Three Essays on Women and Retirement

by

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Abstract

In 2013, the life expectancy at birth for American females was approximately six years longer than for their male counterparts. Therefore, an understanding of retirement security is particularly important for women.

Up until the mid-90s the focus was primarily on the experience of aging men, not women. For example, some research concluded that Social Security (SS) has same effect on all workers, that SS benefits cause labor force reduction, but ignored female workers in their analysis. It was not until 1981 that Congress convened a special committee on the concerns of aging women and their well-being. Therefore, there is a need for research that is devoted to women's attitudes and responses to retirement.

It also is important to acknowledge that family structure is changing in the U.S. About 27 percent of women between the ages of 65 and 75 lived alone in 2014. In many traditional American households, men often handle retirement planning. This delegation has created a gap in women's understanding and engagement in retirement planning among women. This issue may have even deeper ramifications for them, as an insufficient understanding of finances can lead to their mismanagement of their finances. Thus, it is important for women to be able to prepare wisely for their own retirement.

The lives of many older women are filled with endless responsibilities that cause them to have inadequate retirement savings. Many women, raise children and/or take care of adult relatives and this interrupts their careers and cause them to earn lower wages. These lower wages impact them over time, as lower lifetime

earnings mean less income to save in retirement plans and smaller SS benefits as these benefits are based on employment earnings. Women live longer and are less likely to have access to pensions and retirement savings plans. Thus, they are less likely than men to be prepared for retirement. This dissertation analyzes women and their retirement security.

In the first chapter of this dissertation, I examine the post-retirement financial satisfaction of women with respect to their available retirement resources. In particular, the chapter examines whether women are more financially satisfied with annuitized income than other income. I find little evidence that having a higher percentage of income that is fixed income results in higher women's financial satisfaction.

The second chapter analyzes the remarrying decisions of widows by examining the effects of the social security age restriction rule. According to the current rule, a widowed individual can continue to receive the benefits from a previous marriage if the remarriage occurs at or after the age of 60. The results suggest that individuals that are age 60 and younger are less likely to remarry. Thus, Social Security Rule of Age restriction is associated negatively with the remarriage decision of widows.

The third chapter examines whether individuals trust financial professionals and accept what they recommend. The results suggest that women are more likely to trust financial professionals and that individuals that are near retirement age are less likely to trust financial advisors. Thus, it concludes that gender and age are important personal characteristics that influence trust in financial professionals.

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Chapter 1:

Annuitization and Financial Satisfaction Among Women

Introduction

Prior to 1990, research on women's retirement was limited as the literature focused on men and husbands (Hurd, 1990). After 1990, research started addressing this gap by examining gender differences in retirement income.

The type and the level of resources that a household can access is affected by the way household members allocate their time between the labor force and household production (Becker, 1965). Women face unique challenges in retirement due to their lower labor force participation and a greater household production. In traditional households, the secondary earner, usually the woman, participates only marginally in the labor market (Apps and Rees, 1999), meaning lower retirement savings (Shuey and O'Rand, 2004). For example, women's low earnings may cause them to contribute less into their DC plans and/or receive lower employer contributions, thus, cause them to accumulate few pension assets. Furthermore, if they don't work consistently they might not even become qualified for the DB plans (Shaw and Hill, 2002). In addition, Apps and Rees (2001) suggest that the source, whether the secondary earner provides income or not, of household income, has implications on the savings patterns. Thus, intra-household decisions regarding savings have significant implications in women's retirement incomes. With the given circumstances, women tend to have low accumulated assets or do not have retirement income plans at all (Jefferson, 2005).

According to the survey, only 55 percent of women are confident about retiring comfortably (Annual Transamerica Retirement Survey, 2016). Perhaps this is due to the degree of uncertainty of their income. Annuitized income such as SS provide fixed, certain, monthly income which protects the retirees from longevity risks. On the other hand, income from DC plans or IRAs can fluctuate randomly month to month. Women may be more financially satisfied with guaranteed, certain, income. The effects of annuitized income on well-being of retirees is not studied widely, thus there is a need in this domain. There is a growing body of empirical research on retirement income resources, but that too has focused on male retirees.

As a result, there is little research that explores the sources of women's retirement income. This paper analyzes the post-retirement financial satisfaction of women with respect to the available retirement resources. In particular, it examines whether women are more financially satisfied with annuitized income.

Literature Review

Women's economic lives have changed. Since the 1950s women's labor force participation has more than doubled and, in 2014, 57 percent of women participated in the labor force (U.S. Bureau of Labor Statistics Reports, 2015). In addition, among those who were in the labor force, 40 percent of them had college degree (BLS Report, 2015). This increase in women labor force participation can account for a portion of GDP growth in the last decades (Hoffman & Averett, 2010). Thus, studying women's economic behavior is important.

Given the increase in the educational attainment of women, they should have higher income than before. However, despite the legislation guaranteeing equal pay for equal work and preventing workplace inequality women's earnings are still low (Goldin, 1990). Perhaps this is due to women (1) working in low-pay occupations (2) they value the non-pecuniary aspects of their jobs more, and/or, (3) they specialize in household production, choosing jobs that will allow them to have better work-life balance (Hoffman & Averett, 2010).

Economists assume that individuals are rational decision makers. However, sometimes individuals are not well informed (Hoffman & Averett, 2010). The ability of individuals to make well-informed financial decisions can be hindered by a lack of financial literacy (Collins, 2012). Lusardi & Mitchell (2008) find that financial literacy is low among women, thus leading them to fail to prepare for their retirement. Zissimopoulos, Fonseca and Mullen (2012) report that this could be due to women specializing in household's production.

Researchers have studied several effects of household production on retirement. Danigelis & McIntosh (2001) suggest that having a pension income rather than another type of retirement income is important for women. Harrigton-Meyer & Pavalko (1996) find that widows and unmarried women's retirement income is much lower than that of other groups. Furthermore, Hyman (1983) observes that divorced and separated women experience more dissatisfaction with their financial situations than widowed or married women. Examining retirement satisfaction and health

among women, Price and Joo (2005) report that married and remarried women have higher satisfaction rates compared to other groups of women.

One of the reasons that women face economic challenges before and during retirement is that they have a long-life expectancy (Hoffman and Averett, 2010). Women also tend to have smaller pensions and lower social security benefits than men. (Johnson, 1999). Perhaps, women's gap in pension coverage and their longevity risk can be reduced by annuitized products. Because annuitized products can pay a stream of income for life, they allow their beneficiaries to reduce their longevity risk. Hurd (1989) reports that annuitization increases the expected lifetime utility of retirees. Agnew, et al. (2008) find that 38 percent of women choose annuity options in their retirement plans. Furthermore, Mitchell et al. (1999) suggest that women are more likely to annuitize their income. They also report that, although many retirees do not favor annuitization, those with less retirement savings and those who demonstrate low risk tolerance are more likely to annuitize their income.

Despite their longevity protection, however, many retirees favor alternatives to annuities in funding their retirement (Dushi & Webb 2004). Hurd & Panis (2006) report that only 7 percent of retirees with DC plans annuitize their assets. There are several explanations on why people to do not annuitize their asset. These include (1) bequest motives, (2) pre-existing annuitization, and/or (3) self-insurance by marriage (Brown, 2000; Dushi & Webb 2004; Paschenko 2013). One can bequeath non-annuitized wealth, but not annuitized wealth. Retirees do not annuitize because they want to keep their assets in a form that they can transfer to their beneficiaries upon

their deaths (Hurd, 1989). This is often referred to as the bequest motive. High levels of pre-existing annuitized income from SS benefits or private DB plans also can lower demand for voluntary annuitization because individuals who have them may feel that they do not need additional annuitized income (Dushi and Webb 2004; Pashchenko 2013). Kotlikoff and Spivak (1981) report that marriage can provide risk sharing arrangements that can substitute for annuitized products.

Women may be more financially satisfied with guaranteed –certain- income. According to Toscana et al. (2006), the steadier income, the more financially satisfied the individual can be. The effects of annuitized income on well-being of retirees is not studied widely. This study seeks to fill gap in research on women in retirement planning, by examining the impact of annuitized income on the financial satisfaction of women.

Theory

According to consumer theory, the goal of the consumer is to spend her available income so as to maximize her utility, where utility is defined as the enjoyment or satisfaction that she receives from consuming goods and services. However, income may be uncertain, and this uncertainty reduces utility.

Individuals prefer a fixed monthly income to one that fluctuates from month to month. The more uncertain their resources are, the less satisfied they become (Vera-Toscano, Ateca-Amestoy and Serrano-Del-Rosal, 2006). SS benefits can be thought of as a pension or annuity income that does not fluctuate. Annuitized incomes provide fixed incomes, and fixed incomes lead to higher levels of happiness. DC plans, such

as 403(b)s, 401(k)s, and Individual Retirement Accounts, provide unstable income and expose retirees to financial risk. The main disadvantage of traditional DC plans is that retirees do not know how much income they will receive during retirement. Because financial risk is placed on retirees and their incomes fluctuate, their utility may be reduced.

The key hypothesis is whether annuitized, fixed, income has an impact on financial satisfaction in retirement. In particular, the greater the percentage of income that is fixed, the greater should be a person's financial satisfaction should be.

Many married women choose not to invest in financial knowledge, delegating financial decisions to their husbands instead. Because divorced and widowed women have less financial human capital at retirement that they can use to estimate how best to spread spending over an uncertain lifetime, it is predicted that divorced and widowed women have will be less financially satisfied than married women.

Demographic characteristics can be seen as proxies for preferences that affect utility. Thereby, it is also hypothesized that age, education, race, and ethnicity will impact financial satisfaction.

