Do contracts influence comprehensive financial advice?

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Abstract

Delegating management of financial decisions may involve both direct and agency costs. We hypothesize that contracting differences between financial planners and brokers may lead to differences in life insurance adequacy. Using nationally representative data, we estimate the impact of the use of planners and brokers on life insurance adequacy. Descriptive and multivariate analyses of insurance adequacy are consistent with the hypothesis that contracting matters. Those who rely primarily on financial planners are more likely to have adequate life insurance holdings. The use of brokers is not related to optimal levels of life insurance. © 2009 Academy of Financial Services. All rights reserved.

1. Introduction

Financial planners are paid to provide specialized knowledge to households. Because information acquisition is costly, it is rational for households to delegate some responsibility for financial decision making to a professional. Recent research questions the value provided by investment advisers and brokers based on the performance of recommended mutual fund investments (e.g., Bergstresser, Chalmers, and Tufano, 2005). This perspective may be incomplete. Differences in contracting incentives may influence the outcomes of hiring an agent to provide financial advice, and advisors do more than simply recommend funds.

Financial choice in an increasingly complex marketplace requires an understanding of financial instruments and tax laws, the effective use of which would require a substantial

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investment in information. Fischer and Gerhardt (2007) provide an overview of the steps investors must go through to create an optimal asset allocation according to modern portfolio theory and the capital asset pricing model, while Kotlikoff (2006) outlines the complexity that tax laws add to even the most basic financial decisions. Instead of investing the time needed to make effective decisions, households can instead hire a financial intermediary to act on their behalf. This decision requires a tradeoff between investing many hours of one's own time and the direct and indirect costs of hiring an advisor.

These costs are typically collected in the form of either commission or fees, such as assets under management fees and retainers; however, reliance on intermediaries can also provide indirect costs because of conflicts of interest (Boatright, 2000). An intermediary, acting as an agent, is paid to help a household (or principal) make choices that improve the welfare of the client. In any principal and agent relationship, the extent to which the agent acts in the best interest of a principal depends on incentives. If contracts increase the cost of placing the agent's interest above the interests of the household, outcomes are more likely to favor the household. An informed household will engage the services of a financial advisor if the direct and indirect costs are less than the expected benefit of informed advice.

Jensen and Meckling (1996) separate these costs into three categories: monitoring costs, bonding costs, and residual loss. Monitoring costs are a function of the financial sophistication of the principal and include time and information costs sustained by the principal while conducting research, comparing financial intermediaries, and seeking regulation, through either voting on public policy or interpreting the exact stipulations of the contractual relationship. Bonding costs are incurred by the agent to demonstrate an alignment of interests between principal and agent such as the costly attainment of a professional designation or the acceptance of legal constraints. Any agency costs beyond these aforementioned costs are classified as residual losses, which may include the sale of underperforming products with high commissions.

Although intermediaries are profit-seeking businesses, financial planners may undergo bonding costs by maintaining credentials and exposing themselves to legal liability through acceptance of fiduciary responsibility. These costs should send a signal to the market that the monitoring costs for the investor are less than they would be in the absence of bonding mechanisms. Intermediaries who are broker-dealers are self-regulated through the Financial Industry Regulation Authority (FINRA) and by the Securities and Exchange Act of 1934, which subjects them to constraints on self-serving behavior but does not make broker-dealers obligated to provide fiduciary duty. Investment advisors are subject to the federal Investment Advisers Act of 1940, which implies a stricter adherence to fiduciary duty and is the main differentiation between brokers and investment advisors. Among those working as investment advisors, the most common job titles include financial advisor and financial planner (Hung, Clancy, Dominitz, Talley, Berrebi, and Suvankulov, 2007).

According to the Financial Planning Association, a main industry organization representing financial planners, financial planning is a process that "involves taking stock of all your existing resources, developing a plan to utilize them, and systematically implementing the plan in order to achieve your short- and long-term goals" [Financial Planning Association (FPA), 2007a]. Planners achieving the professional designation of Certified Financial Planner must attain a minimum level of competence in providing comprehensive financial

advising services, including investments, estate, retirement, tax, and insurance planning. Financial planners are also assumed to maintain fiduciary duty toward their clients and Certified Financial Planners agree to uphold a fiduciary standard higher than that required by the Investment Advisers Act of 1940 (FPA, 2007b).

