Financial Advice and Bank Profits*

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December 22, 2015

Abstract

We use a unique dataset from a large retail bank containing internal managerial accounting data on revenues and costs per client to analyze how banks and their financial advisors generate profits with customers. We find that advised transactions are associated with higher bank profits than independently executed trades of the same client. Structured products and bank-own mutual funds are most profitable for the bank and profits increase with trade size. Consistently, we show that advisors recommend exactly those transactions. We find no evidence that recommended transactions are particularly beneficial for clients, suggesting that advisors put their own interests first.

JEL Classification: D14, G11, G21

Keywords: financial advice, bank profits, conflicts of interest, structured products, bank-own mutual funds

*We would like to thank an anonymous bank for providing the data. We are grateful to Marc Arnold, Martin Brown, Claire Célérier, Jay Choi, Anthony Cookson, Christian Ehm, Thomas Etheber, Andre Guettler, Samuli Knüpfer, Peter Limbach, Veronika Pool, Alessandro Previtero, Jean-Charles Rochet, Petra Vokatá, Ingo Walter, Youchang Wu, conference participants at the 1st Research in Behavioral Finance Conference in Rotterdam, the 11th European Winter Finance Summit (Skinance) in Schladming, the 8th Swiss Winter Conference on Financial Intermediation in Lenzerheide, the 18th annual conference of the Swiss Society for Financial Market Research (SGF) in Zurich, the 3rd European Retail Investment Conference (ERIC) in Stuttgart, the 10th annual conference of the Financial Intermediation Research Society (FIRS) in Reykjavik, the 6th Helsinki Finance Summit, the 22th annual meeting of the German Finance Association (DGF) in Leipzig, the 26th Annual Conference on Financial Economics and Accounting (CFEA) in New Brunswick, and seminar participants at the Karlsruhe Institute of Technology, the University of Luxembourg, and the University of Mannheim for helpful comments. We also thank Patrick Etter from SIX Swiss Exchange for generously providing his dataset on structured products. Part of this research was undertaken while Schaub was a visiting researcher at the UCLA Anderson School of Management and Schmid was a visiting researcher at NYU Stern School of Business. Financial support from the Swiss National Science Foundation (SNF) is gratefully acknowledged.

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1 Introduction

A large fraction of households relies on financial advice when planning or reviewing their finances.[1] While advisors are expected to help these households to make suitable investment decisions, advisors are also expected to generate profits for their employers. This conflict of interest tends to be amplified by compensation contracts: Advisors are typically not paid directly by customers for the advice they provide but only indirectly through commissions and fees they generate by selling products to clients.[2] These indirect payments may tilt advisors' recommendations towards transactions which are associated with higher commissions and fees earned by the bank rather than to trades that are most suitable for the client.

While the literature on financial advice discusses such conflicts (e.g., Stoughton et al., 2011; Inderst and Ottaviani, 2012), empirical research so far focuses mainly on the suitability of financial advice for clients and not on the impact of financial advice on bank profits. In this paper, we use a unique dataset containing internal managerial accounting data from a large Swiss retail bank with a commission-based remuneration model to shed light on the relation between the investment recommendations of advisors and the profits a bank generates with its clients.[3] Specifically, we first examine whether advised trades generally have a positive impact on the profits the bank generates with its clients. Second, we analyze which trade characteristics and holdings drive a bank's profits earned from individual clients. Third, we can directly investigate whether advisors induce their clients to trade in a way which is expected to maximize bank profits. Finally, we analyze whether transactions recommended by advisors are also beneficial for clients, which could resolve the conflict of interest between clients and advisors.

Our dataset provides information on about 20,000 clients, their over 400 advisors, the financial holdings of these clients, and almost 250,000 trades executed by these clients between

[1] For instance, in the U.S., about 19% of individuals rely on their bank advisor and about 29% on other financial advisors. In Switzerland, which is covered by our study, 38% of individuals make use of financial advice provided by bank employees and 20% talk to other professional financial advisors (BlackRock, 2013).

[2] In a survey among purchasers of retail financial services in Europe, only 7% of respondents say they have made a direct payment in return for financial advice (Chater et al., 2010).

[3] Advisors at our bank earn a fixed salary as well as a bonus that depends on the overall performance of the bank, the performance of the branch, and their own performance. The performance is measured by means of different key figures such as new money acquired or the fees and commissions generated with clients.

January 2002 and June 2005. Most importantly, the database also contains quarterly managerial accounting data on revenues, costs, and profits generated from each individual client. The customers in our sample can conduct their financial transactions independently, they can make use of optional financial advice free of charge, or they can fully delegate account management to the bank for a fee. The dataset also includes information on all contacts between clients and advisors. This feature of our data enables us to distinguish trades that directly follow optional financial advice and transactions carried out independently. Moreover, we can observe when a client decides to completely delegate account management to the bank. Thus, in a within-person analysis using client fixed effects, we are able to compare bank profits related to advised and independent trades of the same investor and we can investigate the change in bank profits when a client decides to switch from a self-managed to a managed account, and vice versa. Thereby, we can also make a big step towards establishing causality and solving the endogeneity problems typically faced by studies on the impact of financial advice.

Consistent with the hypothesis that advisors act in the interest of the bank, we find that transactions executed based on optional financial advice are associated with significantly higher bank profits than independently executed trades of the same client. Executing a transaction on advice rather than independently increases average quarterly bank profits generated with a client by about 60%.

We find structured products and bank-own mutual funds to generate the highest transaction- and holding-related profits for the bank. This is partly driven by kickbacks financial advisors receive from issuers of structured products and from the department that manages the bank's own funds. Moreover, we document that profits increase with trade size, as commissions and fees are proportional to the size of transactions while there is only limited evidence that transaction-related expenses for the bank increase to a similar extent with trade size.

Next, we document that an important reason for the higher profitability of advised trades is the higher probability that they are trades in structured products and in bank-own mutual funds. In addition, we find advised trades to be significantly larger than independently executed transactions, which also results in higher profits generated by the bank.

Obviously, financial advice might not even be subject to conflicts of interest if recommended trades also deliver after-cost profits for clients. However, our evidence shows that such a win-win situation does not exist, at least not for structured products. We document that advised transactions in structured products neither outperform structured product trades executed independently nor do they perform better than common benchmarks.[4] There is also not much evidence that trades in structured products serve investors' hedging needs. This suggests that advisors put the interests of their employers before the interests of their clients.

Focusing on the subgroup of clients who fully delegate account management, we document that the bank's profit with a customer increases significantly once that client decides to delegate account management. Moreover, after the switch to a managed account the likelihood of transactions in structured products and bank-own mutual funds that the advisors execute on behalf of their clients increases significantly.

Our study contributes to several strands of research. First, we contribute to the literature on the determinants of bank profitability. There are some studies that empirically examine determinants of the profitability of the whole banking sector (e.g., Flannery, 1981; Albertazzi and Gambacorta, 2009) as well as of individual banks (e.g., Gorton and Rosen, 1995; Demirgüç-Kunt and Huizinga, 2001). We extend this literature by analyzing drivers of bank profitability on the customer level and the impact of financial advice in this context. To the best of our knowledge, ours is the first study that can analyze internal management accounting data on client-level revenues, expenses, and eventually profitability in the banking industry.

Second, our study relates to the literature on financial advice. Inderst and Ottaviani (2012) show theoretically that if clients naïvely believe that they receive unbiased financial advice (despite the fact that advisors are indirectly compensated for advice through fees and commissions they generate), financial advisors can exploit these naïve clients and increase profitability by selling them products with high fees and commissions. In a related study,

[4]We focus on structured products here because they are among the most profitable products for the bank and are most pushed by advisors. We do not have sufficient data to explicitly analyze the performance of bank-own mutual funds. Regarding stock trades, Hoechle et al. (2015) find in the same dataset that advice does not have informational value.

