# Financial Advice and Retirement Savings*

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**Abstract**

We study the impact of financial advice on voluntary pension contributions. We document that advisors help clients to take advantage of tax-exempt retirement accounts and induce them to invest in equities for retirement. We find no indication that the increase in retirement account usage leads to negative side-effects, such as liquidity constraints. Hence, our findings point towards a bright side of financial advice. However, advisors do not in particular target clients that are at a higher risk of undersaving for retirement. Moreover, our results suggest that advisors' promotion of retirement accounts is associated with increased bank profits from cross-selling activities.

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*Keywords*: financial advice, voluntary pension contributions, tax-exempt retirement accounts, stock market participation

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# 1 Introduction

In past decades, many countries have reformed their pension system to cope with demographic change. These reforms have in common that responsibility for income during retirement is at least partially transferred from the state to individuals. Thus, individuals are required to make their own provisions for income in old age. In fact, voluntary pension contributions now account for a substantial fraction of retirement funding both in the U.S. and in Europe.[1] However, a strong dependence on voluntary retirement savings makes people financially vulnerable as many suffer from sub-optimal financial decision-making due to limited financial literacy, time-inconsistent preferences, and other behavioral biases. Consequently, many individuals do not accumulate enough wealth to be well prepared for retirement.[2] These problems have even been re-enforced following high inflation and volatile markets experienced in the recent past.[3] Besides generally not saving enough for retirement, many individuals leave significant amounts of money on the table by not taking advantage of substantial tax incentives offered by retirement accounts in many countries (e.g., Barber and Odean, 2004; Bergstresser and Poterba, 2004; Amromin et al., 2007).

In this study, we investigate whether and how financial advice can help individuals to better prepare for retirement by inducing them to take advantage of financial incentives for retirement savings and by convincing them to invest in equities as part of their retirement savings strategy. To the best of our knowledge, ours is the first paper that uses actual retirement-related financial decisions to analyze the impact of financial advice on voluntary pension contributions.

In our analysis, we focus on Switzerland and use data from a large Swiss retail bank

[1] In the U.S., the average net replacement rate from mandatory pension contributions is 51% of the pre-retirement income. This is similar to the net replacement rate of 55% in Switzerland, which is covered by our study. The average net replacement rate from mandatory pension schemes is somewhat higher in the E.U. at 67% (OECD, 2021). These numbers imply that a substantial fraction of income in old age must come from voluntary pension contributions.

[2] In the U.S. (Europe), 68% (52%) of retirees state that they wish they had saved more money for retirement. In Switzerland, which we cover in our study, around 56% of retirees wish they had prepared better for retirement (Schroders, 2017).

[3] See, e.g., "A generation of Americans is entering old age the least prepared in decades", *The Wall Street Journal*, June 22, 2018; "Many pandemic retirees weren't ready. How to cope if you're one of them", *The New York Times*, August 21, 2021; "More U.S. retirement savers feel 'off track', BlackRock survey shows", *Financial Times*, July 25, 2023.

to investigate whether and how holdings in tax-exempt retirement accounts and securities portfolios change after financial advisors of this bank pro-actively contact their clients to speak about retirement-related issues. By not investing in tax-exempt retirement accounts, the median Swiss employee loses the equivalent of approximately 2% of annual income every year. Nevertheless, only approximately 56% of employees in Switzerland contribute regularly to such accounts (Swiss Federal Statistical Office, 2022a).

We utilize a dataset providing information on the financial holdings of more than 20,000 clients of the bank between January 2011 and June 2021. Retirement-related advice is available to all bank clients free of charge. The unique feature of our data is that we know exactly when clients and advisors interact with each other, what the topic of the contact was, and whether the contact was initiated by the client or by the advisor. The unique structure of our data allows us to focus on *advisor-initiated retirement-related contacts* in our empirical tests. This approach has three main advantages: First, by using these client-advisor contacts we can run a within-person analysis and thereby ensure that our results are not driven by time-invariant differences between clients. Thus, many of the endogeneity concerns due to selection effects are taken care of. Second, by analyzing retirement-related contacts we can make sure that the savings and investment decisions are specifically made in a pension-savings context. Third, by focusing on advisor-initiated contacts we can make another big step towards establishing causality as our results are not driven by clients that approach advisors and that thus would possibly have acted even in the absence of advice.

We start our analysis by investigating the relation between advisor-initiated retirement-related contacts and the probability to open a tax-exempt retirement account. As discussed above, not opening and investing in such an account leads to substantial amounts of money left on the table by the clients in our sample. We find that the probability to open a retirement account is significantly higher in months with advisor-initiated retirement-related contacts. The unconditional probability that a client without a retirement account opens such an account during our investigation period is 0.3% per month. Conditioning on an advisor-initiated retirement-related contact, this probability increases by 3.9 percentage points, i.e., more than ten-fold. For clients who already have a retirement account, we document sig-

nificantly higher inflows in months with advisor-initiated retirement-related contacts. The unconditional average monthly percentage change in retirement accounts that results from new deposits during our investigation period is 1.7%. Conditioning on an advisor-initiated retirement-related contact, the average monthly percentage change is 3.8 percentage points higher, i.e., increases more than three-fold. In all our regressions, we control for variables that may influence both advisor-initiated retirement-related contacts and retirement savings, such as bank wealth and changes in bank wealth. Moreover, we include client fixed effects to account for all time-invariant observable and unobservable client characteristics. We also control for potential time trends and turn-of-the-year effects as well as other seasonal patterns by adding year-month fixed effects to all our regression specifications. To further support a causal interpretation of our results we conduct a propensity score matching analysis and estimate instrumental variables regressions. We find qualitatively similar results. Finally, we not only document a strong effect on retirement savings in the month of the advisory contact, but also an elevated propensity to save for retirement in the following years. Overall, our findings suggest that advisors help clients to better prepare for retirement and to take advantage of the tax benefits of retirement accounts, thus avoiding leaving substantial amounts of money on the table.

Next, we analyze whether the relation between financial advice and voluntary pension contributions varies in the cross-section of clients. Several studies document that women, poorer individuals, and less financially literate individuals are particularly at risk of undersaving for retirement (e.g., Sundén and Surette, 1998; Dynan et al., 2004; Lusardi and Mitchell, 2008, 2011). However, we document that advisors are more likely to approach male clients, wealthier clients, and better-educated clients, i.e., those that are in fact at a lower risk of undersaving. When looking at clients' responsiveness to financial advice, we find take-up rates to be somewhat higher for poorer clients. Taken together, our results suggest advisors do not specifically target the clients with the highest need for help, even though they would likely benefit the most from financial advice.

While taking advantage of the tax benefits offered by retirement accounts is beneficial for clients, there could also be aspects that limit such benefits. We thus run numerous tests

that aim at identifying potential costs associated with investments in retirement accounts to shed light on whether such investments are truly beneficial for clients. One concern with retirement accounts could be that they may merely replace other savings and therefore not lead to an increase in the overall savings rate of households. However, we document that funds invested in retirement accounts following advisor-initiated retirement-related contacts typically come from external sources, such as bonus payments, and from checking accounts. Thus, financial advisors do not simply get their clients to shift assets from existing savings to retirement accounts, but they induce them to increase the overall savings at the bank.

Another concern with investments into retirement accounts could be that they impose liquidity constraints on clients since, once invested in a voluntary retirement account, withdrawals before retirement are typically not possible. However, we show that clients who invest into retirement accounts following interactions with their advisor are not more likely to overdraw their checking account or to have a loan in the subsequent years compared to clients who invest in retirement accounts independently. Hence, we do find any evidence that advisor-induced investments into retirement accounts lead to liquidity constraints. Overall, there are no indications of negative side-effects from advised investments into retirement accounts.

Stoughton et al. (2011), Inderst and Ottaviani (2012), Hoechle et al. (2018), and others shows that financial advisors are subject to conflicts of interest, leading to the question whether retirement accounts are mainly pushed by financial advisors because they are beneficial for customers or because they are also profitable for the bank and eventually the advisors. We find that the bank generates significantly higher profits with clients who open a retirement account. However, when controlling for other products and services clients start using simultaneously, we find these other products and services to generate the profits for the bank rather than the retirement accounts themselves. This is consistent with financial advisors using retirement accounts for cross-selling. Financial advisors do not promote retirement accounts because of them being particularly profitable, but because of the profitability of other products taken up simultaneously. Taken together, while advisors help clients to better prepare for retirement and take advantage of tax benefits of retirement accounts, doing so also increases the profits the bank generates with these clients via cross-selling, providing an

explanation for why advisors promote retirement accounts.

Finally, we investigate other savings and investment decisions potentially affected by retirement-related financial advice. Specifically, we analyze whether and how equity investments (i.e., investments in individual stocks and equity mutual funds) change after advisors contact their clients to discuss retirement-related issues. Participating in the stock market is attractive for clients because of the positive equity market premium (e.g., Mehra and Prescott, 1985; Dimson et al., 2020). Nevertheless, only 25% of Swiss households participate directly and 32% participate either directly or indirectly in the stock market (Guiso et al., 2008). We show that the probability to hold individual stocks or equity mutual funds is significantly elevated after advisor-initiated retirement-related contacts. For clients who already invest in equities, we find significantly higher inflows in months with client-advisor contacts. Thus, our findings not only indicate that financial advisors help clients to take advantage of tax benefits of retirement accounts, but they also steer clients into the stock market, thereby they benefit from the equity market premium.[4] Taken together, we find strong evidence that financial advisors play a key role in preparing clients for retirement.

Our paper contributes to several strands of the literature. First, our study relates to the literature on retirement savings adequacy. Numerous studies document that a large fraction of the population is not saving enough for retirement (e.g., Poterba et al., 2012; Ellis et al., 2014; Poterba, 2014; Munnell et al., 2016; Gomes et al., 2020; Lusardi et al., 2020). We add to this literature by investigating the role of financial advice in adequately preparing individuals for retirement. Our results suggest that financial advisors can help individuals to make provisions for income in old age.[5]

Second, we contribute to the literature on tax-favored retirement accounts. Several studies

[4]Existing research shows that financial advisors induce clients to invest in costly structured products (e.g., Hoechle et al., 2018; Egan, 2019). In additional tests, we show that retirement-related financial advice is not associated with increased investments in structured products.

[5]Burke and Hung (2015) provide a comprehensive review of the limited literature on the relationship between financial advice and (retirement) savings. However, they conclude that "[...] few papers attempt to address the endogeneity concerns of reverse causation, limiting insights into whether advisers are causing improvements in their clients' savings behavior." (p. 18) Indeed, all reviewed papers are survey-based and cannot address causality concerns. The only paper identified by Burke and Hung (2015) that attempts to establish causality between usage of financial advice and savings is a study by Marsden et al. (2011) who perform a simple matching analysis. However, they do not find a significant relationship between financial advice and clients' savings behavior.

argue that households can accumulate higher wealth levels at retirement by responding to the strong financial incentives offered by tax-favored retirement accounts (e.g., Shoven and Sialm, 1998, 2003; Poterba et al., 2001; Dammon et al., 2004; Choukhmane et al., 2023). Nevertheless, many individuals do not take full advantage of such accounts (e.g., Barber and Odean, 2004; Bergstresser and Poterba, 2004; Amromin et al., 2007).[6] Our study adds to this literature by analyzing whether financial advice can induce individuals to invest in tax-exempt retirement accounts. We show that financial advisors indeed help individuals to exploit tax advantages offered by such accounts.

Third, our paper relates to the growing literature on financial advice. Existing studies focus almost exclusively on the impact of financial advice on the performance of individual investors' securities portfolios and typically document that financial advice negatively affects performance (e.g., Bergstresser et al., 2009; Foerster et al., 2017; Hoechle et al., 2017, 2018; Chalmers and Reuter, 2020).[7] This suggests that individuals are either unaware of the negative effect of financial advice on performance or that financial advisors provide other benefits. Our study sheds light on some of these other benefits of financial advice. Our evidence indicates that financial advisors help clients to prepare for retirement by directing funds into tax-exempt retirement accounts as well as into the stock market.[8]

Fourth, we add to the literature on households' stock market participation. Prior work shows that only a small fraction of the population invests in equities, despite the positive equity market premium (e.g., Haliassos and Bertraut, 1995; Guiso et al., 2008). In recent work, Linnainmaa et al. (2023) investigate a regulatory change in investor protection in Canada that led a reduction in the supply of financial advice. They show that investments in equity

[6]One potential explanation for why individuals do not make use of tax-favored retirement accounts are withdrawal restrictions that could lead to liquidity constraints. However, existing research suggests that retirement contributions do not result in liquidity issues (e.g., Barber and Odean, 2004; Beshears et al., 2022). In our setting, we also do not find any evidence that investments in retirement accounts lead to liquidity constraints.

[7]Several studies show that financial advisors help clients to improve overall portfolio diversification (e.g., Shapira and Venezia, 2001; Kramer, 2012; von Gaudecker, 2015; Hoechle et al., 2017), to reduce the home bias (e.g., Kramer, 2012), the local bias (e.g., Hoechle et al., 2017), as well as the disposition effect (Shapira and Venezia, 2001; Hoechle et al., 2017). However, this usually does not overcompensate the negative performance effects.

[8]Another study that documents benefits of financial advice is Cici et al. (2016) who provide evidence that financial advisors help investors to reduce the tax burden when investing in mutual funds.

mutual funds declined following this change, pointing towards a positive effect of financial advice on stock market participation. We add to this research by examining the impact of financial advice on equity investments in the context of retirement savings. We show that financial advisors can help increase stock market participation in preparation for retirement.

## 2 Institutional setting

The Swiss pension system is based on three pillars: the state pension system, occupational pension provisions, and private pension provisions. The state pension system provides a minimum income to all retirees. The occupational pension scheme consists of a mandatory and a voluntary part for employees and offers retirement income above the guaranteed minimum. Private pension provisions are completely voluntary and complement the first two pillars.[9] Adding the first pillar and the mandatory part of the second pillar, the average net replacement rate was approximately 55% of pre-retirement income in Switzerland in 2020. This is similar to the average net replacement rate of 51% in the U.S. in 2020, but below the average net replacement rate of 67% in the E.U. (OECD, 2021). Consistent with the comparably low income guaranteed by the mandatory part of the pension system, up to 17% of individuals aged over 65 were reported to live in relative income poverty in Switzerland in 2018, with women and less-educated individuals particularly at risk of ending up in poverty in old age. This is below the old-age income poverty rate of 23% in the U.S., but above the 12% reported for Europe (Swiss Federal Statistical Office, 2020; OECD, 2021). Thus, voluntary pension provisions play an increasingly important role in Switzerland, as well as in many other countries. In this study, we will focus on private pension provisions, i.e., the third pillar of the Swiss pension system, which is completely voluntary.

Private pension provisions typically take the form of retirement savings accounts or retirement fund accounts. Contributions can be freely allocated to either an interest-bearing retirement savings account or a retirement fund account, which includes funds eligible for retirement saving purposes. Retirement funds are usually balanced mutual funds that differ

[9] Bütler (2016) provides a detailed description of the Swiss pension system.

in their equity ratio. Both types of retirement accounts offer substantial tax benefits: First, the money allocated to retirement accounts is neither subject to income taxes nor wealth taxes, both of which Swiss households are subject to. Second, returns on retirement accounts are also tax-exempt. To get a feeling for the magnitude of the monetary incentive, in Table A1 in Appendix B, we provide an overview of marginal income tax rates in Switzerland in 2020. In 2020, the median annual salary in Switzerland was CHF 79,980 (equivalent to roughly USD 85,000) (Swiss Federal Statistical Office, 2022b). The marginal income tax rate for an individual with an annual income of CHF 80,000 was around 24%. In the same year, an employee could deposit as much as CHF 6,826 of the annual income in the retirement account.[10] Hence, retirement accounts can result in tax savings of up to CHF 1,707 per year for such an individual, which is equivalent to 2.0% of the annual income ($= \frac{24\% \times 6{,}826}{80{,}000}$). Since contributions to retirement accounts are not only exempt from income taxes but also from wealth taxes, this can be considered a lower bound. Moreover, retirement savings accounts also pay higher interest rates than normal savings accounts and checking accounts.[11] In addition, there are no fees on retirement savings accounts. In contrast, clients usually have to pay fees on normal savings accounts and checking accounts.