Data

The data come from the 2012 wave of the Health and Retirement Study (HRS), a longitudinal panel study that surveys a representative sample of approximately 20,000 Americans over the age of 50. From this wave, information regarding individuals' Social Security income, other pension income, total income, insurance

coverage, and general demographic characteristics is obtained. In addition to data from the core survey, data from the leave-behind questionnaire also is used.

The "leave-behind questionnaire" is actually two separate questionnaires, each of which collects additional information from respondents without extending the length of the survey. The first questionnaire is called the "Participant Lifestyle Questionnaire" and the second questionnaire is called the "Participant Questionnaire on Work and Health." In the 2012 wave of the HRS, participants were divided into two random samples, each of which received one of the questionnaires: half received the Participant Lifestyle Questionnaire, while the other half received the Participant Questionnaire on Work and Health. In the next wave, the individuals received the questionnaire that they did not receive in the previous wave.

After dropping observations with missing values, 10,142 respondents remain in the sample. Retirees, defined as those individuals who were at least 50 years old at the time of the survey, were not currently in the labor force, and reported being retired, comprise a sample of 4,176 retirees. Males are dropped from this sample, leaving 2,439 female retirees. Of these, 340 of them also were dropped to ensure full retirement status (Some of them claimed they had employment income, thus individuals with labor income were dropped.). These leave a sample of 2,099 female retirees.

The dependent variable, financial satisfaction, is measured with a 5-point Likert-type question asked in the leave-behind questionnaire. The question is,

"How satisfied are you with (your/ your family's) present financial situation?"

The responses were coded: 5 = Not at all satisfied, 4 = Not very satisfied, 3 = Somewhat satisfied, 2= Very satisfied, and 1 = Completely satisfied. Thus, the dependent variable is a limited dependent variable. The financial satisfaction of individuals is of interest because financial satisfaction is part of economic well-being and is used by many researchers as an alternative for utility (Clark, Frijters, & Shields, 2008). Table 1.1 displays the distribution of financial satisfaction responses for the sample.

Table 1.1 Distribution of Financial Satisfaction Responses

Financial Satisfaction	Number	Percentage
1- Most Satisfied	438	20.87%
2	585	27.87%
3	689	32.83%
4	258	12.29%
5-Least Satisfied	129	6.15%
Total	2099	100.00%

Financial satisfaction is a function of income, prices, and preferences. Thus, explanatory variables include marital status, age, race, ethnicity, education level, health insurance ownership, Social Security, other pension income, and total income.

The percentage of income from SS is included as an explanatory variable because SS is a guaranteed monthly income that provides a regular income stream for one or more lifetimes. This allows individuals more freedom to spend without the risk of over- or under-spending a lump sum of financial assets, as under-spending is also a risk because it indicates a lack of enjoyment of life with adequate financial resources.

Thus, Social Security (SS) income is expected to have a positive effect. Percentage of other pension income also is included as an explanatory variable because, like Social Security income, it also is annuitized and seen as a guaranteed source of income. It is expected to have a positive effect, similar to that of SS income. Total income also is included as an explanatory variable because utility is increased by consuming goods and services, and higher income can be expected to predict higher utilities. Thus, the effect of total incomes is expected to be positive.

Marital status and economic well-being are highly associated. When marital disruptions occur, women lose their significant others but also lose their husbands' income. This reduction in income may cause a reduction in consumption and lead to lower utility levels. Therefore, the effect of being divorced or widowed on financial satisfaction are expected to be negative.

Health insurance coverage also is included as an explanatory variable. Health insurance coverage is an explanatory variable because health insurance ownership may decrease worries about paying for potential medical expenditures. Thus, it is included and is expected to have a positive effect.

Age is an explanatory variable because as individuals get older they concern more about health, length of life, and financial security. Thus, it is included and is expected to have a negative effect. The demographic factors of race, ethnicity, and education level are explanatory variables because they can affect preferences. Thus, they are included, and the effects are unknown.

Descriptive Statistics

Table 1.2 provides descriptive statistics of the variables that are used in the analysis. On average, 20% of retirees are completely satisfied with their current financial situation. 27% of retirees very satisfied, 32% of them somewhat satisfied, 12% of them not very satisfied, and 6% of retirees are not at all satisfied with their current financial situation. Average income is 3.82 (in 10K). On average individuals receive their half of income from fixed (guaranteed) income and 87% of them have governmental health insurance. Regarding the personal characteristics of the retirees in the sample, their average age is 72. 48% of them married, 4% of them never married, 13% are divorced and 36% of them are widowed. 81% are white, 4% are other race, 8% of them are Hispanic, and 40% have at least a college degree.

Table 1.2: Descriptive Statistics

N= 2,099	Mean	Standard Error
Dependent Variable		
Financial Satisfaction		
1 *(Most Satisfied)*	0.2087	0.4065
2	0.2787	0.4485
3	0.3283	0.4697
4	0.1229	0.3284
5 *(Least Satisfied)*	0.0615	0.2402
Economic Characteristics		
Income (10K)	3.82	5.88
Income Squared	49.12	513.24
Fixed Income	51.59	38.16
Health Insurance	0.87	0.34
Demographic Characteristics		
Married	0.48	0.50
Never Married	0.04	0.19
Divorced	0.13	0.33
Widowed	0.36	0.48
Age	73.33	9.13
Age Squared	5461.33	1340.41
College Degree	0.4080	0.49
White	0.8020	0.40
Black	0.1520	0.36
Other	0.0460	0.21
Hispanic	0.0820	0.28

Model

Given that financial satisfaction (the dependent variable) is a categorical variable, an ordered probit model is estimated:

$$finsat_i^* = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \beta_3 x_{3i} + \beta_4 x_{4i} + \beta_5 x_{5i} + \beta_6 x_{6i} + \beta_7 x_{7i} + \beta_8 x_{8i} + \beta_9 x_{9i} + \beta_9 x_{9i} + \beta_{10} x_{10i} + \beta_{11} x_{11i} + \varepsilon_i$$

$$\varepsilon_i | x_i \sim N(0,1)\ iid,$$

$$finsat_i = \begin{cases} 1\ if\ \ finsat_i^* < \alpha_1, \\ 2\ if \alpha_1 < finsat_i^* < \alpha_2, \\ 3\ if\ \alpha_2 < finsat_i^* < \alpha_3, \\ 4\ if\ \alpha_3 < finsat_i^* < \alpha_4, \\ 5\ if\ \alpha_4 < finsat_i^*. \end{cases}$$

where $finsat_i^*$ is a latent (unobservable) variable representing actual, but unmeasurable financial satisfaction. The higher $finsat_i^*$ is, the higher financial satisfaction is. $finsat_i$ is the observed level of financial satisfaction that takes values from 1 to 5. The α's are the unobserved thresholds that delineate the different reported and observed measures of financial satisfaction. ε_i is an error term and is assumed to follow a standard normal distribution.

The estimated coefficients are the projected effects of the explanatory variables on the unobserved level of financial satisfaction. The variable x_{1i} represents total household income. It is the total household income, in the term of $10,000, of the respondent. The effect of total income on latent financial satisfaction, β_1 is predicted to be positive.

Panis (2003) and Bender (2012) report that individuals with more annuitized income have higher satisfaction in retirement. The variable x_{2i} represents the degree

of fixed income. It is defined as the percentage of total fixed income –the sum of Social Security, other pension and annuity income- to total household income. The effect of degree of fixed income on the dependent variable, β_2, is expected to be positive.

The variable x_{3i} is a dummy variable for whether the respondent is divorced. It equals 1 if the individual is divorced and 0 if not. The variable x_{4i} is dummy variable for whether the respondent is widow. It equals 1 if the individual is a widow and 0 if not. The variable x_{5i} is dummy variable indicating whether the respondent has never been married. Being married is the comparison category and so it is omitted. β_3 and β_4 are expected to be negative. Never married women in this case should be similar to married women because they are accustomed to handling the household finances.

The variable x_{6i} a dummy variable indicating whether the respondent has health insurance or not. It is equal to 1 if the individual has a health insurance and 0 if not. The effect of having health insurance, β_6, is expected to be positive.

The variable x_{7i} indicates the age of the respondent. The effect of being in the different age, β_7, is expected to be negative. The variable x_{8i} takes the value of 1 if the respondent has a bachelor's degree or higher and 0 not. β_8, the effect of education is expected to be positive. The variable x_{9i} is a dummy variable indicating whether the respondent is white. It is equal to 1 if the individual is white and 0 if she is of any other race. The variable x_{10i} is a dummy variable indicating whether the respondent is Hispanic or not. It is equal to 1 if the individual is Hispanic and 0 if not. The variable

x_{10i} is a dummy variable indicating whether the respondent is Hispanic or not. The variable x_{11i} is a dummy variable indicating whether the respondent reports other race or not. The effect of race, β_9, and the effect of being Hispanic, β_{10}, the effect of other race, β_{11}, are not sign able a priori.

Results

Marginal effects for the ordered probit model are displayed in Table 1.3. The results show that the higher is the percentage of income that is fixed, the lower are the probabilities of being in the highest two financial satisfaction categories by 0.0005 and 0.0002, respectively, and the higher are the probabilities of being in the lowest three financial satisfaction categories by 0.0002 at each level of financial satisfaction. According to the theory of consumer choice under uncertainty, one might expect that individuals with higher percentage of income that is fixed would have higher financial satisfaction levels. When large percent of income is uncertain that uncertainty reduces the utility. The more certain their resources are the more satisfied they would become. However, the results show the opposite. Perhaps this is due to retirees' heavy reliance on Social Security to finance their consumption in retirement. Many people believe Social Security benefits and other governmental benefits will not be available when they retire, and this might be associated with having lower financial satisfaction levels.

