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The Value of Financial Advice

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The research paper uses econometric modelling and a unique sample of Canadian households to study if having a financial advisor contributes positively and significantly to the accumulation of financial wealth. It provides important insights on how the process of advised wealth creation actually works. In particular, the research paper provides new evidence that: i) having a financial advisor for at least four years has a positive and significant impact on financial assets after factoring out the impact of close to 50 socio-economic, demographic and attitudinal variables that also affect individual financial assets; ii) the positive effect of advice on wealth creation cannot be explained by asset performance alone: the greater savings discipline acquired through advice plays the major role.

Key Words: Value of advice; Econometric models.
JEL Classification Numbers: G11, G23, C51.

1. INTRODUCTION

Financial institutions frequently describe and advertise the benefits of having a financial advisor. Industry participants routinely claim that advice contributes by, among other things, improving savings and investment behaviours, selecting appropriate financial products, improving the tax efficiency of savings, optimising asset mix for personal circumstances and risk tolerance, and ultimately increasing financial confidence and peace of mind.

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While these benefits may be valid, are the effects of advice observable and measurable? Is financial advice worth the cost?

Public opinion surveys commissioned by the financial services industry consistently observe that those who seek advice are also those who are financially better off.

Not surprisingly, the impact, or value, of advice has drawn considerable public attention. Positive industry claims are met with public skepticism, particularly when the markets show great volatility or downward results. By its nature, advice would seem to be a complex set of interrelated processes. Likewise, the type and volume of reliable data required to measure the various values or impacts of advice is difficult to obtain. This is reflected in the academic literature, which is relatively scarce in relation to the net worth of advised investors, observed differences in portfolio composition and the cost, risk and consequences of advice.

Fischer and Gerhardt (2007) identified investor mistakes made in the six principal phases of the investment decision process, identified as: 1) assess personal balance sheet; 2) assess risk aversion and investment horizon, 3) determine optimal asset allocation to asset classes, 4) select securities, 5) perform transactions, and 6) monitor wealth. Advice is introduced as the mitigating factor while taking into account the intensity, efficiency, and quality of financial advice. Advice is found to improve the investment process in each of the identified phases of decision-making, including avoiding home bias in the asset allocation phase, or avoiding single stock picking in the security selection phase. In another study comparing 597 investors before and after regular investment advice is received, Gerhardt and Hackethal (2009) concluded that there are positive effects, including less speculative trading and more diversified portfolios. Similar results were found by Bluethgen, Gintschel, Hackethal and Mueller (2008) using a large German data bank.

Other studies depict advice as a form of coaching that adds discipline and rationality to investment decisions. Among other findings, Bluethgen et al (2008) suggests that financial advice adds discipline to asset allocation and enhances international portfolio diversification. In a natural experiment setting, combining the introduction of a withholding tax in Germany, Horn, Meyer and Hackethal (2009) found that advice significantly lowers the probability of investing in tax-disadvantaged vehicles. Through regression analyses on a comprehensive multi-decade dataset, Maymin and Fisher (2011) tested and confirmed that advisors help investors stay disciplined in the face of market volatility. The analyses found that interactions with financial advisors intensify in volatile markets, as investors are re-educated and dissuaded from excessive trading. Barber and Odean (2000) found that individual investors who hold common stocks directly pay a tremendous performance penalty for active trading. Based on 66,465 households

with accounts at a large discount broker during 1991 to 1996, they suggest that overconfidence can explain high trading levels and the resulting poor performance. Shapira and Venezia (2001) have analyzed the investment patterns of a large number of clients of a major Israeli brokerage house during 1994. They showed that both professional and independent investors exhibit the disposition effect (the tendency to sell winners quicker than losers), although the effect is stronger for independent investors. Shapira and Venezia demonstrated that professionally managed accounts were more diversified and that round trips were both less correlated with the market and slightly more profitable than those of independent accounts.

Contradictory results have also been observed. Financial advice may not improve investment returns (Kramer, 2009; Karabulut, 2013) and may have little or no bearing on investor outcomes (Niebling, 2011) and to the extent there is a correlation, it is either spurious or the result of good client selection on the part of advisors. Hackethal et al (2009), using German survey data, found that advised accounts from both independent financial advisors and banker financial advisors earned lower returns than those run by similar investors without advisor input. Bergstresser, Chalmers and Tufano (2009) noted that brokered-channel mutual fund customers pay more than twice as much loads and fees as direct-channel customers. Niebling (2011) has extented the paper of Bergstresser, Chalmers and Tufono and obtained similar results and in particular do not increase their clients' level of sophistication. Niebling was able with his data set to compare the behaviors of investors before and after they use the services of a financial advisor.

The context surrounding advice is also relevant. Bluethgen et al (2008) identified older, wealthier, risk averse, and female investors as more inclined to seek advice. Their regression models provide evidence that financial advice adds discipline to asset allocation and enhances international portfolio diversification. Hung and Yoong (2010), using survey data of the Rand American Life Panel and experimental evidence, found that compulsory programs of financial counselling had no impact, whereas individuals who actively solicited advice performed better. Hackethal, Haliassos and Jappelli (2012) found that advised accounts offer on average lower net returns and inferior risk-return tradeoffs (Sharpe ratios), that trading contribute to outcomes, as advised accounts feature higher turnover, consistent with commissions being the main source of advisor income.[1] The authors show that results are robust to controlling for investor and local area characteristics. Finally, Karabulut (2013) also found that professional advices is not

[1] Several studies allude to the moral hazard risks faced by individual investors who may be financially naïve or perhaps illiterate when receiving advice from sales-incentivized advisors.

a reliable substitute for individuals' financial literacy, using a "financial advice intensity" variable and accounting for endogeneity issues.[2]

As seen from the scientific literature and numerous industry studies, the value of financial advice takes different forms from increased financial assets to more subjective indicators such as the feeling of being better prepared for retirement, reduced uncertainty, and increased confidence in being able to take the right financial decisions. By any account, financial advice covers a wide and complex array of activities. To paraphrase Oscar Wilde: "we know the price of everything and the value of nothing." Financial advice comes at a price, so it stands to reason that advised investors will expect better portfolio performance over time. Is this the case? How does the improvement in performance take place?