The money allocated to retirement accounts cannot be withdrawn until five years before retirement, i.e., women (men) can withdraw the money at the age of 59 (60) as women's (men's) retirement age in Switzerland is 64 (65) years. Earlier withdrawal is only possible when purchasing an owner-occupied dwelling, when becoming self-employed, or when leaving Switzerland for good. Upon withdrawal, the accumulated capital is paid out as lump sum. At the time of withdrawal, no matter whether it is a regular or early withdrawal, a one-off tax is due on the lump-sum payment. To get an idea of the magnitude of this one-off tax vis-à-vis the tax benefits, Table A2 in the Appendix B provides an overview of one-off tax rates on retirement accounts in Switzerland in 2020. In 2020, 111,188 individuals residing

[10] During our investigation period, the maximum amount an employee could deposit in retirement accounts each year increased from CHF 6,682 in 2011 to CHF 6,826 in 2020. Self-employed individuals could deposit up to CHF 34,128 in retirement accounts.

[11] In 2020, the average interest rate of retirement savings accounts available in Switzerland was 0.13%, whereas the average interest rate on normal savings accounts and checking accounts was 0.05% and 0.00%, respectively (Moneyland, 2021).

in Switzerland received a lump-sum payment from their private retirement account. The median lump-sum withdrawal was CHF 45,681 (Swiss Federal Statistical Office, 2022a). For an amount of CHF 50,000, the one-off tax rate was around 4% in 2020. Hence, this one-off tax is substantially below income taxes and wealth taxes saved during employment and does not alter the strong incentive to invest the maximum possible amount into retirement accounts. However, despite significant tax advantages, in 2019, only 56% of employees in Switzerland contributed regularly to retirement accounts and 6% made irregular contributions, implying that 38% did not use such accounts, leaving significant amounts of money on the table. The share of (regular and irregular) contributors increased from 57% in 2002 to 64% in 2015, but decreased to 62% in 2019 (Swiss Federal Statistical Office, 2022a).

Figure A1 in Appendix B shows the fraction of employees making use of tax-exempt retirement accounts in Switzerland between 2002 and 2019 separately for men and women and for different levels of education. In 2019, 64% (60%) of men (women) used such accounts to build voluntary pension provisions. Only about one-third (34%) of less-educated employees contributed to retirement accounts, representing the lowest share in the past two decades. In contrast, in 2019, 71% of more-educated employees used such accounts to prepare for retirement. Hence, women and less-educated individuals are less likely to contribute to tax-exempt retirement accounts, even though they are particularly at risk of undersaving for retirement.[12]

Regarding the supply of financial advice, in Switzerland, as in most other European countries, financial advice is typically provided by bank employees. Approximately 38% of individuals are reported to talk to their bank advisor and about 20% to other professional financial advisors when planning or reviewing their long-term finances (BlackRock, 2013).[13] Financial advice involving retirement accounts is usually offered by banks free of any explicit charges.

[12]Using survey data on Switzerland, Brown and Graf (2013) document that individuals' financial literacy and income are positively correlated with the likelihood of having a retirement account. This again indicates that those most in need of voluntary pension contributions are least likely to make such contributions.

[13]Numbers are similar for other European countries, such as France, Germany, and Italy. In the U.S., about 19% of individuals talk to their bank advisor and about 29% to other professional financial advisors (BlackRock, 2013).

# 3 Data and variables

## 3.1 Data and sample selection

The dataset used in this study was provided by a large Swiss retail bank, which we will simply call *the bank* henceforth. Our bank offers a broad range of financial products and services to its clients such as checking accounts, normal savings accounts, retirement accounts, securities accounts, mortgages, and loans. It operates a network of bank branches in Switzerland and several branches abroad. The typical customers are traditional bank branch clients relying on a strong and long-lasting relationship with their bank. Thus, our bank is usually the main bank of its clients. This feature allows for a comprehensive view of the overall financial situation of the clients examined. Financial advice is provided by bank employees. When opening an account at our bank, each client is assigned to an advisor who serves as the main contact person for the client. Clients typically do not choose a specific advisor and the assignment is mainly based on the relative workload of the available advisors at the branch at the time of account opening, resulting in a fairly exogenous assignment of clients to advisors. Advisors usually earn a fixed salary as well as a bonus. The bonus depends on the overall performance of the bank, the performance of the branch, and the individual performance of the advisor. The performance is defined based on various key figures such as the inflow of new money and the commissions and fees generated with clients. Our data cover the time period from January 2011 to June 2021.

We have information on a random sample of the bank's private clients whose wealth at the bank exceeds CHF 75,000 (equivalent to roughly USD 79,000 during our investigation period) at least once during our sample period.[14] As of 2019, 46% of Swiss residents subject to taxation had a net wealth (including non-financial wealth) of more than CHF 50,000 (Swiss Federal Statistical Office, 2022c). Hence, individuals in our sample are on average wealthier than the median Swiss resident. As our analysis focuses on the impact of financial advice on retirement contributions, we exclude clients who are already retired. Specifically, we exclude

[14]The bank did not provide information on its complete customer base for confidentiality reasons. However, to allow for an investigation on whether results differ for less wealthy clients, the bank provided us with a supplementary sample of clients whose wealth at the bank never exceeds CHF 75,000.

clients explicitly flagged as retired. Additionally, we drop female (male) clients who are 64 (65) years old or older as women's (men's) retirement age in Switzerland is 64 (65) years. Moreover, we focus on clients living in Switzerland and drop clients living abroad from our sample as they are likely subject to different pension and tax systems. This results in a final sample of 20,529 clients.

### 3.2 Descriptive statistics

Table 1 reports descriptive statistics. Panel A presents descriptive statistics on client characteristics. 57.5% of clients in our sample are male. On average, clients are 44.5 years old at the beginning of our sample period in January 2011. 16.7% of clients hold a university degree. 83.9% of clients are employed, 11.1% are self-employed, and the remaining 5.0% belong to other categories, such as 'unemployed' or 'student'. On average, clients earn a yearly wage of CHF 80,303 (equivalent to roughly USD 85,000 during our investigation period).[15] The median wage is CHF 69,662, which is close to the median annual wage in Switzerland of CHF 79,980 in 2020 (Swiss Federal Statistical Office, 2022b). The average client has been a customer of the bank for 6.8 years as of January 2011. The information on clients' education, income, and account opening is only available for a subset of all clients. Appendix A provides detailed descriptions of these and all other variables used throughout the study.

In Panel B, we report descriptive statistics on clients' bank wealth. The average client holds CHF 155,091 (equivalent to roughly USD 163,000 during our investigation period) in financial wealth at our bank. Clients on average hold CHF 23,353 (15.1% of their total bank wealth) in their retirement account. This amount includes retirement funds, which contribute CHF 4,171 to the holdings in retirement accounts. In January 2011, at the beginning of our sample period, 45.1% of clients have a retirement account. An additional 15.4% of clients open a retirement account during our investigation period. Thus, at the end of our sample period, the fraction of clients who contribute to retirement accounts at our bank is close to fraction of the Swiss working population that (regularly or irregularly) uses such accounts, which was 62% in 2019 (Swiss Federal Statistical Office, 2022a). The rest of the clients' bank

[15] Monthly wage payments are extracted from clients' checking account.

wealth is held in the checking account (CHF 44,929 or 29.0%), the normal savings account (CHF 39,784 or 25.7%), individual stocks and equity mutual funds (CHF 27,174 or 17.5%), and other securities, such as other funds, bonds, structured products, and derivatives (CHF 19,854 or 12.8%).[16]

Figure A2 in Appendix B shows the fraction of clients with a retirement account at our bank between 2011 and 2021 separately for men and women, for different levels of education, and for different levels of wealth. Across all groups, the share of clients using retirement accounts has increased over time. However, there is still substantial heterogeneity. In 2021, 56.4% of male clients and 55.9% of female clients had a retirement account. Only 47.1% of less-educated clients made use of such accounts in 2021 compared to 52.6% of more-educated clients. Moreover, only 40.9% of low-wealth clients had a retirement account compared to 62.8% of high-wealth clients. Hence, consistent with the numbers for Switzerland presented in Figure A1, women, poorer individuals, and less-educated individuals are less likely to save for retirement, even though they are particularly at risk of undersaving.

Panel C provides descriptive statistics on client-advisor contacts. There are 182,784 client-advisor contacts in our final sample, resulting in 1.2 contacts per client and year. Of all contacts, 17.3% are related to retirement, 29.0% are related to basic services of the bank, 28.8% are related to investments, 14.1% are related to financing, and the remaining 10.9% are related to other topics, such as taxes and inheritance. Our data also includes information on who initiated an advisory contact. In our sample, about two-thirds (62.6%) of all contacts are advisor-initiated. The fraction of advisor-initiated contacts is substantially higher among retirement-related contacts. 77.3% of retirement-related contacts are advisor-initiated. This results in clients being contacted by advisors on retirement-related issues every eighth year, on average. In our empirical tests, we will focus on these advisor-initiated retirement-related contacts.

[16]Negative positions in checking accounts are due to overdrafts. Negative positions in securities accounts are possible because of short positions clients can hold in derivatives.

### 3.3 Determinants of retirement-related contacts

By focusing on advisor-initiated retirement-related contacts, we can make a big step towards establishing causality. However, a potential remaining concern with our analysis is that advisor-initiated retirement-related contacts do not occur randomly but might be correlated with other variables that potentially impact retirement savings. Thus, we investigate the determinants of advisor-initiated retirement-related contacts. We conduct logit regressions and use a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact as dependent variable. The explanatory variables are a dummy variable that equals one for male clients, clients' age, the natural logarithm of bank wealth, the percentage change in bank wealth, a dummy variable that equals one for clients who have a retirement account, and a dummy variable that equals one for clients who have contributed to their retirement account within the past six months. Time-varying explanatory variables are lagged by one month. To control for potential time trends, turn-of-the-year effects, and other seasonal patterns, the regressions contain year-month fixed effects. We cluster standard errors at the client level.

Results are presented in Table 2. We report marginal effects. In Column 1, we find that male clients, older clients, wealthier clients, clients whose bank wealth has increased recently, clients with a retirement account, and clients who have not invested in their retirement account within the past six months are significantly more likely to be contacted by their financial advisor. In Column 2, we add a dummy variable that equals one for clients who hold a university degree as additional explanatory variable. As information about education is available for only a subset of clients, the sample size is substantially reduced if we add this variable. The coefficient estimate on the dummy variable that equals one for clients with a university degree is positive and statistically significant at the 10% level, indicating that financial advisors are more likely to initiate retirement-related contacts with better-educated clients. Finally, in Column 3, we include the length of the bank relationship as additional explanatory variable. Information on account openings is also only available for a subset of clients. The coefficient on this variable is positive, suggesting that clients who are with

the bank for longer are more likely to be contacted by advisors. However, the effect is not statistically significant at conventional levels (t-statistic of 1.59). Overall, we find that advisor-initiated retirement-related contacts do not occur randomly, but vary systematically across clients. Thus, we have to control for these variables when investigating the influence of advisor-initiated retirement-related contacts on voluntary retirement contributions. Moreover, the evidence in Table 2 suggests that retirement-related advice does not in particular target individuals for whom the literature has shown that they face a larger risk to undersave, such as women, less wealthy individuals, and people with lower levels of education (e.g., Sundén and Surette, 1998; Dynan et al., 2004; Lusardi and Mitchell, 2008, 2011).

# 4 Empirical analysis

This section contains our empirical results. First, we present the findings of our analysis of the relation between advisor-initiated retirement-related contacts and holdings in tax-exempt retirement accounts (Section 4.1). Second, we examine whether there is heterogeneity in this relationship (Section 4.2). We then run numerous tests to shed light on potential costs associated with contributions to retirement accounts and to investigate whether investments in retirement accounts are truly beneficial for clients (Section 4.3). Next, we analyze whether the bank also benefits from promoting retirement accounts to clients (Section 4.4). Finally, we investigate other financial decisions potentially affected by retirement-related financial advice, with a focus on stock market participation (Section 4.5).

## 4.1 Financial advice and retirement accounts

### 4.1.1 Baseline results

We start by investigating the relation between advisor-initiated retirement-related contacts and the probability to open a retirement account. To do so, we restrict the sample to clients without retirement accounts hitherto. In Panel A of Figure 1, we show the fraction of clients who open a retirement account around client-advisor contacts. Contacts take place in month t = 0. They are clearly associated with an increased probability of account openings, both

in the month of the contact as well as the subsequent months. The unconditional probability that a client opens a retirement account during our investigation period is 0.3% per month. Conditioning on an advisor-initiated retirement-related contact, the probability increases to 8.6%. This is nearly a 30-fold increase and provides first evidence that account openings are significantly elevated in months with client-advisor contacts.

We also examine the relation between financial advice and the probability to open a retirement account in a more formal way using regression analysis. To do so, we run logit regressions and use a dummy variable that equals one for client-month observations in which a retirement account is opened as dependent variable. The main explanatory variable is a dummy variable that equals one in client-months with at least one advisor-initiated retirement-related contact. Depending on the estimated specification, we include control variables and fixed effects. In all our regressions, we cluster standard errors at the client level.

Results are presented in Panel A of Table 3. We report marginal effects. In Column 1, we neither include controls not fixed effects. In Column 2, we augment the regression with a male dummy, clients' age, the natural logarithm of lagged bank wealth, and the lagged percentage change in bank wealth. In Column 3, we add year-month fixed effects. Column 4 additionally includes client fixed effects. Across all specifications, the coefficient on the dummy variable for advisor-initiated retirement-related contacts is positive and highly statistically significant, suggesting that advisor-initiated retirement-related contacts are associated with a significantly higher probability of retirement account openings. The effects are also economically large. For example, in Column 3, the size of the coefficient estimate suggests that the probability to open a retirement account is 3.9 percentage points higher in months with an advisor-initiated retirement-related contact compared to months without such a contact. Given the unconditional probability to open a retirement account of 0.3% in our sample, this amounts to a 13-fold increase after adjusting for the impact of control variables.[17] Overall, these findings show a strong impact of advice on voluntary contributions to retirement accounts at the extensive margin.

[17]Note that logit regressions with client fixed effects do not allow us to estimate marginal effects. Hence, the coefficient estimates in Column 4 are not comparable to the coefficient estimates in Columns 1 to 3.

In the next step, we analyze the impact of advice at the intensive margin. Thus, we now focus on clients who already have a retirement account and analyze the relation between client-advisor contacts and contributions to retirement accounts. Panel B of Figure 1 presents the monthly net flows into retirement accounts scaled by beginning-of-month holdings around advisor-initiated retirement-related contacts. We winsorize monthly net flows at the 1% level and the 99% level to eliminate the effect of outliers. The figure shows that inflows clearly peak in the month of the client-advisor contact and the month immediately following the contact. The unconditional average monthly percentage change in retirement accounts during our investigation period is 1.7%. Conditioning on an advisor-initiated retirement-related contact, this average monthly percentage change increases to 8.6%. Thus, in months with a contact, net flows into retirement accounts are around five times higher.

We also run OLS regressions where we use the monthly net flows into retirement accounts scaled by the amount held in retirement accounts at the beginning of the month as dependent variable. The main explanatory variable is again a dummy variable that equals one for client-month observations with at least one advisor-initiated retirement-related contact.

Results are presented in Panel B of Table 3. We estimate the same four specifications as in Panel A. In either case, the coefficient on the dummy variable for advisor-initiated retirement-related contacts is positive and highly statistically significant, suggesting that client-advisor contacts are associated with an increase in retirement account balances. In the most stringent specification in Column 4, the size of the coefficient estimate suggests that monthly net flows into retirement accounts are on average 3.8 percentage points higher in months with a client-advisor contact. This still represents a 3-fold increase relative to the unconditional average monthly net flows. These findings show that advice not only has a strong impact on voluntary pension contributions at the extensive margin but is also important at the intensive margin.

In our baseline specification, we use monthly net flows into retirement accounts scaled by the amount held in the retirement account at the beginning of the month as our dependent variable. To shed light on the robustness of our results, we replicate our baseline regression from Column 4 of Panel B of Table 3 using alternative measures for monthly net flows into retirement accounts. Results of these robustness tests are presented in Table A3 in Appendix

B. In Column 1, we use monthly net flows into retirement accounts scaled by the client's total bank wealth at the beginning of the month. In Column 2, we use monthly net flows in Swiss Francs invested into retirement accounts. In Column 3, we use the inverse hyperbolic sine of monthly net flows into retirement accounts.[18] Finally, in Columns 4 and 5, we split monthly net flows into retirement accounts into monthly net flows into retirement savings accounts (Column 4) and monthly net flows into retirement fund accounts (Column 5). Across all these specifications, we document a highly statistically significant and economically meaningful positive relation between advisor-induced retirement-related contacts and contributions to retirement accounts, suggesting that the choice of our dependent variable is not driving our results.