On the other hand, the results show that income increases the probabilities of being in the highest two financial satisfaction categories by 0.015 and 0.006, respectively, and decreases the probabilities of being in the lowest three financial satisfaction categories by 0.007, 0.008, and 0.006, respectively. One may suspect that

the positive relationship between income and financial satisfaction is due to utility maximization through income. The results are not consistent with theory. It is due to the fact that the majority of the respondents have little income.

Being divorced decreases the probabilities of being in the highest two financial satisfaction levels by 0.083 and 0.046, respectively, and increases the probabilities of being in the lowest three financial satisfaction levels by 0.03, 0.05, and 0.46, respectively, compared to being married. These results are consistent with the theory because divorced individuals are expected to have lower financial human capital and thus lower financial satisfaction.

Having governmental health insurance decreases the probabilities of being in financial satisfaction levels 1 and 2 by 0.05 and 0.17, respectively, and increases the probabilities of financial satisfaction levels of 3 and 4 and 5 by 0.027, 0.025 and 0.019, respectively. This is not consistent with the theory and like the percentage of fixed income, this might be due to belief of that government benefits such as Social Security may not be available.

Having a college degree increases the probabilities of being in the highest two financial categories by 0.03 and 0.012, respectively, and decreases the probabilities of being in the lowest three financial satisfaction levels by 0.016, 0.016, and 0.013, respectively, compared to not having a college degree. This is consistent with the theory of financial human capital.

The results show that one additional year in age increases the likelihood of being in financial satisfaction levels 1 and 2 by 0.0076 and 0.0300, respectively, and

decreases the probabilities of financial satisfaction levels of 3,4, and 5 by 0.0035, 0.0038, and 0.003, respectively.

Compared to white respondents, black individuals are less likely to be in the highest two financial satisfaction levels by 0.06 and 0.03, respectively, and more likely to be in the lowest financial satisfaction categories by 0.028, 0.038 and 0.033, respectively.

No significant differences with respect to financial satisfaction have been found for the widowhood, never married, other race, and ethnicity variables.

Table 1.3: Marginal Effects of Demographics and Economic Resources on Financial Satisfaction

N=2999	**Financial Satisfaction**	**Marginal Effect**	**Std. Err.**
Income	1	0.0157***	0.0022
	2	0.0063***	0.0010
	3	-0.0074***	0.0011
	4	-0.0080***	0.0012
	5	-0.0065***	0.0010
Fixed Income			
	1	-0.0005*	0.0002
	2	-0.0002*	0.0001
	3	0.0002*	0.0001
	4	0.0003*	0.0001
	5	0.0002*	0.0001
Never Married			
	1	-0.0102	0.0331
	2	-0.0043	0.0145
	3	0.0047	0.0151
	4	0.0053	0.0176
	5	0.0044	0.0149
Divorced			
	1	-0.0834***	0.0174
	2	-0.0466***	0.0128
	3	0.0334***	0.0057
	4	0.0503***	0.0125
	5	0.0462***	0.0129
Widowed			
	1	0.0009	0.0192
	2	0.0004	0.0076
	3	-0.0004	0.0091
	4	-0.0005	0.0098
	5	-0.0004	0.0080
Age			
	1	0.0352***	0.0097
	2	0.0141***	0.0039
	3	-0.0167***	0.0047
	4	-0.0179***	0.0049
	5	-0.0146***	0.0041

Significance level: *** p<.001, ** p<.05, * p<.1

Table 1.3: Cont. Mar. Effects of Demographics and Economic Resources on Financial Satisfaction

N=2999	**Financial Satisfaction**	**Marginal Effects**	**Std. Err.**
Health Insurance			
	1	-0.0558*	0.0258
	2	-0.0177*	0.0063
	3	0.0277*	0.0133
	4	0.0258*	0.0108
	5	0.0200*	0.0080
Education			
	1	0.0335*	0.0133
	2	0.0130*	0.0050
	3	-0.0162*	0.0066
	4	-0.0168*	0.0066
	5	-0.0135*	0.0053
Other			
	1	-0.0441	0.0268
	2	-0.0214	0.0155
	3	0.0190	0.0101
	4	0.0246	0.0163
	5	0.0220	0.0159
Black			
	1	-0.0659***	0.0153
	2	-0.0338***	0.0098
	3	0.0281***	0.0059
	4	0.0380***	0.0100
	5	0.0335***	0.0097
Hispanic			
	1	0.0125	0.0240
	2	0.0047	0.0086
	3	-0.0060	0.0117
	4	-0.0062	0.0117
	5	-0.0050	0.0092

Significance level: *** p<.001, ** p<.05, * p<.1
Author's calculations based on the RAND Health and Retirement Study dataset

Conclusion

This paper analyzes how American women experience retirement financially. The main concern is that with fixed (guaranteed) income retirees can enjoy their retirement without having anxiety of depleting their resources. The results show little evidence that a higher percentage of retirement income that is fixed (guaranteed) leads to higher levels of financial satisfaction.

I believe these results are likely to understate the importance of fixed (guaranteed) income in financial satisfaction. Perhaps an analysis that includes financial literacy and risk tolerance is needed to fully understand the association of fixed (guaranteed) income and financial satisfaction. Furthermore, some of these issues can be addressed through policies that will help women understand Social Security benefits better.

Bibliography

Agnew, J. R., L. R. Anderson, J. R. Gerlach, and L. R. Szykman, 2008, Who Chooses Annuities? An Experimental Investigation of the Role of Gender, Framing, and Defaults: *American Economic Review, v. 98*, 418-422.

Apps, P., & Rees, R. (1999). Household Saving, Time Allocation and Taxation.

Apps, P., & Rees, R. (2001). Household production, full consumption and the costs of children. *Labour Economics*, *8*(6), 621-648.

ATRS. (2016). Annual Transamerica Retirement Survey. Retrieved from: https://www.transamericacenter.org/retirement-research/17th-annual-retirement-survey

Becker, G. S. (1965). A Theory of the Allocation of Time. *The economic journal*, 493-517.

Bender, K. A. (2012). An analysis of well-being in retirement: The role of pensions, health, and 'voluntariness' of retirement. *The Journal of Socio-Economics*, *41*(4), 424-433.

BLS Report. (2016) U.S. Bureau of Labor Statistics Report, 2016. Retrieved from: https://www.bls.gov/opub/mlr/2016/

Brown, J. R. (2001). Private pensions, mortality risk, and the decision to annuitize. *Journal of Public Economics*, *82*(1), 29-62.

Collins, J. M. (2012). Financial advice: A substitute for financial literacy?. *Financial Services Review*, *21*(4), 307.

Danigelis, N. L., & McIntosh, B. R. (2001). Gender's effect on the relationships linking older Americans' resources and financial satisfaction. *Research on Aging*, *23*(4), 410-428.

Dushi, I., & Webb, A. (2004). Household annuitization decisions: Simulations and empirical analyses. *Journal of Pension Economics and Finance*, *3*(2), 109-143.

Fonseca, R., Mullen, K. J., Zamarro, G., & Zissimopoulos, J. (2012). What explains the gender gap in financial literacy? The role of household decision making. *Journal of Consumer Affairs*, *46*(1), 90-106.

Goldin, C. (1990). The gender gap: An economic history of American women. *Cambridge UniversityPress, New York, United States*

Hoffman, S. D., & Averett, S. L. (2010). Women and the Economy: Family. *Work and Pay. Pearson Addison Wesley*.

Hurd, M. D. (1989). Mortality risk and bequests. *Econometrica: Journal of the econometric society*, 779-813.

Hurd, M. D. (1990). Research on the elderly: Economic status, retirement, and consumption and saving. *Journal of economic literature*, *28*(2), 565-637.

Hurd, M., & Panis, C. (2006). The choice to cash out pension rights at job change or retirement. *Journal of Public Economics*, *90*(12), 2213-2227.

Health and Retirement Survey (HRS), 2012. The Regents of the University of Michigan. http://hrsonline.isr.umich.edu.

Hyman, H. H. (1983). Of time and widowhood: Nationwide studies of enduring effects. *Durham, NC: Duke University Press.*

Price, C. A., & Joo, E. (2005). Exploring the relationship between marital status and women's retirement satisfaction. *International Journal of Aging and Human Development, 61*, 37-55.

Jefferson, T. (2005). Women and retirement incomes in Australia: A review. *Economic Record*, *81*(254), 273-291.

Johnson, R. W. (1999). The Gender Gap in Pension Wealth: Is Women's Progress in the Labor Market Equalizing Benefits?.

Kotlikoff, L. J., & Spivak, A. (1981). The family as an incomplete annuities market. *Journal of political economy*, *89*(2), 372-391.

Lusardi, A., & Mitchell, O. S. (2008). Planning and financial literacy: How do women fare?. *American Economic Review*, *98*(2), 413-17.

Meyer, M. H., & Pavalko, E. K. (1996). Family, work, and access to health insurance among mature women. *Journal of Health and Social Behavior*, 311-325.

Mitchell, O. S., Poterba, J. M., Warshawsky, M. J., & Brown, J. R. (1999). New evidence on the money's worth of individual annuities. *American economic review*, *89*(5), 1299-1318.

Panis, C. W. (2003). Annuities and Retirement. *RAND Working Paper*, 03-17.

Pashchenko, S. (2013). Accounting for non-annuitization. *Journal of Public Economics*, *98*, 53-67.

Shaw, L., & Hill, C. (2002). *The gender gap in pension coverage: what does the future hold?*. Washington, DC: Institute for Women's Policy Research.

