Financial Advisors and Retirees' Risk-Taking

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Abstract

We investigate the role of financial advisors in shaping clients' asset allocation during retirement. Using data on more than 37,000 advised Canadian retirees, we document that advised retirees maintain high equity shares of 60–70 percent well into old age. This share of risky assets is roughly twice the level prescribed by common rules of thumb, target-date funds, or life-cycle models calibrated to non-advised portfolios. Conflicts of interest are unlikely to explain this risk-taking, as retired advisors hold similarly high equity shares in their own portfolios. We show that the observed portfolios are consistent with a standard life-cycle model featuring moderate risk aversion and modest financial wealth levels. Under a "money doctor" interpretation, advisor-induced beliefs about market returns can rationalize advisor fees of up to 150 basis points per year.

Keywords: retirement; financial advisors; risk-taking

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Introduction

There is a worldwide shift from defined benefit (DB) plans to defined contribution (DC) plans. Retirees from DC plans have significantly more autonomy in managing their finances. In DB plans, retirees receive a monthly annuity and are concerned only with managing this lifetime income. In contrast, retirees in DC plans face a complex optimization problem: they must ensure their funds last throughout their lifetimes while making ongoing decisions about asset allocations and withdrawals. Solving this problem requires knowledge and assumptions about factors such as asset returns, unexpected medical expenses, mortality risk, and bequest motives. In addition, retirees experience cognitive decline and are more likely to make suboptimal investment decisions (Korniotis and Kumar (2011)) and are more likely to be scammed (DeLiema, Deevy, Lusardi, and Mitchell (2018)).

As they transition into retirement, many households, feeling overwhelmed and ill-equipped to manage their finances, turn to financial advisors for guidance. In Figure 1, we plot the usage of financial advice in the U.S. from the Survey of Consumer Finances. The probability of relying on financial advice peaks around age 65 across all households. More than half of households with investable wealth rely on some form of financial advice as they retire.[1]

This paper investigates how financial advisors influence asset allocation decisions later in life. Do they ultimately help or harm retirees? To address these questions, we analyze data from over 37,000 advised Canadian retirees. We find that advised retirees hold a share of risky assets of 60 to 70% well into retirement (age 80 and above). This level of equity exposure is at least twice as large as what is observed in non-advised portfolios and what is recommended by practitioners and implemented in target-date funds. This result is robust across various standard estimation methods that allow to simultaneously account for age, time, and cohort effects, and for the role of potential wealth outside of retirement accounts.

[1] Similarly, the 2019 Canadian Financial Capability Survey estimates that 51% of Canadians 65 or older use financial advice.

Advisors can affect clients' risk-taking in several non-mutually exclusive ways. First, financial advisors' remuneration often comes from the products they sell through kick-backs and commissions. This remuneration scheme can generate conflicts of interest and the potential for misselling and misconduct (Egan, Matvos, and Seru (2019), Egan, Ge, and Tang (2022)). Given that equity mutual funds generally pay higher commissions, advisors might face an incentive to steer their clients towards riskier investments to maximize their fees. However, we find that retired advisors hold similarly high risky shares in their own portfolios.

Second, it is possible that advisors simply impose their own willingness to take risk and investment beliefs on clients (Foerster, Linnainmaa, Melzer, and Previtero (2017), Linnainmaa, Melzer, and Previtero (2021)). To address this possibility, we build a standard life-cycle saving and portfolio choice model and estimate its parameters. We show that once we account for the typical composition of wealth and income among Canadian retirees, the observed equity shares are consistent with the optimal portfolio of a household with moderate risk aversion.

Third, aside from steering clients due to conflicts of interest or their own views, advisors can also help clients reduce their anxiety about stock market investments. Consistent with this view, Gennaioli, Shleifer, and Vishny (2015) present a model of advisors akin to money doctors and clients who are willing to pay for their hand-holding.[2] Similarly, advisors can provide non-investment-related services, such as financial planning (Previtero and Xing (2025). Using our model, we can quantify the economic value of financial advice in our setting. Under the view that advisors can make clients' beliefs about future returns more accurate (similar to the "money doctor" mechanism), the welfare gain to investors can rationalize advisor fees of up to 150 basis points per year.

[2]Using a regulatory change implemented in a staggered fashion across Canada, Linnainmaa, Melzer, Previtero, and Foerster (2025) document a causal role of financial advisors on clients' stock market participation.

Our data come from two large Canadian advisory firms. We observe all transactions and holdings for a sample of over 37,000 Canadian advised retirees. Two features of the data are particularly relevant for studying retirees' asset allocation. First, the advised clients in our sample are likely to hold a significant fraction of their financial wealth with their advisors. Almost half of our investors own non-retirement accounts, as well as retirement income accounts.[3] In computing the share of risky assets, we aggregate across all retirees' retirement and non-retirement accounts. Therefore, the potential bias induced by analyzing only retirement accounts is reduced in our sample. Next, we observe the personal portfolios of over 2,000 financial advisors. This information could help us to investigate the role of an advisor's own beliefs in shaping retirees' asset allocation.

Three sets of empirical patterns emerge from our analyses. We begin by investigating the share of risky assets as retirees age. The effects of age, time, and cohorts cannot be simultaneously estimated without imposing additional restrictions (see Ameriks and Zeldes, 2004). Following Fagereng, Gottlieb, and Guiso (2017), we adopt two different approaches from Deaton and Paxson (1994) and Malmendier and Nagel (2011) to overcome this empirical challenge. Across all these methodologies, we find robust evidence that retirees hold a share of risky assets between 60 and 70 percent across most ages, more than twice the equity share observed in non-advised portfolios and implemented in typical life-cycle funds. Our main estimates could be biased if we miss a sizable fraction of retirees' wealth in our data. To address this potential concern, we examine what happens when retirees receive large inflows into their accounts.[4] In the months following a large inflow, clients' share of risky assets decreases only by a few percentage points.

We then explore the role of advisors in shaping retirees' high equity allocations. We first document the determinants of client risk-taking. We run panel regressions of clients' risky shares on investor attributes and advisor fixed effects. While investor attributes such as

[3]For these investors, the average retirement income (RRIF) account value is $84,158. In contrast, the average of the non-retirement accounts is equal to $96,378.

[4]In our sample, 5,682 investors receive an inflow higher than $100,000 in their advised accounts in the post-retirement period.

financial knowledge or income have the expected sign, these explanatory variables account only for 7.1 percent of the observed variation in the risky shares. When we add advisor fixed effects, the adjusted R^2 jumps to 36%, highlighting a key role of advisors in shaping client risk-taking also in the post-retirement years.[5]

This increase in explanatory power due to advisor fixed effects might reflect matching on unobserved characteristics that drive risk-taking behavior. Following Foerster et al. (2017) and Linnainmaa et al. (2021), we next restrict our analyses to a sample of investors who switch advisors because of advisors' retirement, death, or withdrawal from the business. Similar to the previous evidence, adding advisor fixed effects increases the explanatory power from 11% (with only investor attributes) to 46%.[6]

Next, we investigate why advisors promote higher risk-taking. Equity funds allow advisors to earn higher commissions and kick-backs. Alternatively, advisors can facilitate and recommend higher risk-taking because they genuinely believe that clients can benefit from this asset allocation. We provide four pieces of evidence to help disentangle the relative importance of these two alternative interpretations. First, we document that staying with an advisor for an additional year is associated with an increase in the equity share of half a percent. Second, we find that advisors do not sell more expensive funds as client tenure increases. Third, longer-tenured clients are less likely to respond to recent stock market fluctuations when buying or selling risky investments. Fourth, and most importantly, we analyze advisors' own risk-taking post-retirement and show that retired advisors hold very similar equity shares to their clients. Taken together, these results suggest that trust can play a central role for retirees' risk-taking and that advisors may act as "money doctors", shaping their clients' beliefs (as in Gennaioli et al. (2015)).

In sum, our empirical analyses show that advised clients hold persistently high shares of risky assets, and that this risk-taking likely reflects advisors' genuine beliefs about optimal

[5]This result mimics evidence in Foerster et al. (2017) about risk-taking in brokerage and retirement saving accounts in the pre-retirement years.

[6]Including both advisor and investor fixed effects (column 5) raises the adjusted R^2 to 70 percent.

retirement portfolios. A natural next question is whether these high equity exposures can be rationalized within a life-cycle framework. We address this question by building a standard life-cycle model of consumption and portfolio choice that jointly accounts for retirees' risk-taking and financial wealth dynamics. Households have standard constant relative risk aversion (CRRA) preferences and a warm-glow bequest motive, face mortality risk, and receive safe pension income calibrated to the data. We estimate the two key parameters that shape the paths of risk-taking and financial wealth in retirement—risk aversion and the strength of the bequest motive—from the empirical age profiles of equity shares and financial wealth. The model fits the data with a moderate level of risk aversion ($\gamma = 5.0$) and a quantitatively meaningful bequest motive, jointly reproducing the high and gradually declining equity shares and the evolution of financial wealth of retirees. Importantly, the combination of a historically high equity premium, relatively modest financial wealth, and safe pension income allow the model to generate high optimal equity shares without appealing to non-standard risk preferences or investment frictions.

To rationalize why unadvised households may optimally hold substantially less risky portfolios, we build on the money doctors hypothesis (Gennaioli et al. (2015)). Specifically, we assume that in the absence of professional advice, households form pessimistic beliefs about equity returns, which naturally push them toward conservative portfolios. We infer these counterfactual beliefs from the much lower equity allocations of non-advised households observed in the Canadian Financial Monitor (CFM), which imply a perceived equity premium of 40% of the historical premium. The differences in equity allocations between advised and non-advised portfolios have large quantitative implications for wealth and consumption dynamics. To quantify the economic value of financial advice in our setting, we translate welfare differences between the advised baseline and the belief-distorted counterfactual into welfare-equivalent annual investment fees. When welfare is evaluated under households' own subjective beliefs—taking their pessimism at face value—households are indifferent between advice and no advice only if investment fees in advised portfolios are 150 basis points higher.

Even under the objective return distribution, the cost of having suboptimally low equity shares translates to a 60 basis points welfare-equivalent advice fee. In short, correcting distorted beliefs and inducing higher risk-taking is quantitatively meaningful: the belief channel alone can justify economically significant advisory fees.

Our findings contribute to three strands of literature. Several theoretical and empirical papers have investigated the accumulation of retirement wealth (see Gomes, 2020; Gomes, Haliassos, and Ramadorai, 2021, for a review). More recently, academics have also started investigating the decumulation of retirement wealth. Analyzing data from the US, Brown, Poterba, and Richardson (2017) and Brown, Poterba, and Richardson (2022) document how retirees from 401(k) plans tend to follow the minimum withdrawal rules. Using a large sample of Norwegian households, Fagereng et al. (2017) document that investors tend to reduce their equity exposure as they age, and that retirees maintain their risky share at around 30%. We complement these studies by investigating the asset allocation of *advised* retirees. Our finding that clients maintain risky shares of 60 to 70% highlights the importance of accounting for the overlooked role of financial advisors when studying retirees. Given the prevalence of financial advisors later in life and evidence of retirees' suboptimal decisions due to cognitive decline (e.g., Korniotis and Kumar, 2011), financial advice could generate significant welfare consequences for retirees.

Target-date funds— those that automatically reduce equity exposure with age—have exploded in popularity since the Pension Protection Act designated them as qualified default investment alternatives.[7] Many DC plans, in fact, select these funds as their default investment option, making them extremely popular due to the tendency of employees to stick with defaults (Madrian and Shea, 2001). Notwithstanding their popularity, recent studies have questioned whether the asset allocation in target-date funds is optimal for retirees. For example, Anarkulova, Cederburg, and O'Doherty (2025) document how retirees can gain substantially by diversifying into international stocks rather than bonds (as in target-date

[7] In 2021, the assets invested in those funds reached almost $6 trillion or about 22% of all the assets invested in U.S. mutual funds (Parker, Schoar, and Sun, 2023).

funds). We contribute to these studies by showing how advised clients holding a higher share of risky assets can increase their post-retirement consumption and welfare. Our results have implications for the design of defined contribution plans.

Our findings that advisors facilitate client risk-taking nicely dovetail with studies on the trade-offs of relying on advisors. Financial advice is pervasive, yet advised portfolios lag passive benchmarks such as life-cycle funds by roughly 150 basis points (Foerster et al. (2017)) and deliver lower Sharpe ratios (Chalmers and Reuter (2020)). To rationalize this persistent underperformance, Previtero and Xing (2025) introduce a model in which clients value also non-alpha services, such as financial planning. Consistent with their model, they find that the most successful advisors increase their clients' investment amounts and the probability of opening individual retirement accounts over time. This evidence suggests that advisors play a crucial role in their clients' accumulation of retirement assets. Our evidence complements these findings by suggesting that advisors can also significantly influence clients' welfare after retirement. More specifically, our model suggests that the benefits of advisors shaping client risk-taking as in a money doctor model (Gennaioli et al. (2015)) could justify advisor fees as high as 150 basis points.

1 Data

1.1 Canadian Financial Monitor

We start by documenting differences in portfolio allocations between advised and non-advised Canadian households in survey data. We use data from the Canadian Financial Monitor (CFM), a household survey administered by the market research firm Ipsos-Reid. The CFM collects detailed information on households' personal banking relationships, investment holdings, credit use, insurance products, and—crucially for our purposes—whether households rely on financial advice. The survey is conducted at a monthly frequency and consists of repeated cross-sections of approximately 1,000 households per month. We use data from

January 1999, the inception of the survey, through December 2006. We apply the survey weights provided by the CFM to construct nationally representative estimates.