So far, we have run all our analyses at the client-month level. The reason is that information on the existence of a retirement savings account as well as retirement savings account balances is only available at the end of the respective month in our dataset. Thus, one concern with our analysis could be that our results are driven by reverse causality. Financial advisors could observe the opening of a retirement account or increases in retirement account balances within a month and subsequently approach clients to talk about retirement provisions. To address such a reverse casualty concern, we rerun our analysis using trades in retirement funds. For trades in retirement funds, we observe precise time stamps, allowing us to run a test at the client-day level.

In Panel C of Figure 1, we show the number of trades in retirement funds on each day around advisor-initiated retirement-related contacts. Contacts take place on day t = 0. Retirement fund trades are clearly elevated on the day of the advisor-initiated retirement-related contact. The number of purchases is higher than the number of sales, resulting in positive net flows into retirement funds. Retirement fund trades are highest on the day right after the client-advisor contact and stay elevated for several days thereafter. However, we do not observe any pre-trend on the days before the client-advisor contact. This observation lends support to a causal interpretation of the relation between receiving advice and subsequently

[18]The inverse hyperbolic sine is an alternative to a log-transformation when a variable takes on zero or negative values.

investing for retirement.

#### 4.1.2 Matched sample results

So far, we have performed linear regression analyses. To address potential concerns that a non-linear factor drives our results that is not adequately controlled for in our linear regression specifications, we apply propensity score matching. To do so, we run a logit regression similar to the one in Column 1 of Table 2 to generate a propensity score for each observation. We then employ these propensity scores to match client-months with advisor-initiated retirement-related contacts to client-months without such contacts using the nearest-neighbor matching method without replacement. We run the matching separately for clients who do not yet have a retirement account and for clients who already have a retirement account. For clients without a retirement account, the matching results in the pairing of 3,316 months with client-advisor contacts with the same number of months without such contacts. For clients with a retirement account, the matching results in the pairing of 18,677 months with client-advisor contacts with months without such contacts.

To evaluate the matching procedure, we compare client-months with contacts to client-months without contacts before and after the propensity score matching. Results are presented in Table A4 in Appendix B. While observations with contacts differ significantly from those without contacts along several dimensions before the matching, we do not find any significant differences after the matching. This finding suggests that observations with contacts and propensity-score-matched observations without contacts are very similar across observable dimensions.

We then rerun the regression specifications from Column 3 of Panels A and B of Table 3 using the matched sample. Results are reported in Table 4. In Panel A, we examine the probability to open a retirement account.[19] In Panel B, we focus on monthly net flows into retirement accounts. Consistent with previous results, we find a highly statistically significant relation between financial advice and the probability to open a retirement account

[19] In Panel A of Table 4, we use robust standard errors rather than standard errors clustered by client since our matched sample contains only one observation for most clients.

and between financial advice and changes in retirement account balances. These results suggest that non-linear factors that are not captured in linear regression specifications are unlikely to drive our results.

#### 4.1.3 Instrumental variables regression results

Even though we focus on advisor-initiated retirement-related contacts and include numerous control variables as well as time and client fixed effects in our regressions, there is still a hypothetical possibility that retirement-related financial advice is correlated with unobservable determinants of investments into retirement accounts. Thus, to further strengthen the identification of our analysis, we additionally run instrumental variables regressions. To identify an instrumental variable, we rely on the fact that many traditional financial advisors, such as the ones at our bank, usually contact their clients in a very structured manner (e.g., Riekeberg and Wassermann, 2016). Because of this structured approach, we conjecture that advisors generally approach clients in a similar order. Thus, we instrument advisor-initiated retirement-related contacts with a dummy variable that equals one for client-month observations in which the financial advisor contacts fellow clients that were contacted in the same month as the client of interest in the past three years.[20] A valid instrument must satisfy the exclusion restriction and the relevance condition. The exclusion restriction is fulfilled if contacts of fellow clients do not directly affect retirement account activity of the client of interest. Such a direct effect is unlikely to exist because clients of an advisor typically do not interact with each other. Hence, it appears reasonable to assume that instrumented client-advisor contacts are exogenous to other determinants of investments in retirement accounts.

Results from the instrumental variables regressions are reported in Table 5. In Panel A, we investigate the relation between financial advice and the probability to open a retirement account. In Column 1, we report results from the first-stage regression, which is an OLS regression of a dummy variable that equals one in months with at least one advisor-initiated

[20] Our instrumental variable can only equal one if there was at least one contact between the client and the advisor within the last three years. To make sure that our instrument does not capture this effect, we additionally include a dummy variable that equals one if there was at least one advisor-initiated retirement-related contact within the last three years in all our specifications.

retirement-related contact on our instrument and controls. We find the coefficient estimate on the instrument to be positive and highly statistically significant, suggesting that advisors indeed approach clients in a similar order. The F-statistic of the excluded instrument exceeds the often-used threshold of 10 (e.g., Staiger and Stock, 1997). These results indicate that the instrument also satisfies the relevance condition. In the second-stage regression in Column 2, we find a positive and statistically significant coefficient estimate on the instrumented advisor-initiated retirement-related contact dummy, which is consistent with prior results.

In Panel B, we analyze the relation between financial advice and net flows into retirement accounts using our instrument. Results for the first-stage (second-stage) regression are reported in the first (second) column. As before, the coefficient on the instrument is positive and highly statistically significant in the first-stage regression, confirming the instrument's relevance. In the second-stage regression, the coefficient on the instrumented advisor-initiated retirement-related contact dummy is again significantly positive, which again indicates that clients increase their holdings in retirement accounts following advisor-initiated retirement-related contacts. Taken together, all our analyses in this section suggest that financial advisors help clients to set up and invest in retirement accounts. Various identification tests lend support to a causal interpretation of our results.

#### 4.1.4 Long-term results

So far, we have provided robust evidence for an increase in retirement accounts in months with a retirement-related advisory contact. Next, we examine whether there is not only an immediate and transitory reaction to financial advice, but also a longer-term effect on retirement savings. To do so, we focus on clients who increase their holdings in retirement accounts in the current year, either in months with retirement-related advice or independently, and we then track their investments into retirement accounts in the subsequent years. Figure 2 shows the probability to increase the amount held in retirement accounts over the next five years for clients who invested in such accounts in the current year, separately for clients who invested in the current year in months with advice and for clients who acted independently. 94.7% of clients who acted upon advice in the current year again invest into their retirement

accounts in year t = 1 compared to 90.1% of independently acting clients. This difference increases over time and amounts to almost 10 percentage points in year t = 5 (91.2% vs. 81.3%). This provides first evidence that clients who increase their investments in retirement accounts in months with advice are also more likely to save for retirement in the years to come relative to clients investing independently.

We also perform a more formal analysis using logit regressions. The dependent variable is a dummy variable that equals one for clients who invest into their retirement account in future years t = 1 to t = 5, and zero otherwise. The main explanatory variable is a dummy variable that equals one for clients who increase the amount held in their retirement account in year t = 0 in months with an advisor-initiated retirement-related contact, and zero otherwise. We include the same set of controls as in previous specifications. Moreover, we add year fixed effects to the regressions.

Results are presented in Table 6. We report marginal effects. Across all columns, the coefficient on the dummy variable that captures advisor-induced investments into retirement accounts in the current year is positive and significant, except for Column 5. In Column 1, the size of the coefficient estimate suggests that the probability to allocate money to retirement accounts is 1.9 percentage points higher in year t = 1, when the investment into the retirement account in the current year happened in a month with a client-advisor contact. The effect size increases in year t = 2 to 2.6 percentage points and decreases thereafter. Overall, these findings point towards advisors not only having an immediate and transitory impact on clients' retirement savings, but also a longer-term effect over at least four years.[21]

### 4.2 Cross-sectional results

Next, to better understand whether certain groups of clients, in particular those at a higher risk of undersaving for retirement, react differently to advice, we investigate how our results vary in the cross-section of clients. To do so, we reproduce the regressions from Column 3 of Panels A and B of Table 3 and interact the advisor-initiated retirement-related contact

[21] For longer time horizons, it is difficult to find any effects as they require clients to be in the sample for a very long period, i.e., the sample size shrinks considerably.

dummy variable with a dummy variable that equals one for male clients, clients' age, the natural logarithm of bank wealth, a dummy variable that equals one for clients who hold a university degree, and the length of the bank relationship.

Results are presented in Table 7. In Panel A, we again focus on the extensive margin. We find all coefficient estimates on the interaction terms to be statistically insignificant, except for Column 2. In Column 2, the positive and significant coefficient on the interaction term between contacts and age indicates that older clients are more likely to open retirement accounts following advisory contacts.

Panel B shows cross-sectional results for the intensive margin. In Column 2, the coefficient estimate on the interaction term between contacts and clients' age is also significant, but negative, suggesting that younger customers are more responsive to advice. Hence, we find mixed results for the interplay between financial advice, clients' age, and retirement savings. Coefficient estimates on interaction terms are also negative and significant in Columns 3 and 5, indicating that poorer clients and clients who are with the bank for a shorter period are more responsive to retirement-related financial advice.

So far, we have performed all our tests using our main sample consisting of clients whose wealth at the bank exceeds CHF 75,000 at least once during our sample period. To investigate whether our results differ for clients whose wealth never exceeds CHF 75,000, the bank provided us with an additional random sample of 9,012 clients with less than CHF 75,000. We replicate our tests from Table 3 for these low-wealth individuals. Results are reported in Table A5 in Appendix B. In Panel A, when focusing on clients without a retirement account, we find all coefficient estimates on the contact dummy to be positive and highly statistically significant, consistent with the results for wealthier clients. In this sample, the unconditional probability that a client opens a retirement account during our investigation period is 0.1% per month. In Column 3, the size of the coefficient estimate suggests that this probability increases by 2.3 percentage points in months with an advisor-initiated retirement-related contact, representing a 20-fold increase. This increase is larger than the increase for wealthier clients documented in Panel A of Table 3. In Panel B, when focusing on clients who already have a retirement account, we also find all coefficient estimates on the contact dummy to be

positive and significant, which is again consistent with the results for wealthier customers. In this sample, the unconditional average monthly percentage change in retirement accounts is 3.2%. The size of the coefficient estimate in Column 4 indicates that this average is 3.9 percentage points higher when conditioning on an advisor-initiated retirement-related contact, i.e., it more than doubles. This increase is slightly smaller than the one for wealthier clients documented in Panel B of Table 3. Nevertheless, several results in this section suggest that poorer clients, who are typically more at risk of undersaving for retirement, are somewhat more responsive to retirement-related financial advice than wealthier clients. However, as shown above, these clients are less likely to be approached by financial advisors.

## 4.3 Are retirement accounts beneficial for clients?

Up to this point, we have provided robust evidence for a positive relation between retirement-related financial advice and contributions to retirement accounts, which are attractive for households because of significant tax advantages. However, to credibly claim that such investments are beneficial for clients, we need to rule out a number of potentially adverse effects resulting from investing in retirement accounts. Specifically, we will analyze whether savings in retirement accounts replace other savings and thus do not increase overall savings (Section 4.3.1), whether contributions to retirement accounts make clients more liquidity constrained as money cannot be easily withdrawn (Section 4.3.2), or whether financial advisors induce clients to invest in underperforming retirement funds, thereby adversely affecting clients' portfolio performance (Section 4.3.3).

### 4.3.1 Do retirement accounts replace other savings?

One concern with advisors steering clients' money into retirement accounts could be that they replace other savings and therefore do not lead to an increase in the overall financial wealth of households.[22] Existing research provides mixed results on the interplay between retirement savings and other savings. Some studies provide evidence that households simply reshuffle

[22]Note that even a shift from other savings to retirement accounts might increase overall wealth due to the tax benefits offered by the latter.

assets from existing savings to retirement savings (e.g., Gale and Scholz, 1994; Engen et al., 1996; Attanasio and DeLeire, 2002; Chetty et al., 2014), thereby reducing the effectiveness of pension programs that are intended to increase retirement savings rates. Others show that households finance their contributions to retirement savings by actually reducing consumption and thereby increasing their savings rates and eventually overall financial wealth (e.g., Venti and Wise, 1986, 1990; Poterba et al., 1995; Engelhardt, 1996; Benjamin, 2003; Gelber, 2011; Agarwal et al., 2022).

Therefore, in this section, we shed light on the sources of funds used to invest into tax-exempt retirement accounts. To do so, we focus on months with positive net flows into retirement accounts and examine the sources of these inflows. Figure 3 shows the average increase in retirement accounts in months with positive net flows together with average changes in overall bank wealth and average changes in other accounts held at the bank. In months in which clients increase the amount held in retirement accounts, they on average allocate CHF 1,584 to retirement accounts. Increases in retirement accounts go hand in hand with increases in overall bank wealth (CHF 1,567), decreases in checking accounts (CHF -370), increases in normal savings accounts (CHF 182), increases in equity investments (CHF 143), and increases in other investments (CHF 30). Hence, the money invested in retirement accounts mainly stems from external sources and checking accounts, not from normal savings accounts. To the contrary, holdings in normal savings accounts also increase when clients increase their holdings in retirement accounts. Hence, we do not find any evidence that clients reshuffle assets from existing savings to retirement savings.

In Figure 3, we did not differentiate between increases in retirement accounts induced by advisors and self-directed investments into retirement accounts. However, it could be the case that advised investments in retirement accounts may stem from different sources than independent investments. Therefore, we next examine whether the sources of funds invested into retirement accounts are different for advised contributions and independent contributions. To this end, we again focus on months in which clients increase the amount held in retirement accounts. We run OLS regressions and use the monthly change in bank wealth, the monthly change in the checking account, and the monthly change in the normal

savings account all scaled by beginning-of-month bank wealth as dependent variables. Our main independent variable is a dummy variable that equals one for client-months with an advisor-initiated retirement related contact. We include the same control variables and fixed effects as above.

Results are reported in Table 8. In Column 1, we use the change in bank wealth as dependent variable. The coefficient on the contact dummy is positive and statistically significant, suggesting that there is a disproportionate increase in bank wealth in months in which clients invest in their retirement account and interact with their advisor. In Column 2, the dependent variable is the change in the checking account. In this specification, the coefficient estimate on the contact dummy is negative and significant. This result points towards a disproportionate decrease in the checking account in months in which clients save for retirement and interact with their advisor. Finally, in Column 3, when using the change in the normal savings account as dependent variable, we find the coefficient on the contact dummy to be insignificant and close to zero. These results indicate that higher contributions to retirement accounts in months with client-advisor contacts are funded by a disproportionate increase in bank wealth and a disproportionate decrease in the checking account. Hence, financial advisors do not simply get their clients to shift assets from existing savings to retirement accounts, but they induce them to increase the overall savings at the bank.

So far, we have established that clients do not reshuffle assets from existing savings to retirement savings within our bank. However, clients may draw upon savings held somewhere else to fund their contributions to retirement accounts at our bank. This appears rather unlikely since our bank is usually the main bank for its clients, which allows for a comprehensive view of the overall financial situation of the clients. Nevertheless, to address this concern, we investigate potential external sources of funding. More specifically, we examine whether contributions to retirement accounts are funded by additional income. To do so, we regress monthly net flows into retirement accounts on monthly percentage changes in income. Results of this analysis are presented in Table A6 in Appendix B. In Column 1, we find the coefficient estimate on income changes to be positive and highly statistically significant. This finding is consistent with clients using salary increases to fund investments into retirement accounts.

In Column 2, we replace the variable capturing monthly percentage changes in income by a dummy variable that equals one in months in which clients obtain a bonus payment, and zero otherwise. A month with a bonus payment is defined as a month in which the wage payment increases by at least 90% compared to the previous month followed by a decline of at least 40% in the subsequent month.[23] In this specification, the coefficient estimate on the bonus dummy is positive and significant, suggesting that clients invest bonus payments at least partially into their retirement account. In Column 3, we include both variables simultaneously. In this regression, only the coefficient on bonus payments remains statistically significant. This provides further evidence that bonus payments are an important source of external funding for retirement accounts. Overall, the results in this section suggest that clients do not reallocate assets from existing savings to retirement savings, but the funds used to invest in retirement accounts primarily come from external sources, such as bonus payments, and from checking accounts.