Shuey, K. M., & O'Rand, A. M. (2004). New risks for workers: Pensions, labor markets, and gender. *Annual Review of Sociology, 453-477.*

Chapter 2:

How Do Social Security Rules Affect a Widow's Decision to Remarry?

Introduction

One of the important issues that needs to be discussed in marriage is money. Marriage is not only the coming together of two lives of romantically involved individuals, it is also about the coming together of two different financial histories and situations. Retirement benefits can further complicate this issue when people get married, divorced, or remarried. It can be problematic if a future spouse has been through a divorce or is widowed.

According to the Social Security Administration (SSA, 2017), more than half of married couples get at least half of their retirement income from the SS program. There are many factors that need to be considered when making remarrying decisions. It is important that individuals understand the details of social security spousal benefits and their requirements while making important personal decisions to remarry. In addition to retired or disabled worker benefits, Social Security (SS) usually pays two other forms of benefits: spousal and survivor benefits.

Under the current SSA rules current spouses, widowed spouses and ex-spouses can receive spousal benefits. Current spouses and ex-spouses, if they were married for over 10 years and did not marry prior to age 60, can receive a spousal benefit based on their (ex)spouses if they are 62 years of age and older. On the other hand, after nine months of marriage a widowed individual is eligible to receive a deceased spouse's social security benefits as early as age 60. These benefits are usually higher than the spousal benefits. Most of the time, individuals are surprised to find that they are no

longer eligible to receive their deceased spouse's retirement benefits after remarrying. Under the current rules, a widowed individual can continue to receive the benefits if the remarriage occurs at or after the age of 60. In addition to those rules, regardless of widow(er)s' age or marital status, widowed individuals are eligible to receive the benefits for their deceased spouses' children who is under age of 16.

Social Security rules matter because they reinforce the economic theory and remarriage can lessen the negative effects of widowhood. To analyze the remarrying decisions of widows this paper will estimate a random effects probit model for unbalanced panel that examines the effects of social security age restriction rule on the decision to remarry.

Literature Review

The literature that analyzes the effect of U.S. tax code on marriage decisions suggests that the tax penalties have negative impact on marital decisions. Studies find that individuals time their marriages to avoid paying tax penalties (Alm and Whittington, 1996; Gelardi, 1996). Furthermore, Alm and Whittington (1999) suggest that there is an inverse relationship between the tax penalties and marriage decisions. On the other hand, Waite (1995) finds that marriage is associated with higher income and improved health.

Becker (1974) suggests that individuals choose to be married when the economic value of being married is higher to that of being single. Thus, if the economic value of being single increases for widows, then re-marriage rates would decrease. In fact, researchers demonstrate that remarriage benefits widows by increasing their wealth by planning better for their finances (Wilmoth & Koso, 2002;

Zissimopoulos, 2009). However, a report by the Pew Research Center (2014) shows that only 40% of divorced or widowed individuals remarry.

Empirical evidence concerning marriage, divorce, and social security suggests that money is an important factor for individuals who are considering remarriage. Literature indicates that widowhood has negative consequences on women's economic well-being (Smock & Manning, 1995; Smock, Manning, & Gupta, 1999). A widow may improve her economic standard of living by remarrying. In fact, Holden and Kuo (1996) and Wilmoth & Koso (2002) show that remarriage has positive effects on planning and saving for retirement.

Using continuous-time hazard rate regressions, Smith et al. (1991) find that age has negative consequences on remarriage decisions for widows under age 60. Furthermore, studies indicate that Social Security rules create large disincentives for remarriage. Brien et al. (2001) show that the marriage penalty discourages remarriage. In fact, data collected by Brien et al. (2001) demonstrates that marriage rates drop prior to age 60 and increases after that point. Similarly, international research indicates a large increase in the remarriage rates of widows following the removal of marriage penalties (Baker et al., 2004).

Data

The data for the analysis in this paper comes from the Health and Retirement Study (HRS). The HRS is a longitudinal panel study that surveys, biannually, a representative sample of approximately 20,000 Americans over the age of 50. The HRS data set contains detailed information on demographics, family structure, housing, employment status, and net worth. This study examines data from twelve

waves of the RAND, a revision of the HRS. In this study, a sample of individuals who were widows in Wave 1 are followed for twelve waves. Information regarding individuals' marital status, age, total income, and general demographic characteristics is obtained from wave year 1991 to wave year 2014. After dropping observations with missing values for key explanatory variables, a panel of 543 widows with 4522 observations are remained.

The dependent variable is a dichotomous variable equal to 1 if a widow remarried at time t and zero if otherwise. We defined remarried as women who previously being widowed at baseline 1991, but self-reported being currently married in any follow up questionnaire from 1991 to 2014. The marital status of widowed individuals is of interest because remarrying decisions can be affected by the social security rules regarding remarriage thus their economic well-being.

The independent variables in this study include an indicator variable for being age 60 or less, indicators for race & ethnicity, an indicator for education level, and a continuous measure of total income. Marital status and economic well-being are highly associated. When marital disruptions occur, women lose their significant others but also lose their husbands' income. Thus, total income is added as an explanatory variable. The demographic factors of race, ethnicity, and education level are explanatory variables because they can affect preferences.

Descriptive Statistics

Table 2.1 provides descriptive statistics of the variables that are used in the analysis. Our unit observation is person wave. That means each person is observed on wave basis. 543 widows, 4522 observations with an average of 8.32 waves were

analyzed. This happens because some widows exit the survey due to their death. A remarriage occurred, on average, 6.6% of person wave. Age of less than 60 is 22% of person wave. Average annual income is $ 23,800, with the value of 2.38 (in 10K$). Regarding the personal characteristics of the widows in the sample, 8.6% of them have a Hispanic background, 64% of them are white, 31% of them are black and about 5% have another race. 27% of them have at least college degree on average.

Table 2.1: Descriptive Statistics

N= 4522
n= 543
T-bar = 8.32

	Mean	Standard Error
Dependent Variable		
Remarried	0.66	0.24
Key Explanatory Variable		
Age less than 60	0.22	0.41
Economic Characteristics		
Income (10K$)	2.38	5.65
Demographic Characteristics		
College Degree or Higher	0.27	0.44
White	0.64	0.47
Black	0.31	0.46
Other	0.04	0.21
Hispanic	0.08	0.28

Represents data from RAND 1991- 2014 Waves

Model and Theory

Serial correlations can be controlled by including characteristics of the units that are either constant over time or that change over time. In this research certain factors such as our key explanatory variable, age, change over time; however, factors such as race, ethnicity, and education level do not change over time. Also, while we can observe many characteristics, there are also some that we cannot. These unobserved characteristics could be specific to the unit (an individual/widow), and thus, time invariant. Binary response models for panel data always include the unobserved unit-specific error (Schmidt et al., 2013). Due to the discrete nature of the dependent variable, a random effects probit model for unbalanced panel is estimated. This model is warranted because it assumes that unit's error term is not correlated with the explanatory variables and allows the researcher to estimate effects for time-invariant variables. The model focuses on the probabilities for all the $t = 1, \dots T$ observations of unit i over time. Because every unit has different number of observations, the upper limit, T, is individualized with an unbalanced model. The dependent variable $Remarr_{it}$ is a dummy variable that takes a value of 1 if the respondent is ever remarried, and a value of 0 if otherwise. The unbalanced panel probit model used in this analysis can be written as:

$$Remarr_{it}^{*} = \beta_0 + \beta_1 x_{1it} + \beta_2 x_{2it} + \beta_3 x_{3it} + \beta_4 x_{4it} + \beta_5 x_{5it} + \beta_6 x_{6it} + \varepsilon_{it}$$
$$Remarr_{it} = 1 \; if \; Remarr_{it}^{*} > 0$$
$$Remarr_{it} = 0 \; if \; Remarr_{it}^{*} \leq 0$$

While we do not observe $Remarr_{it}^{*}$, we do observe the discrete choice made by the widow. The widow undertakes a cost-benefit analysis and decides to remarry if

the net utility is positive. $Remarr_{it}^{*}$ is the unobserved (because we cannot measure the amount of net utility) net benefit of remarriage to widow i and $Remarr_{it}$ is a dichotomous variable indicating whether or not a remarriage is observed. The estimated coefficients are the estimated effects of the explanatory variables on the net benefits of remarriage.

The variable x_{1it} is a dummy variable indicating whether the respondent is age 60 or younger. It is equal to 1 if the individual is 60 or younger and 0 if she is not. The variable x_{2it} is a continuous variable that gives the value of total annual income. The variable x_{3it} takes the value of 1 if the respondent has a bachelor's degree or higher and 0 if she has not earned a bachelor's degree. The variable x_{4it} is a dummy variable for whether the respondent is white. It is equal to 1 if the individual was white, and 0 if not. The variable x_{5it} is a dummy variable for whether the respondent has another race. It is equal to 1 if the individual has another race, and 0 if not. The variable x_{6it} is a dummy variable indicating whether the respondent was Hispanic or not. It is equal to 1 if the individual was Hispanic and 0 if not. ε_{it} is an error term that follows the standard normal distribution.

Gary Becker's (1974) economic theory of marriage suggests that, if individuals enter a marriage, there must be benefits that outweigh the costs. The choice to get married depends on the utility that one will derive from the marriage. If the utility obtained from marriage exceeds the utility of being single, then an individual will choose to marry.

Overall, there must be a gain from a marriage. For example, if a gain does not exist for both parties, a marriage would not occur or would end in divorce. In other

words, economic incentives should encourage marriage and remarriage decisions (Becker 1974). Therefore, individuals should wait to remarry if they are widowed due to financial benefits that come from waiting to remarry until they reach the required ages and years.

Hypothesis:

H_0: SS age restriction does not affect a widow's remarriage decision.

H_α: SS age restriction does affect a widow's remarriage decision.

