Assessing the Relationship Between Health and Household Portfolio Allocation

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Abstract: This paper surveys the literature on the relationship between health and household portfolio allocation and provides updated empirical analysis based on recent data. Prior research finds robust evidence for cross-sectional correlations between measures of health status and portfolio decisions, but establishing the causal pathways and underlying mechanisms has proven more difficult and complex. Analysis from the most recently available 2016 and 2018 waves of the Health and Retirement Study yields results that are consistent with existing literature. Households with worse self-reported health have a lower probability of holding various types of financial assets and invest a higher share of their portfolios in safe assets, relative to other asset categories. However, there is only weak evidence that new health shocks to a household change portfolio holdings. The paper concludes with a discussion of implications of this research and directions for future work.

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Research in the area of household finance has focused on a number of important determinants of portfolio choice. Some examples of recent empirical work include studies that have analyzed the impacts of age (Ameriks and Zeldes 2004), cognitive abilities (Christelis et al. 2010), income risk (Guiso et al. 1996; Heaton and Lucas 2000; Angerer and Lam 2009), housing values (Cocco 2005; Chetty et al. 2017), differential tax treatment (Poterba and Samwick 2003; Alan et al. 2010), and bequest motives (Lockwood 2012). One factor that has recently generated a particular amount of interest is health, broadly construed. This paper surveys the literature on health and portfolio choice and uses recent data from the Health and Retirement Study to provide an updated analysis of this relationship. Consistent with prior work, I find strong cross-sectional relationships between health status and holdings of financial assets, but less clear evidence on causal pathways leading from health to portfolio decisions. I conclude with discussion and suggestions for future research.

While there is a great deal of research studying the characteristics that predict a household's portfolio, health is of particular interest to researchers and practitioners due to its inherent uncertainty and the central role that it plays in our lives. At the heart of modern portfolio theory is the assumption that investors are risk-averse and therefore seek to balance the tradeoff between higher average returns with the increased risks associated with those returns (Markowitz 1952). One of the greatest sources of risk and uncertainty in life is our health, and changes in health can have a tremendous impact on our economic and overall well-being. Therefore, it is important to devote significant attention to understanding the pathways that connect health and decisions about the allocation of wealth.

There are a number of theoretical reasons that health status might be related to portfolio decisions. Becoming sick may diminish a household's income and wealth, and this decrease in

economic resources may affect optimal asset allocation (King and Leape 1998; Peress 2004; Wachter and Yogo 2010). Deterioration in health could impact risk preferences and reduce the willingness to take on financial risk, leading to safer investment strategies (Decker and Schmitz 2016). The onset of new health conditions may lead to significant medical expenditures (De Nardi et al. 2010) and may also increase non-medical expenditures resulting from changes in life circumstances due to poor health (Wu 2003).[1] This need for higher expenditures may lead to households shifting to more liquid portfolios (Carmichael and Dissou 2000). Time preferences and planning horizons may also be affected by changes in health (Hong and Hanna 2014). Finally, the marginal utility of consumption can be affected by health, resulting in a desire to adjust asset allocations (Finkelstein et al. 2013).

There is a well-established line of research that studies the connections between health and *total* income or wealth (Smith 1999; Miller et al. 2003; Wu 2003; O'Neill 2009), but the specific literature relating health and wealth *allocation* begins with Rosen and Wu (2004), who first document the relationship between health and portfolio choice using data from the first four waves (1992, 1994, 1996, and 1998) of the Health and Retirement Study (HRS). They find that households with worse self-reported health are less likely to hold risky financial assets and hold a smaller (larger) share of their financial wealth in risky (safe) assets. A simple tabulation of the data shows that 25% of healthy singles (with healthy being measured as someone whose self-reported health status is "excellent", "very good" or "good") own at least some risky assets, but only 8% of sick singles (those who report their health as being "fair" or "poor") own any risky assets. Similar results are found for married couples: 38% of couples in which both spouses are healthy own some risky assets, while the analogous figure is only 12% for couples where both

[1] Some examples of this could include ordering more food from restaurants instead of cooking at home or hiring individuals to clean the house or assist with other household chores.

spouses are sick. The authors also find a significant relationship between health status and the shares of a portfolio devoted to various assets. Households with sick individuals hold a higher proportion of wealth in safe assets and a smaller proportion in all other asset categories: bonds, retirement assets and risky assets. Further work corroborates these findings. In the context of a life-cycle model of portfolio choice and retirement decisions, Yogo (2016) uses data from the 1992-2006 waves of the HRS and finds that the share of a household's portfolio invested in stocks is positively correlated with self-reported health, especially for younger retirees.

