Financial Literacy & Planning: Implications for Retirement Wellbeing

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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
- Increased complexity in financial instruments

Theoretical models of saving

Posit that consumers:

- Save and consume given life-time budget constraints
- Look ahead & plan for the future
- Know economics principles (e.g. present discounted values, inflation)

To evaluate the working of such models:

We devised a module on *Financial Literacy & Planning* for the 2004 Health and Retirement Study (HRS)

- Financial Literacy
  - Do people understand the basic working of interest rates, inflation, and risk diversification?
- Planning
  - Do people calculate how much to save for retirement? How well do they plan?

Some questions

- Does financial literacy matter?
  - People could consult others when making financial decisions.
  - People could make good decisions even without knowledge (or precise knowledge).
- "How much" should people know?
  - Saving and investing involve using complex assets, such as indexed annuities, etc.

Assessing 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.

Assessing Financial Literacy

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.

Assessing Financial Literacy

Stock Risk

"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.

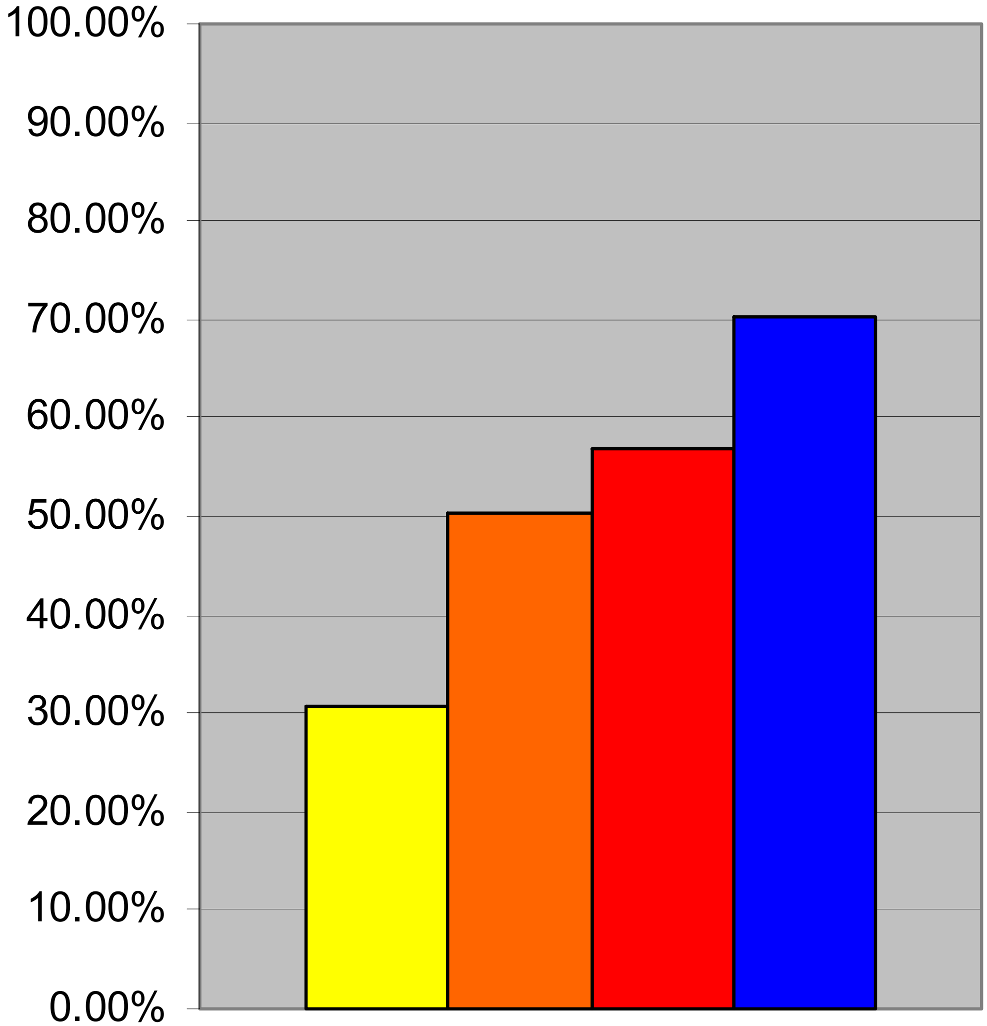
How much do older people (ages 50+) know?