#### 4.3.2 Do retirement accounts impose liquidity constraints?

Another concern with investments into retirement accounts could be that they impose liquidity constraints on clients since withdrawals from such accounts are generally not possible before retirement, except when purchasing an owner-occupied dwelling, when becoming self-employed, or when leaving Switzerland for good. Thus, not investing in retirement accounts could be explained by expected liquidity needs. However, existing research suggests that retirement contributions do not result in liquidity constraints (e.g., Barber and Odean, 2004; Beshears et al., 2022). Moreover, in our sample, 82% of clients who invest into retirement accounts following a client-advisor contact have more than two times their monthly wage on their checking account or their normal savings account, which is often recommended by consumer organizations as liquidity buffer. Hence, if anything, only a small group of clients in our sample is at risk of running into liquidity problems.

Nevertheless, in the following, we analyze potential liquidity issues resulting from volun-

[23] In Switzerland, many employees receive a bonus equivalent to one month's salary. To identify this bonus, we focus on months in which the salary approximately doubles, followed by a month in which the salary approximately halves.

tary contributions to retirement accounts. To this end, we focus on clients who increase their holdings in retirement accounts in the current year t = 0, either in months with a client-advisor contact or independently, and we examine whether these clients are more likely to overdraw their checking account or to have a loan in the following years t = 1 to t = 5. We run logit regressions and use a dummy variable that equals one in years in which clients have overdrafts and a dummy variable that equals one in years in which clients have a loan as dependent variables. The main explanatory variable is a dummy variable that equals one for clients who increase the amount held in their retirement account in the current year t = 0 in months with an advisor-initiated retirement-related contact, and zero otherwise. We include the same set of controls as above. Moreover, we add year fixed effects to the regressions.

Results are presented in Table 9. We report marginal effects. In Panel A, we investigate the probability of overdrawing the checking account in years one to five after an increase in the retirement account. The coefficient estimate on the dummy variable that captures increases in retirement accounts in months with client-advisor contacts is economically small and statistically insignificant across all columns, suggesting that the likelihood of overdrawing the checking account is not elevated for clients who rely on financial advice.

In Panel B, we examine the likelihood of having a loan in the five years after an investment into the retirement account. In this setting, all coefficient estimates on our variable of interest are again not statistically significant at conventional levels, except for Column 4. In Column 4, the coefficient is negative and significant at the 5% level. Thus, customers who contribute to retirement accounts upon advice are less likely to have a loan compared to customers who act independently. Taken together, we do not find any evidence that advisor-induced contributions to retirement accounts lead to liquidity problems of clients, suggesting that this concern is not warranted.

#### 4.3.3 Do retirement funds perform worse than other funds?

Another concern with our analysis might be that some clients invest in retirement funds and that these retirement funds might have poor performance vis-à-vis other funds. However, on average, holdings in retirement funds only account for 18% of the overall holdings in

retirement accounts, implying that the share of retirement funds in retirement accounts is small. Hence, if anything, adverse effects stemming from retirement fund investments should be limited and not outweigh the substantial tax advantages of retirement accounts.

Nevertheless, to shed light on the performance of retirement funds, we compare clients' purchases of retirement funds to purchases of non-retirement funds. We obtain fund data from Morningstar. Since all retirement funds offered by our bank are balanced mutual funds, we restrict the sample to purchases of balanced mutual funds. We use raw returns, Sharpe ratios, and alphas over the 24 months following a purchase as performance measures. All performance measures are net of expenses but before loads. Retirement funds do not charge load fees, but other balanced funds often do so.[24] Thus, if anything, neglecting loads leads to an over-estimation of the net-performance of non-retirement funds. Retirement funds overweight European stocks and bonds, especially stocks and bonds from Switzerland. Therefore, to determine alphas, we use a simple three-factor model that contains a Swiss stock market factor, a European stock market factor, and a European bond market factor. We employ the Swiss stock market factor and the European stock market factor from AQR's data library (https://www.aqr.com/Insights/Datasets). The Markit iBoxx EUR Overall Index serves as the bond market factor. We then run OLS regressions and regress raw returns, Sharpe ratios, and alphas on a dummy variable that equals one for retirement funds, and zero otherwise. We include client fixed effects in these regressions, allowing us to compare investments of retirement funds to investments in other balanced mutual funds by the same investor. Moreover, we include time fixed effects to control for potential time trends.

Results are presented in Table 10. Across all specifications, we do not find significant differences in the performance of retirement funds and other balanced mutual funds. When focusing on alphas in Column 3, the coefficient estimate suggests that monthly alphas of retirement funds are on average 1.7 basis points lower than monthly alphas of non-retirement funds, which corresponds to an annual difference of approximately 0.2% p.a.[25] Hence, performance differences between retirement funds and non-retirement funds are both statistically

[24] In our sample, the average front-end load of non-retirement funds amounts to 0.6%.

[25] When taking into account differences in loads, the performance difference between retirement funds and non-retirement funds would decrease further or might even turn from negative to positive.

insignificant and economically small, implying that investments in retirement funds do not adversely affect clients' performance. Taken together, all our tests in this and previous sections suggest that there are no adverse effects from voluntary contributions to retirement accounts.

### 4.4 Are retirement accounts beneficial for the bank?

Our results hitherto point towards advisor-induced investments into retirement accounts being beneficial for clients. However, existing research shows that financial advisors are subject to conflicts of interest and therefore often act in their own interest rather than in the best interest of their clients (e.g., Stoughton et al., 2011; Inderst and Ottaviani, 2012; Hoechle et al., 2018). Therefore, next, we want to analyze whether retirement accounts are also profitable for the bank, thereby providing a potential explanation for why advisors promote them. To this end, we use internal managerial accounting data of the bank and investigate how the profits the bank generates with each individual client evolve upon opening of retirement accounts. Thus, we regress monthly profits the bank generates with each client on a dummy variable that equals one for clients who have a retirement account, and zero otherwise. We include bank wealth as a control variable. We also add year-month and client fixed effects to the specification.

Results are reported in Table 11. In Column 1, the coefficient estimate on the retirement account dummy is positive and highly statistically significant. This finding suggests that retirement accounts are associated with higher profits for the bank. However, this could also be driven by the cross-selling of other products and services that customers start using at the same time. Therefore, in Column 2, we add additional dummy variables that capture other accounts clients might have at the bank. In this regression, the coefficient estimate on the retirement account dummy turns significantly negative. Thus, when controlling for other products and services clients use in addition to the retirement account, we find retirement accounts to be no longer profitable for the bank. If anything, they are loss-making. These results point towards retirement accounts being used for cross-selling. Financial advisors promote retirement accounts with their clients not because they are particularly profitable

for the bank, but because of the profitability of other products and services taken up by clients simultaneously. Thus, on the one hand, advisors help clients to better prepare for retirement and take advantage of the tax benefits offered by retirement accounts. On the other hand, financial advisors also increase the bank's profits by pushing retirement accounts together with other products. These increases in profits provide a potential explanation for why advisors promote retirement accounts to their clients in the first place.

### 4.5 Financial advice and equity investments

So far, our analysis has focused on the impact of retirement-related financial advice on retirement accounts. In this final section, we also examine other dimensions potentially affected by retirement-related financial advice. We start by investigating the relationship between financial advice and equity investments. Investing in individual stocks and equity mutual funds could be beneficial for clients because of the positive equity market premium (e.g., Mehra and Prescott, 1985; Dimson et al., 2020). Nevertheless, in Switzerland, only 25% of households participate directly and 32% participate either directly or indirectly in the stock market (Guiso et al., 2008). To shed light on whether retirement-related financial advice also increases stock market participation, we rerun the analyses from Figure 1 and Table 3 but using stock market investment-related outcome variables.

In Panel A of Figure 4 and in Panel A of Table 12, we focus on the extensive margin and investigate the impact of advisor-initiated retirement-related contacts on the probability to start investing in individual stocks or equity mutual funds. Panel A of Figure 4 shows that the probability to start investing in equities is strongly elevated in the month of the advisory contact as well as the two subsequent months. Results in Panel A of Table 12 show similar effects. The unconditional probability that a client without equity investments starts participating in the stock market during our investigation period is 0.1% per month. The coefficient estimate in Column 3, which includes the full set of controls as well as time fixed effects, suggests that this probability increases by 0.2 percentage points in months with advisor-initiated retirement-related contacts. Thus, after an advisory contact, clients are around three times more likely to enter the stock market. Hence, we find strong evidence

that clients are more likely to start investing in equities as part of their pension savings in months with advisor-initiated retirement-related contacts.

In Panel B of Figure 4 and in Panel B of Table 12, we focus on the intensive margin and analyze flows into and out of individual stocks and equity mutual funds. Panel B of Figure 4 shows that inflows into equities clearly peak in the month of the client-advisor contact. Results from OLS regressions reported in Panel B of Table 12 confirm these findings. The unconditional average monthly percentage change in equity holdings due to new investments during our investigation period is 0.9%. According to our most conservative regression specification reported in Column 4, an advisor-initiated retirement-related contact increases the average monthly percentage change in equity holdings by 1.7 percentage points, i.e., the increase triples after an advisory contact. Thus, we not only find statistically significant and economically meaningful effects of retirement-related contacts on equity investments at the extensive margin, but also at the intensive margin.

In Panel C of Figure 4, we plot the number of trades in individual stocks and equity mutual funds on each day around advisor-initiated retirement-related contacts. The number of trades increases substantially on the day of the contact and the subsequent days, suggesting that advisors induce clients to trade. Furthermore, clients are significantly more likely to buy rather than sell equities, indicating that advisors help clients to accumulate higher equity positions as part of their retirement savings strategy. We do not find any pre-trend on the days before the contact, pointing towards a causal link between financial advice and equity investments. Taken together, our findings show that financial advisors not only support clients in setting up and managing tax-exempt retirement accounts, but they also induce clients to start participating in the stock market and to increase equity investments as part of their retirement savings strategy, thereby clients benefit from the substantial equity market premium.

Given that we find strong effects of retirement-related financial advice on contributions to retirement accounts and equity investments, it could well be that financial advisors also push other, potentially less-favorable products in this pension-savings context. In fact, Hoechle et al. (2018) and Egan (2019) show that financial advisors induce clients to trade in structured

products that have inferior characteristics and that thus adversely affect clients' portfolio performance. Therefore, in our last analysis, we examine whether advisor-initiated retirement-related contacts are also associated with elevated flows into structured products. To so, we perform very similar tests as for retirement accounts and equity investments. Specifically, we rerun the regression specifications from Column 3 of Panel A and from Column 4 of Panel B of Table 3. Results are presented in Table A7 in Appendix B. In Panel A, we analyze the extensive margin and examine the likelihood to start investing in structured products. In Panel B, we study the intensive margin and investigate monthly net flows into structured products. However, in both tests, we do not find a significant relation between retirement-related financial advice and investments into structured products.[26] Taken together, in this section, we show that retirement-related financial advice impacts contributions to retirement accounts and equity investments, but not investments into structured products, which are often overpriced. These results again support the notion that financial advisors help people to better prepare for retirement.

# 5 Conclusion

In this paper, we examine the role of financial advice in the context of voluntary pension contributions. We document that clients are more likely to open a tax-exempt retirement account and direct more money into these accounts after being approached by their financial advisor to talk about retirement. Various identification checks suggest a causal interpretation of our findings. Clients are also more likely to start investing in equities and to increase their equity investments following client-advisor contacts. We find no indication that the increase in retirement account usage is associated with negative side-effects. Specifically, we do not find any evidence for a simple reshuffling from existing savings to retirement accounts and we also do not find any indication that voluntary pension contributions lead to future liquidity problems for clients. Overall, our findings provide strong support that financial

[26]Note that these results are not contradicting earlier studies showing that advisors can induce clients to invest in overpriced structured products, as these studies focus on general financial advice, while our study focuses on retirement-related financial advice.

advice helps people to better prepare for retirement. Hence, complementary to to the many negative consequences of financial advice documented in previous research, our evidence points towards a bright side of financial advice.

However, we also show that retirement-related financial advice does not primarily target women, less wealthy individuals, and people with lower levels of education, i.e., financial advice does not particularly help groups of individuals who are more at risk of undersaving for retirement. Furthermore, while a retirement account per se is not profit-enhancing from the bank's point of view, it indirectly leads to additional profits via cross-selling, providing an explanation for why financial advisors promote retirement accounts.

Overall, our findings show that financial advice is often necessary to help individuals to take advantage of state-sponsored incentives for retirement savings they would not have taken advantage of otherwise. This suggests that policymakers should not only think about monetary incentives for retirement savings, but also about ways to help individuals to actually take advantage of them.

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# Tables

### Table 1: Descriptive statistics

This table presents descriptive statistics on client characteristics (Panel A), bank wealth characteristics (Panel B), and contact characteristics (Panel C). Appendix A provides detailed descriptions of all variables used throughout the study.

| | Mean | Min. | Median | Max. | Std. dev. | N |
|---|---|---|---|---|---|---|
| **Panel A: Client characteristics** | | | | | | |
| Male (d) | 0.575 | 0.000 | 1.000 | 1.000 | 0.494 | 20,529 |
| Age (years) | 44.51 | 18.00 | 46.00 | 64.00 | 11.19 | 20,529 |
| University degree (d) | 0.167 | 0.000 | 0.000 | 1.000 | 0.373 | 10,576 |
| Employed (d) | 0.839 | 0.000 | 1.000 | 1.000 | 0.368 | 20,529 |
| Self-employed (d) | 0.111 | 0.000 | 0.000 | 1.000 | 0.314 | 20,529 |
| Avg. wage (CHF) | 80,303 | 3,600 | 69,662 | 1,158,600 | 62,502 | 13,708 |
| Length of bank relationship (years) | 6.82 | 0.00 | 5.08 | 24.25 | 6.68 | 14,191 |
| **Panel B: Bank wealth characteristics** | | | | | | |
| Avg. bank wealth (CHF) | 155,091 | -29,482 | 80,977 | 5,601,885 | 301,552 | 20,529 |
| Avg. retirement account (CHF) | 23,353 | 0 | 4,443 | 744,680 | 36,420 | 20,529 |
| - thereof retirement funds | 4,171 | 0 | 0 | 693,117 | 16,664 | 20,529 |
| Has retirement account in 2011 (d) | 0.451 | 0.000 | 0.000 | 1.000 | 0.498 | 15,900 |
| Opens retirement account (d) | 0.154 | 0.000 | 0.000 | 1.000 | 0.361 | 20,529 |
| Avg. checking account (CHF) | 44,929 | -82,811 | 15,496 | 4,340,524 | 130,390 | 20,529 |
| Avg. savings account (CHF) | 39,784 | -2 | 11,902 | 2,870,633 | 93,798 | 20,529 |
| Avg. equity investments (CHF) | 27,174 | 0 | 0 | 5,336,301 | 143,696 | 20,529 |
| Avg. other investments (CHF) | 19,854 | -142,055 | 0 | 3,598,620 | 105,298 | 20,529 |
| **Panel C: Contact characteristics** | | | | | | |
| Avg. # contacts p.a. | 1.18 | 0.00 | 0.76 | 45.33 | 1.70 | 20,529 |
| Avg. # retirement-related contacts p.a. | 0.13 | 0.00 | 0.00 | 5.45 | 0.23 | 20,529 |

## Table 2: Determinants of retirement-related contacts

This table presents the results from logit regressions with year-month fixed effects. The dependent variable is a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. We report marginal effects. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

| | Retirement-related contact $(d)_t$ | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Male (d) | 0.00013* | -0.00001 | 0.00006 |
| | (1.69) | (-0.04) | (0.60) |
| $Age_t$ | 0.00005*** | 0.00007*** | 0.00003*** |
| | (12.12) | (10.05) | (7.52) |
| $Log(bank\ wealth)_{t-1}$ | 0.00070*** | 0.00091*** | 0.00062*** |
| | (17.40) | (14.49) | (13.19) |
| $\Delta\%\ bank\ wealth_{t-1}$ | 0.00024* | -0.00006 | 0.00033** |
| | (1.89) | (-0.27) | (2.31) |
| Has retirement account $(d)_{t-1}$ | 0.00959*** | 0.00940*** | 0.00893*** |
| | (55.91) | (40.61) | (42.26) |
| Has increased amount within past 6 months $(d)_{t-1}$ | -0.00220*** | -0.00255*** | -0.00204*** |
| | (-23.01) | (-16.65) | (-18.03) |
| University degree (d) | | 0.00036* | |
| | | (1.85) | |
| $Length\ of\ relationship_t$ | | | 0.00001 |
| | | | (1.59) |
| Year-month fixed effects | Yes | Yes | Yes |
| Pseudo $R^2$ | 0.282 | 0.255 | 0.259 |
| N | 1,992,939 | 1,045,351 | 1,301,705 |