One important issue in this literature is how researchers define health status, as this may impact results. Bressan et al. (2014) use data across eleven European countries in the 2004 wave of the Survey of Health, Ageing and Retirement (SHARE) and find that poor self-reported health is correlated with safer portfolios, but they do not find portfolio allocations to be related to other measures of health status such as chronic conditions or functional limitations. In a similar vein, Atella et al. (2012) also use SHARE data and obtain strong evidence that perceived health status is more important than objective health status in predicting portfolio choices. Combined together, these results highlight the importance of one's subjective perception of health and health risks in affecting financial decisions.

Although there is strong evidence for cross-sectional correlations between health and wealth allocation, less is understood about the specific mechanisms that link health and portfolio allocations. One attempt to address this is work by Berkowitz and Qiu (2006), who use several waves of the HRS and find that onsets of disease decrease financial wealth much more significantly than non-financial wealth and that after accounting for these changes in financial wealth, there are no additional effects on wealth allocation. Theoretically, this result makes sense given that financial assets are more liquid than non-financial assets such as housing, and

households with sicker individuals may need to increase their medical expenditures in the short term. Another possible reason for the connection between health and portfolio decisions is the impact of health on expenditure risk. Using data from the Study of Assets and Health Dynamics Among the Oldest Old (AHEAD), Edwards (2008) shows that an individual's self-perceived risk of future medical expenses, as proxied by one's probability that "medical expenses will use up all savings in the next five years", is positively correlated with safer investment decisions. He also finds that portfolio decisions of singles are more sensitive to health risk than those of couples, as spouses provide some degree of insurance against this risk.

Health insurance plays a large role in mitigating financial risks associated with sickness, and one strand of the literature focuses on the role it plays in the relationship between health and the allocation of wealth. Hugonnier et al. (2013) formalize a model that jointly incorporates investments in health, health insurance, and financial assets. Their model is consistent with allocations of wealth that they observe from the 1999-2007 waves of the Panel Study of Income Dynamics (PSID). Goldman and Maestas (2013) explore the risk-mitigating effects of having generous health insurance coverage and analyze how this impacts asset holdings. They find that individuals with Medigap or employer supplemental health insurance policies increase risky asset holding by 7 percentage points, while being enrolled in a generous Medicare HMO program increases risky asset holding by 13 percentage points. Using data from the Survey of Income and Program Participation (SIPP) data, Angrisani et al. (2018) reach a similar conclusion that Medicare coverage induces people in poor health to be more likely to undertake risky investments, while Ayyagari and He (2017) find that people who are newly eligible for Medicare Part D prescription drug coverage have reduced medical spending risk, which leads them to increase investment in risky assets. The evidence for the mitigating effects of health insurance to

protect individuals from health shocks is more mixed in Christelis et al. (2020), where Medicare eligibility at age 65 increases stockholding for college-educated individuals, but not for those with less than a college education.

One potential concern in this research is the possibility for unobserved variables such as risk preferences, planning horizons, or expectations about the future to simultaneously affect both health and portfolio allocations. Although some surveys contain variables that proxy for these individual characteristics, they may not be accurately measured, leading to estimates that are biased upwards. Indeed, Fan and Zhao (2009) use the 1982 and 1991 waves of the U.S. New Beneficiary Survey and find strong cross-sectional relationships between health and portfolio decisions, but insignificant results in longitudinal regressions that include fixed effects. Likewise, Love and Smith (2014) use the 1992-2006 waves of the HRS and show that after controlling for unobserved heterogeneity using fixed effects models, there is little correlation between health and portfolio choice for singles and only a modest relationship for married couples. On the other hand, Coile and Milligan (2009) find some evidence of a causal effect of health on asset choices, where the onset of new chronic illness decreases the probability of owning vehicles, businesses, and real estate, and increases the share of assets held in bank accounts and CDs.

In addition to documenting the relationship between physical health and portfolio decisions, there has been an increasing interest in analyzing the relationship between measures of mental health and wealth allocation. Bogan and Fertig (2013) find that various types of mental health difficulties reduce the probability of owning risky assets by nearly 20%, and in related research (Bogan and Fertig 2018), these same authors conclude that having mental health difficulties decreases the likelihood of holding retirement accounts by 24% and decreases the

share of financial assets held in retirement accounts by 67%. Lindeboom and Melnychuk (2015) use SHARE data to show that depression decreases the likelihood of holding risky assets. There is also evidence that psychological distress from exposure to traumatic events such as hunger (Christelis and Dobrescu 2019) and combat experience (Bogan et al. 2016) reduces financial risk taking. And mental disabilities of children in a household have also been linked with a decrease in the likelihood of investing in risky assets (Bogan and Fernandez 2017).

