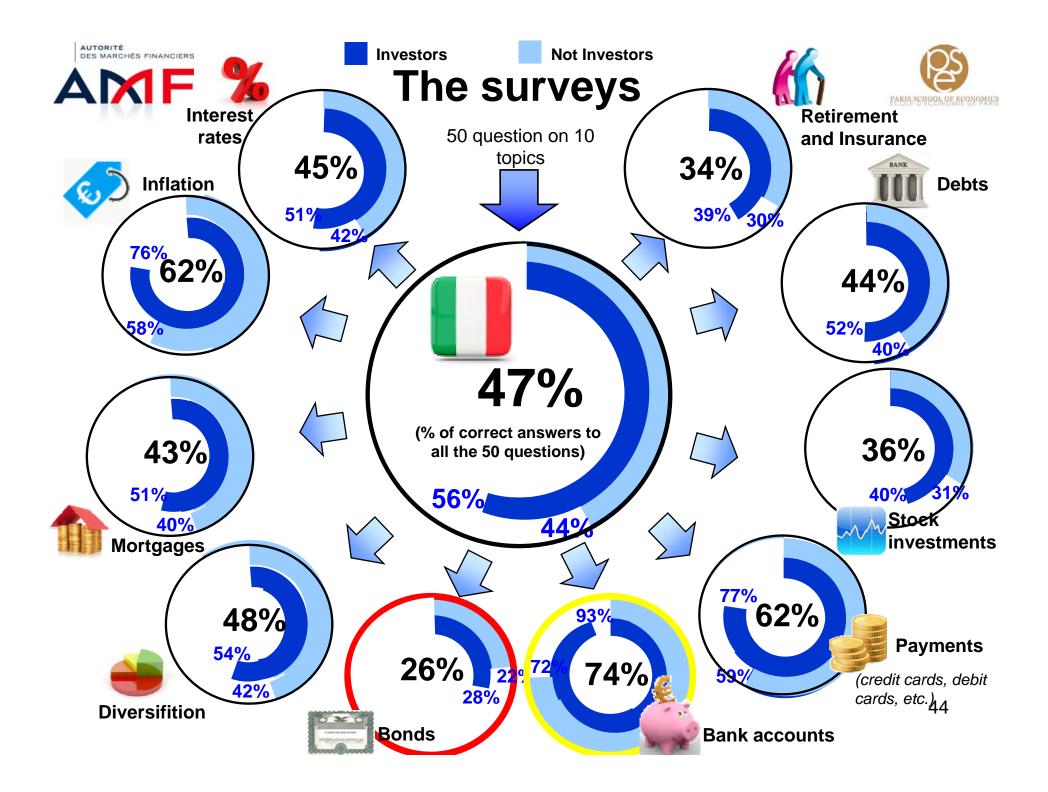


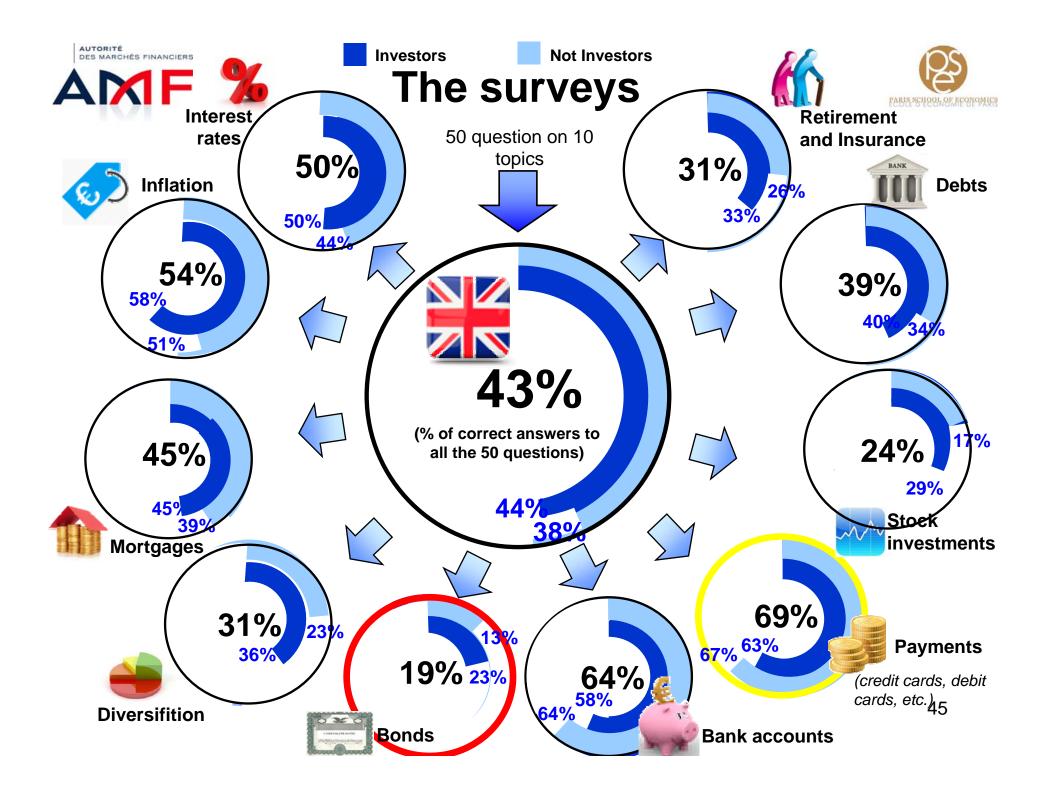


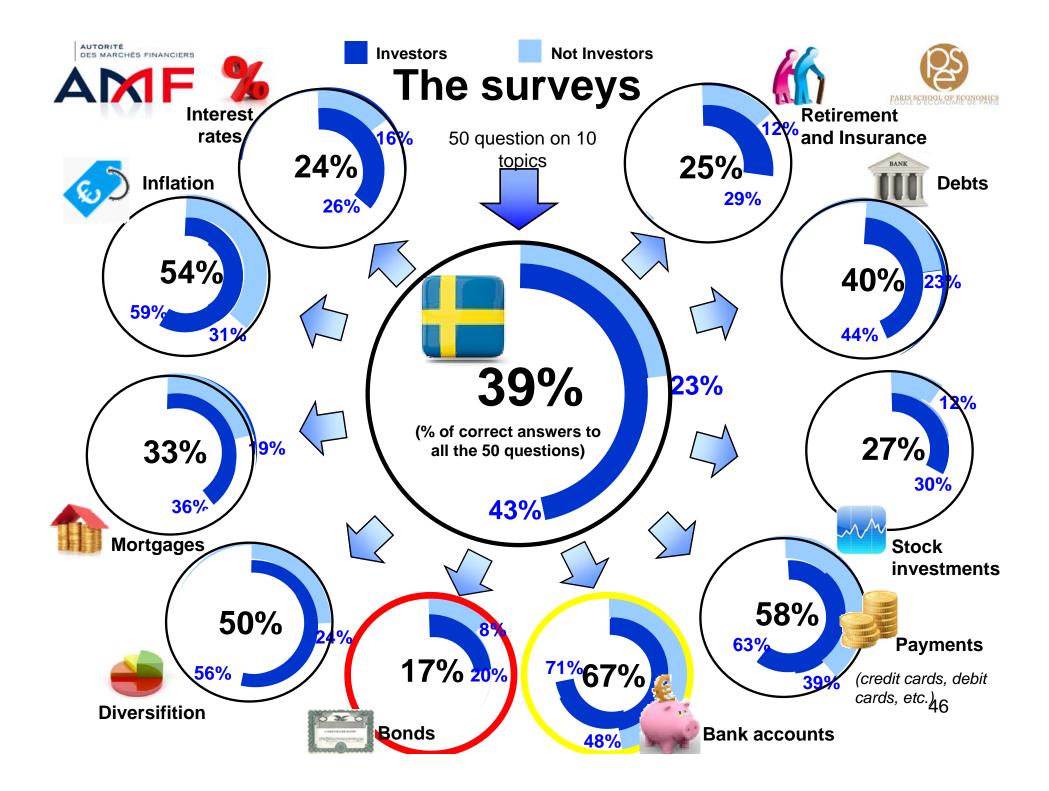


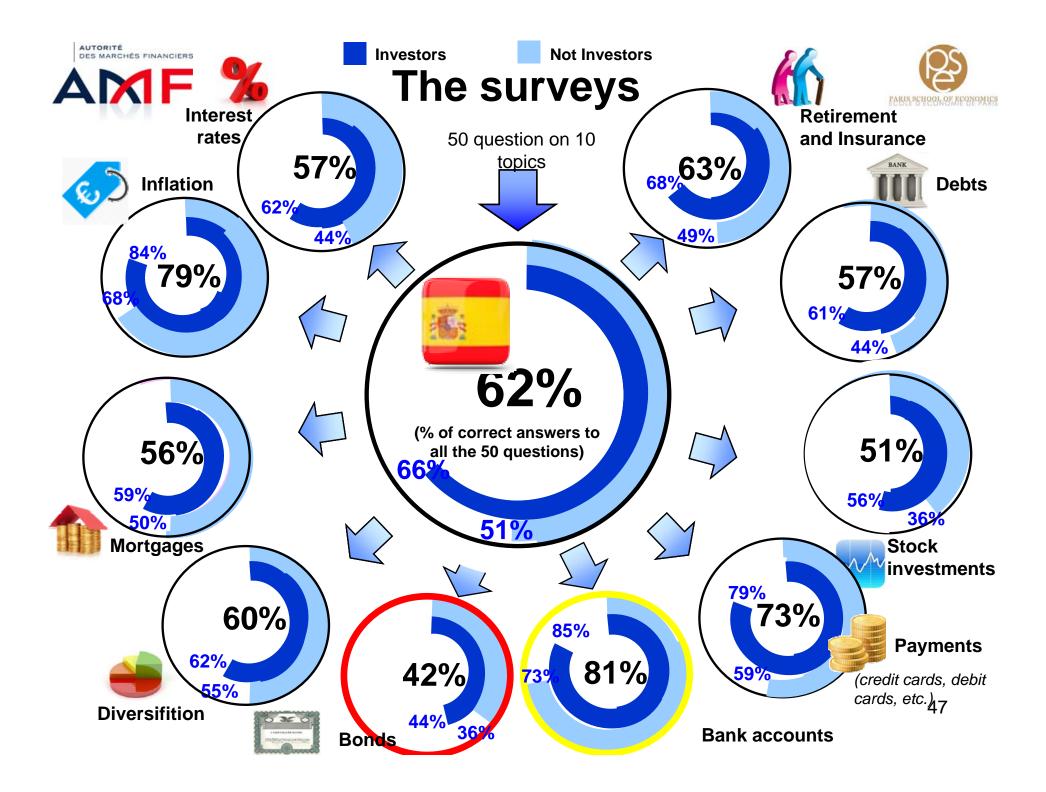


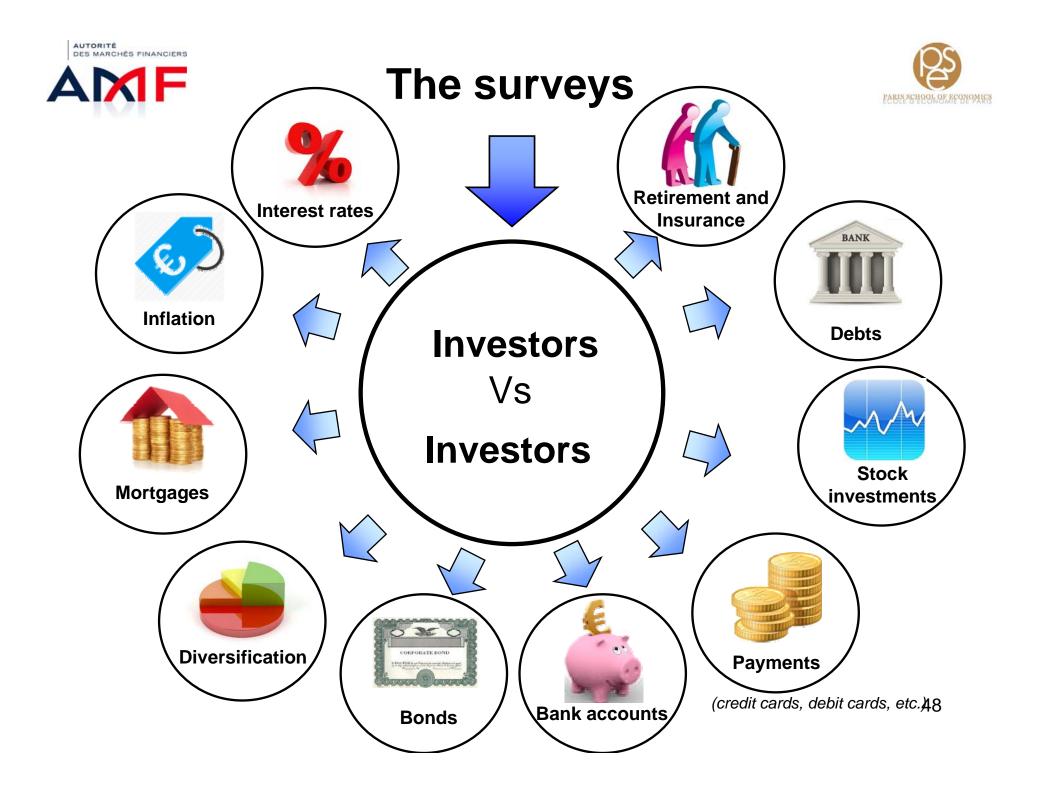


















#### Total score (50 questions on 10 topics)

All Investors	Bond Investors	Stock Investors	Mutual Fund Investors
56%	49%	50%	59%
44%	42%	49%	57%
43%	34%	39%	34%
 66%	88%	69%	80%

AUTORITÉ DES MARCHÉS FINANCIERS

