

# **2015 Personal Finance Seminar for Professionals**

## **May 15, 2015**



## **THE ECONOMIC IMPORTANCE OF FINANCIAL LITERACY**

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Chair, OECD-INFE Research Committee

# 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 and DC pensions

➤ **Changes in labor markets**

- Divergence in wages – skills are critical

➤ **Changes in financial markets**

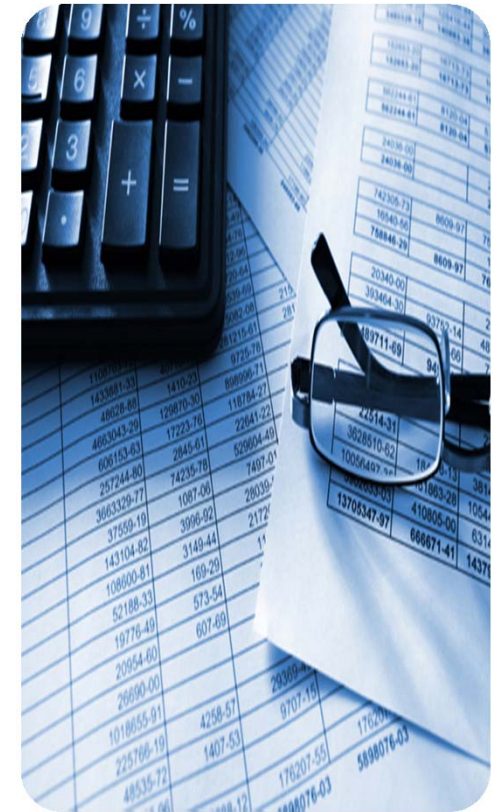
- Greater complexity
- More opportunities to borrow & in large amounts



# Increase in individual responsibility

## Being our own 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:

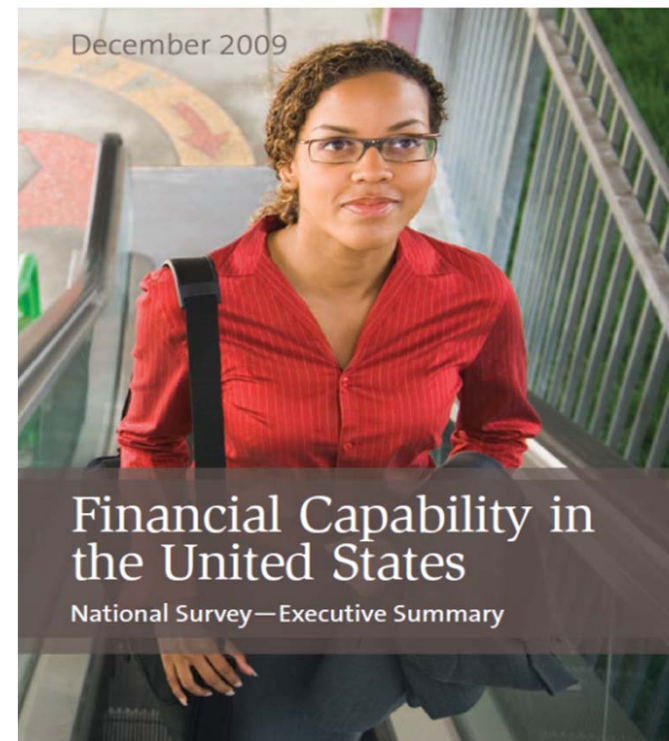
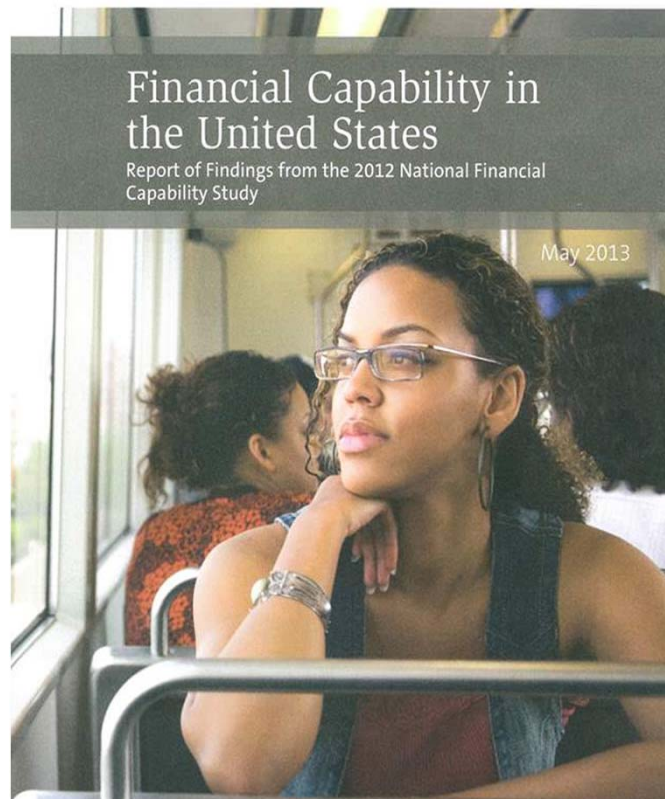
- ❖ USA
- ❖ The Netherlands
- ❖ Germany
- ❖ Italy
- ❖ Russia
- ❖ Sweden
- ❖ New Zealand
- ❖ Japan
- ❖ Australia
- ❖ France
- ❖ Switzerland
- ❖ Romania
- ❖ Canada





# 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 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.

# How much do Japanese know?

## Distribution of responses in the Japanese population (2010 SLPS)

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

NB: 27% correctly answered all three questions; less than half (49%) 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.

# 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?

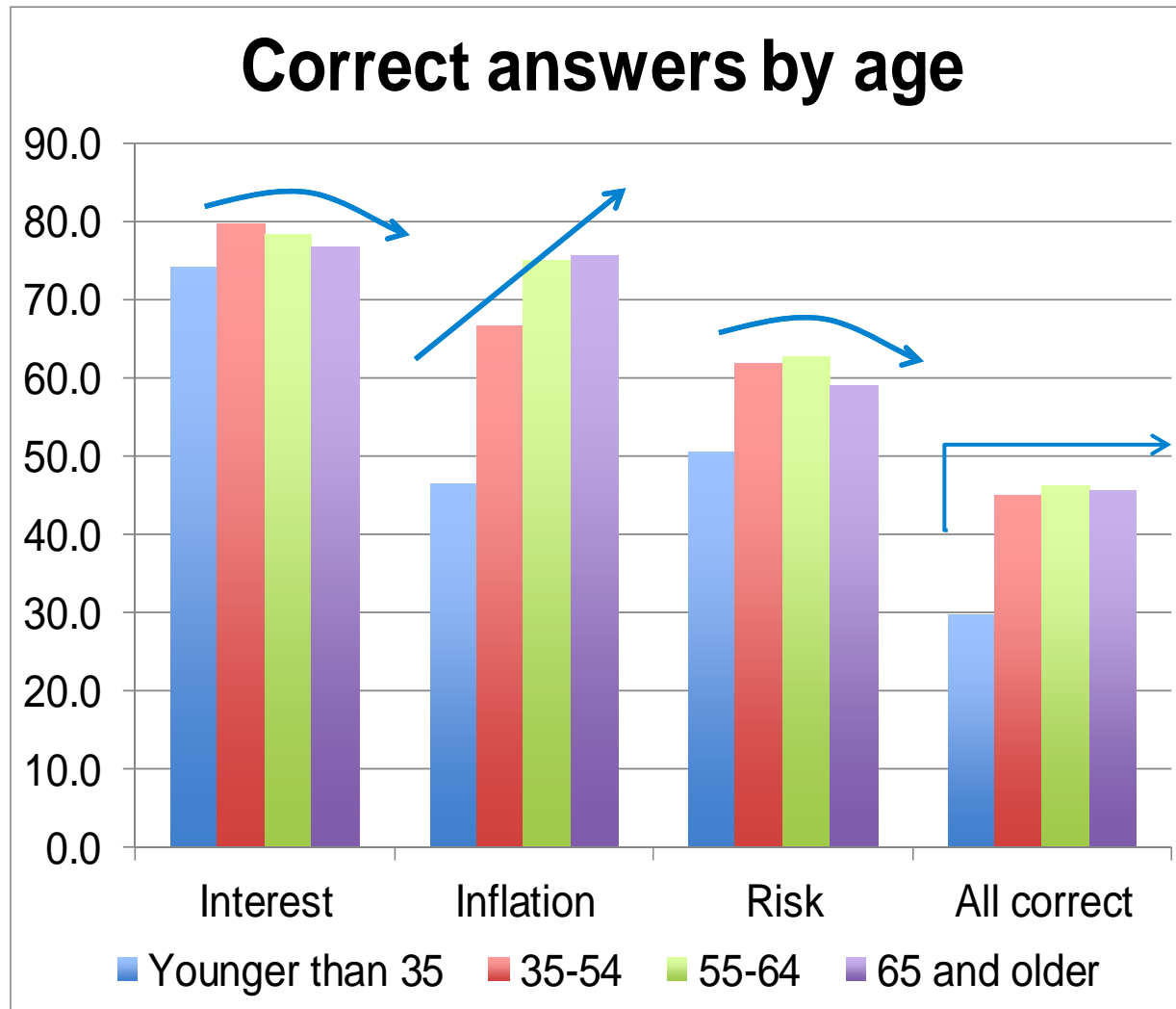
# Financial literacy across age groups (2012 NFCS)