Panel A: Distribution of Responses to Financial Literacy Questions

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

Financial Literacy and Education

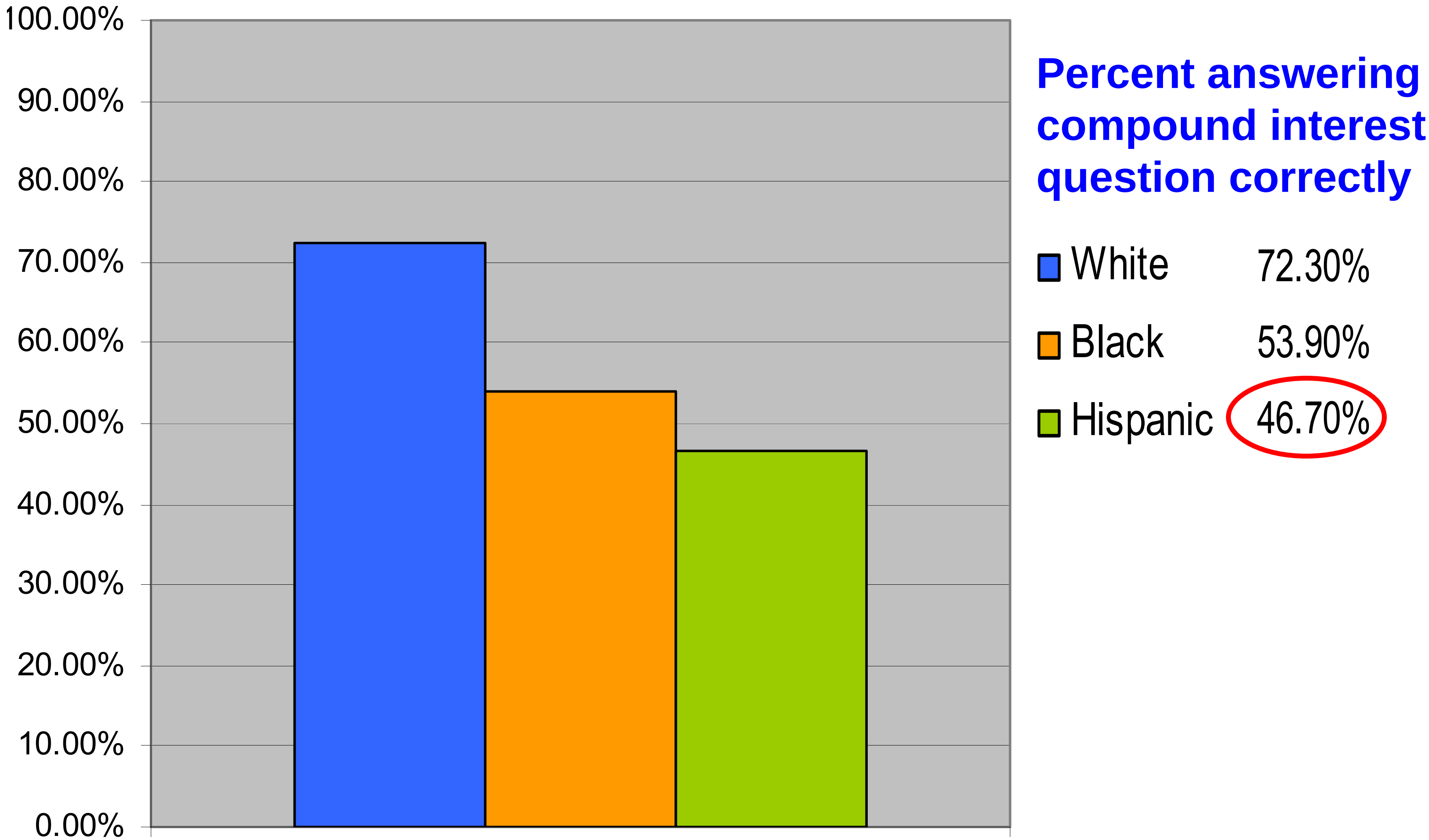


