NBER WORKING PAPER SERIES

HOW COGNITIVE ABILITY AND FINANCIAL LITERACY SHAPE THE DEMAND FOR FINANCIAL ADVICE AT OLDER AGES

Hugh Hoikwang Kim
Raimond Maurer
Olivia S. Mitchell

Working Paper 25750
http://www.nber.org/papers/w25750

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
April 2019

The authors thank Yong Yu and Destan Kirimhan for excellent programming and research assistance. Research funding for this project was provided by the TIAA Institute and the Pension Research Council/Boettner Center at the Wharton School of the University of Pennsylvania. Opinions and conclusions expressed herein are solely those of the authors and do not represent the opinions or policy of the funders or any other institutions with which the authors are affiliated, nor those of the National Bureau of Economic Research.

At least one co-author has disclosed a financial relationship of potential relevance for this research. Further information is available online at http://www.nber.org/papers/w25750.ack

How Cognitive Ability and Financial Literacy Shape the Demand for Financial Advice at Older Ages

Hugh Hoikwang Kim, Raimond Maurer, and Olivia S. Mitchell

NBER Working Paper No. 25750
April 2019
JEL No. D14,G11,G41,J26

ABSTRACT

We investigate how cognitive ability and financial literacy shape older Americans' demand for financial advice using an experimental module in the 2016 Health and Retirement Study. We show that cognitive ability and financial literacy strongly improve the quality, but not the quantity, of financial advice sought. Most importantly, the financially literate and more cognitively able tend to seek financial help from professionals rather than family members, and they are less likely to accept so-called 'free' financial advice that may entail conflicts of interest. Nevertheless, those with higher cognitive function also tend to distrust financial advisors, leading them to eschew their services.

Hugh Hoikwang Kim
The Darla Moore School of Business
University of South Carolina
1014 Greene St.
Columbia, SC 29208
hugh.kim@moore.sc.edu

Olivia S. Mitchell
University of Pennsylvania
The Wharton School
3620 Locust Walk, St 3000 SH-DH
Philadelphia, PA 19104-6302
and NBER
mitchelo@wharton.upenn.edu

Raimond Maurer
Goethe University Frankfurt Finance Department
Theodor-W. Adorno Platz 3
60323 Frankfurt am Main
Germany
maurer@finance.uni-frankfurt.de

How Cognitive Ability and Financial Literacy Shape the Demand for Financial Advice at Older Ages

The last four decades have seen a global trend toward disintermediation of retirement saving and decumulation, as company-provided defined benefit pensions gave way to defined contribution plans and government old-age benefit programs experienced shortfalls. Nevertheless, shifting the risks of saving too little, investing poorly, and outliving assets to individuals does not make such risks disappear. Additionally, there is growing evidence that retail investors have a difficult time setting spending goals, paying debt, deciding how much and where to invest, determining when to stop working and claim their retirement benefits, and handling insurance needs (e.g., Brüine de Bruin, 2017; Mitchell, 2018). Financial disintermediation poses an even larger challenge when a large segment of the older population lacks financial sophistication (c.f., Finke, Howe, and Huston, 2016; Lusardi and Mitchell, 2014).

This paper explores how cognitive ability and financial literacy shape older Americans' demand for financial advice. This is of concern since the older population holds more wealth than do younger people, and when cognitive function deteriorates with age (Horn, 1968; Schroeder and Salthouse, 2004), this can undermine retirement security (Agarwal et al., 2009). Prior research linking cognitive ability and financial management skills has examined stock market participation and allocation patterns, and many have demonstrated that more cognitively able and financially literate people are more likely to participate in the stock market and reap better investment returns (e.g., Bogan and Fertig, 2013; Christelis, Jappelli, and Padula, 2010; Clark, Lusardi, and Mitchell, 2015; Cole and Shastry, 2014; Grinblatt, Keloharju, and Linnainmaa, 2011; Kézdi and Willis, 2003; and van Rooij, Lusardi, and Alessie, 2011).

It has also been reported that investors lose financial skills as cognitive ability declines with age (Korniotis and Kumar, 2011). Of course, those unable to manage their finances in later life may be able to hire investment professionals, thus substituting financial advisors' inputs for their own (Kim, Maurer, and Mitchell 2016; 2017). Yet cognitive ability and financial literacy can also affect the decision to delegate, since delegation requires a complicated process of acquiring, screening, and monitoring information about financial advisors and their services.

Accordingly, to evaluate whether cognitive ability and financial literacy have a protective role helping older people make better decisions about when to seek – or avoid – financial advice, we designed a purpose-built experimental module and fielded it in the 2016 Health and Retirement Study (HRS). Here we asked people age 50+ several questions about whether they had obtained financial advice, and if so, which types of advice they sought. For those who did not access financial advice, we also asked them why not. To this module we linked a rich array of information from the core HRS including cognitive ability scores, financial literacy scores, socio-demographic factors, wealth, and health. Using a novel instrumental variable (IV) approach, we trace the causal impacts of cognitive ability and financial literacy on older peoples' financial behavior focusing on their demand for financial advice.

Our results show that cognitive ability and financial literacy affect the *quality*, but not the *quantity*, of financial advice that older persons seek out. Specifically, cognitive ability and financial literacy do not affect the *likelihood* of seeking financial advice in any form, but they do influence the *types* of financial advice people receive. For instance, greater cognitive ability positively affects older peoples' likelihood of seeking financial advice about sophisticated financial tasks such as investments, rather than simply paying bills. In addition, the more cognitively able and financially literate are more likely to obtain financial advice from professional advisors, and they report being less likely to receive 'free' financial consultations with possible embedded conflicts of interest. The economic significance of these results is also sizable: for instance, in our preferred IV specification, a standard deviation increase in cognitive ability leads to a 10.6 percent greater chance of seeking professional financial advice and a 12.1 percent smaller chance of having gotten 'free' advice. A standard deviation higher financial literacy score boosts the probability of obtaining financial advice by 3.4 percent, and reduces the chance of having sought 'free' advice by 8.5 percent.

Only around one-third (35 percent) of our respondents said they ever sought financial advice, we also asked the others why they did not. Our evidence indicates that more cognitively able respondents lacked trust in financial advisors, such that a standard deviation higher cognition score was associated with a 28.2 percent higher chance of distrusting financial advisors. Accordingly, cognitive ability plays an important role in determining who trusts financial advisors, and trust is a significant predictor of the demand for financial advice (Gennaioli, Shleifer, and Vishny, 2015).