Our analysis focuses on Canadian households that hold an investment account. We therefore restrict the sample to households with a positive balance in an account other than checking or savings accounts. We further limit the sample to households with heads aged 25 to 85. We define retirees as households with a head aged 65 or older who reports being retired.

The CFM contains a series of yes-or-no questions that ask households whether they received free or paid advice on various aspects of their financial situation, including their retirement plan, overall financial plan, insurance, estate planning, and tax planning. We classify households as receiving paid investment advice if they report receiving paid advice on either their retirement plan or their overall financial plan. Households are classified as receiving free investment advice if they report receiving free advice on one of these two categories but no paid advice. Households that report neither free nor paid advice on their retirement plan or overall financial plan are classified as unadvised.

Table 1 reports summary statistics on asset allocations and financial characteristics by advice status, both for the full sample of investors and for the subsample of retirees. Portfolio allocations differ markedly across advice groups. Among all investors, the average equity share is 57 percent for households receiving paid advice, compared to 36 percent for unadvised households. Differences are even more pronounced among retirees: advised retirees with paid advice hold, on average, 49 percent of their financial portfolios in equities, whereas unadvised retirees hold only 24 percent. Households receiving free advice exhibit only slightly higher equity exposure than unadvised households.

Two additional patterns are noteworthy. First, the equity shares of unadvised households are similar to those documented in prior studies of household portfolio choice in other countries (e.g., Gomes and Michaelides, 2005; Fagereng et al., 2017). Second, equity exposure among advised retirees is only modestly lower than that of advised investors overall, suggesting that higher equity allocations persist well into retirement among households receiving professional advice.

Taken together, these summary statistics suggest that financial advisors may exert a substantial influence on household portfolio risk-taking, including among retired households, which are the focus of our analysis. At the same time, the survey evidence has important limitations: a small sample of advised households, asset allocations are self-reported and subject to measurement error, and the correlations are silent about underlying mechanisms. For these reasons, we next turn to detailed administrative data on advised portfolios, which allow for a richer and more precise analysis of advised portfolios for retirees.

1.2 Administrative Data from Canadian Mutual Fund Dealers

For our main analysis, we use administrative records provided by two independent Canadian Mutual Fund Dealers.[8] These firms advise just under C$20 billion of assets, or roughly 5% of all assets under management by advisors registered with the Mutual Fund Dealer Association (MFDA), which represents a major component of retail investment in Canada.[9] Their advisors are licensed to distribute only mutual funds. The anonymized dataset contains transactions with identifiers for clients and advisors from 1999 to 2012. We are also able to observe demographic and related client characteristics from the last available "Know Your Client" form, which collects information on the client's risk tolerance, investment horizon, financial knowledge, wealth, income, and occupation.

Throughout this paper, we restrict attention to Canadian households with private retirement savings. Canada's retirement income system is often described as a "three-pillar" model, consisting of government-provided public pensions (Old Age Security and the Guaranteed Income Supplement), a mandatory public pension plan (Canada Pension Plan), and

[8] These two firms are the same as those examined in Linnainmaa et al. (2021).

[9] As of December 2022, 85 MFDA member firms employed roughly 78,000 advisors and managed accounts worth C$635B, or nearly 50% of Canadian retail investment assets.

private, voluntary savings. This third pillar is primarily made up of the Registered Retirement Savings Plan (RRSP).

An RRSP is a tax-deferred account similar to traditional IRAs in the United States, allowing Canadians to contribute pre-tax income up to annual limits throughout their working years. The accounts are tax-sheltered, with no taxes paid on interest, dividends, or capital gains. A variety of investments may be held within an RRSP, including stocks, bonds, mutual funds, and other securities. RRSPs serve as the primary vehicle for voluntary retirement savings outside of employer-sponsored pension plans, and they represent a significant component of retirement wealth in Canada.

The transition from accumulation to decumulation is also similar to the rules for retirement accounts in the U.S. By the end of the year in which they turn 71, Canadians must convert their RRSP into a decumulation account, the most common of which is the Registered Retirement Income Fund (RRIF). The rollover from an RRSP to a RRIF is a non-taxable event, and funds within the RRIF continue to grow tax-sheltered. However, investors must begin drawing down the account according to a minimum withdrawal percentage.[10] All withdrawals from a RRIF are taxed as ordinary income. Since RRIFs are subject to required minimum withdrawals, most people convert their RRSP only at retirement.

Our full dataset includes approximately 480,000 advised clients holding different types of investment accounts; summary statistics are reported in Appendix Table A.1. Over one-quarter of investors own a brokerage account ("General" or "Open"), while 85% own retirement-related accounts (either RRSP or RRIF). Fewer investors own college saving accounts (9%) and tax-free savings accounts (4%).[11]

In this paper, we focus on investors with a RRIF account. Summary statistics for RRIF holders are shown in Table 2. We have a sample of 37,208 unique investors that hold RRIFs.

[10]The required minimum distribution formula up to age 70 is $\frac{1}{90-\text{Age}}$. At age 71 and older, the RMW is determined by a set of prescribed factors that increase with age. These factors were reduced in 2015, after the end of our sample period.

[11]TFSAs were introduced in 2009, near the end of our sample period, and have become another important component of retirement savings (Statistics Canada, 2023).

These clients' average age is 74 years old, and the average age of opening the RRIF is 69.4 years. The distribution of the RRIF account values is highly skewed at the account opening, with an average value of C$170,561 and a median of C$10,554. The average share of risky assets equals 61.0%. 96% of investors (self-)report either low or moderate levels of financial knowledge. Over three-quarters of clients have net worth higher then C$200,000.

2 Empirical Analysis

2.1 Retirees' Advised Portfolio Allocations

We start by plotting the raw data on the equity shares of advised retirees in Figure 2.[12] Figure 2a plots average equity shares by age for selected calendar years (cross-sectional view), while Figure 2b presents the age profile of equity shares for selected cohorts (cohort view). Each plotted data point represents the average equity share of one cohort in a given year. Together, these figures provide a clear view of portfolio choice patterns in our sample. Three main features stand out.

First and foremost, equity shares are high on average, typically between 60 and 70 percent across most ages. These levels substantially exceed those implied by common rules of thumb (such as "100 − age" or "110 − age"), by the glide paths of typical target-date funds (TDFs),[13] and by the equity shares reported in standard household surveys or brokerage data for self-directed investors. Advised retirees in our sample thus maintain substantially higher equity exposures, even well into old age.

Second, there is substantial variation in equity shares across years, with allocations being higher during the mid-2000s and lower in the early 2010s. These fluctuations likely reflect both broad market conditions and institutional factors, such as changes in advisor practices

[12] Figure A.1 shows the corresponding plots for the full sample of all advised clients who have some retirement savings.

[13] Most target-date fund glide paths allocate around 40 percent to equities for investors aged 70 or older. See, e.g., https://institutional.vanguard.com/investment/strategies/tdf-glide-path.html and https://www.plansponsor.com/in-depth/understanding-tdf-glide-paths/.

and the availability of investment products. Equity shares rise sharply between 1999 and 2001 and then gradually decline in subsequent years, a pattern that is common to all cohorts, suggesting that calendar time effects are likely important.

Third, there are pronounced differences in equity shares across cohorts. Earlier-born cohorts hold higher equity shares at a given age than later-born cohorts. This pattern suggests that cohort effects likely play an important role, potentially reflecting differences in risk tolerance or investment experience as in Malmendier and Nagel (2011).

As is well known, age, cohort, and time effects cannot be separately identified without additional restrictions (Ameriks and Zeldes, 2004). This problem arises because the three variables are perfectly collinear, due to the accounting identity cohort = year − age. The linear dependence makes it impossible to disentangle the three components using a complete set of fixed effects in a standard regression, even with arbitrarily large samples.

To identify the age profile in portfolio allocations, we follow Fagereng et al. (2017) and implement the methodology of Deaton and Paxson (1994), which introduces an additional parametric restriction to disentangle age, year, and cohort effects. Specifically, we impose the restriction that the year effects are orthogonal to a linear trend, so that any linear time trends are absorbed by the cohort effects. We further impose the normalization that the year and cohort dummies sum to zero, so that the estimated age profile reflects the average sample year and cohort.

Figure 3 presents the estimated age profile of equity shares for advised retirees that we obtain by applying the Deaton and Paxson (1994) methodology. Equity shares decline gradually with age, from roughly 70 percent at age 65 to about 55 percent by age 85. Even at advanced ages, advised retirees maintain substantial equity exposure. To benchmark these allocations against non-advised portfolios, the figure also reports the corresponding Deaton–Paxson age profile for non-advised households estimated from the Canadian Financial Monitor (Section 1.1). Non-advised households hold markedly lower equity shares throughout retirement—the gap is roughly 40 percentage points on average. For additional comparison, the figure also plots the target glide path of Fidelity's ClearPath TDFs (the largest Canadian TDF family by assets). The equity share at age 65 is about 30 percentage points higher in our sample than in the TDF, and this gap widens further with age.

As a robustness check, Appendix Figure A.2 reports results based on two alternative identification strategies motivated by the experience-based learning framework of Malmendier and Nagel (2011), following Fagereng et al. (2017). In the first specification, we proxy for time effects by using realized stock market returns during the preceding ten years. In the second, we proxy for cohort effects using average stock market returns experienced by investors when they were aged 18–25. While the specific identification strategy affects the estimated age gradient, the main finding is robust: average equity shares decline modestly with age but remain high even at older ages.

2.2 Heterogeneity in Risk-Taking and the Impact of Advisors

Having established that equity shares of advised retirees are high on average and decline modestly with age, we next examine how portfolio allocations vary across clients with different characteristics and across advisors. We estimate regressions of the form

$$\theta_{i,t} = \mu_t + b\, X_{i,t} + \varepsilon_{i,t}, \tag{1}$$

where $\theta_{i,t}$ denotes investor i's equity share in year t. The term μ_t captures year fixed effects that absorb common variation in portfolio behavior arising from institutional or macroeconomic factors, such as stock market valuations. $X_{i,t}$ is a vector of investor characteristics that includes age dummies, categorical indicators for income and net worth groups, self-reported financial knowledge, and province fixed effects.

Column (1) of Table 3 reports the results of the panel regression (1) for the baseline sample. The risky share increases with both financial knowledge and income, though the magnitudes are modest. Retirees who report moderate financial knowledge hold portfolios about 4.5 percentage points riskier than those with low knowledge, and those with high knowledge hold portfolios roughly 7 percentage points riskier. Higher-income retirees also tend to take somewhat more risk, whereas net worth shows little systematic relationship with the risky share. The adjusted R^2 of 0.07 indicates that observable investor characteristics explain only a small portion of the cross-sectional variation in risk-taking, echoing Foerster et al. (2017), who document similarly limited explanatory power for observable client traits.

Next, we add an advisor fixed effect, μ_a, to the specification:

$$\theta_{i,t} = \mu_{a(i,t)} + \mu_t + b\, X_{i,t} + \varepsilon_{i,t}, \tag{2}$$

Column (2) of Table 3 presents the results of this regression. The adjusted R^2 rises sharply from 0.07 to 0.36, and the explanatory power of the advisor effects alone is 0.33. Thus, advisor identity accounts for roughly five times more of the variation in retirees' equity exposure than all investor characteristics combined. This pattern mirrors the results in Foerster et al. (2017), who show that portfolio risk-taking varies far more across advisors than across client characteristics. These results suggest that systematic differences across advisors are an important source of heterogeneity in retirees' portfolio risk-taking.

Since the explanatory power of the advisor fixed effect might reflect matching on unobserved characteristics that drive risk-taking behavior, we next use a subset of the data to disentangle investor effects from advisor effects:

$$\theta_{i,t} = \mu_i + \mu_{a(i,t)} + \mu_t + \varepsilon_{i,t}, \tag{3}$$

To separately identify μ_i and μ_a, we restrict the sample to investors who use multiple advisors during the sample period. To exclude endogenous client-initiated switches, we focus on switches that are due to advisors' retirement, death, or withdrawal from the advisory business, and analyze the average equity share for investments made with the new advisor, as in Foerster et al. (2017). Columns (3)–(5) of Table 3 present regression results for this subsample. In the baseline specification without advisor fixed effects (column 3), observable investor characteristics again explain little of the cross-sectional variation in risky share, with an adjusted R^2 of 0.11. Adding advisor fixed effects (column 4) increases the explanatory power to 0.46, indicating that the identity of the newly assigned advisor remains a strong determinant of portfolio risk even in this restricted sample. Finally, including both advisor and investor fixed effects (column 5) raises the adjusted R^2 to 0.70.

2.3 Trust, Advisor Relationships, and Portfolio Risk-Taking

The large advisor effects documented above invite two broad interpretations of high equity shares. One possibility is that advisors act as "money doctors," shaping clients' risk-taking behavior through guidance and belief formation (Gennaioli et al., 2015). In this view, differences across advisors reflect differences in their investment philosophies and in the extent to which they instill confidence in equity investing among their clients. An alternative explanation is agency conflicts: advisors might recommend higher-commission equity funds over cheaper fixed-income funds, regardless of whether such allocations are optimal for the client.

While we do not observe the counterfactual portfolios that investors would have held absent advice, we can examine portfolio allocations along the intensive margin—across advice relationships of different length and depth—to assess how advice impacts client outcomes. If advisors build trust and shape clients' beliefs about market returns, the intensity of the relationship should matter for portfolio risk-taking: longer and stronger advisor–client ties should be associated with higher equity exposure, as clients gain confidence in equities and rely more on the advisor's guidance. We examine this prediction using variation in the length of the advisor–client relationship and clients' overall experience with financial advice.

