
THE DETERMINATION OF INDIVIDUAL FINANCIAL PLANNING HORIZONS

James P. Dow, Jr., California State University, Northridge
Yanbo Jin, California State University, Northridge

ABSTRACT

Recent evidence has shown that an individual's financial planning horizon is important for asset allocation and other financial decisions, but that it is not closely tied to age as assumed by typical models and common financial advice. This paper investigates the determinants of financial planning horizons using a longitudinal data set with detailed information on health and life expectancy. We find that expectations of life expectancy and health do affect the planning horizon, as does the financial situation of the individual, but that other factors, such as race, ethnicity, sex and education are also important. **JEL Classification:** G11

INTRODUCTION

How individuals manage their money has become an increasingly important issue for financial research. One area of particular interest is how individuals decide on their asset allocation and investment strategy. At the center of this issue is the tradeoff between current and future consumption. While people have tried to estimate individuals' marginal rates of substitutions for households with long investing horizons, the underlying assumption has been that individuals have long investing horizons. However, the choice of planning horizon itself may be endogenous, either as a result of psychological biases, or alternatively as a rational response to the costs of being future oriented. Becker and Mulligan (1997) provide an example of the latter argument by constructing a theoretical model where individuals make decisions that affect their degree of time preference. They show how the degree of future-orientation an individual has may be influenced by wealth and education. They argue that their model is consistent with indirect evidence such as the relationship between education, income and economic growth across individuals and countries, although they do not provide any direct evidence for their hypothesis.

Our paper adds to this literature in three ways. First, we show that the assumption that individuals have long planning horizons driven rationally by life expectancy is

incorrect. A large group of individuals have short planning horizons, which shows that life expectancy and/or age is a poor predictor of the horizon. Second, we provide direct evidence on the hypothesis of Becker and Mulligan. We find that education and wealth have the predicted effects on future-orientation. However, consistent with a more behavioral approach, we also find that sex and race are significant after controlling for income, education, wealth and age. Finally, we place this research in the context of the literature on individual financial decision-making and asset allocation.

We use longitudinal data from the Health and Retirement Study to examine the effects of socio-economic variables on the self-reported financial planning horizon. When individuals in the survey were asked to self-report their primary financial planning horizon, 30% responded “a year” or “less than a year” while only 11% responded “longer than 10 years”. This seems directly in contradiction with the traditional “rational” economic actor.

There are several possible reasons for this. First, since the survey focuses on individuals who are later in the life cycle, the short planning horizons may rationally reflect life expectancy. Alternatively, some individuals may be financially constrained and so would tend to focus on immediate financial needs. For example, young households with long life expectancies may still be focused on accumulating cash for a down payment on a house. Similarly, individuals with little in the way of assets and who are living from month to month are also likely to be focused on short-term financial planning, rational or not. Finally, a short-term approach may also reflect a cognitive bias. Planning for the future is complex and may not be seen as a priority for some individuals. Or, as argued by Becker and Mulligan, “People are not equally patient” and “patience seems to be associated with income, development and education” (pg. 731). The range of data available through the Health and Retirement Study allows us to be able to address these hypotheses.

We find that age has a non-linear effect with younger and older individuals having shorter horizons. We also find that worse health leads to shorter planning horizons, perhaps because of the associations with life expectancy. Greater wealth is also associated with longer financial planning horizons (up to a point) although the causation is likely to run in both directions. Demographic factors such as sex, race and ethnicity are also found to play a role. Education is also important which may reflect the complexity of financial planning and also supports Becker and Mulligan’s contention that “schooling may be some form of investment in ‘future-oriented’ capital” (pg. 751).