In what follows, we first briefly summarize prior studies on older persons' financial management patterns. The subsequent section discusses anticipated hypotheses linking cognitive ability, financial literacy, and the demand for financial advice in our HRS module. Following a discussion of empirical results, a final section concludes.

Related Studies

Three related threads in the literature are relevant to our research: studies on rational delegation and inattention, analyses of financial illiteracy, and inquiries into the complex institutional environment in which older persons must make financial decisions. We touch on each, in turn.

In the context of a life-cycle model with stochastic labor income and endogenous work effort, Kim, Maurer and Mitchell (2016, 2017) showed that individuals deriving utility from consumption and leisure rationally devote little or no attention to their retirement portfolios early in life.[1] This is because managing

[1]Other authors have also postulated that a rational, fully-informed, forward-looking individual makes optimal decisions regarding saving, portfolio choice, asset location, benefit claiming, while taking into consideration individual factors such as preferences (risk, time, leisure, bequest, intertemporal substitution, loss aversion), mortality, health, and family status (e.g., Cocco, Gomes, and Maenhout, 2005, Gomes, Kotlikoff, and Viceira, 2008, Hubener, Maurer, and Mitchell, 2016, and Horneff, Maurer, and Mitchell, 2016). However none integrates the opportunity cost of managing one's own finances, however, which we believe to be an important factor driving the life cycle demand for financial advice. Pagel (2018) recently introduced news-utility theory to show within a life-cycle portfolio choice model that such (behavioral) preferences are able to account for inattention, predict realistic stock portfolio shares, involve non-participation in the

one's portfolio is time-consuming, and devoting time to the task reduces the opportunity to invest in on-the-job training. Since people who manage their own investments must do so at the cost of future earnings growth, workers can benefit from hiring financial advisors to reduce the cost of managing their own finances. Naturally, delegating one's investments to an advisor also entails a cost, so this tradeoff must be re-evaluated over the life cycle. Young workers have little wealth, but they have the longest time horizon over which to reap the rewards of good financial advice. Older individuals may value input from financial advisors to the extent that they experience declining mental faculties, making it more difficult to do a good job on their own. Accordingly, this literature predicts that incentives to outsource financial advice peak near and into retirement, and fall after that.

A second reason that older people may seek financial advice is that many of them are financially illiterate, leading them to undersave and underinvest (Lusardi and Mitchell, 2014; Lusardi, Michaud, and Mitchell, 2017; Clark, Lusardi, and Mitchell, 2015; Choi, Laibson, and Madrian, 2011; Choi, 2015). Somewhat surprisingly, and despite objective confirmation of an age-linked decline in financial capability at older ages, the evidence shows that older persons' self-confidence in their own financial ability *rises* with age, peaking at about age 88.[2] To this point, there is now a substantial literature on the consequences of poor financial capability in later life (Agarwal et al., 2009). For instance, the FINRA Investor Education Foundation (2013) found that over 80 percent of adults of all ages had been solicited for potentially fraudulent offers, with older Americans the most likely targets and most likely to lose money when targeted (DeLiema and Deevy, 2017). Even worse, education has a limited impact on increasing elders' financial management capability (Choi, Laibson, and Madrian, 2005; Fernandes, Lynch, and Netemeyer, 2014). Old adults making mistakes in their financial management are widely observed both in developed and developing countries (e.g., Badarinza, Campbell, and Ramadorai, 2016; Badarinza, Balasubramaniam, and Ramadorai, 2019).

A third reason that older persons may seek financial advice is that institutional complexity bedevils the decisions people must confront when planning for, making provision for, and moving into retirement. In the US, for instance, rules regarding when to claim one's Social Security benefits are extremely complicated, particularly if one has a spouse who is also entitled (or will be entitled) to Social Security benefits (Kotlikoff, Moeller, and Solman, 2016). There are also numerous complex regulations regarding how much people may save in tax-qualified retirement saving accounts, when one can make penalty-free payouts, and when one must begin taking required minimum distributions from these accounts (Horneff, Maurer, and Mitchell, 2016). These realities become particularly challenging when cognitive ability declines with age. Combined with potentially lower cognitive ability of older adults, the complexity of financial products and services can be an obstacle to sound financial decision-making (Agarwal and

stock market, and include a willingness to pay for delegated portfolio management.

[2]See Mazzonna and Peracchi (2018) and Hammond, Mitchell, and Uktus (2017) for a discussion of cognitive changes with aging.

Mazumder, 2013).

These three reasons can help explain why older persons might demand more financial advice, particularly when financial advisors can actually enhance their advisees' financial outcomes. Few studies focus on older individuals *per se*, but the literature does indicate that retail investors who suffer from behavioral biases can be protected by good financial advisors (Shapira and Venezia 2001).[3] Kramer (2012) found that portfolios advised by financial advisors were less prone to home bias or over-concentration in their own country. Bhattacharya et al. (2012) reported that portfolio risk-return efficiency improved for those who actually followed the advice. Using a Dutch household survey, von Gaudecker (2015) discovered that households who engaged professional advisors achieved significant portfolio diversification measured in terms of return loss. Moreover, financial advice can also help with estate planning and tax management (Cici, Kempf, and Sorhage, 2017). By contrast, financial decisions are more difficult for those unable to process financial information readily (Christelis, Jappelli, and Padula, 2010; Bertrand and Morse, 2011), present-biased individuals who procrastinate making financial decisions (O'Donoghue and Rabin, 1999), and persons who distrust or cannot evaluate advice (Gino, 2008; Inderst and Ottaviani, 2012; Agnew et al., 2018).[4] To date, however, available research has not linked older persons' demand for financial advice with cognitive ability and financial literacy, as we do here.

Methodology and Data

While relatively little is known about the links between cognitive ability, financial literacy, and the probability of seeking financial advice at older ages as well as the type of advice sought, it is useful to outline possible channels for possible effects. Specifically, we seek to determine whether older people suffering from cognitive shortfalls are more or less likely to seek financial advice. The directionality could be positive or negative, *ex ante*. For instance, some older investors would rationally delegate managing their finances to others, if they recognized that their ability to manage finances had declined (Kim, Maurer, and Mitchell, 2016). But those who mistakenly believe that their acumen remained intact would retain these management tasks without asking for help. In other words, the direction of the link is still to be empirically established.