Panel A of Table 4 relates equity shares to two measures of experience: time with the current advisor and total time advised by any advisor. The upper panel shows that relationship length is strongly positively associated with risk-taking. The coefficient of roughly 0.005 on years the current advisor implies that staying with an advisor for an additional year is associated with and increase in the equity share of half a percent. These regressions control for observable client characteristics, including wealth, income, and age. This pattern holds both in the full sample and when restricting to clients who enter after the sample begins. For the latter group, we can separate time with the current advisor from time spent with any advisor. The effects are very similar on both dimensions.

A potential concern is that advisors might use trust to extract higher fees over time. Panel B of Table 4 relates client fees to relationship length. While longer relationships are associated with slightly higher percentage fees (column 1), this relation turns negative once we control for the risky share (column 2). Similarly, clients with longer advice relationships pay somewhat higher total dollar fees (column 3), but the relationship becomes insignificant once controlling for the risky share (column 4). This evidence is inconsistent with a rent-extraction motive and supports the interpretation that advisors' influence reflects sincerely held beliefs rather than opportunistic behavior.

Figure 5 provides further evidence that the strength of the advisor–client relationship affects investment behavior. Panel (a) plots the equity share of purchases, and panel (b) the incidence of selling equity, as functions of past portfolio performance and relationship length. Among clients with short advisor relationships ("low trust"), buying and selling behavior is more sensitive to recent performance—clients chase returns when their portfolio performs well and sell risky assets after poor performance. Among clients with long-standing relationships ("high trust"), this performance sensitivity is markedly attenuated. Longer-tenured clients thus rely less on short-term performance for portfolio rebalancing. This pattern supports a hand-holding interpretation where advisors reduce behavioral responses to realized returns.

Taken together, these results suggest that trust and the advisor–client relationship play a central role in shaping portfolio risk-taking among retirees. Clients gradually increase their equity exposure as relationships mature, but do not face higher fees as a result, and become less reactive to short-term market movements. The evidence is consistent with a money-doctor view of financial advice, in which advisors encourage long-term risk-taking by fostering confidence and mitigating behavioral responses to market fluctuations.

2.4 Retired Advisors' Own Portfolios

The large advisor fixed effects documented above indicate that advisors exert a substantial influence on retirees' portfolio choices. A natural question is whether these high equity shares reflect conflicts of interest—advisors steering clients toward riskier, fee-generating investments—or whether they reflect advisors' genuine views on optimal portfolio composition. To shed light on this issue, we examine the portfolios of retired financial advisors themselves.

Figure 6 compares the equity shares held by retired advisors and by advised retirees at the same ages. At most retired ages, advisor's hold identical equity shares that their clients did at the same age. The figure plots the coefficients from a regression of equity share on age dummies interacted with an indicator equal to one if the equity share belongs to an advisor. The specification also controls for the investor's financial knowledge, income, and net worth, as well as advisor and year-month fixed effects. Even after these adjustments, advisors' own portfolio equity share remain statistically indistinguishable from their clients'.

These findings closely parallel the evidence in Foerster et al. (2017) and Linnainmaa et al. (2021), who show that advisors invest their own wealth in ways consistent with the advice they provide to clients. The fact that advisors are willing to hold a portfolio composition similar to what they recommend supports the interpretation that high equity shares among advised retirees reflect sincerely held investment views rather than agency conflicts. In this sense, the portfolios observed in our data likely represent what advisors themselves consider appropriate for typical retirement investors—a view consistent with the money-doctor hypothesis that advice transmits advisors' own expectations and attitudes toward risk.

3 Model

The empirical analysis presented above documents new evidence on the composition of retirees' advised portfolios. To rationalize these patterns, this section develops a life-cycle model that jointly accounts for retirees' risk-taking behavior and the evolution of financial wealth during retirement.

3.1 Household Preferences and Endowments

Following our empirical analysis, we focus on the retirement phase of the life cycle and model the consumption and portfolio choice decisions of retired households. Agents enter the model in retirement at model age $t = 1$. Households face uncertainty over the duration of their remaining lifetime. Conditional on being alive at age t, the probability that the household survives until the next year is denoted by π_t. Households live for a maximum of T periods.

Households maximize the expected sum of discounted utility over the remaining lifetime, given by

$$V_{i,1} = \mathbb{E}\left[\sum_{t=1}^{T} \beta^{t-1} \left(\prod_{k=1}^{t-1} \pi_k\right) U(C_{i,t}) + \sum_{t=2}^{T+1} \beta^{t-1} \left(\prod_{k=1}^{t-2} \pi_k\right) (1 - \pi_{t-1})\, q\, U(W_{i,t}/q)\right], \quad (4)$$

where β is the time discount factor, $C_{i,t}$ is the consumption of household i at age t, and $W_{i,t}$ is wealth (cash on hand) at the beginning of the period. We assume that household utility is of the CRRA form: $U(C) = C^{1-\gamma}/(1-\gamma)$, where γ is the coefficient of relative risk aversion. We allow the household to derive utility from bequests via a standard warm-glow motive; for simplicity, we assume that the bequest utility function is the same as the utility function U that applies to consumption while alive. The parameter q captures the strength of the bequest motive.

Households enter the model with initial financial wealth $X_{i,1}$. Throughout retirement, households also receive pension income Y_i. Canada's public pension system has two main pillars: the Canada Pension Plan (CPP) and the Old Age Security (OAS) program. Both programs entitle retirees to a pension benefit that is fixed in real terms. Most Canadians also receive private pension benefits from Registered Pension Plans (RPPs), predominantly in the form of Defined Benefit (DB) plans. Therefore, we assume that retirement income Y_i is constant over time.

3.2 Asset Allocation

Households can invest in two assets: a risk-free asset and a risky asset. The risk-free asset is a real bond that has a constant gross return R^b each period. The risky asset is a stock that has gross return R^s_t, which is given by

$$\log R^s_{t+1} = \mu - \frac{1}{2}\sigma^2_\nu + \nu_t, \quad \nu_t \sim N(0, \sigma^2_\nu). \tag{5}$$

As is common in the life-cycle literature, we assume that the household cannot borrow and cannot short the stock, so that it must hold nonnegative quantities of both assets.

In the baseline specification of our model, households delegate the management of their financial wealth to a financial advisor. We assume that when advised, households form rational beliefs over the distribution of asset returns. Investors pay a proportional, per-period investment fee f on their asset holdings, which captures both advisor compensation and underlying fund management expenses.

3.3 Household Optimization Problem

Households enter a period with cash on hand $W_{i,t}$, which is composed of financial wealth $X_{i,t}$ and pension income Y_i. Households (with their advisors) must decide how much to consume and how much to invest in stocks and in bonds. We let $\theta_{i,t}$ denote the share of the portfolio that is invested in stocks. The budget constraint can be written in terms of $\theta_{i,t}$ as

$$W_{i,t+1} = \underbrace{(W_{i,t} - C_{i,t})\{R^b + \theta_{i,t}(R^s_{t+1} - R^b) - f\}}_{X_{i,t+1}} + Y_i. \tag{6}$$

The borrowing and short-sale constraints imply that the portfolio share is restricted to

$$\theta_{i,t} \in [0, 1]. \tag{7}$$

The household maximizes (4) subject to (6) and (7). The household problem has control variables $\{C_{i,t}, \theta_{i,t}\}_{t=1}^{T}$ and state variables Y_i and $\{W_{i,t}\}_{t=1}^{T+1}$. In recursive form, the household solves the optimization problem

$$V_t(W, Y) = \max_{C,\theta} \quad \frac{C^{1-\gamma}}{1-\gamma} + \beta\, \mathbb{E}\Big[\pi_t\, V_{t+1}(W', Y) + (1-\pi_t)\, q\, \frac{(W'/q)^{1-\gamma}}{1-\gamma}\Big] \tag{8}$$

$$\text{s.t.} \quad W' = (W - C)\{R^b + \theta(R^{s\prime} - R^b) - f\} + Y \tag{9}$$

$$C \leq W \tag{10}$$

$$0 \leq \theta \leq 1. \tag{11}$$

Given our assumptions, the value function is homothetic in retirement income Y. Thus, we can reduce the dimensionality of the state space by normalizing with respect to permanent income.

3.4 Parameterization

The model is set at an annual frequency. We fix a subset of the parameters based on ex-ante information, summarized in Table 5. Agents enter the model in retirement at actual age 65 ($t = 1$). We assume that agents live until a maximum age of 100 years ($T = 36$) and use the mortality tables from Statistics Canada to parameterize the conditional survival probabilities π_t. Since the time discount factor and bequest motives are not separately identified from the decumulation phase alone, we fix $\beta = 0.96$ following Cocco, Gomes, and Maenhout (2005) and Gomes and Michaelides (2005).

We set the real risk-free rate to 2%, which is also a standard value from the literature. For the distribution of stock returns, we use the estimates from Dimson, Marsh, and Staunton

(2008), who report for Canada a historical equity premium relative to bonds of 5.67% and a volatility of 17.95%. We set the portfolio management fee equal to 2.20%, which is the average fee that advised clients in our sample pay (Table 2).

Finally, we pin down the joint distribution of initial financial wealth and pension income based on publicly available data on Canadian households' income and wealth. We assume that initial financial wealth at retirement and pension income are jointly lognormally distributed:

$$\log X_{i,1} \sim N(\mu_X - \sigma_X^2/2, \sigma_X^2) \tag{12}$$

$$\log Y_i \sim N(\mu_Y - \sigma_Y^2/2, \sigma_Y^2), \tag{13}$$

with correlation ρ_{XY} between the two variables. We discuss the parameterization of this joint distribution below.

3.5 Financial Wealth Profile

To compare the asset allocation predictions of a life-cycle model to empirical portfolio choices, it is important that the model matches wealth profiles in the data, since the relative weights of financial wealth and human capital are a crucial determinant of optimal risky shares in portfolio choice models.

We estimate the age profile of financial wealth using data from the Canadian Survey of Financial Security (SFS). Similar to the U.S. Survey of Consumer Finances (SCF), the SFS is a repeated cross-sectional survey that is conducted once every few years. We use data from the 1999, 2005, 2012, and 2016 samples of the SFS.[14] Crucial for our analysis, the data contain detailed information on both household balance sheets and income. Following our main empirical analysis, we restrict the sample to households that have positive total financial wealth, whose head is at least 65 years old (ages are top-coded at 80), and that

[14] We do not use data post 2016 since those years are less representative for our main sample period and the exact age of survey participants is no longer reported.

hold some money in a RRIF account. We use the CPI deflator to convert all nominal values to 2005 Canadian dollars.

Table 6 reports summary statistics on wealth and pension income for retired households in the SFS, compared to corresponding values from the U.S. Survey of Consumer Finances (SCF). Median financial wealth among Canadian retirees with positive retirement assets is C$154 thousand, and median liquid retirement wealth is C$78 thousand. These values are broadly comparable to, and in fact somewhat higher than, those observed among advised retirees in our data (Table 2). Hence, there is no indication of positive selection into financial advice along the wealth dimension—if anything, advised retirees appear slightly less wealthy than the broader population of retired Canadian households with positive liquid retirement wealth. Median total net worth is C$425 thousand, with home equity accounting for the large majority of non-financial wealth. At the median, wealth and income levels of Canadian retirees with retirement savings are very similar to those of U.S. retired investors, although the U.S. distribution exhibits a substantially larger right tail.

We estimate the age profile of financial wealth using the same identification strategy as in Section 2.1. Specifically, we disentangle age, year, and cohort effects following the methodology of Deaton and Paxson (1994), imposing the restriction that year effects are orthogonal to a linear time trend so that any long-run trends are absorbed by the cohort effects. To smoothen the estimated profile by reducing sampling noise given the limited sample size, we approximate the relationship between financial wealth and age using a third-order polynomial rather than a full set of age dummies. We then compute the predicted values of financial wealth for each age. The resulting age profile, shown in Appendix Figure A.3, shows that average financial wealth increases modestly from about C$225 thousand at age 65 to about C$300 thousand at age 75 and remains roughly stable thereafter.

We use the same data to parameterize the joint distribution of initial financial wealth, $X_{i,1}$, and retirement income, Y_i, as defined in equations (12) and (13). We set the mean μ_X of $X_{i,1}$ equal to the estimated average financial wealth at age 65, and choose μ_Y and σ_Y to match the mean and cross-sectional dispersion of pension income among retired households. Finally, we calibrate ρ_{XY} by computing the cross-sectional correlation between $\log X_{i,1}$ and $\log Y_i$ for retired households below age 70. Figure A.4 illustrates this joint distribution for households aged 65–69. While financial wealth and pension income are positively correlated, the correlation is modest—around 0.15—indicating only a weak association between retirement wealth and pension income.

4 Model Estimation and Results

4.1 Parameter Estimates

We structurally estimate the remaining model parameters using the Simulated Method of Moments (SMM). Specifically, we choose the risk aversion parameter γ and the strength of the bequest motive q to match the empirical life-cycle profiles of portfolio equity shares and financial wealth in retirement. Formally, γ and q are the solution to the following minimization problem:

$$\min_{\gamma,q} (m(\gamma, q) - \bar{m})' W (m(\gamma, q) - \bar{m}), \tag{14}$$

where $m(\gamma, q)$ denotes the model-simulated moments, $\bar{m}$ their empirical counterparts, and W the weighting matrix. We set W equal to the identity matrix.

