Financial Literacy and Long Term Financial Security

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The growing importance of financial literacy for financial security

Changes in pension systems

- 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

Some questions given these new challenges

1. How well-equipped are people to make decisions about their future?

2. Does financial literacy matter for retirement planning?

3. How can we improve financial literacy and financial security?

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Question 1

How well-equipped are people to make decisions about their future?

Assessing knowledge of basic concepts, the abc’s of personal finance

Measuring financial literacy

How to measure financial literacy?

Theory: Saving (borrowing) and investing

- Life-cycle model of saving
- Portfolio choice

Concepts*:*

- *Numeracy and interest compounding*
- *Inflation*
- *Risk diversification*

These theories/concepts apply everywhere (work of Nobel Prize Winner Angus Deaton)

A simple measure of financial literacy

The Big Three

1. "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**
- ❑ **Refuse to answer**

2. "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**
- ❑ **Refuse to answer**

3. "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**
- ❑ **Refuse to answer**

Financial Literacy Around the World (FLAT World)

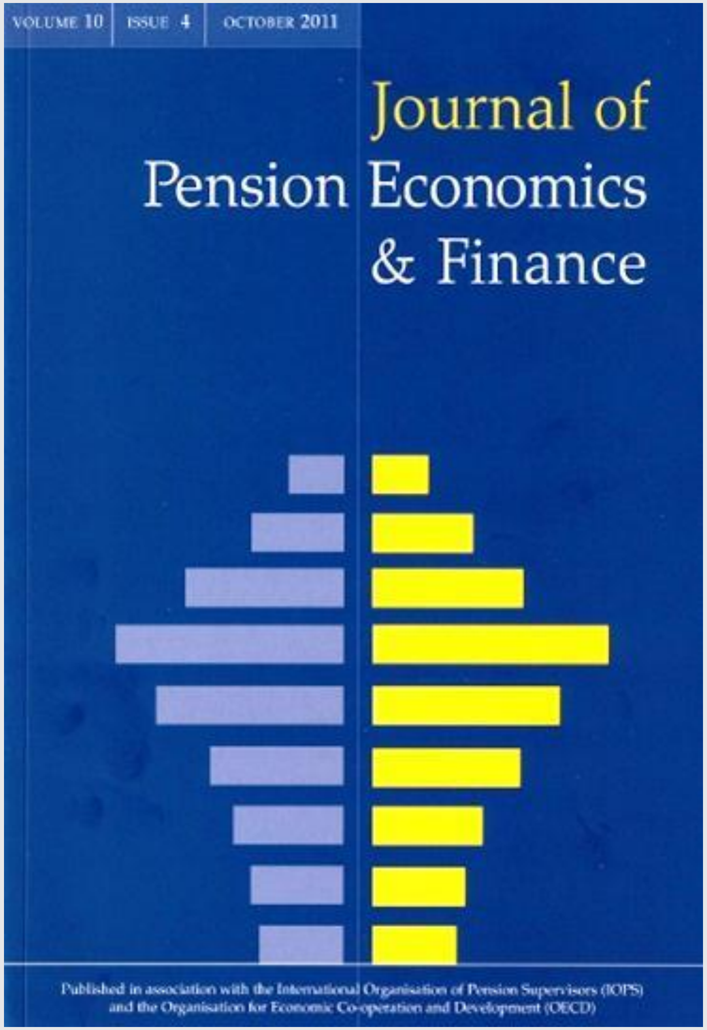
Evidence from 15 countries:

