

# **Economic and Financial Education Symposium - MIDE**

## **September 25, 2015**



## **THE ECONOMIC IMPORTANCE OF 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 and private accounts

➤ **Changes in labor markets**

- Divergence in wages – skills are critical

➤ **Changes in financial markets**

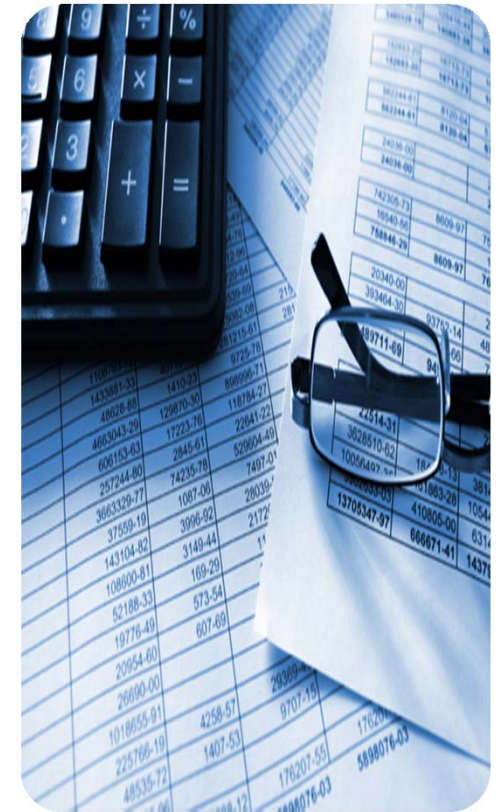
- Greater complexity
- More opportunities to borrow & in large amounts



# Increase in individual responsibility

## Being our own Chief Financial Officer (CFO)

- **Individuals make many financial decisions**
  - Investment in education
  - Financial security after retirement
  - Investing in financial markets & other markets (buying a home, car, etc)
- **Not enough to look at asset side; liability side is equally important**
  - Increase in household debt
  - Debt normally incurs higher interest rates than what is earned on assets
- **Financial decisions are complex**
  - Many more financial products than in the past



# A large amount of research in past 15 years

## Some 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 and financial decision-making?



# How well-equipped are people?

**Do individuals know the basic concepts that are key to making financial decisions?**

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

**The journey of three simple 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?”

- ☐ More than \$102
- ☐ Exactly \$102
- ☐ Less than \$102
- ☐ Don't know (DK)
- ☐ 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...”

- ☐ More than today
- ☐ Exactly the same as today
- ☐ Less than today
- ☐ Don't know (DK)
- ☐ 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.*”

- ☐ True
- ☐ False
- ☐ Don't know (DK)
- ☐ Refuse to answer

# Financial Literacy around the World

## (FLat World)

Evidence from 13 countries:

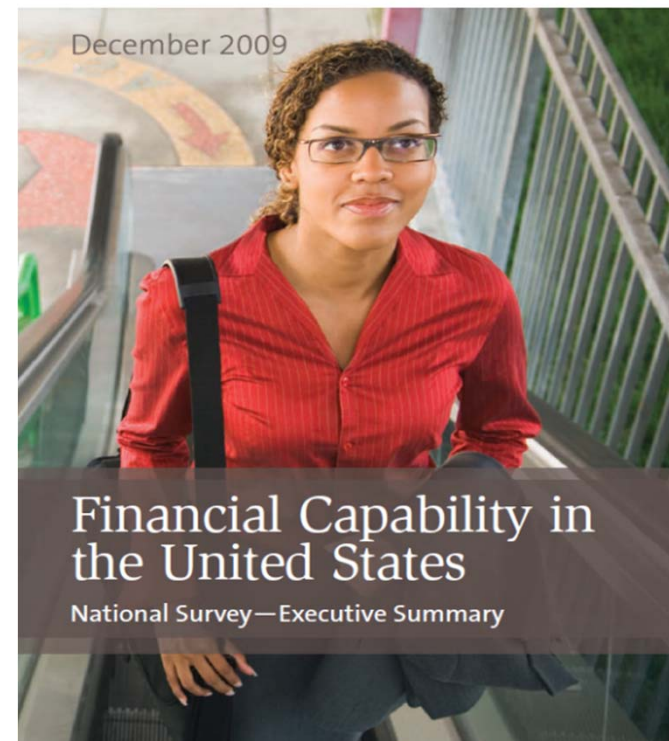
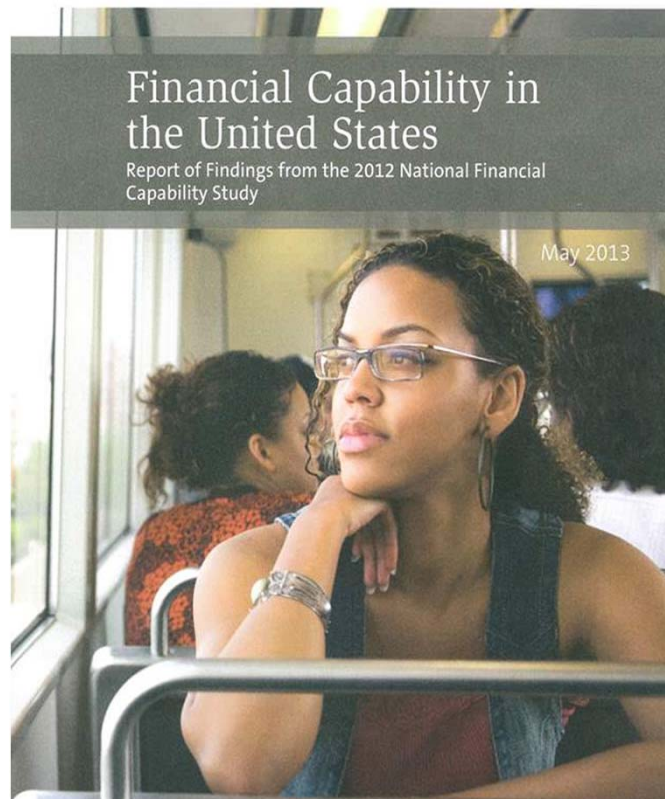
- ❖ USA
- ❖ The Netherlands
- ❖ Germany
- ❖ Italy
- ❖ Russia
- ❖ Sweden
- ❖ New Zealand
- ❖ Japan
- ❖ Australia
- ❖ France
- ❖ Switzerland
- ❖ Romania
- ❖ Canada