Stoughton et al. (2011) document that if investors are unsophisticated and advisors are paid indirectly, kickbacks support aggressive marketing of funds by advisors. In another theoretical study, Bolton et al. (2007) show that in a setting with uninformed clients, conflicted financial advisors, and profit margins which differ across products, advice can be biased, even if there is competition among financial institutions. In a recent paper, Gennaioli et al. (2015) show theoretically that advisors, who are compensated through the fees and commissions they generate with individual investors, can charge higher fees and commissions the higher the level of trust of individual investors in these advisors is. Moreover, a number of empirical studies investigate the value of financial advice to individual investors and usually find no effect or even a negative effect on performance (e.g., Hackethal et al., 2012; Chalmers and Reuter, 2015; Hoechle et al., 2015). In this paper, we use the same dataset as in Hoechle et al. (2015). However, that paper takes the client's perspective and investigates the stock-picking skills of financial advisors and their effect on behavioral biases. In contrast, in this study, we take the bank's point of view and are the first to show empirically that financial advisors tend to sell those products to their clients that generate the highest profits for the financial institution.[5]

Finally, we add to the literature on structured products. In an empirical study, Henderson and Pearson (2011) investigate the overpricing of a popular type of structured products in the U.S. and estimate it to amount to about 8%.[6] Moreover, they show that the expected return of these structured products is negative. Despite these apparent drawbacks, structured products enjoy great popularity among private investors.[7] Our study contributes to the literature on structured products by first showing that structured products generate substantial profits not

[5]Bergstresser et al. (2009) investigate mutual funds distributed in the U.S. and show that mutual funds sold through brokerage firms charge higher fees than funds sold directly to individual investors. Christoffersen et al. (2013) also analyze U.S. mutual funds and find that higher payments from product providers to brokers lead to higher inflows. Mullainathan et al. (2012) perform an audit study in which they send trained auditors to financial advisors to examine what kind of products financial advisors recommend to retail investors. They document that financial advisors promote actively managed funds that have higher fees even if the client started with a well-diversified, low-fee portfolio.

[6]Bergstresser (2008) analyzes the performance of structured products in an international sample and also documents that structured products underperform common benchmarks. Moreover, Burth et al. (2001) report an issue premium for structured products sold in Switzerland (which is covered by our study).

[7]In June 2005, at the end of our investigation period, the market for structured products in Switzerland amounted to CHF 172 billion (equivalent to roughly USD 134 billion), of which 46.3% were held by retail investors.

only for the issuer but also for the distributor. Moreover, because of the high profitability of these products, financial advisors strongly promote them to retail investors, providing a potential explanation for why these products are so popular among many retail investors.

Our results stress the importance of the ongoing debate on commissions and fees paid in the financial services industry. The recent financial crisis has motivated several countries to consider new regulations better protecting private investors' interests. In the U.S., based on the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act, the SEC is currently considering imposing a uniform standard of care for all types of financial advisors.[8] However, there are no attempts so far to ban kickbacks, which we show to affect advisors' recommendations. Moreover, in 2014, the European Union published a revised version of its Markets in Financial Instruments Directive (MiFID II) that states that independent financial advisors must transfer all commissions and fees paid by third parties to their clients.[9] However, these new rules only apply to financial advisors declaring themselves to be independent, leaving the business model of non-independent advisors largely unchanged. In addition, the ban on payments of product providers to financial advisors does not necessarily affect bank-own products and commissions customers pay directly to the bank for transactions in any product, both of which in our analysis have a substantial influence on profitability and eventually advisors' recommendations. Moreover, career concerns are likely to provide indirect incentives to increase revenues with clients, as often those advisors get promoted that contribute most to the bank's performance.[10] Thus, regulatory steps taken so far might not be sufficient to align interests of financial advisors and clients.

The remainder of our paper is structured as follows. In the next section, we introduce the data. In Section 3, we first investigate whether financial advice impacts the bank's

[8]See, e.g., "SEC head backs fiduciary standards for brokers, advisers", The Wall Street Journal, March 17, 2015.

[9]See, e.g., "MiFID II: Regulatory 'typhoon' on course for Europe", Financial Times, October 26, 2014. The U.K. and the Netherlands had already banned payments from product providers to advisors in 2013 and 2014, respectively. Shortly after the European Union, Switzerland, which is covered by our study, issued a draft of a new regulation for the financial services industry that is largely consistent with MiFID II.

[10]Anecdotal evidence suggests that employees at financial institutions often feel pressure to recommend certain products even in the absence of explicit bonuses due to an intense sales culture at these firms (see, e.g., "Former brokers say JP Morgan favored selling bank's own funds over others", The New York Times, July 2, 2012).

profitability. We then analyze which transactions and which financial holdings are most profitable for the bank. Next, we examine whether financial advisors tend to sell those products that are expected to maximize profits. Finally, we investigate whether transactions promoted by financial advisors are also beneficial for customers. Section 4 concludes. An Appendix at the end of the text shows findings from additional analysis and robustness checks.

2 Data and variables

2.1 Data and sample selection

The dataset used in this study comes from a large Swiss retail bank, which we will simply call *the bank* henceforth.[11] Our bank offers a broad range of financial products and services to its clients such as checking accounts, savings accounts, retirement savings accounts, securities accounts, mortgages, and loans.[12] It operates a network of bank branches throughout Switzerland and several branches abroad. The data cover the time period from January 2002 to June 2005. This investigation period includes both bearish and bullish market environments. Markets declined sharply following the burst of the dot-com bubble in 2000 and recovered strongly starting in March 2003.

Customers tend to be traditional bank branch clients relying on a strong and long-lasting relationship with their bank. The clients in our sample constitute a random sample comprising 90% of the bank's private clients whose main account is denominated in Swiss Francs and whose wealth at the bank exceeds CHF 75,000 (equivalent to roughly USD 56,000 during our investigation period) at least once prior to December 2003.[13] As of December 2003, 42.0% of Swiss residents subject to taxation had a net wealth (including non-financial wealth) of more than CHF 50,000 (Swiss Federal Statistical Office, 2012). Hence, the clients in our sample are wealthier than the median private person in Switzerland. As our analysis focuses on

[11] The same dataset is used in Hoechle et al. (2015).

[12] The Swiss pension system is based on three pillars: the state pension system, occupational pension provisions, and private pension provisions. Private pension provisions typically take the form of retirement saving accounts that offer higher interest rates than normal savings accounts as well as tax benefits.

[13] The bank did not provide information on its complete customer base for confidentiality reasons.

investment recommendations of advisors, we exclude clients that do not trade at all during our investigation period. Our final sample consists of 20,411 clients, assigned to 461 advisors, executing a total of 242,421 trades between January 2002 and June 2005.

In addition to the information provided by the bank, we received data from the SIX Swiss Exchange that enable us to classify structured products into different categories. Moreover, we use daily return data on structured products from the SIX Swiss Exchange and daily return data on the underlying stocks, stock indices, and option contracts from Thomson Reuters Datastream to measure trade performance.

2.2 Optional financial advice and managed accounts

When opening an account at our bank, each client is assigned to an advisor. This advisor serves as the main contact person for the client. Clients can conduct their financial transactions independently, they can make use of optional financial advice provided by bank employees for free, or they can completely delegate account management to the bank in return for a semi-annual fee.