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

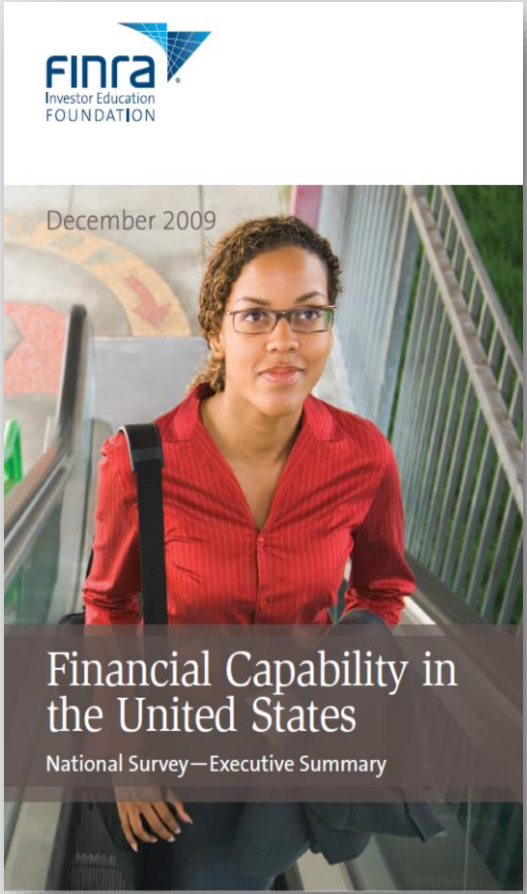
These 3 questions are now in the 2016 US Survey of Consumer Finances

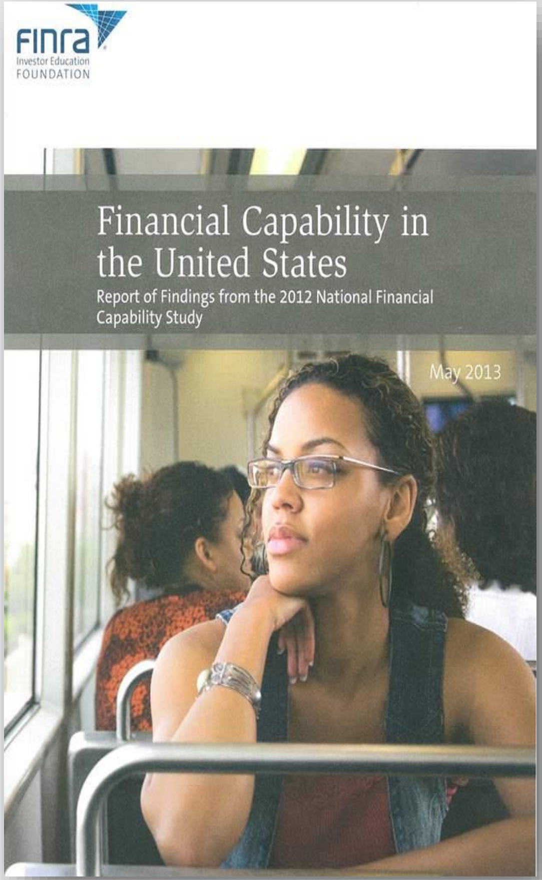
Special issue of JPEF

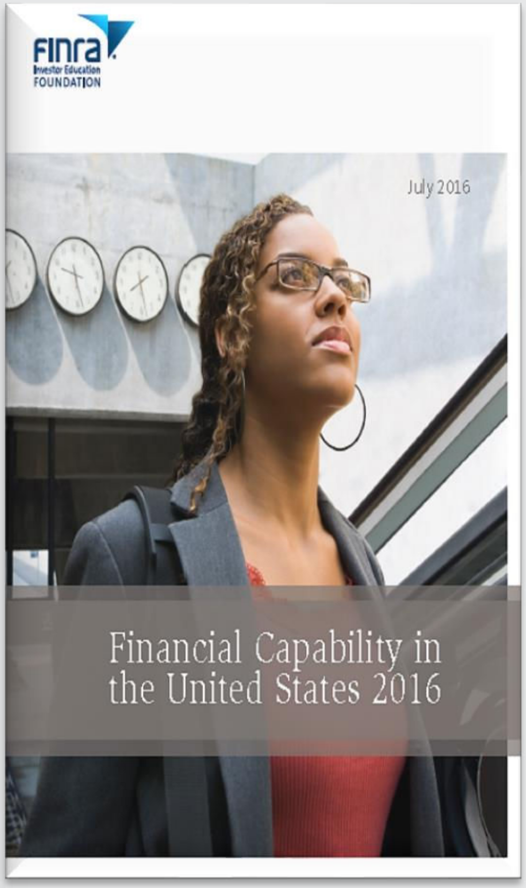
- FLAT World project
- Examine the link between financial literacy and retirement planning
- We published papers for 8 participating countries, including Sweden



Collecting data : The US National Financial Capability Study







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How much do Americans know?