# Collecting new data

## The 2009 & 2012 National Financial Capability Study (new 2015 wave is in the field)



# How much do Americans know?

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

	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 answered all three Qs; less than half (46%) got the first two Qs right. **Strikingly similar evidence across countries.**

# 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 Canadians know?

## Distribution of responses in the Canadian population (2012 CSA Investor Index Survey)

	Responses		
	<i>Correct</i>	<i>Incorrect</i>	<i>DK</i>
Interest rate	78%	13%	9%
Inflation	66%	18%	16%
Risk diversif.	59%	10%	31%

NB: Less than half (42%) correctly answered all three questions; 58% got the first two questions right.

# Gallup Survey



GALLUP®

## THE GLOBAL FINANCIAL LITERACY SURVEY





# Gallup Survey



**In 2014 McGraw Hill Financial and Gallup interviewed 1,000 people per country in more than 140 countries around the world about their level of financial literacy through the use of the Gallup World Poll. The data will be released in October 2015.**

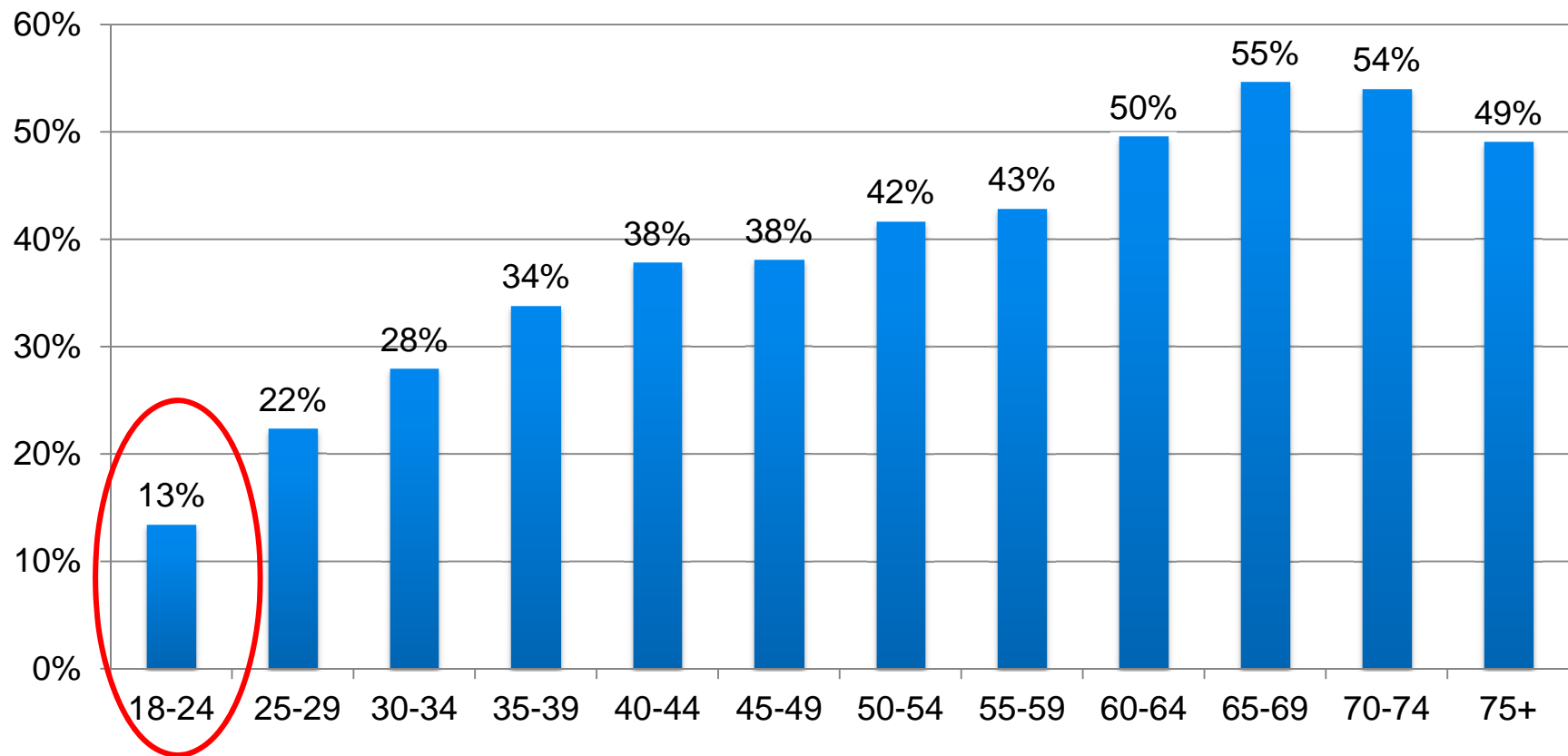
# A large amount of research in past 15 years