We have information on 60,402 contacts between clients with self-managed accounts and their advisors. In our dataset, contacts may include everything from a client receiving a rather impersonal mailing to an in-person meeting between the client and the advisor. 11,004 contacts are explicitly classified as advisory contacts, out of which 41.0% are explicitly initiated by the advisor. These advisory contacts allow us to identify trades based on optional financial advice. Clients who do not have a managed account execute a total of 154,846 trades during our sample period. Figure 1 illustrates how these trades are distributed around advisory contacts. Advisory contacts are clearly associated with an increased number of trades. In the figure, the advisory contact takes place on day t = 0 and trades also peak on this day. However, an exceptionally high number of trades also takes place on the days following the advisory contact. Therefore, we classify a trade as an *advised trade* if it is executed within the

five trading days after an advisory contact, that is, between t = 0 and t = 4.[14] 57.0% of all advisory contacts are associated with at least one trade during this period. If a client decides to trade after interacting with the advisor, the client executes 1.6 transactions on average. This results in 10,105 advised transactions in our dataset. Thus, 4.2% of all trades in our sample are classified as advised. 38.0% of these advised trades take place after a contact that is classified as advisor-initiated.

Our classification of advised trades could be misleading if clients meet with advisors but then do not follow the advice they get but rather execute trades in other securities. To address this concern, we analyze a small subset of 558 client-advisor contacts in our dataset for which the securities discussed between the client and the advisor are reported in the bank's internal system (which unfortunately is not the case for all other contacts). If these contacts result in trades within the following five trading days, in more than 90% of cases these trades involve a security discussed with the advisor.[15] Thus, it seems reasonable to assume that our definition of advised trades does capture recommendations of advisors that clients typically follow.

There are 2,161 *advised clients* in our dataset, meaning that 10.6% of all clients trade on advice at least once during our sample period. Advised clients execute 30,694 *independent trades* besides the 10,105 advised transactions. Hence, even clients that trade on advice at least once execute most of their transactions independently, highlighting the importance of analyzing the impact of optional financial advice on the trade level and not on the client level.

Rather than making use of financial advice only occasionally, clients can also completely delegate account management to the bank. The dataset provides information on whether a client has a managed account at least once during our investigation period. There are 1,244 customers with managed accounts in our sample (equivalent to about 6.1% of all clients). Unfortunately, this variable is time-invariant and we do not know when account management

[14] Chater et al. (2010) document that 68% of purchasers of retail financial products act within the first three days of receiving advice and 88% act upon advice received within the first two weeks. In our robustness tests in Table A1 in Appendix B, we rerun our main analysis only classifying trades as advised if they take place on the day of the advisory contact, that is, on t = 0. This does not alter our findings.

[15] Obviously, this effect could also be driven by clients approaching their advisors with specific trading ideas in mind. However, results are similar if we focus on the 330 contacts that are advisor-initiated. Moreover, there are typically several identical entries across different clients by the same advisor in the database, indicating that advisors contact different clients with the same trading recommendations.

is assumed by the bank. However, as we have data on the management fees which are paid semi-annually for managed accounts, we can determine when clients switch to and from managed accounts. There are 305 clients that decide to delegate account management to our bank during our investigation period from January 2002 to June 2005 and 117 clients that switch back from a bank-managed account to a self-managed account according to this definition. A large number of trades (87,575 or 36.1% of all trades) are associated with these managed accounts.

Finally, there are 17,006 *independent clients* neither relying on optional financial advice nor delegating account management in our sample. They execute a total of 114,047 independent transactions.

While 16.7% of clients in our sample either trade on optional financial advice or completely delegate account management to the bank, we observe at least one contact with the bank for 71.2% of clients.[16] Most of these contacts involve financial services other than investment recommendations. Referring to all financial services provided by banks, BlackRock (2013) reports that 38% of individuals in Switzerland rely on bank advice.

2.3 Descriptive statistics

The database provides information on quarterly revenues, expenses, and eventually profits generated with each client. This is an important feature, as focusing on revenues without taking into account costs allows only for an incomplete picture of the drivers of profitability. Moreover, we have detailed information on clients' use of financial products, including a client's checking account holdings, savings, retirement savings, individual positions in securities accounts, mortgages, loans, and transaction data. The dataset also includes various investor characteristics such as gender, age, education, employment, and place of residence. Moreover, it contains account information such as whether investors receive product information, whether they have an e-banking account, and the length of the bank relationship. Finally, the dataset also includes detailed socio-demographic information on the advisors, including gender, age, number of children, whether the advisor is part of the bank's manage-

[16] This includes contacts that are not explicitly classified as advisory contacts by the bank.

ment, and the number of clients the advisor is responsible for. All information is collected by the bank on the date of the account opening and subsequently updated when new information is provided either by clients or advisors. Appendix A provides detailed descriptions of all variables used throughout the study.

Table 1 reports descriptive statistics on the various characteristics. Profit characteristics are presented in Panel A. The bank generates average total revenues of CHF 718 (equivalent to about USD 530) per client and quarter. The revenue figure contains the securities account fee a client pays, the securities transaction income the client generates, the fee the client pays if account management is delegated to the bank, other fee and commission income, interest income, and a residual position for other revenues that can be assigned to a client. This compares with average total expenses of CHF 225 per client and quarter. Unfortunately, unlike the case for our revenue data, the expense data is not further split up into subcategories. Expenses include all costs that can be attributed to a client such as labor costs of the financial advisor or costs the client generates in another department of the bank. Overall, the average quarterly profits the bank generates with each client over our investigation period from January 2002 to June 2005 amounts to CHF 492. Clients in the most profitable decile of customers generate about 57.4% of all profits. At the lower end of the distribution there are 2,874 (or 14.1% of all) clients generating losses to the bank on average over the whole investigation period.

Securities transaction income (CHF 183), other fee and commission income (CHF 179), and interest income (CHF 184) account for 76.1% of total revenues. Securities transaction income consists mainly of fees and commissions that customers pay directly to our bank when trading securities regardless of whether the product was issued by the bank or by another financial institution as well as transaction-related kickbacks the bank receives from product providers. Other fee and commission income includes, among other things, fees for account keeping, fees for payment transactions, and fees for credit cards as well as recurring kickbacks the bank gets from product providers as long as a client holds a security in the portfolio. Interest income contains the net income from mortgages, loans, savings accounts, and retirement savings accounts calculated according to the market interest rate method. The market interest

rate method assumes that assets and liabilities are refinanced at current market conditions. Securities account fees generate CHF 83 (11.6% of total revenues) per client and quarter on average and management fees generate another CHF 41 (5.7%).[17] Clients with a securities account have to pay semi-annual account fees. Management fees for accounts managed by our bank are also paid semi-annually. In order to smooth the distributions of these variables, we spread the securities account fee and the management fee over the quarter preceding the payment and the quarter of the actual payment. Finally, other income contributes CHF 48 (6.7%) per client and quarter on average. Figure 2 presents average quarterly profits (Panel A) and average quarterly revenues by profit center (Panel B) over time between January 2002 and June 2005. Average quarterly revenues and profits per client are lowest at the trough of the dot-com crisis in the first quarter of 2003 and tend to increase thereafter.

Panel B of Table 1 reports portfolio characteristics. The average client holds CHF 307,187 (equivalent to about USD 230,000) in financial wealth at our bank. Hence, a large part of clients' financial wealth appears to be represented in our dataset and we can reasonably assume that the accounts at our bank typically are the clients' main accounts rather than 'play money' accounts.[18] Securities accounts contribute CHF 234,321 (or 76.3% of total bank wealth), savings accounts CHF 37,645 (12.3%), retirement savings accounts CHF 5,225 (1.7%), checking accounts CHF 21,553 (7.0%), and other positions CHF 8,443 (2.7%). Mortgages and loans are not netted against clients' financial wealth. The average client has an outstanding mortgage balance of CHF 31,645 and a loan balance of CHF 4,118. On average, clients execute almost one trade per quarter amounting to an average quarterly trading volume of CHF 25,785.