### AMF

#### Investment knowledge scores



	All in	vestors	Bond i	nvestors	Stock	Investors		al Fund restors
Total (50)	5	56%	4	9%	5	50%	Ę	59%
Diversification (5)	54%		52%		54%		64%	
Bond (5)	28%	41%	32%	42%	37%	44%	34%	<b>49%</b>
Stock (5)	40%		43%		41%		50%	

Total (50)	44%	42%	49%	57%
Diversification (5)	31%	35%	34%	59%
Bond (5)	19% <b>25%</b>	33% <b>33%</b>	27% 31%	42% <b>46%</b>
Stock (5)	24%	31%	32%	37%

Total (50)		4	13%	3	4%		39%	~	34%
Diversification (5)		50%		53%		71%		70%	
Bond (5)	ſ	17%	31%	24%	44%	42%	<b>59%</b>	22%	53%
 Stock (5)		27%		55%		64%		68%	

	Total (50)	66%	88%	69%	80%
	Diversification (5)	60%	100%	76%	76%
漸	Bond (5)	42% 51%	100% <b>93%</b>	<b>59% 63%</b>	64% <b>72%</b>
	Stock (5)	51%	80%	53%	76%



## Financial Literacy...

### ... and Financial Behaviors

	GROUPS	JPS Financial literacy		Finar Finar	ncial Behaviors	THE SHORE
Countries	Groups	<b>TOTAL</b> (50 questions)	Risk attitude (1=Low 7=High)	Use of e-banking (Yes=1 No=0)	Figure out retirement needs? (Yes=1 No=0)	Cash preference (in case of a purchase between 100€ and 200€)
	Not Investors	44%				
TA	Investors-Bonds	49%				
ITA	Investors-Stocks	50%				
ITA	Investors-Mutual funds	59%				
1	Not Investors	38%				
UK	Investors-Bonds	42%				
UK	Investors-Stocks	49%				
UK	Investors-Mutual funds	57%				
122						
	Not Investors	23%				
SWE	Investors-Bonds	34%				
SWE	Investors-Stocks	39%				
SWE	Investors-Mutual funds	34%				
8	Not Investors	51%				
SPA	Investors-Bonds	88%				
SPA	Investors-Stocks	69%				
SPA	Investors-Mutual funds	80%				