The identification of the model parameters from the empirical moments is straightforward and well established. Higher risk aversion γ lowers the optimal equity share, whereas a stronger bequest motive q leads households to preserve or even accumulate financial wealth during retirement rather than drawing it down to finance consumption.

Table 7 summarizes the estimation results. With $\gamma = 5.0$ and $q = 10.0$, the model provides a close fit to the empirical moments. Figure 7a compares the average equity share in the model with that observed in the data, while Figure 7b presents the corresponding profiles of financial wealth. The model successfully reproduces the persistently high but gradually declining equity shares of advised retirees, as well as the evolution of financial wealth throughout retirement.

4.2 Discussion

The main takeaway from our baseline estimates is that a standard life-cycle portfolio choice model jointly matches the saving and asset allocation decisions of advised retirees in our sample with a moderate level of risk aversion, $\gamma = 5.0$, which lies well within the range of values commonly considered plausible in the literature (e.g., $\gamma = 5$ in Gomes and Michaelides, 2005). Importantly, this estimate contrasts with those obtained by targeting standard household-level survey or administrative data covering the overall population, which exhibit much lower equity shares at older ages. To match those portfolios, the baseline life-cycle model requires very high degrees of risk aversion or implausibly large (cyclicality in) permanent income risk (see Gomes, 2020, for a survey). For instance, Fagereng et al. (2017) estimate $\gamma = 11$ using Norwegian administrative data and Catherine (2022) obtains $\gamma = 12$ in a frictionless benchmark model without cyclical income tail risk that is estimated from SCF data.

In addition to the level of risk aversion, two other features of the baseline model help explain the relatively high equity share it generates compared with models in the literature that are calibrated or estimated to match conditional equity shares in non-advised portfolios. First, the model features an equity Sharpe ratio directly taken from the data, which is higher than values typically used in the literature. Specifically, while many studies calibrate the annual equity premium to roughly 4% (with an equity return volatility around 18%, similar to our parameterization), we use an equity premium of 5.7%, consistent with historically realized returns in Canada. The resulting higher Sharpe ratio naturally increases the optimal equity share in the model.

Second, the model matches the empirically observed wealth accumulation profile, which feature relatively low levels of financial wealth even around retirement. Median financial wealth starts around C$100,000 at age 65, only three times the typical pension income.

Figure 8a displays the distribution of normalized cash on hand in the model, and Figure 8b presents the corresponding policy function for the optimal equity share as a function of normalized cash on hand. For a given age, the optimal equity share generally decreases with the level of financial wealth, holding pension income fixed. Thus, relatively low levels of financial wealth contribute to higher equity shares.

Once we account for the composition of household balance sheets, the model-implied portfolio allocations closely align with the data. Figure 8c shows that for a typical retiree with normalized cash on hand between 5 and 10, consumption approximately equals pension income. Because a large share of retirees' remaining lifetime consumption is financed by pension income in the form of a safe annuity, households optimally invest the residual component of their overall wealth–financial wealth–more aggressively in risky assets.

Finally, it is worth noting that, by adopting a fairly standard life-cycle model, we have abstracted from some aspects of the saving and investment problem that are particularly relevant for retirees. While the model incorporates uncertainty over the remaining lifetime and a bequest motive—features that the literature has emphasized as key for understanding saving behavior at older ages (e.g. De Nardi, French, and Jones, 2010; Horneff, Maurer, Mitchell, and Stamos, 2010; Ameriks, Caplin, Laufer, and Van Nieuwerburgh, 2011; Inkmann, Lopes, and Michaelides, 2011)—it abstracts from health and medical expenditures risk. Analogous to idiosyncratic labor income risk as the main source of background risk during the working life, health shocks represent an important form of idiosyncratic risk in retirement (Hubbard, Skinner, and Zeldes, 1994; Horneff, Maurer, Mitchell, and Stamos, 2009; De Nardi et al., 2010; Ameriks et al., 2011). For a careful treatment of the implications of health risks on retirees' portfolio choice, see Yogo (2016). Because background risks increase households' effective risk aversion, introducing additional sources of risk would lead to a lower estimate of γ to rationalize the same high equity shares observed in the data. Since our baseline estimate of risk aversion lies toward the upper end of the range of values typically considered reasonable, incorporating additional background risks is unlikely to alter our main conclusions.

4.3 Counterfactual: Reduced Risk-Taking

While our empirical findings are consistent with the predictions of a standard life-cycle model, the portfolio allocations of advised retirees differ strikingly from those of non-advised retirees, from conventional investment advice—such as the "100 − age" rule—and from the glide paths implemented by common target date funds. To assess the quantitative implications of these differences, we consider a counterfactual scenario in which households without financial advisors optimally choose substantially lower equity shares in retirement.

To rationalize why unadvised households may optimally hold substantially less risky portfolios, we build on the "money doctors" hypothesis of Gennaioli et al. (2015). The central idea is that financial advice primarily influences households by shaping their beliefs about the distribution of future asset returns. In the absence of professional advice, households may hold pessimistic expectations about equity returns, leading them to underinvest in risky assets. Financial advisors act as money doctors by correcting these distorted beliefs and aligning clients' expectations with the objective return distribution, which in turn induces higher equity exposure.

We operationalize this mechanism by modeling a belief distortion: in the no-advisor counterfactual, households' subjective expectations of the equity premium are tilted downward relative to the true distribution. In contrast, when paired with an advisor—as in our baseline model—households hold rational beliefs about the equity premium. The difference in equity allocations between advised and unadvised portfolios can then be interpreted as the consequence of advisors bringing clients' expectations about equity returns closer to the objective distribution.

Formally, unadvised households perceive the expected equity return to be lower than the true mean, while maintaining the same perceived volatility. That is, their subjective return process is given by

$$\log R^s_{t+1} = \tilde{\mu} - \frac{1}{2}\sigma^2_\nu + \nu_t, \quad \nu_t \sim N(0, \sigma^2_\nu). \tag{15}$$

where $\tilde{\mu} < \mu$ denotes the subjective average return under pessimistic beliefs. Besides holding pessimistic beliefs about future equity returns, households face the same economic environment as in the baseline model. Given distorted expectations, households solve a modified dynamic optimization problem:

$$\tilde{V}_t(W, Y) = \max_{C,\theta} \quad \frac{C^{1-\gamma}}{1-\gamma} + \beta\, \tilde{\mathbb{E}}\Big[\pi_t\, \tilde{V}_{t+1}(W', Y) + (1-\pi_t)\, q\, \frac{(W'/q)^{1-\gamma}}{1-\gamma}\Big] \tag{16}$$

$$\text{s.t.} \quad (9), (10), (11), \tag{17}$$

with expectations $\tilde{\mathbb{E}}[\cdot]$ that are taken with respect to the subjective return distribution (15). We set the portfolio management fee in the no-advice counterfactual to $f = 1.02\%$, corresponding to the average management fee of Fidelity's ClearPath TDFs during our sample period. All other parameters are held fixed at their baseline values.

We discipline the magnitude of the belief distortion, $\mu - \tilde{\mu}$, by calibrating it so that the average equity share of unadvised households in the model matches the empirically estimated age profile of equity shares for non-advised portfolios shown in Figure 3. The implied downward shift in expected returns corresponds to a perceived equity premium of $e^{\tilde{\mu}} - R^b = 2.3\%$, or approximately 40% of the objective equity premium. This reduction in expected returns generates a substantial decline in optimal equity exposures, consistent with the data, as shown in Figure 9a.[15]

The implications for consumption are shown in Figures 9b and 9c. Both the average level and the volatility of consumption, evaluated under the objective return distribution, are higher in the baseline (advised) economy than in the counterfactual without financial advice. Because advised households expect a higher equity premium, they optimally take on

[15] We obtain similar results if we instead take the TDF glide path as the counterfactual average age profile: the implied perceived equity premium is $e^{\tilde{\mu}} - R^b = 2.6\%$. TDFs were relatively new and not yet widely adopted during our sample period.

more financial risk and attain higher expected wealth and consumption paths, despite paying higher portfolio management fees (Figure 9b). Figure 9c reports the cross-sectional standard deviation of cumulative consumption growth—defined as consumption at each age relative to consumption at age 65. Not surprisingly, higher risk-taking among advised households also translates into greater variation in realized consumption outcomes over time.

4.4 Welfare-Equivalent Investment Fees

To quantify the economic value of financial advice in our setting, we use the counterfactual described in Section 4.3 and translate welfare differences between the advised baseline economy and the no-advice counterfactual into an equivalent annual portfolio management fee. Specifically, we ask what percentage fee f households would be willing to pay when receiving advice to be as well off as in the counterfactual without advice. Because higher fees reduce lifetime utility, a larger welfare-equivalent fee implies greater welfare gains from financial advice.

We consider two distinct welfare concepts. In the first, objective evaluation, welfare is computed under the true data-generating process for returns. This perspective corresponds to a planner who knows the actual stochastic process for returns. In the second, subjective evaluation, welfare is computed using households' own (pessimistic) beliefs about returns in the no-advice counterfactual. This perspective takes the inferred households' views at face value, even if those views understate expected stock returns.

Figure 10 reports the resulting welfare-equivalent fees under both perspectives. In the no-advice counterfactual, households pay an annual investment fee of 1.0%. When welfare is evaluated under the objective return distribution, the annual investment fee that would make households indifferent between no advice and advice is 1.6%. In other words, to offset the welfare gain from receiving advice—and thus from overcoming suboptimally conservative portfolio choices due to distorted beliefs—the incremental fee for advice would have to be 60 basis points per year.

The value of advice is even larger when welfare is evaluated using households' own subjective beliefs. Under this perspective, the annual fee for advised portfolios would have to rise to 2.5% to make households indifferent to paying 1.0% in the no-advice counterfactual. The reason is that, from households' subjective perspective, advice delivers two distinct benefits. First, it induces higher equity exposures, which raises expected lifetime utility when future outcomes are evaluated under the true return distribution. Second, it eliminates the pessimistic beliefs about future returns that cause households to fear low future wealth and low consumption, thereby directly increasing perceived welfare. In other words, advice improves both households' current decision-making and their expectations about future economic outcomes.

These results highlight two key points. First, the effect of advice on risk-taking behavior is quantitatively meaningful: inducing more risky investment by correcting distorted beliefs is enough to justify advisor fees of 60 basis points. Second, from households' own perspective, advice is even more valuable because it simultaneously alleviates pessimistic beliefs about future returns. Households would be indifferent between receiving advice and going without it if portfolio fees in advised portfolios were as high as 2.5%. While our analysis abstracts from other potential sources of value added by financial advisors—such as help with financial planning or implementing tax-efficient strategies—it is worth noting that the implied difference in investment fees is in fact slightly larger than the observed additional cost of advised portfolios—about 1.2% per year—over life-cycle funds.

Conclusion

More Americans will turn 65 through 2027 than at any time in history (over 12 million, according to the Retirement Income Institute). Many of these elderly will face a series of complicated financial decisions, from when to retire to how to manage their retirement wealth to make it last. Financial advisors can help retirees navigate this difficult transition. Do they?

To address this question, we study the asset allocation decisions of over 37,000 Canadian advised investors. We find that retirees keep a significant fraction of their retirement wealth invested in equities (between 60 and 70%). Advisors themselves invest a similarly high fraction of their wealth in equities post-retirement, suggesting that conflicts of interest are not driving clients' equity allocation.

We show that this share of risky assets—approximately double the level followed in target-date funds—with a standard life-cycle model that assumes moderate risk aversion and reasonable levels of financial wealth. Under a "money doctor" view of the role of financial advisors, the beliefs about market returns they instill can justify fees of up to 140 basis points per year.

Our findings have implications not only for the design of retirement plans, but also for aggregate financial markets. Our model suggests that retirees could benefit from substantially increasing their exposure to equities beyond what is prescribed in target-date funds. In addition, many studies have highlighted how the aging of the population could have consequences on aggregate financial markets (e.g., Poterba (2001)). More recently, Parker et al. (2023) document how target date funds can reduce aggregate stock market volatility. What could happen to aggregate markets if retirees have a higher fraction of equities compared to the level (30%) in target date funds? We find that retirees exhibit lower sensitivity to stock market volatility as their tenure with the advisor increases. While this evidence suggests that retirees might not negatively impact financial market stability, more research is needed to fully understand the consequences of facilitating this higher risk-taking.