Our study comes on the heels of recent investigations by the Securities and Exchanges Commission into the regulations guiding both brokers and financial advisors. Hung et al. (2007) find that consumers are often unable to discern between brokers and investment advisors. This may be because of a lack of incentive among brokers to clarify the differences between investment advisors and brokers, and the often-overlapping job titles among employees subject to both sets of regulations. Although investors are generally satisfied with their financial service providers, it is difficult for investors to compare the quality of financial advice if they are unable to compare their outcomes with those of other households.

2. Literature review

Financial planning is a relatively new industry that arose from the desire of households to receive comprehensive financial advice from a single source. Black, Ciccotello, and Skipper (2002) propose two models for assembling professional financial advice: the specialist model where the individual seeks advice from several professionals in their given topic areas, and the planner model where the individual receives comprehensive financial advice from a financial planner who coordinates the advice from professionals in their given areas of expertise. According to the Certified Financial Planners Board of Standards (2004), 22% of consumers in 2004 relied on financial planners as their primary source of financial advice, up from 19% in 1999. Similarly, using the 1998 Survey of Consumer Finance (SCF), Elmerick, Montalto, and Fox (2002) find that just over 20% of households use financial planners for advice on credit and borrowing, savings and investment, or both (comprehensive). A probit analysis of these data reveals that households are more likely to seek comprehensive financial advice from a financial planner as education, income, net worth and financial assets increase, or with decreased age. In terms of compensation, 9.5% of investment advisors are paid via commissions whereas the rest are paid on a fee basis (Hung et al., 2007).

Research on the benefit from financial advisors is mixed. Using Italian banking data, Guiso and Jappelli (2007) identify a positive relationship between financial delegation and portfolio Sharpe ratio, suggesting that financial professionals add value through increasing investors' risk-adjusted return. Similarly, Bluethgen, Gintschel, Hackethal, and Mueller (2007) find that older, female, risk-averse, and wealthier individuals tend to employ the use of financial advisors and that this group gains a net benefit from these services. These advised households still suffer agency costs in the form of higher portfolio turnover and transaction costs than their unadvised counterparts.

Other studies find that commission-based investments provide an incentive to push products that may not be in the best interest of investors. Bergstresser et al. (2005) find that funds sold through brokers, which often sacrifice investment principal to pay commissions, underperform direct-sold funds. Using data from the Center for Research in Security Prices (CRSP), Morningstar, and Financial Research Corporation, the authors find that broker-sold

funds offer investors higher fees and fail to outperform direct-channel funds on a risk-adjusted basis even gross of these increased expenses. Although brokers appear to add little value to compensate for their direct and agency costs through investment recommendations, the authors do suggest the possibility that lower wealth and less educated clientele of broker-channel funds may receive advice whose value exceeds the costs.

There is also evidence that mutual funds that do a better job of compensating intermediaries receive greater inflows of investor money than funds that provide lower commissions, consistent with agency costs resulting from residual losses. Both Sirri and Tufano (1998) and Zhao (2003) find that mutual funds with higher loads receive higher flows from investors.

Although much of extant research has focused on investments and mutual funds, we seek to answer Campbell's (2006) call for research in the area of household finance and the role of financial advice in household portfolio allocation. Our study uses data from the SCF to separate the roles of broker and financial planner, a distinction that has yet to be made in the many studies on the effectiveness of financial advisors. Furthermore, we explore the impact of employing an agent to provide financial advice in mortality risk management, a service that is arguably of greater importance than marginal investment return and one that requires more holistic approach to financial planning. Using household-level data, we test the hypothesis that financial advisors can improve welfare by providing appropriate non-investment advice.

3. Theory and empirical operationalization

3.1. Use of a financial professional

According to expected utility theory, households seek to maximize utility across time by equalizing discounted marginal utility given current expectations and endowments. Reliance on the human capital of a primary earner subjects the household to a significant potential decline in consumption if the earner dies. Because the earner converts human capital to financial capital (income) over a lifetime, life insurance coverage that replaces the present value of human capital provides a hedge against mortality risk. In the event of the insured's death, their unconverted human capital is immediately available as financial capital via life insurance (Chen, Ibbotson, Milevsky, and Zhu, 2006). Households will demand life insurance up to the point that the marginal cost of an additional dollar of life insurance premium equals the discounted expected marginal benefit of hedging away that dollar of mortality risk exposure.