In a world of individually-managed retirement accounts, how people plan for the future is of significant practical concern. Less future-oriented investors will save less, which means that they could find themselves with insufficient funds upon retirement. Even for investors who are saving enough, the planning horizon will interact with investing decisions. Common financial advice suggests that older investors should shift their allocation from stocks to bonds; however, empirically, there is mixed evidence for this. Often, a hump-shaped pattern is found, where initially asset allocation shifts towards stocks as the investor gets older but then shifts back towards bonds. Rosen and Wu (2004) and Dow (2009) offer a partial explanation for this, as they find that proxies for investing horizon are significant for asset allocation but that age is not closely correlated with investing horizon. Our research looks at factors that affect planning horizons (other than age) as possible explanations for this.

The next section of the paper provides a review of the literature on planning horizon and asset choice. Section 3 discusses the data used from the Health and Retirement

Study. Potentially one of the most important variables determining the planning horizon is life expectancy. However, subjective life expectancy may not match with an individual's age, either because of information that is available only to the individual or because of cognitive biases. Section 4 shows how we construct a measure of subjective life expectancy using responses to several questions in the Health and Retirement Study. The regression results are presented in section 5. Section 6 concludes the paper.

LITERATURE REVIEW

Becker and Mulligan (1997) construct an optimization model where individuals can choose to consume now or in the future; the tradeoff depending on an endogenous time discount factor (β). Individuals can choose to spend resources to increase this value and therefore the value of future consumption. Their model predicts that the degree of future orientation will be related to the level of education and wealth. They argue that this model is consistent with various empirical studies, in particular, that consumption growth is faster for individuals and countries that are better educated and that we see the inequality of consumption across individuals and countries increasing over time.

While the degree of future orientation is certainly an interesting question from a theoretical perspective, it also has practical importance, particularly in the field of financial management. Campbell (2006) provides an overview of some of the major issues in household or individual financial management. One of the central questions is the connection between time and investing behavior. While little work has been done on the determinants of investing horizon, there has been significant analysis of how rational forward-looking investors should behave. For example, traditional investment advice suggests that asset allocation should shift away from stocks and towards bonds as an investor gets older. Reasons for this include mean reversion in stock prices (Cochrane, 1999) and decreasing flexibility in labor supply (Bodie, Merton and Samuelson, 1992).

However, empirical evidence provides mixed support for this advice. Cohn, Lewellen, Lease, Schlarbaum (1975), Kullmann, Siegel, (2003) and Wang and Hanna (1997) find that stockholding increases with age. Riley and Chow (1992) find that it increases with age until age 65. The evidence from Bertaut and Star-McCleure (2000) suggests that being older and younger reduces stock holding compared with middle-age individuals. Ameriks and Zeldes (2004) find a similar hump shape.

Shum and Faig (2006) use SCF data and find a hump-shaped pattern for age. They add in dummy variables for eight different reported savings motives. They find that households with retirement as a motive (and presumably a longer investment horizon) tend to hold a larger share of their wealth as stock while those who are investing to purchase a home (presumably with a shorter investment horizon) hold less wealth in stock. Dow (2009) finds similar results.

What this suggests is that behavioral factors have a significant effect on investment decisions and that age is not a very good proxy for investment horizon. This has led researchers to investigate the importance of the investment horizon directly. Rosen and Wu (2004) using data from the Health and Retirement Study, and Dow (2009) using data from the Survey of Consumer Finances, find that reported investing horizons are indeed important for asset allocation. Our paper extends this literature by treating the investment horizon as an endogenous rather than exogenous variable.

It is unclear which variables beyond age will matter for determining financial planning horizons. We can get some idea by looking at other socioeconomic variables

that have been found to be significant for financial decision-making. Gender has been found to be significant for asset allocation (for example, Hariharan, Chapman and Domian, 2000, Schooley and Worden, 1996, Bertaut and Starr-McCluer, 2000, Rosen and Wu, 2004). Women have greater life expectancies, and so probably longer investment horizons for a given age, although most studies have found that women exhibit more conservative financial behavior, so that any longevity effect may be outweighed by other factors. Race/ethnicity has also been found to affect financial decision-making and may affect investment horizon or focus (for example, Dow, 2009, Choudhury, 2001/2002, Wang and Hanna, 1997, Bertaut and Starr-McCluer, 2000, and Rosen & Wu, 2004).