## Some questions

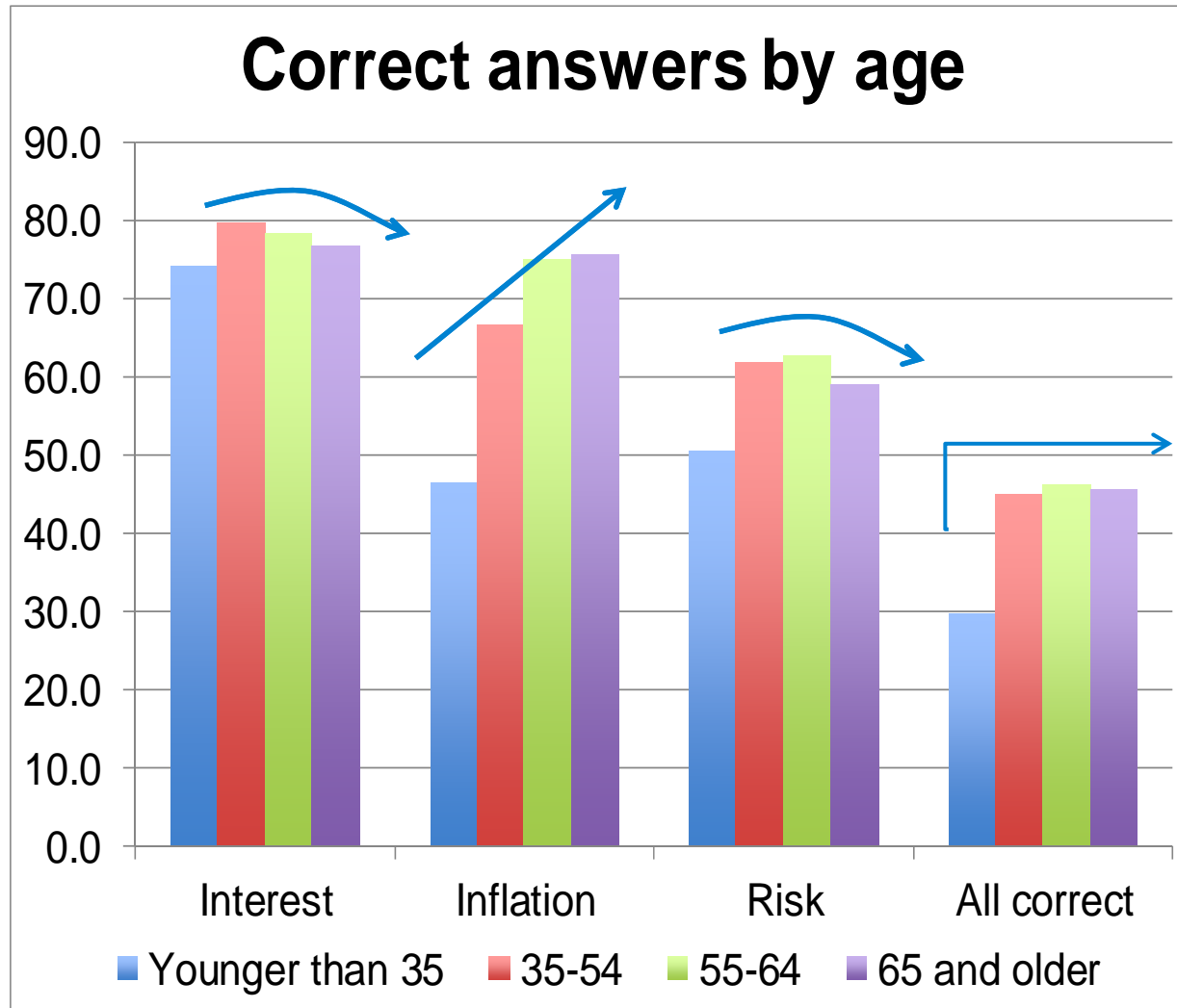
1. How well-equipped are people to make financial decisions?
2. Are there vulnerable groups?

# Financial literacy across age groups

**Financial literacy by age in the United States –  
2012 US National Financial Capability Study  
(% answering 3 questions correctly)**



