

Financial Literacy: An essential tool for informed consumer choice?

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Significance

- Workers are increasingly in charge of saving and investing for their retirement
 - Shift from DB to DC pensions is continuing at a rapid rate
 - Potential changes in the Social Security system
 - Investors are facing increasingly complex financial instruments
 - ARM mortgages
 - Wide variety of mutual funds
 - Are people well equipped to make saving and investment decisions?
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Economic Model of Saving: Life-cycle / Permanent Income

The model posits that consumers:

- Save and consume given their resources over the life-time
 - Look ahead & plan for the future
 - Know economics principles (e.g. interest compounding, inflation)
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A Famous Permanent Income Consumer

- When he won the Nobel prize in Economics, Milton Friedman was asked how he would spend the prize money.
 - He replied: “I have already spent most of it”
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Evaluating the working of this model

Olivia Mitchell (Wharton School) and I devised a module on *Financial Literacy & Planning* for the 2004 Health and Retirement Study (HRS)

➤ Financial Literacy

- Do people know about economics and finance principles?

➤ Planning

- Do people calculate how much they need to save for retirement? How well do they plan?
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Assessing Literacy: Numeracy

Compound Interest

“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?”

- i) More than \$102;
 - ii) Exactly \$102;
 - iii) Less than \$102;
 - iv) Don't know (DK);
 - v) Refuse to answer.
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Assessing Literacy: Inflation

Inflation

“Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy with the money in this account:”

- i) More than today;
 - ii) Exactly the same;
 - iii) Less than today;
 - iv) DK;
 - v) Refuse to answer.
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Assessing Literacy: Risk Diversification

Risk Diversification

“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.”

- i) True;
 - ii) False;
 - iii) DK;
 - iv) Refuse to answer.
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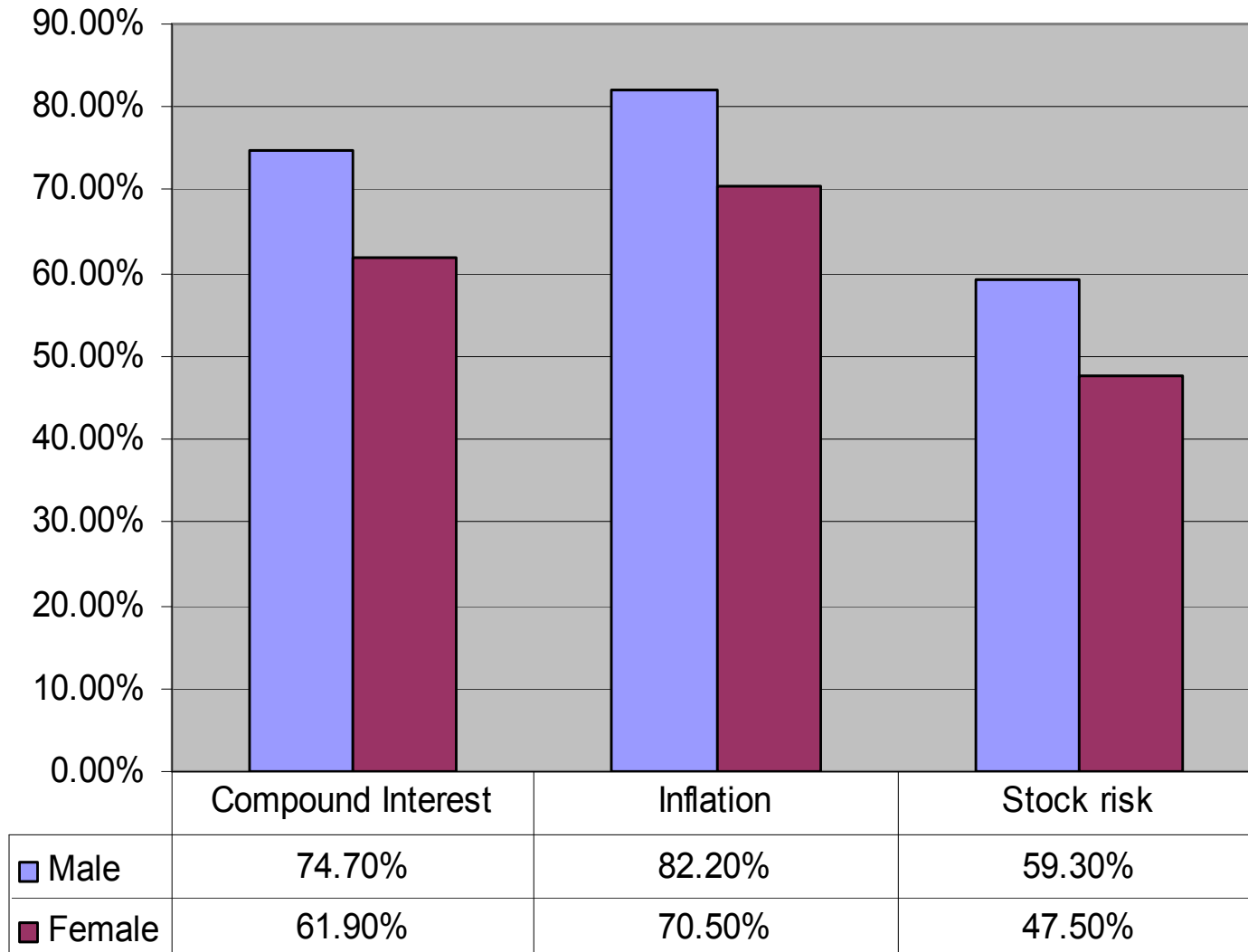
How much do older people (ages 50+) know?