Data and Empirical Analysis

Similar to much of the previous literature, I use data from the Health and Retirement Study (HRS), a biennial panel survey that follows households entering the early stages of retirement, so the great majority of respondents are in their fifties, sixties, or seventies. Specifically, I use the two most recently available waves from 2016 and 2018. There are several reasons that the HRS is particularly well suited for studying the relationship between health and portfolio decisions. Most importantly, the survey contains the appropriate variables: a vast array of health status measures, as well as detailed information on household assets. Second, the longitudinal nature of the data provides an opportunity to study the dynamics of wealth allocation and test hypotheses on causal pathways leading from health to portfolio decisions. Finally, the data allows researchers to study the intrahousehold effects of health on portfolio choice because for dual-person households, demographic and health information are available for both partners.

I use two types of health measures in my empirical analysis: an individual's self-reported health (or the average self-reported health for partnered and married households), and the onset of a new severe health condition that occurs in between the 2016 and 2018 waves for at least one

person in the household. Self-reported health is measured on a 1-5 scale, with 1 corresponding to excellent health and 5 corresponding to poor health. To study portfolio decisions, I use the probability of owning various types of assets, as well as the shares of financial wealth held in the following asset categories: safe assets (checking and savings accounts, CDs, government savings bonds, and Treasury bills), bonds (corporate, municipal, foreign bonds or bond funds), retirement assets (IRAs, Keogh Accounts), and risky assets (stocks or mutual funds). One additional methodological note: I conduct all of the analysis separately for singles and couples, a strategy that is similar to much of the previous research in this area.

I begin by tabulating the cross-sectional relationships between self-reported health status and (1) the likelihood of owning any bonds, retirement accounts, or risky assets[2] and (2) the share of wealth held in each of the four different asset categories for the 2018 wave. The results for singles are shown in Table 1a and the results for couples are shown in Table 1b. For singles, the probabilities of owning at least some positive amount of bonds, retirement assets, or risky assets are all strongly related to self-reported health status, though these relationships are not always monotonic across all of the health categories. For example, the percentages of single households that own a positive amount of risky assets for those in excellent, very good, good, fair, and poor health are 19.1%, 19.5%, 13.2%, 7.3%, and 6.8%, respectively. The values for the likelihood of owning bonds or retirement assets show similar patterns: individuals with excellent and very good health have similar ownership probabilities to each other, but those probabilities significantly decrease as one's health status moves to good, fair, or poor. Meanwhile, the share of financial wealth held in safe assets increases and the shares held in retirement accounts and

[2] Similar to Rosen and Wu (2004), I look at ownership probabilities for the three asset categories that are less commonly held, as nearly all households that have a positive amount of financial wealth hold a positive amount of safe assets.

risky assets decrease as health status deteriorates. For example, single individuals who report to be in excellent health hold an average of 62.0% of their financial wealth in safe assets, 24.8% in retirement assets, and 12.5% in risky assets, while the analogous figures for those in poor health hold are 84.3%, 8.6%, and 6.6%. Bonds make up such a small share of financial assets (about 1% overall) that there is little variation in this asset share across health levels.

For couples, I compare the likelihood of holding various types of assets with the average health status of the two partners. Once again, I find that households that are healthier are generally more likely to hold a positive amount of each of the different asset categories. For example, for households in the 2018 wave where both partners have excellent health, 54.5% hold a positive amount of retirement assets. The analogous numbers for households with an average health status of very good, good, fair, or poor[3], are 56.0%, 43.5%, 23.0%, and 13.5%, respectively. I find a similarly strong relationship between average self-reported health and the probabilities of owning bonds or risky assets for these households. The composition of household wealth is also strongly related to average self-reported health for couples, with healthier (sicker) couples holding a lower (higher) percentage of wealth in safe assets and a higher (lower) percentage in retirement and risky assets. Households with two spouses in excellent health hold an average of 44.8% of their financial wealth in safe assets and 36.7% and 17.8% in retirement and risky assets, respectively. For households with an average of poor health, the analogous numbers are 77.8%, 18.0%, and 4.2%. Once again, the amount of money held in bonds is sufficiently low such that there is only a weak relationship between this asset share and health status. As with singles, the differences in ownership probabilities and wealth

[3] For couples, the average self-reported health status is used, where "Excellent" corresponds to both couples reporting excellent health, "Very Good" corresponds to an average health status of 1.5 or 2 (where 1 represents excellent and 5 represents poor), "Good" corresponds to an average health status of 2.5 or 3, "Fair" corresponds to an average health status of 3.5 or 4, and "Poor" corresponds to an average health status of 4.5 or 5.

allocations are not very significant between the two healthiest categories (excellent and very good health), but the relationships are very strong across the other categories.