By far, the most common way of measuring the impact of advice is by measuring the value added to initial assets; however the observed results in the literature are ambiguous on this point. The challenge is two-fold. First, if financial markets are efficient, differences in performance are largely due to chance. Second, not enough is known about the behaviour of a fixed group of individuals over time. Were the data available, the performance of advised investors could be compared with the comparable unadvised investor across a variety of environments. Additionally, if the panel were sufficiently large, the many counterfactual variables affecting the financial portfolio could also be controlled in order to define the comparable investor. However, longitudinal panel data take time to collect and are costly. Finally, essentially, without panel data, the causality issue cannot be properly addressed. As for other studies relying on survey data, our a priori is to assume that advisors influence wealth rather than wealth attracting advisors. We refer to a sequential model ant to instrumental (IV) techniques to control for the endogeneity of financial advice.

This study relies on a pair of detailed surveys conducted on a single, large set of working-age Canadian households approximately six months apart in December 2010 and June 2011.[3] The total sample size is 3,610 respondents who are the primary financial decision-makers or are involved in

[2]His "financial advice intensity" variable is a continuous variable taking a value between zero for self-managed accounts and one for full delegation of portfolio decisions to the professional advisors.

[3]In December 2010, Ipsos Reid was commissioned by Power Financial Corporation to conduct an Internet-based survey on the financial situation of Canadian households. A total of 18,333 working-age households participated in the survey, of which 10,505 were retained after adjustments were made for out-of-scope and incomplete answers. Sponsored by Power Financial, CIRANO designed a follow-up survey focused on assessing the value of advice. Conducted in June 2011, the second survey was addressed to the 10,505 respondents of the original survey. A total of 4,978 observations were collected, of which 3,610 were retained after adjustments for out-of-scope, incomplete, and inconsistent answers. CIRANO administers both survey datasets.

the household's financial decision-making. All participants were between the ages of 25 and 65 and had at least $1,000 in financial assets and a household income of less than $250,000. The surveys captured a significant amount of information and detail about the participants' financial situations, socio-economic circumstances, financial literacy, behavioural tendencies, financial objectives, savings rates, and type and tenure of advice, as well as their perceptions and satisfaction about their situation and financial advisors.[4] The participants in the surveys can be grouped into three categories: 1,785 participants (49.4% of the total) have a financial advisor, while 1,825 respondents do not have a financial advisor and can be divided in two sub-categories: 1,598 (44.3%) are passive non-advised participants and 227 (6.3%) are active non-advised participants or "traders".[5] While the initial and the follow-up surveys used for our study are unique, exhaustive and very rich in information, they should be viewed as more of a snapshot of the participants' current situation than as a set of panel data. Thus, the ability to directly test the importance of advice in reducing losses in a negative market, and increasing the value of the portfolio in a positive environment, is restricted.

This paper addresses two questions. First, the determinants of having financial advice are considered. Second, the economic impact of having an advisor is measured and the sources of economic value from advice are assessed.

The particular focus of this study is to provide statistical tests on the value of a financial advisor.[6] The models address issues associated with the direction of causality, selection bias and endogeneity in the examination of whether other confounding factors might explain observed results.

The econometric results show that on average, participants retaining the service of a financial advisor for more than 15 years have about 173% more financial assets, ceteris paribus, or 2.73 times the level of assets of "comparable" non-advised respondents. The impact of advice on financial assets (cash, GICs, term deposits, stocks, bonds, ETFs, investment funds and other investment vehicles) increases with the tenure of advice. The difference in financial assets is explained most significantly by higher household savings rates and greater allocation into non-cash investments. The greater savings discipline acquired through advice is the original result of this paper.

[4]The survey questions and the construction of the variables used in this paper are available upon request.

[5]The 227 traders are non-advised respondents answering "I do my own financial planning" to question ("What sources of financial advice do you rely on ...") and "I am capable of doing my own finances" to question ("What reasons would lead your household to consider not using a financial advisor?").

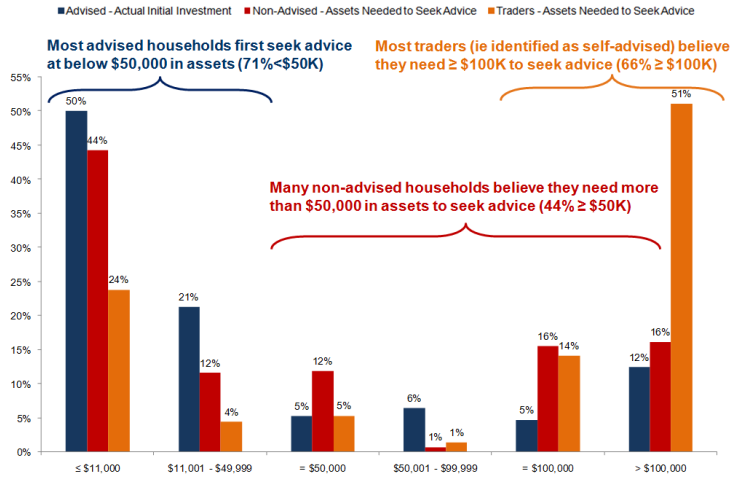
[6]In a companion paper Montmarquette and Viennot-Briot (2013), we consider the perceived value of financial advice.

2. THE DETERMINANTS OF HAVING A FINANCIAL ADVISOR

Do better-educated people choose to retain the service of a financial advisor? What role does household income play in that decision? Is age an important factor? What level of assets do people believe is needed to hire a financial advisor?

A binary probit model explains the probability of having an advisor with respect to numerous explanatory variables. This analysis identifies those people who are likely to seek advice and those who need to be convinced. We consider two samples. The first uses the full 3,610 observation sample and is concerned with advised and non-advised respondents. The second considers the probability of being a "trader" (ie active, non-advised investors) among the 1,825 sample of non-advised respondents.