Education is one of the most significant variables in financial decision-making, even after adjusting for differences in income and wealth (for example, Rosen and Wu, 2004, Bertaut and Start-McCluer, 2000, Wang and Hanna, 1997). This is somewhat at odds with the rational model of decision-making since individuals are assumed to have equivalent cognitive skills. However, insights from behavioral finance (e.g. Barberis and Thaler, 2003) reveal that psychological factors can be important for financial decision-making and may be one explanation for education's effects. Wahlund and Gunnarsson (1996) show a connection between savings strategies used and attitudes towards the future in terms of subjective discount rates.

DATA

The data used in this study are from six waves (wave 1, wave 4-8)¹ of the Health and Retirement Study (HRS).² The HRS is a biennial panel jointly managed by the National Institute of Aging (NIA) and the Institute for Social Research (ISR) at the University of Michigan. The panel surveys a nationally diverse sample of more than 10,000 households with a primary respondent over the age of 51. The panel began in 1992 (wave 1) with follow-up surveys every two years. Initially, the survey was conducted with two groups; in 1992 to individuals born between 1931 and 1941 and in 1993 to individuals born before 1924. In later surveys, three additional cohort groups were added. Specifically, the Children of Depression cohort (born 1924-1930) and War Baby cohort (born 1942-1947) were added in 1998 (wave 4); the Early Baby Boomer cohort (born 1948-1953) was added in 2004 (wave 7).

The focus on mid-life and older households is one advantage of this panel data set. The change in planning horizon in moving from 30 to 45 years of age is much smaller than when moving from 50 to 65. The data set also cuts out very young households who tend to have few assets to invest.

The survey includes comprehensive information on the household respondent and spouse (for couples) in terms of demographics, family structure, financial and housing data, income, social security, employment history, retirement plans, expectations, health status and health insurance.

The focus of this paper is on the factors that determine an individual's financial planning horizon. The HRS question on financial planning horizons asks, "In deciding how much of their (family) income to spend or save, people are likely to think about different financial planning periods. In planning your (family's) saving and spending, which of the time periods listed... is most important to you [and your (husband/wife...)]?" The possible responses are: "next few months", "next year", "next few years", "next 5-10 years", and "more than 10 years".

Table 1 shows the distribution of responses to the financial planning horizon question across all waves and cohorts. “Total” includes the response of both married and single households, “Single” is the response of households that were single at the time the question was asked. In married households, both husband and wife give responses to the financial planning question and so will be treated as separate individuals. The “married” column therefore includes separate responses for both partners. We found

TABLE 1. DISTRIBUTION OF FINANCIAL PLANNING HORIZONS (IN PERCENTS, BY MARITAL STATUS)

Horizon	Total	Single	Married
1. Next few months	18.0	25.4	15.0
2. Next year	12.8	15.2	11.9
3. Next few years	28.6	26.0	29.6
4. Next 5-10 years	30.0	24.4	32.2
5. Longer than 10 years	10.7	9.1	11.4
N	57,632	16,649	40,983

that answers tend to be similar across spouses with no bias in one direction or the other.

As can be seen, planning horizons tend towards the short run, with 30% saying that their planning horizon was “the next few months” or “the next year”. Only 11% are focused on the very long run. The distribution of responses for married individuals is shifted towards the long run when compared with single individuals, possibly reflecting greater financial stability.

We can test the consistency of the responses over time by looking at the distribution of the change in responses between wave 1 and wave 8 (calculated as response_in_wave_8 – response_in_wave_1 for individuals who responded in both waves). As can be seen on Table 2, there is a fair amount of consistency across time, with ‘no change’ being the most common result. One would expect horizons to become shorter as people get older (which would show up as more negative numbers than positive numbers in the table); however, this does not seem to be the case, suggesting that behavioral biases may be more important than objective life expectancy.