## Table 3: Financial advice and retirement accounts

This table presents the results from logit regressions with year-month and client fixed effects (Panel A) and OLS regressions with year-month and client fixed effects (Panel B). In Panel A, the dependent variable is a dummy variable that equals one in the month in which the client opens a retirement account, and zero otherwise. In Panel B, the dependent variable is the monthly net flows into the retirement account as percentage of the amount of money the client held in the retirement account at the beginning of the month. In Panel A (Panel B), we restrict the sample to clients without (with) a retirement account. The variable *Retirement-related contact (d)* is a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact between the client and the advisor, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. In Columns 1 to 3 of Panel A, we report marginal effects. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

**Panel A: Probability to open a retirement account**

| | Opens retirement account $(d)_t$ | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Retirement-related contact $(d)_t$ | 0.080*** | 0.066*** | 0.039*** | 1.755*** |
| | (16.50) | (15.68) | (13.01) | (14.99) |
| Male (d) | | -0.000*** | -0.000*** | |
| | | (-3.31) | (-3.43) | |
| $Age_t$ | | -0.000*** | -0.000*** | |
| | | (-27.50) | (-22.39) | |
| $Log(bank\ wealth)_{t-1}$ | | 0.000*** | 0.000*** | 0.486*** |
| | | (2.84) | (2.78) | (7.96) |
| $\Delta\%\ bank\ wealth_{t-1}$ | | 0.001*** | 0.000*** | -0.076 |
| | | (6.87) | (4.66) | (-1.19) |
| Year-month fixed effects | No | No | Yes | Yes |
| Client fixed effects | No | No | No | Yes |
| Pseudo $R^2$ | 0.034 | 0.050 | 0.121 | 0.435 |
| N | 949,183 | 949,183 | 949,183 | 142,181 |

**Panel B: Net flows into retirement accounts**

| | % net flows into retirement $account_t$ | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Retirement-related contact $(d)_t$ | 0.070*** | 0.071*** | 0.037*** | 0.038*** |
| | (45.75) | (47.13) | (25.46) | (26.65) |
| Male (d) | | -0.001* | -0.000* | |
| | | (-1.84) | (-1.84) | |
| $Age_t$ | | -0.001*** | -0.000*** | |
| | | (-34.81) | (-32.84) | |
| $Log(bank\ wealth)_{t-1}$ | | -0.008*** | -0.008*** | -0.016*** |
| | | (-37.33) | (-36.47) | (-29.56) |
| $\Delta\%\ bank\ wealth_{t-1}$ | | 0.018*** | 0.013*** | 0.012*** |
| | | (16.52) | (12.11) | (10.88) |
| Year-month fixed effects | No | No | Yes | Yes |
| Client fixed effects | No | No | No | Yes |
| Adj. $R^2$ | 0.011 | 0.024 | 0.063 | 0.088 |
| N | 1,042,958 | 1,042,958 | 1,042,958 | 1,042,958 |

## Table 4: Financial advice and retirement accounts – Propensity score matching

This table presents the results from a logit regression with year-month fixed effects (Panel A) and a OLS regression with year-month fixed effects (Panel B). In Panel A, the dependent variable is a dummy variable that equals one in the month in which the client opens a retirement account, and zero otherwise. In Panel B, the dependent variable is the monthly net flows into the retirement account as percentage of the amount of money the client held in the retirement account at the beginning of the month. We focus on a subsample after propensity score matching. In Panel A (Panel B), we restrict the sample to clients without (with) a retirement account. The variable *Retirement-related contact (d)* is a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact between the client and the advisor, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. In Panel A, we report marginal effects. In Panel A, we use robust standard errors. In Panel B, standard errors are clustered at the client level. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

**Panel A: Probability to open a retirement account**

| | Opens retirement account $(d)_t$ |
|---|---|
| | (1) |
| Retirement-related contact $(d)_t$ | 0.039*** |
| | (8.58) |
| Male (d) | -0.001 |
| | (-0.49) |
| $Age_t$ | -0.000*** |
| | (-3.48) |
| $Log(bank\ wealth)_{t-1}$ | 0.000 |
| | (0.89) |
| $\Delta\%$ bank $wealth_{t-1}$ | 0.001 |
| | (0.62) |
| Year-month fixed effects | Yes |
| Pseudo $R^2$ | 0.245 |
| N | 6,632 |

**Panel B: Net flows into retirement accounts**

| | % net flows into retirement $account_t$ |
|---|---|
| | (1) |
| Retirement-related contact $(d)_t$ | 0.025*** |
| | (13.46) |
| Male (d) | -0.001 |
| | (-0.50) |
| $Age_t$ | -0.001*** |
| | (-7.40) |
| $Log(bank\ wealth)_{t-1}$ | -0.010*** |
| | (-8.71) |
| $\Delta\%$ bank $wealth_{t-1}$ | 0.017** |
| | (2.32) |
| Year-month fixed effects | Yes |
| Adj. $R^2$ | 0.150 |
| N | 37,354 |

## Table 5: Financial advice and retirement accounts – Instrumental variables regressions

This table presents the results from instrumental variables regressions with year-month and client fixed effects. In Panel A, the dependent variable is either a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact, and zero otherwise (Column 1) or a dummy variable that equals one in the month in which the client opens a retirement account, and zero otherwise (Column 2). In Panel B, the dependent variable is either a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact, and zero otherwise (Column 1) or the monthly net flows into the retirement account as percentage of the amount of money the client held in the retirement account at the beginning of the month (Column 2). In Panel A (Panel B), we restrict the sample to clients without (with) retirement accounts. The variable *Retirement-related contact (d)* is a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact between the client and the advisor, and zero otherwise. The instrument for advisor-initiated retirement-related contacts is a dummy variable that equals one in months in which the advisor contacts fellow clients that were contacted in the same month as the client within the past 36 months, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

**Panel A: Probability to open a retirement account**

| | First stage | Second stage |
|---|---|---|
| | Retirement-related contact $(d)_t$ | Opens retirement account $(d)_t$ |
| | (1) | (2) |
| Retirement-related contact $(d)_t$ | | 0.190* |
| | | (1.84) |
| Log(bank wealth)$_{t-1}$ | 0.001*** | 0.001*** |
| | (10.12) | (7.89) |
| $\Delta$% bank wealth$_{t-1}$ | 0.000 | 0.000 |
| | (0.46) | (0.62) |
| At least one contact within past 36 months $(d)_{t-1}$ | -0.011*** | 0.007*** |
| | (-17.04) | (5.68) |
| Advisor contacts fellow clients $(d)_t$ | 0.019*** | |
| | (6.31) | |
| Year-month fixed effects | Yes | Yes |
| Client fixed effects | Yes | Yes |
| N | 948,863 | 948,863 |
| F-statistic | 39.785 | |

**Panel B: Net flows into retirement accounts**

| | First stage | Second stage |
|---|---|---|
| | Retirement-related contact (d)$_t$ | % net flows into retirement account$_t$ |
| | (1) | (2) |
| Retirement-related contact (d)$_t$ | | 0.070* |
| | | (1.95) |
| Log(bank wealth)$_{t-1}$ | 0.002*** | -0.016*** |
| | (7.46) | (-29.09) |
| $\Delta$% bank wealth$_{t-1}$ | -0.000 | 0.012*** |
| | (-0.42) | (10.89) |
| At least one contact within past 36 months (d)$_{t-1}$ | -0.010*** | 0.000 |
| | (-24.28) | (0.64) |
| Advisor contacts fellow clients (d)$_t$ | 0.028*** | |
| | (11.51) | |
| Year-month fixed effects | Yes | Yes |
| Client fixed effects | Yes | Yes |
| N | 1,042,933 | 1,042,933 |
| F-statistic | 132.579 | |

**Table 6: Financial advice and retirement accounts in the longer run**

This table presents the results from logit regressions with year fixed effects. The dependent variable is a dummy variable that equals one if the client increases the amount of money held in the retirement account in a certain year, and zero otherwise. We restrict the sample to clients who increase the amount of money held in the retirement account in the current year. The variable *Increases amount in month of contact (d)* is a dummy variable that equals one if the client increases the amount of money held in the retirement account in a month with at least one advisor-initiated retirement-related contact, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. We report marginal effects. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

| | Increases amount in retirement account $(d)_{t+1}$ | Increases amount in retirement account $(d)_{t+2}$ | Increases amount in retirement account $(d)_{t+3}$ | Increases amount in retirement account $(d)_{t+4}$ | Increases amount in retirement account $(d)_{t+5}$ |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Increases amount in month of contact $(d)_t$ | 0.019*** | 0.026*** | 0.019*** | 0.012** | 0.008 |
| | (7.26) | (7.74) | (4.40) | (2.20) | (1.28) |
| Male (d) | -0.007*** | -0.010*** | -0.011*** | -0.015*** | -0.017*** |
| | (-4.69) | (-4.39) | (-3.80) | (-4.09) | (-3.74) |
| $Age_t$ | -0.001*** | -0.001*** | -0.001*** | -0.001*** | -0.001*** |
| | (-7.88) | (-7.49) | (-5.82) | (-4.85) | (-3.52) |
| $Log(bank\ wealth)_{t-1}$ | -0.000 | -0.001 | -0.000 | -0.000 | -0.001 |
| | (-0.49) | (-0.46) | (-0.21) | (-0.26) | (-0.66) |
| $\Delta\%\ bank\ wealth_{t-1}$ | -0.004 | -0.006 | 0.004 | -0.003 | -0.002 |
| | (-1.16) | (-1.39) | (0.84) | (-0.44) | (-0.24) |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes |
| Pseudo $R^2$ | 0.261 | 0.227 | 0.212 | 0.200 | 0.198 |
| N | 80,190 | 70,250 | 60,495 | 51,050 | 42,077 |

## Table 7: Financial advice, client characteristics, and retirement accounts

This table presents the results from logit regressions with year-month fixed effects (Panel A) and OLS regressions with year-month fixed effects (Panel B). In Panel A, the dependent variable is a dummy variable that equals one in the month in which the client opens a retirement account, and zero otherwise. In Panel B, the dependent variable is the monthly net flows into the retirement account as percentage of the amount of money the client held in the retirement account at the beginning of the month. In Panel A (Panel B), we restrict the sample to clients without (with) a retirement account. The variable *Retirement-related contact (d)* or *Contact (d)* is a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact between the client and the advisor, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. In Panel A, we report marginal effects. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

**Panel A: Probability to open a retirement account**

| | Opens retirement account $(d)_t$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Retirement-related contact $(d)_t$ | 0.039*** | 0.024*** | 0.032* | 0.036*** | 0.031*** |
| | (8.68) | (3.95) | (1.94) | (8.87) | (5.82) |
| Male (d) | -0.000*** | -0.000*** | -0.000*** | -0.000** | -0.000*** |
| | (-3.23) | (-3.39) | (-3.42) | (-2.57) | (-3.04) |
| Contact $(d)_t$ × Male (d) | -0.000 | | | | |
| | (-0.10) | | | | |
| $Age_t$ | -0.000*** | -0.000*** | -0.000*** | -0.000*** | -0.000*** |
| | (-22.38) | (-22.40) | (-22.37) | (-15.91) | (-19.55) |
| Contact $(d)_t$ × $Age_t$ | | 0.000** | | | |
| | | (2.05) | | | |
| $Log(bank\ wealth)_{t-1}$ | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| | (2.78) | (2.69) | (2.65) | (2.63) | (3.52) |
| Contact $(d)_t$ × $Log(bank\ wealth)_{t-1}$ | | | 0.000 | | |
| | | | (0.35) | | |
| University degree (d) | | | | -0.000 | |
| | | | | (-0.93) | |
| Contact $(d)_t$ × University degree (d) | | | | -0.000 | |
| | | | | (-0.12) | |
| Length of $relationship_t$ | | | | | 0.000*** |
| | | | | | (2.68) |
| Contact $(d)_t$ × $Length_t$ | | | | | 0.000 |
| | | | | | (0.95) |
| $\Delta\%$ $bank\ wealth_{t-1}$ | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| | (4.66) | (4.63) | (4.66) | (4.17) | (4.33) |
| Year-month fixed effects | Yes | Yes | Yes | Yes | Yes |
| Pseudo $R^2$ | 0.121 | 0.121 | 0.121 | 0.122 | 0.124 |
| N | 949,183 | 949,183 | 949,183 | 472,707 | 665,129 |

**Panel B: Net flows into retirement accounts**

| | % net flows into retirement account$_t$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Retirement-related contact (d)$_t$ | 0.039*** | 0.094*** | 0.182*** | 0.039*** | 0.064*** |
| | (16.37) | (10.43) | (8.44) | (18.95) | (11.96) |
| Male (d) | -0.000 | -0.000* | -0.000* | -0.000 | -0.000 |
| | (-1.63) | (-1.83) | (-1.82) | (-0.55) | (-0.66) |
| Contact (d)$_t$ × Male (d) | -0.004 | | | | |
| | (-1.17) | | | | |
| Age$_t$ | -0.000*** | -0.000*** | -0.000*** | -0.001*** | -0.001*** |
| | (-32.84) | (-31.80) | (-32.80) | (-26.85) | (-26.52) |
| Contact (d)$_t$ × Age$_t$ | | -0.001*** | | | |
| | | (-6.60) | | | |
| Log(bank wealth)$_{t-1}$ | -0.008*** | -0.008*** | -0.008*** | -0.008*** | -0.008*** |
| | (-36.47) | (-36.41) | (-35.52) | (-27.40) | (-27.31) |
| Contact (d)$_t$ × Log(bank wealth)$_{t-1}$ | | | -0.012*** | | |
| | | | (-6.85) | | |
| University degree (d) | | | | 0.002*** | |
| | | | | (4.45) | |
| Contact (d)$_t$ × University degree (d) | | | | 0.005 | |
| | | | | (0.92) | |
| Length of relationship$_t$ | | | | | -0.000*** |
| | | | | | (-13.85) |
| Contact (d)$_t$ × Length$_t$ | | | | | -0.002*** |
| | | | | | (-4.99) |
| Δ% bank wealth$_{t-1}$ | 0.013*** | 0.013*** | 0.013*** | 0.012*** | 0.013*** |
| | (12.11) | (12.11) | (12.12) | (8.12) | (9.75) |
| Year-month fixed effects | Yes | Yes | Yes | Yes | Yes |
| Adj. $R^2$ | 0.063 | 0.063 | 0.063 | 0.061 | 0.061 |
| N | 1,042,958 | 1,042,958 | 1,042,958 | 572,127 | 635,913 |

## Table 8: Financial advice and the funding of retirement accounts

This table presents the results from OLS regressions with year-month and client fixed effects. The dependent variable is either the monthly percentage change in the total wealth the client holds at our bank (Column 1), the monthly change in the amount of money the client holds in the checking account as percentage of the total wealth the client held at our bank at the beginning of the month (Column 2), or the monthly change in the amount of money the client holds in the savings account as percentage of the total wealth the client held at our bank at the beginning of the month (Column 3). We restrict the sample to months in which clients increase the amount of money held in the retirement account. The variable *Retirement-related contact (d)* is a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact between the client and the advisor, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

| | External funds | Internal funds | |
|---|---|---|---|
| | $\Delta$% bank wealth$_t$ (scaled by bank wealth$_{t-1}$) | $\Delta$% checking account$_t$ (scaled by bank wealth$_{t-1}$) | $\Delta$% savings account$_t$ (scaled by bank wealth$_{t-1}$) |
| | (1) | (2) | (3) |
| Retirement-related contact (d)$_t$ | 0.014*** | -0.005** | -0.000 |
| | (5.06) | (-2.44) | (-0.18) |
| Log(bank wealth)$_{t-1}$ | -0.129*** | -0.046*** | -0.012*** |
| | (-33.85) | (-21.09) | (-17.42) |
| $\Delta$% bank wealth$_{t-1}$ | -0.071*** | -0.100*** | 0.009*** |
| | (-12.19) | (-21.50) | (4.92) |
| Year-month fixed effects | Yes | Yes | Yes |
| Client fixed effects | Yes | Yes | Yes |
| Adj. $R^2$ | 0.173 | 0.080 | 0.042 |
| N | 301,191 | 301,188 | 301,188 |