FIG. 1. Distribution of Value of Assets that would prompt Household to Seek Financial Advice



The value of financial assets needed, or believed to be needed, to hire a financial advisor is an important and significant control variable. As shown in Figure 1, advised households generally start their advice relationships with only modest levels of financial assets (the median initial investments is $11,000) while non-advised households believe they need more to seek advice.[7] Within the non-advised sample, nearly half (44%) believe they need $50,000 or more to seek advice. There is, however, another specific

[7]The IFIC Value of Advice Report (2011) confirms the point that most investors first begin to work with an advisor when they have only modest amounts of savings. The IFIC cites in particular a study by Pollara (2011), a Canadian firm specialized in public opinion and marketing.

group of non-advised households, represented by non-advised but active households ("traders").[8] These households self-manage their investments, identify themselves as the main source of advice and are without an advisor because they are capable of managing their own investments. Relatively speaking, they exhibit greater levels of education, income and financial literacy. Nearly two-thirds of traders believe that they need $100,000 or more to seek advice.[9]

The determinants of the probability of having an advisor and being a trader are presented in Table 1. Without surprise, we observe that the higher the value of "Assets Needed", the lower the probability to have a financial advisor and the higher the probability that one is a trader.[10]

TABLE 1.

The Determinants of Having a Financial Advisor and Being a Trader (Probit models)

SAMPLE	Financial Advisor	Traders in the Non-advised Sample
Assets Needed	$-1.62e-06^{***}$	$2.15e-08^{**}$
	$(2.38e-07)$	$(8.54e-09)$
Household's annual income before taxes		
Income before taxes < 35000	Ref.	Ref.
35000 <= income before taxes < 60000	0.096	0.028
	(0.080)	(0.159)
60000 <= income before taxes < 90000	0.219^{**}	0.102
	(0.089)	(0.172)
Income before taxes >= 90000	0.416^{***}	0.070
	(0.098)	(0.187)
Savings:		
savings=0	Ref.	Ref.
savings> 0 & savings<= 3000	0.255^{***}	0.500^{***}
	(0.072)	(0.155)
savings> 3000 & savings<= 10000	0.444^{***}	0.798^{***}
	(0.073)	(0.154)
savings> 10000	0.673^{***}	0.956^{***}
	(0.088)	(0.175)

[8]Note that we cannot include a dummy variable "trader" in the first regression as it becomes a perfectly predictable variable since all traders have no financial advisor.

[9]Some mention "millions of dollars" as if to stress their point that they do not need a financial advisor.

[10]Karabulut (2013) has obtained a similar result with his "overconfidence" variable in his probit regression on the determinants of making use of financial advice.

TABLE 1—*Continued*

Sources of income:		
Government transfers, investment income and other income	Ref.	Ref.
Wages and salaries	0.060	−0.534**
	(0.123)	(0.208)
Self-employment income	0.166	0.229
	(0.138)	(0.224)
Working full time	−0.082	−0.190
	(0.077)	(0.140)
Fully retired	0.179	0.317
	(0.157)	(0.289)
Workplace pension	0.050	0.124
	(0.048)	(0.090)
Characteristics:		
Minimum living needs at retirement:	Ref.	Ref.
Less than 40%		
40%	0.112	−0.089
	(0.080)	(0.140)
50%	0.082	−0.309**
	(0.070)	(0.126)
60%	0.059	−0.349**
	(0.077)	(0.147)
70%	0.083	−0.284*
	(0.083)	(0.152)
More than 80%	−0.072	−0.598***
	(0.084)	(0.165)
Never save for retirement	−0.578***	−0.704***
	(0.095)	(0.198)
Risk averse[1]	0.022	−0.157
	(0.062)	(0.109)
Preference for immediate consumption[2]	−0.085	−0.115
	(0.061)	(0.117)
Preference for investing[3]	−0.049	0.072
	(0.069)	(0.125)
Financial literacy[4]	0.103**	0.303***
	(0.049)	(0.094)
Male	−0.036	0.342***
	(0.049)	(0.091)
Post-secondary diploma	0.112**	0.070
	(0.052)	(0.097)

TABLE 1—*Continued*

Age:		
Age< 45	Ref.	Ref.
45 <= age< 54	0.294***	0.158
	(0.055)	(0.106)
54 <= age < 65	0.535***	0.255**
	(0.061)	(0.112)
Number of income earners aged 18 or older in the household:		
One income earner	Ref.	Ref.
Two income earners	−0.141**	−0.281**
	(0.068)	(0.124)
Three or more income earners	−0.218**	−0.559***
	(0.093)	(0.182)
Marital status:		
Other family type	Ref.	Ref.
Single individual household	−0.018	−0.040
	(0.113)	(0.195)
Couple with children	0.115	0.054
	(0.096)	(0.177)
Couple with no children	0.260***	0.258
	(0.092)	(0.169)
Single parent family	0.215	−0.097
	(0.132)	(0.258)
Regions:		
Atlantic	Ref.	Ref.
Quebec	0.056	−0.169
	(0.102)	(0.207)
Ontario	0.052	0.158
	(0.099)	(0.192)
Manitoba, Saskatchewan	−0.006	−0.401
	(0.121)	(0.268)
Alberta	0.009	−0.124
	(0.116)	(0.223)
British Columbia	0.090	−0.011
	(0.110)	(0.211)
Constant	−0.893***	−1.349***
	(0.207)	(0.363)
Observations	3610	1825
ll_0	−2502.040	−685.413
Ll	−2147.675	−554.825

TABLE 1—*Continued*

chi2	434.445	211.901
Prob < chiˆ2	0.000	0.000
Pseudo R2	0.142	0.191

Robust standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

[1] Consider in the following hypothetical choice offered to the participants: If you were to be presented with an opportunity to receive a cash award, what would you prefer? Please select one only.