Percent answering Stock Risk question correctly

Less than HS	30.70%
High School	50.40%
Some College	56.70%
College +	70.20%

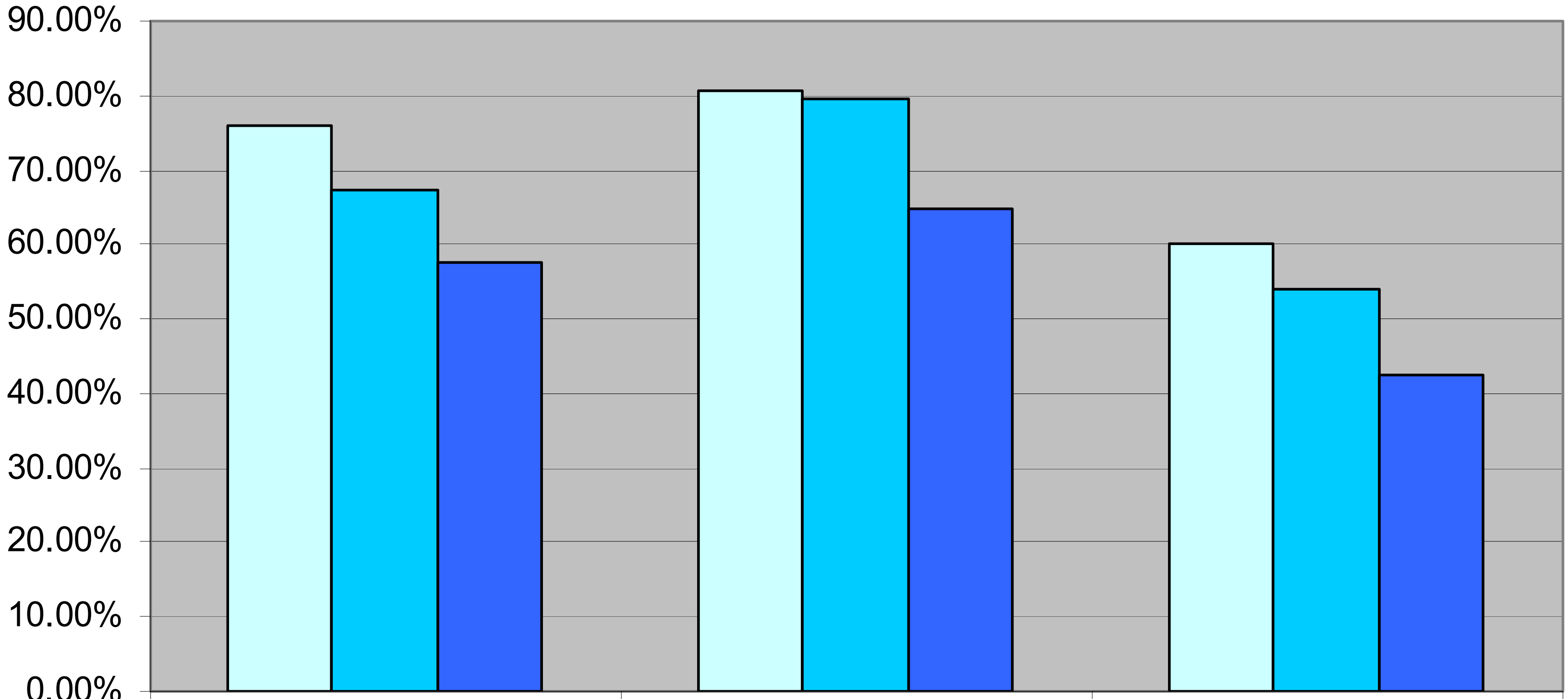
Source: Health and Retirement Study, 2004

