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Planning and Financial Literacy: How Do Women Fare?

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Many baby boomers are approaching retirement with perilously low levels of financial wealth and virtually no assets other than their homes (Lusardi and Mitchell 2007a). This is a particular concern for female-headed households which face many lean years ahead (David R. Weir and Robert J. Willis 2000). Yet little is known about why people fail to plan for retirement, and how planning as well as information costs shape retirement saving decisions. Lack of planning has important consequences for saving and portfolio choice: those who do not plan tend to accumulate far less wealth than those who plan, and nonplanners are also less likely to invest in stocks and tax-favored assets (Lusardi and Mitchell 2007c).

This paper examines the factors central to women's retirement planning, relying on a purpose-designed module we have developed for the 2004 Health and Retirement study (HRS) on planning and financial literacy. In this module, we have inserted several questions that measure basic levels of financial literacy, as well as questions to assess how respondents plan and save for retirement. Our research shows that older women in the United States have very low levels of financial literacy, and the majority of women have undertaken no retirement planning. Furthermore, financial knowledge and planning are clearly interrelated: women who display higher financial literacy are more likely to plan and be successful planners.

Our findings can be of help to those seeking to enhance older women's retirement security. Both employers and governments have devoted effort to seminars, educational programs, and retirement planning products in the last decade, but such efforts have had only a very mixed effect on saving patterns (Lusardi and Mitchell 2007c). One-size-fits-all programs are unlikely to successfully address saving shortfalls among many different groups. Specifically, insofar as financial illiteracy is widespread among women, it is doubtful that a one-time financial education seminar can reshape long-term planning and saving decisions. Instead, programs targeted specifically at women may be better suited to address fundamental differences in their preferences, saving needs, and financial knowledge.

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I. Empirical Strategy

The decision of how much to save for retirement is a complex one, as it requires collecting and processing information on a large set of variables including Social Security and pensions, inflation, and interest rates, to name a few. It further requires making predictions about future values of these variables. It is also necessary for the consumer to understand compound interest, inflation, financial markets, mortality tables, and more. Nevertheless, little research has asked exactly how households make saving decisions, how they overcome the difficulty of making those decisions, and whether they are financially literate enough to make well-informed choices. These topics are of paramount importance, particularly when older households are increasingly required to take responsibility for investing and allocating their pension wealth.

To gain insight into how households make saving decisions, we devised a module on planning and financial literacy for the 2004 Health and Retirement Study (see Lusardi and Mitchell 2006). The module includes three questions on financial literacy**,** as follows:

1. *Suppose you had $100 in a savings account and the interest rate was 2 percent 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?*

2. *Imagine that the interest rate on your savings account was 1 percent per year and inflation was 2 percent per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?*

3. *Do you think that the following statement is true or false? Buying a single company stock usually provides a safer return than a stock mutual fund.*

The first two questions, which we refer to as "Interest Rate" and "Inflation," help evaluate whether respondents display knowledge of fundamental economic concepts and basic numeracy. The third question, which we refer to as "Risk Diversification," evaluates respondents' knowledge of risk diversification, a crucial element of an informed investment decision.

The HRS module also asks respondents how they calculated their retirement saving needs. Retirement planning is a very strong predictor of wealth accumulation (Lusardi and Mitchell 2007a). The questions about retirement planning calculations we devised for the module are as follows:

4. *Have you ever tried to figure out how much your household would need to save for retirement? Yes or No.*

5. *Have you developed a plan for retirement saving? Yes; more or less; no.*

6. *How often have you been able to stick to this plan? Would you say always, mostly, rarely, or never?*

In what follows, we tabulate the prevalence of financial literacy and retirement calculations among a sample of age 50+ women respondents in the 2004 HRS module on planning and literacy. In addition, we assess whether the women who lack insight into these simple economic facts also appeared to have particular difficulty devising and carrying out plans.

II. Financial Literacy and Retirement Planning

Table 1 reports the responses to the financial literacy questions for our sample of 785 women respondents to the 2004 HRS module. The Table shows that 61.9 percent of women correctly answered the interest rate calculation question. This is a relatively easy question, so it is surprising that so many were unable to respond correctly, particularly because these older women have most likely made numerous decisions involving interest rates over their lifetimes (e.g., credit card rates, mortgage financing rates, etc.). Respondents were more accurate regarding the inflation question, with 70.6 percent answering correctly. By contrast, only 47.6 percent of the women respondents knew that holding a single company stock implies a riskier investment than a stock mutual fund.