Panel C presents various socio-demographic variables on the clients as well as information on their accounts. 56.8% of clients in our sample are male. On average, clients are 58.9 years old as of January 2002. Education is based on the highest education a client received and measured by a count variable ranging from 1 to 7. Detailed definitions are

[17] Management fees are fees the client pays for the management of managed accounts. This should not be confused with mutual fund management fees. If our clients hold mutual funds and have to pay management fees for those, the respective expenses are directly deducted from the fund investment, as in the U.S.

[18] In December 2003, the average net wealth of a Swiss resident subject to taxation with net wealth above CHF 50,000 is CHF 529,011 (Swiss Federal Statistic Office, 2012). This also includes non-financial wealth.

provided in Appendix A. 76.2% of the clients in our sample completed a vocational education, 16.5% hold a university degree, and the remaining 7.3% are assigned to categories such as 'unskilled', 'semi-skilled', 'high-school degree', 'higher vocational education', or 'technical college'. 62.2% of clients are employed, 31.1% are retired, and 6.7% belong to other categories such as 'self-employed', 'housewives', or 'students'. The information on the clients' education and employment status is only available for 4,335 and 16,360 customers, respectively. The vast majority of clients (72.4%) lives in Switzerland. Product information is distributed to 71.9% of the clients. It typically takes the form of mass mailings, provides information about new and existing products, and is only partially personalized to client characteristics. 13.7% of the clients in our sample have an e-banking account. The average client has been a customer of the bank for 6.6 years as of January 2002.

Finally, Panel D of Table 1 reports advisor characteristics. 59.0% of advisors are male. Advisors are on average 34.5 years old as of January 2002. On average, an advisor has one child. 44.0% of advisors belong to the bank's management. Bank management is defined broadly by our bank. It is a dummy variable that is equal to one, once an advisor reaches a certain hierarchical level within the bank. Experienced and established advisors belong to the management category quite regularly. Finally, one advisor is responsible for 543 customers on average.

3 Empirical analysis

The unique structure of our dataset allows us to perform four sets of novel tests. First, we analyze whether financial advice impacts the profits the bank generates with its customers (Section 3.1). Second, we investigate how trade characteristics and holding characteristics affect bank profits (Section 3.2). Third, we analyze whether financial advisors induce trades which are, based on the analysis in Section 3.2, expected to maximize bank profits (Section 3.3). Finally, we shed light on whether transactions promoted by financial advisors are also beneficial for investors, which would resolve the issue of potential conflicts of interest (Section 3.4).

3.1 Financial advice and bank profits

To investigate potential drivers of client profitability, we run panel regressions at the client-quarter level with different measures of bank profits as dependent variables. As independent variables we include the percentage of advised trades per quarter and a dummy variable that equals one if a client delegates account management to the bank in the respective quarter, and zero otherwise. Moreover, regressions contain quarterly portfolio characteristics.[19] All portfolio characteristics are denoted in Swiss Francs and are scaled by 1,000 except for the dummy variable that equals one for quarters with at least one transaction and the number of trades.[20] We also control for (time-invariant) client and advisor characteristics. In addition, we include quarter fixed effects to control for unobserved heterogeneity which is constant across clients. As different quarterly observations on one advisor are not independent (within correlation), we use cluster-robust standard errors and treat each advisor as a cluster.

The results are presented in Table 2. As a starting point, in Column 1, the dependent variable is quarterly profits earned by the bank from the respective client. The coefficients on the percentage of advised trades and the managed account dummy variable are both positive and statistically significant, suggesting that optional-advice-driven trading and managed accounts are profitable for the bank. On average, clients execute about one trade per quarter. Thus, the coefficient estimate on the percentage of advised trades indicates that if a client executes this trade on advice rather than independently, this increases quarterly bank profits by about CHF 318 (61.8% of the average quarterly bank profit in the respective sample). Moreover, the coefficient estimate on the managed account dummy indicates that a switch from a non-managed to a managed account is associated with an increase in the bank's profit from this client of CHF 520 (101.3% of the average quarterly bank profit in the respective sample). Hence, our results document that bank profits earned with a client increase sub-

[19] As the percentage of advised trades is not defined in quarters without any transactions, we include a dummy variable that equals one for quarters with at least one trade, and zero otherwise. Results are similar if we restrict our sample to quarters with at least one transaction.

[20] Some of our variables have a skewed distribution. Thus, in Table A1 in Appendix B, we rerun our analysis winsorizing profit and portfolio characteristics at the 1% level and the 99% level. Moreover, we also replicate our analysis using the inverse hyperbolic sine of profit and portfolio characteristics. Our findings remain qualitatively unchanged. Taking the logarithm of these variables instead is not an option since observations are sometimes negative.

stantially once the client receives and follows financial advice or once the client switches to a managed account.

The coefficients on the size of the securities portfolio and the size of the savings account are both positive and statistically significant, suggesting that wealthier client generate more profits for the bank. Interestingly, retirement savings seem to generate losses for the bank during our sample period, indicating that previously agreed-upon interest rates paid on these accounts are above current market conditions during our sample period. The coefficient on the size of the checking account is negative but statistically not significant. Moreover, clients holding mortgages and loans are substantially more profitable for the bank than unlevered clients. The coefficients on the dummy variable that equals one for client-quarters with at least one trade and the trading volume are both positive and statistically significant, suggesting that securities transactions significantly increase the profits the bank generates with its clients. The coefficient on the number of trades is also positive but not statistically significant.

Turning to the impact of client characteristics, we find that gender does not influence profitability significantly. There is weak evidence that clients over 75 years of age are less profitable compared to the base case of those below 45. Foreign clients are significantly more profitable for the bank than Swiss clients. Furthermore, we document that clients who receive product information, that is, mass mailings, generate significantly lower profits. This result is probably driven by the bank sending more product information to clients who are less profitable. Whether clients have an e-banking account and the length of the bank relationship does not affect profitability.

Regarding the influence of advisor characteristics, we document that neither the coefficient on the gender dummy nor the coefficients on the age dummies are statistically significant. However, advisors with more children, advisors who are part of the bank's management, and advisors with fewer clients are associated with significantly higher bank profits.

While taking advantage of the panel structure of our data and controlling for time fixed effects is a first step towards establishing causality, there are still important endogeneity concerns we need to address: Clients relying more heavily on advice may have poor financial skills and might have spent even more on expensive financial products (and eventually may

have led to even higher profits for the bank) if they had not been advised. This problem of the unobservable counterfactual is severe in most existing studies on the impact of financial advice. Hence, in Column 2, we add client fixed effects to our panel regression to control for unobservable client characteristics which are constant over time. This allows us to isolate the within-person variation of the impact of advice on profits.[21] In the fixed effects regressions, we exclude the mostly time-invariant client and advisor characteristics. The coefficient on the percentage of advised trades now captures the difference in quarterly profits between quarters with more and less advised transactions after controlling for the average profit from the respective client. Similarly, the coefficient on the managed account dummy variable now measures the change in quarterly profits when a client switches from a self-managed account to a managed account or back from a managed account to a self-managed account.

Results in Column 2 show that the coefficient on the percentage of advised trades becomes economically slightly weaker but gains statistical significance when compared to Column 1 (with the t-statistic more than doubling to 8.30). Moreover, the coefficient on the managed account dummy variable increases substantially in size and the statistical significance remains well above the 1% significance level.

While client fixed effects should alleviate endogeneity concerns to a large extent, there is still one remaining problem even in this setting: It could be the case that clients approach their advisors only with more expensive trading ideas. Thus, in Column 3 of Table 2, we rerun the analysis only classifying trades as advised transactions if they follow an advisor-initiated contact. This allows us to focus on trades that result from the advisor's initiative rather than the client's initiative.

Results in Column 3 show that the coefficient estimate on the percentage of advised trades that follow advisor-initiated contacts is economically even stronger than the coefficient estimate on all advised trades in Column 2. Hence, advisors seem to promote financial products and trades that are particularly profitable for the bank.