Financial Literacy and Race



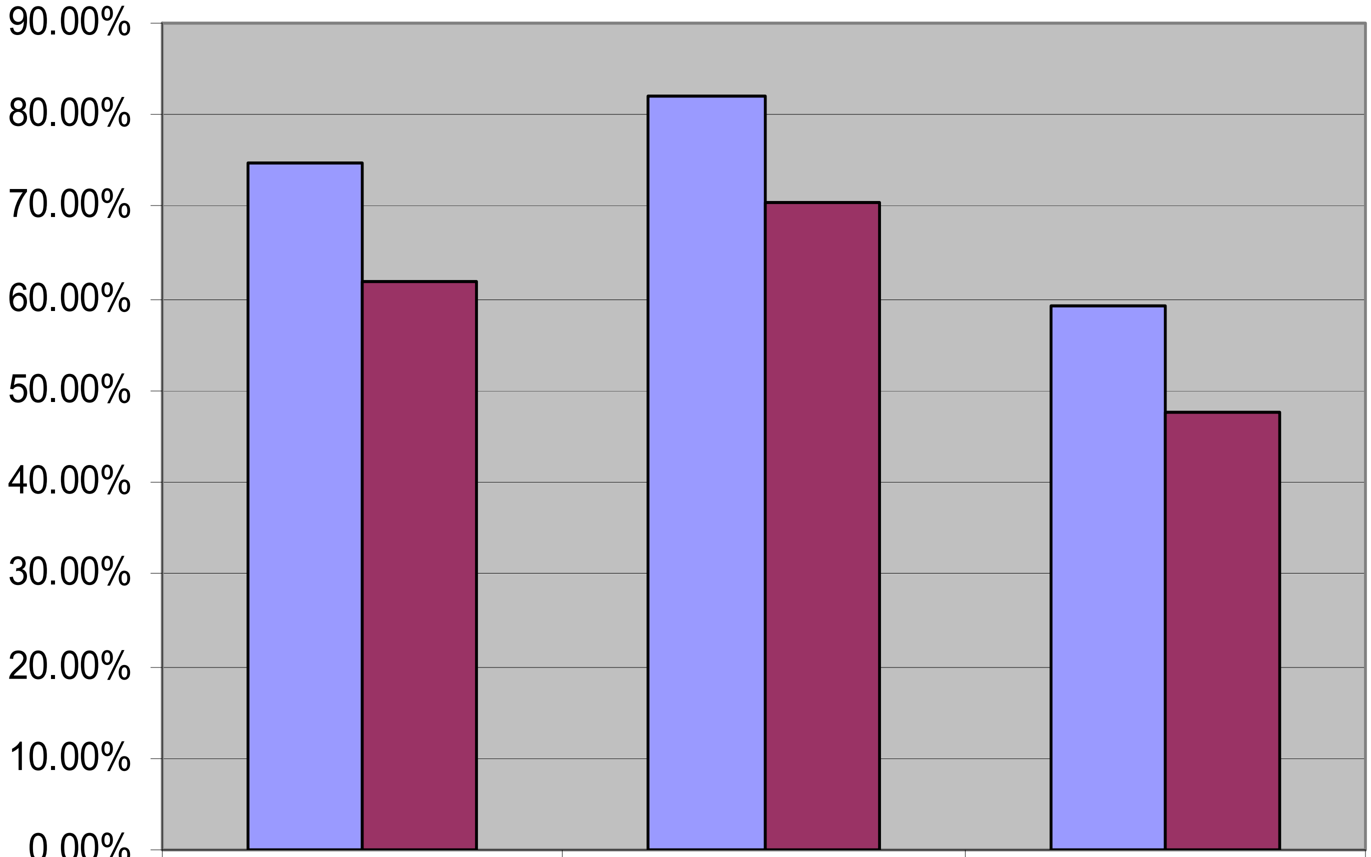
Source: Health and Retirement Study, 2004

Financial Literacy and Age



	Compound Interest	Inflation	Stock Risk
≤ 60	75.88%	80.79%	59.95%
61-70	67.22%	79.72%	54.01%
> 70	57.63%	64.89%	42.61%

Correct responses: By Gender



	Compound Interest	Inflation	Stock risk
Male	74.70%	82.20%	59.30%
Female	61.90%	70.50%	47.50%