## Table 9: Financial advice, retirement accounts, overdrafts, and loans

This table presents the results from logit regressions with year fixed effects. In Panel A, the dependent variable is a dummy variable that equals one if the client overdraws the checking account in a certain year, and zero otherwise. In Panel B, the dependent variable is a dummy variable that equals one if the client has a loan in a certain year, and zero otherwise. We restrict the sample to clients who increase the amount of money held in the retirement account in the current year. The variable *Increases amount in month of contact (d)* is a dummy variable that equals one if the client increases the amount of money held in the retirement account in a month with at least one advisor-initiated retirement-related contact, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. We report marginal effects. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

**Panel A: Probability to overdraw the checking account**

| | Overdraws checking account $(d)_{t+1}$ | Overdraws checking account $(d)_{t+2}$ | Overdraws checking account $(d)_{t+3}$ | Overdraws checking account $(d)_{t+4}$ | Overdraws checking account $(d)_{t+5}$ |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Increases amount in month of contact $(d)_t$ | -0.000 | 0.003 | 0.002 | 0.004 | 0.004 |
| | (-0.04) | (1.17) | (0.61) | (1.45) | (1.46) |
| Male (d) | 0.022*** | 0.020*** | 0.019*** | 0.017*** | 0.015*** |
| | (9.66) | (8.92) | (8.06) | (6.85) | (6.09) |
| $Age_t$ | 0.000*** | 0.000*** | 0.000** | 0.000* | 0.000 |
| | (3.03) | (2.69) | (2.51) | (1.94) | (1.36) |
| $Log(bank\ wealth)_{t-1}$ | -0.010*** | -0.009*** | -0.009*** | -0.009*** | -0.008*** |
| | (-12.08) | (-10.59) | (-10.22) | (-9.52) | (-8.49) |
| $\Delta\%$ bank $wealth_{t-1}$ | -0.004 | -0.002 | -0.003 | -0.002 | -0.004 |
| | (-1.33) | (-0.79) | (-0.85) | (-0.61) | (-1.13) |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes |
| Pseudo $R^2$ | 0.036 | 0.032 | 0.030 | 0.028 | 0.027 |
| N | 80,190 | 70,250 | 60,495 | 51,050 | 42,077 |

**Panel B: Probability to have a loan**

| | Has loan $(d)_{t+1}$ | Has loan $(d)_{t+2}$ | Has loan $(d)_{t+3}$ | Has loan $(d)_{t+4}$ | Has loan $(d)_{t+5}$ |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Increases amount in month of contact $(d)_t$ | -0.000 | -0.000 | -0.000 | -0.000* | -0.000 |
| | (-0.78) | (-0.05) | (-1.39) | (-1.72) | (-1.45) |
| Male (d) | 0.000** | 0.000** | 0.001** | 0.001** | 0.001** |
| | (2.07) | (2.06) | (2.24) | (2.31) | (2.26) |
| $Age_t$ | 0.000 | 0.000 | 0.000* | 0.000** | 0.000** |
| | (0.94) | (1.27) | (1.69) | (2.00) | (1.99) |
| $Log(bank\ wealth)_{t-1}$ | 0.000*** | 0.000*** | 0.000** | 0.000** | 0.000* |
| | (3.28) | (2.64) | (2.51) | (2.33) | (1.88) |
| $\Delta\%$ bank $wealth_{t-1}$ | -0.000 | -0.000 | -0.000 | -0.000 | -0.001* |
| | (-0.17) | (-0.05) | (-0.28) | (-0.24) | (-1.81) |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes |
| Pseudo $R^2$ | 0.183 | 0.196 | 0.181 | 0.163 | 0.176 |
| N | 80,190 | 70,250 | 60,495 | 51,050 | 42,077 |

## Table 10: The performance of retirement funds

This table presents the results from OLS regressions with year-month and client fixed effects. The dependent variable is either the raw return of the share class over the next 24 months following a purchase (Column 1), the Sharpe ratio of the share class over the next 24 months following a purchase (Column 2), or the alpha of the share class over the next 24 months following a purchase (Column 3). We restrict the sample to purchases of balanced mutual funds. The variable *Retirement fund (d)* is a dummy variable that equals one for retirement funds, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the mutual fund level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

| | Monthly return $(\%)_t$ | Sharpe ratio$_t$ | Monthly alpha $(\%)_t$ |
|---|---|---|---|
| | (1) | (2) | (3) |
| Retirement fund $(d)_t$ | -0.246 | -0.087 | -0.017 |
| | (-1.32) | (-1.00) | (-0.46) |
| Log(bank wealth)$_{t-1}$ | 0.001 | 0.004 | -0.011 |
| | (0.27) | (0.85) | (-1.54) |
| $\Delta$% bank wealth$_{t-1}$ | -0.001 | -0.001 | 0.002 |
| | (-1.45) | (-1.52) | (1.61) |
| Year-month fixed effects | Yes | Yes | Yes |
| Client fixed effects | Yes | Yes | Yes |
| Adj. $R^2$ | 0.843 | 0.934 | 0.602 |
| N | 20,191 | 20,191 | 16,203 |

## Table 11: Retirement accounts and bank profits

This table presents the results from OLS regressions with year-month and client fixed effects. The dependent variable is the monthly profit the bank generates with each client. The variable *Has retirement account (d)* is a dummy variable that equals one if the client has a retirement account, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

| | Profit $(CHF)_t$ | |
|---|---|---|
| | (1) | (2) |
| Has retirement account $(d)_t$ | 7.495*** | -6.491*** |
| | (3.83) | (-4.82) |
| Has checking account $(d)_t$ | | -0.308 |
| | | (-0.18) |
| Has savings account $(d)_t$ | | -9.430*** |
| | | (-6.48) |
| Has securities account $(d)_t$ | | 13.161*** |
| | | (6.86) |
| Has mortgage $(d)_t$ | | 295.668*** |
| | | (54.09) |
| Has loan $(d)_t$ | | 143.549*** |
| | | (6.91) |
| Bank wealth $(CHF)_t$ | 0.149*** | 0.148*** |
| | (18.14) | (20.32) |
| Year-month fixed effects | Yes | Yes |
| Client fixed effects | Yes | Yes |
| Adj. $R^2$ | 0.589 | 0.634 |
| N | 1,992,939 | 1,992,939 |

## Table 12: Financial advice and equity investments

This table presents the results from logit regressions with year-month and client fixed effects (Panel A) and OLS regressions with year-month and client fixed effects (Panel B). In Panel A, the dependent variable is a dummy variable that equals one in the month in which the client starts investing in individual stocks or equity mutual funds, and zero otherwise. In Panel B, the dependent variable is the monthly net flows into individual stocks and equity mutual funds as percentage of the amount of money the client invested in individual stocks and equity mutual funds at the beginning of the month. In Panel A (Panel B), we restrict the sample to clients without (with) individual stocks or equity mutual funds. The variable *Retirement-related contact (d)* is a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact between the client and the advisor, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. In Columns 1 to 3 of Panel A, we report marginal effects. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

**Panel A: Probability to start investing in equity**

| | Starts investing in equity $(d)_t$ | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Retirement-related contact $(d)_t$ | 0.004*** | 0.003*** | 0.002*** | 1.211*** |
| | (7.07) | (6.87) | (4.66) | (7.87) |
| Male (d) | | 0.000 | 0.000 | |
| | | (0.78) | (0.71) | |
| $Age_t$ | | -0.000*** | -0.000*** | |
| | | (-3.18) | (-2.68) | |
| $Log(bank\ wealth)_{t-1}$ | | 0.000*** | 0.000*** | 0.896*** |
| | | (15.99) | (15.99) | (8.99) |
| $\Delta\%\ bank\ wealth_{t-1}$ | | 0.001*** | 0.000*** | -0.076 |
| | | (10.45) | (9.96) | (-0.92) |
| Year-month fixed effects | No | No | Yes | Yes |
| Client fixed effects | No | No | No | Yes |
| Pseudo $R^2$ | 0.005 | 0.024 | 0.048 | 0.233 |
| N | 1,401,722 | 1,401,722 | 1,401,722 | 78,814 |

**Panel B: Net flows into equity**

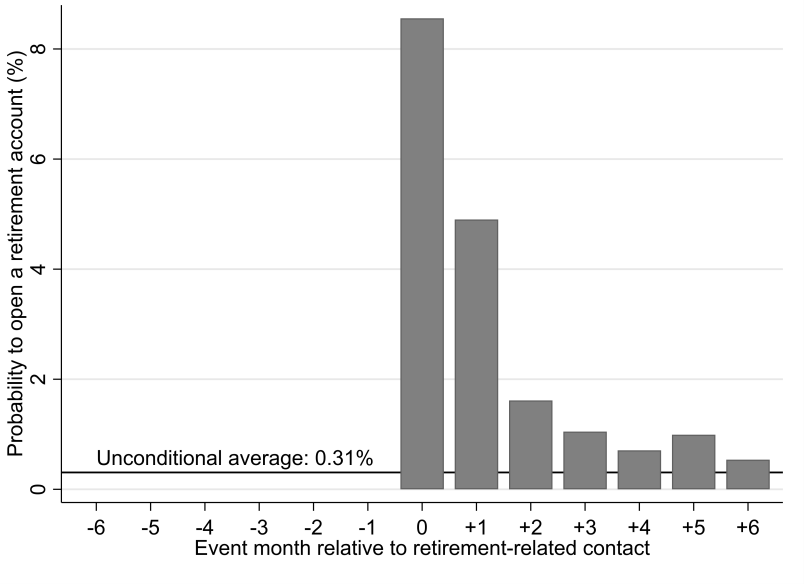
| | % net flows into $equity_t$ | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Retirement-related contact $(d)_t$ | 0.013*** | 0.013*** | 0.016*** | 0.017*** |
| | (4.18) | (4.09) | (4.75) | (4.87) |
| Male (d) | | 0.004*** | 0.004*** | |
| | | (6.57) | (6.62) | |
| $Age_t$ | | -0.000*** | -0.000*** | |
| | | (-4.61) | (-5.66) | |
| $Log(bank\ wealth)_{t-1}$ | | 0.002*** | 0.001*** | -0.001 |
| | | (4.93) | (4.00) | (-1.38) |
| $\Delta\%\ bank\ wealth_{t-1}$ | | 0.035*** | 0.036*** | 0.031*** |
| | | (9.26) | (9.43) | (8.33) |
| Year-month fixed effects | No | No | Yes | Yes |
| Client fixed effects | No | No | No | Yes |
| Adj. $R^2$ | 0.000 | 0.001 | 0.003 | 0.020 |
| N | 590,020 | 590,020 | 590,020 | 590,020 |

# Figures

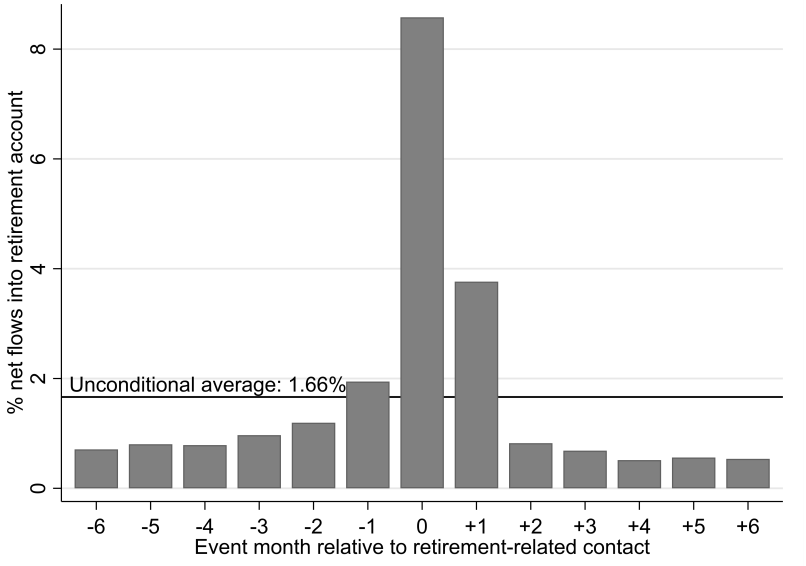
## Figure 1: Financial advice and retirement accounts

This figure shows the fraction of clients who open a retirement account around advisor-initiated retirement-related contacts (Panel A), the monthly net flows into the retirement account around advisor-initiated retirement-related contacts (Panel B), and the number of trades in retirement funds around advisor-initiated retirement-related contacts (Panel C). In Panel A (Panel B), we restrict the sample to clients without (with) a retirement account. Appendix A provides detailed descriptions of all variables used throughout the study.

**Panel A: Probability to open a retirement account**




**Panel B: Net flows into retirement accounts**



**Panel C: Retirement fund trades**

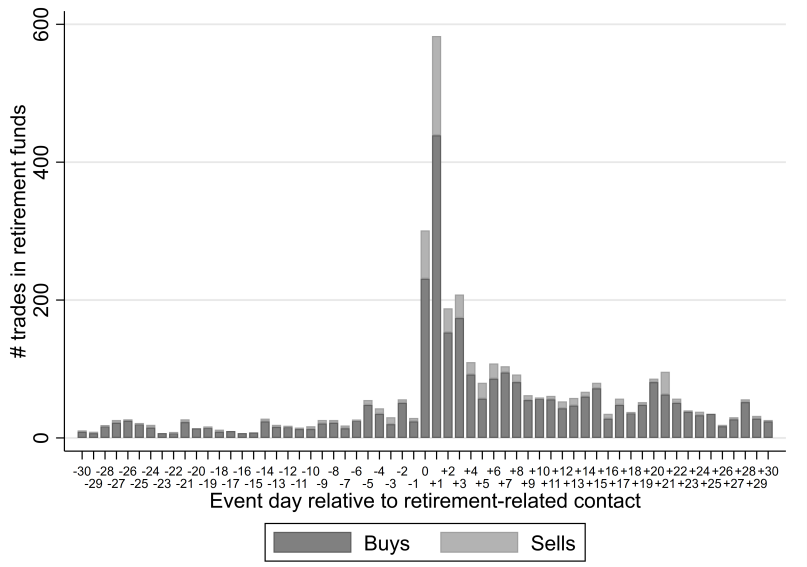
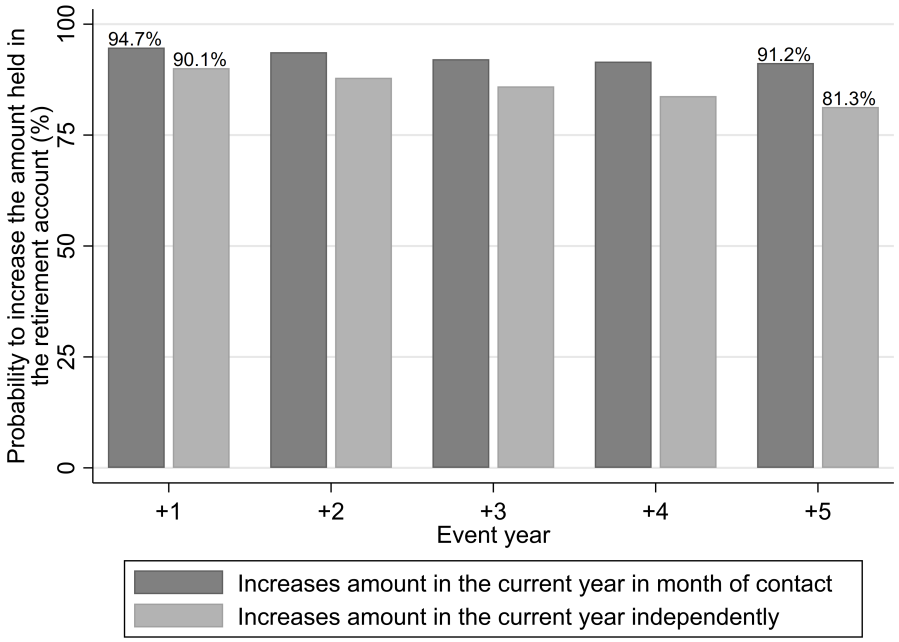


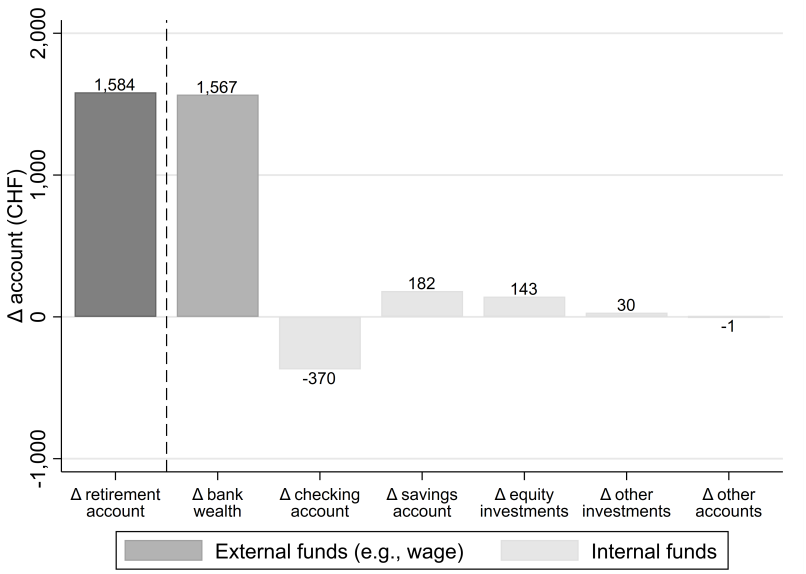
**Figure 2: Financial advice and retirement accounts in the longer run**

This figure shows the fraction of clients who increase the amount of money held in the retirement account in a certain year. We restrict the sample to clients who increase the amount of money held in the retirement account in the current year. Appendix A provides detailed descriptions of all variables used throughout the study.