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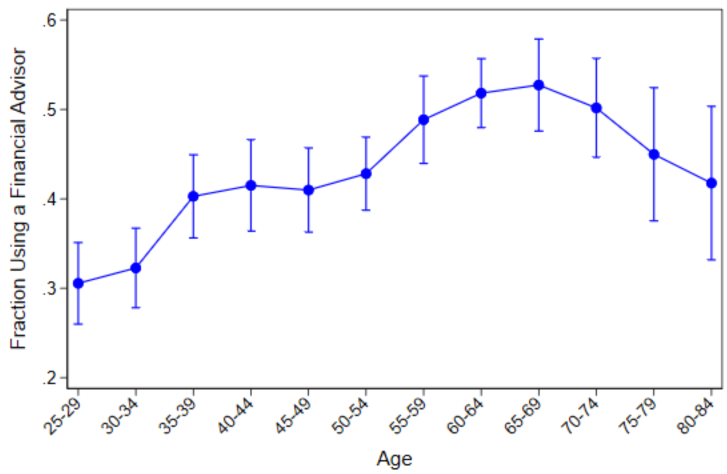
Figures and Tables

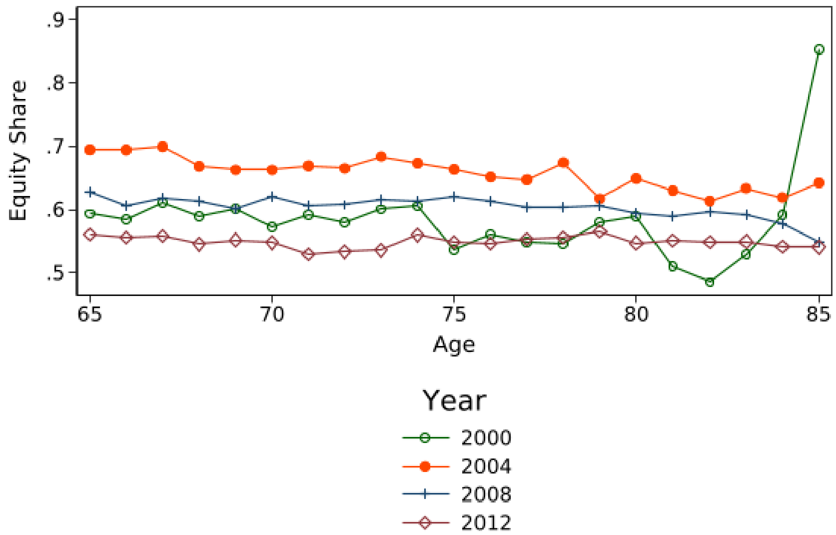
Figure 1: Usage of Financial Advice in the U.S. Survey of Consumer Finances



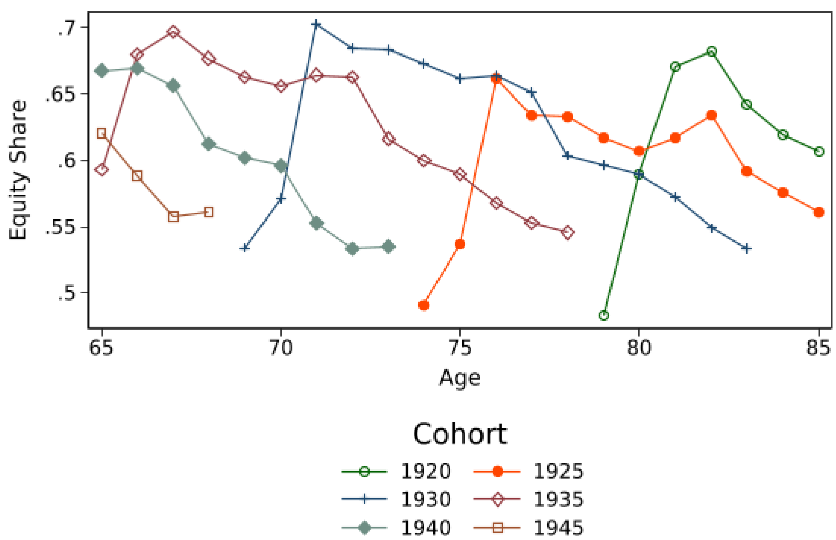
These figures show the fraction of households using financial advice in the SCF, using pooled data from the 2004, 2007, 2010, 2013, 2016, and 2019 waves. Averages are weighted by the SCF sample weights and standard errors are calculated using the SCF replicate weights. Only respondents with some investable wealth are included. Investable wealth is defined as the sum of money market mutual funds, non money market mutual funds, stocks, bonds, certificates of deposits, all liquid retirement wealth, and trusts.

Figure 2: Equity Shares of Advised Retirees

(a) Cross-Sectional View

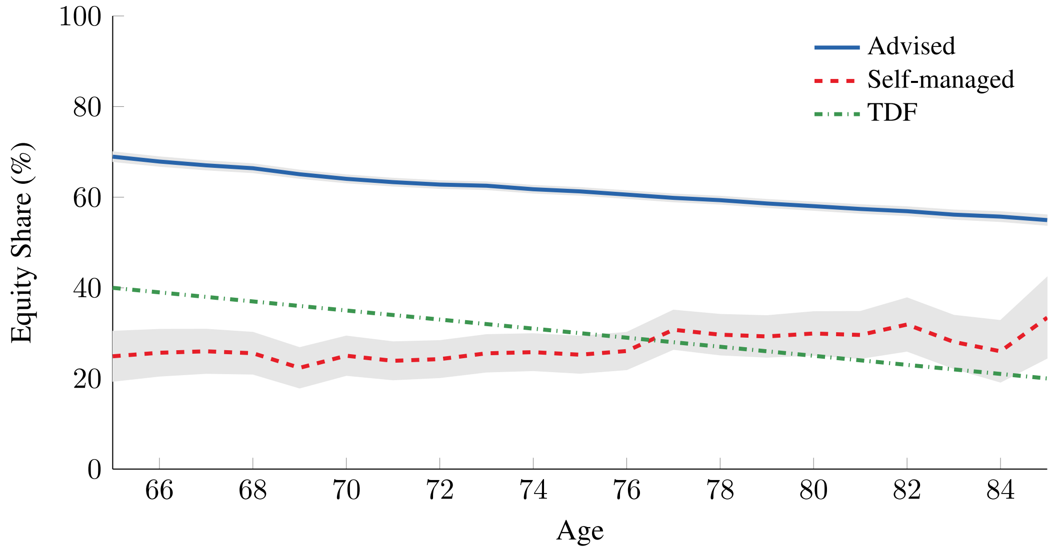


(b) Cohort View



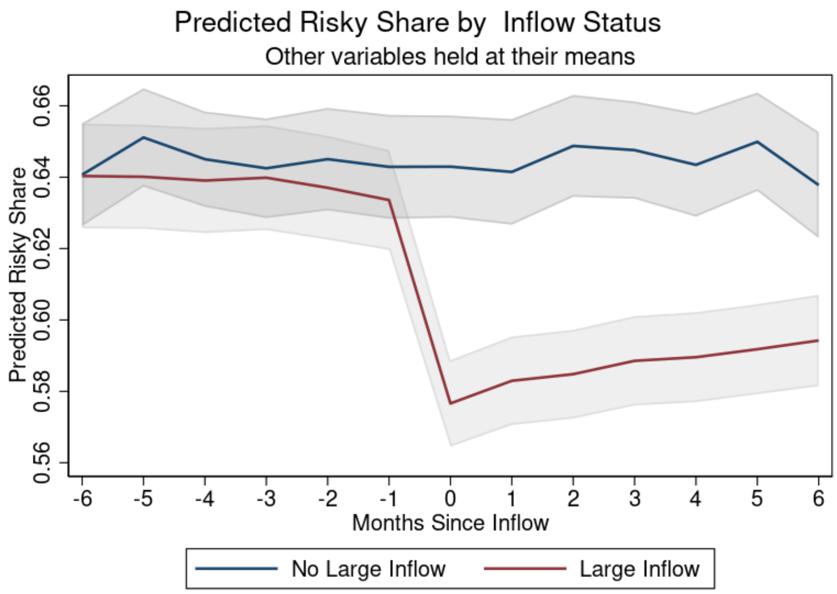
This figure plots the average equity share by age for advised retirees in our sample. The top panel presents the average equity share by age in four different sample years. The bottom panel presents the average equity share by age for selected birth year cohorts. The portfolio equity share is defined as the sum of equity securities, pure equity funds, and the equity portion of hybrid funds, relative to total assets in all accounts. The sample includes all investors of age 65–85 with a positive RRIF account balance. All accounts owned by these investors are included.

Figure 3: Estimated Age Profile of the Equity Share



The solid line in this figure plots the estimated age profile of the equity share of advised retirees in our sample, using the estimation methodology of Deaton and Paxson (1994), along with 95% confidence bands. The dashed line plots the estimated age profile of the equity share of non-advised retirees in the Canadian Financial Monitor (CFM), using the same estimation approach. The dash-dot line plots the target equity share of Fidelity's Clearpath TDFs.

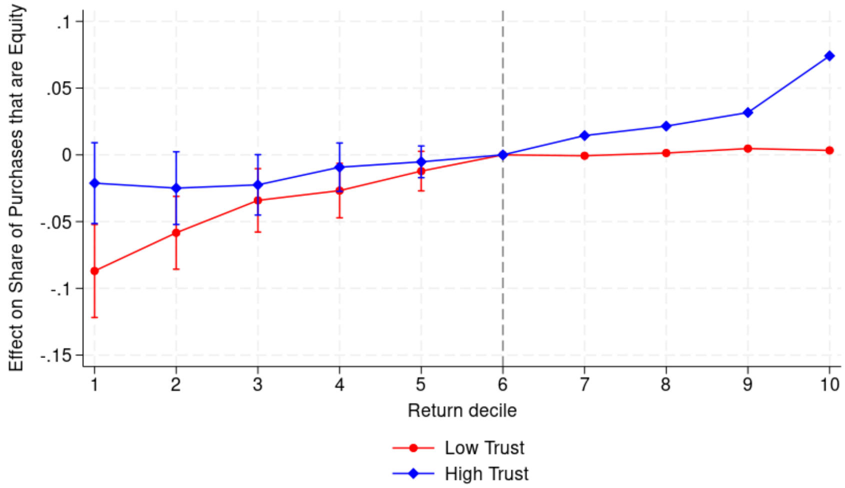
Figure 4: Response of Risky Share to Large Inflows



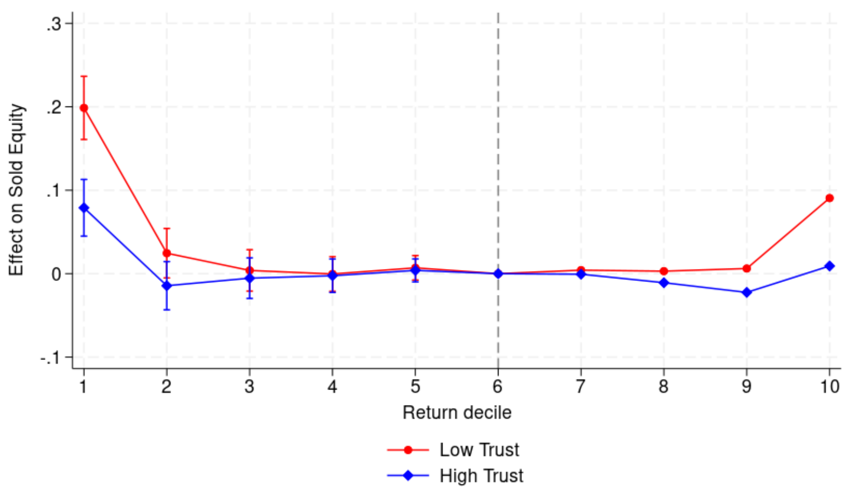
This figure plots marginal effects from an unreported model of equity shares following large inflows. The regressions have a dependent variable of equity share, regressed on an independent variable of a dummy equal to one if the investor has a large inflow (>$100,000) in month 0, the number of months since the inflow and the interaction of those terms. Additional controls include financial knowledge category, salary category, net worth category, gender, and province. Those with no large inflow are indexed in months prior and months after based on a randomly generated date during their tenure. Only investors age 65-85 who own a RRIF and another account type are included. Large inflows must occur in in non-RRIF account. The equity share is the investor's equity share across all accounts. The plot shows the difference in the respective outcome variable between investors who had an inflow > $100,000 dollars versus those who did not in the 6 months prior and 6 months after the inflow, holding all other control variables at their means.