## The widespread lack of financial literacy

	Total sample	Millennials	Mid-career	Pre-retirees
Interest Q correct	80%	75%	81%	83%
Inflation Q correct	65%	50%	68%	79%
Risk Q correct	54%	44%	56%	62%
<b>All 3 Qs correct</b>	<b>41%</b>	<b>28%</b>	<b>43%</b>	<b>51%</b>

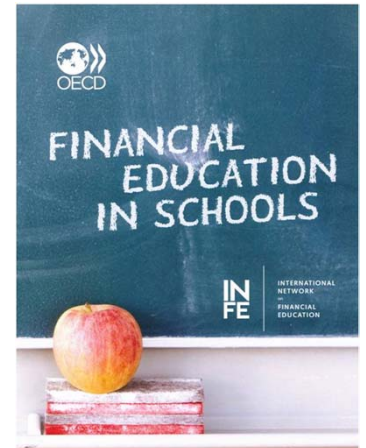
**Note: Respondents aged 23 to 61 and employed at the time of the survey. Young people know the least in most countries.**

# Financial Literacy and Age: Canada



# 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**

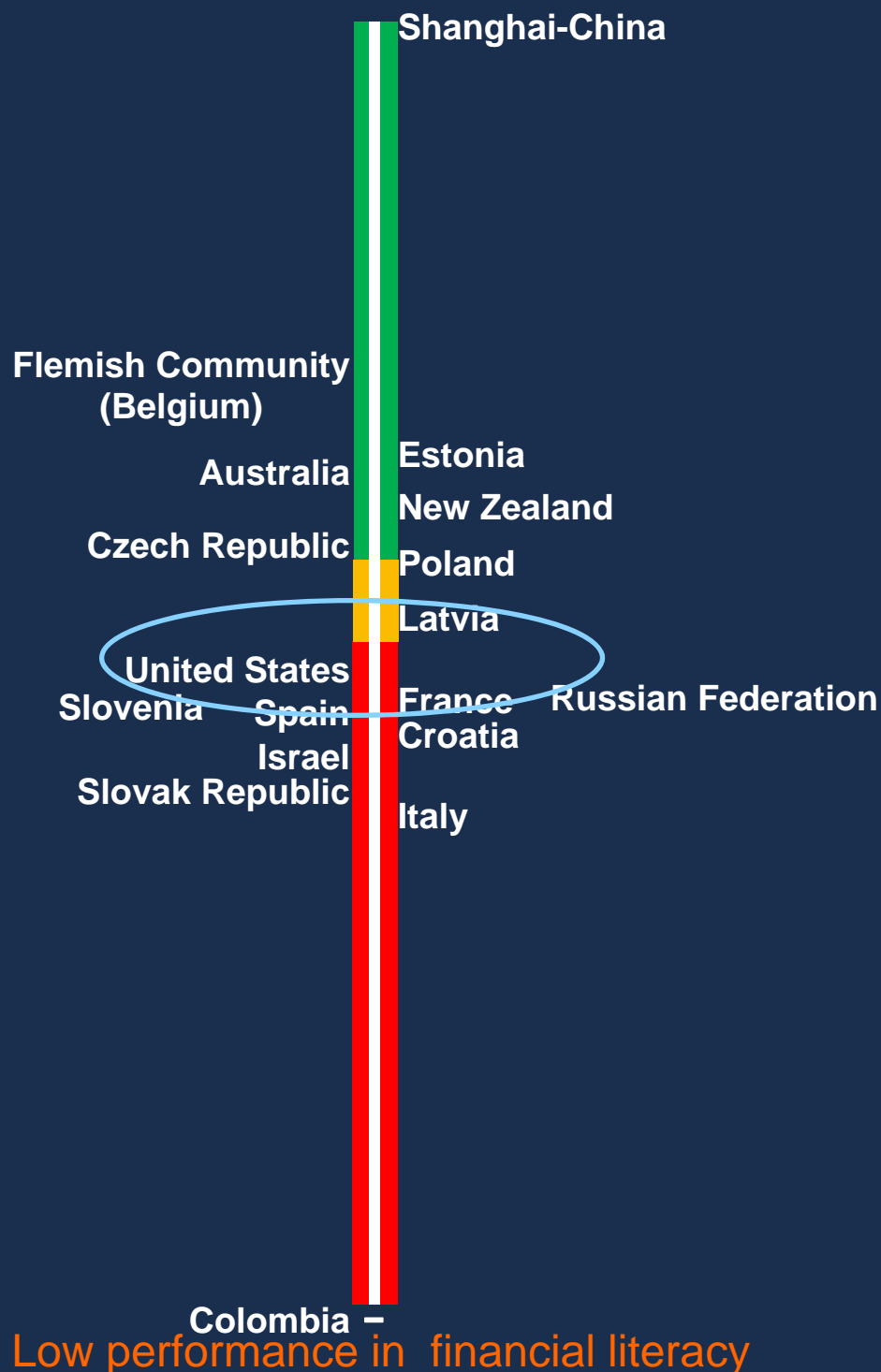