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

Distribution of Responses to Financial Literacy Questions (%)

	Responses			
	Correct	*Incorrect*	*DK*	*Refuse*
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.

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How much do Swedes know?

Distribution of responses across the Swedish population (2010 Swedish Financial Supervisory Consumer Survey)

Distribution of Responses to Financial Literacy Questions (%)

	Responses			
	Correct	*Incorrect*	*DK*	*Refuse*
Interest rate	35%	49%	16%	n.a.
Inflation	60%	24%	16%	n.a.
Risk diversif.	68%	13%	18%	n.a.

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

Interest rate question for the Swedish population

A more complex question, regarding interest rates, was included in the 2010 Swedish Financial Supervisory Consumer Survey.

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

- ❑ ……
- ❑ Do not know
- ❑ Refuse to answer

How much do Germans know?

Distribution of responses across the German population (2009 SAVE)

Distribution of Responses to Financial Literacy Questions (%)

	Responses			
	Correct	*Incorrect*	*DK*	*Refuse*
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.

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How much do Japanese know?

Distribution of responses in the Japanese population (2010 SLPS)

Distribution of Responses to Financial Literacy Questions (%)

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

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

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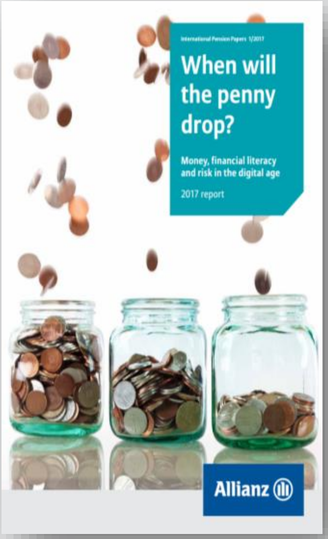
Findings: The world is *flat*

- **Financial illiteracy is widespread in the population**
  - Less than half of the population can answer three basic questions
  - Even in countries with well developed financial markets
  - People lack knowledge of fundamental financial concepts (even among «investors»)

- **Risk diversification is most difficult concept to grasp**
  - Similar pattern of response across countries
  - Prevalence of “do not know” answers

- **These findings are robust**
  - Evidence from bigger surveys and different questions
    - 2014 Global FinLit Survey
    - 2016 Allianz Survey in 10 European countries



Similar patterns across countries

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Question 2

Does financial literacy matter?