Other evidence of financial literacy

- Similar findings about literacy/numeracy are confirmed in Lusardi and Mitchell (*Journal of Monetary Economics, 2007*)

- Widespread illiteracy are also found in several other surveys (NCEE, Jump$tart Coalition, etc.) in the US and other countries

  Lusardi and Mitchell (*Business Economics, 2007*)

Two Takeway points

- Financial literacy is low among the older population
- Financial literacy varies a lot among demographic groups

Beyond the HRS

- I have inserted these (and other questions) in the Rand Internet Panel covering respondents 40 and older

- I have inserted these 3 questions in the National Longitudinal Survey of Youth (wave 11) covering respondents between the age of 23 and 27

- I have inserted these (and other questions) in the Dutch Central Bank Panel

Does Financial Literacy Matter?

- In addition to questions about literacy, we devised questions about retirement planning
  - Does literacy affect planning?

- In other papers, I have investigated the relationship between financial literacy and portfolio choice
  - Those who low literacy are less likely to invest in stocks. See Alessie, Lusardi and van Rooij (2007)

Retirement Planning: HRS Module

Trying to plan

“Have you ever tried to figure out how much your household would need to save for retirement?”

Developing a plan

“Have you developed a plan for retirement saving?”

Sticking to the plan

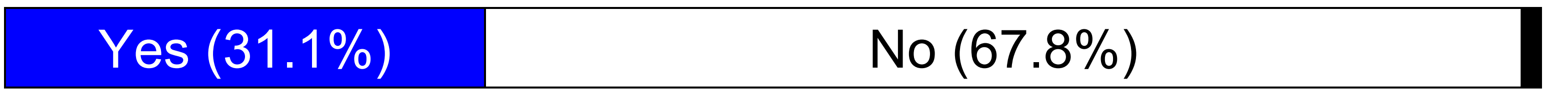
“How often have you been able to stick to this plan? Would you say:”

i) always; ii) mostly; iii) rarely; or iv) never?

What we find:

Tried

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



Developed a plan

Have you developed a plan for retirement saving?

Stuck to the plan

How often have you been able to stick to the plan?

Prevalence of retirement planners

Question	*Proportion of Sample*
Simple Planners Yes to “tried to figure out how much to save for retirement”	31.3%
Serious Planners Replied Yes/More or less to “developed a plan”	21.1%
Successful Planners Replied Always/Mostly to “able to stick to the plan”	18.5%

Analysis of Simple, Serious, and Successful Planners

	Simple Planners n = 1269		*Serious Planners* n = 1269		*Successful Planners* n = 1269	
	I	**II**	**I**	**II**	**I**	**II**
Correct on Compound Interest	.068**	.032	.064**	.037	.061**	.037
Correct on Inflation	.104***	.079**	.073***	.057*	.072***	.062**
Correct on Stock Risk	.165***	.109***	.155***	.101***	.137***	.088***
DK Compound Interest		-.171**		-.138**		-.130**
DK Inflation		.025		.036		.057
DK Stock Risk		-.071*		-.070*		-.064*
Pseudo R^2	.048	.056	.060	.069	.060	.069

Probit Analysis of Simple, Serious, and Successful Planners : Accounting for Differences in Demographic Characteristics

	Simple Planners	Serious Planners	Successful Planners
Correct on Compound Interest	.024 (.032)	.004 (.027)	.007 (.024)
Correct on Inflation	.053 (.037)	.038 (.037)	.043 (.027)
Correct on Stock Risk	.094*** (.030)	.086*** (.030)	.067*** (.030)
DK Compound Interest	-.162*** (.050)	-.127*** (.040)	-.117*** (.030)
DK Inflation	.035 (.082)	.047 (.078)	.068 (.078)
DK Stock Risk	-.044 (.043)	-.044 (.036)	-.038 (.033)
Pseudo R^2	.107	.133	.142

The importance of planning

- In another paper using HRS data, we show that planning leads to higher wealth (Lusardi and Mitchell, JME 2007)

- In an earlier paper using data from the 1992 HRS, I showed that planning influences portfolio choice: Planners are more likely to own stocks.