Panel A: Distribution of Responses to Financial Literacy Questions

	<i>Responses</i>			
	<i>Correct</i>	<i>Incorrect</i>	<i>DK</i>	<i>Refuse</i>
Compound Interest	67.1%	22.2%	9.4%	1.3%
Inflation	75.2%	13.4%	9.9%	1.5%
Stock Risk	52.3%	13.2%	33.7%	0.9%

NB: Only **ONE THIRD (34%)** correctly answer all 3 questions; only around **HALF (56%)** correctly answer Inflation & Compound Interest.

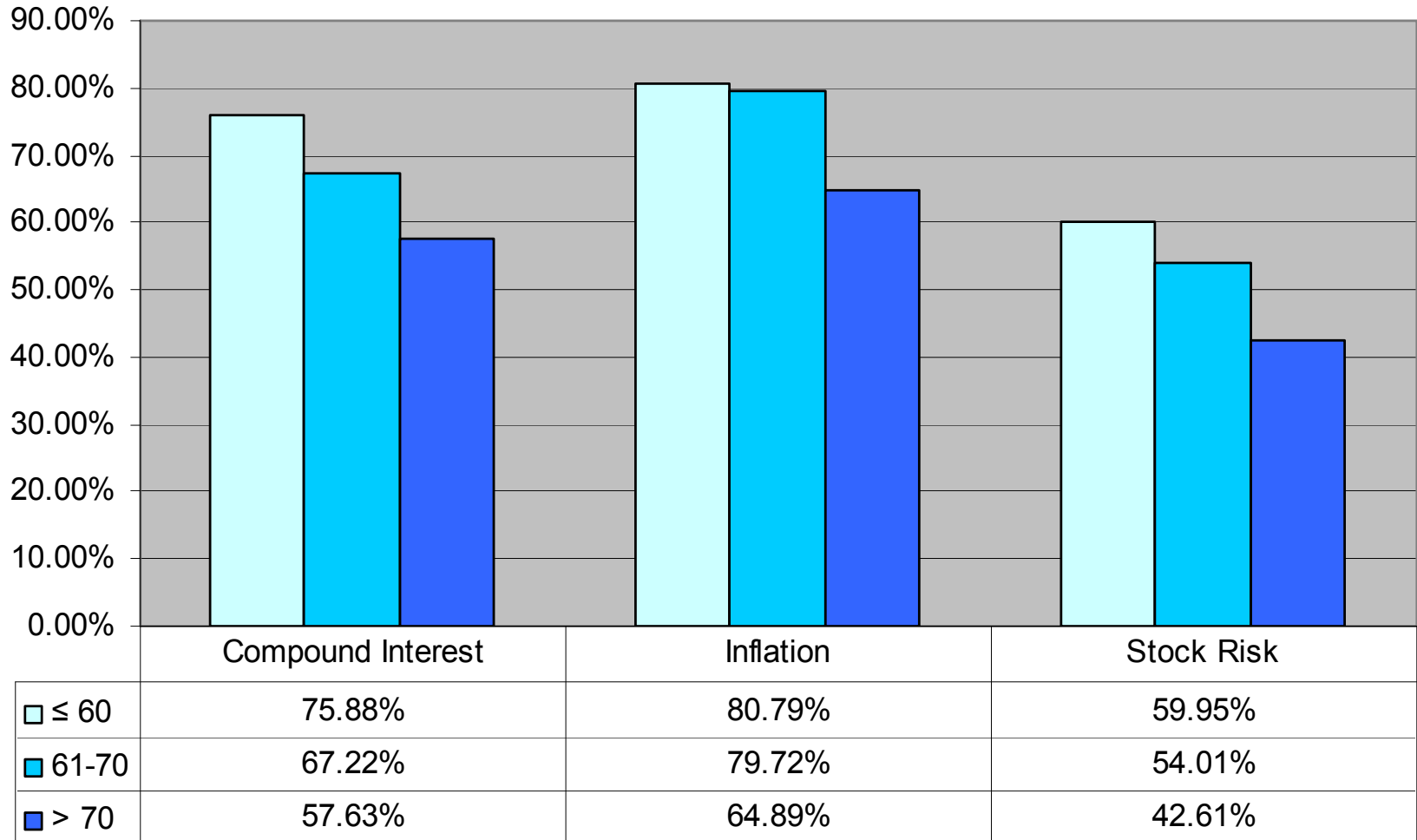
Correct responses: By Gender



Potential Implications for Women

- Women live longer than men but may face lower opportunities for learning
 - Shorter tenure in labor market
 - Weaker “peer” effects, e.g. more interaction with female colleagues
 - Saving and financial decision-making