Overall, these tabulations demonstrate that relative to sicker households, healthier households are more likely to have a positive amount of bonds, retirement accounts, and risky assets, and they also hold a smaller fraction of their wealth in safe assets and a larger fraction in other types of assets. This is true for both single and dual-person households. As discussed earlier, research has shown that the level of financial wealth is greatly affected by health status, so it is possible that the probability of owning a particular type of asset category is higher for healthier households simply because they have more total financial wealth. To control for overall wealth effects, I estimate regressions that control for a household's overall financial assets. In addition, I also include controls for age, education, and race to account for the fact that portfolio allocations may vary by demographic characteristics. Tables 2a and 2b present the marginal effects of probit regressions where the dependent variables are dichotomous variables indicating the ownership of bonds, retirement accounts, or risky assets. The coefficients in Table 2a imply that older and more educated singles are more likely to hold each type of financial asset, while Blacks are less likely to own a positive amount of each asset category. Of particular interest here is the fact that health status is significantly correlated with the probabilities of owning each category of asset, even after controlling for total financial wealth and demographics. For singles, a 1-point increase (worsening) of the self-reported health index is correlated with a 4.7% decrease in the probability of owning any retirement assets and a 2.6% decrease in the probability of owning any risky assets. Both of these coefficients have p-values below 0.01. The coefficient for owning bonds is small (-0.3%) but still statistically significant. In Table 2b, the average of the health status index is also shown to be strongly related to ownership probabilities

for couples even after accounting for total financial wealth, average age and education of the couple, and whether or not one at least one partner is Black. The coefficients imply that a 1-point worsening of the average health index of a couple is correlated with a 0.8%, 10.4%, and 5.6% decrease in the probability of holding bonds, retirement assets, and risky assets, respectively.

In Tables 3a and 3b, I report the results for OLS regressions that predict the shares of a portfolio held in different asset categories after controlling for household demographics and total financial wealth. In general, households that are in worse health have a larger share of financial wealth held in safe assets and smaller shares held in retirement and risky assets, while the share held in bonds is not significantly related to health. In particular, the results imply that for singles, the share of financial wealth held in safe assets is 5.1 percentage points higher for someone in poor health, relative to someone in fair health, holding total financial wealth and demographics constant. Meanwhile, the shares of financial wealth held in retirement assets and risky assets are 3.4 percentage points and 1.7 percentage points lower for someone in poor health, relative to someone in fair health. For couples, a one-point increase in the average health index (signifying worsening health) is correlated with a 7.1 percentage point increase in the share of financial wealth held in safe assets, a 5.1 percentage point decrease in retirement asset share, and a 2.0 percentage point decrease in risky asset share. These coefficients are all significant at the 1% level.

These cross-sectional results for the most recently available waves of the Health and Retirement Study are consistent with the general consensus of the literature that shows a strong relationship between health and portfolio allocations. However, there could be omitted variables that simultaneously affect one's health status and portfolio allocations. For example, people who have shorter planning horizons or who are less sophisticated in financial planning may not take

good care of their health and also may underinvest in many types of financial assets. Underlying risk tolerances could also simultaneously impact health and wealth allocations. In order to better understand the potential causal link leading from health to portfolio decisions, I next analyze the changes in portfolio allocations between the 2016 and 2018 waves of the survey that occur as a result of a new health shock. I define a health "shock" as a newly diagnosed onset of one or more of the following conditions: heart conditions, strokes, cancers or malignant tumors, lung diseases, and diabetes.[4]

I first test to see whether a new health shock changes ownership probabilities for the various asset categories. Tables 4a and 4b present marginal effects for several probit regressions where the outcomes is a dichotomous variable that is equal to one if a household in 2018 owns a positive amount of bonds (first column), retirement assets (second column), or stocks or mutual funds (third column). To more accurately test for a causal pathway leading from health to portfolio decisions, I control for age, education, race, and several baseline characteristics from the 2016 wave: self-reported health status, total financial assets, and whether or not the household owned any of that particular asset in the base year. Adding these baseline controls, in particular the initial health status in 2016 and ownership of the asset in 2016, allows one to interpret the coefficient on a new health event as the effect of an exogenous shock to the household on the change in ownership probabilities. The results in Table 4a show that for singles, a new health shock is not significantly related to the ownership of any of the asset categories once we control for demographics, total financial wealth, ownership of that asset category in 2016, and self-reported health in 2016. In Table 4b, we see that for couples, having at least one member undergo a new serious health condition decreases the likelihood of owning