Households are, however, subject to bounded rationality and may lack the financial sophistication needed to properly evaluate the present value of their human capital. Similarly, in markets where large price dispersion or high variation in quality exists such as financial markets,[1] Stigler (1961) argues that the benefits of increased search, or information gathering, increase. This tradeoff is in equilibrium and the household will stop gathering information at the point where the marginal benefit of an additional hour of search equals the marginal cost of that hour of search. In the case where a household lacks the human capital to efficiently navigate financial markets, the marginal cost of search will be higher and *ceteris*

parabis the household will cease their search sooner. On the other hand, a financial professional can engage in information gathering on behalf of the household and, because the cost of information acquisition is roughly independent of its use, can distribute the benefit of the increased search to any number of households in the case of non-arbitrage information while sharing the costs of search among these principal households (Stigler, 1961). This intuition continues to hold in the case where households utilize information and financial professionals in tandem as argued by Bi, Montalto, and Fox (2002) rather than as substitute goods. If the search costs associated with properly evaluating the human capital of the household are greater than the transaction costs of contracting financial advice, the household will outsource this computational element to financial advisors.

Households must still engage in search costs to choose the proper financial professional in markets where contracts are not homogenous. This lack of homogeneity creates varying monitoring costs that must be incorporated into the transaction costs of outsourcing financial decision making. Eisenhardt (1989) posits that length of agency is positively related to behavior-based contracts and negatively related to outcome-based contracts with agency costs varying inversely with length of agency. The principal with long-term financial goals is exposed to lower agency costs, captured here as the suboptimal exposure to household mortality risk, as their planning horizon nears that of the agent. Brokers on a commission-only pay schedule fall under the category of outcome-based contracts with their compensation solely dependent on the purchase of a financial product, a short-term goal without long-term repercussions. On the other hand, financial planners paid on an assets under management or other fee basis benefit from a contract that is dependent on the ongoing relationship between principal and agent. This behavior-based structure helps to align the long-term goals of the principal with the long-term payment structure of the agent, reducing agency costs borne by the principal because of length of agency. Therefore, we hypothesize that receiving saving and investment advice from a financial planner should positively influence the adequacy of insurance ratio while reliance on a broker's advice may not.

3.2. Life insurance adequacy

We examine the impact of financial advice and the associated agency costs of this advice on the household-level measure of insurance adequacy. Kotlikoff (2006) evaluates this measure in assessing household preparedness by comparing recommendations made by commercially available financial advice software and *ESPlanner*, a commercially available software program he developed with Jagadeesh Gokhale. This same software has been used to evaluate households' long-term financial planning in numerous studies using a variety of national datasets.[2] Their findings across these data are that American households are exposed to large potential variation in consumption through the unanticipated and consequently uninsured loss of an earner (Bernheim, Carman, Gokhale, and Kotlikoff, 2003).

Using a measure of impact in current standard of living given the death of an earner and life insurance holdings, Bernheim, Carman, Gokhale, and Kotlikoff (2001) and Lin and Grace (2007) find conflicting results as to the relationship between life insurance holdings

and financial vulnerability in the SCF. Therefore, we modify the framework of Mincer (1958) to compute the present value of human capital, which we define as life insurance need. We then calculate the ratio of life insurance holdings to this need.

$$\text{Adq}_{ins} = \frac{\sum_{i=1}^{l} V_p}{((I_t - T_t) * f) * \{[1 - (1 + r_r)^{-W}]/r_r\}} \tag{1}$$

where V_p = face value of insurance policy, p
w = time in years until exhaustion of human capital
I_t = current income
f = household economies of scale ratio
T_t = estimated taxes
r_r = expected real interest rate

Our model accounts both for the fact that life insurance proceeds are tax-free and that economies of scale exist on the household level. Household debt is not included in the need because it is simply collateralized debt against future earnings. Unfortunately, a limitation of the SCF is that life insurance holdings are only reported on the household level so our study cannot look at the potential mismatch in holdings and present value of human capital across earners.

With this measure, we consider a household to be adequately insured when its insurance adequacy ratio is greater than or equal to one. We also control for household characteristics that should alter household preferences, or demand, for insurance.

3.2. Income and earner characteristics

Considering human capital as a dividend-paying risky asset, investments in human capital increase the portfolio value of this shadow asset and the expected disutility of losing this asset because of the preference of risk-averse investors for certain outcomes. Insomuch as education, household income and the number of earners proxy for increases in the present value of human capital, we expect these household characteristics to increase demand for life insurance (Showers and Shotick, 1994). Variation in income, however, can be viewed as changing the nature of the human capital asset. As variation in income increases, the present value of human capital must be discounted at a higher rate leading households to demand less insurance. This increased volatility in earnings should be markedly apparent in households in which earners are self-employed (Chen et al., 2006). Controlling for the effects of human capital on income, the law of diminishing marginal utility posits that the marginal benefit of income decreases with income shifting the optimal amount of insurance up assuming economies of scale in coverage or the ability to diffuse search costs over additional units of coverage (Lee, 2007). Showers and Shotick (1994) come to the similar conclusion that insurance is in fact a normal good.