Mean score

Strong performance in  
financial literacy

Average performance  
of 15-year-olds in  
financial literacy

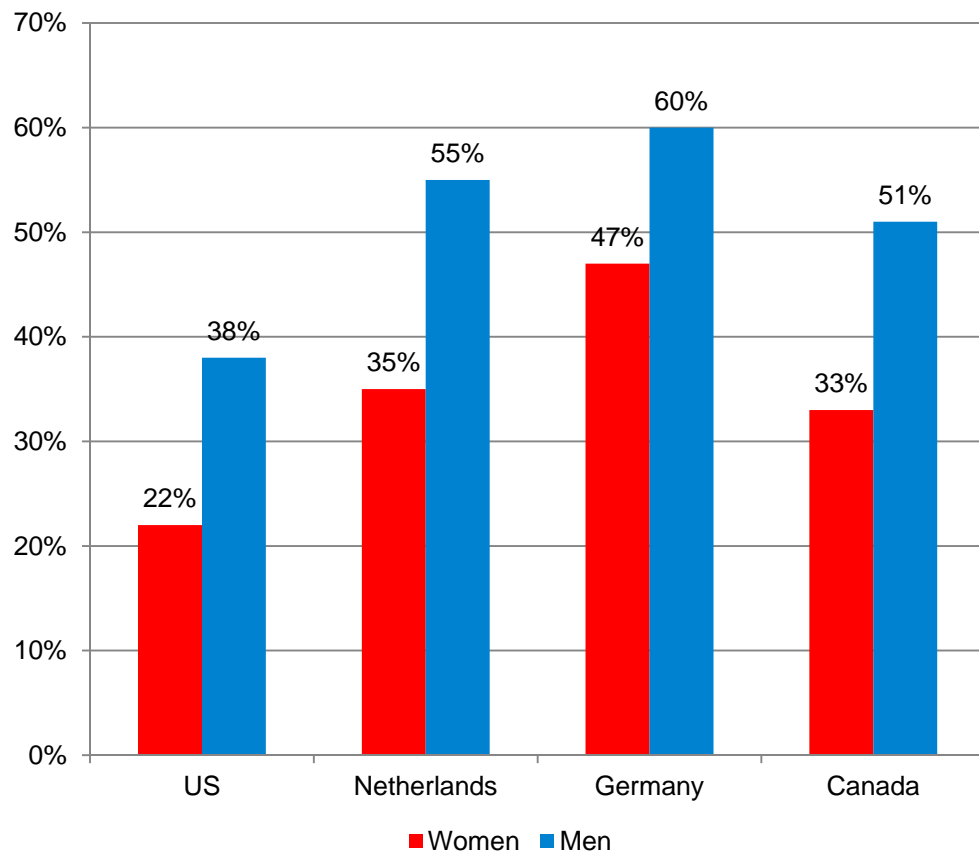
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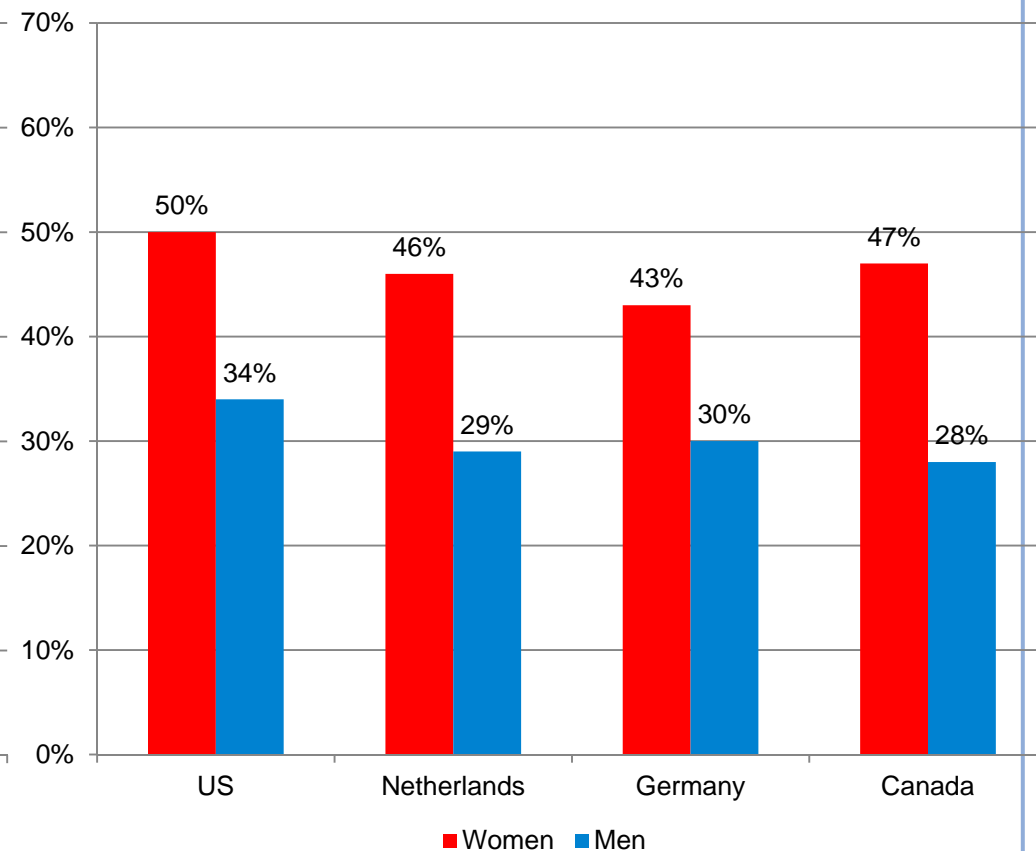
# Financial knowledge among women

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

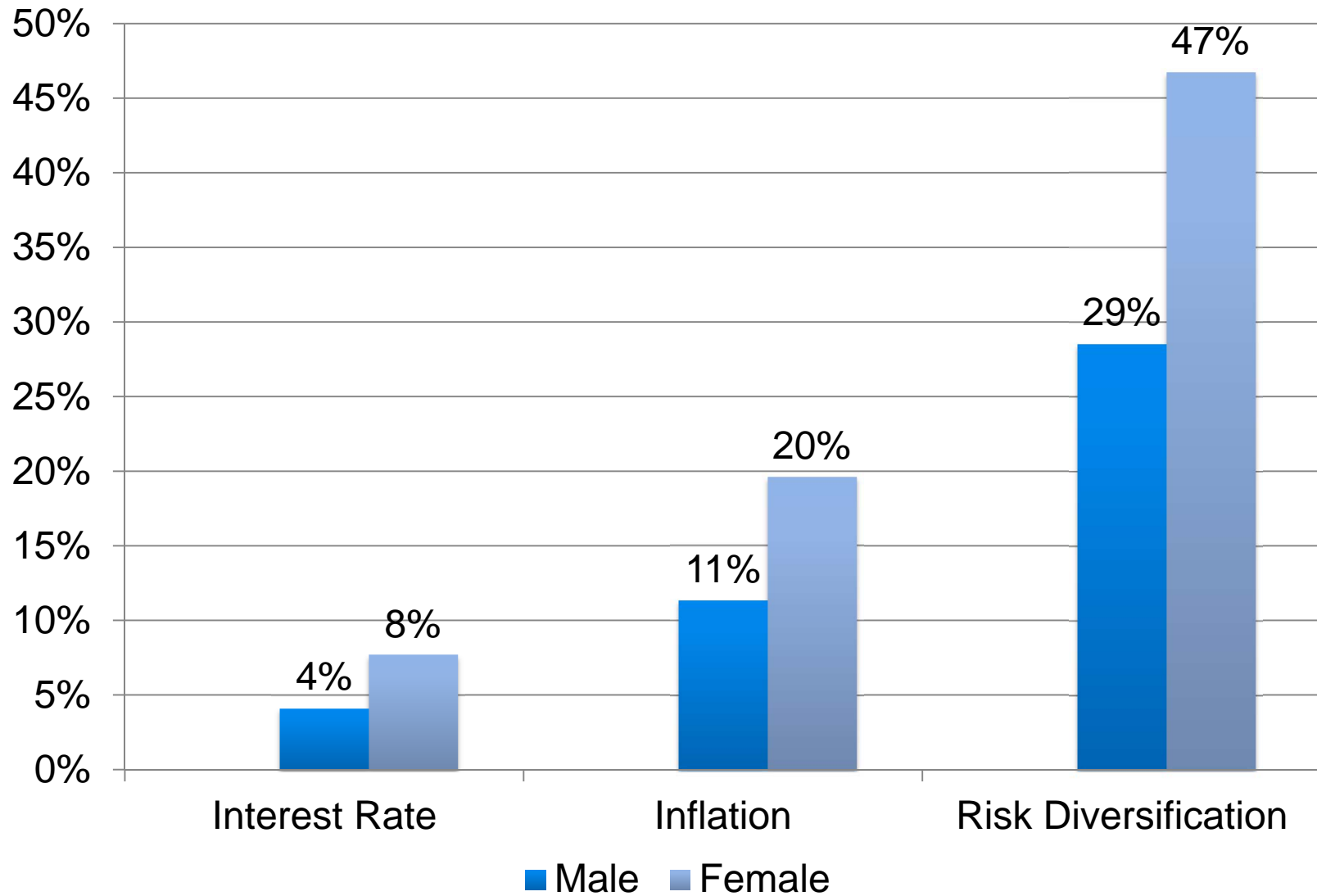
**Financial knowledge by gender  
(% answering 3 Qs correctly)**