## Figure 3: Financial advice and the funding of retirement accounts

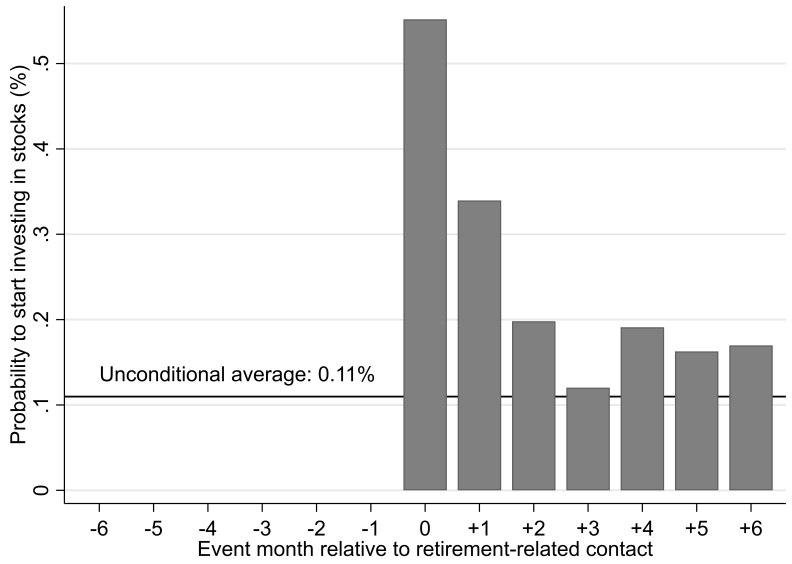
This figure shows the sources of funds when clients increase the amount of money held in the retirement account. We restrict the sample to months in which clients increase the amount of money held in the retirement account. Appendix A provides detailed descriptions of all variables used throughout the study.



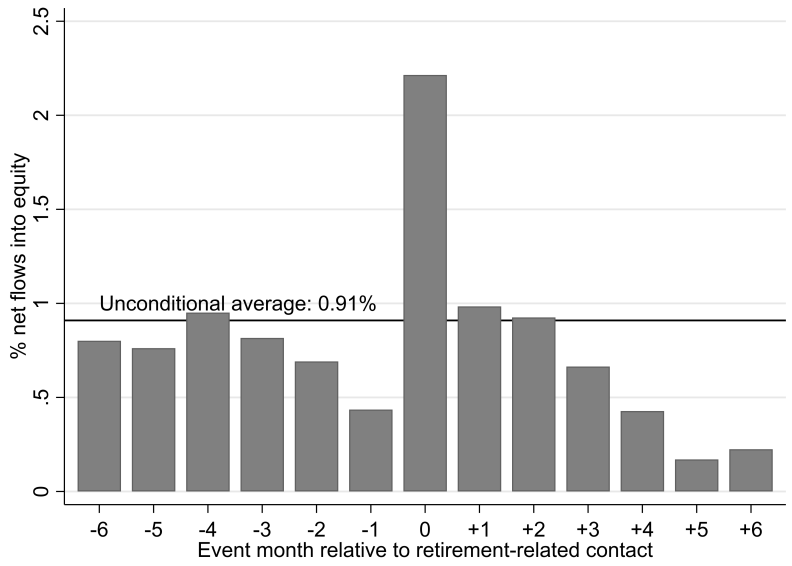
## Figure 4: Financial advice and equity investments

This figure shows the fraction of clients who start investing in individual stocks or equity mutual funds around advisor-initiated retirement-related contacts (Panel A), monthly net flows into individual stocks and equity mutual funds around advisor-initiated retirement-related contacts (Panel B), and the number of trades in individual stocks and equity mutual funds around advisor-initiated retirement-related contacts (Panel C). In Panel A (Panel B), we restrict the sample to clients without (with) individual stocks or equity mutual funds. Appendix A provides detailed descriptions of all variables used throughout the study.

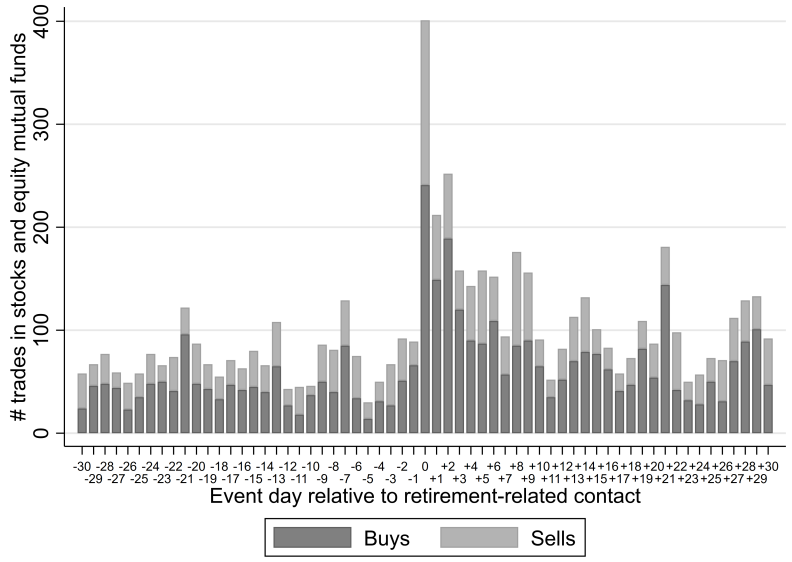
**Panel A: Probability to start investing in equity**




**Panel B: Net flows into equity**



**Panel C: Equity trades**



# Appendix A: Variable descriptions

| Variable | Description |
|---|---|
| **Client characteristics** | |
| Male (d) | Dummy variable that equals one for male clients and zero for female clients |
| Age (years) | Client's age (in years) |
| University degree (d) | Dummy variable that equals one for clients who hold a university degree, and zero otherwise |
| Employed (d) | Dummy variable that equals one for employed clients, and zero otherwise |
| Self-employed (d) | Dummy variable that equals one for self-employed clients, and zero otherwise |
| Wage (CHF) | Client's annual wage (in Swiss Francs). This variable is derived from monthly wage payments observed on the checking account |
| $\Delta$% wage | Monthly percentage change in the wage of the client. This variable is winsorized at the 1% level and the 99% level |
| Bonus (d) | Dummy variable that equals one in months in which the wage of the client increases by at least 90% compared to the previous month followed by a decrease of at least 40% in the next month, and zero otherwise |
| Length of bank relationship (years) | Number of years since the client opened the account (in years) |
| **Bank wealth characteristics** | |
| Bank wealth (CHF) | Total wealth the client holds at our bank (in Swiss Francs). This position is not netted against mortgages and loans |
| Log(bank wealth) | $Ln(bank\ wealth + 1)$ |
| $\Delta$% bank wealth | Monthly percentage change in the total wealth the client holds at our bank. This variable is winsorized at the 1% level and the 99% level |
| Retirement account (CHF) | Amount of money the client holds in the retirement account (in Swiss Francs) |
| Has retirement account (d) | Dummy variable that equals one if the client has a retirement account, and zero otherwise |
| Opens retirement account (d) | Dummy variable that equals one in the month in which the client opens a retirement account, and zero otherwise. We only consider clients who did not have a retirement account in the 12 months before the account opening and who keep the retirement account for at least 12 months |
| Has increased amount within past 6 months (d) | Dummy variable that equals one if the client has increased the amount of money held in the retirement account within the past six months, and zero otherwise |
| % net flows into retirement account | Monthly net flows into the retirement account as percentage of the amount of money the client held in the retirement account at the beginning of the month. This variable is winsorized at the 1% level and the 99% level |
| Net flows into retirement account (CHF) | Monthly net flows into the retirement account of the client (in Swiss Francs) |
| Increases amount in retirement account (d) | Dummy variable that equals one if the client increases the amount of money held in the retirement account in a certain year, and zero otherwise |
| Increases amount in month of contact (d) | Dummy variable that equals one if the client increases the amount of money held in the retirement account in a month with at least one advisor-initiated retirement-related contact, and zero otherwise |

| | |
|---|---|
| Retirement funds (CHF) | Amount of money the client invests in retirement funds (in Swiss Francs) |
| Checking account (CHF) | Amount of money the client holds in the checking account (in Swiss Francs) |
| Has checking account (d) | Dummy variable that equals one if the client has a checking account, and zero otherwise |
| Δ% checking account | Monthly change in the amount of money the client holds in the checking account as percentage of the total wealth the client held at our bank at the beginning of the month. This variable is winsorized at the 1% level and the 99% level |
| Overdraws checking account (d) | Dummy variable that equals one if the client overdraws the checking account in a certain year, and zero otherwise |
| Savings account (CHF) | Amount of money the client holds in the normal savings account (in Swiss Francs) |
| Has savings account (d) | Dummy variable that equals one if the client has a savings account, and zero otherwise |
| Δ% savings account | Monthly change in the amount of money the client holds in the savings account as percentage of the total wealth the client held at our bank at the beginning of the month. This variable is winsorized at the 1% level and the 99% level |
| Equity investments (CHF) | Amount of money the client invests in individual stocks and equity mutual funds (in Swiss Francs) |
| Starts investing in equity (d) | Dummy variable that equals one in the month in which the client starts investing in individual stocks or equity mutual funds, and zero otherwise. We only consider clients who did not have any equity investments in the 12 months before they start investing in equity and who keep the equity investments for at least 12 months |
| % net flows into equity | Monthly net flows into individual stocks and equity mutual funds as percentage of the amount of money the client invested in individual stocks and equity mutual funds at the beginning of the month. This variable is winsorized at the 1% level and the 99% level |
| Other investments (CHF) | Amount of money the client invests in other securities, such as other funds, bonds, structured products, and derivatives (in Swiss Francs) |
| Has securities account (d) | Dummy variable that equals one if the client has a securities account, and zero otherwise |
| Has mortgage (d) | Dummy variable that equals one if the client has a mortgage, and zero otherwise |
| Has loan (d) | Dummy variable that equals one if the client has a loan, and zero otherwise |
| **Contact characteristics** | |
| # contacts p.a. | Number of contacts between the client and the advisor per year |
| Retirement-related contact (d)<br>Contact (d) | Dummy variable that equals one in months with at least one advisor-initiated retirement-related contact between the client and the advisor, and zero otherwise |
| # retirement-related contacts p.a. | Number of advisor-initiated retirement-related contacts between the client and the advisor per year |
| At least one contact within past 36 months (d) | Dummy variable that equals one if there was at least one advisor-initiated retirement-related contact within the past 36 months, and zero otherwise |
| Advisor contacts fellow clients (d) | Dummy variable that equals one in months in which the advisor contacts fellow clients that were contacted in the same month as the client within the past 36 months, and zero otherwise |

| | |
|---|---|
| **Fund characteristics** | |
| Retirement fund (d) | Dummy variable that equals one for retirement funds, and zero otherwise |
| Monthly return (%) | Average monthly raw return of the share class over the next 24 months following a purchase. Raw returns are net of expenses but before loads. This variable is winsorized at the 1% level and the 99% level |
| Sharpe ratio | $\frac{Average\ monthly\ raw\ return\ in\ excess\ of\ the\ risk-free\ rate\ over\ the\ next\ 24\ months}{Standard\ deviation\ of\ monthly\ raw\ returns\ over\ the\ next\ 24\ months} \times \sqrt{12}$ This variable is winsorized at the 1% level and the 99% level |
| Monthly alpha (%) | Average monthly alpha of the share class over the next 24 months following a purchase. Alphas are calculated using a three-factor model. The three-factor model includes a Swiss stock maket factor, a European stock market factor, and a European bond market factor. We use stock market factors from AQR. The Markit iBoxx EUR Overall Index serves as the bond market factor. Alphas are net of expenses but before loads. This variable is winsorized at the 1% level and the 99% level |
| **Bank profit characteristics** | |
| Profit (CHF) | Monthly profit the bank generates with each client (in Swiss Francs). This variable is winsorized at the 1% level and the 99% level |

# Appendix B: Additional analyses

### Table A1: Marginal income tax rates in Switzerland in 2020

This table presents marginal income tax rates at different levels of gross income for the principle towns of the 26 cantons of Switzerland in 2020. We assume the tax payer to be a single 35-year old protestant with no children. Numbers are retrieved from the online tax calculator of the Swiss Federal Tax Administration (2023).

| | | Marginal income tax rate at different levels of income | | | | |
|---|---|---|---|---|---|---|
| Canton | Town | 50,000 | 80,000 | 100,000 | 150,000 | 200,000 |
| Aargau | Aarau | 20.6% | 23.0% | 27.8% | 31.2% | 34.5% |
| Appenzell Ausserrhoden | Herisau | 21.6% | 23.6% | 28.8% | 31.7% | 33.9% |
| Appenzell Innerrhoden | Appenzell | 16.2% | 15.8% | 21.7% | 24.0% | 25.4% |
| Basel-City | Basel | 26.0% | 26.5% | 30.1% | 32.3% | 34.5% |
| Basel-Country | Liestal | 25.4% | 29.1% | 34.3% | 38.2% | 40.8% |
| Berne | Berne | 24.1% | 26.9% | 30.5% | 36.4% | 40.0% |
| Fribourg | Fribourg | 24.3% | 28.6% | 29.1% | 38.8% | 42.9% |
| Geneva | Geneva | 28.9% | 31.9% | 36.4% | 39.7% | 42.7% |
| Glarus | Glarus | 19.0% | 21.7% | 25.4% | 28.9% | 32.9% |
| Grisons | Chur | 21.9% | 24.5% | 28.0% | 31.5% | 33.6% |
| Jura | Delémont | 23.2% | 28.1% | 31.6% | 37.1% | 39.3% |
| Lucerne | Lucerne | 21.3% | 21.5% | 25.2% | 28.2% | 31.4% |
| Neuchâtel | Neuchâtel | 29.9% | 29.7% | 35.2% | 39.8% | 43.3% |
| Nidwalden | Stans | 18.3% | 17.5% | 21.5% | 24.1% | 25.7% |
| Obwalden | Sarnen | 17.9% | 16.8% | 20.3% | 22.5% | 24.9% |
| Schaffhausen | Schaffhausen | 19.5% | 24.1% | 29.9% | 32.0% | 36.2% |
| Schwyz | Schwyz | 15.4% | 18.2% | 22.0% | 24.2% | 26.3% |
| Solothurn | Solothurn | 24.2% | 25.0% | 29.8% | 35.0% | 37.2% |
| St. Gallen | St. Gallen | 25.3% | 29.0% | 32.5% | 35.3% | 37.5% |
| Thurgau | Frauenfeld | 22.0% | 22.4% | 27.4% | 29.6% | 33.3% |
| Ticino | Bellinzona | 22.8% | 25.7% | 29.0% | 34.0% | 36.2% |
| Uri | Altdorf | 17.7% | 17.5% | 21.0% | 23.9% | 26.0% |
| Valais | Sion | 19.9% | 26.4% | 32.6% | 41.6% | 38.3% |
| Vaud | Lausanne | 34.6% | 26.5% | 32.3% | 39.1% | 42.6% |
| Zug | Zug | 9.2% | 10.8% | 23.1% | 23.2% | 22.6% |
| Zurich | Zurich | 16.4% | 21.4% | 27.2% | 31.7% | 36.2% |
| Average | | 21.8% | 23.5% | 28.2% | 32.1% | 34.5% |

