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 accounts and DC pensions

- **Changes in labor markets**
  - Divergence in wages – skills are critical
  - More flexibility – pensions have to be portable

- **Changes in financial markets**
  - Greater complexity
  - More opportunities to borrow & in large amounts
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 health?
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

- Added to 5 national surveys in the United States
  - Including RAND ALP and FINRA NFCS
- Added to national surveys in many countries
Collecting new data

The 2009 & 2012 National Financial Capability Study
ALP now includes the questions from NFCS
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
- 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
- Refuse to answer
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
- 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
Financial illiteracy is widespread in the population
  • Less than half of the population in many countries can answer three basic financial literacy questions
  • Particularly low among the young

Risk diversification is most difficult concept
  • Similar pattern of response across countries
  • 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
The widespread lack of financial literacy

<table>
<thead>
<tr>
<th></th>
<th>Total sample</th>
<th>Millennials</th>
<th>Mid-career</th>
<th>Pre-retirees</th>
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</thead>
<tbody>
<tr>
<td>Interest Q correct</td>
<td>80%</td>
<td>75%</td>
<td>81%</td>
<td>83%</td>
</tr>
<tr>
<td>Inflation Q correct</td>
<td>65%</td>
<td>50%</td>
<td>68%</td>
<td>79%</td>
</tr>
<tr>
<td>Risk Q correct</td>
<td>54%</td>
<td>44%</td>
<td>56%</td>
<td>62%</td>
</tr>
<tr>
<td>All 3 Qs correct</td>
<td>41%</td>
<td>28%</td>
<td>43%</td>
<td>51%</td>
</tr>
</tbody>
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Note: N= 11,544. Respondents aged 23 to 61 and employed at the time of the survey.
“Do not know” responses by gender (age 23-28, NLSY)
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
  - 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
Financial literacy cannot be taken for granted
• Even in countries with well-developed financial markets

Some groups are particularly vulnerable
• Young, old, and women

Difficulty with risk and risk diversification
• Risk is one of the most difficult concepts to grasp

Importance of financial education programs
• Link of financial literacy to behavior
• Sizeable differences across individuals, one-size-does-not-fit-all
More recommendations from research

- Keep communication simple and free of financial jargon
  - Overall lack of financial sophistication and sensitive to framing

- Difficulty in engaging people
  - Disconnect between perceived and actual knowledge

- Changing behavior is not optimal for everyone
  - Some financial illiteracy can be optimal
  - Letting financial knowledge decay can be optimal behavior
  - Cannot expect everyone to change behavior
Are students well prepared for future challenges? Can they analyze, reason and communicate effectively? Do they have the capacity to continue learning throughout life?

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.
SAVE THE DATE: July 9, 2014

- Release of 2012 PISA Financial Literacy Data
- GFLEC will host the US release of the PISA financial literacy data
- Invited founder of PISA and Financial Literacy Experts who designed questions

Where: Jack Morton Auditorium, GW
A new course at GWSB

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 interest compounding and risk diversification, in a simple story
Short video about interest compounding

Link to video! http://www.youtube.com/watch?v=r0haW5E_OpI
Short video about risk

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

Link to Video
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.
Visualization: Research shows use of computer supported representation of data amplifies cognition

- Increases cognitive resources and expands working memory
- Reduces search effort and time costs – represents large amount of data in small space
- Enhances recognition of trends
- Encourages exploration of the decision space
- Increases confidence
Goals of FinVis

- Help the user understand risk profiles of different types of stocks
- Help the user understand the impact of different rates of return, different standard deviations and correlations of assets
- Help the user learn why it is important to diversify across stocks
- Help the user learn why it is important to diversify across asset classes
Visualizing risk

Don't put all your savings in one basket: FinVis
What can we expect from different investments?

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".
Managing risk – Visual aid

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

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.

Spreading your investments across similar companies doesn’t lower your risk much.
A financial bootcamp for women
A saving museum in Turin, Italy
A Museum of Saving in Italy
A Museum of Saving in Italy
An International Federation of Finance Museums: four founders – now extended to many museums
What a federation of museums can do

Support and promote financial literacy

- Promote financial literacy among the young
  - Organize a financial literacy academy or a financial literacy competition

- Be an ambassador for the work of PISA
  - Can rely on rigorous data and tests

- Provide an opportunity to learn
  - Visitors go to museums to explore and learn
The Summit will be joint with OECD in Fall 2014
Financial illiteracy is a complex but solvable problem

“If we can really see a problem, which is the first step, we come to the second step: cutting through the complexity to find a solution.”

Contact and further information

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