Figure 5: Trust and Portfolio Rebalancing

(a) Equity Share of Purchases

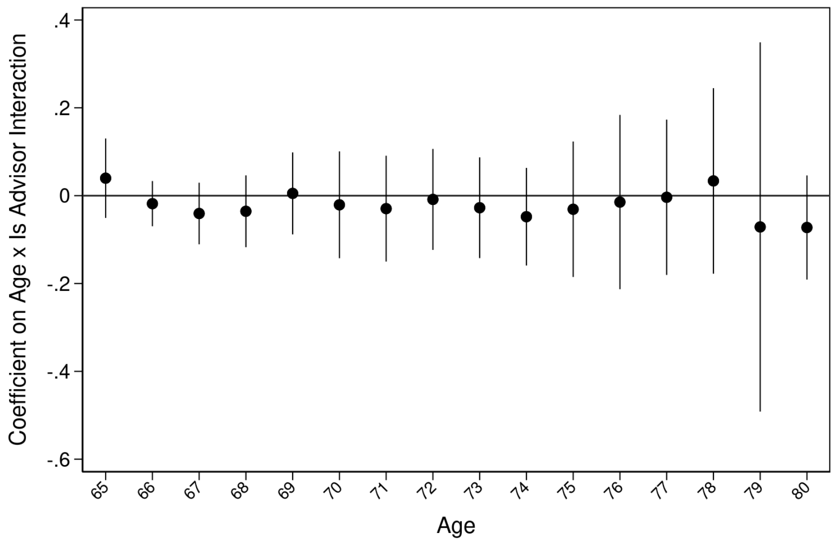


(b) Equity Share of Sales



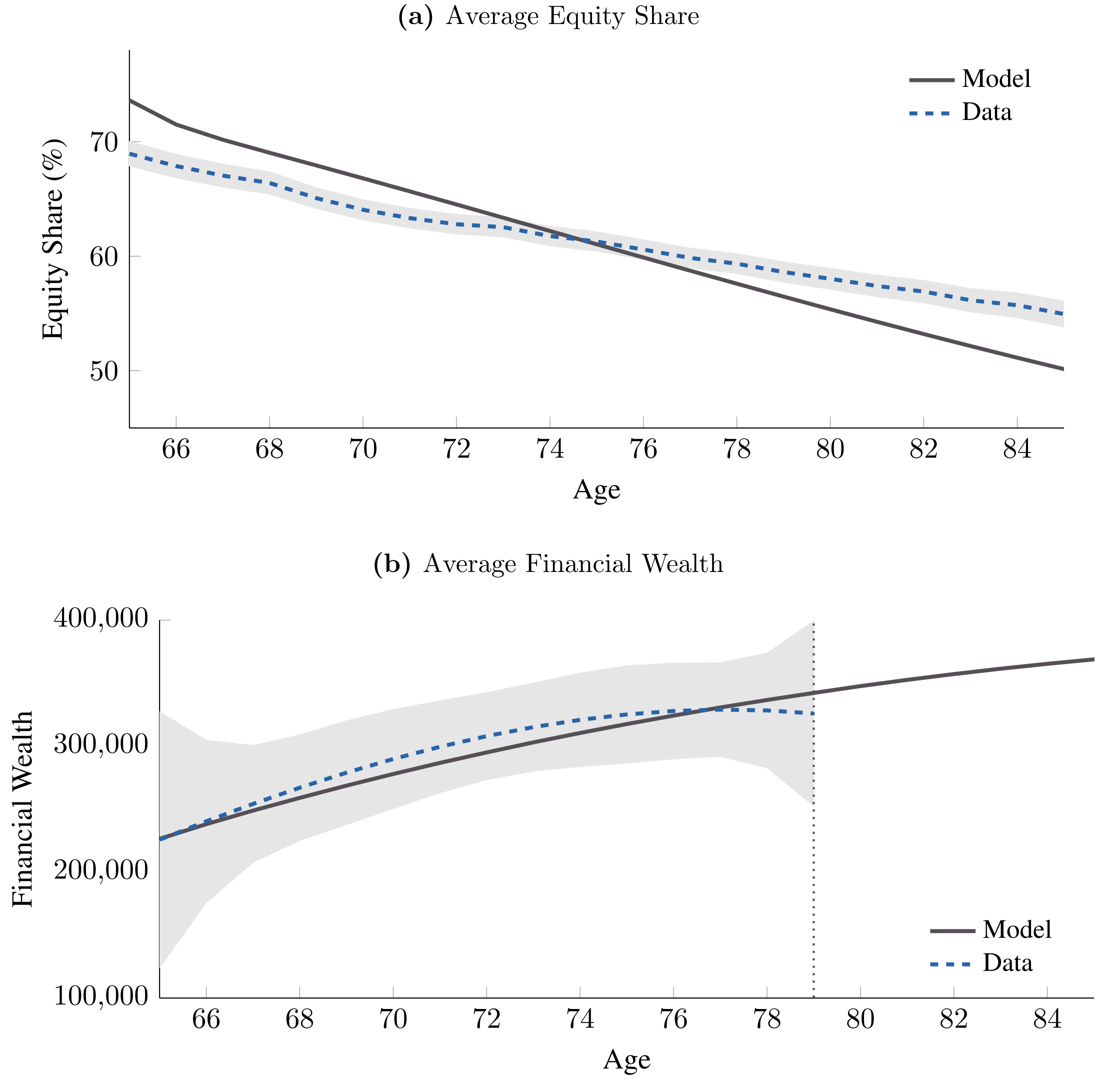
This figure plots coefficient estimates from regressions of the riskiness of assets bought (a) and the propensity to sell risky assets (b) on decile indicator variables for client performance over the prior quarter, the length of the current advisor-client relationship, the interaction between performance and the relationship, client age, and the interaction between client age and performance. The red lines are the coefficients associated with the decile indicator variables; these estimates represent the performance-flow relationship among clients who have been with their current advisors the shortest amount of time. The blue lines are the sum of these same coefficients and those associated with the interaction between the decile indicator variables and the advisor-client relationship; these estimates represent the performance-flow relationship among clients who have been with their current advisors the longest. The estimates are relative to the behavior of clients in decile 6.

Figure 6: Advisor versus Client Portfolio Allocations



This figure shows the coefficients from a regression of the equity share on age dummies and the interaction of age dummies with an an indicator equal to one if the equity share belongs to a retired advisor. The regression also controls for the investor's, financial knowledge, income, and net worth. Standard errors are clustered by advisor. Advisor and year-month fixed effects are included. Only advisors who are no longer seeing clients are included. The sample includes investors age 65-85 with a RRIF account.

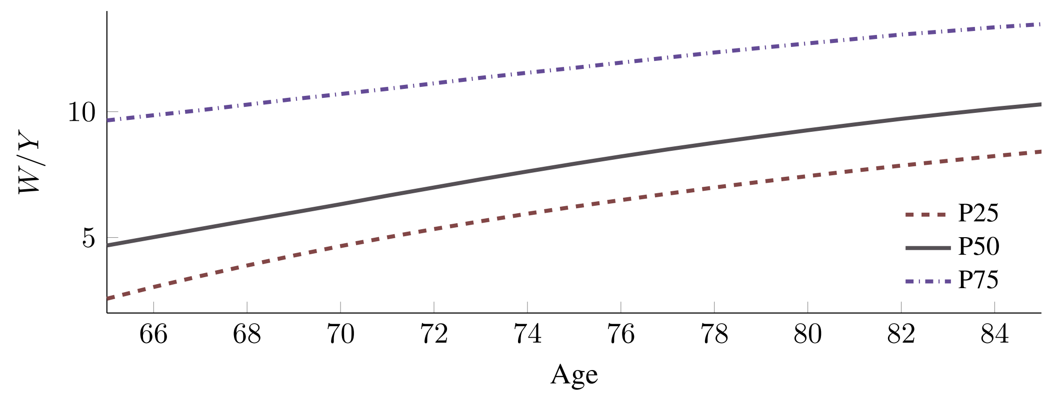
Figure 7: Age Profiles in Model versus Data



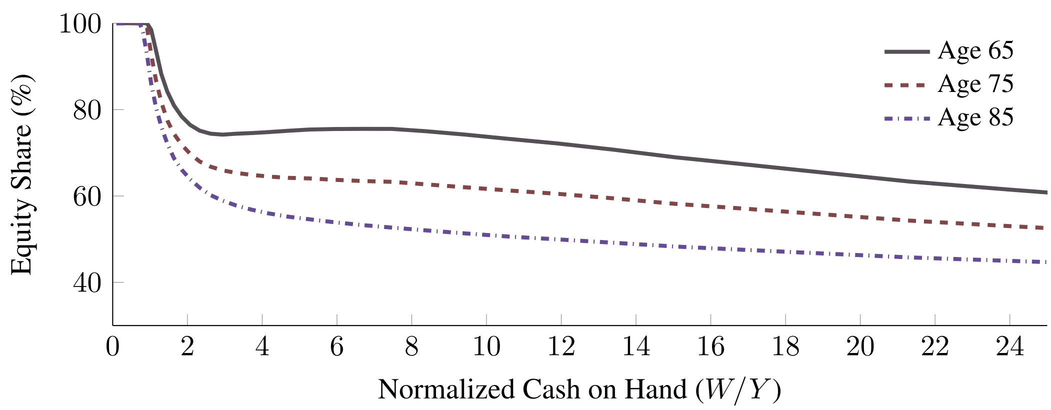
The figure compares age profiles of equity shares and financial wealth in the model and in the data. The data series are the Deaton and Paxson (1994) estimates of the equity share by age in advised portfolios (Section 2.1) and financial wealth by age from the Canadian Survey of Financial Security (Section 3.5).

Figure 8: Normalized Wealth Distribution and Policy Functions

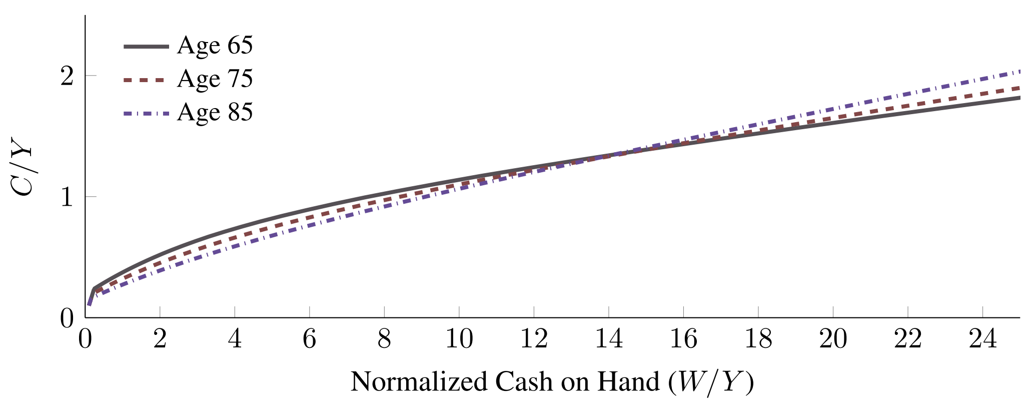
(a) Distribution of Normalized Cash on Hand (W/Y)



(b) Policy Function for Equity Share



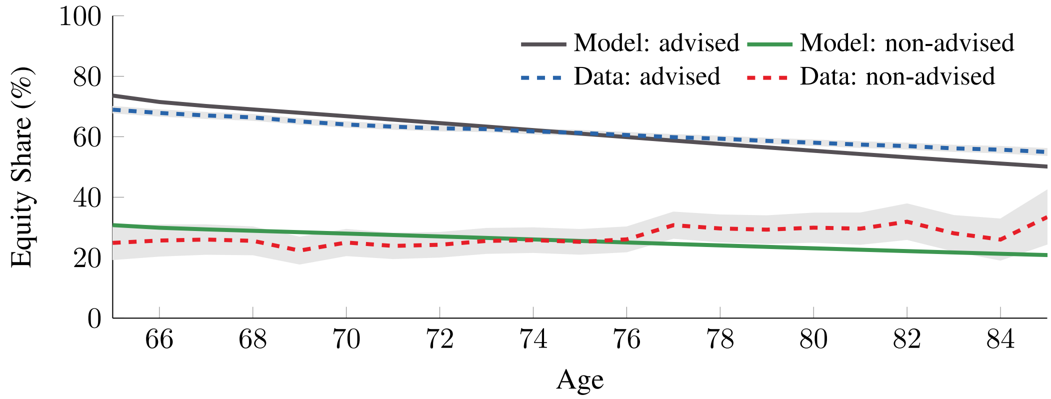
(c) Policy Function for Normalized Consumption (C/Y)



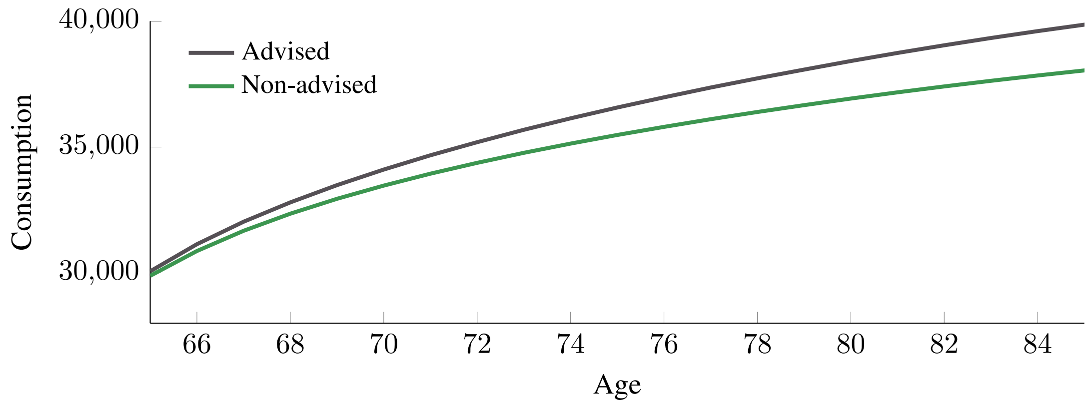
Panel (a) of this figure plots the 25th, 50th, and 75th percentiles of normalized cash on hand, W/Y, by age in the model under the baseline parameter estimates. Panels (b) and (c) show the policy functions for the optimal equity share and normalized consumption, respectively, as functions of normalized cash on hand for different ages.