[4] This is the similar to the definition as used in many prior studies, including Smith (1999) and Wu (2003).

stocks or mutual funds by 3.4%, and the coefficient has a p-value of 0.02. New health shocks do not impact the probability of owning bonds or retirement assets for couples, ceteris paribus.

Finally, I test to see whether a new health shock to a household member affects the share of financial wealth held in different types of assets. The results for singles and couple are presented in Tables 5a and 5b, respectively. For singles, a new health shock is not significantly related to the share of financial wealth held in any of the four asset categories. For couples, having at least one member develop a new severe health condition leads to a decrease in the share of wealth held in risky assets by 1.7 percentage points, though this coefficient is not quite statistically significant, with a p-value of 0.12.

Taken together, these empirical results show that for the most recently available waves of the HRS, the strong cross-sectional relationships found in prior research are confirmed here. Sicker households are less likely to hold various types of financial assets and they more heavily concentrate their portfolios in safer investment choices. However, after controlling for baseline health status and portfolio holdings, new onsets of serious health conditions are not as robustly related to portfolio decisions, with some weak evidence of households shifting their allocations away from risky assets.

Discussion

There is now a fairly extensive literature analyzing the association between health and household portfolio decisions. The overwhelming consensus is that there is a strong cross-sectional correlation between the two, but documenting a causal link from health to the allocation of wealth has been more elusive in this line of research. This paper employs the recent 2016 and 2018 waves of the Health and Retirement Study to provide an updated look at this

relationship and the results are largely consistent with prior work. Within the 2018 wave of the HRS, households that indicate worse self-reported health are less likely to hold various types of financial assets and are more likely to have safer portfolios. These results hold for both singles and couples. However, when looking at transitions in health and wealth allocation across two consecutive years of the survey, a new severe health condition to a household only modestly affects portfolio decisions after controlling for baseline health and portfolio holdings. For singles, new onsets of illness do not impact asset ownership probabilities or the allocation of financial wealth. For couples, a health shock decreases the likelihood of holding stocks or mutual funds and there is weak evidence that portfolios become less concentrated in these types of assets.

While there is now a well-established research agenda focused on health and portfolio decisions, there are still ample opportunities for researchers to add to our knowledge of this relationship. One of the most important questions that remains unanswered is why there is such a strong cross sectional relationship between health and wealth allocation, but much weaker evidence documenting a causal effect of health changes on portfolio changes. While such a causal link may certainly exist, more work needs to be done to investigate this possibility. One promising avenue for future research is to incorporate more different measures of health status. In the brief analysis of health shocks for this paper, I have aggregated several different health conditions together as one variable, but one possibility is that onsets of certain conditions have larger impacts on a household's portfolio than others due to their longer-term impacts on health and medical expenses. In addition, prior work has shown that subjective assessments of health and health risk are stronger predictors of portfolio allocation than objective indicators like specific illnesses or functional limitations. And economists and other social scientists have

increasingly been including subjective measures of well-being in their analysis of economic outcomes. Researchers have devoted time to studying the pathways between income/wealth and well-being measures such as happiness and life satisfaction, but less work has been done to test how these subjective measures are related to the allocation of wealth. A longitudinal study that includes subjective measures of health could be very illuminating. One methodological difficulty with this approach is that it is much more difficult to demonstrate an exogenous change in subjective health or health risk than it is to show an exogenous change in objective health conditions like getting a stroke or having a heart attack. Researchers should think about possible ways to instrument for changes in subjective health status or health risk, as this would be greatly benefit our understanding of the causal mechanisms linking health and the allocation of wealth.

Another important direction for additional work is to explore the possibility of heterogeneity in the correlation between health and portfolio choice. In particular, much of the existing work has focused on older households, but we do not have as much evidence on the connections between health and portfolio decisions for younger and prime-aged households. There are great differences in risk tolerance, planning horizons, financial sophistication, and labor supply considerations across age groups, so much can be gained from extending the analysis to younger samples. There are other possible sources of heterogeneity that have yet to be carefully studied, including along the dimensions of gender, race, and education levels. While these characteristics have been included as control variables in most of the prior research in the literature, they have not generally been interacted with health in household portfolio regressions. Also, the great majority of papers have studied this topic for the United States, with a small number of studies using data from Western Europe, so more work that analyzes data from other countries would be valuable. In particular, it would be interesting to test whether the results

found in the U.S. and other developed countries hold for developing countries with lower values of household income and wealth and less developed financial markets.