[3] There is also a literature reporting negative outcomes from hiring financial advisors, though again, few have focused on older adults. For instance, Bergstresser, Chalmers, and Tufano (2009) and Del Guercio and Reuter (2014) reported that broker-sold mutual funds underperformed direct-sold mutual funds. Hackethal, Haliassos, and Jappelli (2012) studied independent financial advisors and bank-affiliated advisors in Germany, finding that accounts advised by both types of advisors did not generate higher risk-adjusted returns than those without advice. Using Swiss data, Hoechle et al. (2017) found that trades advised by financial advisors underperformed trades initiated by account holders. One of the very few analyses of retirement plans by Chalmers and Reuter (2015) concluded for Oregon State University System Retirement Plan that broker-advised retirement accounts had lower risk-adjusted returns because of high-fee investments.

[4] Several studies have examined how advisors' conflicts of interest can shape households' advice-seeking behavior (e.g., Inderst and Ottaviani 2012; Stoughton, Wu, and Zechner, 2011; Bolton, Freixas, and Shapiro, 2007; Piccolo, Puopolo, and Vasconcelos, 2016); and Hackethal, Haliassos, and Jappelli, 2012).

We also investigate whether more cognitively able individuals who do seek advice get help on simple decisions such as bill-paying, or on more complex topics such as investments and benefit claiming. To this end, we investigate what types of financial help people seek, and from whom.

Finally, we seek to ascertain whether financial literacy has an independent protective effect on the demand for financial advice, after controlling for cognitive ability. That is, we wish to test whether more financially sophisticated persons are also more likely to self-manage their financial affairs, less likely to request financial help, and more likely to get help from professionals when help is sought. Accordingly, we investigate whether financial literacy is positively associated with self-management of financial affairs; also we investigate whether the financially savvy are less likely to request financial help, and when they do seek advice, whether they turn to professional advisors versus family and friends.

We designed and fielded an experimental module in the 2016 HRS to explore how people age 50+ manage their financial affairs.[5] The sample consists of 1,180 age-eligible respondents responding to two sets of questions to evaluate older people's financial behaviors. The first set asked respondents whether they received any type of financial advice, and if so, what types of financial advice they received. The second set focused on persons who did not seek financial advice and asked them why they did not. For this reason, sample sizes for each of the financial behavior questions differ depending on how respondents answered precursor questions.

Summary statistics and variable definitions of these financial behaviors appear in Table 1. Responses to the first Module question shows that only one-third (34 percent) of the age 50+ respondents said they received advice on money management (*Get help w/money mgmt*). Of those who did, half received advice on investments (*Get help w/invst*), and a large majority (76 percent) of those sought help from a professional outside of their family/friends network. A sizeable fraction (14 percent) said they received 'free' professional advice, which of course is likely to be not truly free rather to embed fees in products involving potential conflicts of interest. Focusing on respondents who sought no financial advice, 4 percent said they were confident enough to manage the money on their own (*No money help: Self-confidence*); 3 percent indicated they did not trust advisors (*No money help: Distrust*); and 3 percent indicated they did not know whom to ask (*No money help: DK whom to ask*).

Table 1 here

To these responses we also linked participants' answers to other core HRS queries on their education, wealth, age, race/ethnicity, and marital status. The 2016 HRS additionally provides a widely-used measure of cognitive ability (*Cognition score*), defined as the sum of the respondent's total word recall and mental status indices.[6] These measure performance on immediate and delayed word recall, serial 7's test, counting backwards, naming tasks (e.g., date-naming), and vocabulary questions. The mental status

[5] For more on the HRS, see Fisher et al (2017).
[6] See St. Clair et al. (2011) and Fisher et al. (2017).

index sums scores from counting, naming, and vocabulary tasks. Total cognition scores sum each respondent's total recall and mental status indices. The financial literacy (*FinLit*) score refers to the total number of correct answers to the four financial literacy questions developed and used around the world (Lusardi and Mitchell 2014).

Table 1 also shows that the average *Cognition* score was 23.93 (out of a maximum of 35) with a standard deviation of 4.23. The *FinLit* score averaged 2.07 (out of a maximum of 4) with a standard deviation of 0.91. *Cognition* and *FinLit* are positively correlated, with a Pearson correlation coefficient of 0.32 (significant at the 1% level). The other variables are as expected: respondents averaged 68.03 years of age and 45 percent of the sample was male. Most were White (85 percent) or Hispanic (9 percent). A majority (62 percent) of respondents were married. Education averaged 13.56 years, and the sample held an average of net non-housing wealth of about $155,000 and housing net wealth of $139,000.[7]

Multivariate Empirical Analysis

To evaluate how financial behaviors of interest relate to respondents' cognitive ability and financial literacy holding other factors constant, we estimate multivariate Probit models of the following form:

$$\Pr(Y_i = 1|X_i) = \Phi(\beta_1 \times Cognition_i + \beta_2 \times FinLit_i + \delta' X_i), \quad (1)$$

where the dependent variable measures the probability of respondent *i* indicating that he or she engaged in this behavior. Here $\Phi(\cdot)$ is the standard normal cumulative distribution with respect to the control variables of the Probit model. To mitigate potential confounding effects, the other controls besides cognition and financial literacy noted above are contained in the vector X_i. Marginal effects are reported and standard errors are clustered at the household level.

We are aware that estimates of equation (1) might be biased by unobservable omitted variables. For example, *Cognition* and *FinLit* might reflect some unobservable personal trait that may also affect the demand for financial advice. If true, this could prejudice the causal interpretation of the coefficient estimates in equation (1). To address this potential endogeneity concern, we undertake an instrumental variable (IV) analysis for each of our two key explanatory variables. For the *Cognitive* variable, we turn to medical evidence reporting that vision dysfunction is strongly related to poor cognitive ability among older adults (Chen, Bhattacharya, and Pershing, 2017). Moreover, Rogers and Langa (2010) also conclude that poor vision is strongly associated with dementia and other cognitive diseases such as Alzheimer's. Accordingly, we construct a variable called *Vision problem* which takes the value of one if the respondent's eyesight was self-reported to be fair/poor/legally blind (and zero otherwise). We use this variable as an IV for cognitive ability. For the *FinLit* variable, we use as an instrument whether the respondent self-reported having taken an economics course took an economics/finance class in school, *Economics class* (following van Rooij, Lusardi, and Alessie, 2012). Table 1 shows that values of *Vision problem* and *Economics class* average 21

[7] All monetary values are provided in real $2014.

percent and 34 percent, respectively. We believe that these variables satisfy the conditions necessary for instrumental variables, as it is not evident how having a vision problem in old age or taking an economics class while in high school would affect older peoples' demand for financial advice through channels other than impaired cognitive ability and financial literacy.