 - Will women be able to save enough for their retirement?
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Financial Literacy and Age



Potential Implications for the Elderly

- Generations differ not only in tastes but also in financial literacy and, as investors age, cognition also declines
 - How will the elderly fare in financial decision-making?
 - Provide protection against scams?
 - Many elderly have high wealth but low literacy
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Other evidence of financial literacy

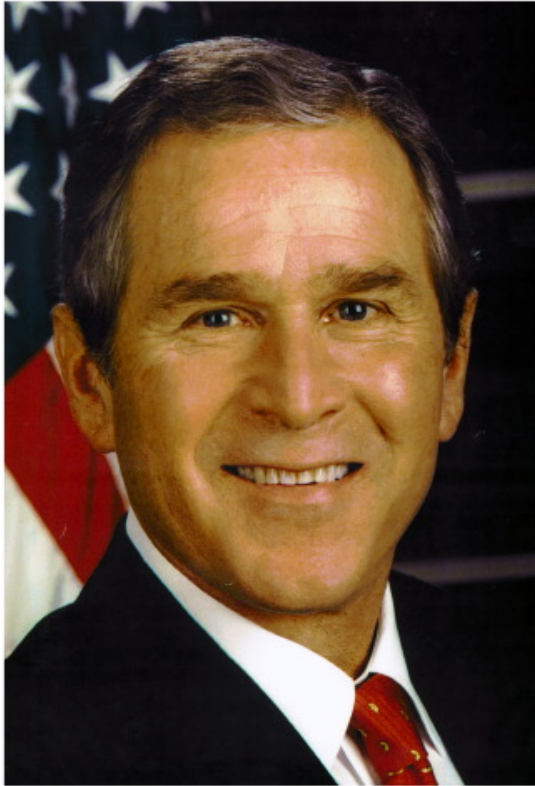
- Widespread illiteracy is also found among the very young (high school students)
 - NCEE Survey
 - Jump\$tart Coalition Survey