One explanation for our findings is the commission-based remuneration models that in-

[21] In our robustness tests in Table A1 in Appendix B, to control for a potential endogenous matching between clients and advisors, we rerun our analysis with combined client-advisor fixed effects rather than only client fixed effects. Results remain very similar.

centivize financial advisors to induce transactions that increase bank profits. While we have no information on the specific numerical details of the individual compensation contracts of advisors at our bank, we know that 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 as well as the 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 individual clients. Moreover, in addition to direct financial incentives, career concerns are likely to provide indirect incentives for advisors to generate revenues with customers, because advisors are more likely to get promoted if they contribute more to the bank's performance.

To investigate the potential drivers of bank profits in more detail, we rerun our analysis for the various profit centers of the bank separately. In Columns 4 to 9 of Table 2, we again estimate panel regressions using our most conservative specification with client and time fixed effects from Column 2. However, now the dependent variable is the income for different profit centers and the incurred expenses of the bank, respectively: the securities account fee in Column 4, the securities transaction income in Column 5, the management fee in Column 6, other fee and commission income in Column 7, interest income in Column 8, and expenses in Column 9.

The results in Column 4 show that, as expected, securities account fees are mainly driven by the size of the securities portfolio. Interestingly, clients with managed accounts pay lower securities account fees, probably driven by the fact that the management fee already includes the account fee for these clients. In Column 5, we document that securities transaction income is most strongly influenced by whether a trade takes place in a certain quarter, the number of trades, and the trading volume. The coefficient on the percentage of advised trades is positive and significant at the 1% level. Hence, advisors seem to generate significant transaction-related profits by either selling products which are more profitable than others or by inducing customers to take larger positions (which also generate higher commission income for the bank). By definition, management fees are mainly driven by managed accounts (Column 6). The results in Column 7 show that the main drivers of other fee and commission income are the existence of a securities portfolio and a checking account. Other fee and commission income

contains, among other things, recurring kickbacks from mutual funds and fees for payment transactions. While the former is driven by mutual fund holdings in the securities portfolio, the latter is driven by the number of transactions on the checking account. Clients who rely on advice when trading and clients with managed accounts generate significantly higher other fee and commission income. Hence, advisors also seem to generate higher holding-related profits. In Column 8, we find that, as expected, interest income is driven by retirement savings, mortgages, and loans. Finally, in Column 9, larger securities portfolios, higher mortgages, whether a transaction takes place in a certain quarter, more transactions, and higher trading volumes are found to be associated with higher costs for the bank. Moreover, switching to a managed account also increases expenses for the bank significantly. However, the coefficient on the percentage of advised trades is not statistically significant. This suggests that clients trading a lot on advice do not generate higher costs than independently acting clients. It is important to note that labor costs of financial advisors (that can be assigned to individual clients) are already included in the expense figure.

We run a number of robustness tests. Results are presented in Table A1 in Appendix B. In Column 1, we rerun our analysis from Column 2 of Table 2 only classifying trades as advised if they take place on the day of the advisory contact (rather than within five trading days of an advisory contact). Results remain virtually unchanged, suggesting that alternative classifications of advised trades do not alter our findings. Second, in Column 2, we use the regression specification from Column 2 of Table 2 and replace the client fixed effects by combined client-advisor fixed effects. Thereby, we control for potential endogenous matching between clients and advisors.[22] We find our results to remain unchanged. Third, in Columns 3 and 4 of Table A1, we investigate whether the skewed distribution of some of our variables influences results. To this end, we replicate the panel regression with client and time fixed effects from Column 2 of Table 2, but winsorize profit and portfolio characteristics at the 1% level and the 99% level (Column 3) and use the inverse hyperbolic sine of profit

[22]In unreported tests, we investigate the correlation between client and advisor characteristics for the 1,720 clients who open their account during our investigation period, to check whether the bank assigns advisors to clients in a specific way. In general, the correlation coefficients are relatively low and mostly statistically insignificant, suggesting that the bank makes only limited use of specific advisor skills in dealing with different types of clients.

and portfolio characteristics (Column 4). Results remain very similar. Finally, in Columns 5 and 6 of Table A1, we rerun the analysis from Column 2 of Table 2 separately for Swiss and foreign clients, respectively. The investment decisions of Swiss and foreign clients might differ because of differences in tax regimes. Moreover, there might be differences in the fee structure for Swiss clients and foreign clients. However, we find results to be similar for the two groups.

3.2 The determinants of transaction- and holding-related bank profits

In this section, we analyze which transactions and which holdings are most profitable for our sample bank. We do not have information on the revenues and expenses generated by each individual trade. Hence, to investigate the profitability of transactions, we focus on quarters with only one trade. Moreover, we restrict our sample to self-managed accounts.[23] We use panel regression specifications very similar to those in Table 2 and focus on those profit centers which have been shown to be significantly influenced by transactions: quarterly profits, quarterly securities transaction income, and quarterly expenses. The set of explanatory variables includes dummy variables for trades in different asset classes. We include dummies for foreign bond trades, Swiss and foreign stock trades, bank-own mutual fund trades, trades in mutual funds of partner firms, other mutual fund trades, derivative transactions, and structured product trades.[24] The omitted base case in the regressions is the transactions in Swiss bonds. Moreover, we include all portfolio characteristics as control variables, except for the dummy that equals one for quarters with at least one trade and the number of trades as there is one trade per quarter in all specifications by definition. We also include the variable on the percentage of advised trades, which by construction becomes a dummy variable in this setting. The coefficients on these control variables are not reported for space reasons.

The results are presented in Table 3. In Column 1, we use profits as dependent variable. We document that quarterly bank profits from clients executing a trade in a bank-own mutual fund are on average CHF 272 higher (55.2% of average quarterly bank profits in the respective

[23] Results are similar if we also include managed accounts as there are only a few managed account quarters with only one transaction.

[24] We classify fund firms that have an explicit distribution agreement with our bank as partner firms.

sample) compared to the average quarterly profits from our base case of a trade in Swiss bonds of the same client. Moreover, trades in structured products increase average quarterly profits by CHF 134 (27.1% of average quarterly bank profits in the respective sample). In addition, trades in foreign bonds are also associated with significantly positive transaction-related profits. The results in Columns 2 and 3 show that the higher profitability of these transactions is almost entirely driven by higher securities transaction income as the type of the transaction does not cause much variation in expenses. One explanation for higher securities transaction income is transaction-related kickbacks paid by the department that manages the bank's own mutual funds as well as by structured product providers. As our bank does not issue its own structured products, higher bank profits cannot be driven directly by the issue premium of structured products documented in the literature (e.g., Burth et al., 2001; Henderson and Pearson, 2011).

In Columns 4 to 6 of Table 3, we add the actual size of the respective trade to the specifications from Columns 1 to 3 to investigate the effect of trade size on profitability. These variables are denoted in Swiss Francs and scaled by 1,000. The results show that larger trades in any asset class are associated with higher bank profits (Column 4). Similarly, in Column 5, we document that larger trades in any asset class are also associated with higher securities transaction income. Moreover, expenses are still largely unrelated to the trade size in different asset classes (Column 6). Overall, these findings show that the bank has a strong incentive to induce trades in bank-own mutual funds, structured products, and foreign bonds as well as generally trades that are larger in size.

The results in Table 3 suggest that transactions involving structured products are among the most profitable transactions from the bank's perspective. Thus, to better understand transaction-related profits of structured products, we group structured products into different categories.[25] The most frequently traded structured products are tracker certificates

[25]Overall, there are 17,373 trades in structured products in our sample. We follow the categorization of the Swiss Structured Products Association. Details on the categorization are available on the website of the Swiss Structured Products Association: http://www.svsp-verband.ch/home/produkttypen.aspx?lang=en. Since the Swiss Structured Products Association only categorizes products issued in Switzerland, we can only classify Swiss structured products. We are able to categorize 10,530 structured product transactions in 630 distinct products.