Our hypothesis has been tested by Brien et al. (2004). The authors' results suggest that age restriction affects remarriage decisions. In their analysis, authors used the Panel Study of Income Dynamics data and an OLS model. In the current study, we are testing the same hypothesis using different and newer data, Health and Retirement Study data and a newer empirical technique, unbalanced panel probit model. This model allows us to follow up individuals and to be able to repeat the measurements of marital status which allows for control of prior marital statuses.

Under the current Social Security rules, a widow/er can receive a Social Security benefit based on her/his spouse's earnings if s/he does not remarry before the age of 60. Many widows may choose not to remarry because of the eligibility requirement of the Social Security system. Therefore, β_1, the marginal effect of age of 60 and younger on remarriage, is expected to be negative, that is, an age of 60 or younger would lower the probability of remarriage.

According to Becker's theory (1974), individuals choose to marry if both parties expect that marriage will increase their utility from when they are single. So, financially secure and independent women should be more likely to remarry compared

to women who have limited financial sources. Thus, β_2, the marginal effect of the total annual income is expected to be positive. β_3, the marginal effect of having at least a college degree; β_4, the marginal effect of being white; β_5, the marginal effect of having another race; and, β_6, and the marginal effect of being Hispanic, are not signable a priori.

Results

Marginal effects for the random effects unbalanced panel probit model are displayed in Table 2.2. The marginal effect for age less than 60 is found to be statistically different from zero. The results show that being at age less than 60 decreases the probability of remarrying by 0.0547 at alpha level of 0.01 meaning that a widow has a decreased probability of getting remarried, holding other things equal, of 5. 45%.

According to the results, income, having a college degree, race and ethnicity reflected no relationships with remarrying decisions. These variables have not been found to be statistically different from zero.

Table 2.2: Average Marginal Effects of Demographic Characteristics and Economic Resources on Remarriage

N= 4522
n= 543
T-bar = 8.32

	Marginal Effect	Standard Error
Key Explanatory Variable		
Age less than 60	-0.0547***	0.0086
Economic Explanatory Variable		
Income (10K$)	0.0002	0.0002
Demographic Characteristics		
College Degree	-0.0199	0.0146
Black	0.0001	0.0135
Other	-0.0083	0.0320
Hispanic	-0.0153	0.0243

Significance level: *** p<.001, ** p<.05, * p<.1
Author's calculations based on the RAND Health and Retirement Study dataset

Conclusion and Policy Implications

Several factors including, age, religious activities, tax code etc. affect women's decisions to marry or to remarry. This paper used a model that relates financial and demographic characteristics to marital decisions. Our results suggest that individuals that are age 60 and younger are less likely to remarry. This evidence is consistent with the prediction of Becker's (1974) marriage model that Social Security remarriage age is associated negatively with the remarriage decision of widows.

These results go against other government pro-family policy because of increasing temptation of cohabitation as a choice of re-partnering rather than remarriage. Thus, losing getting access to possible partner's assets, health insurance, pension benefits, etc. because they are not married. This ensures the importance and the need of better retirement planning. On the other hand, in 2016, there were nearly 14.2 million widowed persons in the United States (BLS, 2016). Over 11 million of the widowed persons, in the U.S., were women. Among widows about 95 percent were age fifty and older. This also is important because this shows a large number of the population might be affected by the SS restriction rule.

Social security rules may have unintended consequences that may not reside in the intended purpose of social security benefits. While social security aims "to protect aged and disabled persons against the expenses of illnesses that may otherwise use up their savings" (SSA Administration), an awareness of these unintended consequences might help develop clear purposeful policy moving forward: policy that doesn't leave in its wake such adverse effects.

Bibliography

Andreß, H. J., Golsch, K., & Schmidt, A. W. (2013). *Applied panel data analysis for economic and social surveys*. Springer Science & Business Media.

Alm, J., & Whittington, L. A. (1996). The rise and fall and rise... of the marriage tax. *National Tax Journal*, 571-589.

Alm, J., Dickert-Conlin, S., & Whittington, L. A. (1999). Policy watch: The marriage penalty. *The Journal of Economic Perspectives*, *13*(3), 193-204.

Baker, M., Hanna, E., & Kantarevic, J. (2004). The Married Widow: Marriage Penalties Matter!. *Journal of the European Economic Association*, *2*(4), 634-664.

Becker, G. S. (1973). A theory of marriage: Part I. *The Journal of Political Economy*, 813-846.

Brien, M. J., Dickert-Conlin, S., & Weaver, D. A. (2001). Widows waiting to wed?(Re) Marriage and economic incentives in Social Security widow benefits.*Journal of Human Resources*, *39*(3), 585-623.

BLS Report. (2016) U.S. Bureau of Labor Statistics Report, 2016. Retrieved from: **https://www.census.gov/data/tables/2016/demo/families/cps-2016.html**

Gelardi, A. M. (1996). The influence of tax law changes on the timing of marriages: A two-country analysis. *National Tax Journal*, 17-30.

Health and Retirement Survey (HRS), 1991-2014. The Regents of the University of Michigan. http://hrsonline.isr.umich.edu.

Holden, K. C., & Kuo, H. H. D. (1996). Complex marital histories and economic well-being: The continuing legacy of divorce and widowhood as the HRS cohort approaches retirement. *The Gerontologist*, *36*(3), 383-390.

Loughran, D. S., & Zissimopoulos, J. M. (2009). Why wait? The effect of marriage and childbearing on the wages of men and women. *Journal of Human resources*, *44*(2), 326-349.

Manning, W. D., & Smock, P. J. (1995). Why marry? Race and the transition to marriage among cohabitors. *Demography*, *32*(4), 509-520.

Smock, P. J., Manning, W. D., & Gupta, S. (1999). The effect of marriage and divorce on women's economic well-being. *American Sociological Review*, 794-812.

SSA. (2017). Social Security Administration Fact Sheet. Retrieved from: https://www.ssa.gov/news/press/factsheets/basicfact-alt.pdf

Smith, K. R., Zick, C. D., & Duncan, G. J. (1991). Remarriage patterns among recent widows and widowers. *Demography*, *28*(3), 361-374.

Waite, L. J. (1995). Does marriage matter?. *Demography*, *32*(4), 483-507.

Wilmoth, J., & Koso, G. (2002). Does marital history matter? Marital status and wealth outcomes among preretirement adults. *Journal of Marriage and Family*, *64*(1), 254-268.

PRR. (2014). Pew Research Center Report. Retrieved from: http://www.pewsocialtrends.org/2014/11/14/four-in-ten-couples-are-saying-i-do-again/

Chapter 3:

Do Women Trust Financial Advisors?

Introduction

Consumers face risks when purchasing financial services. One of these may be the need to trust a financial planner or advisor to offer appropriate products and to provide a high quality of services. Trust facilitates business activities in the market. When people trust each other, transaction costs in economic activities are reduced (Alesina & La Ferrara, 2002; Dyer 2003). Therefore, trust is necessary for rapid financial development and economic success (Guiso et al., 2004). However, the literature suggests that trust in the financial services industry is declining (Mullanaithan et al., 2011).

Gabaix and Laibson (2006) argue that many times consumers enter into transactions without knowing the existence of shrouded attributes and note that even if they know they may not be able to observe them before the purchase. On the other hand, Falk and Kosfeld (2006) report that principal-agent relations involve a conflict of interest and that hidden costs should be considered in the ongoing relationship between consumers and organizations. Even when the conflict of interest is considered, there still exists the benefit of trusting a financial professional: increased well-being by making better financial choices. The gains also include a reduction in required human capital, more free time, increased peace of mind by delegating to a third party, and greater expected utility than the "do it yourself" route because time is a scarce resource (Finke et al., 2009; Finke et al., 2011).

According to Gambetta (2000), trust is a result of cooperation. Men and women trust differently because of cooperation, and women value cooperation more; thus, they are expected to cooperate more than men (Eckel & Wilson, 1999, 2004). This paper analyzes whether older men and women differ in their trust of financial advisor using data from the 2009 National Financial Capability Study (NFCS, 2009).

Literature Review

Guiso et al. (2008) define trust as the "subjective probability that individuals attribute to the possibility of being cheated" and note that it plays an important role in financial development and in client and financial professional relationships. Hiring a financial planner or advisor creates a principal-agent relationship. Financial advice is a credence good. With a credence good the quality of the good cannot be determined even after purchasing it (Emons 1997). Despite the fact that conflict of interest and this information asymmetry can increase the costs of hiring an agent, rational consumers will still choose to trust the financial advisor if they believe the advisor will act in a manner to improve their financial well-being (Finke et al, 2009).

According to Chang (2005), it may be more efficient to hire a financial professional than to manage one's own financial matters. Larson (1993) finds that individuals hire financial professionals because they are more knowledgeable than themselves. However, Grable et al. (2004) find that many households rely on individuals who are not financial professionals because of high cost and trust issues.

Rahn and Transue (1998) analyze trust by measuring the effect of materialism and find that, because women are less materialistic, they are more trusting than men. Eckel and Wilson (2004) conduct lab experiments in which individuals participate in a

trust game and observe a photo of their counterpart while making the decision whether to trust. They provide word-pair items to photographs to measure cooperativeness and report that women are more trusting than men. Using a sample of Dutch households, Bellemare & Kroger (2007) find a higher trust rate for women than men. They report that, in an investment game, women invest significantly more than men. Analyzing gender differences, Hansen (2012) finds that financial capability and subjective financial knowledge impact trust in financial professionals. In fact, Goldsmith & Goldsmith (2006) argue that women who have lower financial literacy than men are less likely to be confident in managing their finances. Barber & Odean (2001) suggest that the young and men might be overconfident and, thus, less likely to seek assistance from a financial professional. Given that women have lower financial capability on average, they may be more likely to trust an advisor.