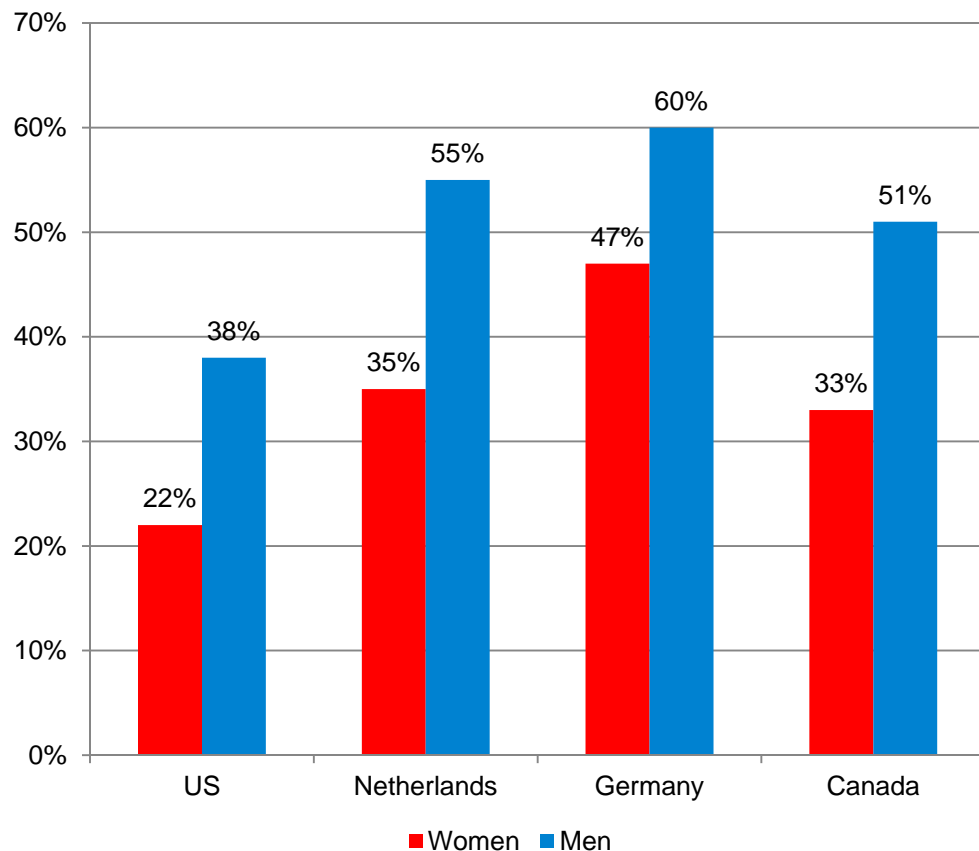
# Financial literacy and age: Canada



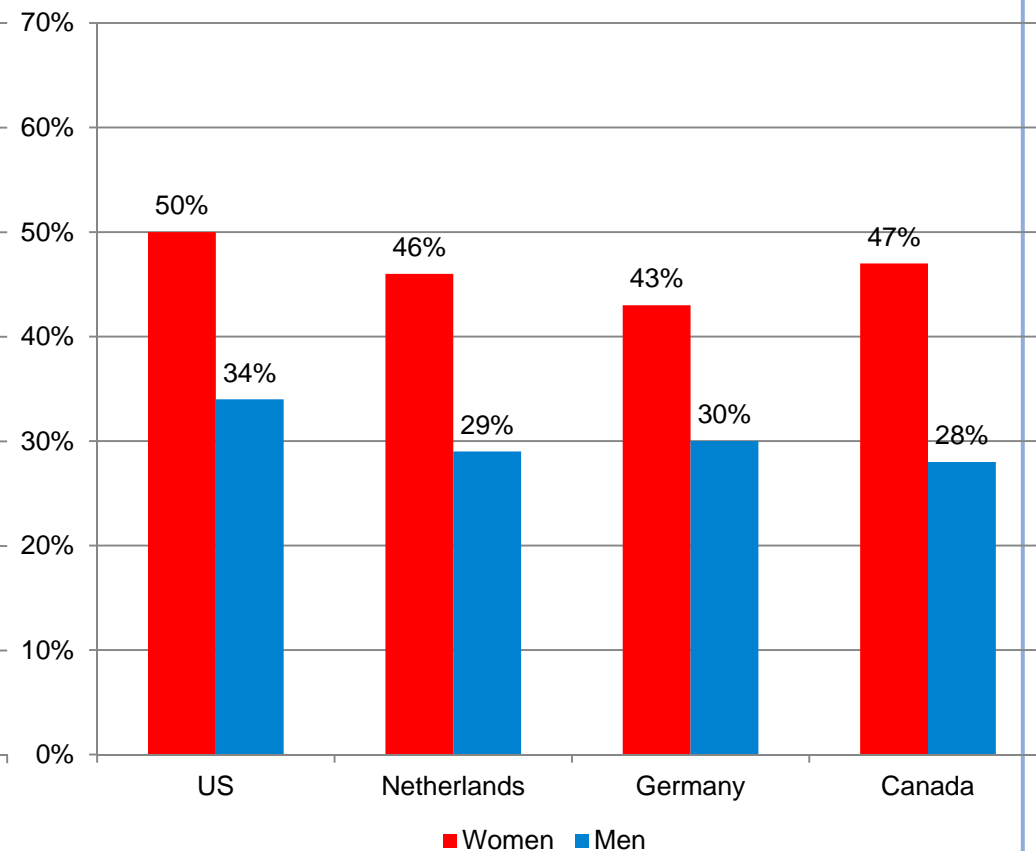
# Financial knowledge among women

- Very robust findings of large gender differences in financial knowledge
- Women are much more likely to say “I do not know”