TABLE 2. DISTRIBUTION OF *CHANGE* IN RESPONSE TO PLANNING HORIZON QUESTION FROM WAVE 1 TO WAVE 8

Change in response	%
-4	1
-3	4
-2	10
-1	19
0	31
1	19
2	9
3	5
4	1

Note: Response values are: 1=“next few months”, 2=“next year”, 3=“next few years”, 4=“next 5-10 years” and 5=“longer than 10 years”.

EXPECTATIONS OF LIFE SPAN

Life expectancy is potentially one of the most important variables determining the planning horizon. However, subjective life expectancy may not be directly determined from age, either because of health information that is available only to the individual or because of cognitive biases. In this section we show how we construct a measure of subjective life expectancy using responses to several questions in the HRS.

The HRS provides some information on life expectancy collected from life tables and from the interviews with the respondents themselves. Unfortunately, the form of the question has not remained the same across waves. Table 3 reports the number of responses by wave for the three questions: “What is the percent chance that you will live to be 75 or more?”, “What is the percent chance that you will live to be 85 or more?” and “What is the probability of living 10 more years” (where the exact wording depended on the respondents age, e.g., “What is the percent chance that you will live to be 80 (85, 90, 95, or 100) or more”). Given that the population is aging across the panel (and at some point older than 75 and 85) the “10 more years

TABLE 3. NUMBER OF RESPONSES TO LIFE EXPECTANCY QUESTIONS BY WAVE

	Wave					
	1	4	5	6	7	8
Probability of living:						
to 75	11463	2925	842	6013	8432	6251
to 85	11445	2900	0	0	0	0
10 more years	0	0	1316	5969	15923	14830

question” is the best, but unfortunately it is not available at the start of the survey.

As a measure of optimism, we will use the difference between the subjective response and the probability calculated by life tables (and reported in the HRS). Table 4 reports the distributions of the difference between subjective and life table probabilities for each of the three questions (in percentage points so that 100% = 100). While the standard deviation of the difference

TABLE 4. DISTRIBUTION OF PROBABILITY DIFFERENCES (SUBJECTIVE PROBABILITY – LIFE TABLE PROBABILITY)

Question	Mean	Standard deviation	N
Probability of living:			
10 more years	-2.6	32.1	38,036
to 75	-7.8	29.1	35,893
to 85	6.0	32.3	14,344

^aOnly individuals younger than 75 are included in the live-to-75 question and younger than 85 in the live-to-85 question

is large, the biases (the mean difference between the two) tend to be small.

This bias may be related to sociological factors. Because of that, studies that find sociological variable influencing financial planning decisions may be in

part picking up this effect. To see what underlies the bias, we regress the optimism measure (for each of the three life expectancy questions) against several socioeconomic factors that will be used in section 5. The regression results are presented in Table 5. Results show that bad health has the predicted effect of making people less optimistic about life expectancy which illustrates the complicated effect that health has on financial decision-making. Bad health reduces life expectancy which should shorten the financial planning horizon and make the individual more conservative about financial decisions. However, it also may imply greater expenditure risk also increasing conservatism and short-term focus. Bad health may also lead to a more pessimistic attitude in general. Health will be included separately from the optimism variable in the financial planning horizon regression of section 5 in order to allow for the possibility that health works through multiple channels. We also see from the table that education leads to a more positive outlook about the future (if not necessarily a more rational outlook). Women tend to underestimate how long

TABLE 5. FACTORS EXPLAINING DIFFERENCES IN PROBABILITIES (OLS REGRESSION)^a

	10 more years	Until 75	Until 85
Education	0.65*** (0.06)	0.72*** (0.05)	0.52*** (0.09)
Female	-6.58*** (0.32)	-6.77*** (0.29)	-10.79*** (0.53)
Black	10.76*** (0.46)	6.64*** (0.41)	13.07*** (0.72)
Hispanic	0.73 (0.61)	-2.94*** (0.53)	0.28 (0.97)
Health	-9.08*** (0.15)	-8.75*** (0.13)	-8.08*** (0.23)
Age	0.72*** (0.02)	-0.17*** (0.03)	-0.02 (0.05)
n	37,872	35,754	14,326
R ²	0.15	0.15	0.13

^aOnly individuals younger than 75 are included in the live-to-75 question and younger than 85 in the live-to-85 question. Standard errors are in parentheses: *** indicates statistical significance at the 1% level.

they will live, as do Hispanics, while Blacks tend to overestimate life expectancy.