Note, also, that fewer than half of all respondents could answer correctly both the interest rate and inflation questions. This is a remarkably low ratio, taking into account the complex financial calculations that households on the verge of retirement have almost surely engaged in over their lifetimes. Also disturbing is the fact that only 29 percent of respondents could answer all three questions correctly.

It is useful to further distinguish between those offering correct answers and those giving an incorrect answer or responding "don't know" (abbreviated DK). The proportion of incorrect or DK responses varies according to the question. For example, for the interest rate item, only 11.6 percent did not know, but over one-fifth (24.7 percent) gave an incorrect answer. On the inflation question, 12.8 percent did not know, while 14.5 percent gave a wrong answer. The question about risk diversification elicited the most DKs: 39.6 percent of the sample did not know, while a smaller fraction (12 percent) gave a wrong answer. DK responses are highly correlated within individual respondents: that is, women are consistently financially illiterate or literate. For instance, there is a 70 percent correlation between those who reply DK to both the interest and the inflation questions. Erroneous answers are more scattered, with mistakes having a correlation of only 10 percent (the highest correlation among incorrect responses). These results confirm other findings about widespread financial illiteracy among older adults (Lusardi and Mitchell 2007c).

Turning to the question about retirement planning, fewer than one-third of all women respondents (30.9 percent) indicated that they had ever attempted to undertake a retirement saving

TABLE 1—DISTRIBUTION OF WOMEN'S RESPONSES TO FINANCIAL LITERACY QUESTIONS IN THE 2004 HEALTH AND RETIREMENT STUDY (N=785)

	Responses			
	Correct	Incorrect	DK	Refuse
Interest rate	61.9	24.7	11.6	1.8
Inflation	70.6	14.5	12.8	2.1
Risk diversification	47.6	12.0	39.6	0.8

Note: This table reports the percentage of correct, incorrect, "do not know," and refusal responses.

calculation. We call this group of respondents S*imple Planners*. The fact that we find such a small number of planners confirms results in other papers that use a different measure of planning (Lusardi and Mitchell 2007a). It is also consistent with findings in Alan L. Gustman and Thomas L. Steinmeier (2004) that people know little about their Social Security and pension benefits, two of the most important components of retirement wealth.

A key advantage of our HRS module, as compared with previous surveys, is that we are further able to distinguish among types of planners. For the women we examine, only 58.5 percent of those who tried to figure out how much they need to save for retirement did actually develop a plan, while another handful "more or less" developed a plan (7.3 percent). Both of these we refer to as *Serious Planners*. The high failure rate in terms of developing a plan underscores the difficulty of developing retirement projections. Furthermore, of the subset of Serious Planners, fewer than one-third (31.8 percent) were always able to stick to the plan. Close to half of the Serious Planners said they were "mostly" able to stick to their plans (53.9 percent). The respondents who are "always" or "mostly" able to stick to a plan are called *Committed Planners*. Thus, in the sample as a whole, fewer than one-third (30.9 percent) of the older women are *Simple Planners* and one-fifth (20.3 percent) are *Serious Planners*, leaving only 17.4 percent as *Committed Planners*. Of course, households may face unexpected shocks that make them deviate from plans, but the fact remains that few respondents have tried and succeeded at planning. In other words, planning for retirement is difficult, few do it, and fewer still think they get it right.

III. Does Financial Literacy Affect Retirement Planning?

One explanation for why women fail to plan for retirement, or do so unsuccessfully, may be that they are financially illiterate. Table 2 report results of a multivariate regression analysis that sheds some light on the importance of financial literacy and its relationship to planning. The three dependent variables reflect whether the respondent is a planner, whether she said she developed a plan, and whether she was able to stick to her plan. The dependent variable in column 1, in each case, takes on a value of one if the respondent was correct regarding the literacy questions (otherwise, zero); column 2 adds an indicator equal to one if the respondent indicated she did not know the answer to the question (otherwise, zero); and column 3 has the same dependent variable but adds a set of demographic controls (age, race, educational attainment, marital status, being born in the United States, and being a baby boomer). The results depicted are marginal effects from Probit analysis.