**Financial knowledge by gender  
(% answering 3 Qs correctly)**



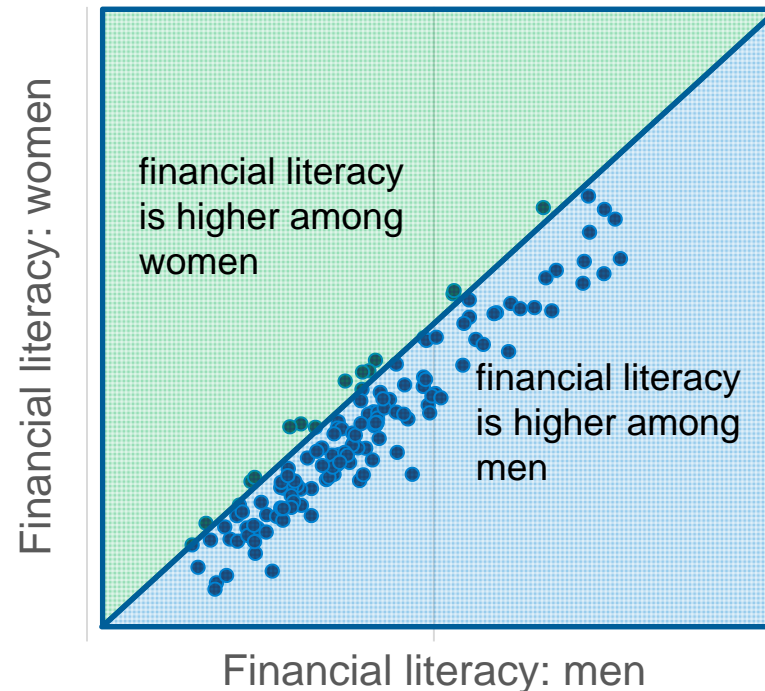
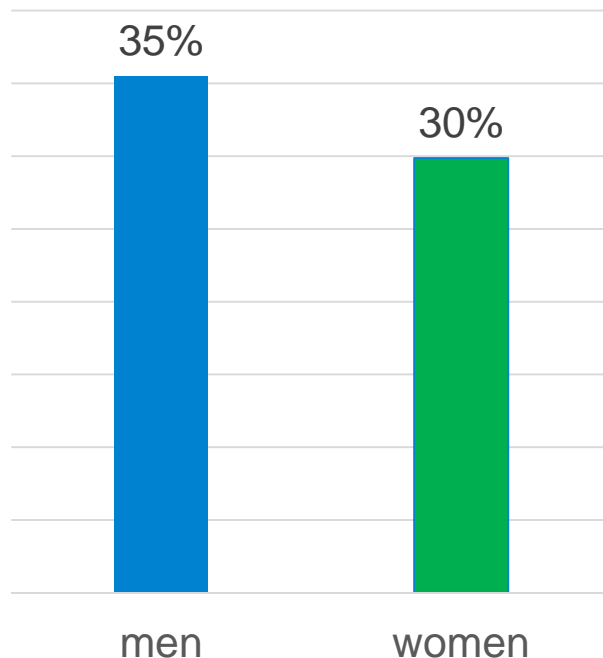
**At least one "don't know" answer, by gender**





# Gallup Survey: Gender gap in financial literacy

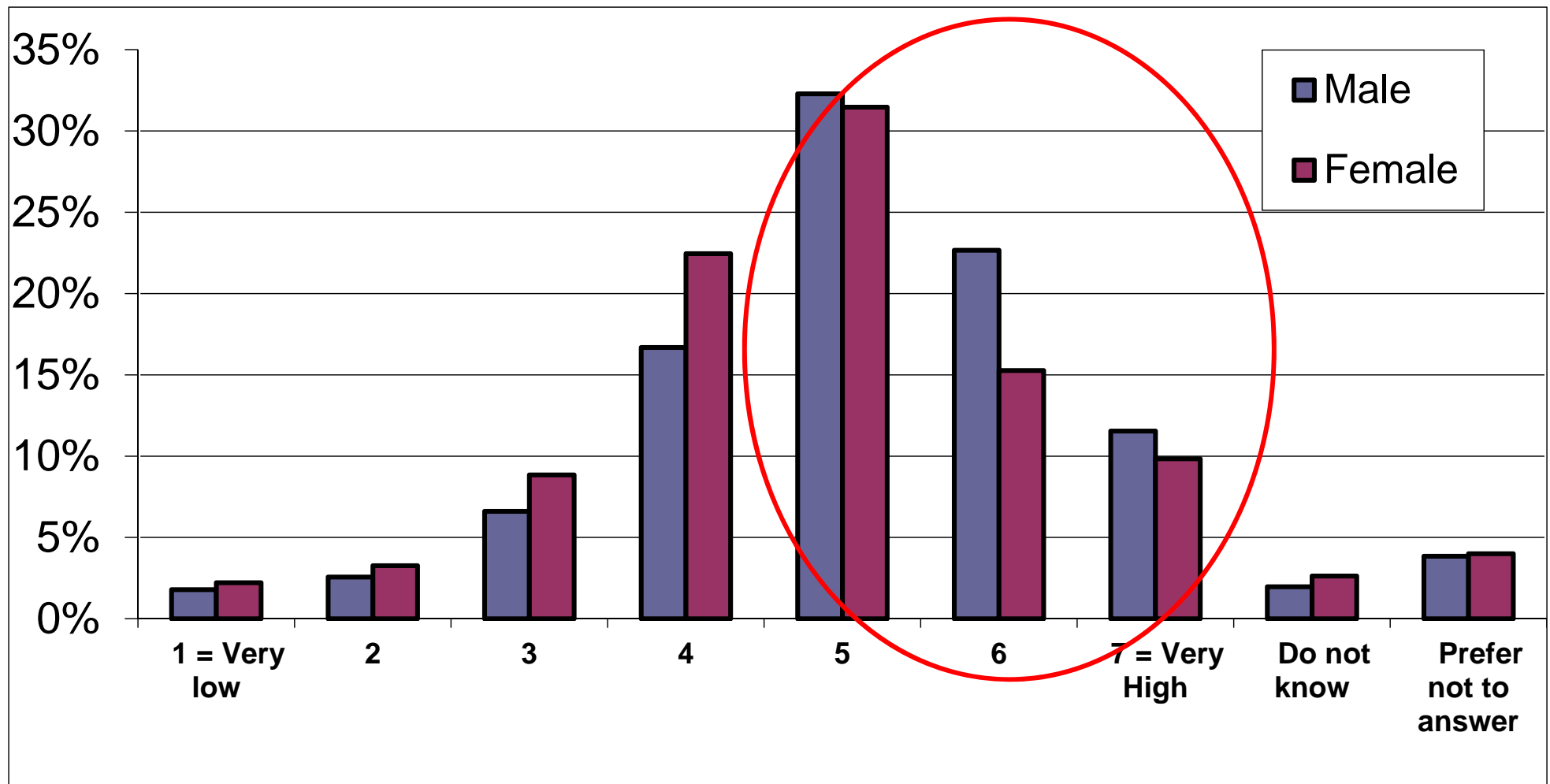
adults that answered 3 out of 4 topics correctly (%)