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

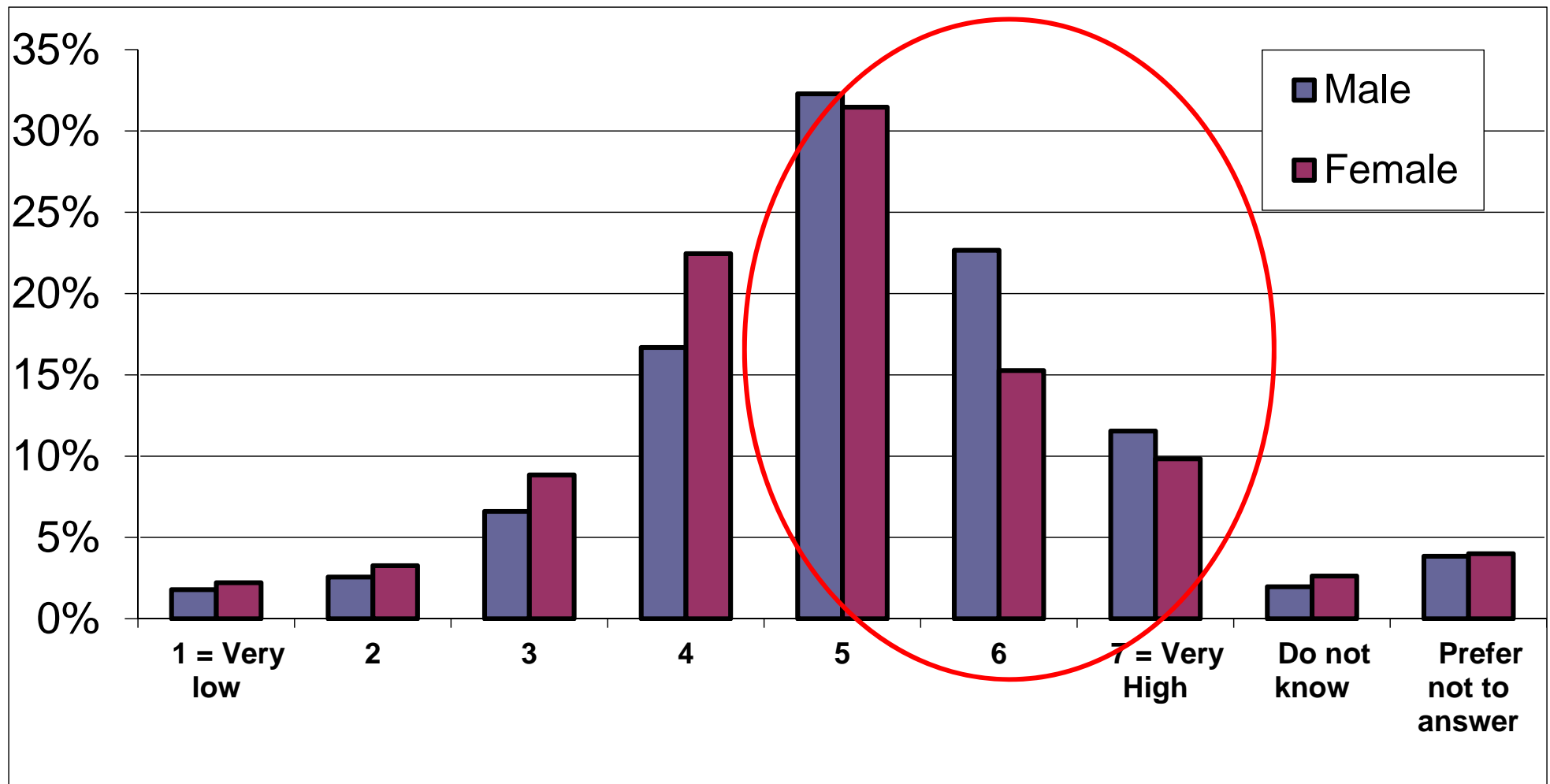


# “Do not know” responses by gender (age 23-28, NLSY)



# 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
- **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

# 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



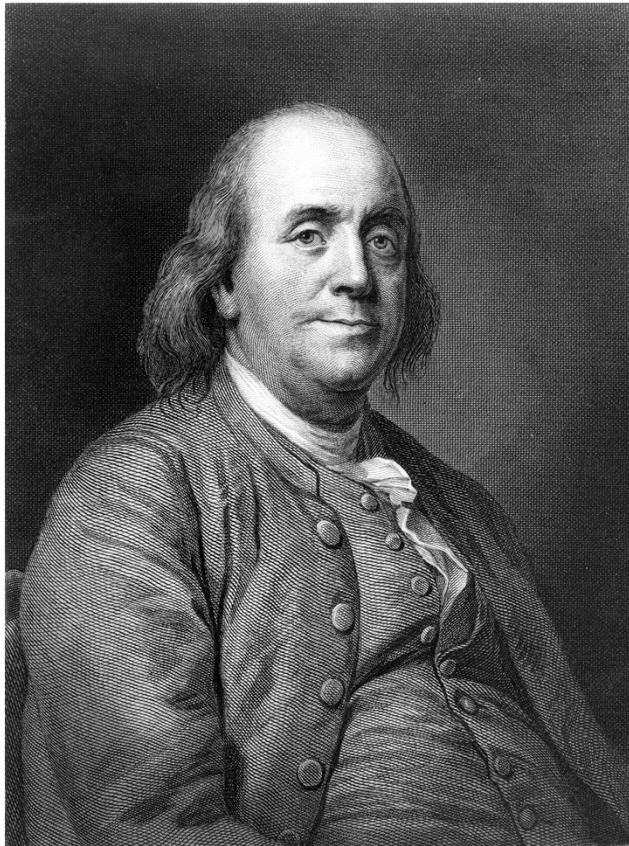
## Investments



## Planning and wealth accumulation

# 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

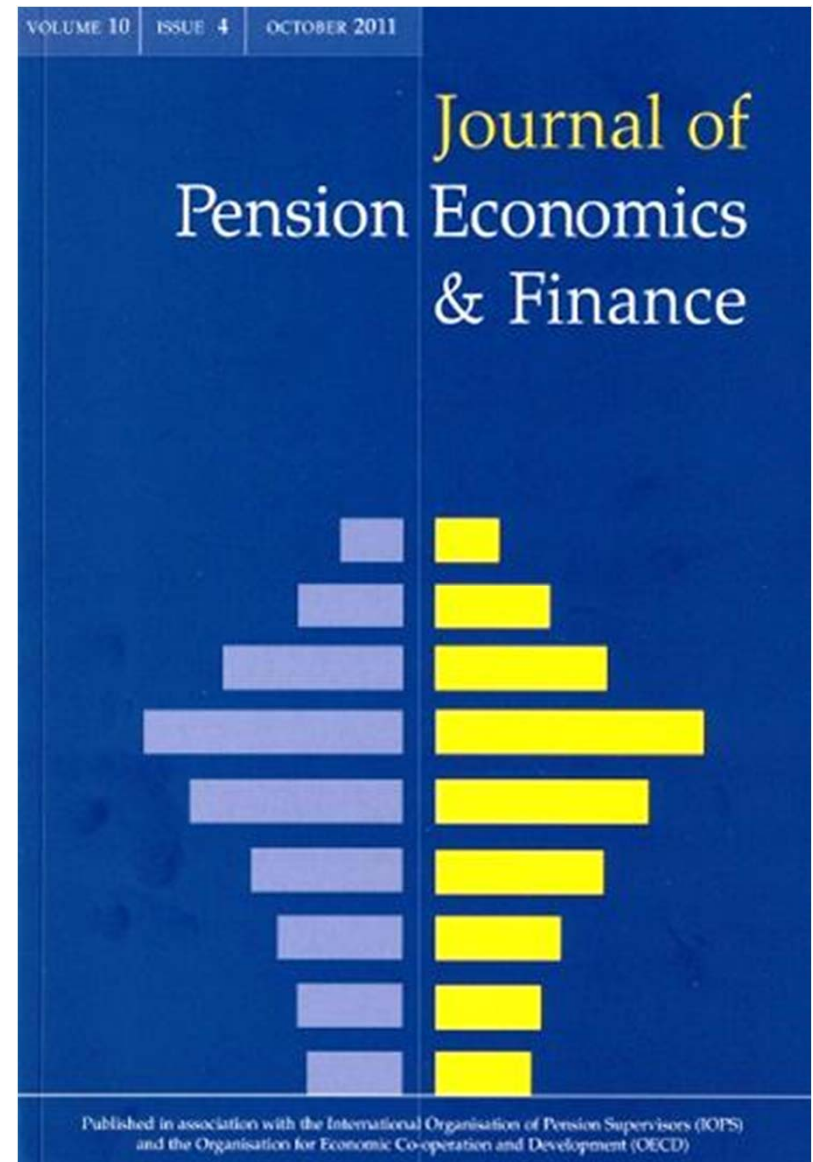
## Financial knowledge & 401(k) investment performance

- **Use administrative data from large financial institution**