In the presence of Social Security, income also influences a household's demand for insurance through both survivor and retirement benefits. As income increases, survivor

benefits reduce the disutility experienced by a household in the event of loss. On the other hand, retirement benefits increase with income increasing the present value of human capital and the demand for insurance. Given the progressive nature of the Social Security system, these benefits increase at a decreasing rate allowing us to predict opposite effects on insurance demand if income is squared. Fitzgerald (1987), however, finds that these Social Security-induced effects roughly offset each other.

The impact of earner age on the demand for insurance is muddled by a number of competing factors. The present value of human capital decreases with age, lowering both the insurable loss and the demand for insurance (Campbell, 1980; Chen et al., 2006). Similarly, the marginal cost of insurance increases with age or health issues, driving down the demand for insurance (Goldsmith, 1983). On the other hand, this increase in mortality risk with age or poor perceived health drives up the subjective probability of loss, causing households to increase their insurance holdings. Finally, given the path of typical household earners, insurable loss is relatively low both early in life, during which time human capital is being attained, and retirement, when human capital is no longer being converted to financial capital in the market. Therefore, earner age squared should have a negative impact on the demand for insurance (Showers and Shotick, 1994). If younger earners are more likely to expose themselves to risky behavior, this increase in perceived mortality risk could also contribute to this effect.

Assuming that probability of death across earners is independent, increases in the number of earners within a household diffuses the risk of extreme variation in consumption and decreases household demand for insurance (Fitzgerald, 1987). Showers and Shotick (1994) argue, however, that effects of number of earners should be separated into an income effect captured by number of earners and a risk-sharing effect captured by the interaction of income and number of earners. This risk-sharing effect could perhaps be better captured by the ratio of secondary to primary earner income.

3.3. Dependent characteristics

Household utility is conditional on earner income, with insurance premiums representing an investment of this income at the cost of current consumption to guarantee a payoff in the low-endowed state (Lewis, 1989). As the number of dependents increases, the household indifference curve is shifted up such that higher levels of consumption are required to achieve the same level of overall utility. However, given that households benefit from economies of scale, this increase is experienced at a decreasing rate. Following Showers and Shotick (1994), we therefore expect that demand for insurance will increase with family size but decrease with increases in the value of family size squared.

Apart from the impacts of earner human capital already discussed, Goldsmith (1983) argues that education of a non-earner spouse or other dependents can serve as a hedge against the mortality risk faced by earners in the household. Age of dependent can also serve to capture this effect given that young children in the household cannot readily convert their human capital to financial capital in the market (but older children can).

3.4. Other household characteristics

Changes to the household utility function, either through increased risk aversion or lower rate of time preference, increase the disutility experienced by households that are subject to variation in consumption and, therefore, should increase these households' insurance holdings (Campbell, 1980; Chen et al., 2006). However, households with a lower rate of time preference also have a preference for current consumption and are less likely to forego income now, in favor of transferring it to future periods.

Household net worth, or the availability of financial assets, decreases the demand for insurance because, as Ehrlich and Becker (1972) argue, market and self-insurance are substitute goods. Campbell (1980) extends this causative element by advocating that only a proportion of marketable assets are a perfect substitute for human capital. The intuition behind this effect stems from the fact that households derive utility from both dissaving from wealth and income. As risk-averse households move up the utility function, their certainty equivalent falls, because of diminishing expected disutility in the event of a loss, inducing them to buy less insurance.

Increases to the household's motive for bequest also drive up the demand for life insurance to the extent that altruistic intentions increase the utility derived from the peace of mind of knowing that beneficiaries will be better able to achieve their financial goals (Campbell, 1980).