Results: Who Seeks Financial Advice and What Type?

Our first-stage regression confirms that *Vision problem* and *Cognition* are negatively and statistically significantly related*:* that is, a one standard deviation increase in vision problems is associated with a 1.14 percent decrease (=-0.666×0.41/23.92) in the *Cognition* score (see Appendix Table 2). We also find that having taken an *Economics class* is positively and statistically significantly linked to financial literacy scores: a one standard deviation increase in *Economics class* is associated with a 6.2 percent increase (=0.271×0.47/2.07)in *FinLit*. Below we present both OLS and IV results of our two key variables on financial behaviors of interest.

Table 2 reports the factors associated with seeking financial advice as well as the types of advice that respondents receive. In each case, we report marginal effects from the Probit and IV Probit regressions, to facilitate a side-by-side comparison of the impact of addressing endogeneity concerns. Columns 1-2 of this table indicates that *Cognition* and *FinLit* are unrelated to the take-up of financial advice in both the OLS and IV models. Accordingly, the unconditional probability of receiving *any* financial advice is unaffected by cognitive ability or financial literacy, holding other factors constant. Even for those who do receive financial advice, *Cognition* scores and *FinLit* scores are not correlated with the probability of receiving financial advice regarding sophisticated financial topics such as investment (Column 3). Nevertheless, the IV analysis (Column 4) shows that, for those who do seek financial advice, the probability of receiving more sophisticated financial advice (e.g., about investments) is positively and statistically significantly associated with *Cognition*. Thus a one standard deviation higher *Cognition* score is associated with a 1.7 percent greater (=0.002×4.23/0.51) chance of getting investment advice. Conversely, people of low cognitive ability seek advice on less sophisticated financial tasks (e.g., bill paying). Heterogeneity in types of financial advice that people seek, given their different cognitive abilities, thus helps explain why the unconditional probability of receiving *any* financial advice is unrelated to the *Cognition* score.

Table 2 here

Another interesting finding is that both cognitive ability and financial literacy influence whom people ask when they do seek financial advice. For instance, Column 5 shows that *Cognition* and *FinLit* scores are both positively related to receiving advice from professional financial advisors. In other words, more cognitively able and financially literate respondents tend to seek professional financial advice, rather than seeking casual help from family/friends. The IV analysis (Column 6) confirms that this positive association is attributable to the causal impact of *Cognition* and *FinLit*. The economic magnitudes of these

are also sizable: a one standard deviation rise in *Cognition* score is associated with a 10.6 percent higher (=0.019×4.23/0.76) chance, and a standard deviation increase in *FinLit* is associated with a 3.4 percent higher (=0.028×0.91/0.76) chance of seeking professional advice. Put differently, cognitive decline induces people age 70+ to be about 4-8 percent less likely to seek professional financial advice, compared to their counterparts in their 60s. Lower financial literacy also plays a role, reducing the probability of seeking professional advice by 1-2 percent for those age 70+ versus people in their 60's.[8]

Columns 7 and 8 of Table 2 report how *Cognition* and *FinLit* influence the probability of receiving so-called 'free' professional financial advice. The IV analysis (Column 8) indicates that those scoring higher on both *Cognition* and *FinLit* are less likely to seek 'free' financial advice: specifically, a one standard deviation rise in *Cognition* and *FinLit* scores leads, respectively, to 12.1 percent (=-0.004× 4.23/0.14) and 8.5 percent (=-0.013×0.91/0.14) lower chance of seeking financial advice of this type. When 'free' financial advisors charge 'shrouded' commissions which clients may not readily perceive, this can give rise to a conflict of interest between advisors and customers (Inderst and Ottaviani, 2012; Anagol and Kim, 2012). It is therefore important to note that both cognitive ability and financial literacy have a protective function in steering people away from advisors who shroud their fees.

Other results in Table 2 are also worth noting. Better-educated respondents are more likely to receive financial advice in the OLS equation (Column 1), but the result is attenuated in the IV analysis (Column 2). The IV analysis shows that better-educated people also tend to seek advice on investment (Column 4) from professional advisors (Column 6) and are less likely to get 'free' consulting (Column 8). People with more housing wealth are more likely to receive financial advice on investment (Column 3) but this tendency again becomes insignificant in the IV analysis (Column 4). Older people are less likely to receive investment advice and professional financial advice (Columns 4–6), as well as 'free' help (Column 8).

Taken as a whole, then, Table 2 suggests that more cognitively able and financially literate older respondents seek professional advice rather resorting to informal help. Since cognitive ability and financial literacy do not affect the likelihood of seeking financial advice based on the IV analysis, we conclude that cognitive ability and financial literacy determine the *quality* rather than the *quantity* of financial advice sought.

Who Does Not Seek Financial Advice?

Two-thirds of the older HRS respondents do not seek financial advice, leading us to ask why. Table 3 presents coefficients estimates from both Probit and IV Probit regressions of reasons people give for not receiving financial advice, where we link these to *Cognition* and *FinLit* scores as well as self-confidence,

[8] Average *Cognition* (*Finlit*) scores for persons in their 60s, 70s, and 80+ are 24.95 (2.23), 23.30 (1.96) and 21.57 (1.84), respectively.

distrust, and lack of knowledge as potential explanations. Column 1 reports marginal effects from Probit models of self-confidence, where we see that people scoring well on *Cognition* believe they can handle their financial management duties without others' help. By contrast, the *FinLit* score is negatively correlated with self-confidence. Interestingly, these results are again attenuated in the IV models (Column 2). In other words, *Cognition* and *FinLit* scores may be correlated with self-confidence, but this relationship does not appear to be causal.