In addition to these factors, optimism clearly reflects individual specific factors not captured in the regression. Since optimism towards the future may well affect the financial planning horizon, it will be included in the financial planning horizon regression. To make a series that exists for all waves, we will append the value of optimism in terms of the “Live to 75” question for the first two waves, with the value of optimism in terms of the “Live 10 more years” question for the last 4 waves. While not identical, these variables are capturing the same behavior and have similar distributions.

REGRESSION RESULTS

Broadly there are three theories of what determines the financial planning horizon: (1) older individuals with shorter life expectancies should have shorter horizons, (2) people with financial concerns should have shorter horizons, and (3) better education and financial awareness should lead to a more future-oriented attitude and longer financial planning horizons. This section evaluates these theories by regressing the reported financial planning horizon against various potential explanatory variables.

The dependent variable is whether the individual has a “short” financial planning horizon and will take the value of 1 if the response was “Next few months” or “Next year” and 0 otherwise. An alternate specification was tried with the dependent variable taking the value of 1 if the response was “Next five to 10 years” or “Longer than 10 years”, measuring whether the individual had a “long” financial horizon. The results were quite similar (except, of course, that the coefficients took the opposite sign). Since it is longitudinal data, a random effects probit regression will be used. The data is summarized on Table 6, with the regression results reported on Table 7 and the marginal effects reported on Table 8. The independent variables listed on Table 6 are “Education” which is measured in number of years, “Health” which is measured on a 1-5 scale with 1 being best, “Age” which is measured in number of years (an age squared variable will also be added to the regression), “Wealth” which is measured in 10,000’s of dollars, “Optimism” which is measured in percentage points, and “Bequest” which is the probability in percentage points of leaving at least a \$10,000 bequest. Dummy variables are added for “Black”, “Hispanic”, “Female” and “Married” where appropriate.

TABLE 6. DATA SUMMARY (POOLED DATA)^a

Variable	Mean	Standard Deviation
Education	12.65	2.98
Female	0.59	0.9
Black	0.14	0.35
Hispanic	0.08	0.27
Married	0.72	0.45
Health	2.70	1.13
Age	62.37	10.01
Wealth	43.72	172.39
Optimism	-3.13	31.56
Bequest	63.07	39.46

^a“Education” is in number of years, “Health” is on a 1-5 scale with 1 being best, “Age” is in number of years, “Wealth” is in 10,000’s of dollars, “Optimism” is the difference between subjective and life-table probabilities of living 10 more years in percentage points, and “Bequest” is the probability in percentage points of leaving at least a \$10,000 bequest.

Because theory does not suggest whether married and single people should be combined in the regression or kept separate, four versions of the regression were run. Column 1 of Tables 7 and 8 report the results with single and married individuals pooled, column 2 reports the results for just single individuals, column 3 for married males and column 4 for married females. The results are similar across the four regressions.

**TABLE 7. FINANCIAL PLANNING HORIZON REGRESSION: ESTIMATED COEFFICIENTS
(DEPENDENT VARIABLE IS WHETHER THE INDIVIDUAL HAS A “SHORT” PLANNING
HORIZON)^a**