4. Method

4.1. Data

The household data used for this study is from the 2004 SCF, a triennial interview survey sponsored by the Federal Reserve Board (FRB) in conjunction with the U.S. Department of Treasury and the richest national data source for detailed household information on balance sheets, pensions, labor force participation, and demographic characteristics. The 2004 SCF provides public use data for 4,519 families, uses a two-part sample design (a standard, geographically based random sample and a special oversample of wealthy households), and provides statistical weights to calculate estimates representative of the full U.S. population. The FRB uses multiple imputation techniques to generate data for missing responses, resulting in five complete data sets for public use (Bucks, Kennickell, & Moore, 2006). In this study, data from all five implicates are used to generate empirical estimates and all descriptive analyses are weighted using the SCF final non-response adjusted sampling weights to produce nationally representative point estimates. The repeated-imputation inference technique is used to derive ordinary least squares (OLS) regression coefficients, test statistics for individual coefficients, and model test statistics (Montalto & Sung, 1996).[3]

Following the 1995 SCF sample used in the Yuh, Montalto, & Hanna (1998) study to capture households that are relatively financially stable, the sample for this study was also restricted to households with respondents between the ages of 35 and 70, working full time, and having household income above the poverty line[4] to calculate the insurance adequacy

ratio. The sample is further reduced by households with only one member because of a lack of dependents and households with an insurable need in excess of $250,000 because life insurance policies are typically sold in $250,000 increments. Because our analysis is conducted at the household level, a single person household need not insure the loss of an earner because the household ceases to be at the death of the earner and has no continued consumption needs hinging on the earner's unconverted human capital.

4.2. Calculating life insurance adequacy

For each household, after-tax income is calculated by subtracting estimated taxes from income,[5] based on related children under 18, adjusted gross income, filing status, and the standard deduction. This after-tax income is adjusted down based on a ratio of household economies of scale before and after the death of an earner. The economies of scale factor stems from the fact that people living together can live on less than those who live separately. Following Bernheim et al. (2001), we use $x^{0.678}$ to estimate these economies of scale where x equals the number of people in the household and a child-adult equivalency factor of 0.5 is used. For example, a two adult household has a scale of 1.599 indicating that this household together could live at the same standard of living as roughly 1.6 adults separately. Similarly, a household with two adults and a single child has a scale of 1.861 and a household with two adults and two children has a scale of 2.106. If this household with two adults and two children loses an adult earner, then their scale becomes 1.599 and they need to replace 1.599/2.106, or 76%, of their pre-loss income to maintain the same standard of living. The replaceable need is then discounted to its present value using a conservative real rate of return of 2.3% over either years to anticipated retirement or, in the case of a household not planning to retire, years to anticipated death. Insurance adequacy is defined as the ratio of the current face value of both whole-life and term-life policies to this insurable need.

Because of potential mis-estimation of the present value of human capital and the desire to capture potential non-linear effects, we define a household as being adequately insured (dependent variable = 1.0) when their insurance ratio is greater than or equal to 1.0; otherwise, the household is deemed to have inadequate insurance (dependent variable = 0.0). We also control for a household's ability to self-insure against mortality risk. We create a self-insurance dummy variable that is equal to one if the ratio of the household's financial asset holdings to our calculated insurance need is greater than or equal to one. Financial asset holdings are the sum of the market value of bonds, stocks, and cash equivalents held in both retirement and non-qualified accounts.

The binary dependent variable measuring adequate household insurance is used in a logistic regression on the SCF data using the repeated-imputation inference technique. The regression takes the following form:

$$Adequate\_Insurance \tag{2}$$

$$= b_0 + b_1 * Financial\_Professional + b_2 * Demographic\_Characteristics$$

$$+ b_3 * Financial\_Characteristics + b_4 * Financial\_Attitudes + error$$

Adequate_Insurance is a binary variable equal to 1.0 if the household has an insurance adequacy ratio greater than or equal to 1.0. *Financial_Professional* is a vector of indicator variables capturing whether or not the household utilizes a broker, dealer, or a financial planner for their savings and investment decisions. *Demographic_Characteristics* is a vector of independent variables capturing a household's education level, age, race, and marital status. *Financial_Characteristics* is a series of variables designed to capture a household's income, net worth, whether or not the household is self-employed, whether or not the household is self-insurable, the household's housing tenure, and if the household expects income growth. *Financial_Attitudes* is a vector containing variables indicating whether or not the household expects to leave a bequest, whether or not the household takes substantial financial risk, and whether or not the household spends more than their yearly income. We define the component independent variables of these vectors explicitly below.

4.3. Use of a financial professional

The SCF asks two questions pertaining to where a household receives information for decisions on credit or borrowing and investment or saving. We focus on the saving or investment question and create separate dummy variables if one of a household's top three sources of information was a financial planner or a broker. A small number of respondents who use both planners and brokers are coded as using planners since respondents may use a broker to trade assets and a planner to provide comprehensive advice. Given the fiduciary responsibility of financial planners, the expected coefficient for insurance adequacy is positive. The lack of fiduciary duty on the part of the broker leads us to predict a coefficient in the opposite sign.