Table 3 here

Another potential reason for not receiving financial advice could be distrust of financial advisors (Gennaioli, Shleifer, and Vishny, 2015). Columns 3-4 of Table 3 present both Probit and IV Probit marginal effects from regressing *Distrust* on *Cognition* and *FinLit* as well as other controls. The IV Probit model, in which we place more confidence, indicates that the more cognitive able tend to distrust financial advisors, leading the respondents to avoid asking for financial advice. A one standard deviation higher *Cognition* score is associated with a 28.2 percent greater (=0.002×4.23/0.03) chance of stating that distrust is the reason for not seeking financial advice. *FinLit* is not statistically significantly related to this outcome. Table 3 also shows results from Probit and IV Probit regressions of "Do not know whom to ask" on *Cognition* and *FinLit* as well as the other controls. The multivariate Probit estimates (Column 5) suggest that *Cognition* and *FinLit* scores drive lack of knowledge, but this relationship is not robust in the IV analysis (Column 6). In the IVProbit estimation, few of the control variables are related to self-confidence and lack of knowledge. One that does stand out is reported in Column (4), where older non-white men with more education and more net housing wealth are more likely to elect distrust as a reason for not receiving financial advice.

Overall, Table 3 indicates that cognitive ability is an important factor associated with older people's trust in financial advisors. Specifically, the more cognitively able are likely to say that distrust is a reason for not seeking financial advice. Combined with results in Table 2 showing that cognitive ability discourages 'free' financial consultation, this implies that older people who maintain high cognitive ability have a more prudent attitude toward financial advice. Financial literacy plays less of a role.

Discussion and Conclusion

This paper has explored the impact of two important factors driving the demand for financial advice in an aging population: cognitive ability, and financial literacy. Given increasingly complex financial products and the disintermediation of retirement decisions, it seems clear that many older persons with substantial savings may not be able to manage financial tasks on their own – and at the same time, be unable to hire quality financial advisors. Moreover, we find that cognitive ability and financial literacy both help shape the *quality*, but not the *quantity,* of financial advice sought by older persons. While cognitive ability and financial literacy scores are not significantly related to the *probability* of seeking financial advice, being more cognitively able does enhance the chance that people seek advice for *more sophisticated* financial

tasks such as investment decisions and discourages them from seeking 'free' financial consultations. Our IV analysis implies that a standard deviation increase in cognitive ability and financial literacy increases the chances of seeking financial advice from professionals, rather than family members, by 10.6 percent and 3.4 percent, respectively. We also find that more cognitively able respondents tend to distrust financial advisors, suggesting that cognitive ability may protect them from potentially deceptive financial advice practices.

These findings have potential policy implications. The fact that both cognitive ability and financial literacy help shape the quality of financial advice sought implies that the mere existence of financial advisors will not, on its own, correct some older people's sub-optimal financial practices. Accordingly, financial institutions could find it useful to enhance protections for their older customers; efforts along these lines include a program teaching bank tellers how to recognize when customers show signs of declining mental capacity or are being financially exploited (Gunther, 2015). Several federal agencies also handle complaints regarding financial fraud, and various states have also passed laws seeking to protect elders from financial exploitation, for instance, allowing triple damages for victims winning legal cases against their perpetrators (DeLiema and Deevy, 2017). Our work also shows that low cognitive ability and poor financial literacy can be a barrier to receiving quality financial advice, suggesting that researchers and policymakers may need to find new ways to evaluate and monitor financial behavior in an aging population.

References

Agarwal S, Driscoll J, Gabaix X, Laibson D (2009). The age of reason: Financial decisions over the life cycle and implications for regulation. *Brookings Papers on Economic Activity* Fall: 51–101.

Agarwal S, Mazumder B (2013). Cognitive ability and financial decision making. *American Economic Journal: Applied Economics* 5(1):193-207.

Agnew J, Bateman H, Eckert C, Iskhakov F, Louviere J, Thorp S (2018). First impressions matter: An experimental investigation of online financial advice. *Management Science* 64(1):288-307.

Anagol S, Kim HH (2012). The impact of shrouded fees: Evidence from a natural experiment in the Indian mutual funds market. *American Economic Review* 102(1):576–593.

Badarinza, C., Balasubramaniam V, Ramadorai T (2019). The household finance landscape in emerging economies. *Annual Review of Financial Economics* Forthcoming.

Badarinza, C., Campbell JY, Ramadorai T (2016). International comparative household finance. *Annual Review of Financial Economics* 8:111-144.

Bergstresser D, Chalmers J, Tufano P (2009). Assessing the costs and benefits of brokers in the mutual fund industry. *Review of Financial Studies.* 22(10):4129–56.

Bertrand M, Morse A (2011). Information disclosure, cognitive biases, and payday borrowing. *Journal of Finance* 66(6):1865–1893.

Bhattacharya U, Hackethal A, Kaesler S, Loos B, Meyer S (2012). Is unbiased financial advice to retail investors sufficient? Answers from a large field study. *Review of Financial Studies* 25(4):975–1032.

Bogan V, Fertig A (2013). Portfolio choice and mental health. *Review of Finance* 17(3):955–992.

Bolton, P, Freixas , and Shapiro J (2007). Conflicts of interest, information provision, and competition in the financial Services Industry. *Journal of Financial Economics* 85(2): 297–330.

Brüine de Bruin W (2017). Aging and competence in decision making." In *Financial Decisionmaking and Retirement Security in an Aging World.* Eds Mitchell OS, Hammond PB, Utkus SP. Oxford: Oxford University Press: 15-32.

Chalmers J, Reuter J (2015). Is conflicted investment advice better than no advice? NBER Working Paper No. 18158.

Chen S, Bhattacharya J, Pershing S (2017). Association of vision loss with cognition in older adults. *JAMA Ophthalmology* 135(9):963–970.

Choi JJ (2015). Contributions to defined contribution pension plans. *Annual Review of Financial Economics* 7:161-178.

Choi JJ, Laibson D, Madrian BC (2005). Are empowerment and education enough? Underdiversification in 401(k) plans. *Brookings Papers on Economic Activity* 72(2):151-198.

Choi, JJ, Laibson D, Madrian BC (2011). $100 bills on the sidewalk: Suboptimal investment in 401(k) plans. *The Review of Economics and Statistics* 93(3):748-763.

Christelis D, Jappelli T, Padula M (2010). Cognitive abilities and portfolio choice. *European Economic Review* 54(1):18–38.

Cici G, Kempf A, Sorhage C (2017). Do financial advisors provide tangible benefits for investors? Evidence from tax-motivated mutual fund flows. *Review of Finance* 21(2):637–665.

Clark RL, Lusardi A, Mitchell OS (2015). Financial knowledge and 401(k) investment performance. *Journal of Pension Economics and Finance* 15(3):1–24.

Cocco J, Gomes F, Maenhout P (2005). Consumption and portfolio choice over the life cycle. *Review of Financial Studies* 18(2):491–533.