  - 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 130 basis points more on their portfolio (adjusted for risk)**
  - Similar evidence is emerging in other papers



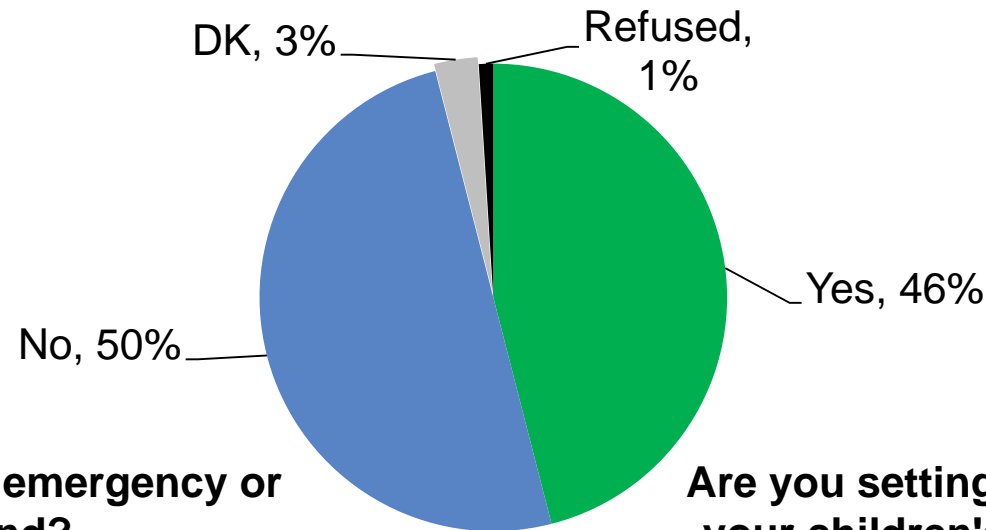
# Special issue of JPEF, project ongoing

- **FLat World project**
- **Examine the link between financial literacy and retirement planning**
- **We published a paper for each participating country**

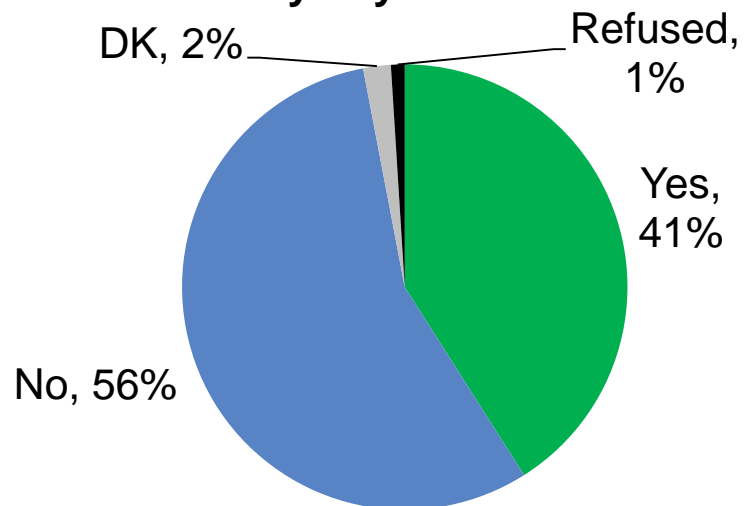


# Planning ahead: Most workers don't

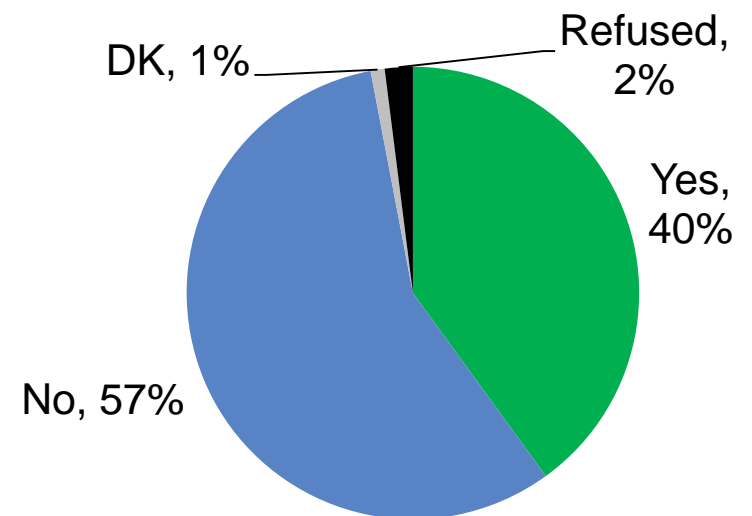
**Have you ever tried to figure out how much you need to save for retirement?**