- 100% chance of receiving $500
- 50% chance of receiving $1,200 but 50% chance of receiving $0

Participants who chose the cash are considered risk averse.

[2] Consider the following two questions: If you were given the choice of receiving cash today or in the future, what would you prefer? Please select one only.

- $1,000 today
- $1,100 in 6 months

If you were given the choice of receiving cash today or in the future, what would you prefer? Please select one only.

- $1,000 today
- $1,100 in a year

Participants who chose the today option for both questions are showing a preference for immediate consumption.

[3] Participants who chose the second option for both questions in footnote 13 are showing a preference for investing.

[4] Consider the following two questions: If the interest rate on your savings account is 2 percent a year and inflation is 3 percent a year, after five years, you would expect the money in the account to buy how much? Please select one only.

- More than it does today
- Exactly the same as it does today
- Less than it does today
- Don't know

Suppose you have $100 in a savings account earning 2 percent interest a year compounded. After five years, how much would you expect your savings account would be worth? Please select one only.

- Less than $110
- Exactly $110
- More than $110
- Don't know

Participants who chose the third option for both questions show a financial literacy.

As expected, the important factors that positively affect the probability of having a financial advisor are income level, the capacity of the house-

hold to save, and the age of the respondent.[11] Respondents who are more financially literate or have a post-secondary diploma are more likely to retain the service of a financial advisor. Households who declare that they will never save for retirement are less likely to have a financial advisor. Somewhat surprisingly, couples with no children are more likely to have a financial advisor, even when we control for income and savings. The second regression demonstrates that traders form a specific group among the sample of non-advised respondents. They believe that a very high level of assets is needed to hire a financial advisor and they have greater rates of savings. Their source of income is less likely to be from wages and salaries and they are more likely financially literate and male. Finally, they are older than the other non-advised respondents.

3. ASSESSING THE IMPACT OF A FINANCIAL ADVISOR ON THE VALUE OF ASSETS

One critical objective of a financial advisor is to increase the value of his clients' assets. Is it the case? This section addresses this question within the limits of the surveys at hand. Table II.1.1 presents the median, mean and standard deviation of the value of financial assets for the three categories of respondents.[12] The median and mean values are different with respect to the non-advised respondents. The dispersions around the means are large across respondents, particularly for the traders. The median value of the financial assets of the advised respondents is 4.2 times the median value of all the non-advised respondents. In Figure 2, we illustrate the differences in the median value of assets for the different categories of respondents by income and age. Passive non-advised respondents clearly have lower financial assets.

Consider a linear sequential model, equation (1):[13]

$$\begin{aligned} \ln A_i &= y_i\theta + \alpha_0 FA_i + \alpha_1 FA \times 4 \text{ to } 6 \text{ years} + \alpha_2 FA \times 7 \text{ to } 14 \text{ years} \\ &+ \alpha_3 FA \times 15 \text{ years or more} + \varepsilon_i \end{aligned} \tag{1}$$

[11] The level of assets was not introduced as a determinant of having or not having a financial advisor as the respondents' income and savings are correlated with the respondents' level of assets.

[12] As mentioned earlier, only respondents declaring a positive financial assets of more than $1,000 were retained in the study. Financial assets include cash, GICs, term deposits, stocks, bonds, ETFs, investment funds and other investment vehicles.

[13] In support of our sequential model, Lusardi and Michell (2007) using two cohorts of the US Health and Retirement Study have shown that deliberate financial planning affects wealth and that wealth does not affect planning.

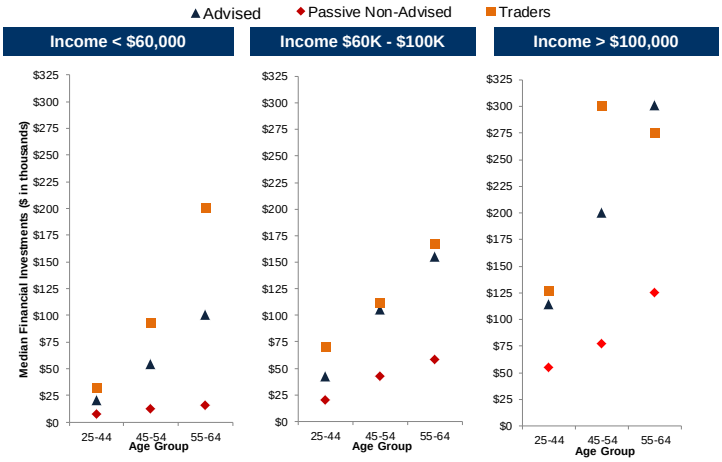
TABLE 2.

Descriptive Statistics on the Value of Financial Assets by Categories of Respondents

		Non Advised	
	Advised	**All**[1]	**Traders**
Observations	1785	1825	227
Median($)	101000	24000	110000
Mean($)	193772	93384	256766
Standard Deviation	281874	264005	469216

[1] Includes passive non-advised and traders

FIG. 2. Median Value of Financial Assets of the Different Categories of Respondents by Income and Age



In equation (1), the effect of the financial advisor, FA, on the level of assets (expressed in logarithm terms), $\ln A$, is also influenced by the length of time one has had a financial advisor. Positive and statistically significant parameter estimates for the α coefficients will suggest that a financial advisor adds to the financial assets of participants, taking into account the length of time that one is associated with a financial advisor. y is a set of other explanatory variables and ε is the error term.

In this specification, the choice of having an advisor, FA, is endogenous and is therefore instrumented using the parameter estimates of the probit equation above. Substituting the predicted value for FA, the linear least squares estimation results of equation (1) are reported in Table 3.

TABLE 3.