A third avenue for further research in this area is a more thorough investigation of the mechanisms that explain the correlation between health and portfolio allocation. There is some prior work in this area, but more could be done here, including a closer examination of the roles of characteristics such as risk tolerance, planning horizons, and expectations of the future, and how these interact with changes in health in predicting portfolio holdings. Risk considerations are central to household portfolio decisions, and some research has focused on the importance of medical expenditure risk, but less work has looked at how self-assessments of future life expectancy and the length of one's planning horizon are affected by shocks to health. Relatedly, declines in health that shorten one's planning horizon or expected lifespan may also impact bequest motives. Intergenerational considerations have largely been ignored in research on the relationship between health and wealth allocation, so theoretical models and empirical analyses that incorporate these issues would provide a nice contribution to the literature.

One constraint on research on this topic is the availability of appropriate data that contains sufficient variables measuring both health status and asset holdings. Indeed, there are currently few data sets that meet this criterion, which explains the reliance on a small set of them in the existing work. There would be a great benefit to creating new household surveys that are suitable for investigating these questions, and especially among younger populations and in developing countries, for which research is sparse. As more surveys are developed for a broader range of households of different ages and from different countries, researchers will have opportunities to further our understanding of the important relationship between health and portfolio choice.

Research on health and portfolio choice is important for a number of reasons. Risk minimization is central to all household financial decisions, and our health status is one of the greatest sources of uncertainty in life. By understanding the ways in which financial decisions are affected by changes in health, policy makers can be better equipped to help people insure against these risks. Likewise, there are great implications of this research for financial planners. As practitioners counsel households on how to divide their wealth among various investment vehicles, it is crucial that they are mindful of the important role that health plays in shaping these financial decisions. And finally, by becoming more aware of the impacts that changes in health have on economic circumstances, individuals and households can be better equipped and more well-informed about their investment decisions both in the near and long term.

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Table 1a: Self-Reported Health and Portfolio Choice in 2018 (Singles)

	Self-Reported Health Status				
	Excellent	Very Good	Good	Fair	Poor
Ownership Probabilities					
Bonds	0.041	0.038	0.026	0.016	0.012
Retirement Assets	0.311	0.322	0.226	0.122	0.093
Risky Assets	0.191	0.195	0.132	0.073	0.068
Ownership Shares					
Safe Assets	0.620	0.618	0.696	0.788	0.843
Bonds	0.007	0.011	0.008	0.008	0.005
Retirement Assets	0.248	0.239	0.191	0.129	0.086
Risky Assets	0.125	0.131	0.106	0.076	0.066

Table 1b: Self-Reported Health and Portfolio Choice in 2018 (Couples)

	Average Self-Reported Health Status				
	Excellent	Very Good	Good	Fair	Poor
Ownership Probabilities					
Bonds	0.055	0.076	0.047	0.027	0.000
Retirement Assets	0.545	0.560	0.435	0.230	0.135
Risky Assets	0.272	0.320	0.227	0.107	0.045
Ownership Shares					
Safe Assets	0.448	0.438	0.536	0.671	0.778
Bonds	0.007	0.013	0.012	0.013	0.000
Retirement Assets	0.367	0.339	0.320	0.228	0.180
Percentage in Risky Assets	0.178	0.149	0.131	0.087	0.042

For couples, the average self-reported health status is used, where "Excellent" corresponds to both couples reporting excellent health, "Very Good" corresponds to an average health status of 1.5 or 2 (where 1 represents excellent and 5 represents poor), "Good" corresponds to an average health status of 2.5 or 3, "Fair" corresponds to an average health status of 3.5 or 4, and "Poor" corresponds to an average health status of 4.5 or 5.