Cole S, Shastry GK (2014). Smart money? The effect of education on financial outcomes. *Review of Financial Studies* 27(7):2022-2051.

DeLiema M, Deevy M. (2017). Aging and exploitation: How should the financial service industry respond? In *Financial Decisionmaking and Retirement Security in an Aging World*. Eds. Mitchell OS, Hammond PB, Utkus SP. Oxford: Oxford University Press, 153-184.

DeLiema M, Mottola G, Deevy M (2017). Findings from a pilot study to measure financial fraud in the United States. *Stanford Center on Longevity Working Paper*. February.

Del Guercio D, Reuter J (2014). Mutual fund performance and the incentive to generate alpha. *Journal of Finance* 69(4):1673–1704.

Fernandes D, Lynch JG, Netemeyer RG (2014). Financial literacy, financial education, and downstream financial behaviors. *Management Science* 60(8):1861-1883.

Finke MS, Howe JS, Huston SJ (2016). Old age and the decline in financial literacy. *Management Science* 63(1):213-230.

FINRA Investor Education Foundation (2013). Financial fraud and fraud susceptibility in the United States: Research report from a 2012 national survey. New York, NY: Applied Research and Consulting.

Fisher GG, Hassan H, Faul JD, Rodgers WL, Weir DR (2017). *HRS Imputation of Cognitive Functioning Measures: 1992 – 2014 Data Description* (Final Release Version). http://hrsonline.isr.umich.edu/modules/meta/xyear/cogimp/desc/COGIMPdd.pdf

Gennaioli N, Shleifer A, Vishny R (2015). Money doctors. *Journal of Finance* 70(1):91–114.

Gino F (2008). Do we listen to advice just because we paid for it? The impact of advice cost on its use. *Organizational Behavior and Human Decision Processes* 107(2):234–45.

Gomes FJ, Kotlikoff LJ, Viceira LM (2008). Optimal life-cycle investing with flexible labor supply: A welfare analysis of life-cycle funds. *American Economic Review: Papers & Proceedings* 98(2):297-303.

Grinblatt M, Keloharju M, Linnainmaa J (2011). IQ and stock market participation. *Journal of Finance* 66(6):2121–64.

Gunther J (2015). BankSafe safeguards against exploitation. AARP Public Policy Institute. https://www.aarp.org/ppi/info-2015/age-friendly-banking-an-initiative-promoting-the-financial-resilience-of-people-age-50.html

Hackethal, A, Haliassos M, Jappelli T. (2012). Financial advisors: A case of babysitters? *Journal of Banking and Finance* 36(2):509–524.

Hammond PB, Mitchell OS, Utkus SP, eds. (2017). *Financial Decision Making and Retirement Security in an Aging World*. Oxford: Oxford University Press.

Hoechle D, Ruenzi S, Schaub N, Schmid M (2017). The impact of financial advice on trade performance and behavioral biases. *Review of Finance* 21(2):871–910.

Horn JL (1968). Organization of abilities and the development of intelligence. *Psychological Review*. 75(3): 242–259.

Horneff V, Maurer R, Mitchell OS (2016). Putting the pension back in 401(k) plans: Optimal retirement plan design with longevity income annuities. NBER Working Paper 22717.

Hubener A, Maurer R, Mitchell OS (2016). How family status and Social Security claiming options shape optimal life cycle portfolios. *Review of Financial Studies* 29(1):937-978.

Inderst R, Ottaviani M (2012). How (not) to pay for advice: A framework for consumer financial protection. *Journal of Financial Economics* 105(2):393–411.

Kézdi G, Willis RJ (2003). Who becomes a stockholder? Expectations, subjective uncertainty, and asset allocation. The University of Michigan Working Paper.

Kim HH, Maurer R, Mitchell OS (2016). Time is money: Rational life cycle inertia and the delegation of investment management. *Journal of Financial Economics* 121(2):424–447.

Kim HH, Maurer R, Mitchell OS (2017). Choosing a financial advisor: When and how to delegate." In *Financial Decision Making and Retirement Security in an Aging World.* Eds Hammond PB, Mitchell OS, Utkus SP. Oxford: Oxford University Press, 86–95.

Korniotis GM, Kumar A (2011). Do older investors make better investment decisions? *Review of Economics and Statistics* 93(1):244–65.

Kotlikoff LJ, Moeller P, Solman P (2016). *Get What's Yours: Revised and Updated. The Secrets to Maxing Out Your Social Security*. New York: Simon & Schuster.

Kramer MM (2012). Financial advice and individual investor portfolio performance. *Financial Management* 41(2):395–428.

Lusardi A, Mitchell OS (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature* 52(1):5-44.

Lusardi A, Michaud PC, Mitchell OS (2017). Optimal financial literacy and wealth inequality. *Journal of Political Economy* 125(2):431-477.

Mazzonna F, Peracchi F (2018). Self-assessed cognitive ability and financial wealth: Are people aware of their cognitive decline? EIEF Working Papers Series 1808.

Mitchell OS (2018). Enhancing risk management for an aging world. *Geneva Risk and Insurance Review*. 42(2):115-136.

O'Donoghue T, Rabin M (1999). Doing it now or later. *American Economic Review* 89(1):103–24.

Pagel M (2018). A news-utility theory for inattention and delegation in portfolio choice. *Econometrica* 86(2):491-522.

Piccolo S, Puopolo GW, Vasconcelos L (2016). Non-exclusive financial advice. *Review of Finance* 20(6):2079–2123.

Rogers M, Langa K (2010). Untreated poor vision: A contributing factor to late-life dementia. *American Journal of Epidemiology* 171(6):728–735.

Schroeder, D. and T. Salthouse (2004). Age-related effects on cognition between 20 and 50 years of age. *Personality and Individual Differences.* 36(2): 393–404.

Shapira, Z. and I. Venezia (2001). Patterns of behavior of professionally managed and independent investors. *Journal of Banking and Finance.* 25(8):1573–87.

St. Clair P, Bugliari D, Campbell N, Chien S, Hayden O, Hurd M, Main R, Miu A, Moldoff M, Panis S, Pantoja P, Rastegar A, Rohwedder S, Oshiro M, Zissimopoulos J (2011). *RAND HRS Data Documentation, Version L.* Santa Monica, CA: RAND.