Determinants of the (logarithm) Value of Assets (Instrumented linear least squares)

SAMPLE	Financial Advisor	Traders in Non-Advised
The household has a financial advisor (IV)	−0.123	
	(0.076)	
The household is a trader (IV)		0.834***
		(0.215)
Financial Advisor X Tenure		
Financial Advisor X Less than 4 years	Ref.	
Financial Advisor X 4 to 6 years	0.456***	
	(0.092)	
Financial Advisor X 7 to 14 years	0.687***	
	(0.074)	
Financial Advisor X 15 or more years	1.006***	
	(0.078)	
Household's annual income before taxes		
Income before taxes < 35000	Ref.	Ref.
35000 <= income before taxes < 60000	0.482***	0.453***
	(0.089)	(0.111)
60000 <= income before taxes < 90000	1.081***	1.201***
	(0.097)	(0.124)
Income before taxes >= 90000	1.682***	1.821***
	(0.106)	(0.141)
Sources of income:		
Government transfers, investment income and other income	Ref.	Ref.
Wages and salaries	−0.040	−0.011
	(0.143)	(0.192)
Self-employment income	0.258	0.199
	(0.161)	(0.222)
Working full-time	−0.059	−0.004
	(0.085)	(0.118)
Fully retired	0.387***	0.495*
	(0.149)	(0.255)
Workplace pension	−0.026	−0.005
	(0.051)	(0.078)

In Table 3, we distinguish two samples. In the first column, we include all the participants in the survey.[14]

[14]Note that by including the traders in the sample, we bias against a positive effect of the financial advisor on the value of assets.

TABLE 3—*Continued*

Characteristics:		
Minimum living needs at retirement:		
Less than 40%	Ref.	Ref.
40%	−0.036	−0.023
	(0.085)	(0.132)
50%	−0.066	0.005
	(0.074)	(0.109)
60%	−0.196**	−0.169
	(0.082)	(0.123)
70%	−0.160*	0.004
	(0.084)	(0.126)
More than 80%	−0.388***	−0.318**
	(0.093)	(0.128)
Never save for retirement	−0.926***	−0.758***
	(0.104)	(0.116)
Risk averse	−0.154**	−0.204**
	(0.063)	(0.097)
Preference for immediate consumption	−0.082	−0.098
	(0.064)	(0.098)
Preference for investing	0.181**	0.233**
	(0.071)	(0.110)
Financial literacy	0.288***	0.345***
	(0.052)	(0.077)
Male	0.196***	0.241***
	(0.051)	(0.075)
Post-secondary diploma	0.047	0.085
	(0.057)	(0.081)
Age:		
Age< 45	Ref.	Ref.
45 <= age < 54	0.586***	0.584***
	(0.062)	(0.086)
54 <= age < 65	0.950***	0.838***
	(0.071)	(0.097)
Number of income earners aged 18 or older in the household:		
One income earner	Ref.	Ref.
Two income earners	−0.216***	−0.155
	(0.071)	(0.106)
Three or more income earners	−0.379***	−0.543***
	(0.097)	(0.145)

TABLE 3—*Continued*

Marital status:		
Other family type	Ref.	Ref.
Single individual household	0.057	0.114
	(0.121)	(0.160)
Couple with children	0.066	0.171
	(0.104)	(0.135)
Couple with no children	−0.027	0.002
	(0.098)	(0.129)
Single parent family	−0.220*	0.109
	(0.132)	(0.171)
The industry sector:		
Other industries	Ref.	Ref.
Goods-producing industries	0.109	0.045
	(0.093)	(0.130)
Service-producing industries	0.158*	0.150
	(0.082)	(0.114)
Public administration	−0.080	−0.100
	(0.102)	(0.150)
Regions:		
Atlantic	Ref.	Ref.
Quebec	0.030	0.102
	(0.110)	(0.159)
Ontario	0.295***	0.333**
	(0.107)	(0.156)
Manitoba, Saskatchewan	0.214*	0.252
	(0.127)	(0.192)
Alberta	0.424***	0.543***
	(0.124)	(0.180)
British Columbia	0.395***	0.403**
	(0.119)	(0.172)
Constant	8.947***	8.373***
	(0.233)	(0.316)
Observations	3610	1825
ll_0	−7201.752	−3643.785
Ll	−6301.139	−3285.627
R-squared	0.393	0.325
Adj R-squared	0.386	0.311

Robust standard errors in parentheses
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Controlling for multiple factors, the results of the first column in Table 3 indicate that the presence of a financial advisor increases the size of

the assets, but only after four years. Specifically, for identical individuals, those who have had a financial advisor for at least four to six years will have almost 58 % more financial assets than those who do not have a financial advisor.[15] Similarly, a respondent associated with a financial advisor for seven to 14 years will have 99 % more assets. Those with 15 years or more will have 173 % more assets than if they did not have a financial advisor (2.73× the assets of the equivalent non-advised respondents).[16] In the sample of the non-advised, controlling for many explanatory variables, those categorized as traders have 2.30× the assets of comparable passive, non-advised respondents.

Across both samples, many other variables have coefficient estimates that have positive, statistically significant effects on the logarithm of the value of assets. Notable variables include: those with income levels above $35,000, those older than 45 years of age, those who are fully retired, those with a preference for investing, those with financial literacy, and those who male. Participants from Alberta, Ontario and British Columbia have more assets that those in the rest of Canada. Respondents declaring that they will never save for retirement and who are risk averse have lower assets, as do households with three or more income earners.

What could explain a 173 % increase in the financial assets of long-tenured advised participants in the survey over comparable non-advised participants assuming the same level of initial assets?[17] In recent U.S. research, the accounts of workers who received some form of financial help, or advice, in defined contribution plans were compared with those who received no financial advice in the period from 2006 to 2010.[18] Advised savers received median returns that were approximately 3 % higher than non-advised participants. If the markets are efficient, it is indeed difficult

[15] From the estimated coefficients of equation (1), we predict the ln of assets of an individual with a financial advisor for at least 4 to 6 years, that is $FA = 1$ and $FA\times$advisor for 4 to 6 years $= 1$ with the following equation : $\ln A_i = y_i\theta + \alpha_0 + \alpha_1$ Without a financial advisor, $FA = 0$:

$$\ln A_j = y_j\theta.$$

The difference in the ln of assets for the same individual or an identical individual in all aspects (same income, age ...) except for the presence of a financial advisor is:

$$\ln A_i - \ln A_j = \alpha_0 + \alpha_1$$

Rising to the exponential on both sides: $A_i/A_j = \exp(\alpha_0 + \alpha_1)$.
Neglecting α_0 which is non-significantly different from zero at the 5 % level of confidence, with $\alpha_1 = 0.456$ the expected ratio of assets is equal to 1.58.