Table 2a: Self-Reported Health and Asset Ownership Probabilities (Singles)
Reported Coefficients are Probit Marginal Effects

VARIABLES	(1) Bonds	(2) Retirement	(3) Risky
Fin. Assets*10^{-7}	0.000***	0.002***	0.002***
	(0.000)	(0.000)	(0.000)
Age	0.001***	0.003***	0.003***
	(0.000)	(0.000)	(0.000)
Education	0.004***	0.042***	0.021***
	(0.001)	(0.002)	(0.001)
Black	-0.013***	-0.139***	-0.093***
	(0.002)	(0.009)	(0.007)
Health	-0.003**	-0.047***	-0.026***
	(0.001)	(0.005)	(0.003)
Observations	6,617	6,617	6,617

Self-reported health is measured on a 1-5 scale, with higher numbers indicating worse health. Standard errors are in parentheses. *** p<0.01, **p<0.05, * p<0.1

Table 2b: Self-Reported Health and Asset Ownership Probabilities (Couples)
Reported Coefficients are Probit Marginal Effects

VARIABLES	(1) Bonds	(2) Retirement	(3) Risky
Fin. Assets*10^{-7}	0.000**	0.004***	0.001
	(0.000)	(0.001)	(0.001)
Average Age	0.001***	0.008***	0.006***
	(0.000)	(0.001)	(0.001)
Average Education	0.010***	0.070***	0.040***
	(0.001)	(0.004)	(0.003)
At Least One Partner Black	-0.024***	-0.230***	-0.122***
	(0.005)	(0.018)	(0.012)
Average Health	-0.008***	-0.104***	-0.056***
	(0.003)	(0.011)	(0.008)
Observations	4,060	4,060	4,060

Self-reported health is measured on a 1-5 scale, with higher numbers indicating worse health. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 3a: Self-Reported Health and Financial Asset Shares (Singles)

VARIABLES	(1) Safe	(2) Bond	(3) Retirement	(4) Risky
Fin. Assets*10^{-7}	0.002***	-0.000	-0.002***	-0.001*
	(0.001)	(0.000)	(0.000)	(0.000)
Age	-0.003***	0.000***	-0.001**	0.003***
	(0.000)	(0.000)	(0.000)	(0.000)
Education	-0.038***	0.002***	0.024***	0.012***
	(0.002)	(0.000)	(0.002)	(0.001)
Black	0.156***	-0.004*	-0.092***	-0.060***
	(0.014)	(0.002)	(0.012)	(0.010)
Health	0.051***	-0.000	-0.034***	-0.017***
	(0.006)	(0.001)	(0.005)	(0.004)
Constant	1.186***	-0.044***	0.049	-0.191***
	(0.052)	(0.008)	(0.044)	(0.034)
Observations	4,301	4,301	4,301	4,301
R-squared	0.124	0.014	0.074	0.052

Self-reported health is measured on a 1-5 scale, with higher numbers indicating Worse health. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 3b: Self-Reported Health and Financial Asset Shares (Couples)

VARIABLES	(1) Safe	(2) Bond	(3) Retirement	(4) Risky
Fin. Assets*10^{-7}	0.004***	-0.000	-0.003***	-0.001
	(0.001)	(0.000)	(0.001)	(0.000)
Average Age	-0.006***	0.001***	0.002***	0.004***
	(0.001)	(0.000)	(0.001)	(0.000)
Average Education	-0.049***	0.002***	0.031***	0.016***
	(0.003)	(0.001)	(0.003)	(0.002)
At Least One Partner Black	0.184***	-0.006	-0.128***	-0.050***
	(0.020)	(0.004)	(0.019)	(0.013)
Average Health	0.071***	-0.000	-0.051***	-0.020***
	(0.010)	(0.002)	(0.009)	(0.006)
Constant	1.409***	-0.047***	-0.097	-0.265***
	(0.074)	(0.014)	(0.070)	(0.048)
Observations	3,161	3,161	3,161	3,161
R-squared	0.167	0.010	0.084	0.053

Self-reported health is measured on a 1-5 scale, with higher numbers indicating worse health. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 4a: New Health Shocks and Asset Ownership Probabilities in 2018 (Singles)
Reported Coefficients are Marginal Effects

VARIABLES	(1) Bond	(2) Retirement	(3) Risky
Own Bonds in 2016	0.251***		
	(0.036)		
Own Retirement Assets in 2016		0.559***	
		(0.016)	
Own Risky Assets in 2016			0.460***
			(0.021)
Fin. Assets*10^{-7} in 2016	0.004***	0.048***	0.015***
	(0.001)	(0.011)	(0.006)
Age	0.000***	0.001*	0.001***
	(0.000)	(0.000)	(0.000)
Education	0.002***	0.020***	0.010***
	(0.000)	(0.002)	(0.001)
Black	-0.007***	-0.070***	-0.050***
	(0.002)	(0.010)	(0.007)
Health in 2016	-0.000	-0.024***	-0.015***
	(0.001)	(0.005)	(0.003)
New Health Shock	-0.003	-0.004	0.012
	(0.003)	(0.016)	(0.012)
Observations	6,655	6,655	6,655