Connecting financial literacy to retirement planning

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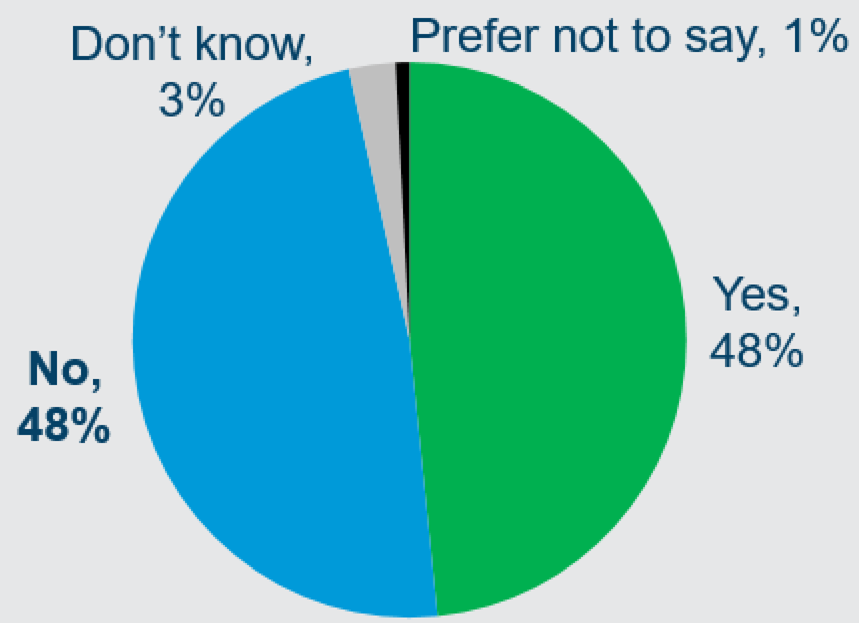
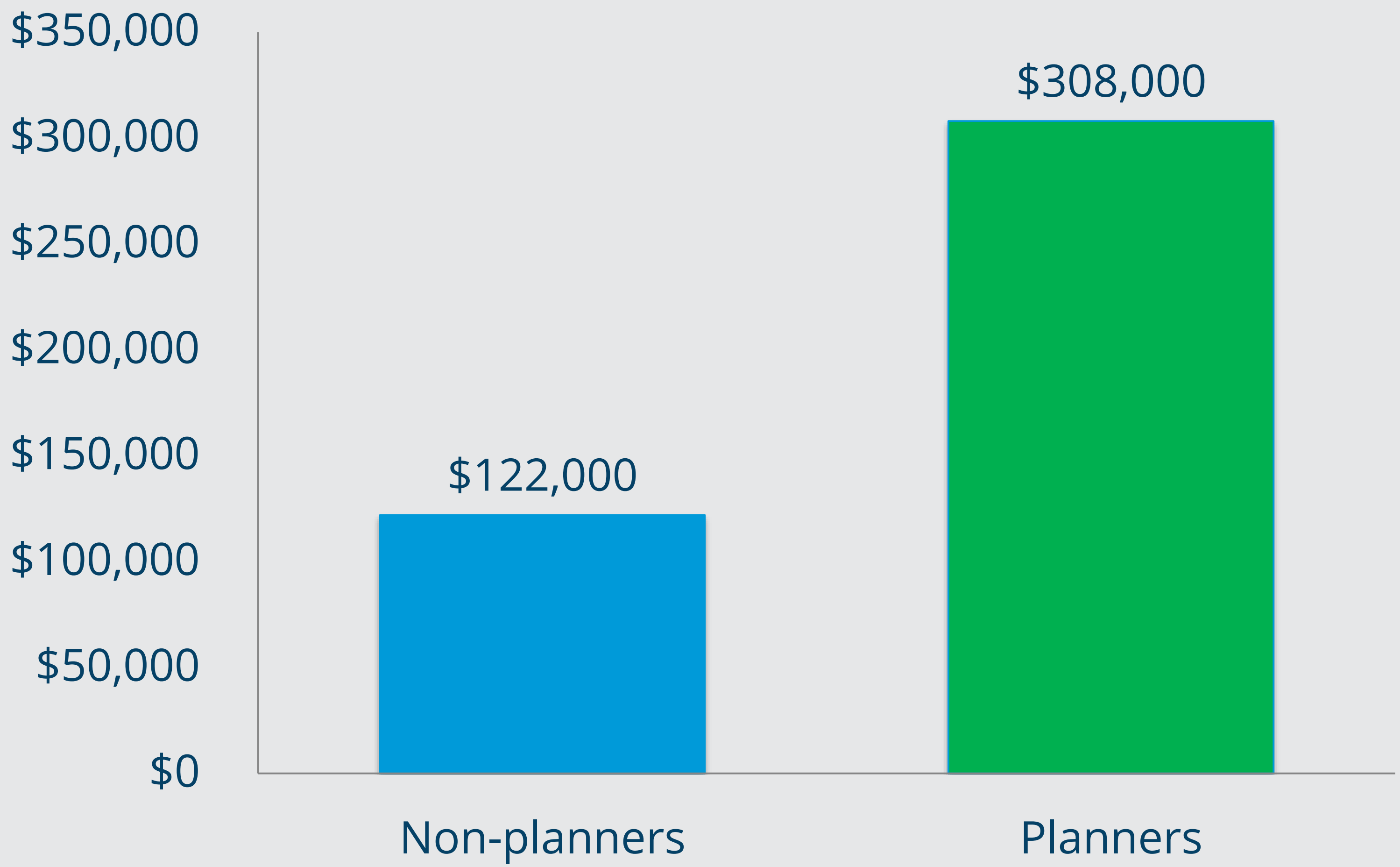
Planning ahead: most workers don't

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



Note: Respondents age 23 to 61 and employed at the time of the survey. 2015 NFCS.