Age is another important determinant of trust. For example, Fehr et al. (2003) and Fehr and List (2004) demonstrate that older individuals -those over 65- are less trusting than younger individuals. The literature suggests that there is heterogeneity in the effects of age on trust. For example, Grable & Joo (1999) find that younger individuals are more likely to seek financial assistance compared to older individuals. Hanna (2011) finds that the demand for financial professionals is high among individuals who are age 42 and younger. However, Hackethal et al. (2012) suggest that older individuals that are over age 50 are more likely to use a financial professional.

Ethnic background also influences trust. Research demonstrates that individuals do not trust those who are less similar to them (Alesina & Ferrara,2002)

and minorities are less likely to trust (Ashraf et al. 2003). Yao & Hanna (2005) suggest that minorities are less likely to trust financial professionals and/or have less financial planning experience.

We know little about what affects trust in financial professionals and even lesser about what determines women's trust in financial professionals. This paper contributes to the limited research by exploring whether gender and age are important personal characteristics that influence trust in financial professionals.

Data

The 2009 NFCS survey was conducted online and covered a nationally representative sample of more than 28,000 Americans. The 2009 NFCS survey measures key indicators of financial capability and evaluates how they change among different individuals. This paper investigates whether older men and women differ in their trust of financial advisors.

The dependent variable, trust in financial professionals, is measured by a 7-point Likert-type statement asked in the NFCS survey. The statement is,

"I would trust a financial professional and accept what they recommend."

The responses were coded on a 7-point scale that ranges from 1 (strongly disagree) to 7 (strongly agree). Thus, the dependent variable is an ordered variable. Table 3.1 represents the distribution of trust in financial professionals.

Table 3.1 The Distribution of Trust in Financial Professional

Trust Level		Frequency	Percent
Lowest Trust	**1**	1,551	11.26
	2	1,151	8.36
	3	1,693	12.29
	4	5,421	39.36
	5	2,011	14.6
	6	1,212	8.8
Highest Trust	**7**	733	5.32
Total		**13,772**	**100**

Gender, age, race, marital status, education level, risk tolerance, financial knowledge, perceived cost, and income can impact trust (Coleman 1990; Furlong 1996; Alesina and La Ferrara, 2002), and they are included as explanatory variables.

Female is a dummy variable that takes a value of 1 if the respondent is female and 0 if male. Age is defined by three categories: 45-54, 55-64 and 65 or older. A dummy variable is included for each of the highest age categories and the omitted category is 45-54 age group. White is a dummy variable that takes a value of 1 if the respondent is white and 0 if otherwise. Education is categorized into three levels: high school or less, some college and, college or more. High school or less is a dummy variable that takes a value of 1 if applicable and 0 if not. Some college is a dummy variable that takes a value of 1 if applicable and 0 if not. College or more is the omitted category.

Marital status is categorized in to three levels: single, living with a partner, and married. Single is a dummy variable that takes a value of 1 if applicable and 0 if not.

Living with a partner is a dummy variable that takes a value of 1 if applicable and 0 if not. Married individuals are the omitted category.

Income is categorized into eight levels, and each is a dummy variable reported as value of 1 if the respondent's annual income falls in a range and 0 if not. Income levels defined as: less than $15K, $15K-$25K, $25K-$35K, $35K-$50K, $50K-$75K, $75K-$100K, $100K-$150K, and $150K and over. Income with less than $15,000 is the omitted category.

The perceived cost of financial advisor is a subjective answer that is measured on a 7-point Likert Scale. In this paper, they are combined into three levels: low, medium and high. MediumCost is a dummy variable that takes value of 1 if applicable and 0 if not. HighCost is a dummy variable that takes value of 1 if applicable and 0 if not. LowCost is the omitted category.

The risk tolerance variable is a subjective answer that is measured on a 10-point Likert Scale. In this paper, the willingness to take risk is combined into three levels as low, medium, and high. LowRisk is a dummy variable and takes value of 1 and 0 if not. MediumRisk is a dummy variable takes value of 1 if applicable and 0 if not. HighRisk is a dummy variable takes value of 1 if applicable and 0 if not. The LowRisk tolerance is the omitted category.

Perceived financial knowledge is a subjective answer that is measured on a 7-point Likert Scale. In this paper, perceived knowledge is combined into three categories, low, medium and high. MediumKnowledge is a dummy variable that takes value of 1 if applicable and 0 if not. HighKnowledge is a dummy variable that takes value of 1 if applicable and 0 if not. LowKnowledge is the omitted category.

The retired variable is a dummy variable that takes value of 1 if applicable and 0 if otherwise. The financial literacy variable is the sum of the correct answers to the literacy questions that were asked in the survey and has a range of 0 to 5.

Descriptive Statistics

Table 3.2 provides descriptive statistics of the variables that are used in this analysis. On average, 11% of respondents appear to entirely distrust financial professionals. About 8% of them do not trust, and 12% of them somewhat do not trust financial professionals. About 39% of respondents appear to be neither distrusting nor trusting. 14% of respondents somewhat trust, 8% of them trust, and 5% of them strongly trust financial professionals. 52% of respondents are female. 84% of respondents are white.

About 41% of respondents are between age 45 and 54, followed by individuals between age 55 and 64 at 31% and age of 65 and older at 28%. 25% of respondents have a high school level of education or less, 35% of them have some college education and about 40% have college degree or more. Married individuals are the majority at 63%, while singles are at 32% and individuals living with partners is at around 5%. About 31 % of respondents are retired. The mean financial literacy score is 3.44.

About 8% of respondents have an income less than $15,000. 12 % of respondents have an annual income between $15K and $25K. Another 12% of respondents have income between $5K and $35K. About 16% of respondents have an annual income between $35K and $50K. 20% of respondents have an annual income between $50K and $75K. 12% of respondents have income between $75K and

$100K. About 11% of respondents have an annual income between $100K and $150K and about 7% have an annual income more than $150K. The majority of respondents report subjective assessment of financial knowledge is high, which are at 75%, while low knowledge is at 9% and medium knowledge is at 16%. About 19% of respondents report that financial professionals have low cost followed by medium cost at 29% and high cost at 52%. Only 11% of respondents report high risk tolerance, while 45% report low risk tolerance and 42% report medium risk tolerance.

Table 3.2 Descriptive Statistics

N= 13,772	**Mean**	**Std. Error**
Dependent Variable		
Trust Level		
1 (Lowest)	0.11	0.31
2	0.08	0.27
3	0.12	0.32
4	0.39	0.48
5	0.14	0.35
6	0.08	0.28
7 (Highest)	0.05	0.22
Independent Variables		
Gender		
Female	0.52	0.49
Race		
White	0.84	0.36
Age		
Age of 45 to 54	0.41	0.49
Age of 55 to 64	0.31	0.46
Age 65 and older	0.28	0.44
Education Level		
High School and Less	0.25	0.43
Some College	0.35	0.47
College and Above	0.40	0.48
Marital Status		
Single	0.32	0.46
Living with Partner	0.05	0.20
Married	0.63	0.48
Annual Income		
Less than $15,000	0.08	0.27
$15,000 to less than $25,000	0.12	0.32
$25,000 to less than $35,000	0.12	0.33
$35,000 to less than $50,000	0.16	0.37
$50,000 to less than $75,000	0.20	0.40
$75,000 to less than $100,000	0.12	0.32
$100,000 to less than $150,000	0.11	0.31
$150,000 or more	0.07	0.25
Retired	0.31	0.46
Financial Literacy	3.44	1.30

Table 3.2 Continued Descriptive Statistics

N= 13,772	**Mean**	**Std. Error**
Perceived Financial Knowledge		
Low	0.09	0.27
Med	0.16	0.35
High	0.75	0.43
Cost of Financial Professionals		
Low	0.19	0.38
Med	0.29	0.44
High	0.52	0.49
Risk Tolerance		
Low	0.45	0.49
Med	0.44	0.49
High	0.11	0.30

Model

The model estimated in this paper is an ordered probit model:

$$Trust_i = \beta_0 + X_i' \beta + \varepsilon_i$$

$$\varepsilon_i | x_i \sim N(0,1)\ iid,$$

$$Trust_i = \begin{cases} 1\ if\ Trust_i^* < \alpha_1, \\ 2\ if\ \alpha_1 < Trust_i^* < \alpha_2, \\ 3\ if\ \alpha_2 < Trust_i^* < \alpha_3, \\ 4\ if\ \alpha_3 < Trust_i^* < \alpha_4, \\ 5\ if\ \alpha_4 < Trust_i^* < \alpha_5, \\ 6\ if\ \alpha_5 < Trust_i^* < \alpha_6, \\ 7\ if\ \alpha_6 < Trust_i^* \end{cases}$$

where $Trust_i^*$ is a latent variable representing actual, but unobservable net benefit that an individual i perceives she will receive. The higher $Trust_i^*$ is, the higher is the trust in financial advisor. $Trust_i$ is the observed level of trust in financial advisors that takes values from 1 to 7. The α's are the unobserved thresholds that delineate the different reported and observed measures of trust in financial advisors. ε_i us an error term and is assumed to follow a standard normal distribution. X_i' is a matrix of explanatory variables representing gender, income, risk tolerance, perceived financial knowledge, perceived cost of financial advisors, white, age, education, marital status, financial literacy, and being retired.