 - Let's consider a different age group: Early Baby Boomers
 - Age 51-56 in 2004
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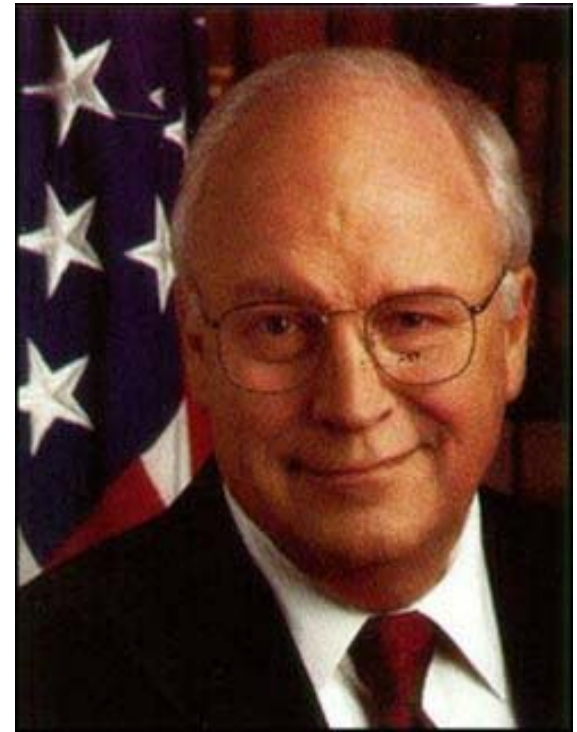
Financial Literacy among Early Baby Boomers

- If the chance of getting a disease is 10 percent, how many people out of 1,000 would be expected to get the disease? (a: 100)
- If 5 people all have the winning number in the lottery and the prize is 2 million dollars, how much will each of them get? (a: 400,000)
- Let's say you have 200 dollars in a savings account. The account earns 10 percent interest per year. How much would you have in the account at the end of two years? (a: 242)

“Political” Literacy: Who is the President and Vice President of the US?



and



Financial and Political Literacy Among Early Baby Boomers (age 51-56)

<i>Question Type</i>	% Correct	% Wrong	% DK
Percentage Calculation	83.6	13.2	2.7
Lottery Division	56.4	34.1	9.5
Compound Interest*	17.9	78.6	3.1
Political Literacy	81.4	10.8	7.6

Two Takeway Points

- Financial literacy should not be taken for granted
 - Illiteracy is widespread
 - Financial literacy varies a lot among demographic groups
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Consequences of financial illiteracy

- Where does financial illiteracy hurt?
- Those who are not literate:
 - Are less likely to plan retirement
 - Are less likely to accumulate retirement wealth
 - Are less likely to participate in the stock market

How about debt?

Debt literacy

- Peter Tufano (HBS) and I devised questions measuring financial knowledge for a representative sample of the US population
 - Collaboration with market research firm TNS
 - Objective is to understand financial knowledge related to debt behavior
 - Credit card debt
 - High-cost borrowing (pay-day lending, pawn shops, rent-to-own, etc.)
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More on the power of interest compounding (TNS)

Suppose you owe \$1,000 on your credit card and the interest rate you are charged is 20% per year compounded annually. If you didn't pay anything off, at this interest rate, how many years would it take for the amount you owe to double?

- 2 years
- Under 5 years
- 5 to 10 years
- More than 10 years
- Do not know
- Prefer not to answer

Interest compounding	Percent
2 years	9.6
Less than 5 years (correct)	35.9
5 to 10 years	18.8
More than 10 years	13.1
Do not know	18.2
No answer	4.3