Respondents who indicate that they rely on a financial planner for information on savings or investments may confuse their non-fiduciary broker for a financial planner who is regulated as an investment advisor. Hung et al. (2007) do find some misunderstanding of the differences between financial advisors who use similar terms to describe their occupation. To the extent that respondents confuse some brokers for financial planners, the statistical evidence presented in this study will be biased in the direction of an insignificant difference between planners and brokers.

4.4. Demographic characteristics

Following Yuh et al. (1998), the age of the respondent, education obtained by the respondent, marital status, and race of the respondent are also used to control for changes in insurance and retirement adequacy. Age is separated into three categories: ages 35–44, age 45–54, and ages 55 and older. Education is separated into four categories: less than high school, graduate of high school but no college, some college, and at least a college degree. Because education is often used as a proxy for financial sophistication, insurance adequacy should increase with education (Van Rooij, Lusardi, and Alessie, 2007). Marital status is dummied into three categories: married, unmarried male, and unmarried female. Race is measured with four dummy variables: White, Black, Hispanic, and other. These categories

are mutually exclusive, and the term White, Black, and other refer to non-Hispanic members of these racial categories.

4.5. Financial characteristics

Income is measured as the log of household income because of the heavy skewness of household income in our sample coupled with our desire to capture potential non-linear effects between income and adequate household insurance. Housing tenure is captured with three dummy variables: own home without mortgage, own home with mortgage, and renter. Net worth deciles are used to capture wealth effects. Conversely, Ibbotson, Milevsky, and Zhu (2007) conclude that, given decreasing absolute risk aversion, life insurance holdings should decrease with wealth. Self-employment is also dummied. Insomuch as income volatility is not captured by the self-employment variable, the variable's sign should be positive on insurance adequacy given the benefits of using life insurance policies to complete buy or sell agreements in partnerships (Leimberg and Doyle, 1993).

4.6. Attitudes toward risk and saving

Dummy variables are created for the following attitudes toward risk and saving: whether the household spent more than it earned, whether the respondent was willing to take substantial financial risk, whether the respondent expected income growth, and whether the respondent expected to leave a bequest. With increasing risk aversion, life insurance holdings should increase. High expected income growth should increase the discount rate used to determine the present value of human capital thereby decreasing life insurance holdings (Ibbotson et al., 2007).

5. Results

Descriptive statistics are presented in Table 1. The majority of the sample (70%) does not use a financial planner or a broker. The proportion of respondents using a financial planner (22%) is more than double that of those who use a broker (8%). Households that rely on financial planners have a mean (median) income of $158,818 ($97,553), similar to those who rely on brokers $163,153 ($108,849). Mean (median) wealth is also similar between those who rely on planners [$885,894 ($317,300)] and those that rely on brokers [$970,289 ($378,950)]. The mean (median) ratio of life insurance coverage as a proportion of estimated insurance adequacy is 0.59 (0.35) for those who rely on financial planners, 0.52 (0.28) for those who rely on brokers, and 0.32 (0.18) for those who rely on neither. There are 18% of households who rely on a planner, 16% who rely on a broker, and 6% who rely on neither have life insurance that exceeds the adequacy threshold.

Demographic comparisons between those who rely on financial planners and those who do not are presented in Table 2. Similar to the findings of Elmerick et al. (2002), households that use financial planners are more highly educated, higher income and higher net worth than

Table 1   Insurance ratio descriptive statistics by use of financial professional

Variable	Planner	Broker	Neither	All
Frequency (N = 1308)	22%	8%	70%	—
Mean insurance ratio (median)	0.59	0.52	0.32	0.40
Adequately insured	(0.35)	(0.28)	(0.18)	(0.21)
o:p	18%	16%	6%	9%
Age (mean)	47	48	45	46
Age 35–44	40%	33%	52%	48%
Age 45–54	42%	48%	36%	38%
Age 55 and older	19%	19%	12%	14%
Education (mean)	15	15	14	14
Less than high school	1%	0	8%	6%
High school	19%	14%	30%	26%
Some college	17%	13%	20%	18%
College	64%	73%	43%	50%
Marital status	88%	91%	89%	89%
Married couples	4%	1%	4%	4%
Unmarried males	8%	8%	7%	8%
Unmarried females				
Race	80%	91%	76%	78%
White	11%	1%	8%	8%
Black	5%	3%	10%	9%
Hispanic	4%	5%	5%	5%
Other				
Housing tenure	8%	7%	8%	8%
Owner no mortgage	80%	88%	75%	77%
Owner with mortgage	12%	5%	17%	15%
Renter				
Spends more than income	42%	40%	54%	50%
Takes substantial financial risk	3%	5%	3%	3%
Expect income growth	33%	33%	23%	26%
Expect to leave a bequest	47%	38%	33%	36%
Self-employed	23%	17%	17%	18%
Self-insurable	2%	5%	2%	2%
Mean net worth (median)	$885,894	$970,289	$448,017	$589,493
	($317,300)	($378,950)	($148,101)	($184,750)
Mean income (median)	$158,818	$163,153	$98,818	$116,956
	($97,553)	($108,849)	($71,881)	($80,096)