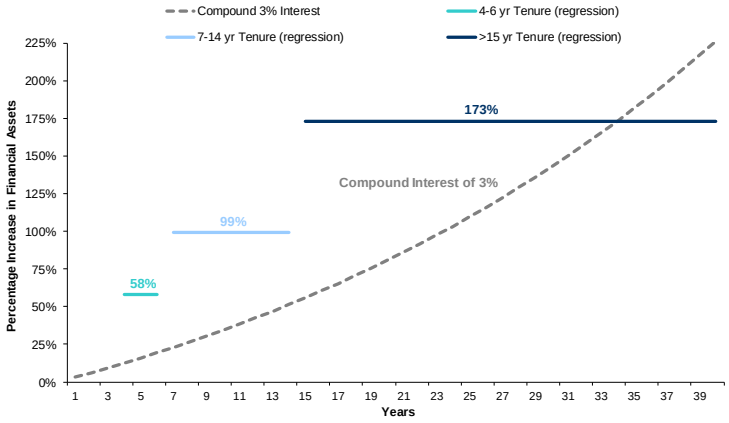
[16] This is reasonable knowing that the average value of assets for the advised respondents is $193 772 versus $93 384 for the average dollars assets for all the non-advised respondents. See Table 2.

[17] If we exclude the traders among the non-advised households, this percentage will be higher as one can anticipate with the last column of Table 2.

[18] Aon Hewitt and Financial Engines (2011).

to earn more than or even a 3 % rate of return due to better stock picking. Figure 3 plots the results from a 3 % annual rate of return of a dollar investment compounded over time. The cumulative return falls well short of the 173 % incremental return estimated in the current study. To achieve 173 %, an annual interest rate of 7 % would need to be compounded over 15 years. At a rate of 3 %, it would take 34 years to achieve this result. This suggests that the impact of advice must arise from factors other than better stock picking, such as increased rates of savings, better portfolio diversification, and/or greater tax efficiency. Also, as the statistically significant positive coefficient estimates on the tenure dummies are related to assets compounded growth rates, therefore, in the face of market volatility, sticking with a financial advisor induces a more discipline behaviour.

FIG. 3. Percentage Increase in the Financial Assets of Advised Participants over Non-advised Participants with the Same Level of Initial Assets

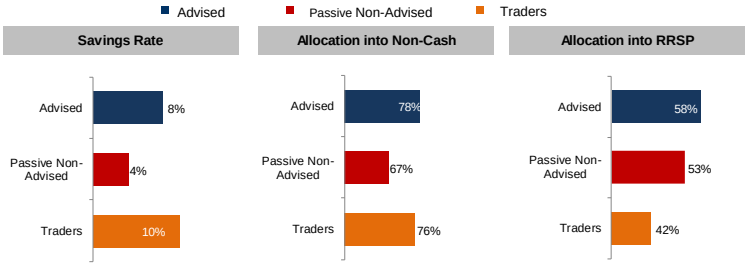


How can one explain the much higher level of assets of the long-tenured advised households as compared to non-advised households? The savings rate, the ratio of non-cash over total investments, and the ratio of Registered Retirement Savings Plan investments over total investments have been considered. Figure 4 outlines the observed saving discipline and asset allocation of respondents. Apparently, significant differences exist between passive non-advised respondents and advised respondents in terms of their savings rates and their allocation of assets into non-cash investments.

The determinants of these ratios are investigated with Tobit type 2 regressions and the results are presented in the first six columns of Table 4.[19] For each ratio, the probit concerns the probability of a positive ratio.

[19]Tobit model involved censored variables. For all ratios, we have an important mass point of observations at zero.

FIG. 4. Savings Discipline and Asset Allocation (Mean values)



The regression concerns the determinants of the value of each ratio conditional on a positive ratio. In all regressions, along with other explanatory variables serving as controlled variables, the variables of interest are the presence of advisors and traders. These latter variables are instrumented from Table 1.

TABLE 4.

The Determinants of the Savings Rate, Non-cash to Total Investment Ratio, RRSP to Total Investment Ratio and the logarithm of Financial Assets (Tobit type 2 models and instrumented least squares)

	Savings Rate		Non-cash Total Investments		RRSP - Total Investments		Assets
VARIABLE	Probit	Regression	Probit	Regression	Probit	Regression	Regression
Savings rate (P)							5.678^{***}
							(0.768)
Non-cash — total investment (P)							6.240^{***}
							(0.419)
The RRSP total investment (P)							-0.238
							(0.455)
The household has a Financial Advisor							
The household has no Financial Advisor (IV)	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	
The household has a Financial Advisor (IV)	1.421^{***}	0.059^{***}	0.211^{***}	0.026	0.319^{***}	0.028	
	(0.082)	(0.013)	(0.066)	(0.023)	(0.072)	(0.026)	
The household has a trader (IV)	6.710^{***}	0.023	5.973^{***}	0.350^{***}	6.519^{***}	0.163	
	(1.347)	(0.046)	(0.474)	(0.104)	(1.267)	(0.159)	
Household's annual income before taxes							
Income before taxes < 35000	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	
35000 <= income before taxes < 60000	0.343^{***}	-0.013	0.257^{***}	0.092^{**}	0.315^{***}	0.125^{***}	
	(0.084)	(0.009)	(0.078)	(0.040)	(0.080)	(0.042)	
60000 <= income before taxes < 90000	0.689^{***}	-0.020^{*}	0.562^{***}	0.146^{**}	0.702^{***}	0.171^{***}	
	(0.100)	(0.012)	(0.086)	(0.060)	(0.089)	(0.063)	
Income before taxes >= 90000	0.872^{***}	-0.011	0.767^{***}	0.213^{***}	0.904^{***}	0.204^{***}	
	(0.118)	(0.013)	(0.096)	(0.069)	(0.102)	(0.070)	