Retirement planning and wealth holdings



Median Net Worth, 2004 Health and Retirement Study, age: 51-56

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Does financial literacy matter for retirement planning?

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

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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

Source: National Financial Capability Study 2009

Financial literacy is an important determinant of retirement planning across countries (JPEF issue)

- Financial literacy affects retirement planning, having a saving plan, participation in pension plans, and retirement expectations
- Knowledge of risk diversification is most important for retirement planning
- Empirical estimates are higher in the Netherlands

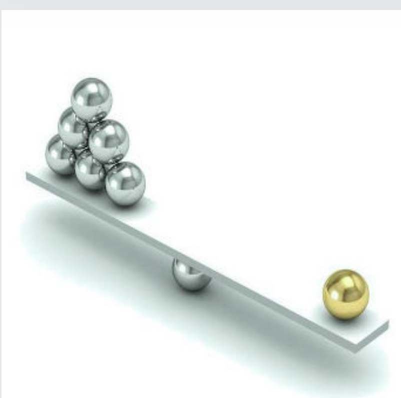
Financial literacy and investment behavior

- The financially literate are more likely to participate in and contribute to their retirement accounts

- Individuals with higher levels of financial knowledge not only plan more, but are more likely to participate in the stock market and invest in stocks.

- Financially knowledgeable investors
  - hold more equity in their pension accounts
  - earn higher excess returns (adjusted for risk)

Financial behavior: wealth accumulation



- Consider a life cycle model with financial literacy
- Financial literacy affects the return on savings
- Financial literacy is an important determinant of wealth and wealth inequality
- Important finding: **30-40%** of U.S. retirement wealth inequality can be attributed to difference in financial knowledge

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Question 3

How can we improve financial literacy and financial security?

Evidence from our programs at GFLEC

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What we learn from research

This research has inspired our current work, aimed to improve financial literacy and retirement planning.

➢ Financial literacy levels are low

- Need to improve knowledge of the abc of personal finance

➢ People do not plan for retirement

- Financial education programs that help people make financial decisions

➢ Young are an important target and can use time in their f

- Start in school, widespread financial illiteracy requires robust interventions

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From research to applications

Ideal venues for financial education

- **In schools**
  - Easier to reach the young
  - Need a base on which to build

- **In the workplace**
  - Easier to reach the adults
  - Growing importance of retirement accounts

- **In libraries, local communities, museums**
  - Where people go to learn

Personal finance course at the George Washington University

- GFLEC designed the curriculum joint with a mathematician
- Using a rigorous quantitative approach
- It covers saving and investing, retirement planning, personal taxes, insurance, etc.
- Material available for free on our website

Five steps to planning success: experimental evidence from US households

Set-up:

- Design of a low-cost, easily-replicable financial education program called «Five Steps»
- Covering five basic financial planning concepts that relate to retirement
- Delivery models: written narratives and online videos

Program:

- Targeted to young workers
- Kept the message free of economic/ finance jargon
- Covered concepts that people know the least, for example risk, in a simple story

Results from five steps to planning success

- After being exposed to videos, the performance on financial literacy improved
- While young were targeted, the videos affected all age groups
- 25-33% of the knowledge gain is still observable 8 months after the intervention
- Simple program has effects both in the short and medium run

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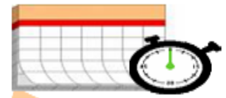
New ways to make people save: the Dartmouth project

- We designed a program that targeted individuals who wanted to save but were limited by a lack of knowledge
- The aim of the program was to
  - Simplify financial decisions
  - Provide information when needed by individuals
  - Target specific groups
  - Use communication that does not rely on figures and numeracy

Planning Aid

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.

Fidelity.com
TIAA CREF
Calvert

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.

FlexOnline

Development of a comprehensive, cost-effective planning aid to improve participation in and contribution to Supplementary Retirement Accounts (SRAs)

In their own words: four videos

Topics discussed:

Hopes for retirement

Why they save

How they save

Planning for the future

Their recommendations

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Results from the Dartmouth project

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

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

- Videos generated an increase in enrollment of 56%.