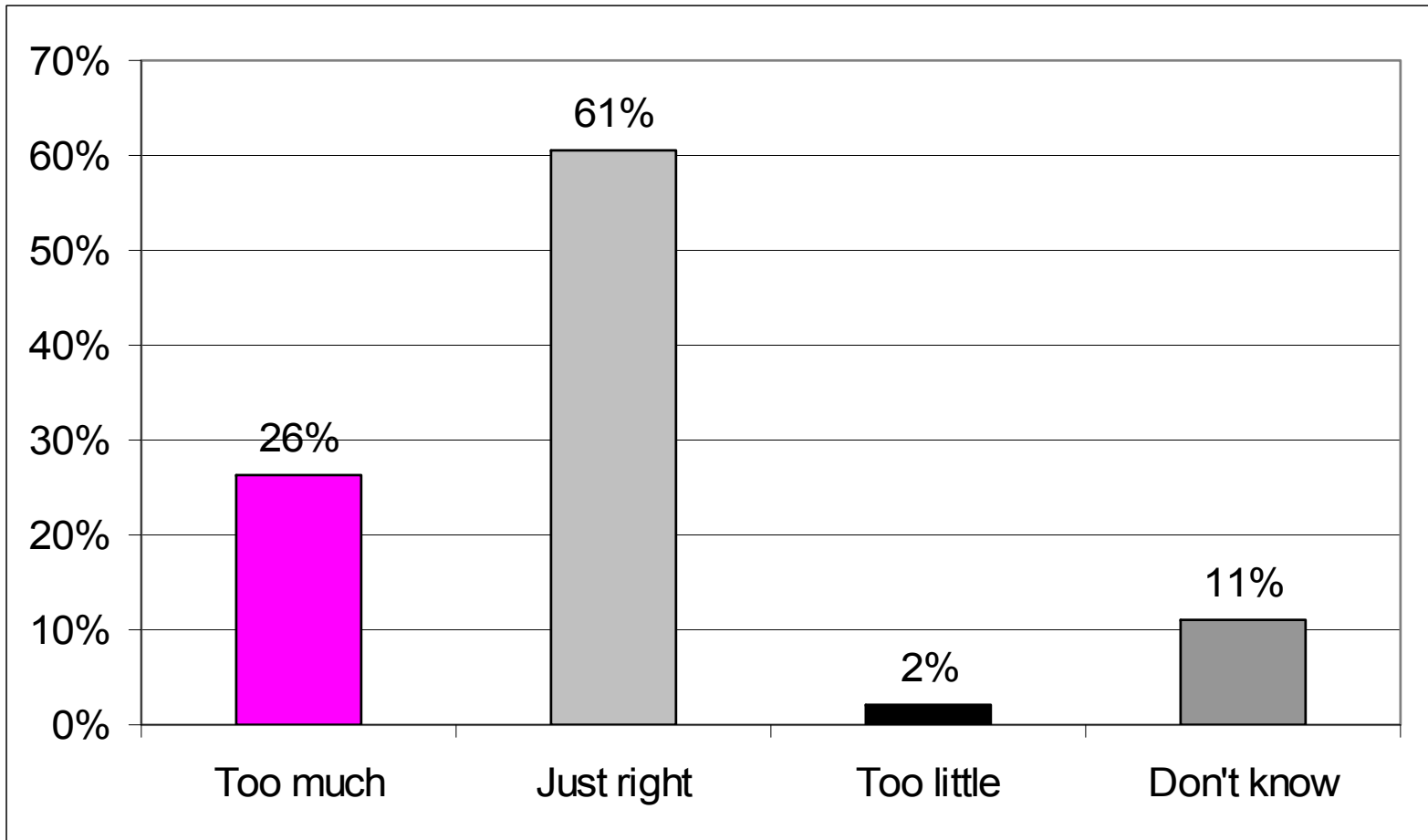
Payment options: Loaning money to the retailer (TNS)

You purchase an appliance which costs \$1,000. To pay for this appliance, you are given the following two options: a) Pay 12 monthly installments of \$100 each; b) Borrow at a 20% annual interest rate and pay back \$1,200 a year from now. Which is the more advantageous offer?

- Option (a)
- Option (b)
- They are the same
- Do not know
- Prefer not to answer

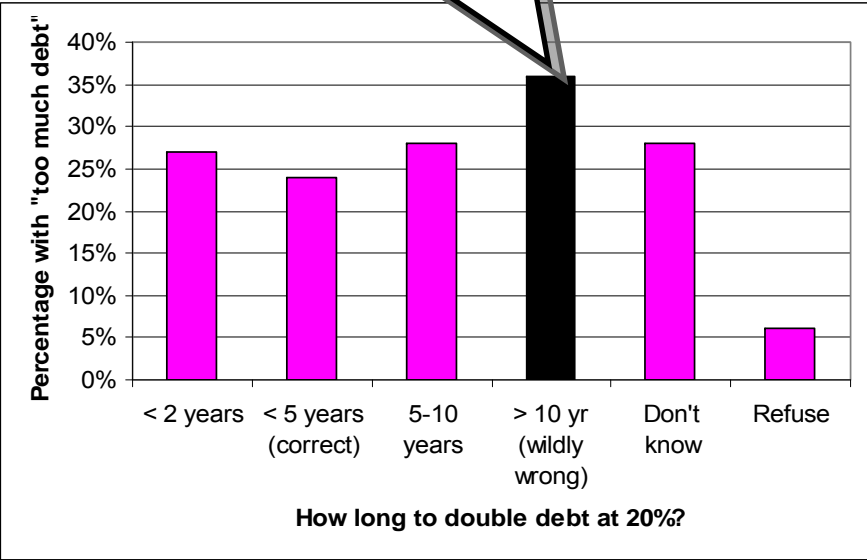
Appliance payment	Percent
Option a	40.6
Option b (correct)	6.9
They are the same	38.8
Do not know	9.2
No answer	4.5