(59.4% of all trades), discount certificates (15.2%), barrier reverse convertibles (14.3%), bonus certificates (6.6%), and reverse convertibles (3.1%).

Carlin (2009) shows theoretically that financial institutions can exploit uninformed investors and increase profitability by adding complexity to financial products. Moreover, in an empirical study, Célérier and Vallée (2014) investigate retail structured products and find that complex products are associated with higher markups. To examine whether the complexity of structured products influences the profits the bank generates with clients, in Column 7 of Table 3, we add an additional dummy variable that equals one for all structured products other than tracker certificates to our regression specification from Column 1. While tracker certificates have linear payoff profiles, all other structured products have more complex non-linear payoffs. The results in Column 7 indicate that the profitability of more complex structured products and tracker certificates is similar. Thus, complexity of structured products as captured by the payoff profile does not seem to significantly influence profitability for the distributor. However, this is not necessarily inconsistent with findings from the existing literature as our bank does not issue structured products itself and therefore our results do not reflect the issue premiums but only trading commissions paid directly by the customers and transaction-related kickbacks received from product providers.

Next, we focus on holding-related profits. To separate these profits from transaction-related profits, we investigate the drivers of profitability in quarters without any transactions. As before, we focus on self-managed account quarters.[26] The regression specifications are again similar to those in Table 2. We focus on those profit centers which have been shown to be significantly influenced by securities holdings (rather than transactions) in Table 2. Thus, the dependent variables are bank profits, securities account fees, management fees, other fee and commission income, and expenses. The independent variables of interest are the holdings in all asset classes. Holdings are denoted in Swiss Francs and scaled by 1,000. All regressions also include the full set of portfolio characteristics except for the dummy variable that takes the value one in quarters with at least one trade, the number of trades, and the volume of

[26] Results are similar if we also include managed accounts as there are virtually no managed account quarters without any transactions.

trades (as we focus on quarters without any transactions). For space reasons, we only report the coefficients on the holdings in the different asset classes.

Results are shown in Table 4. The findings for bank profits are reported in Column 1. We document that holdings in foreign bonds, Swiss stocks, bank-own mutual funds, mutual funds of partner firms, other mutual funds, and derivatives are associated with higher holding-related bank profits. However, the effect is by far strongest for bank-own mutual funds and partner mutual funds. Within the category of mutual funds, holdings in bank-own mutual funds are about three times more profitable than holdings in mutual funds of partner firms. Specifically, we find that holding CHF 100,000 in bank-own mutual funds (mutual funds of partner firms) result in a quarterly profit of CHF 410 (CHF 144) for our bank (173.2% and 60.6% of average quarterly bank profits in the sample, respectively). The results in Columns 2 to 5 show the sources of these profits. Larger holdings in bank-own mutual funds and mutual funds of partner firms are associated with higher income from securities account fees and higher other fee and commission income. These two positions outweigh expenses, which are also significantly higher, the higher the holdings in bank-own mutual funds and mutual funds of partner firms. The substantial other fee and commission income the bank generates with bank-own mutual funds and mutual funds of partner firms is due to kickbacks paid by mutual funds as long as clients hold these securities in their portfolios. In summary, these findings suggest that the advisors have incentives to promote mutual funds, and within this asset class particularly bank-own mutual funds, if they are stimulated to maximize profits for the bank.

3.3 Do advisors promote trades that are expected to maximize bank profits?

In the next step, we analyze whether financial advisors indeed promote trades which are, based on the findings in the previous section, expected to maximize bank profits. If advisors recommend transactions that are most profitable for the bank, we expect advised trades to be larger than independently executed transactions and to be more likely to involve foreign bonds, bank-own mutual funds, and mutual funds of partner firms as well as structured

products. We start with a univariate comparison of trades following optional financial advice and independent trades.[27] We focus on purchases of securities. Sales differ from purchases to the extent that selling a security requires holding it in the portfolio since short sales are not allowed by our bank. Thus, focusing on purchases allows for a clearer analysis of trade motivations.

The results are presented in Table 5. Consistent with our conjecture, we find that advised purchases are on average about 50% larger than independently executed purchases. Moreover, about 2.5% of advised buys involve bank-own mutual funds while only about 0.8% of independent trades are trades in bank-own mutual funds. In addition, 18.3% (7.8%) of advised (independent) trades are trades in structured products. Advised trades are also more likely to involve foreign bonds and foreign stocks.

We corroborate these univariate findings by running panel logit regressions of a dummy variable for whether a trade is advised on trade size and dummy variables for trades in the different asset classes.[28] The omitted base case is the transactions in Swiss bonds. To account for the skewness of trade size, we use the natural logarithm of this variable. All regressions include the full set of portfolio characteristics (except for the dummy variable that equals one for quarters with at least one trade, the number of trades, and the trading volume since we focus on individual trades) and time fixed effects. To be able to estimate marginal effects, we first run regressions without client fixed effects but including client and advisor characteristics as additional controls. To better identify the effects, we then also run our analysis with client fixed effects. For space reasons, we do not report the coefficients on portfolio, client, and advisor characteristics.

Results are presented in Table 6. In the first two columns, we report marginal effects. In

[27] For this analysis, we focus again on optional financial advice and drop trades in managed accounts for the following reasons: First, the set of assets advisors can choose from in the case of managed accounts is typically restricted. Second, the trade-by-trade within-person comparison of advised and independent trades we use in this section allows us to better address the selection and endogeneity problems described above than an analysis of clients switching from and to managed accounts. However, in Table A3 in Appendix B, we also investigate the determinants of trades in managed accounts. Results are largely consistent with the findings from optional financial advice.

[28] At first, it might appear more intuitive to use trade size and the dummies for trades in different asset classes as dependent variables and the advised trade dummy as explanatory variable. However, this would imply that we would have to run 10 separate regressions while the specification with the advised trade dummy as dependent variable allows us to run just one regression, which simplifies the analysis tremendously.

Column 1, we show that consistent with the results in the previous section, advised trades are larger on average and more likely to involve foreign bonds, bank-own mutual funds, and structured products. We also document that advised trades are more frequently trades in foreign stocks even though there is not much evidence in the previous section that these trades are associated with higher profits. Advised trades are less likely to be in mutual funds that are not from the bank or its partner firms and are less likely to be in derivatives. The coefficient estimates are largest for bank-own mutual funds and structured products. Results suggest that if a trade in a bank-own mutual fund or a structured product takes place, the probability of that trade being an advised transaction is about 4.4 percentage points and 3.1 percentage points higher, respectively, compared to trades in Swiss bonds, the base category. Given the overall percentage of advised trades in this sample of 7.0%, these effects are economically meaningful.

To mitigate concerns that these findings are driven by clients contacting their advisors only in the case of certain types of trades, for example, large trades or trades in specific product categories, we re-evaluate our results based on the subset of trades that follow advisor-initiated contacts in Column 2. However, with the exception of the coefficient estimates on foreign bonds and trades in other mutual funds that turn insignificant, results remain very similar to those in Column 1. These findings indicate that advisors actively contact their clients with the intention to induce larger trades, trades in structured products, bank-own mutual funds, and foreign stocks, that is, the kinds of trades that lead to the largest profits for the bank.

In Columns 3 and 4, we rerun the analysis from Columns 1 and 2 including client fixed effects that account for all client characteristics that remain constant over time. In our most restrictive specification in Column 4, we again find highly statistically significant evidence that advisors actively promote larger trades and trades in structured products. Furthermore, the coefficient on bank-own mutual funds remains relatively large and positive, but is no longer significant at conventional levels (t-statistic of 1.51).