- The average gender gap in financial literacy is 5 percentage points
- The gender gap in financial literacy is consistent across many countries

# Gender differences in self-reported literacy (TNS data for US - 2009)

On a scale of 1 (very low) to 7 (very high), how would you assess your overall financial knowledge?



# Three main findings

## Strikingly similar patterns across countries

- **Financial illiteracy is widespread in the population**
  - Particularly low among the young
- **Risk diversification is most difficult concept**
  - Prevalence of “do not know” answers
- **Gender difference in financial literacy**
  - Women more likely than men to answer “I do not know” to financial literacy questions

# Implications: What the research suggests

- **Need to improve levels of financial literacy**
  - Levels of knowledge are low, in particular in some groups
- **Need for more targeted programs**
  - One size does not fit all
- **Women are an ideal group for fin education programs**
  - They know what they do not know
- **Many people will be unlikely to participate in financial education programs**
  - Unaware that they need it

# Focusing on the young

- **Need to improve levels of financial literacy**
  - Levels of knowledge are low, in particular among the young
- **Until recently we had little or no information about people younger than 18 (or 16)**
  - National surveys do not cover high school students
- **This has changed recently, now we have data from the Programme for International Student Assessment (PISA)**

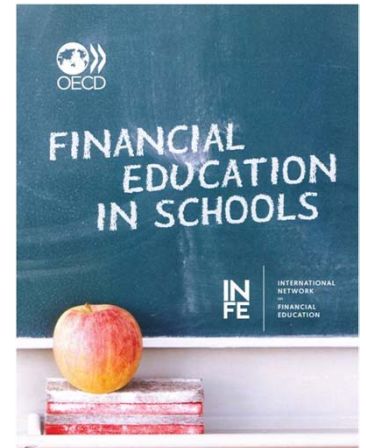


# PISA?



# OECD's Programme for International Student Assessment (PISA). Financial literacy added in 2012

**Are students well prepared for future challenges?  
Can they analyze, reason and communicate  
effectively?  
Do they have the capacity to continue learning  
throughout life?**



**PISA 2012 Assessment  
and Analytical Framework**  
MATHEMATICS, READING, SCIENCE,  
PROBLEM SOLVING AND FINANCIAL LITERACY



**Every three years the OECD  
Programme for International Student  
Assessment (PISA) answers these  
questions and more. It assesses to  
what extent students near the end of  
compulsory education have acquired  
some of the knowledge and skills  
essential for *full participation in  
society*.**





# PISA 2012 Results: Students and Money

FINANCIAL LITERACY SKILLS  
FOR THE 21ST CENTURY

**VOLUME VI**



# Definition of financial literacy

*“Financial literacy is **knowledge and understanding** of financial concepts and risks, and the **skills, motivation and confidence** to **apply** such knowledge and understanding in order to make **effective decisions** across a **range of financial contexts**, to improve the financial well-being of **individuals and society**, and to enable **participation in economic life**.”*

# Participating countries-economies

## **18 countries-economies participated in the 2012 Financial Literacy Assessment**

Australia, Belgium (Flemish Community), Shanghai-China, Colombia, Croatia, Czech Republic, Estonia, France, Israel, Italy, Latvia, New Zealand, Poland, Russia, Slovak Republic, Slovenia, Spain, and the United States