Takeway points

- Financial literacy cannot be taken for granted. Both literacy and numeracy are lacking.
- Widespread lack of retirement planning
- Literacy is correlated with retirement planning

Implications for Financial Education Programs

- Wide differences in literacy in the population
  - Targeted programs
- Low levels of literacy
  - Simplification
  - Different ways of providing information
  - Financial advice

My conference and book

- I have organized a conference at the NBER on “Improving the Effectiveness of Financial Education and Saving Programs” on May 21-22, 2007

- I am editing a book from the conference aimed to a wide public (policy makers, employers, HR executives, academics)

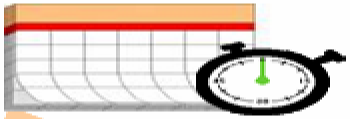
New Ways to Make People Save

- Project joint with Punam Keller (Professor of Marketing, Tuck School of Business)

- Use focus groups and surveys to understand barriers to saving and participation to pensions

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.

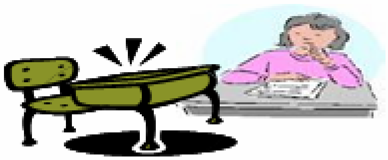


2. 3 minutes. **Check to see if you have the following materials**: a) worksheet in your benefits packet _√_, and b) the name and social security number of a beneficiary _√_.

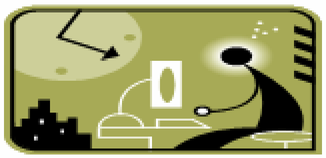
3. **Select the amount you want to invest for 2006** (minimum: $16/month, maximum: $1,666.67/ month), even if you don't know your take-home pay in your first month. If you want, you can change this amount at a later date. This voluntary contribution is tax-deferred, you will not pay taxes on it until 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.

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!

Probit Analysis of Stock Ownership

	Own Stocks (n = 1265)		
	I	II	III
Correct on Compound Interest	.121*** (.027)	.111*** (.030)	.066** (.032)
Correct on Inflation	.065** (.031)	.082** (.036)	.058 (.037)
Correct on Stock Risk	.126*** (.026)	.064* (.038)	.045 (.038)
DK Compound Interest		-.047 (.070)	-.064 (.067)
DK Inflation		-.109 (.083)	.133 (.088)
DK Stock Risk		-.153*** (.039)	-.130*** (.040)
Demographics[a]	no	no	yes
Pseudo R^2	.053	.063	.166

[a] Race, Gender, Marital Status, Born in US, Education, Age, Baby-Boomer Cohort

Measuring Financial Literacy via Quizzes

Stock Risk

"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.

Measuring Financial Literacy via Quizzes: Results from an internet survey (all ages)

True or False?	Correct	Incorr.	DK
Buying a single company stock usually provides a safer return than a stock mutual fund N= 763	$\boxed{63.4\%}$	12.1%	24.1%
Buying a stock mutual fund usually provides a safer return than a company stock N= 745	$\boxed{32.3\%}$	38.1%	29.2%

Measuring Financial Literacy

- Answers to quizzes generate noisy measures of financial literacy
  - Additional evidence of widespread illiteracy
- Importance of framing

Existing literacy surveys

- Jump$tart Coalition for Personal Financial Literacy Surveys
- National Council on Economic Education
- Federal Reserve Board sponsored literacy questions in the Survey of Consumers
- Many other surveys, often on specific sub-groups (Consumer Federation of America, Washington State Department of Financial Institutions)

The Effects of Financial Literacy: Wealth

	Total sample	1st quartile	median	3rd quartile
Correct on Compound Int.	40.85 (25.66)	19.72 (16.91)	29.18** (10.43)	21.29 (27.28)
Correct on Inflation	31.23 (27.71)	3.44 (7.54)	17.96 (11.28)	34.51 (29.39)
Correct on Risk Diversific.	11.68 (23.79)	19.39** (6.44)	26.95** (9.67)	20.73 (26.31)
Demographics	yes	yes	yes	yes