Trades in structured products are particularly attractive for the bank not only because they are highly profitable but also because most structured products expire after a rather short period of time. In our sample, the average lifetime of structured products is slightly more

than a year, while stocks and mutual funds usually do not have a fixed maturity and bonds typically only mature after several years. Hence, an advisor recommending a structured product knows that after some time the client will probably again trade either to sell the underlying (if the product delivered the underlying at maturity date) or to buy a new asset (when the product was settled in cash). To investigate which structured products financial advisors sell in particular, in Columns 5 and 6 of Table 6, we add an additional dummy variable for more complex structured products with non-linear payoff profiles to the regression specifications from Columns 3 and 4. The coefficient on the complex product dummy variable is positive and statistically significant while the coefficient on the structured product dummy is no longer statistically different from zero, suggesting that advisors mainly promote structured products with non-linear payoff profiles. One reason that advisors do not sell certificates with linear payoff profiles (that is, simple tracker certificates) might be that tracker certificates typically have a substantially longer time to maturity or that they do not mature at all. In our sample, the average time to maturity of tracker certificates is 2.0 years and almost 20% of tracker certificates do not expire at all, while the average time to maturity of the more complex products is only 1.3 years with no cases of products that do not expire at all. Thus, tracker certificates appear less attractive from the advisors' point of view compared to other structured products because they do not ensure future transactions to the same extent. Overall, we find clear evidence that advisors are successful in inducing clients to trade those products that maximize bank profits.

Burth et al. (2001), Henderson and Pearson (2011), and many others find that structured products are issued at a premium. Our bank does not issue its own structured products. However, product providers may induce distributors to promote structured products at issuance as the kickbacks distributors receive from product providers are at least partly funded through these issue premiums. Thus, we also investigate whether advised trades in structured products are more likely to take place at issuance, that is, at the issue price. To this end, we add an additional dummy variable to the specifications in Columns 3 and 4 of Table 6 that equals one for structured product transactions that take place before the first listing date of the products. These transactions must take place at the issue price set by the product

provider and therefore investors executing these trades are forced to pay the issue premium. The results are reported in Table A2 in Appendix B. The positive and significant coefficients on both the structured product dummy and the dummy variable for structured products that are purchased before the first listing date suggest that transactions in structured products are even more likely to be advised if they take place before the first listing date and advised clients are thus more likely to pay the issue premium.

In Table A3 in Appendix B, we also investigate the determinants of purchases of clients that completely delegate account management at least once to the bank during our investigation period. To do so, we rerun the analysis from Table 6 and replace the dependent variable with a dummy variable that equals one for trades in managed accounts and zero for trades in self-managed accounts. Consistent with our findings from optional financial advice, we document that managed account purchases are more likely to be trades in foreign bonds, bank-own mutual funds, and structured products. Trades in managed accounts are also more likely to be trades in mutual funds of partner firms, which we find to generate substantial holding-related profits. Finally, we find that once a client delegates account management to the bank, trades tend to become smaller, indicating that bank employees are no longer concerned about the size of transactions once they can regularly turnover the portfolio at their own will.

In their theoretical model, Inderst and Ottaviani (2012) show that financial advisors can exploit naïve clients, who believe that they receive unbiased financial advice, and increase bank profitability by selling them products with high fees and commissions. Moreover, Gennaioli et al. (2015) show theoretically that advisors, who are compensated through the fees and commissions they generate with individual investors, can charge higher fees and commissions the higher the level of trust they enjoy with their clients is. To investigate differences between naïve and sophisticated clients and between more and less trusting clients, we use the level of education as a proxy for naïveté and the length of the client-advisor relationship as a proxy for trust. Specifically, we create a dummy variable that equals one for the 79.2% of clients in the four lowest education categories, and zero otherwise. Moreover, we construct a trust dummy variable which equals one for clients whose client-advisor relationship is of

above median length in a specific quarter, and zero otherwise. We then run the same logit regressions with client and time fixed effects as in Columns 3 and 4 of Table 6 and interact all explanatory variables with the dummies for naïveté and trust. Results are reported in Table 7. In Column 1, we find the coefficient on the interaction term between the structured product dummy and the high education dummy to be positive and borderline significant (t-statistic of 1.70), indicating a higher propensity to follow advice and trade in structured products by poorly educated individuals. However, the effect disappears when focusing on trades that follow advisor-initiated contacts (Column 2). The results in Column 3 of Table 7 show that the coefficients on the bank-own fund dummy and the structured product dummy are both insignificant, while the coefficients on both the interaction term between the bank-own fund dummy and the trust dummy and the interaction term between the structured product dummy and the trust dummy are positive and significant. Hence, the higher propensity to follow advice and trade in bank-own mutual funds and structured products documented in Table 6 is caused by more trusting clients, a finding which is consistent with the model in Gennaioli et al. (2015). Results become weaker when focusing on advised trades that follow advisor-initiated contacts in Column 4. Consistently with these findings, when interacting all explanatory variables in Column 2 of Table 2 with either the dummy for naïve or the dummy for more trusting clients, we find the coefficient on the interaction term between the percentage of advised trades and the dummy for naïve (more trusting) clients to be positive (results not reported). The coefficient estimate indicates that quarterly bank profits related to advised trades are on average CHF 117 (CHF 31) higher for naïve (more trusting) clients as compared to sophisticated (less trusting) clients. However, while economically sizable, these findings are statistically insignificant. Overall, we find results which are, albeit statistically weak, generally consistent with the model predictions of Inderst and Ottaviani (2012) and Gennaioli et al (2015).

3.4 Is advice beneficial for clients?

So far, our results show that advisors promote trades that eventually maximize bank profits. These findings suggest that advisors put their own interests and their employer's interests

first rather than their clients' interests. However, there might exist a win-win situation in the sense that advisors promote bank-profit maximizing trades, but that these trades are also beneficial for clients. This would resolve the issue of potential conflicts of interest. To analyze this possibility, we now investigate whether the transactions promoted by financial advisors are beneficial for investors or whether they hurt investors' performance. As shown in the previous section, advisors induce clients to trade structured products and to hold the bank's own mutual funds in their portfolios. If structured products or bank-own mutual funds recommended by bank advisors generate substantially positive abnormal returns this might be a win-win situation. We focus on structured products rather than bank-own mutual funds as the number of transactions in bank-own mutual funds is much smaller than the number of trades in structured products.[29] This is mainly due to a substantially smaller number of bank-own mutual funds as compared to structured products available to our clients.

We first compare the trade performance of advised and independent purchases in structured products. In this sample, about 99% of purchases of structured products have an equity underlying and in 89% of these cases, the underlying is a single stock. Thus, we restrict our analysis to these transactions in structured products with single stock underlyings. We compute raw returns, market-adjusted returns, and reference-equity-adjusted returns of structured product transactions.[30] Daily market-adjusted returns are determined as the difference between daily returns of structured products and daily returns of the SMI (Swiss Market Index). Daily reference-equity-adjusted returns are determined as the difference between daily returns of structured products and daily returns of underlyings.[31] The cumulative raw returns, market-adjusted returns, and reference-equity-adjusted returns of a transaction

[29] As reported in Table 5, only 0.9% of purchases in self-managed accounts are transactions in bank-own mutual funds while 8.5% of purchases involve structured products. Comparing the performance of bank-own mutual funds with funds from the same Morningstar category and the same region of sales delivers no hints of significant performance differences based on raw returns and based on Carhart (1997) alphas, respectively.

[30] Our performance analysis accounts for coupon payments of the structured products. In Switzerland, reported prices of structured products can be clean (excluding accrued interest) or dirty (including accrued interest). As we do not dispose of the term sheets of the structured products, we do not know whether prices are clean or dirty and therefore assume all prices to be clean and add back accrued interest. Thereby, we tend to overestimate the performance of structured products.