Figure 9: Advised versus Non-Advised Portfolio Outcomes

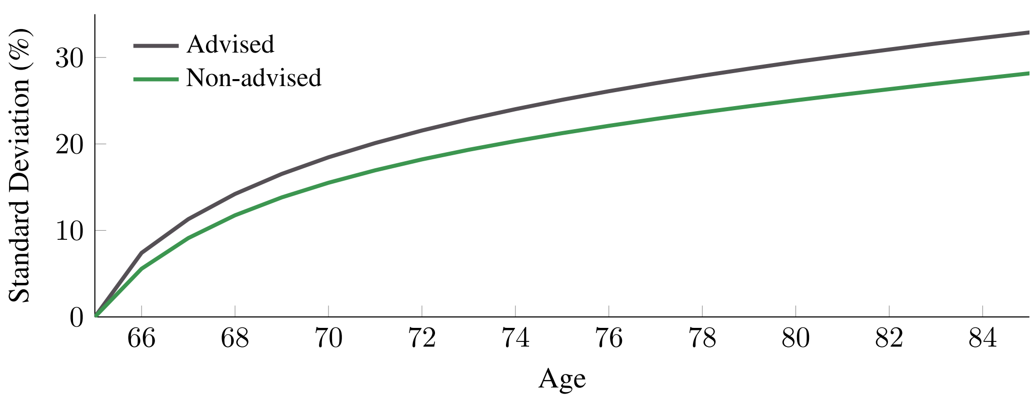
(a) Average Equity Share



(b) Average Consumption

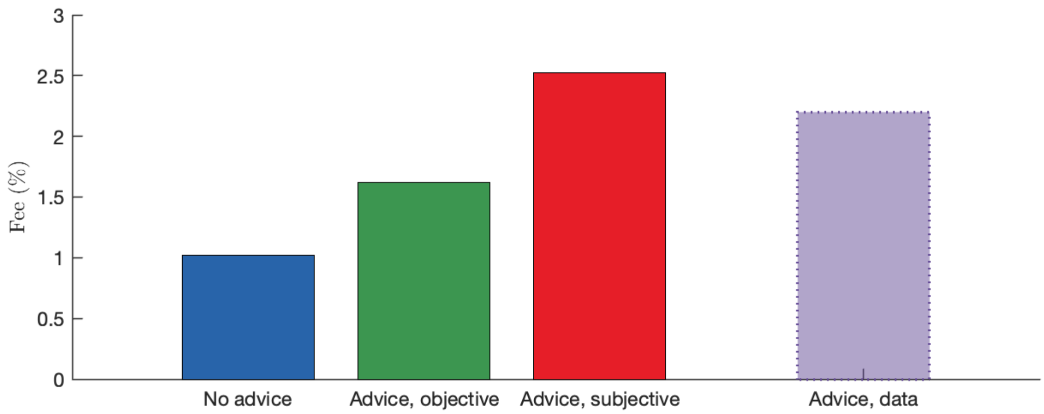


(c) Standard Deviation of Cumulative Consumption Growth



Panel (a) of this figure plots the average equity share by age in the baseline version of the model, estimated based on advised portfolios, and in the counterfactual version of the model with distorted beliefs and lower fees, estimated based on non-advised portfolios, together with their empirical counterparts. Panels (b) and (c) report, respectively, average consumption (2005 CAD) and the cross-sectional standard deviation of cumulative log consumption growth relative to age 65 by age.

Figure 10: Welfare-Equivalent Investment Fees



The figure reports welfare-equivalent annual investment fees that make retirees indifferent between advised and non-advised portfolios. "No advice" refers to the counterfactual version of the model in which households do not receive advice. "Advice, objective" and "Advice, subjective" refer to the baseline model with advice, where the investment fee is chosen so that welfare equals that in the no-advice model. Welfare is evaluated using households' objective return beliefs in the former case and subjective return beliefs in the latter. Fees are expressed as percentages of assets under management.

Table 1: Demographic and Financial Characteristics of Investors in Survey Data

	No advice		Free advice		Paid advice	
	All	Retired	All	Retired	All	Retired
Average age	49	73	48	72	49	72
Retired (%)	18	100	13	100	14	100
Married (%)	59	47	62	51	66	54
Education:						
HS diploma or less (%)	25	49	19	40	12	26
Some college (%)	20	18	20	21	17	26
College degree (%)	43	25	47	27	50	30
Graduate degree (%)	11	9	14	12	20	18
Homeowner (%)	76	73	80	79	85	81
Average assets	98,420	153,449	124,152	225,997	227,373	330,429
Asset allocations:						
Equity (%)	36	24	41	29	57	49
Fixed income (%)	40	54	40	54	28	36
Cash (%)	23	22	20	17	15	16
Participation:						
Mutual funds (%)	53	32	67	46	77	60
Stocks directly (%)	29	27	31	34	50	58
Bonds directly (%)	30	33	30	36	33	37
GICs (%)	49	72	53	76	40	56
Checking/saving account (%)	99	97	99	96	99	99
Observations	34,180	5,487	20,092	2,028	2,931	319

This table reports summary statistics from the Canadian Financial Monitor survey administered by Ipsos-Reid. The data are monthly from January 1999 through December 2006. Statistics are computed using survey sampling weights. The sample consists of households with head aged 25 to 85 and with wealth in an account other than checking or saving accounts. We also report summary statistics separately for retirees (head aged 65 or older and retired). Households are classified into three groups by advice usage: paid advice, free advice, and no advice. Paid advice includes households reporting paid advice on either their retirement plan or overall financial plan; free advice includes households reporting only free advice in at least one of these categories; households reporting neither are classified as unadvised.

Table 2: Demographic and Financial Characteristics of Advised RRIF Owners

Variable	**Mean**	25^{th}	50^{th}	75^{th}
Frac. Female	.52			
Frac. French Speaking	.19			
Age	74.03	71.00	74.00	77.00
Age When RRIF Account Opens	69.43	67.00	69.00	72.00
Age When First Account Opens	67.82	64.00	68.00	71.00
RRIF Account Age (years)	3.59	1.50	3.08	5.17
Client Advisor Relationship Length (Months)	71.58	35.00	68.00	104.00
Market Value of RRIF ($)	72283.40	18621.53	43046.28	89935.20
Market Value at Account Opening	170561.35	4625.59	10544.54	23191.90
Market Value of all Accounts ($)	119209.33	27284.18	65758.85	146179.44
Equity Share in RRIF	0.61	0.50	0.59	0.81
Equity Share in All Accounts	0.62	0.50	0.61	0.81
Total $ Outflows per Month (from RRIF)	683.75	0.00	0.00	0.00
Fees Paid in RRIF(%)	2.20	1.90	2.26	2.43
Total Fees Paid (%)	2.20	1.90	2.25	2.42
# of Distinct RRIF Plans	1.41	1.00	1.00	2.00
# of Distinct Accounts in RRIF	4.80	2.00	4.00	6.00
# of Distinct Investments in RRIF	4.54	2.00	3.00	6.00
# of Distinct Plans, Including Non-RRIFs, conditional on having	2.27	1.00	2.00	3.00
% with RRSP Account	0.06	0.00	0.00	0.00
% with RRSP Account Ever	0.21	0.00	0.00	0.00
RRSP Account Age (years), conditional on having	4.29	1.92	3.83	6.25
Equity Share in RRSP, conditional on having	0.63	0.50	0.61	0.88
% with Other Account	0.45	0.00	0.00	1.00
Other Account Age (years), conditional on having	4.07	1.75	3.50	5.92
Equity Share in Other, conditional on having	0.67	0.50	0.70	0.99
Salary				
$30 to 50k	58.1%			
$50 to 70k	27.5%			
$70 to 100k	8.5%			
$100 to 200k	5.6%			
$200 to 300k	0.1%			
Over $300k	0.1%			
Financial Knowledge			**Net Worth**	
Low	42.5%	Under $35k	1.0%	
Moderate	53.4%	$35 to 60k	2.6%	
High	4.1%	$60 to 100k	5.9%	
		$100 to 200k	12.6%	
		Over $200k	77.9%	
Observations				
# of Unique Investors	37,208			
# of Investor-Years	221,891			

This table includes summary statistics for investors who hold a RRIF account. Statistics are averaged across investor-years, based on the first data point of each year. The first and final year that an investors appears are excluded, to smooth inflows and outflows.

Table 3: Analysis of Portfolio Allocations with Investor Attributes and Advisor Fixed Effects

	Baseline		Switchers		
	(1)	(2)	(3)	(4)	(5)
Financial Knowledge					
Low	— omitted category —				
Moderate	4.569***	2.388***	3.600**	3.563	
	(0.694)	(0.352)	(1.800)	(2.296)	
High	7.267***	5.620***	9.010***	7.704**	
	(1.316)	(0.781)	(2.924)	(3.434)	
Income					
<$50k	— omitted category —				
$50k-70k	1.196***	1.423***	-1.284	-0.375	
	(0.459)	(0.322)	(1.861)	(1.930)	
$70k-100k	1.537**	1.497***	-0.272	0.691	
	(0.705)	(0.514)	(2.400)	(2.818)	
>$100k	1.532*	1.542**	-5.684*	-2.337	
	(0.829)	(0.627)	(3.124)	(4.226)	
Net Worth					
<$100k	— omitted category —				
$100k-200k	-0.527	0.709	-3.468	-3.609	
	(0.886)	(0.654)	(3.831)	(3.920)	
$200k-300k	0.310	1.063	-7.486**	-5.555	
	(0.846)	(0.654)	(3.500)	(3.539)	
>$300k	-0.856	0.575	-7.447*	-6.177*	
	(0.982)	(0.660)	(3.874)	(3.679)	
Constant	60.25***	62.83***	79.22***	59.71***	58.26***
	(4.636)	(3.720)	(4.538)	(9.272)	(4.989)
Observations	103545	103545	3092	3092	3083
Adjusted R^2	0.071	0.359	0.111	0.457	0.698
Advisor FE	N	Y	N	Y	Y
Investor FE	N	N	N	N	Y
Age group FE	Y	Y	Y	Y	N
Year FE	Y	Y	Y	Y	Y
Province FE	Y	Y	Y	Y	N

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

This table shows regression of the portfolio risky share on investor demographics, with and without advisor fixed effects and investor fixed effects. All investors age 65-85 who own a RRIF and have some equity are included. In columns 3-5, only investors in that sample who were forced to switch advisors are included. Observations are at the year level, taken in December of each year. Risky share is calculated across all accounts owned by the investor. Standard errors, in parentheses, are clustered at the advisor level.

Table 4: Advisor Relationship Length, Portfolio Risk-Taking, and Fees

	Risky Share			
	All Clients	Clients Entering After Sample Start		
	(1)	(2)	(3)	(4)
Panel A: Risk-taking				
Years with Current Advisor	0.00513***	0.00536***		0.00372***
	(0.000171)	(0.000180)		(0.000196)
Years with Any Advisor			0.00365***	0.00226***
			(0.000152)	(0.000171)
Year-month FE?	Y	Y	Y	Y
Observations	1010896	919996	919996	919996
R^2	0.077	0.078	0.078	0.079
	Total Client Fee (%)		Log Total Client Fee (Dollars)	
Panel B: Fees				
Years with Current Advisor	0.00258***	-0.00101**	0.00213***	0.000255
	(0.000464)	(0.000436)	(0.000170)	(0.000157)
Risky Share		0.768***		0.385***
		(0.00517)		(0.00199)
Lagged Log Account Value			0.997***	0.998***
			(0.000343)	(0.000318)
Year-month FE?	Y	Y	Y	Y
Observations	992207	987646	991831	987273
R^2	0.019	0.076	0.960	0.966

The top panel shows regressions of risky shares with two time variables: time spent with the current advisor and time spent with any advisor, both measured in years. The bottom panel shows regressions of the fee in percent (columns (1) and (2)) or log dollar fees (columns (3) and (4)) on time spent with the current advisor in years. Investors age 65-85 who own a RRIF are included. All accounts owned by those investors are included. All regressions includes additional controls for client age, gender, net worth category, salary category, financial knowledge category and province. We cluster standard errors (in parentheses) by both year-month and advisor. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Calibrated Parameters

Parameter	Symbol	Value	Source
Survival probability	π_t		Statistics Canada
Time preference parameter	β	0.96	Cocco et al. (2005) &
Risk-free rate (%)	$R^b - 1$	2.00	Gomes and Michaelides (2005)
Equity premium (%)	$e^{\mu} - R^b$	5.67	Dimson et al. (2008)
Equity return, volatility (%)	σ_ν	17.95	
Advisor fee (%)	f	2.20	Table 2
Initial financial wealth, mean	μ_X	225,668	
Log initial financial wealth, dispersion	σ_X	1.22	
Pension income, mean	μ_Y	33,715	Survey of Financial Security
Log pension income, dispersion	σ_Y	0.54	
Correlation log initial financial wealth and log pension income	ρ_{XY}	0.14	

This table summarizes the parameters that are calibrated based on ex-ante information.

Table 6: Wealth and Pension Income in Canada vs. United States

	Canadian SFS				U.S. SCF			
	Mean	P25	P50	P75	Mean	P25	P50	P75
Financial wealth	298,587	65,417	154,167	342,653	719,030	74,444	206,818	577,547
Liquid retirement wealth	151,464	30,000	77,745	172,766	242,857	22,565	78,638	216,762
Non-retirement investments	81,171	0	0	35,000	357,595	0	7,820	156,374
Cash and cash-like assets	65,953	6,458	25,339	74,865	118,579	8,388	35,649	97,187
Home equity	279,559	97,901	200,000	333,333	403,687	94,953	184,536	383,678
Net worth	648,028	232,659	425,208	743,542	1,364,914	231,630	488,908	1,048,367
Retirement income	33,666	20,000	28,333	42,612	42,328	20,681	32,170	52,595
Government transfers	19,329	14,397	19,000	24,000				
Private pension benefits	14,338	0	7,785	22,455				

This table reports summary statistics on financial wealth and retirement income for households aged 65 and older in the 1999–2016 waves of the Canadian Survey of Financial Security (SFS) and the 2001–2016 waves of the U.S. Survey of Consumer Finances (SCF). Financial wealth includes liquid retirement assets, non-retirement investments, and cash and cash-like assets. All values are expressed in 2005 dollars. The sample is restricted to households with positive total financial wealth and positive liquid retirement wealth.