**Data was released on July 9, 2014**

Mean score

Strong performance in  
financial literacy

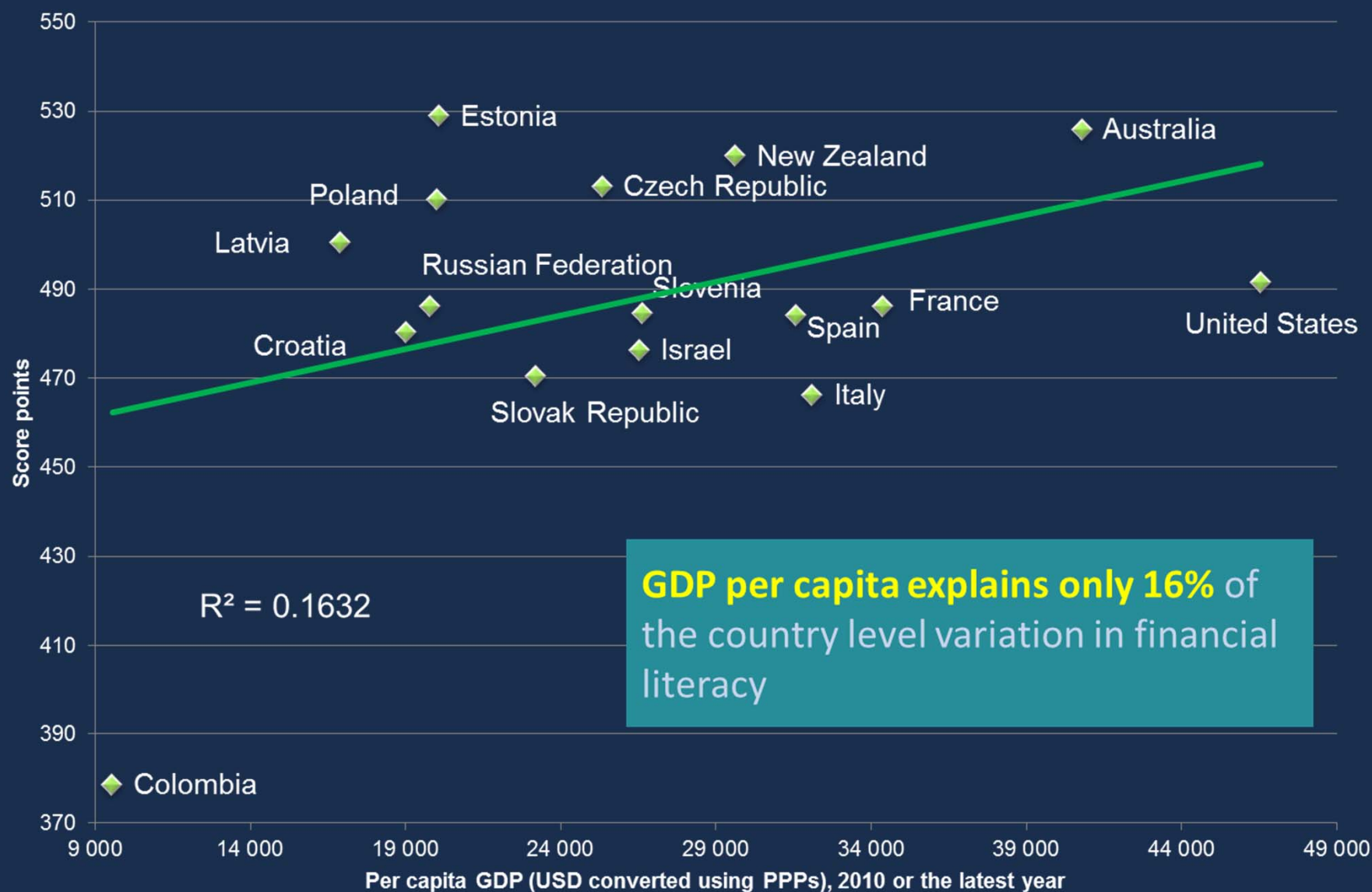
Average performance  
of 15-year-olds in  
financial literacy

605  
595  
585  
575  
565  
555  
545  
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525  
515  
505  
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475  
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405  
395  
385  
375





# Differences only partially explained by GDP per capita



# A large amount of research in past 15 years

## Some questions

1. How well-equipped are people to make financial decisions?
2. Are there vulnerable groups?
3. Does financial literacy matter?



# It pays to be financially literate

## Debt and debt management



## Investments



## Planning and wealth accumulation

# Financial literacy and mortgages

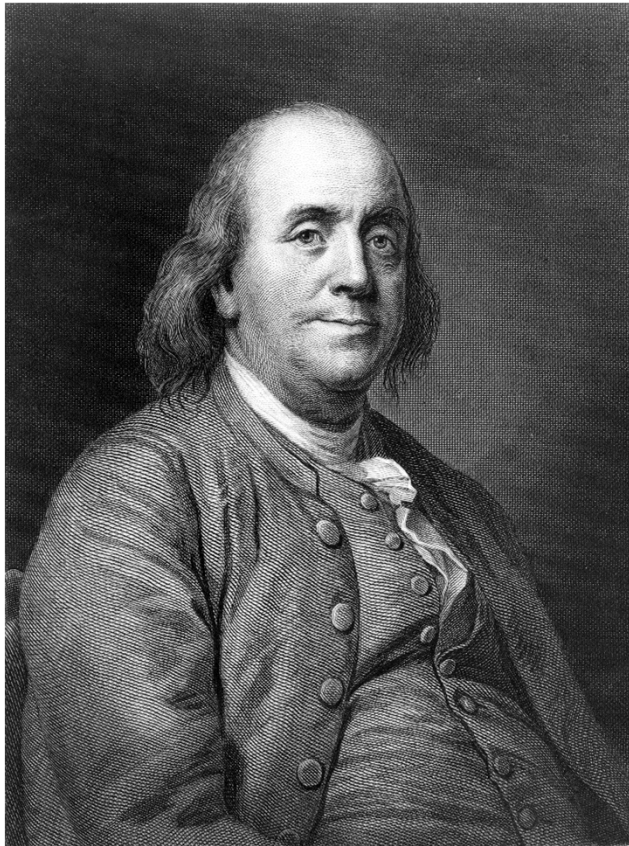
- Those with low literacy (numeracy) are more likely to be delinquent and default on subprime mortgages
- Those with low educational attainment are less likely to refinance mortgages during a period of falling interest rates