Because women lack financial knowledge and skills they tend to make financial mistakes or make suboptimal financial decisions affecting their well-being negatively (Lusardi & Tufano 2009; Lusardi & Mitchell 2009). In fact, according to the Stress Awareness Month Survey Report (2015), women are more likely to experience financial stress. A financial professional can decrease financial stress and

increase a household's financial well-being by helping it to make better financial decisions (Winchester & Huston 2015). Women can decrease their financial uncertainty and display cooperativeness by trusting financial professionals, and thus the effect of being female is expected to be positive.

Obtaining the human capital that is needed for financial planning requires time and effort (Laibson et al., 2007). By delegating the tasks to financial professionals, households can enjoy their time or master the activities in their jobs by outsourcing the need of new skills to a financial advisor (Finke et al., 2011). High income and high education can be used a proxy for the respondent's rate of time preference and thus the effects of income and education are expected to be positive.

Hanna (2011) demonstrates that risk tolerance and being a single female increases the likelihood of seeking financial advice. The effect of risk tolerance is expected to be associated positively to trust in financial advisors because this may indicate that the respondents are willing to take risk- accepting the vulnerability- for greater benefits in a client and advisor relationship (Eckel & Wilson, 2003).

The effect of perceived financial knowledge is expected to associate negatively with trusting in financial advisors due to overconfidence (Kramer, 2016). The effect of financial literacy also is expected to associate positively because respondents those who are financially literate expected to acknowledge the benefits of financial management (Lusardi, 2008).

According to Alesina and La Ferrara (2002), individual experiences and community characteristics have impact on trust. Older individuals might have witnessed several financial crises such as the tech bubble and the 2009 mortgage

crisis, thus they might have more negative experiences compared to younger individuals. This could lead to less trust in financial professionals therefore, the effect of being older is expected to be negatively associated. The effect of the individual's perceived cost is expected to associate negatively with trusting in financial advisors because they may think a professional's service is expensive. Marital status and race are proxies for cultural differences and are not assignable priori.

Results

Marginal effects for the ordered probit model are displayed in Table 3.3. The dependent variable is an indicator variable for whether individuals trust financial professionals and accept what they recommend. In this study, the female variable has been found to be associated positively with trusting financial professionals. The age variable between 55 and 64 has been found to be associated negatively with the dependent variable. Income variables, Income35to50, Income50to75 and Income100to150, have been found to be associated positively with trusting financial professionals. Perceived high cost of financial professionals has been found to be associated negatively, and perceived high risk has been found to be associated positively. Financial literacy has been found to be associated negatively.

Being female decreases the probability of being in the lowest three trust levels by 0.0073, 0.0033 and 0.0031, respectively, and increases the highest three trust levels by, 0.0045, 0.0045, and 0.0041, respectively, compared being male. These results are consistent with theory.

Compared to respondents who are between age 45 to 54, individuals who are in age group of 55 to 64 are less likely to be in the highest three trust levels by 0.0057, 0.0056, and 0.0051, respectively, and more likely to be in the lowest trust levels by 0.0093, 0.0042 and 0.0039, respectively. These results are consistent with theory.

The results show that having income of $35K to $50K increases the probabilities of being in the highest three trust levels by 0.0144, 0.0149, and 0.0146, respectively, and decreases the probabilities of being in the lowest three levels by, 0.0227, 0.0108, and 0.0105, respectively, compared to those income are less than $15K. Having income between $50K and $75K increases the probabilities of being in the highest trust levels by 0.0165, 0.0171 and 0.0167, respectively, and decreases the probabilities of being in the lowest three levels by, 0.0259, 0.0123, and 0.0120 respectively. For those respondents have income between $100K and 150K, the trust levels are more likely to be in the highest three levels by 0.0149, 0.0155, and 0.0152, respectively, and less likely to be in the lowest three levels by 0.0231, 0.0111, and 0.0109 respectively, compared to whose income are less than $15K. The results are consistent with theory.

Perceiving the cost of financial professionals as medium decreases the probabilities of the highest trust levels by 0.0142, 0.0137, and 0.0125, respectively, and increases the probabilities of the lowest trust levels by 0.0237, 0.0103, and 0.0094, respectively, compared to those who perceive such costs to be low. Perceiving the cost of financial professionals as high decreases the probability of the highest trust levels by 0.0284, 0.0281, and 0.0261, respectively, and increases the probability of the

lowest three trust levels by 0.0453, 0.0208, and 0.0196, respectively, compared to those perceive such costs to be low. These results are consistent with theory.

Having medium risk tolerance increases the probability of the highest three trust levels by 0.0401, 0.0403, and 0.0382, respectively, and decreases the probability of the lowest three trust levels by, 0.0630, 0.0297, and 0.0284, respectively, compared to those have low risk tolerance. Having high risk tolerance increases the probability of the highest three trust levels by 0.0444, 0.0531, and 0.0605, respectively, and decreases the probability of the lowest three trust levels by 0.0657, 0.0354, and 0.0379, respectively, compared to those have low risk tolerance. These results were as expected and consistent with theory.

The results show that one additional point in financial literacy decreases the likelihood of being in the highest trust levels 5, 6, and 7 by 0.0050, 0.0049, and 0.0046, respectively, and increases the probability of lowest three trust levels 1, 2 and 3 by 0.0081, 0.0037, and 0.0035 respectively. This is not consistent with theory. This might be due to the belief that the more financially literate person feels as if they could do a better job at managing their finances than a financial advisor.

No significant differences with respect to trust in financial professionals have been found for the marital status, age 65 and older, race, some college, retired, INC$25Kto$35K, INC$75Kto$100K, INC150Above, Med-Knowledge, or High-Knowledge variables.

Table 3.3: Marginal Effects of Variables on Trust

N= 13,722			
	Trust Level	Marginal Effect	Standard Error
Female			
	1	-0.0073*	0.0035
	2	0.0033*	0.0016
	3	-0.0031*	0.0015
	4	0.0006*	0.0003
	5	0.0045*	0.0022
	6	0.0045*	0.0021
	7	0.0041*	0.0020
White			
	1	0.0053	0.0046
	2	0.0024	0.0021
	3	0.0023	0.0020
	4	-0.0003	0.0002
	5	-0.0033	0.0029
	6	-0.0033	0.0029
	7	-0.0031	0.0028
Age 55 to 64			
	1	0.0093*	0.0042
	2	0.0042*	0.0019
	3	0.0039*	0.0017
	4	-0.0009	0.0005
	5	-0.0057*	0.0026
	6	-0.0056*	0.0025
	7	-0.0051*	0.0023
Age 65 & Up			
	1	0.0033	0.0053
	2	0.0015	0.0024
	3	0.0014	0.0022
	4	-0.0003	0.0005
	5	-0.0020	0.0033
	6	-0.0020	0.0032
	7	-0.0019	0.0030
Highschool or Less			
	1	0.0080	0.0049
	2	0.0036	0.0022
	3	0.0033	0.0020
	4	-0.0008	0.0006
	5	-0.0049	0.0030
	6	-0.0048	0.0029
	7	-0.0044	0.0026

Significance level: *** p<.001, ** p<.05, * p<.1

Table 3.3: Continued Marginal Effects of Variables on Trust

N=13,722			
	Trust Level	Marginal Effects	Standard Errors
Some College			
	1	0.0029	0.0041
	2	0.0013	0.0018
	3	0.0012	0.0017
	4	-0.0002	0.0004
	5	-0.0018	0.0025
	6	-0.0017	0.0025
	7	-0.0016	0.0023
Living with Partner			
	1	-0.0036	0.0080
	2	-0.0017	0.0037
	3	-0.0016	0.0035
	4	0.0002	0.0004
	5	0.0023	0.0050
	6	0.0023	0.0050
	7	0.0021	0.0048
Single			
	1	-0.0010	0.0042
	2	-0.0004	0.0019
	3	-0.0004	0.0018
	4	0.0001	0.0003
	5	0.0006	0.0026
	6	0.0006	0.0025
	7	0.0005	0.0024
Retired			
	1	0.0009	0.0046
	2	0.0004	0.0021
	3	0.0004	0.0019
	4	-0.0001	0.0004
	5	-0.0005	0.0028
	6	-0.0005	0.0028
	7	-0.0005	0.0026
Income$15Kto$25K			
	1	-0.0086	0.0074
	2	-0.0040	0.0035
	3	-0.0038	0.0034
	4	0.0004	0.0002
	5	0.0054	0.0047
	6	0.0054	0.0048
	7	0.0052	0.0047

Significance level: *** p<.001, ** p<.05, * p<.1

Table 3.3: Continued Marginal Effects of Variables on Trust

N= 13,722			
	Trust Level	Marginal Effects	Standard Errors
Income$25Kto$35K			
	1	-0.0132	0.0073
	2	-0.0061	0.0035
	3	-0.0059	0.0034
	4	0.0004	0.0003
	5	0.0083	0.0047
	6	0.0084	0.0049
	7	0.0081	0.0049
Income$35Kto$50K			
	1	-0.0227**	0.0069
	2	-0.0108**	0.0034
	3	-0.0105**	0.0034
	4	0.0000**	0.0007
	5	0.0144**	0.0045
	6	0.0149**	0.0048
	7	0.0146**	0.0050
Income$50Kto$75K			
	1	-0.0259***	0.0070
	2	-0.0123***	0.0035
	3	-0.0120***	0.0035
	4	0.0000***	0.0008
	5	0.0165***	0.0045
	6	0.0171***	0.0049
	7	0.0167***	0.0051
Income$75Kto$100K			
	1	-0.0147	0.0079
	2	-0.0069	0.0039
	3	-0.0067	0.0038
	4	0.0003	0.0004
	5	0.0093	0.0051
	6	0.0095	0.0054
	7	0.0092	0.0054
Inc.$100Kto$150K			
	1	-0.0231**	0.0079
	2	-0.0111**	0.0040
	3	-0.0109**	0.0041
	4	-0.0004**	0.0011
	5	0.0149**	0.0052
	6	0.0155**	0.0058
	7	0.0152**	0.0060