TABLE 4—*Continued*

Sources of income:						
Government transfers, investment income and other income	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Wages and salaries	0.477***	−0.014	0.105	−0.003	0.183	0.008
	(0.132)	(0.016)	(0.131)	(0.042)	(0.131)	(0.044)
Self-employment income	0.363**	0.008	0.136	0.017	−0.056	−0.076*
	(0.154)	(0.017)	(0.149)	(0.047)	(0.147)	(0.045)
Working full time	0.155*	−0.012	0.020	0.006	0.094	0.025
	(0.090)	(0.007)	(0.080)	(0.022)	(0.083)	(0.023)
Fully retired	−0.460**	−0.018	0.049	−0.030	0.227	0.012
	(0.206)	(0.016)	(0.197)	(0.049)	(0.212)	(0.045)
Characteristics:						
Minimum living needs at retirement:						
Less than 40%	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Workplace pension	−0.024	0.000	0.032	0.000	−0.088	−0.034**
	(0.063)	(0.004)	(0.053)	(0.014)	(0.058)	(0.014)
40%	0.070	−0.027***				
	(0.112)	(0.007)				
50%	−0.029	−0.023***				
	(0.093)	(0.006)				
60%	0.037	−0.033***				
	(0.103)	(0.007)				
70%	0.011	−0.035***				
	(0.109)	(0.008)				
More than 80%	−0.018	−0.027***				
	(0.099)	(0.007)				
Never save for retirement	−0.167*	−0.015	−0.620***	−0.142**	−0.762***	−0.117
	(0.095)	(0.009)	(0.089)	(0.069)	(0.092)	(0.076)
Risk averse	−0.033	−0.005	−0.170**	−0.053***	−0.106	−0.016
	(0.086)	(0.005)	(0.072)	(0.020)	(0.079)	(0.017)
Preference for receiving cash today	−0.202**	0.003	−0.134*	−0.034*	−0.026	−0.006
	(0.084)	(0.005)	(0.070)	(0.019)	(0.074)	(0.017)
Preference for investing	−0.048	0.023***	−0.021	−0.036*	0.018	−0.033*
	(0.097)	(0.006)	(0.080)	(0.019)	(0.085)	(0.019)
Financial literacy	0.043	0.009**	0.299***	0.059**	0.140**	−0.004
	(0.062)	(0.004)	(0.054)	(0.026)	(0.058)	(0.016)
Male	0.048	0.011***	0.086	0.033**	0.063	0.030**
	(0.063)	(0.004)	(0.054)	(0.016)	(0.058)	(0.014)
Post-secondary diploma	−0.033	0.001	0.036	0.006	0.079	−0.009
	(0.066)	(0.004)	(0.057)	(0.016)	(0.061)	(0.016)

TABLE 4—*Continued*

Age:						
Age< 45	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
45 <= age< 54	−0.240***	−0.016***	0.187***	0.089***	0.127*	0.087***
	(0.075)	(0.005)	(0.064)	(0.020)	(0.069)	(0.017)
54 <= age < 65	−0.407***	−0.009	0.181**	0.095***	0.254***	0.083***
	(0.087)	(0.007)	(0.070)	(0.022)	(0.079)	(0.022)
Number of income earners aged 18 or older in the household:						
One income earner	Ref.	Ref.				
Two income earners	0.175**	−0.005				
	(0.088)	(0.006)				
Three or more income earners	0.161	−0.009				
	(0.129)	(0.008)				
Marital status:						
Other family type	Ref.	Ref.				
Single individual household	0.198	0.004				
	(0.132)	(0.010)				
Couple with children	−0.052	−0.007				
	(0.118)	(0.009)				
Couple with no children	−0.456***	−0.028***				
	(0.113)	(0.009)				
Single parent family	0.021	−0.029***	−0.045	0.016	−0.045	0.020
	(0.154)	(0.011)	(0.103)	(0.031)	(0.109)	(0.031)
The industry sector:						
Other industries						
Goods-producing industries						
Service-producing industries						
Public administration						

TABLE 4—*Continued*

Regions:							
Atlantic	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	
Quebec	-0.077	0.002	-0.227^{**}	-0.076^{**}	0.088	-0.011	
	(0.131)	(0.008)	(0.116)	(0.035)	(0.116)	(0.029)	
Ontario	0.050	0.014^{*}	-0.155	-0.037	0.040	-0.055^{**}	
	(0.129)	(0.008)	(0.112)	(0.031)	(0.112)	(0.028)	
Manitoba, Saskatchewan	0.348^{**}	0.008	-0.038	-0.029	0.245^{*}	-0.080^{**}	
	(0.167)	(0.009)	(0.140)	(0.035)	(0.146)	(0.037)	
Alberta	0.021	0.029^{***}	-0.024	-0.068^{**}	0.130	-0.100^{***}	
	(0.152)	(0.009)	(0.133)	(0.034)	(0.136)	(0.033)	
British Columbia	-0.058	0.013	-0.067	-0.029	0.138	-0.050	
	(0.142)	(0.009)	(0.124)	(0.033)	(0.126)	(0.032)	
Constant	-0.202	0.133^{***}	0.181	0.443^{***}	-0.069	0.414^{***}	6.665^{***}
	(0.254)	(0.033)	(0.196)	(0.143)	(0.198)	(0.152)	(0.125)
Observations	3610		3610		3610		3610
Censored obs	625		811		638		
Uncensored obs	2985		2799		2972		
Rho	0.176		1.000		1.000		
Sigma	0.101		0.406		0.371		
Lambda	0.018		0.406^{**}		0.371^{**}		
R-squared							0.323

Standard errors in parentheses are obtained by a jackknife procedure for the probits. They are robust standard errors in the regressions.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

P; The predicted savings rate, non-cash to total investment ratio and RRSP to total investment ratio. We have calculated the expected value pf the dependent variable (y_j^*), where that value us taken to be 0 when it is expected to be unobserved; $y_j^* = Pr(y_j \text{observed}) E(y_j | y_j \text{observed})$. The assumption of 0 is valid for cases where non selection implies nonparticipation.