	GROUPS	Financial literacy	RIASK	Final	ncial Behaviors	THE REPORT OF THE PARTY OF THE
Countries	Groups	<b>TOTAL</b> (50 questions)	Risk attitude (1=Low 7=High)	Use of e-banking (Yes=1 No=0)	Figure out retirement needs? (Yes=1 No=0)	Cash preference (in case of a purchase between 100€ and 200€)
	Not Investors	44%	2,93			•
ITA	Investors-Bonds	49%	3,70			
ITA	Investors-Stocks	50%	4,65			
ITA	Investors-Mutual funds	59%	4,14			
				_		
1	Not Investors	38%	2,78			
UK	Investors-Bonds	42%	4,50			
UK	Investors-Stocks	49%	4,42			
UK	Investors-Mutual funds	57%	4,67			
122.				_		
	Not Investors	23%	2,76			
SWE	Investors-Bonds	34%	2,94			
SWE	Investors-Stocks	39%	4,81			
SWE	Investors-Mutual funds	34%	3,90			
8	Not Investors	51%	3,43			
SPA	Investors-Bonds	88%	6,00			
SPA	Investors-Stocks	69%	4,47			
SPA	Investors-Mutual funds	80%	4,00			

-	GROUPS	Financial literacy	ncial Behaviors	PRONOF RE OPE		
Countries	Groups	<b>TOTAL</b> (50 questions)	Risk attitude (1=Low 7=High)	Use of e-banking (Yes=1 No=0)	Figure out retirement needs? (Yes=1 No=0)	Cash preference (in case of a purchase between 100€ and 200€)
	Not Investors	44%		53,7%		
ТА	Investors-Bonds	49%		65,2%		
TA	Investors-Stocks	50%		91,9%		
ITA	Investors-Mutual funds	59%		86,9%		
			_			
1	Not Investors	38%		78,6%		
UK	Investors-Bonds	42%		87,8%		
UK	Investors-Stocks	49%		89,9%		
UK	Investors-Mutual funds	57%		76,9%		
1222			_			
	Not Investors	23%		74,8%		
SWE	Investors-Bonds	34%		58,8%		
SWE	Investors-Stocks	39%		94,1%		
SWE	Investors-Mutual funds	34%		97,1%		
			_			
8	Not Investors	51%		68,6%		
SPA	Investors-Bonds	88%		100,0%		
SPA	Investors-Stocks	69%		86,7%		
SPA	Investors-Mutual funds	80%		100,0%		

	GROUPS	Financial literacy	REASK	Final Final	ncial Behaviors	TESPOSITE LESSINGLIEUS
Countries	Groups	<b>TOTAL</b> (50 questions)	Risk attitude (1=Low 7=High)	Use of e-banking (Yes=1 No=0)	Figure out retirement needs? (Yes=1 No=0)	Cash preference (in case of a purchase between 100€ and 200€)
	Not Investors	44%		•	13,0%	
ITA	Investors-Bonds	49%			28,3%	
ITA	Investors-Stocks	50%			45,9%	
ITA	Investors-Mutual funds	59%			21,3%	
1	Not Investors	38%			12,4%	
UK	Investors-Bonds	42%			53,1%	
UK	Investors-Stocks	49%			50,7%	
UK	Investors-Mutual funds	57%			48,7%	
E2.			_			
	Not Investors	23%			7,6%	
SWE	Investors-Bonds	34%			17,6%	
SWE	Investors-Stocks	39%			39,2%	
SWE	Investors-Mutual funds	34%			29,8%	
	·		-			
8	Not Investors	51%			14,3%	
SPA	Investors-Bonds	88%			100,0%	
SPA	Investors-Stocks	69%	_		40,0%	
SPA	Investors-Mutual funds	80%			40,0%	