**Have you set aside an emergency or rainy day fund?**



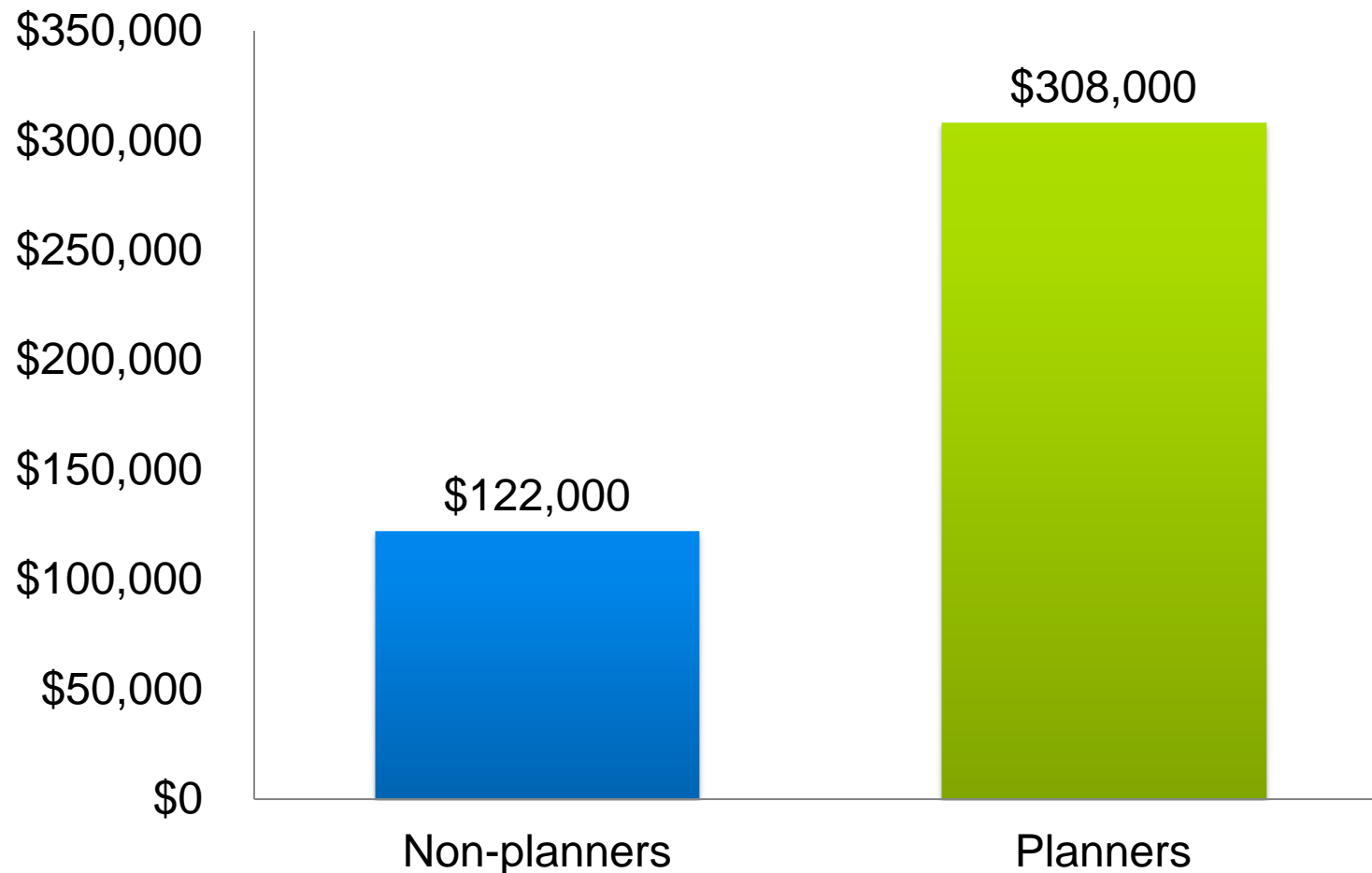
**Are you setting aside any money for your children's college education?**



Note: Respondents age 23 to 61 and employed at the time of the survey. 2012 NFCS



# Retirement planning and wealth holdings



**Median Net Worth, 2004 US HRS, age 51-56**

# Financial literacy and retirement planning

## **Financial literacy is an important determinant of retirement planning**

- Financial literacy affects retirement planning
  - Those who are financially literate are 9 percentage points more likely to plan
  - Causality goes from financial literacy to planning
- Knowledge of risk diversification is most important for retirement planning
- Findings hold true across different measures of planning and across countries

# A quick look at debt close to retirement

## ➤ **Data**

- Health and Retirement Study (HRS): 3 cohorts (age 56-61) at three different time periods: 1992, 2002, and 2008.
- National Financial Capability Study, 2009 & 2012

## ➤ **Empirical analysis**

- Evaluate if/why patterns changed over time.
- Evaluate factors associated with debt/debt management for those on verge of retirement

# The increase in debt across cohorts

## **Total debt/Total assets > 0.5**

First HRS cohort (1992)

War Babies (2002)

Baby Boomers (2008)

9.6%

16.0%

22.9%

## **Home loans/home value > 0.5**

First HRS cohort (1992)

War Babies (2002)

Baby Boomers (2008)

17.0%

26.4%

29.3%

## **Respondents with < \$25,000 in savings (in \$2012)**

First HRS cohort (1992)

War Babies (2002)

Baby Boomers (2008)

18.0%

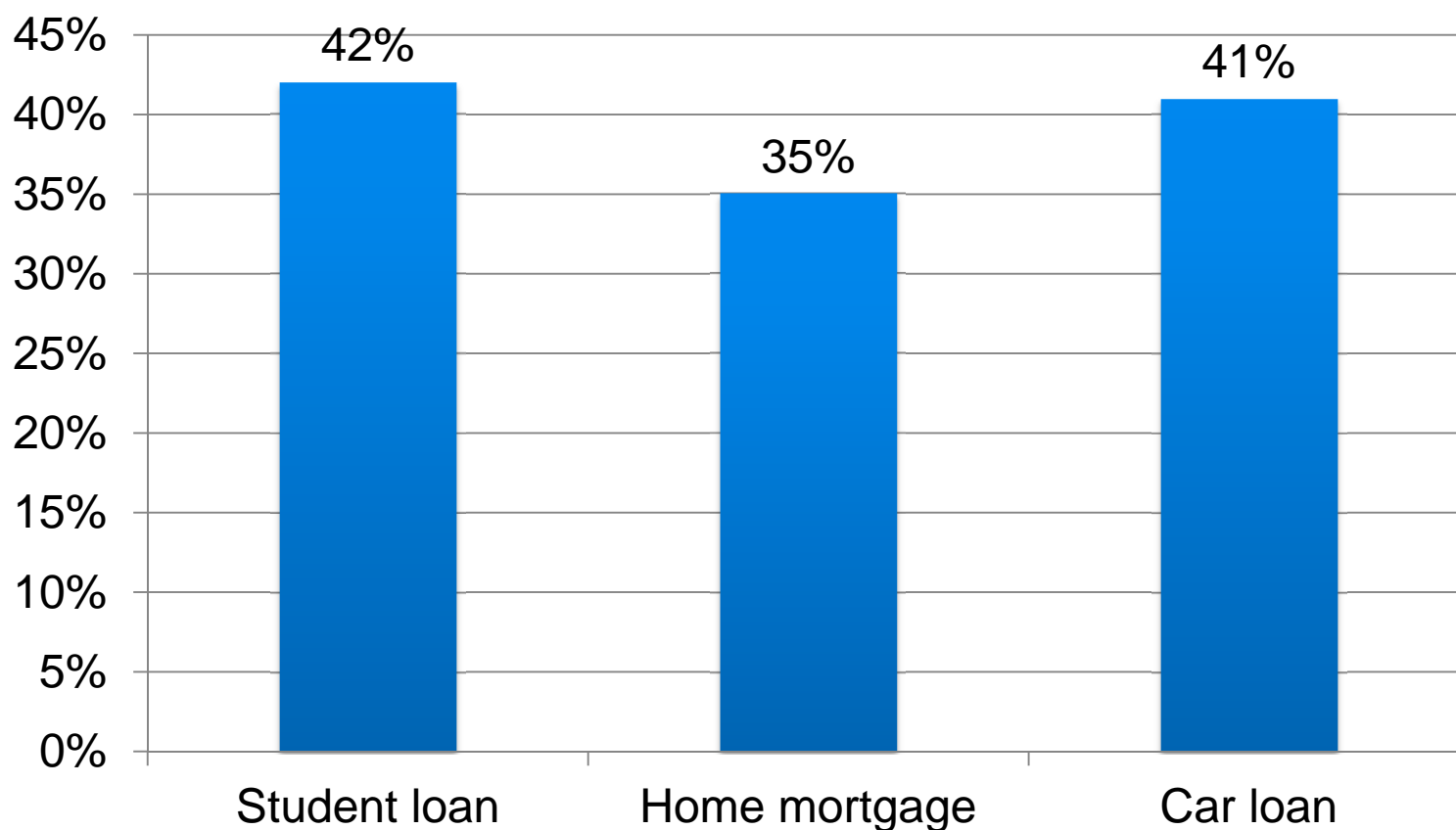
16.4%

24.3%

# What the research suggests

- **Baby Boomers carry debt close to retirement**
  - Recent old cohorts have borrowed more
  - They will have to manage debt into retirement
- **Debt and financial literacy are closely linked**
  - Using NFCS data, we confirm results from HRS about borrowing and can link borrowing to financial literacy
  - Financial literacy has an effect above and beyond income, education, and other demographics
- **The link between debt and financial literacy holds true for other forms of debt and age groups**
  - High cost borrowing and borrowing on retirement accounts