Financial literacy is strongly and positively associated with planning, and the results are statistically significant at conventional levels. That is, those who give a correct answer to the financial literacy questions are more likely to be planners (column 1). In particular, those who understand risk diversification are much more likely to plan. In addition, knowledge about risk diversification strongly differentiates the sophisticated from the unsophisticated respondents. Not only does it have a much larger estimated marginal effect than being able to correctly answer the interest and the inflation questions, but it also remains statistically significant even after accounting for the demographic characteristics of the

TABLE 2—THE RELATIONSHIP BETWEEN PLANNING AND LITERACY: HRS WOMEN
(*Probit analysis, marginal effects reported, HRS 2004, Module 8*)

	Simple planners N = 758			Serious planners N = 758			Committed planners N = 758		
	1	2	3	1	2	3	1	2	3
Correct on interest rate	0.068*	0.023	−0.014	0.060*	0.028	0.003	0.051**	0.025	−0.001
	(0.036)	(0.038)	(0.040)	(0.030)	(0.031)	(0.032)	(0.028)	(0.030)	(0.029)
Correct on inflation	0.112***	0.084*	0.065	0.069**	0.044	0.029	0.058*	0.044	0.028
	(0.037)	(0.044)	(0.045)	(0.032)	(0.037)	(0.036)	(0.029)	(0.034)	(0.033)
Correct on risk diversification	0.180***	0.114**	0.095*	0.161***	0.103**	0.094**	0.140***	0.082**	0.061*
	(0.034)	(0.052)	(0.052)	(0.029)	(0.044)	(0.042)	(0.028)	(0.041)	(0.038)
DK interest rate		−0.194**	−0.182**		−0.135**	−0.122*		0.114*	−0.100*
		(0.060)	(0.061)		(0.047)	(0.043)		(0.044)	(0.038)
DK inflation		0.042	0.054		0.005	0.021		0.035	0.050
		(0.092)	(0.094)		(0.079)	(0.079)		(0.080)	(0.078)
DK risk diversification		−0.081	−0.056		−0.067	−0.037		−0.069	−0.045
		(0.054)	(0.056)		(0.045)	(0.045)		(0.042)	(0.040)
Demographics	no	no	yes	no	no	yes	no	no	yes
Pseudo R^2	0.058	0.069	0.123	0.066	0.077	0.139	0.061	0.071	0.144

Note: Demographics include age and controls for race, marital status, education, born in the US, and Baby Boomer cohort.
* Significantly different from 0 at the 10 percent level;
** Significantly different from 0 at the 5 percent level;
*** Significantly different from 0 at the 1 percent level.

respondent. We also find that those who answer "don't know" are different from the rest of the respondents. That is, the DK group is much less likely to plan and succeed in a planning effort, even compared to those who give an incorrect response (column 2). Most crucial is a lack of knowledge about the working of interest rates, which is perhaps understandable since basic numeracy is crucial for doing calculations about retirement savings.

Column 3 indicates that some financial literacy indicators remain statistically significant after controlling for demographic characteristics. For example, financial literacy still affects planning above and beyond the effect of education. This is a particularly important result for women in this sample, many of whom are unlikely to have higher education and are relatively likely to be unmarried (widow, divorced, or separated). In other words, there is reason to believe that these financial literacy variables may prove very useful in explaining observed differences in retirement savings among households.

One may argue that unobservable variables or a third factor may affect both planning and literacy, or that the desire to plan may affect financial literacy, i.e., the direction of causality does not necessarily go from literacy to planning. In other work (Lusardi and Mitchell 2007b), we use a much larger set of controls in the empirical specification and show that our results are robust. Moreover, we address reverse causality and find strong evidence that literacy causes planning, not the reverse.

IV. Concluding Remarks

Policymakers seek to learn whether households are effectively protected for many years in retirement, which we have argued is intimately related to whether they know how to plan for retirement and whether they can execute these plans effectively. Indeed, we posit that this topic is of particular interest for women who tend to live longer than men and have shorter work experiences and lower earnings. Our research shows that older women in the United States display very low levels of financial literacy. Moreover, the large majority of women have not done any retirement planning calculations. Further, financial knowledge and planning are closely related: women who display higher financial literacy are more likely to plan and be successful planners.

Our findings raise concerns about the ability of women to make sound saving and investment decisions over a long retirement period. In an environment where individuals rather than employers and governments are charged with

handing retirement finances, it is essential that consumers become more financially literate in order to be more successful at retirement.

Several questions are left unexplained, such as why women are so financially illiterate and what might be the best ways to address financial literacy among this segment of the population. We plan to address these questions in future research.

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