Describe your current debt position (TNS)

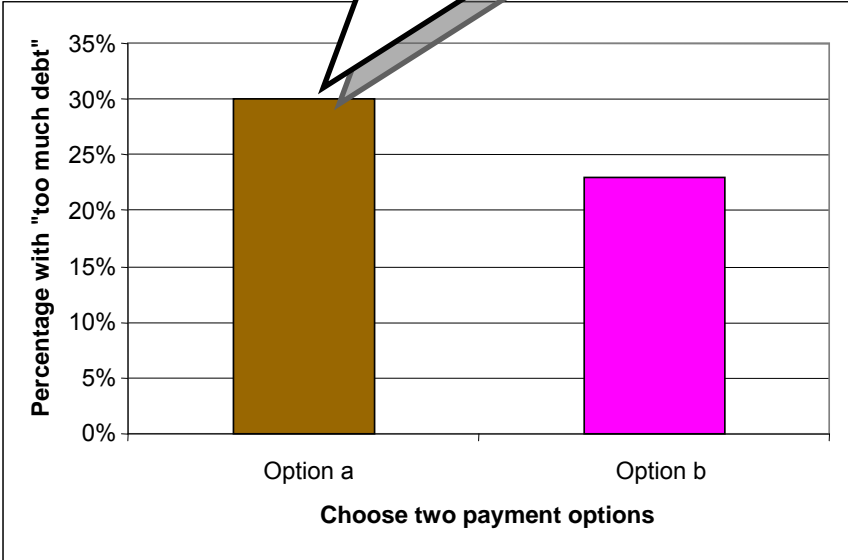


People who make errors have “too much debt.”

Grossly underestimate compounding



Gives free loan to retailer



More on where financial literacy matters

- Danna Moore (2003) shows that those with low literacy are more likely to take up high cost mortgages
 - John Campbell (2006) shows that those with low education are less likely to refinance mortgages during a period of falling interest rates
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What can be done to help consumers?

- Financial education/literacy programs
 - Financial engineering: Build a structure that help/prevent consumers from going into troubles
 - Make financial literacy mandatory
 - Forbid consumers from using specific financial products
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Financial Engineering

- Automatically enroll workers into pensions at a set contribution rate and allocate their money into a life-cycle fund
 - Develop default options for other products as well, such as mortgages
 - Provide a small and safe set of financial instruments to choose from
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Other Ideas

- Provide incentives to become literate (the UK Child Trust Fund)
 - Simplify information: A “saving pyramid” (similar to the food pyramid)
 - Provide information from “experts” and make it widely available
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***Avoid
too good deals***

***Make your money last
a lifetime***

Rely on reliable information

Monitor Investment & Savings

***Take time to choose
the right investment for you***

Plan for your future

Diversify your investments

Invest in low fees index funds

Avoid high interest rate debt

Exploit the power of interest compounding

Take advantage of tax incentives and employers' matches

A Financial Driving License

- Require people to display knowledge of specific issues before they enter into financial contracts

 - This would also bring:
 - National guidelines about financial knowledge; so far every state has its own financial literacy curriculum
 - Financial literacy manual: the “book” that everybody should read
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Making progress on these topics

- Understanding these issues requires knowledge of:
 - Economics
 - Psychology
 - Law
 - Political science

 - Collaborative effort is a fruitful area for further research
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Want to read more?

- More papers are available on my web site:
<http://www.dartmouth.edu/~alusardi/>
 - I write a blog on financial literacy:
<http://annalusardi.blogspot.com/>
 - My new book: *Overcoming the saving slump: How to increase the effectiveness of financial education and saving programs*, University of Chicago Press will be out in the Fall 2008.
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