Data are from the 2004 Survey of Consumer Finances and represent column percents and mean or median values as indicated.

households who do not use a financial planner. The mean age, marital status, race, and willingness to take substantial financial risk are similar between both groups, and those who do not indicate using financial planners have lower educational attainment, net worth, and income levels. More households that use a financial planner are adequately insured than households who do not use a planner. The mean and median life insurance adequacy ratio is also higher among those who use planners. Higher percentages of those who do not use planners are renters and indicate that they spend more than their income.

Results from a multivariate estimation of the likelihood of meeting the life insurance adequacy threshold are presented in Table 3. Holding household characteristics constant, the use of a financial planner has a positive and significant effect on life insurance adequacy at

Table 2 Mean or proportional differences between planner users versus non-planner users

Variable	Use planner	Do not use planner
Mean insurance ratio (median)	0.59**	0.34
Adequately insured	(0.35)	(0.18)
	18%***	7%
Age (mean)	47	45
Age 35–44	40%***	50%
Age 45–54	42%	37%
Age 55 and older	19%	13%
Education (mean)	15	14
Less than high school	1%***	7%
High school	19%***	28%
Some college	17%	19%
College	64%***	46%
Marital status	88%	89%
Married couples	4%	4%
Unmarried males	8%	7%
Unmarried females		
Race	80%	78%
White	11%	7%
Black	5%**	10%
Hispanic	4%	5%
Other		
Housing tenure	8%	8%
Owner no mortgage	80%	76%
Owner with mortgage	12%**	16%
Renter		
Spends more than income	42%***	53%
Takes substantial financial risk	3%	3%
Expect income growth	33%***	24%
Expect to leave a bequest	47%***	34%
Self-employed	23%**	17%
Self-insurable	2%	2%
Mean net worth (median)	$885,894***	$501,240
	($317,300)	($159,070)
Mean income (median)	$158,818**	$105,374
	($97,553)	($75,989)

Data are from the 2004 Survey of Consumer Finances.
Asterisks, *** and **, indicate significance at the 0.01 and 0.05, respectively.

a 99% confidence level. However, the impact of using a broker is not significantly different from the reference category of respondents who did not rely on a financial professional. Consistent with theory, wealthier, self-employed, and home-owning households are significantly more likely to hold adequate life insurance than other households. However, income is negatively related to life insurance adequacy when wealth is held constant. This may occur if income elasticity of demand for life insurance is not high enough to provide full human capital coverage as income increases, or if tax deductibility limits constrain the ability of employers to provide greater coverage for workers with the highest incomes. Those whose wealth allows them to self insure are, in fact, more likely to hold adequate life insurance. This may be because of the use of life insurance as an estate tax shield.

Table 3   Logistic regression results

Variable	Coefficient	Chi square	Odds ratio estimate
Use of financial professional (reference none)	0.5636	0.0130**	1.784
Financial planner	0.0556	0.8457	
Broker			
Age (reference 55 and older)	−0.1019	0.7106	
Age 35–44	−0.1695	0.4555	
Age 45–54			
Education (reference less than high school)	0.7006	0.0686	
Some college	0.5484	0.0967	
College			
Marital status (reference married couples)	0.4211	0.4133	
Unmarried males	−0.3028	0.6406	
Unmarried females			
Race (reference White)	0.3300	0.4979	
Black	−0.9560	0.1247	
Hispanic	0.2958	0.5323	
Other			
Income (log)	−0.3867	0.0035***	0.680
Housing tenure (reference owner, no mortgage)	0.4998	0.0493**	1.651
Owner with mortgage	−0.3586	0.5288	
Renter			
Spends more than income	0.2899	0.1918	
Takes substantial financial risk	0.1290	0.7511	
Expect income growth	0.2106	0.3102	
Expect to leave a bequest	0.0130	0.9543	
Self-employed	0.4770	0.0165**	1.612
Self-insurable	0.7288	0.0357**	2.096
Net worth deciles	−0.2347	0.7955	
(reference lowest decile = NW ≤ $18,250)	0.7862	0.3113	
2nd decile ($18,250 < NW ≤ $67,250)	0.3585	0.6592	
3rd decile ($67,250 < NW ≤ $138,900)	1.1481	0.1415	
4th decile ($138,900 < NW ≤ $254,520)	1.5306	0.0402**	
5th decile ($254,520 < NW ≤ $413,450)	1.4644	0.0422**	
6th decile ($413,450 < NW ≤ $691,700)	2.0040	0.0098***	4.636
7th decile ($691,700 < NW ≤ $1,245,180)	2.8755	0.0003***	4.328
8th decile ($1,245,180 < NW ≤ $3,102,000)	3.6708	0.0000***	7.474
9th decile ($3,102,000 < NW ≤ $10,026,600)			17.791
10th decile (NW > $10,026,600)			39.430
Intercept	−0.1653	0.9190	
Mean adjusted R^2 = 0.2510		Mean N = 1308	