Table 7: Estimation Results

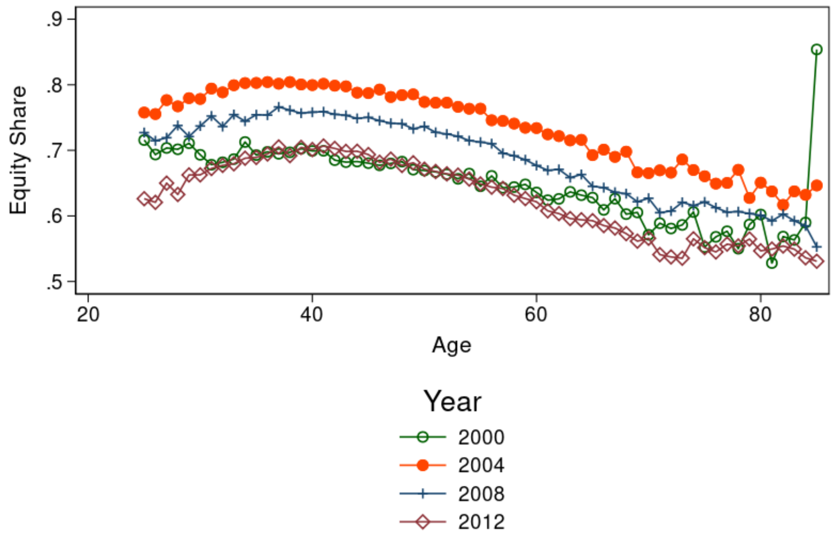
	Risk aversion (γ)	Bequest motive (q)	# moments	Objective
Estimate	5.0	10.0	36	0.063
(standard error)	(0.2)	(1.0)		

This table reports parameter estimates for the baseline model. The parameters are estimated by simulated method of moments (SMM) to match the empirical age profiles of equity shares and financial wealth. Standard errors of the estimates are reported in parentheses.

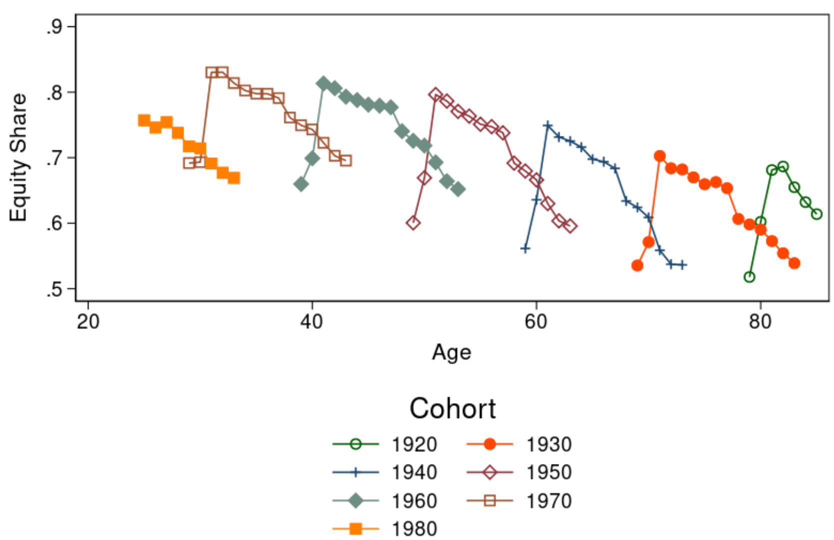
Appendix Figures and Tables

Figure A.1: Equity Shares of All Advised Clients

(a) Cross-Sectional View



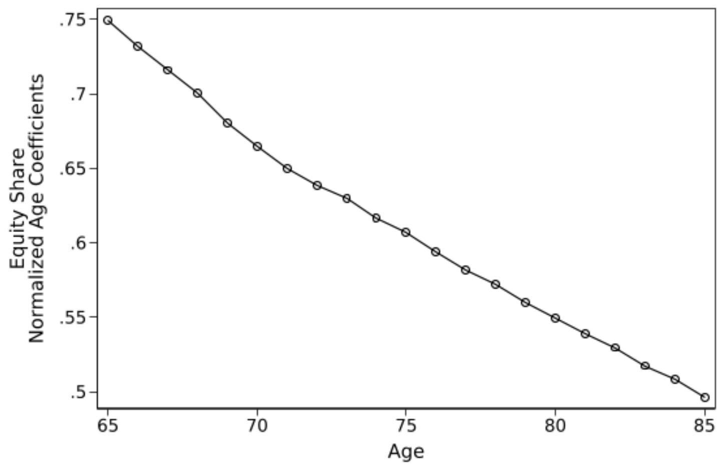
(b) Cohort View



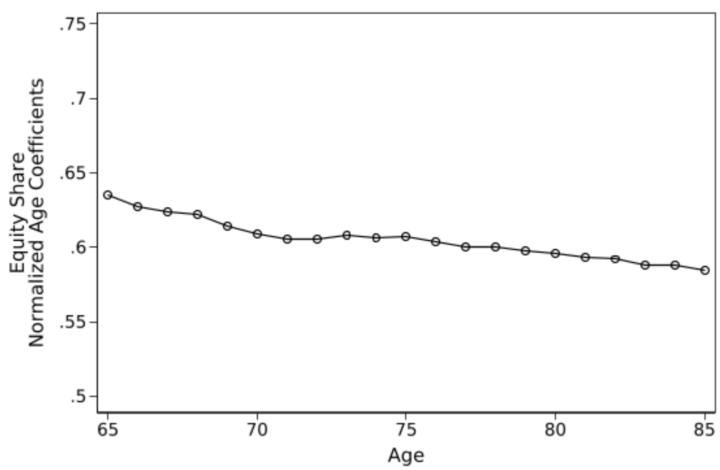
This figure plots the average equity share by age for advised clients in our sample. The top panel presents the average equity share by age in four different sample years. The bottom panel presents the average equity share by age for selected birth year cohorts. The portfolio equity share is defined as the sum of equity securities, pure equity funds, and the equity portion of hybrid funds, relative to total assets in all accounts. All investors with a RRIF or an RRSP aged 25-85 are included.

Figure A.2: Estimated Age Profile of Equity Share (Alternative Assumptions)

(a) Malmendier and Nagel (2011) – Year Effect Proxy

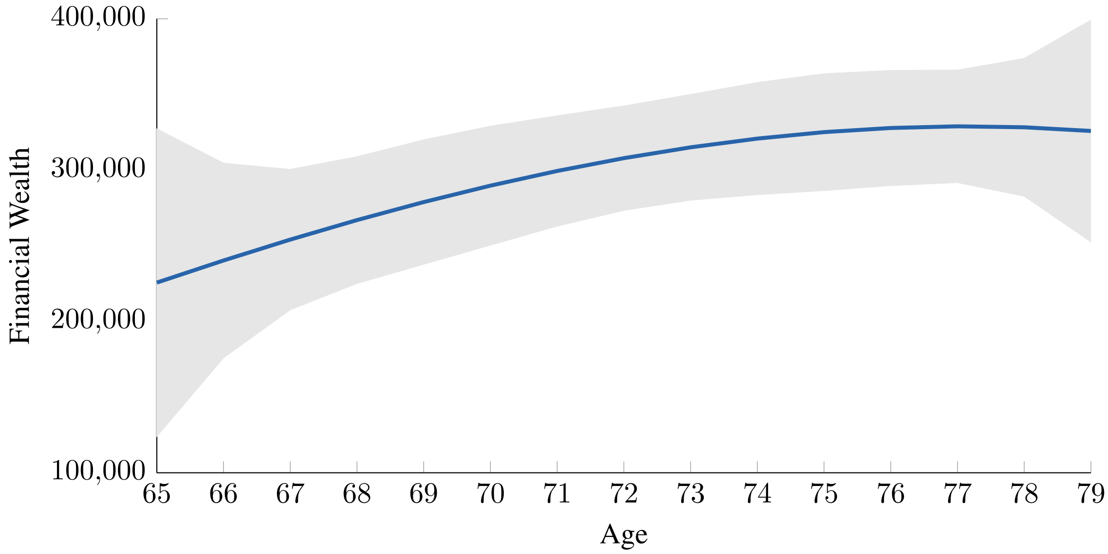


(b) Malmendier and Nagel (2011) – Cohort Effect Proxy



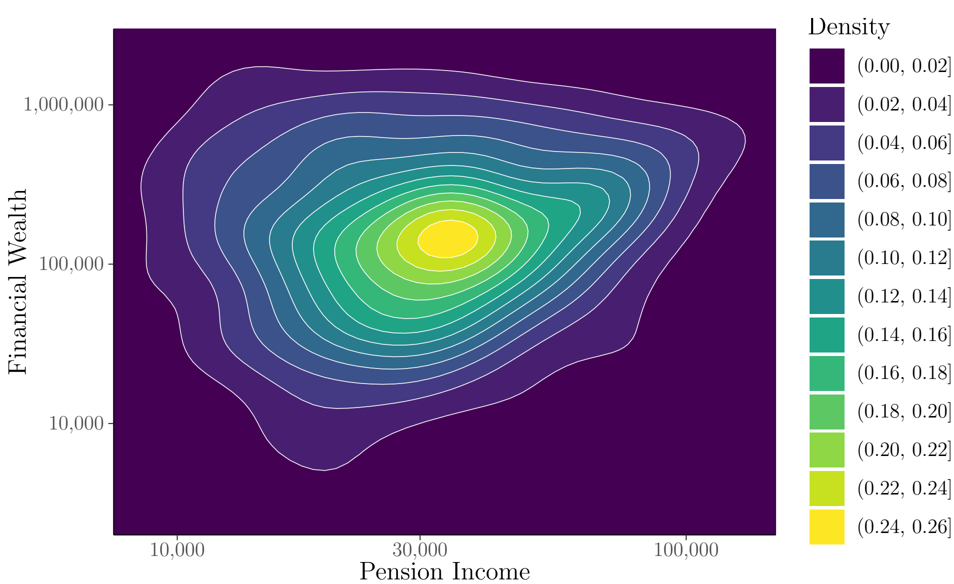
These figures show the normalized age coefficients from a regression of equity share on age, birth year cohort and year, using various methods to disentangle the three effects. The first figure shows the method adopted by Fagereng, Gottlieb and Guiso (2017) and Parker et al. (2024) from Malmendier and Nagel (2011) where year effects are proxied using the previous 10 year's average excess return. The second figure instead proxies for birth-year cohort effects using the investor's average stock market returns when they were aged 18-25. All investors with a RRIF, age 65-85 included. All accounts owned by those investors are included.

Figure A.3: Estimated Age Profile of Financial Wealth



This figure plots the estimated age profile of average financial wealth (2005 CAD) for retired households in the Canadian Survey of Financial Security (SFS). The profile is obtained using the estimation methodology of Deaton and Paxson (1994) to control for cohort and time effects, approximating the age profile with a third-order polynomial.

Figure A.4: Joint Distribution of Initial Financial Wealth and Pension Income



The figure shows the joint distribution of financial wealth and pension income for households aged 65–69 in the Canadian Survey of Financial Security (SFS). The different colors represent kernel-smoothed density levels.

Table A.1: Demographic and Financial Characteristics of all Investors

Variable	**Mean**	$\mathbf{25^{th}}$	$\mathbf{50^{th}}$	$\mathbf{75^{th}}$
Frac. Female	.52			
Frac. French Speaking	.22			
Age	49.98	40.00	49.00	59.00
Age When First Account Opens	44.72	35.00	44.00	53.00
Account Age (years)	2.75	0.92	2.08	3.92
Client Advisor Relationship Length (Months)	59.59	26.00	52.00	87.00
Average Market Value per Account ($)	51090.59	9468.93	25998.59	61075.30
Total Market Value of all Accounts ($)	79879.16	11952.91	36331.21	92420.55
Equity Share in All Accounts	0.73	0.56	0.76	0.95
Total $ Outflows per Month (all accounts)	704.38	0.00	0.00	0.00
Total $ Inflows per Month (all accounts)	2858.01	0.00	0.00	175.45
Total Fees Paid (%)	2.23	1.97	2.31	2.47
Total # of Distinct Plans	2.61	1.00	2.00	3.00
Total # of Distinct Accounts	7.98	3.00	6.00	11.00
Total # of Distinct Investments	7.08	3.00	5.00	10.00
Average # of Distinct Investments per Account	4.60	1.67	3.33	6.25
% with RRIF Account	0.10	0.00	0.00	0.00
% with RRSP Account	0.75	1.00	1.00	1.00
% with Other Account	0.61	0.00	1.00	1.00
Salary				
$30 to 50k	33.7%			
$50 to 70k	35.3%			
$70 to 100k	17.9%			
$100 to 200k	12.7%			
$200 to 300k	0.3%			
Over $300k	0.3%			
Financial Knowledge			**Net Worth**	
Low	40.0%	Under $35k	3.9%	
Moderate	53.8%	$35 to 60k	6.8%	
High	6.1%	$60 to 100k	9.9%	
		$100 to 200k	18.0%	
		Over $200k	61.4%	
Observations				
# of Unique Investors	479,769			
# of Investor-Years	3,414,962			

This table includes summary statistics for all investors aged 25-85. Statistics are averaged across investor-year-accounts, based on the first data point of each year per account. The first and final year that an investors appears are excluded, to smooth inflows and outflows.

Table A.2: Description of Large Inflows

	Average	P25	P50	P75	Max
Age at Large Inflow	72.45	69	71	76	85
Inflow Size	157,944	118,857	144,995	187,455	294,414
Account Value prior to Inflow	247,841	41,366	146,811	360,445	7,589,599
Investors with RRIF & Other Account	27,155				
Investors with Inflow >= $100,000	5,682				

This table describes large inflows (>$100,000) to non-RRIF accounts in the sample. The sample includes investors aged 65-85 with a RRIF and a non-RRIF account.