The financial advisor instrumented variable is associated with a greater probability of a positive savings rate, and also increases the value of the savings rate when positive. Traders show a greater probability of positive savings. The probability of a positive ratio of non-cash investments over total investments increases with the advisor and the trader instrumented variables. The value of this ratio increases for the traders only. The probability of a positive allocation of assets to RRSP increases with financial advice and for traders. Given the influence of financial advice on these ratios, the next step is to determine whether predicted (instrumented) values of these ratios help to explain the level of assets. The semi logarithmic regression reported in the final column of Table 4 indicates positive and statistically significant elasticity estimates for the savings rate and the non-cash total investments ratio. Thus, a one percentage point increase in the savings rate and non-cash total investments ratio increases the level of assets by 5.7 % and 6.2 % respectively.[20] A statistically significant effect was not found for the RRSP to total investment ratio.[21]

From the results of Table 4, the effect of having a financial advisor on the level of financial assets can be isolated through the predicted values of those ratios. First, consider the savings rate variable. The effect of having a financial advisor on the expected predicted savings rate can be computed. If P is defined as the probability of a positive savings rate, then the expected value of the savings rate SR is given by: $E(SR) = P(SR > 0) + (1 - P)0 = P(SR > 0)$, as the savings rate is either positive or zero. Taken at mean values, differentiating (in a discrete form) this last equation with respect to the variable financial advisor, FA, yields equation (2):

$$\frac{\Delta E(SR)}{\Delta FA} = \frac{\Delta P}{\Delta FA}(\overline{S > 0}) + \overline{P}\frac{\Delta(SR > 0)}{\Delta FA}. \tag{2}$$

Where, $\frac{\Delta P}{\Delta FA}$ is the marginal effect of having a financial advisor on the probability of a positive savings rate, $(\overline{S > 0})$ is the mean savings rate of all respondents, $\overline{P}$ is the mean probability of a positive savings rate among all respondents, and $\frac{\Delta(SR>0)}{\Delta FA}$ is the effect of having a financial advisor on the value of a positive savings rate.

[20] This is the most parsimonious regression. The ratios are insignificant when we include 38 controlled variables most likely due to collinearity. Note that in this case the Adjusted R-squared moves from 0.328 to 0.360. A regression without the ratios but with the controlled variables yields an Adjusted R-squared of 0.358.

[21] This result may be an avenue for further research. The lack of statistical significance where it would have been expected is an interesting result that may have arisen because of any number of factors, including limitations in data quality, already extensive use of RRSPs by all respondents, or the annual limit on RRSPs, which is capped at 18% of earned income for the preceding year, up to an annual maximum of $22,970.

From the probit regression, the marginal effect of having a financial advisor on the probability of a positive savings rate is estimated to be 26 percentage points. Specifically, a respondent having a financial advisor increases the probability of having a positive savings rate by 26 percentage points, relative to a "comparable" non-advised respondent. From the results in table 4, the effect of having a financial advisor on the value of a positive savings rate is 5.9 percentage points.[22] Thus a respondent with a financial advisor and a positive savings rate will have a savings rate that is 5.9 percentage points higher than an otherwise "comparable" non-advised respondent. Solving equation (2) with S and P taken at their mean value of 0.116 and 0.827 respectively, shows that the effect of having a financial advisor on the expected savings rate, holding everything else constant, translates into a 7.9 percentage point increase in the expected savings rate: $(0.26 * 0.116) + (0.827 * 0.059) = 0.079$. This is an important effect.[23] Repeating the exercise for the expected non-cash ratio and the expected $RRSP$ ratio indicates that having a financial advisor increases the values of these ratios by 4.3 and 4.8 percentage points respectively.[24]

From these numbers and using statistically significant coefficient estimates (See the final column of Table 4), one can infer that for two identical individuals, the one with a financial advisor will have 106 % more financial assets, or 2.06× the level of financial assets of the non-advised respondent.[25] This value is comparable to what was obtained previously.

4. CONCLUSION

As expected, important factors that positively affect the probability of having a financial advisor are income, the capacity of the household to save, and the age of the respondent. Among the non-advised population, there are traders that are more likely to be financially literate and male and believe that they need a very high level of assets before they hire a financial advisor.

[22] This is taken directly from the regression of the second column of table 4. For a probit model to obtain the marginal effect of a variable x, one must differentiate $\int_{-x_i\delta}^{\infty} \frac{1}{\sqrt{2\pi}} \exp(-\frac{1}{2}x^2)ds$ with respect to x.

[23] The savings rate is a robust result and is consistent with the statistically positive coefficient estimate for the variable preference for investing in the regression for the logarithm of assets of Table 3.

[24] Only the statistically coefficient estimates different from zero are considered.

[25] For identical individuals i with a financial advisor and individual j without, the difference in the logarithms of assets is a function of the incremental values of the saving and non-cash ratios due to having a financial advisor (the non-statistically coefficient estimate on the $RRSP$ ratio is not considered). Thus: $\ln A_i - \ln A_j = \ln(\frac{A_i}{A_j}) = 5.678\times0.08+6.240\times0.0428 = 0.723$. Raising to the exponential on both sides: $\frac{A_i}{A_j} = 2.06$

An econometric model suggests a positive relationship between having a financial advisor for at least four years and the level of financial assets relative to the equivalent non-advised respondent. Compared to a similar long-tenured (15 years or more) advised participant in the survey, the non-advised has 2.73 times less financial assets. This amount is too large to be explained simply by better stock picking. One highly plausible explanation of this finding comes from the greater savings that is associated with having a financial advisor and other appropriate advice.

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