# Long-term debt among Millennials (age 23-35, 2012 NFCS)



*Note: The statistics relative to home mortgage and car loan are unconditional means.*

# 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?

# 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 workplace financial education

# 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 new 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

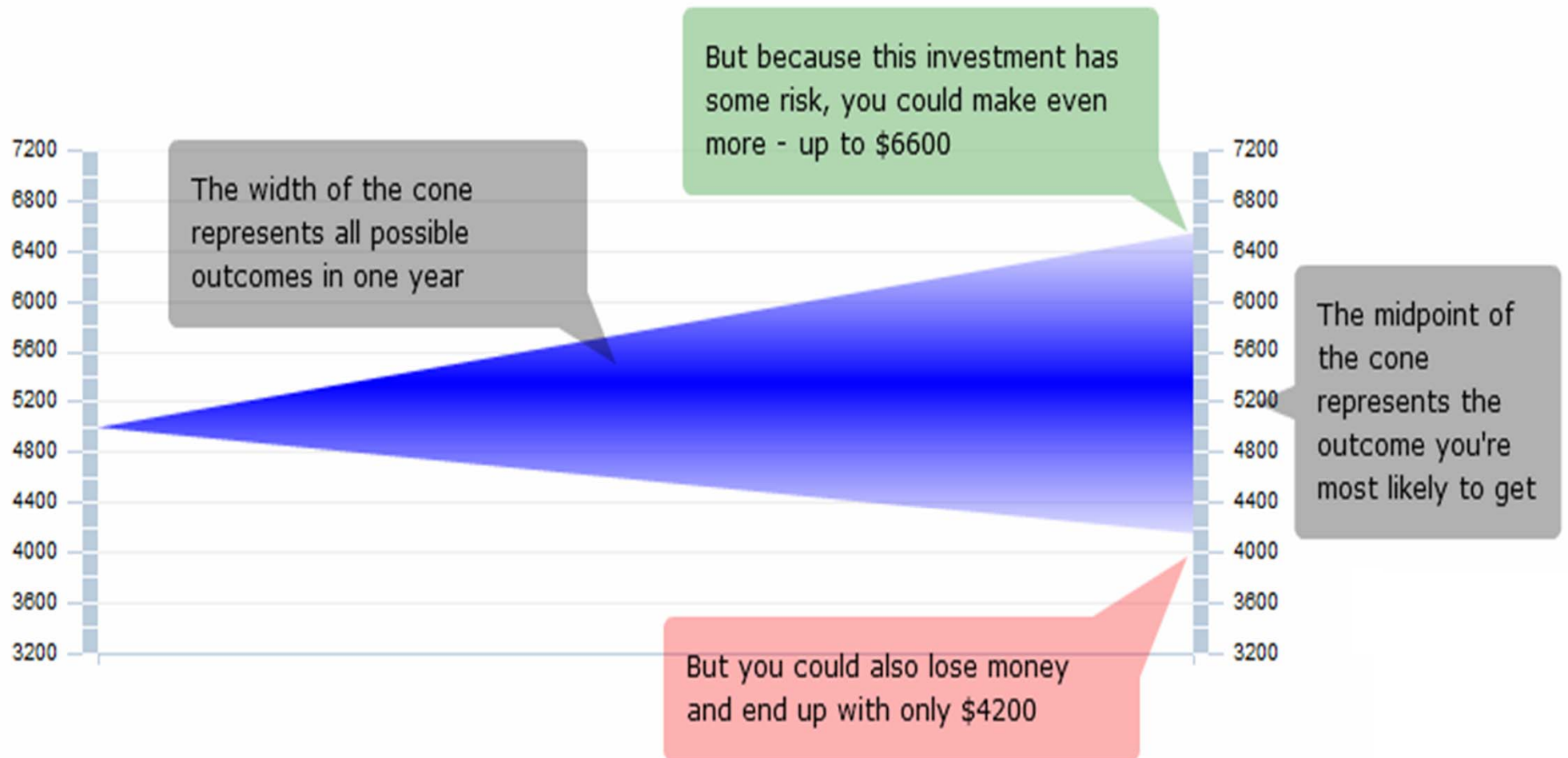
- Tested interventions using an Internet panel
- Baseline questions on 5 concepts
- Randomly assigned
  - Intervention group
    - ◆ Video only, narrative only, video & narrative
  - Control group
    - ◆ No intervention
- Repeated 5 concepts questions

# 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



# Visual tool to understand risk



**Don't put all your savings in one basket:**

**FinVis**

# FinVis tutorial – Visualizing risk

FinVis

1 2 3

1

Introduction

Kate and Sam's choices

Your Choices

What can we expect from different investments?



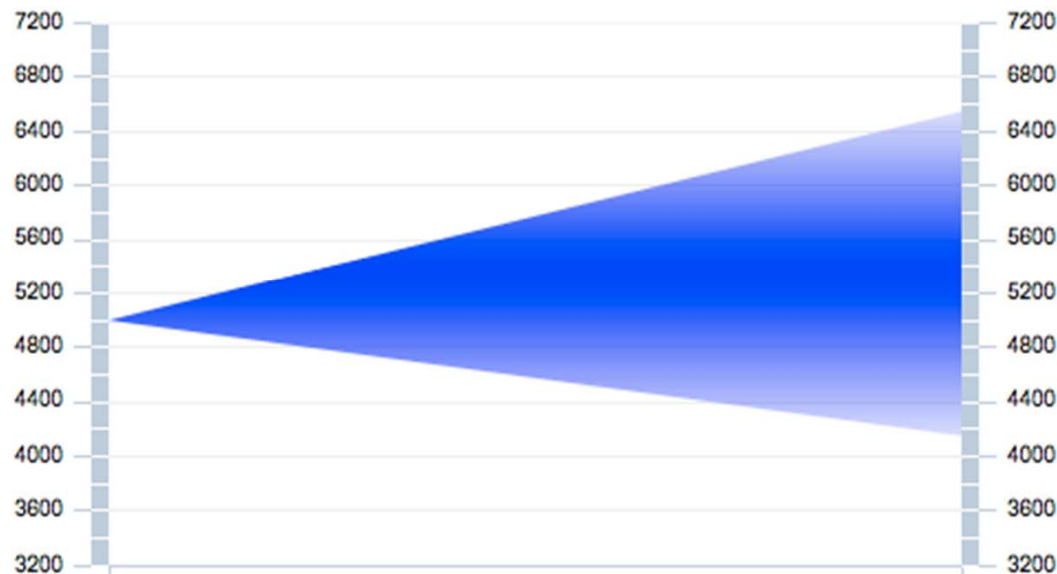
Invest in R

I decided to put my \$5000 in the investment with some risk, the "Riskier Fund".

I decided to put my \$5000 in the investment with less risk, the "Less Risky Fund".



Invest in L



Back

# Managing risk – Visual aid

FinVis

1 2 3

1 2 3 4

Introduction

Kate and Sam's choices

Your Choices

Spreading your investments widely.