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Employee financial literacy and retirement plan behavior: a case study

Program:

- Conducted with employees from the Federal Reserve System
- Study of the participation and contributions of employees to their employer sponsored plan
  - DC plan (Thrift Saving Plan)
- Employees could complete a learning module about retirement planning

Findings:

Most financially knowledgeable employees

- are more likely to participate
- contribute 3 percentage points more of their earnings to the DC plan
- hold more equity in their pension accounts

Results from the Federal Reserve System

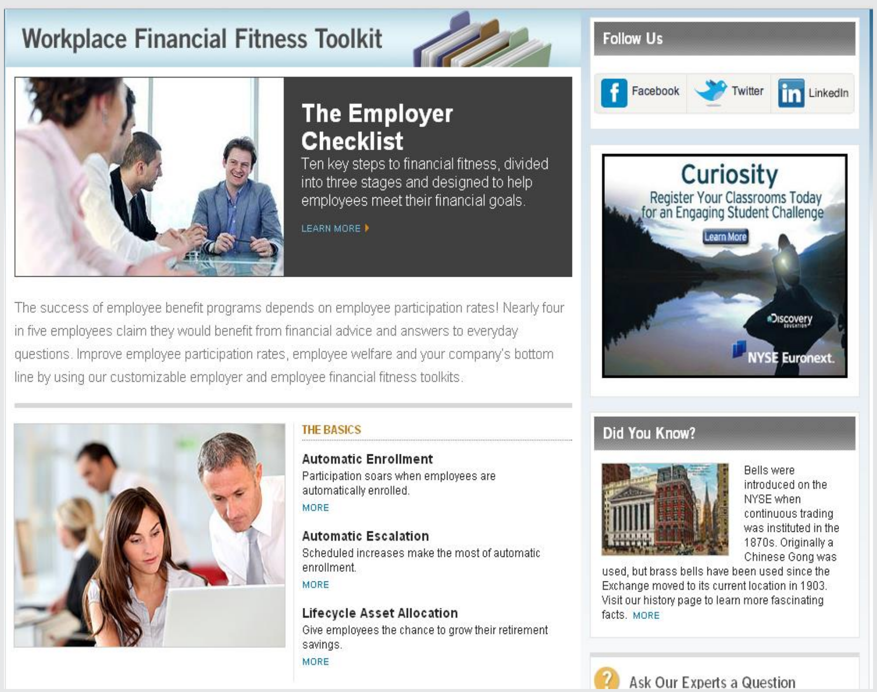
- Higher levels of financial literacy levels are linked to greater retirement readiness

- Employees who completed the learning module were
  - more likely to start contributing to their DC plan
  - less likely to have stopped contributing post-survey
  - More likely to boost contributions and equity allocations after the intervention

Evidence that employer-provided educational programs do have positive effects on employees' behavior

Impacting business: Our research reaches the New York Stock Exchange

We built a toolkit for NYSE to promote financial wellness in the workplace



Ringing the bell at the NYSE

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"… the International Federation of Finance Museums (IFFM) is committed to promoting financial literacy globally, raising awareness that every individual in every country is in need of financial literacy."

A saving museum in Turin, Italy

to your wealth

New Financial Education Committee in Italy

Last July, I was appointed by Italy's Minister of Economy and Finance, Pier Carlo Padoan, as director of the Financial Education Committee.

For GFLEC, it reflects a step forward in improving financial literacy around the world

Concluding remarks

Financial literacy is like reading and writing

- It is an essential skill for the 21st century
- Everyone deals with finance, and finance is sufficiently complex that we cannot leave it to the individual to learn by himself/herself
- It is very important to be financially literate as early as possible
- Financial literacy is a stepping stone for financial security

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Quote from our founder

"Knowledge is in every country the surest basis of public happiness."

George Washington, First President of the United States (1789–97)

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Quote from our founder

"(Financial) knowledge is in every country the surest basis of public happiness."

George Washington, First President of the United States (1789–97)

Coming back to financial literacy

Definition of financial literacy: *A vision for the future*

Which future do we want to build?

Thank you!

Questions? Contact us at **gflec@gwu.edu**

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