Significance level: *** p<.001, ** p<.05, * p<.1

Table 3.3: Continued Marginal Effects of Variables on Trust

N= 13,722		
Trust Level	Marginal Effects	Standard Errors
IncAbove$150K		
1	-0.0069	0.0099
2	-0.0031	0.0045
3	-0.0029	0.0042
4	0.0005	0.0008
5	0.0043	0.0061
6	0.0042	0.0061
7	0.0039	0.0057
Med Knowledge		
1	-0.0043	0.0068
2	-0.0020	0.0031
3	-0.0019	0.0030
4	0.0003	0.0003
5	0.0027	0.0042
6	0.0027	0.0043
7	0.0025	0.0041
High Knowledge		
1	-0.0080	0.0062
2	-0.0036	0.0027
3	-0.0033	0.0025
4	0.0008	0.0007
5	0.0049	0.0038
6	0.0048	0.0036
7	0.0044	0.0033
Med Cost		
1	0.0237***	0.0052
2	0.0103***	0.0022
3	0.0094***	0.0019
4	-0.0029***	0.0009
5	-0.0142***	0.0030
6	-0.0137***	0.0029
7	-0.0125***	0.0026
High Cost		
1	0.0453***	0.0045
2	0.0208***	0.0021
3	0.0196***	0.0020
4	-0.0032***	0.0009
5	-0.0284***	0.0028
6	-0.0281***	0.0028
7	-0.0261***	0.0027

Significance level: *** p<.001, ** p<.05, * p<.1

Table 3.3: Continued Marginal Effects of Variables on Trust

N= 13,722

	Trust Level	Marginal Effects	Standard Errors
Med Risk			
	1	-0.0630***	0.0037
	2	-0.0297***	0.0019
	3	-0.0284 ***	0.0018
	4	0.0026*	0.0012
	5	0.0401***	0.0024
	6	0.0403***	0.0025
	7	0.0382***	0.0026
High Risk			
	1	-0.0657***	0.0040
	2	-0.0354***	0.0026
	3	-0.0379***	0.0030
	4	-0.0190***	0.0035
	5	0.0444***	0.0028
	6	0.0531***	0.0042
	7	0.0605***	0.0058
Financial Literacy			
	1	0.0081***	0.0015
	2	0.0037***	0.0007
	3	0.0035***	0.0006
	4	-0.0006***	0.0002
	5	-0.0050***	0.0009
	6	-0.0049***	0.0009
	7	-0.0046***	0.0009

Significance level: *** p<.001, ** p<.05, * p<.1

Conclusion

This paper uses the 2009 NFCS to analyze the effect of being female, older, and retired on trusting financial professionals. The results suggest that being female is related positively to trust in financial professionals, while being in the 55 to 64 (near retirement) age group is related negatively to trust in financial professionals compared to 45-54 age group. Retirees were found to be no different than non-retirees. Trust is created in interactions with others. Reasons not to trust financial advisors may be caused by negative experiences with these professionals. However, measuring these direct interactions is beyond the scope of this study.

Bibliography

Agarwal, S., Driscoll, J. C., Gabaix, X., & Laibson, D. (2007). The age of reason: Financial decisions over the lifecycle.

Alesina, A., & Ferrara, E. La. (2002). Who trusts others? *Journal of Public Economics*, *85*(2), 207–234.

Barber, M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *The Quarterly Journal of Economics*, *116*(1), 261–293.

Bellemare, C., & Kröger, S. (2007). On representative social capital. *European Economic Review*, *51*(1), 183–20http://doi.org/10.1016/j.euroecorev.2006.03.006

Chang, M. L. (2005). With a Little Help from My Friends (and My Financial Planner). *Social Forces*, *83*(4), 1469–1497. http://doi.org/10.1353/sof.2005.0061

Coleman, J. S. (1990). *Foundations of Social Theory*. Harvard University Press.

Eckel, C. C., & Wilson, R. K. (1999). The human face of game theory: Trust and reciprocity in sequential games, *Trust Work*(February). Retrieved from http://www.researchgate.net/publication/228597172_The_human_face_of_game_theory_Trust_and_reciprocity_in_sequential_games/file/79e4150b8e9bf15fa0.pdf

Eckel, C. C., & Wilson, R. K. (2004). Conditional trust: Sec, race and facial expressions in a trust game. *Working Paper*, *Rice Unive*.

Emons, W. (1997). Credence goods and fraudulent experts. *The RAND Journal of Economics*, 107-119.

Dyer, J. H., & Chu, W. (2003). The role of trustworthiness in reducing transaction costs and improving performance: Empirical evidence from the United States, Japan, and Korea. *Organization science*, *14*(1), 57-68.

Falk, A., & Kosfeld, M. (2006). The Hidden Costs of Control. *The American Economic Review*, *96*(5), 1611–1630.

Fehr, E., Fischbacher, U., von Rosenbladt, B., Schupp, J., Wagner, G. (2003). A nation-wide laboratory examining trust and trustworthiness by integrating behavioral experiments into representative surveys. *Working Paper No. 141, Institute for Empirical Research in Economics, University of Zurich.*

Fehr, E., & List, J. A. (2004). The Hidden Costs and Returns of Incentives—Trust and

Trustworthiness among Ceos. *Journal of the European Economic Association*, *2*(5), 743–771. http://doi.org/10.1162/1542476042782297

Finke, M. S., Huston, S. J., & Waller, W. (2009). Do Contracts Impact Comprehensive Financial Advice?.

Finke, M. S., Huston, S. J., & Winchester, D. D. (2011). Financial Advice: Who Pays. *Journal of Financial Counseling and Planning*, *22*, 18–26.

Furlong, D. (1996). The Conceptualization of "Trust" in Economic Thought. *IDS Working Paper*, *35*, 21. Retrieved from http://www.ids.ac.uk/publication/the-conceptualization-of-trust-in-economic-thought

Gabaix, X., & Laibson, D. (2006). Shrouded Attributes , Consumer Myopia , and Information Suppression in Competitive Markets. *The Quarterly Journal of Economics*, *121*(2), 505–540.

Gambetta, D. (2000). Can We Trust Trust? *Department of Sociology, University of Oxford, Chapter 13, Pp. 213-237, <http://www.sociology.ox.ac.uk/papers/gambetta213-237.pdf>*. *<<213>>*. http://doi.org/10.1.1.24.5695

Goldsmith, R. E., & Goldsmith, E. B. (2006). The Effects of Investment Education on Gender Differences in Financial Knowledge. *Journal of Personal Finance*, *5*(2), 55–69. Retrieved from http://www.researchgate.net/publication/268341254

Grable, J. E., & Joo, S. (1999). Financial Help-Seeking Behavior : Theory And Implications. *Journal of Financial Counseling and Planning*, *10*(1), 14.

Grable, J. E., & Professor, A. (n.d.). Financial Help-Seeking Behavior: Theory And Implications.

Guiso, B. L., Sapienza, P., & Zingales, L. (2004). American Economic Association The Role of Social Capital in Financial Development *The American Economic Review*, *94*(3), 526–556.

Guiso, L., Sapienza, P., & Zingales, L. (2008). Trusting the Stock Market. *The Journal of Finance*, *63*(6), 2557–2600.

Hanna, S. D. (n.d.). THE DEMAND FOR FINANCIAL PLANNING SERVICES. Retrieved from http://ssrn.com/abstract=1953400

Hanna, S. D., & Lindamood, S. (n.d.). Quantifying the Economic Benefits of Personal Financial Planning.

Hansen, T. (2012). Understanding Trust in Financial Services: The Influence of Financial Healthiness, Knowledge, and Satisfaction. *Journal of Service Research*,

15(3), 280–295. http://doi.org/10.1177/1094670512439105

Kramer, M. M. (2016). Financial literacy, confidence and financial advice seeking. *Journal of Economic Behavior and Organization*, *131*(June 2015), 198–217. http://doi.org/10.1016/j.jebo.2016.08.016

Larson, J. (1993). Getting professional help. *American Demographics*, *15*(7).

Lusardi, A., & Mitchell, O. S. (2010). How ordinary consumers make complex economic decisions: Financial literacy and retirement readiness,. *CFS Working Paper, No. 2010/11*, *Http://nbn-resolving.de/urn:nbn:de:hebis:30-78630*.

Lusardi, A., & Tufano, P. (2015). *Debt literacy, financial experiences, and overindebtedness*. *Journal of Pension Economics and Finance* (Vol. 14). http://doi.org/10.1017/S1474747215000232

NFCS. (2009) National Financial Capability Study, 2009. Retrieved from: http://www.usfinancialcapability.org/downloads.php

Mullainathan, S., Noeth, M., & Schoar, A. (2012). The Market for Retirement Financial Advice. *NBER Working Audit Study., 1–32. Retrieved from http://www.nber.org/papers/w17929*.

Rahn, W. M., & Transue, J. E. (1998). Social Trust and Value Change : The Decline of Social Capital in American Youth , 1976-1995. *Political Psychology*, *19*(3), 545–565.

Winchester, D. D., & Huston, S. J. (2015). All Financial Advice for the Middle Class is Not Equal. *Journal of Consumer Policy*, *38*(3), 247–264. http://doi.org/10.1007/s10603-015-9290-8

Yao, R., Gutter, M. S., & Hanna, S. D. (2005). The Financial Risk Tolerance of Blacks , Hispanics and Whites. *Financial Counseling and Planning*, *16*(1), 51–62. http://doi.org/Cited By (since 1996) 17\nExport Date 30 November 2011