***Source: Campbell (2006), Gerardi et al. (2013)***

# An earlier thinker on financial literacy

*“An investment in knowledge pays the best interest.”*



Benjamin Franklin, *The Way to Wealth*, 1758

# Most recent research work

## Financial knowledge & 401(k) investment performance

- **Use administrative data from the Federal Reserve Board**
  - High quality data
- **Designed survey that had the 3 financial literacy questions + questions on pension literacy**
  - Higher financial literacy than in the US population
- **Linked financial literacy to return on 401(k) investments**
  - Unique data
- **Those who are more financially literate earn a lot more on their portfolio (adjusted for risk)**
  - Similar evidence is emerging in other papers



# Inequality

- Financial literacy can also be linked to wealth inequality
- Our paper shows that **30-40%** of wealth inequality can be attributed to financial knowledge



# A large amount of research in past 15 years

## Some questions

1. How well-equipped are people to make financial decisions?
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# Scalability: Reaching the population

## Venues for financial education

- **In schools**
  - Easier to reach the young
  
- **In the workplace**
  - Easier to reach the adults
  
- **In libraries, local communities, museums**
  - Where people go to learn



# Financial education in schools

## Need to prepare the new generations

### Financial education in school is critically important:

- Investment in higher education is one of the most important decisions the young face
  - Young people start their economic life in debt
- Need to be financially literate *before* engaging in financial transactions
- Provide a basis on which to build
  - It will be cheaper to do financial education for adults



# New field: Personal Finance

## A new course at the George Washington University

### *Financial Decision-Making: Implications for the Consumer and the Professional*

- **Cover personal finance with a rigorous approach**
  - A quantitative approach to personal finance
  - Teaching takes into consideration gender differences in fin literacy
- **It incorporates some macro, accounting, and risk management**
- **Writing a textbook on personal finance**
  - Joint with a mathematician

# Our (STAR) students

**Undergraduates, graduate students and... athletes**

Our students in and out of the classroom



# A program for the young

## Five steps to planning success

- **We designed a program for young workers**
  - They are the ones with low literacy
- **Used new method of communication**
  - A video
- **Kept the message free of economic/finance jargon**
  - Very important for women
- **Covered concepts, such as risk diversification, in a simple story**

# Short video about risk

Risk diversification = don't put all your eggs in one basket



[Link to Video](http://www.rand.org/labor/centers/financial-literacy.html) <http://www.rand.org/labor/centers/financial-literacy.html>

# We measured whether it worked

- Tested interventions using an Internet panel
- Baseline questions on 5 concepts
- Randomly assigned
  - Intervention group
    - ◆ Video only, narrative only, video & narrative
  - Control group
    - ◆ No intervention
- Repeated 5 concepts questions

# Findings

- After being exposed to videos, the performance on financial literacy questions (general knowledge and hypothetical choices) improved
- While young were targeted, the videos affected all age groups

# **NYSE Workplace Financial Fitness Toolkit**

## **A program for any company**

- **Ten steps divided into 3 stages: Basic, Intermediate, and Advanced**
- **Customize the program for employees  
One size does not fit all**
- **The Employee Checklist  
Ten guidelines with implementation tips to improve employees' financial fitness**





 **NYSE**





## The Employer Checklist

Ten key steps to financial fitness, divided into three stages and designed to help employees meet their financial goals.

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### THE BASICS

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Participation soars when employees are automatically enrolled.

[MORE](#)

#### Automatic Escalation

Scheduled increases make the most of automatic enrollment.

[MORE](#)

#### Lifecycle Asset Allocation

Give employees the chance to grow their retirement savings.

[MORE](#)

### Did You Know?



Bells were introduced on the NYSE when continuous trading was instituted in the 1870s. Originally a Chinese Gong was

used, but brass bells 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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## ADVANCED

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Help with debt management can prevent an employee's loss of focus and performance.

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### Health and Financial Fitness Assessment

Data enables employers to design an evidence-based benefit plan.

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### Financial Planning Seminars

Educate your employees about the customized financial plans available to them.

[MORE](#)





# A saving museum in Turin, Italy





It's my life

Le persone che non hanno la pensione sono in media non è elevata. La nostra capacità di lavorare vicino alla pensione è elevata.

to your wealth





# Final thoughts

## ➤ **Financial literacy is like reading and writing**

- As it was not possible in the past to participate in society without being able to read and write, so it is not possible to thrive in today's society without being financially literate

## ➤ **Building human capital for the 21<sup>st</sup> century**

- Everyone deals with finance and finance is sufficiently complex that we cannot leave it to the individual to learn by himself/herself

# **Financial literacy: The best line of defense**

**"Well-informed consumers, who can serve as their own advocates, are one of the best lines of defense against the proliferation of financial products and services that are unsuitable, unnecessarily costly, or abusive."**

***Ben Bernanke, Former Chairman of the Fed***

# Final quote

**“If you think education is expensive, try ignorance”**

***Derek Bok, Former President of Harvard***



So proud of the work that MIDE is doing



# Contact and further information

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