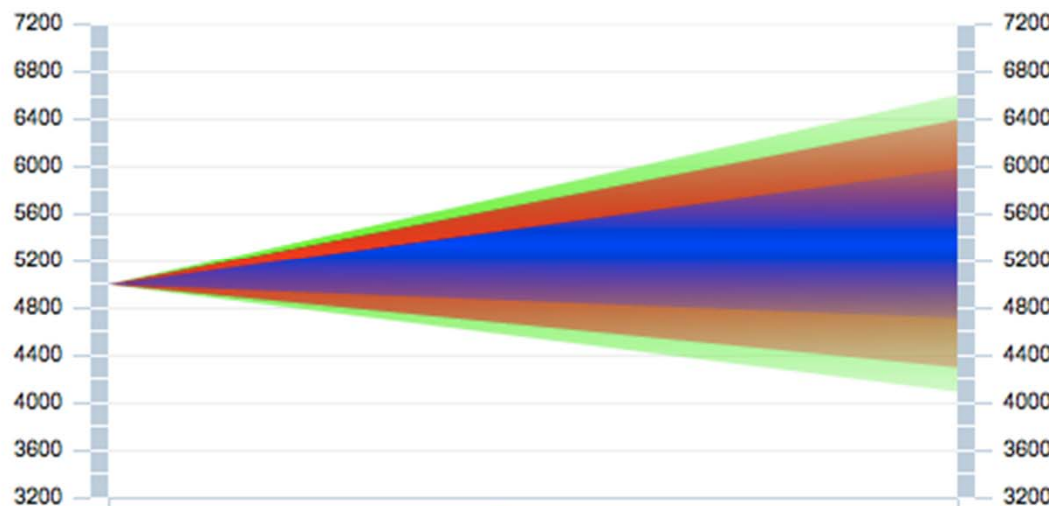
I also want to spread my risk, so I'll invest in three different companies - ComputerStars, iComputer, and Laptop Times

Invest in ComputerStars

But all of these are companies that depend on the year's sale of computers. See what happens if Sam splits his money between these three companies

Invest in iComputers

Invest in Laptop Times



Spreading your investments across similar companies doesn't lower your risk much.

See an outcome in a bad year

See an outcome in a good year

Back

# How to help employees make financial decisions

## The Dartmouth Project

- Simplify financial decisions
- Provide information when needed by individuals
- Target specific groups
- Use communication that does not rely on figures and numeracy





# A planning aid

Together with a marketing professor, I designed a planning aid intended to help Dartmouth College employees enroll in supplementary retirement accounts (SRA)

We have outlined 7 simple steps to help you complete the application.

1. **Select a 30 minute time slot** right now to complete the online contribution to your Supplemental Retirement Account (SRA) during the next week.
2. 3 minutes. **Check to see if you have the following materials:** a) worksheet in your benefits packet ✓, and b) the name and social security number of a beneficiary ✓.
3. **Select the amount you want to invest for 2006** (minimum: \$16/month, maximum: \$1,666.67/month), even if you don't know your take-home pay in your first month. If you want, you can change this amount at a later date. This voluntary contribution is tax-deferred, you will not pay taxes on it until you withdraw the funds.
4. 5 minutes. **Select a carrier.** if you do not select a carrier, Dartmouth will invest the non-voluntary portion of your college funds in a Fidelity Freedom Fund, a fund that automatically changes asset allocation as people age.
5. 5 minutes. Now you are **ready to complete your worksheet.** Complete the worksheet even though you may be unsure of some options. You can change the options in the future.
6. **Take your completed worksheet to a computer** that is available for 20 minutes. If you like, you can use the one in the Human Resources office at 7 Lebanon Street, Suite 203.
7. 15-20 minutes. **Log on to Flex Online and complete your online SRA registration** within the 20 assigned minutes. Be sure to click on the investment company (TIAA-CREF, Fidelity, or Calvert) to complete the application. You need to set up your account – otherwise your savings will not reach the carrier.



**Fidelity.com**



**Calvert**



# A Planning aid

**Don't give up! Contact the Benefits Office (6-3588) if for any reason you could not complete the online application.**



**It takes no time to prepare for your lifetime!**

Most people plan on electing a supplemental retirement account, but feel they don't have the time or information right now. We have outlined 7 simple steps to help you complete the election process. It will take between 15 – 30 minutes, from start to finish. It will take less time for you to start to insure your future than it takes you to unload your dishwasher!

# Program effectiveness

**There was a large increase in savings enrollment within 30 and 60 days of hiring among participants who received the brochure.**

	<b>30 days After Hire</b>	<b>60 days After Hire</b>	<b>Number of Observations</b>
<b>Control Group</b>	<b>7.3%</b>	<b>28.9%</b>	<b>210</b>
<b>Planning aid</b>	<b>21.7%</b>	<b>44.7%</b>	<b>166</b>



# **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.

[LEARN MORE](#) ▶

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The success of employee benefit programs depends on employee participation rates! Nearly four in five employees claim they would benefit from financial advice and answers to everyday questions. Improve employee participation rates, employee welfare and your company's bottom line by using our customizable employer and employee financial fitness toolkits.



### THE BASICS

#### Automatic Enrollment

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](#)



Ask Our Experts a Question

## INTERMEDIATE



### Employee Toolkit

Increase participation rates by empowering employees to customize programs. [MORE](#)



### Direct Deposit

Increase safety and lower administrative costs at the same time. [MORE](#)



### Financial Planning and Tax Preparation

Employee satisfaction is as a competitive advantage. Create a culture of caring for employees. [MORE](#)



### Credit Scores

Improved employee credit scores have direct and indirect benefits to employers. [MORE](#)

## ADVANCED

### Debt Management

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

[MORE](#)

### Health and Financial Fitness Assessment

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

[MORE](#)

### Financial Planning Seminars

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

[MORE](#)





# Building long-term financial security

## Best practices

### How employers can help new hires save for retirement: *Best practices that build long-term financial security*



September 2012

Authors:

Robert L. Clark  
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Financial Literacy Center



School of Business  
THE GEORGE WASHINGTON UNIVERSITY

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#### How Employers Can Help New Hires Save for Retirement: Best Practices that Build Long-Term Financial Security

##### Top Ten Best Practices

Not all employer-sponsored defined contribution retirement savings plans are created equal—some employer practices and plan designs are more successful than others in helping new hires accumulate a robust retirement nest egg. We reviewed numerous studies conducted by researchers affiliated with the Financial Literacy Center, and have identified ten powerful—and often relatively easy—ways to increase financial literacy among newly hired employees, enhance their ability and willingness to participate in and contribute to retirement plan accounts, and improve their overall financial well-being. The guidance offered in this report is based on information derived from studies of real people in real situations and examination of how their behavior is affected by workplace policies and practices.<sup>1</sup>

1. Equip new employees with basic retirement plan information. When new employees understand the fundamentals of their employer-sponsored retirement plan, they are more likely to participate in and contribute to the plan. As such, the information that employers provide to employees is critically important. Studies tell us that many people, when surveyed, are unable to identify the type of retirement plan they have, raising concerns that individuals in the workforce don't know the fundamentals regarding retirement plan options. When offering plan information to employees, for example when they are first hired, start with the basics. Make sure employees understand their plan and plan offerings:
  - ▶ What type of plan is this?
  - ▶ How does it work?
  - ▶ What features (such as matches, ability to borrow, ability to roll prior employer or IRA plans into the account, etc.) and investment choices does it offer?

We prepared a report documenting best practices for improving financial decision making in the workplace.

- Based on studies of many employer-provided financial education programs
- Goal of the report is to help employers improve retirement saving choices of newly hired workers

# A saving museum in Turin, Italy











# An International Federation of Finance Museums: four founders – now extended to many museums



# Concluding remarks

## Shifting paradigm

- **Equipping people to make saving and retirement decisions**
  - Financial literacy is an essential skill for the 21<sup>st</sup> century
- **Need to start early**
  - The importance of financial literacy in school. These are not separate topics. Pension providers and employers should speak to the Department of Education
- **Need targeted approach**
  - Workers are very different
- **Cannot focus on retirement savings only**
  - Other decisions are important and affect retirement security

# 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***

# Financial illiteracy is a complex but solvable problem

“It always seems impossible until it is done.”

*Nelson Mandela*

# Contact and further information

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