Stoughton NM, Wu Y, Zechner J (2011). Intermediated investment management. *Journal of Finance* 66(3):947–980.

van Rooij M, Lusardi A, Alessie R (2011). Financial literacy and stock market participation. *Journal of Financial Economics* 101(2):449–72.

van Rooij M, Lusardi A, Alessie R (2012). Financial literacy, retirement planning, and household wealth. *Economic Journal* 122:449–478.

von Gaudecker HM (2015). How does household portfolio diversification vary with financial literacy and financial advice? *Journal of Finance* 70(2):489–507.

Table 1: Descriptive Statistics for Key Variables

This table presents summary statistics for our main variables. The full sample includes 1,168 HRS module respondents: one group sought financial advice (N=318), and a second did not (N=830). Variables defined in Appendix Table 1.

A. Financial Behaviors

Variable	Mean	St Dev	Respondent Group
Any Financial Help			
Get help w/ financial mgmt (0/1)	0.34	0.47	Full sample
Types of Financial Advice			
Gets help w/ invst (0/1)	0.51	0.50	Those receiving financial advice
Gets help from profl/other non-family advisors (0/1)	0.76	0.43	Those receiving financial advice
Gets 'free' profl help (0/1)	0.14	0.35	Those receiving financial advice
Reasons for Not Seeking Advice			
No money help: Self-confidence (0/1)	0.04	0.20	Those not receiving financial advice
No money help: Distrust (0/1)	0.03	0.18	Those not receiving financial advice
No money help: DK whom to ask (0/1)	0.03	0.18	Those not receiving financial advice

B. Controls

Variable	Mean	St Dev	Respondent Group
Cognition score	23.91	4.23	Full sample
FinLit score	2.07	0.91	Full sample
Age	68.03	9.08	Full sample
Male	0.45	0.50	Full sample
White	0.85	0.36	Full sample
Hispanic	0.09	0.28	Full sample
Married	0.62	0.49	Full sample
Education (yrs)	13.56	2.79	Full sample
Good health	0.77	0.42	Full sample
Non-housing wealth (/100k, 2014$)	1.55	4.49	Full sample
Housing wealth (/100k, 2014$)	1.39	2.06	Full sample
Vision problem	0.21	0.41	Full sample
Vision problem 2	0.05	0.22	Full sample
Vision change	0.25	0.43	Full sample
Hearing problem 1	0.20	0.40	Full sample
Hearing problem 2	0.04	0.19	Full sample
Hearing change	0.22	0.41	Full sample
Economic class	0.34	0.47	Full sample

Table 2. Determinants of Financial Advice Seeking

This table presents marginal estimates from multivariate Probit analysis (odd numbered columns) and IV Probit (even numbered columns) of key financial behaviors: *Get help w/ financial mgmt, Get help w/ invst, Get help from profl/other non fmaily advisors,* and *Get 'free' profl help*, regressed on *Cognition* and *FinLit* and with other controls. All dependent variables are binary; see Appendix 1. Coefficients on constant terms and missing data dummies suppressed. Standard errors are reported in parentheses and clustered at the household level. *, **, and *** represents statistical significance at 10%, 5%, and 1% levels, respectively.

	Full sample		Those receiving financial advice					
	Get help w/ financial mgmt (0/1)		*Get help w/ invst (0/1)*		*Get help from profl/other non*		*Get 'free' profl help (0/1)*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Probit	IVProbit	Probit	IVProbit	Probit	IVProbit	Probit	IVProbit
Cognition score	-0.007	-0.007	0.003	0.002 ***	0.013 *	0.019 ***	0.000	-0.004 ***
	(0.005)	(0.112)	(0.010)	(0.139)	(0.007)	(0.054)	(0.005)	(0.101)
FinLit score	0.033	0.028	0.011	-0.008	0.021	0.029 ***	-0.017	-0.013 ***
	(0.022)	(0.186)	(0.045)	(10.264)	(0.025)	(0.074)	(0.029)	(0.124)
Age	0.000	0.000	-0.005	-0.004 ***	-0.006 ***	-0.006 ***	-0.002	-0.003 ***
	(0.002)	(0.009)	(0.004)	(0.023)	(0.002)	(0.006)	(0.002)	(0.010)
Male	-0.081 **	-0.078	0.068	0.061	0.010	0.010 *	-0.009	-0.020 *
	(0.037)	(0.117)	(0.076)	(2.076)	(0.047)	(0.073)	(0.048)	(0.078)
White	0.117 ***	0.118	0.114	0.129 **	0.140 *	0.136 ***	0.033	0.027 **
	(0.043)	(0.191)	(0.104)	(0.467)	(0.078)	(0.124)	(0.067)	(0.190)
Hispanic	-0.089	-0.088	-0.035	-0.013	-0.093	-0.052	-0.120 ***	-0.240
	(0.063)	(0.096)	(0.168)	(2.121)	(0.119)	(0.100)	(0.037)	(0.145)
Married	0.020	0.018	0.022	0.042	0.065	0.080 *	-0.040	-0.051 *
	(0.040)	(0.095)	(0.084)	(0.918)	(0.049)	(0.079)	(0.057)	(0.118)
Education (yrs)	0.029 ***	0.026	0.023	0.010 *	0.010	0.014 ***	-0.008	-0.003 ***
	(0.008)	(0.042)	(0.017)	(0.340)	(0.009)	(0.035)	(0.011)	(0.057)
Good health	0.044	0.036	0.100	0.058	0.003	-0.018	0.020	0.059
	(0.047)	(0.121)	(0.105)	(0.846)	(0.051)	(0.082)	(0.058)	(0.119)
Non-housing wealth (/100k, 2014$)	0.007	0.006	0.007	0.007	0.013 **	0.013	-0.001	0.000
	(0.005)	(0.005)	(0.009)	(0.035)	(0.006)	(0.007)	(0.005)	(0.005)
Housing wealth (/100k, 2014$)	0.022	0.021	0.045 **	0.036	0.007	0.007	0.008	0.011 *
	(0.014)	(0.026)	(0.020)	(0.374)	(0.011)	(0.016)	(0.011)	(0.020)
N	1,168	1,168	318	318	338	338	338	338
Pseudo R-sq/Log likelihood	0.074	-26,057,347	0.089	-8,400,164	0.230	-8,518,821	0.022	-8,406,369

Table 3. Factors Associated with Not Seeking Financial Advice

This table presents marginal estimates from multivariate Probit analysis (odd numbered columns) and IV Probit (even numbered columns) for factors explaining why people did not seek financial advice: *Self-confidence*, *Distrust*, and *DK whom to ask*. These are regressed on *Cognition score* and *FinLit score* along with other controls. All dependent variables are binary; see Appendix 1. Coefficients on constant terms and missing data dummies suppressed. Standard errors are reported in parentheses and clustered at the household level. *, **, and *** represents statistical significance at 10%, 5%, and 1% levels, respectively.