	(1) Pooled	(2) Single	(3) Married Husband	(3) Married Wife
Education	-0.027*** (0.003)	-0.024*** (0.005)	-0.010* (0.006)	-0.014** (0.006)
Female	0.079*** (0.016)	-0.047 (0.032)		
Married	-0.196*** 0.017			
Black	0.262*** (0.022)	0.194*** (0.036)	0.289*** (0.045)	0.301*** (0.045)
Hispanic	0.372*** (0.029)	0.262*** (0.055)	0.365*** (0.085)	0.244*** (0.082)
Health	0.088*** (0.007)	0.096*** (0.013)	0.074*** (0.013)	0.077*** (0.013)
Optimism	-0.120*** (0.025)	-0.153*** (0.044)	-0.054 (0.046)	-0.104** (0.046)
Age	-0.026*** (0.010)	-0.067*** (0.025)	0.039* (0.022)	-0.030* (0.018)
Age ²	0.028*** (0.008)	0.054*** (0.020)	-0.030 (0.019)	-0.028* (0.016)
Wealth	-0.093*** (0.031)	-0.183*** (0.037)	-0.081*** (0.019)	-0.060*** (0.016)
Wealth ²	0.107*** (0.013)	0.525*** (0.116)	0.093*** (0.021)	0.061*** (0.022)
Bequest	-0.003*** (0.000)	-0.003*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)
Education Spouse			-0.018*** (0.006)	-0.032*** (0.005)
Hispanic Spouse			0.053 (0.084)	0.125 (0.083)
Health Spouse			0.052*** (0.014)	0.056*** (0.013)
Optimism Spouse			-0.039 (0.047)	-0.005 (0.045)
Age Spouse			-0.021 (0.015)	-0.010 (0.019)
Age ² Spouse			0.017 (0.013)	0.016 (0.015)
Bequest Spouse			-0.000 (0.000)	-0.001*** (0.000)
Rho	0.22	0.26	0.19	0.19
Chi ²	593.89	208.36	106.46	113.50
Prob > Chi ²	0.000	0.000	0.000	0.000

^aN=48,477. Cohort and wave dummies were added to the regression but not reported. Standard errors are in parentheses: *** indicates significance at 1% level, ** 5% level, *10% level. For purposes of presentation, the coefficients on age², wealth and optimism were multiplied by 100 and the coefficient on wealth² was multiplied by 100,000.

We can see from Table 7 that age has the opposite of the predicted effect; the negative coefficient in the regression implies that as an individual gets older they are less likely to have a short financial planning horizon. However, the squared term is positive, implying that the effect diminishes with age. This agrees with the literature on asset allocation which tends to find a hump shape in the relationship between age and the proportion of an individual's wealth that they invest in stock, that is, younger and older households tend to allocate less of their wealth to stock than households in between. Our results reinforce that by showing that younger households in this data set tend to be focused more on the short term, which may lead them to choose to invest in less risky assets. As individuals get older, their investing interests become more long-term, until they get past their retirement age.

Health has the predicted effect. As people respond that they are in worse health (on a scale of 1 to 5 with 5 being worst) they are more likely to have a short financial planning horizon. Whether this is due to a shorter life expectancy or concerns about health expenses is not clear. Optimism also has the predicted effect. The more optimistic individuals are (measured as the difference between subjective probability of living and the value from life tables) the less likely they are to have a short planning horizon. The optimism may reflect personal knowledge of life expectancy that is not captured by age or sex or it may simply reflect an optimistic disposition. In any case, this leads individuals to be more future-oriented.

An increase in wealth reduces the probability of having a short financial planning horizon, although the effect diminishes as wealth increases. Poor households are more likely to be focused on meeting their immediate financial needs. As wealth increases, the individual is less likely to be in difficult financial straits, although after some point, the benefit of additional wealth is small. There are two other reasons why wealth might be connected with the financial planning horizon. The first is that greater wealth offers an incentive to think about the future because one needs to make decisions on how it is invested. The second connection leads from the financial planning horizon back to wealth. Individuals who are more future-oriented are more likely to save and invest, which will result in them having greater wealth over time. A second financial variable is also significant. Individuals who report that they are more likely to leave a bequest are also less likely to have a short planning horizon. Planning for a bequest requires a forward-looking orientation, in addition to a certain amount of wealth, and so it is not surprising that these individuals have longer financial planning horizons.