**Table A2: One-off tax rates on retirement accounts in Switzerland in 2020**

This table presents one-off tax rates on retirement accounts at different levels of accumulated retirement savings for the the principle towns of the 26 cantons of Switzerland in 2020. We assume the tax payer to be a single 65-year old protestant male with no children. Numbers are retrieved from the online tax calculator of the Swiss Federal Tax Administration (2023).

| | | One-off tax rate at different levels of accumulated retirement savings | | | |
|---|---|---|---|---|---|
| Canton | Town | 50,000 | 100,000 | 150,000 | 200,000 |
| Aargau | Aarau | 3.5% | 5.3% | 6.4% | 7.1% |
| Appenzell Ausserrhoden | Herisau | 8.1% | 8.5% | 8.9% | 9.3% |
| Appenzell Innerrhoden | Appenzell | 2.6% | 3.6% | 4.3% | 4.7% |
| Basel-City | Basel | 3.7% | 5.3% | 6.8% | 7.7% |
| Basel-Country | Liestal | 3.6% | 4.0% | 4.4% | 4.8% |
| Berne | Berne | 3.7% | 5.0% | 5.8% | 6.4% |
| Fribourg | Fribourg | 4.3% | 5.9% | 7.3% | 8.5% |
| Geneva | Geneva | 3.2% | 5.0% | 6.0% | 6.7% |
| Glarus | Glarus | 5.2% | 5.6% | 6.0% | 6.4% |
| Grisons | Chur | 4.2% | 4.6% | 5.1% | 5.4% |
| Jura | Delémont | 5.7% | 6.5% | 7.7% | 8.5% |
| Lucerne | Lucerne | 4.4% | 5.8% | 6.6% | 7.3% |
| Neuchâtel | Neuchâtel | 5.2% | 6.2% | 7.3% | 8.1% |
| Nidwalden | Stans | 4.5% | 5.9% | 6.9% | 7.3% |
| Obwalden | Sarnen | 5.7% | 6.1% | 6.5% | 6.9% |
| Schaffhausen | Schaffhausen | 2.5% | 4.0% | 4.8% | 5.5% |
| Schwyz | Schwyz | 1.5% | 2.8% | 4.2% | 5.5% |
| Solothurn | Solothurn | 3.8% | 5.3% | 6.4% | 7.0% |
| St. Gallen | St. Gallen | 6.4% | 6.8% | 7.2% | 7.6% |
| Thurgau | Frauenfeld | 6.8% | 7.2% | 7.7% | 8.0% |
| Ticino | Bellinzona | 4.0% | 4.4% | 4.8% | 5.2% |
| Uri | Altdorf | 4.5% | 4.9% | 5.3% | 5.6% |
| Valais | Sion | 4.4% | 4.8% | 5.2% | 5.7% |
| Vaud | Lausanne | 5.6% | 7.5% | 8.9% | 10.0% |
| Zug | Zug | 1.9% | 3.6% | 4.5% | 4.8% |
| Zurich | Zurich | 4.8% | 5.2% | 5.6% | 5.9% |
| Average | | 4.4% | 5.4% | 6.2% | 6.8% |

**Table A3: Financial advice and retirement accounts – Robustness tests**

This table presents the results from OLS regressions with year-month and client fixed effects. The dependent variable is either the monthly net flows into the retirement account as percentage of the total wealth the client held at our bank at the beginning of the month (Column 1), the monthly net flows into the retirement account (Column 2), the inverse hyperbolic sine of the monthly net flows into the retirement account (Column 3), the monthly net flows into retirement savings as percentage of the amount of money the client held in the retirement account at the beginning of the month (Column 4), or the monthly net flows into retirement funds as percentage of the amount of money the client held in the retirement account at the beginning of the month (Column 5). We restrict the sample to clients with a retirement account. The variable *Retirement-related contact (d)* is a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact between the client and the advisor, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

| | % net flows into retirement account$_t$ (scaled by bank wealth$_{t-1}$) | Net flows into retirement account (CHF)$_t$ | Log(net flows into retirement account$_t$) | % net flows into retirement savings$_t$ | % net flows into retirement funds$_t$ |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Retirement-related contact (d)$_t$ | 0.012*** | 790.829*** | 0.745*** | 0.017*** | 0.024*** |
| | (24.06) | (24.50) | (21.70) | (10.75) | (19.71) |
| Log(bank wealth)$_{t-1}$ | -0.007*** | -23.739*** | 0.002 | -0.016*** | -0.001*** |
| | (-33.43) | (-6.36) | (0.14) | (-29.51) | (-4.40) |
| $\Delta$% bank wealth$_{t-1}$ | 0.002*** | -21.535 | -0.049** | 0.010*** | 0.002*** |
| | (4.90) | (-1.52) | (-2.56) | (8.83) | (4.52) |
| Year-month fixed effects | Yes | Yes | Yes | Yes | Yes |
| Client fixed effects | Yes | Yes | Yes | Yes | Yes |
| Adj. $R^2$ | 0.121 | 0.098 | 0.501 | 0.075 | 0.025 |
| N | 1,042,942 | 1,042,958 | 1,042,958 | 1,042,958 | 1,042,958 |

## Table A4: Financial advice and retirement accounts – Evaluation of propensity score matching

The table presents univariate comparisons of client and bank wealth characteristics in months with at least one advisor-initiated retirement-related contact and months without advisor-initiated retirement-related contacts before and after propensity score matching. In Panel A (Panel B), we restrict the sample to clients without (with) a retirement account. Appendix A provides detailed descriptions of all variables used throughout the study. Means of the subgroups are tested for equality using a standard t-test. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

**Panel A: Clients without a retirement account**

| | Retirement-related contact | No retirement-related contact | Difference | t-value | N |
|---|---|---|---|---|---|
| **Male (d)** | | | | | |
| Before propensity score matching | 0.587 | 0.566 | 0.021** | 2.40 | 949,183 |
| After propensity score matching | 0.587 | 0.580 | 0.007 | 0.55 | 6,632 |
| **Age**$_t$ | | | | | |
| Before propensity score matching | 44.408 | 46.759 | -2.351*** | -11.59 | 949,183 |
| After propensity score matching | 44.408 | 44.506 | -0.098 | -0.32 | 6,632 |
| **Log(bank wealth)**$_{t-1}$ | | | | | |
| Before propensity score matching | 11.100 | 10.679 | 0.420*** | 13.29 | 949,183 |
| After propensity score matching | 11.100 | 11.110 | -0.010 | -0.26 | 6,632 |
| **Δ% bank wealth**$_{t-1}$ | | | | | |
| Before propensity score matching | 0.065 | 0.051 | 0.013** | 1.99 | 949,183 |
| After propensity score matching | 0.065 | 0.071 | -0.007 | -0.71 | 6,632 |

**Panel B: Clients with a retirement account**

| | Retirement-related contact | No retirement-related contact | Difference | t-value | N |
|---|---|---|---|---|---|
| **Male (d)** | | | | | |
| Before propensity score matching | 0.600 | 0.593 | 0.007* | 1.95 | 1,042,958 |
| After propensity score matching | 0.600 | 0.602 | -0.002 | -0.41 | 37,354 |
| **Age**$_t$ | | | | | |
| Before propensity score matching | 48.963 | 47.886 | 1.077*** | 14.93 | 1,042,958 |
| After propensity score matching | 48.963 | 49.069 | -0.106 | -1.07 | 37,354 |
| **Log(bank wealth)**$_{t-1}$ | | | | | |
| Before propensity score matching | 11.521 | 11.452 | 0.068*** | 9.75 | 1,042,958 |
| After propensity score matching | 11.521 | 11.504 | 0.017 | 1.61 | 37,354 |
| **Δ% bank wealth**$_{t-1}$ | | | | | |
| Before propensity score matching | 0.024 | 0.018 | 0.006*** | 4.71 | 1,042,958 |
| After propensity score matching | 0.024 | 0.022 | 0.001 | 0.74 | 37,354 |

## Table A5: Financial advice and retirement accounts of clients with less than CHF 75,000 in bank wealth

This table presents the results from logit regressions with year-month and client fixed effects (Panel A) and OLS regressions with year-month and client fixed effects (Panel B). In Panel A, the dependent variable is a dummy variable that equals one in the month in which the client opens a retirement account, and zero otherwise. In Panel B, the dependent variable is the monthly net flows into the retirement account as percentage of the amount of money the client held in the retirement account at the beginning of the month. We focus on clients whose bank wealth never exceeds CHF 75,000 during our investigation period. In Panel A (Panel B), we restrict the sample to clients without (with) a retirement account. The variable *Retirement-related contact (d)* is a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact between the client and the advisor, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. In Columns 1 to 3 of Panel A, we report marginal effects. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

**Panel A: Probability to open a retirement account**

| | Opens retirement account $(d)_t$ | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Retirement-related contact $(d)_t$ | 0.065*** | 0.038*** | 0.023*** | 2.153*** |
| | (8.85) | (7.95) | (6.80) | (9.49) |
| Male (d) | | -0.000 | -0.000 | |
| | | (-1.29) | (-1.28) | |
| $Age_t$ | | -0.000*** | -0.000*** | |
| | | (-5.89) | (-5.16) | |
| $Log(bank\ wealth)_{t-1}$ | | 0.000*** | 0.000*** | 0.416*** |
| | | (18.43) | (15.64) | (5.01) |
| $\Delta\%\ bank\ wealth_{t-1}$ | | -0.000* | -0.000** | -0.012 |
| | | (-1.87) | (-2.09) | (-1.64) |
| Year-month fixed effects | No | No | Yes | Yes |
| Client fixed effects | No | No | No | Yes |
| Pseudo $R^2$ | 0.030 | 0.054 | 0.109 | 0.401 |
| N | 688,943 | 688,943 | 688,943 | 53,123 |

**Panel B: Net flows into retirement accounts**

| | % net flows into retirement $account_t$ | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Retirement-related contact $(d)_t$ | 0.060*** | 0.059*** | 0.034*** | 0.039*** |
| | (9.81) | (9.78) | (4.13) | (4.77) |
| Male (d) | | 0.001 | 0.001 | |
| | | (1.00) | (0.97) | |
| $Age_t$ | | -0.001*** | -0.001*** | |
| | | (-11.44) | (-11.07) | |
| $Log(bank\ wealth)_{t-1}$ | | -0.013*** | -0.013*** | -0.032*** |
| | | (-10.46) | (-10.47) | (-16.04) |
| $\Delta\%\ bank\ wealth_{t-1}$ | | 0.003*** | 0.003*** | 0.004*** |
| | | (4.41) | (4.00) | (5.01) |
| Year-month fixed effects | No | No | Yes | Yes |
| Client fixed effects | No | No | No | Yes |
| Adj. $R^2$ | 0.003 | 0.021 | 0.049 | 0.132 |
| N | 128,118 | 128,118 | 128,118 | 128,118 |

## Table A6: Wage payments and retirement accounts

This table presents the results from OLS regressions with year-month and client fixed effects. The dependent variable is the monthly net flows into the retirement account as percentage of the amount of money the client held in the retirement account at the beginning of the month. The variable $\Delta\%$ *wage* is the monthly percentage change in the wage of the client. The variable *Bonus (d)* is a dummy variable that equals one in months in which the wage of the client increases by at least 90% compared to the previous month followed by a decrease of at least 40% in the next month, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

| | % net flows into retirement account$_t$ | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| $\Delta\%$ wage$_t$ | 0.001*** | | 0.000 |
| | (4.40) | | (1.33) |
| Bonus (d)$_t$ | | 0.005*** | 0.004*** |
| | | (5.02) | (3.41) |
| Log(bank wealth)$_{t-1}$ | -0.020*** | -0.020*** | -0.020*** |
| | (-21.97) | (-22.00) | (-21.98) |
| $\Delta\%$ bank wealth$_{t-1}$ | 0.015*** | 0.015*** | 0.015*** |
| | (9.79) | (9.67) | (9.73) |
| Year-month fixed effects | Yes | Yes | Yes |
| Client fixed effects | Yes | Yes | Yes |
| Adj. $R^2$ | 0.076 | 0.076 | 0.076 |
| N | 526,150 | 526,150 | 526,150 |

## Table A7: Financial advice and structured product investments

This table presents the results from logit regressions with year-month and client fixed effects (Panel A) and OLS regressions with year-month and client fixed effects (Panel B). In Panel A, the dependent variable is a dummy variable that equals one in the month in which the client starts investing in structured products, and zero otherwise. In Panel B, the dependent variable is the monthly net flows into structured products as percentage of the amount of money the client invested in structured products at the beginning of the month. In Panel A (Panel B), we restrict the sample to clients without (with) structured products. The variable *Retirement-related contact (d)* is a dummy variable that equals one in months with at least one advisor-initiated retirement-related contact between the client and the advisor, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. In Panel A, we report marginal effects. Standard errors are clustered at the client level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level.

**Panel A: Probability to start investing in structured products**

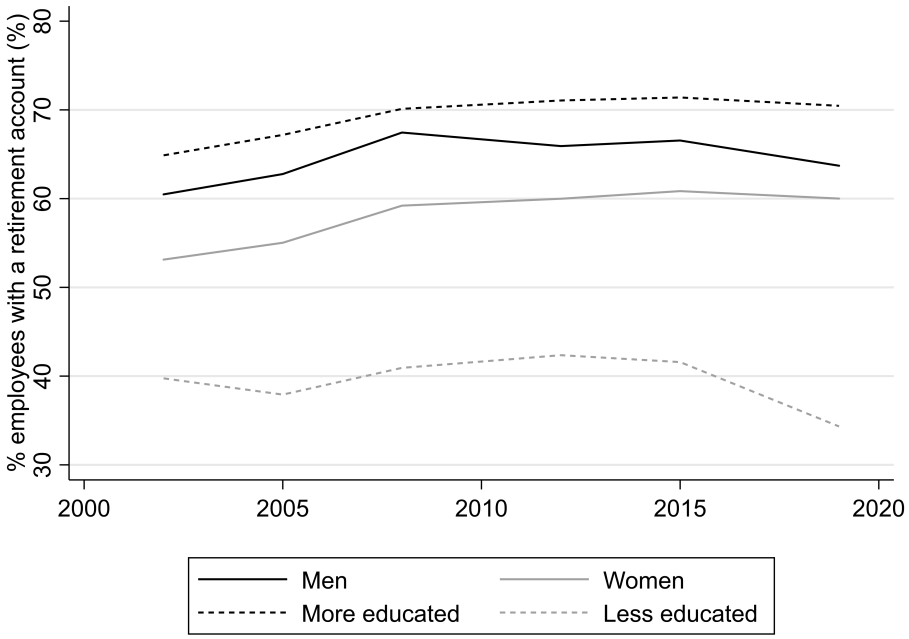
| | Starts investing in structured products $(d)_t$ |
|---|---|
| | (1) |
| Retirement-related contact $(d)_t$ | 0.000 |
| | (1.39) |
| Male (d) | -0.000 |
| | (-0.34) |
| $Age_t$ | -0.000 |
| | (-1.14) |
| $Log(bank\ wealth)_{t-1}$ | 0.000*** |
| | (6.40) |
| $\Delta\%$ $bank\ wealth_{t-1}$ | 0.000 |
| | (1.31) |
| Year-month fixed effects | Yes |
| Pseudo $R^2$ | 0.128 |
| N | 1,939,393 |

**Panel B: Net flows into structured products**

| | % net flows into structured $products_t$ |
|---|---|
| | (1) |
| Retirement-related contact $(d)_t$ | -0.004 |
| | (-0.60) |
| $Log(bank\ wealth)_{t-1}$ | 0.010*** |
| | (6.88) |
| $\Delta\%$ $bank\ wealth_{t-1}$ | 0.030*** |
| | (2.68) |
| Year-month fixed effects | Yes |
| Client fixed effects | Yes |
| Adj. $R^2$ | 0.017 |
| N | 52,873 |

**Figure A1: Fraction of employees with a retirement account in Switzerland**

This figure shows the fraction of employees with a retirement account in Switzerland. We classify individuals with a middle school degree as less educated and individuals with a university degree as more educated. The data are from the Swiss Federal Statistical Office (2022a).



## Figure A2: Fraction of clients with a retirement account

This figure shows the fraction of clients with a retirement account. We classify unskilled and semi-skilled individuals as less educated and individuals with a university degree as more educated. Individuals with bank wealth of more than CHF 80,000 are classified as high-wealth individuals and individuals with bank wealth equal to or less than CHF 80,000 are classified as low-wealth individuals.