	No money help: Self-confidence (0/1)		*No money help: Distrust (0/1)*		*No money help: DK whom to ask (0/1)*	
	(1)	(2)	(3)	(4)	(5)	(6)
	Probit	IVProbit	Probit	IVProbit	Probit	IVProbit
Cognition score	0.005 ***	0.007	0.001	0.002 ***	0.004 ***	0.009
	(0.002)	(0.031)	(0.001)	(0.007)	(0.001)	(0.034)
FinLit score	-0.013 *	-0.019	0.003	0.008	-0.007 *	-0.017
	(0.007)	(0.075)	(0.004)	(0.134)	(0.004)	(0.067)
Age	0.000	-0.001	0.000	0.000 ***	0.000	-0.001
	(0.001)	(0.003)	0.000	(0.002)	0.000	(0.003)
Male	0.017	0.023	0.009	0.028 **	0.006	0.014
	(0.013)	(0.044)	(0.007)	(0.057)	(0.007)	(0.043)
White	-0.018	-0.021	-0.007	-0.016 ***	-0.018	-0.028
	(0.016)	(0.053)	(0.011)	(0.047)	(0.012)	(0.068)
Hispanic	-0.022 ***	-0.050	-0.008	-0.031	-0.009 **	-0.038
	(0.008)	(0.037)	(0.005)	(0.055)	(0.004)	(0.034)
Married	0.008	0.011	0.010 *	0.029	0.003	0.007
	(0.011)	(0.023)	(0.006)	(0.039)	(0.006)	(0.021)
Education (yrs)	-0.002	-0.003	-0.001	0.000 ***	-0.002 *	-0.004
	(0.002)	(0.011)	(0.001)	(0.008)	(0.001)	(0.013)
Good health	0.020 **	0.034	0.018 **	0.065	0.009 *	0.032
	(0.009)	(0.031)	(0.007)	(0.091)	(0.005)	(0.024)
Non-housing wealth (/100k, 20	-0.005	-0.007	0.000	0.001	-0.002	-0.004
	(0.004)	(0.006)	(0.001)	(0.002)	(0.002)	(0.005)
Housing wealth (/100k, 2014$)	0.000	0.001	0.001	0.002 **	0.000	-0.001
	(0.004)	(0.010)	(0.001)	(0.004)	(0.002)	(0.011)
N	830	830	809	809	809	809
Pseudo R-sq/Log likelihood	0.124	-15,581,302	0.170	-15,172,372	0.182	-15,188,275

Appendix Table 1: Variable Descriptions

Note: R refers to HRS Respondent

A. Financial Behaviors (from 2016 HRS Module)[9]

Seeks Any Financial Help

Gets help w/ financial mgmt. is a binary variable =1 if R got help with money management in past year (Item v106=1), 0 else.

Types of Financial Advice Sought

Gets help w/ invst is a binary variable =1 if R got help with investing stocks, bonds, or mutual funds, 0 else.
Gets profl advice is a binary variable =1 (if v108=4, 5, 6, 7, 8; advisor_help3); R gets help from professional or other nonfamily member, =0 else
Gets 'free' profl help is a binary variable =1 (if v112=7; free_advice1); R gets 'free' help from professional advisor, =0 else

Why Not Seeking Financial Advice

No money help: Self-confidence is a binary variable =1 if R did not receive financial advice because felt can do financial management on own, 0 else.
No money help: Distrust (0/1) is a binary variable =1 if R did not receive financial advice due to distrust in financial advisors, 0 else.
No money help: DK whom to ask **(0/1)** is a binary variable =1 if R did not seek financial advice because knows no one to ask, 0 else.

B. Control variables (from HRS Core)

Cognition score: Sum of total word recall and mental status summary scores (0-35)
FinLit score: Sum of number of correct answers to four financial literacy questions.
Age: R age in years
Male=1 if R male, 0 else.
White: =1 if R white, zero else.
Hispanic: =1 if R Hispanic, zero else.
Married: =1 if R married, zero else.
Education: Years of education.
Good health: =1 if R reports health status excellent/good, 0 else.
Non-housing wealth: net value of non-housing financial wealth (stock, saving, CDs, bonds, and other saving less debt) in $100,000s ($2014).
Housing wealth: net value of housing (value of primary residence less mortgage and home loans) in $100,000s ($2014).

C. Instrumental variables

Vision problem: =1 if R has a vision problem (eyesight is fair, poor or legally blind), =0 else.
Economics class: =1 if R had economics/finance class in school, 0 else.

[9] https://hrs.isr.umich.edu/documentation

Appendix Table 2. First-Stage Regressions of Cognition and Financial Literacy on Instrumental Variables

This table presents coefficient estimates from the first-stage OLS regressions of Cognition and FinLit scores on two instrumental variables, respectively, *Vision problem* and *Economics class*, along with all other controls. Variables described in Appendix 1. Coefficients on constant terms and missing data dummies suppressed. Standard errors are reported in parentheses and clustered at the household level. *, **, and *** represents statistical significance at 10%, 5%, and 1% levels, respectively.

	Cognition	FinLit
Vision problem	-0.666 **	-0.241 ***
	(0.326)	(0.092)
Economics class	0.108	0.271 ***
	(0.302)	(0.067)
Age	-0.098 ***	-0.011 ***
	(0.013)	(0.003)
Male	-0.558 **	0.284 ***
	(0.273)	(0.060)
White	1.904 ***	0.232 ***
	(0.328)	(0.081)
Hispanic	-0.902 **	-0.262
	(0.446)	(0.161)
Married	0.782 ***	0.038
	(0.271)	(0.064)
Education (yrs)	0.442 ***	0.051 ***
	(0.054)	(0.014)
Good health	0.962 ***	0.041
	(0.347)	(0.085)
Non-housing wealth (/100k, 2014$)	0.029	0.015 ***
	(0.034)	(0.005)
Housing wealth (/100k, 2014$)	0.205 ***	0.010
	(0.062)	(0.013)
Intercept	21.852 ***	1.703 ***
	(1.240)	(0.303)
N	1,179	1,179
R-sq	0.321	0.208