Self-reported health is measured on a 1-5 scale, with higher numbers indicating worse health. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 4b: New Health Shocks and Asset Ownership Probabilities in 2018 (Couples)
Reported Coefficients are Marginal Effects

VARIABLES	(1) Bond	(2) Retirement	(3) Risky
Own Bonds in 2016	0.280***		
	(0.037)		
Own Retirement Assets in 2016		0.646***	
		(0.014)	
Own Risky Assets in 2016			0.481***
			(0.020)
Fin. Assets*10^{-7} in 2016	0.009***	0.024*	0.042***
	(0.002)	(0.014)	(0.009)
Average Age	0.001***	0.002**	0.002***
	(0.000)	(0.001)	(0.001)
Average Education	0.005***	0.037***	0.020***
	(0.001)	(0.004)	(0.003)
At Least One Partner Black	-0.014***	-0.123***	-0.077***
	(0.005)	(0.024)	(0.014)
Average Health in 2016	-0.004	-0.063***	-0.030***
	(0.003)	(0.013)	(0.008)
New Health Shock	-0.005	-0.009	-0.034**
	(0.005)	(0.024)	(0.014)
Observations	4,132	4,132	4,132

Self-reported health is measured on a 1-5 scale, with higher numbers indicating worse health. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 5a: New Health Shocks and Financial Asset Shares in 2018 (Singles)

VARIABLES	(1) Safe	(2) Bond	(3) Retirement	(4) Risky
Share in Safe Assets 2016	0.580***			
	(0.014)			
Share in Bonds 2016		0.274***		
		(0.015)		
Share in Retirement Assets 2016			0.531***	
			(0.014)	
Share of Risky Assets 2016				0.437***
				(0.016)
Fin. Assets*10^{-7} in 2016	-0.045***	0.007***	0.038***	0.034***
	(0.010)	(0.002)	(0.008)	(0.007)
Age	-0.000	0.000***	-0.001***	0.002***
	(0.000)	(0.000)	(0.000)	(0.000)
Education	-0.016***	0.001***	0.011***	0.006***
	(0.002)	(0.000)	(0.002)	(0.002)
Black	0.069***	-0.003	-0.046***	-0.031***
	(0.014)	(0.003)	(0.012)	(0.010)
Health in 2016	0.018***	0.000	-0.013***	-0.009**
	(0.005)	(0.001)	(0.005)	(0.004)
New Health Shock	-0.006	-0.002	-0.004	0.010
	(0.017)	(0.003)	(0.015)	(0.012)
Constant	0.466***	-0.035***	0.072*	-0.098***
	(0.050)	(0.010)	(0.043)	(0.035)
Observations	3,684	3,684	3,684	3,684
R-squared	0.443	0.108	0.340	0.262

Self-reported health is measured on a 1-5 scale, with higher numbers indicating worse health.
Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 5b: New Health Shocks and Financial Asset Shares in 2018 (Couples)

VARIABLES	(1) Safe	(2) Bond	(3) Retirement	(4) Risky
Share in Safe Assets 2016	0.615***			
	(0.015)			
Share in Bonds 2016		0.359***		
		(0.019)		
Share in Retirement Assets 2016			0.582***	
			(0.015)	
Share of Risky Assets 2016				0.466***
				(0.017)
Fin. Assets*10^{-7} in 2016	-0.017**	0.010***	0.006	0.021***
	(0.008)	(0.002)	(0.007)	(0.006)
Age	-0.002***	0.000	0.000	0.002***
	(0.001)	(0.000)	(0.001)	(0.000)
Average Education	-0.017***	0.001	0.011***	0.007***
	(0.003)	(0.001)	(0.003)	(0.002)
At Least One Partner Black	0.077***	-0.004	-0.060***	-0.020
	(0.018)	(0.004)	(0.018)	(0.013)
Health in 2016	0.030***	0.001	-0.021***	-0.012**
	(0.008)	(0.002)	(0.008)	(0.006)
New Health Shock	0.017	0.001	-0.002	-0.017
	(0.015)	(0.003)	(0.015)	(0.011)
Constant	0.450***	-0.014	0.023	-0.102**
	(0.066)	(0.015)	(0.063)	(0.047)
Observations	2,901	2,901	2,901	2,901
R-squared	0.475	0.138	0.385	0.281

Self-reported health is measured on a 1-5 scale, with higher numbers indicating worse health. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1