TABLE 8. FINANCIAL PLANNING HORIZON REGRESSION: MARGINAL EFFECTS (DEPENDENT VARIABLE IS WHETHER THE INDIVIDUAL HAS A “SHORT” PLANNING HORIZON)^a

	(1) Pooled	(2) Single	(3) Married Husband	(4) Married Wife
Education	-0.009*** (0.001)	-0.009*** (0.002)	-0.003* (0.002)	-0.004** (0.002)
Female	0.026*** (0.005)	0.018 (0.012)		
Married	-0.066*** (0.006)			
Black	0.091*** (0.008)	0.074*** (0.014)	0.092*** (0.015)	0.101*** (0.016)
Hispanic	0.133*** (0.011)	0.102*** (0.022)	0.119*** (0.030)	0.081*** (0.029)
Health	0.029*** (0.002)	0.036*** (0.005)	0.022*** (0.004)	0.024*** (0.004)
Optimism	-0.039*** (0.008)	-0.058*** (0.017)	-0.016 (0.013)	-0.032** (0.014)
Age	-0.008*** (0.003)	-0.025*** (0.010)	0.011* (0.006)	-0.009* (0.006)
Age ²	0.009*** (0.003)	0.020*** (0.008)	-0.009 (0.005)	-0.009 (0.005)
Wealth	-0.031*** (0.004)	-0.069*** (0.014)	-0.024*** (0.005)	-0.019*** (0.005)
Wealth ²	0.035*** (0.000)	0.198*** (0.000)	0.027*** 0.000	0.019*** 0.000
Bequest	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.000*** (0.000)
Education Spouse			-0.005*** (0.002)	-0.010*** (0.002)
Hispanic Spouse			0.016 (0.025)	0.040 (0.028)
Health Spouse			0.016*** (0.004)	0.017*** (0.004)
Optimism Spouse			-0.011 (0.014)	-0.001 (0.014)
Age			-0.006	-0.003
Spouse			(0.004)	(0.006)
Age ² Spouse			0.005 (0.004)	0.005 (0.005)
Bequest Spouse			-0.000 (0.000)	-0.000*** (0.000)

^aN=48,477. Cohort and wave dummies were added to the regression but not reported. Standard errors are in parentheses: *** indicates significance at 1% level, ** 5% level, *10% level. For purposes of presentation, the coefficients on age², wealth and optimism were multiplied by 100 and the coefficient on wealth² was multiplied by 100,000.

In addition to health and wealth, a number of other variables are also significant. The more educated a person is, the less likely they are to have a short financial planning horizon. It is well known that education is important for financial decision making, both for the kinds of assets invested in and the willingness to take risks. While education is not part of the standard model of optimal financial decision-making, the reality is that financial planning can be very complicated and behavior is strongly influenced by education. We show that this applies to having a future orientation as well.

Finally, married individuals are less likely to have a short financial planning horizon, perhaps due to the financial stability the marriage provides or perhaps due to the advantages of two people in the households to make financial decisions. On the other hand, single females, Blacks and Hispanics are all more likely to have short financial planning horizons.

CONCLUSION

One of the most important areas of economic decision-making for households is financial planning. While traditional models of financial decision-making emphasize rational agents optimizing utility over their lifetime, in practice people are subject to a multitude of cognitive and behavioral biases. One particular bias is that individuals may not sufficiently plan for the future, which may result in them having insufficient funds at retirement. Given the shift away from defined benefit pension funds to defined contribution pension funds that require the individual to take increased responsibility for their saving, this may be an issue of some concern.

This paper provides evidence on the kinds of factors that affect the degree that individuals are future-oriented in their financial planning. Interestingly, age is not the primary driver of the planning horizon, as younger households in this sample often have shorter horizons. Rather, income and demographic factors seem to affect decision-making, along with idiosyncratic attitudes towards financial planning. This supports the argument made in Becker and Mulligan (1997) that wealth and education should increase future orientation.