Data are from the 2004 Survey of Consumer Finances. DV = adequate insurance (insurance ratio ≥1). Asterisks, *** and **, indicate significance at the 0.01 and 0.05, respectively.

6. Conclusions

This study tests the hypothesis that the use of financial advisors has an impact on a financial behavior essential to a comprehensive financial plan: life insurance adequacy. Consistent with agency theory, the use of financial intermediaries who have the strongest fiduciary duty toward a household is associated with holding life insurance at or above the adequacy threshold. Even though households who employ brokers are demographically similar to those who rely on financial planners, the lack of contracting incentive among

brokers to provide comprehensive planning services may reduce their willingness to recommend financial products that are substitutes for those that provide direct compensation.

Many investors are reluctant to rely on the advice of financial professionals because of misconceptions about the amount of welfare that could be obtained by hiring an informed agent to guide financial decision making. This study provides strong evidence that the 22% of Americans who use financial planners are more likely to receive comprehensive planning services consistent with a fiduciary relationship between the agent and the household. Better understanding of the residual losses associated with contracting differences between financial professionals will impact the decision seek financial advice since these losses represent part of the indirect costs of hiring an agent. These results also suggest that any possible indirect costs identified in prior studies may stem from an inability to distinguish between financial planners and brokers, or an excessive focus on net returns in investment accounts.

Multivariate results indicate the potential benefit from using a financial planner rather than a broker as a source of comprehensive financial advice. Many investors, even the most educated and financially experienced, are not able to articulate this difference in contracting among different types of financial advisors (Hung et al., 2007). If investors were better able to identify important contractual distinctions among advisors, their perception of the indirect costs of soliciting advice might be reduced.

The most important characteristic cited by those who chose both to use and not use a financial professional is trust (Hung et al., 2007). Investors also cite an inability to distinguish which professionals look out for their interests as a reason for not seeking the services of an advisor. These reactions are consistent with a principal or agent relationship where the costs of monitoring are too high to justify delegating financial decision making. These costs can best be reduced through bonding via the use of professional certifications and by voluntarily operating under more stringent legal constraints. Improved awareness can only reduce reticence toward the use of professionals to provide much-needed financial advice in a complex investment marketplace.

Notes

1. To motivate our argument that financial markets are ripe with variation in both price and quantity, consider the following two examples. Ranking a sample of 28 U.S. mutual funds from CRSP with words "S&P 500" in the mutual fund name and 12 months of return data over the years 2000 to 2008, we observe a 10th percentile of 0.16% annual expense ratio and 0.05% tracking error on the S&P 500 Index and a 90th percentile of 1.75% annual expense ratio and 6.71% tracking error on the S&P 500 Index. A survey of 77 Section 529 College Savings Plans from the Morningstar Direct database yields similar findings. In 2008, we find a 10th percentile of 6 mutual funds offered and a equally weighted annual expense ratio across funds offered of 0.08% and a 90th percentile of 40 mutual funds offered with a 1.21% annual expense ratio.
2. See for example, Bernheim, et al., 2003, and Bernheim et al., 2001.

3. For additional discussion of resources for the appropriate use of the SCF data, see Huston, 2007.
4. The poverty line was defined by household size and related children under the age of 18 as reported in Appendix B of Income, Poverty, and Health Insurance Coverage in the United States: 2003 published by the U.S. Census Bureau.
5. 2003 IRS tax tables were used to estimate taxes.

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