	GROUPS	Financial literacy	RUNSK	Fina	TO A SERIES	
Countries	Groups	<b>TOTAL</b> (50 questions)	Risk attitude (1=Low 7=Hi		Figure out retirement needs? (Yes=1 No=0)	Cash preference (in case of a purchase between 100€ and 200€)
	Not Investors	44%				23,9%
ITA	Investors-Bonds	49%				23,9%
ITA	Investors-Stocks	50%				18,9%
ITA	Investors-Mutual funds	59%				18,0%
			٦			
	Not Investors	38%	_			12,2%
UK	Investors-Bonds	42%				10,2%
UK	Investors-Stocks	49%				11,6%
UK	Investors-Mutual funds	57%				5,1%
	I		٦			
	Not Investors	23%	4			5,9%
SWE	Investors-Bonds	34%				5,9%
SWE	Investors-Stocks	39%	1			7,8%
SWE	Investors-Mutual funds	34%				2,9%
2			٦			
	Not Investors	51%				28,6%
SPA	Investors-Bonds	88%	1			50,0%
SPA	Investors-Stocks	69%	_			20,0%
SPA	Investors-Mutual funds	80%				0,0%

	GROUPS	Financial literacy	RIASK	Finar	ncial Behaviors	TERRAR BERGE
Countries	Groups	<b>TOTAL</b> (50 questions)	Risk attitude (1=Low 7=High)	Use of e-banking (Yes=1 No=0)	Figure out retirement needs? (Yes=1 No=0)	Cash preference (in case of a purchase between 100€ and 200€)
	Not Investors	44%	2,93	53,7%	13,0%	23,9%
ITA	Investors-Bonds	49%	3,70	65,2%	28,3%	23,9%
ITA	Investors-Stocks	50%	4,65	91,9%	45,9%	18,9%
ITA	Investors-Mutual funds	59%	4,14	86,9%	21,3%	18,0%
	Not Investors	38%	2,78	78,6%	12,4%	12,2%
UK	Investors-Bonds	42%	4,50	87,8%	53,1%	10,2%
UK	Investors-Stocks	49%	4,42	89,9%	50,7%	11,6%
UK	Investors-Mutual funds	57%	4,67	76,9%	48,7%	5,1%
122						
	Not Investors	23%	2,76	74,8%	7,6%	5,9%
SWE	Investors-Bonds	34%	2,94	58,8%	17,6%	5,9%
SWE	Investors-Stocks	39%	4,81	94,1%	39,2%	7,8%
SWE	Investors-Mutual funds	34%	3,90	97,1%	29,8%	2,9%
8	Not Investors	51%	3,43	68,6%	14,3%	28,6%
SPA	Investors-Bonds	88%	6,00	100,0%	100,0%	50,0%
SPA	Investors-Stocks	69%	4,47	86,7%	40,0%	20,0%
SPA	Investors-Mutual funds	80%	4,00	100,0%	40,0%	0,0%







## **Financial Literacy in Europe**

# Conclusions

1

Financia literacy is low on average...



... but changes a lot when different areas of knowledge are taken into account.

Investors are on average more knowledgable than others.



There are differences between investors (bond, stock, mutual fund investors).



Financial literacy seems to be related with financial behaviors.





#### Financial education in the digital age: What are the challenges for investment?

Paris, Maison du Barreau – Monday, June 20th 2016

## **Financial Literacy in Europe**

(Gianni Nicolini<sup>1</sup>)

For more details on the research project visit the



**Consumer Finance Research Center** 

(www.consumer-finance.org)



<sup>1</sup>Associate professor of Finance University of Rome "Tor Vergata" (Rome, Italy) - Faculty of Economics <sub>59</sub> mail: gianni.nicolini@uniroma2.it