Public policy that is directed towards increased financial planning and a more future orientation should take this into account. Some variables, such as health shocks, reflect uncertainty that could not be directly addressed through policy (although increased availability of health insurance may ameliorate their effects). On the other hand, the importance of education in financial decision-making is something that shows up in many studies, including this one. While increasing the average level of education in the population is likely to be slow and expensive, targeted increases in education about financial planning would be cheaper and may produce similar results.

ENDNOTES

¹Question on financial planning horizon was not asked in wave 2 and 3 of the HRS survey.

²We used the RAND HRS Data file in this study. The RAND HRS Data file is an easy to use longitudinal data set based on the HRS data. It was developed at RAND with funding from the National Institute on Aging and the Social Security Administration.

REFERENCES

- Ameriks J. & Zeldes, S. (2004) How do household portfolio shares vary with age? Columbia University working paper.
- Barberis, N. & Thaler, R. (2003) A survey of Behavioral Finance. Handbook of the Economics of Finance, Edited by G.M. Constantinides, M. Harris and R. Stulz, Elsevier Science B.V.
- Becker, G. & Mulligan, C. (1997) The Endogenous Determination of Time Preference, *The Quarterly Journal of Economics* 112, 729-758.
- Berkowitz, M. & Qiu, J. (2006) A further look at household portfolio choice and health status, *Journal of Banking and Finance* 30, 1201-17.
- Bergstresser, D. & Poterba, J. (2004) Asset allocation and asset location: household evidence from the survey of consumer finances, *Journal of Public Economics* 88, 1893-1915.
- Bertaut, C. & Starr-McCluer, M. (2000) Household portfolios in the United States, Federal Reserve Board of Governors working paper.
- Bodie, Z., Merton, R. & Samuelson, W. (1992) Labor Supply Flexibility and Portfolio Choice in a Life-Cycle Model. *Journal of Economic Dynamics and Control* 16, 427-449.
- Campbell, J. (2006) "Household Finance" *Journal of Finance*, 61, 1553-1604.
- Choudhury, S. (2001/2002) Racial and ethnic differences in wealth and asset choices, *Social Security Bulletin* 64, 1-15.
- Cochrane, J. (1999) Portfolio advice for a multifactor world, *Economic Perspectives* (Federal Reserve Bank of Chicago) 23, 59-78.
- Cohn, R., Lewellen W., Lease, R. & Schlarbaum, G. (1975) Individual investor risk aversion and investment portfolio composition. *Journal of Finance* 30, 605-620,
- Dow, James, P. (2009) Age, Investing Horizon and Asset Allocation, *Journal of Economics and Finance* 33, 422-436.
- Fan, E. & Zhao, R. (2009) Health status and portfolio choice: Causality or heterogeneity?" *Journal of Banking and Finance* 33, 1079-1088.
- Hariharan, G., Chapman, K. & Domian, D. (2000) Risk tolerance and asset allocation for investors nearing retirement. *Financial Services Review* 9, 159-170.
- Kullmann, C. & Siegel, S. (2003) Real Estate and its Role in Household Portfolio Choice, University of British Columbia working paper.
- Riley, W. & Chow, K. (1992) Asset allocation and individual risk aversion, *Financial Analysts Journal* 48, 32-37.
- Rosen, H. & Wu, S. (2004) Portfolio choice and health status. *Journal of Financial Economics* 72, 457-484.
- Schooley, D. & Worden, D. (1996) Risk Aversion Measures: Comparing Attitudes and Asset Allocation, *Financial Services Review* 5, 87-99.
- Shum, P. & Faig, M. (2006) What explains household stock holding? *Journal of Banking and Finance* 30, 2579-2597.
- Wang, H. and Hanna, S. (1997) Does Risk Tolerance Decrease with Age? *Financial Counseling and Planning* 8, 27-31.
- Wahlund, R. & Gunnarsson, J. (1996) Mental discounting and financial strategies, *Journal of Economic Psychology* 17, 709-730.