[31] We do not have sufficient information on the structured products in our dataset to calculate the elasticity of structured product prices with respect to the prices of underlyings as done in existing studies (e.g., Henderson and Pearson, 2011).

are then calculated by summing up daily (abnormal) returns over the following 1-year period after a trade.

Overall, trades in structured products in our sample on average deliver a 1-year raw return of 4.6%. This return is statistically significant at the 1% level. Moreover, the average 1-year market-adjusted return of these trades amounts to -4.9% and structured product trades underperform their underlying stocks by about 5.5% p.a. Both effects are again statistically significant at the 1% level. They confirm the general underperformance of structured products documented in the literature before (e.g., Bergstresser, 2008; Henderson and Pearson, 2011). However, it could still be the case that advisors are able to identify specific products that overcompensate for the generally bad performance of structured products. Thus, to compare the performance of advised and independent trades we again apply our within-person setting and run regressions of the individual trade performance on the advised (advisor-initiated) trade dummy and include client fixed effects.

The results of this within-person analysis are reported in Panel A of Table 8. In Columns 1 and 2, the dependent variable is the 1-year raw return of a trade. In Column 1, there is no difference in trade performance between advised and independent transactions, suggesting that advisors do not help to identify particularly well-performing products. Additionally, in Column 2, we document that structured product trades that follow advisor-initiated contacts perform even worse than trades that follow the client's initiative. In Columns 3 and 4, we replace the 1-year raw returns by the 1-year market-adjusted return of a trade. In these specifications, there is no statistically significant difference between the performance of advised and independent transactions. Finally, in Columns 5 and 6, the 1-year reference-equity-adjusted return of a trade serves as the dependent variable. As in the case for raw returns, in Column 5, we find no evidence of better performance of advised trades in structured products. In Column 6, we find some evidence that advised trades after advisory contacts that follow the client's initiative perform slightly better than completely independent trades. However, the effect is statistically only weak (t-statistic of 1.71). Furthermore, given that we find that the structured product trades in our sample on average underperform the market and their underlying stocks significantly, these findings still suggest that a direct investment in

the benchmark or underlying stock would have been the better choice anyhow. More importantly, we again document that structured product trades that follow advisor-initiated contacts perform significantly worse than trades that follow client-initiated contacts.

One potential shortfall of our multivariate regression approach is that it does not take into account the problem of cross-sectional dependence in returns (e.g., Barber et al., 1999; Odean, 1999; Seasholes and Zhu, 2010). Moreover, when calculating market-adjusted returns and reference-equity-adjusted returns, we simply assume the beta of structured products to be one. In addition, so far, we weight each trade equally, irrespective of its size. To account for these shortcomings, we next construct value-weighted calendar-time portfolios. The main disadvantage of the calendar-time portfolio approach is that we can no longer investigate the impact of advice on trade performance in a within-person setting. We construct a value-weighted calendar-time portfolio including all advised purchases in structured products and a value-weighted portfolio including all independent purchases in structured products. As we focus on purchases only and do not take into account actual sales, we assume a 1-year holding period for all purchases. We then compute daily excess returns over the risk-free rate for each portfolio. We estimate daily abnormal returns of the portfolios using a three-factor model. We include the excess return of a value-weighted portfolio formed on underlying stocks of structured products as an equity risk factor. This portfolio is constructed in the same way as the corresponding portfolio containing the structured products. In addition, we include the excess return on a call option factor and the excess return on a put option factor in our model to account for the non-linear payoff profiles of some structured products. The two option factors are constructed as in Agarwal and Naik (2004) using at-the-money European call and put options on the SMI (Swiss Market Index).

Results are shown in Panel B of Table 8. We find negative alphas for both portfolios. In Column 1, the alpha of the advised trade portfolio amounts to -0.009% per day or -2.3% p.a. and in Column 2, the alpha of the independent trade portfolio is -0.015% per day or -3.7% p.a. However, alphas are not statistically significant. Moreover, the alpha of the difference portfolio (not reported) is also not significantly different from zero. Thus, there is no evidence

that advised trades outperform benchmarks or that they perform better than independently executed transactions in structured products.

Another reason that advisors may promote trades in structured products (apart from the higher profitability) could be that structured products serve investors' hedging needs. However, over 80% of trades in structured products with non-linear payoff profiles take place in products with payoff profiles similar to those of covered calls. It is unlikely that our investors hold a substantial amount of naked purchased put options for which these products seem like a reasonable hedge. In our sample, only 5.4% of clients holding structured products also hold some sort of derivatives, which are mainly options and warrants. Finally, structured products in our sample also do not appear to provide tax advantages, are not particularly liquid, and also do not seem to help investors to avoid transaction costs. In summary, we find no evidence that the products heavily promoted by financial advisors are likely to be particularly beneficial for the average individual investor. As a consequence, all our evidence points to financial advisors' aiming at maximizing bank profits and thereby putting the interests of their employer before the interests of their clients.

4 Conclusion

In this paper, we provide insights into the question of how financial advisors that potentially face conflicts of interest generate profits with individual investors. We find that transactions executed based on optional financial advice are generally associated with higher bank profits than independently executed transactions of the same client. Our results also show that trades in structured products and bank-own mutual funds generate the highest transaction- and holding-related profits for the bank. Moreover, bank profits tend to increase with trade size, as commissions and fees are proportional to the size of transactions while we find at best limited evidence that transaction-related expenses increase with trade size. Consistently, we show advised trades to be significantly more likely to be trades in structured products and bank-own mutual funds compared to independently executed trades of the same client. Moreover, advised trades are significantly larger than independently executed transactions. We also

show that our findings are not consistent with a win-win situation for clients and advisors, at least not in the case of structured products. We document that trades in structured products neither perform better than common benchmarks nor do they outperform independently executed transactions. These findings show that financial advisors tend to put their own interests and their employers' interests first despite their fiduciary duty to put their clients' interests first.

The unique structure of our dataset allows us to run all our analyses in a within-person setting using client fixed effects. Thereby, we can alleviate the endogeneity concerns typically faced by studies on financial advice.

To the best of our knowledge, our paper is the first to document empirically that advisors induce transactions which are associated with above average profits to the financial institution. Thus, our results are of particular importance in light of the ongoing debate on commissions and fees paid in the financial services industry. As discussed in the introduction, regulatory steps taken so far might not be sufficient to address conflicts of interest of financial advisors.

While we think that our dataset has many advantages, the main limitation of our study is that all information is from one bank only. However, there are no obvious reasons to expect the bank to be different from other financial institutions in other countries in any fundamental way and we consequently think that the bank, its customers, and its advisors are representative: First, according to a recent survey by BlackRock (2013), individual investors' reliance on advice fluctuates roughly between 20% and 40% across a broad range of industrialized countries (Belgium, Canada, France, Germany, Italy, Netherlands, Switzerland, U.K., U.S.). Hence, financial advice is of similar importance across developed countries. Second, even though commission-based remuneration models have come under scrutiny more recently, according to a survey among purchasers of retail financial services in Europe, still less than 10% of clients pay directly for financial advice they receive (Chater et al, 2010). Similar numbers apply for North America.[32] Moreover, even if financial advisors do not have direct financial incentives, career concerns are likely to provide indirect incentives to increase revenues with clients. Therefore, incentives of financial advisors are expected to be similar across different

[32]See, e.g., "Canada's trouble with investment advisers", The Globe and Mail, November 23, 2013.

financial institutions. Finally, to analyze whether our clients and their trading behavior deviates from the trading behavior of individual investors in other samples, in unreported tests we replicate a number of studies on individual investors' behavior that use data from a large U.S. brokerage house, including Barber and Odean (2000, 2001, and 2002), Ivkovic et al. (2008), and Seasholes and Zhu (2010). We find that their results also hold in our dataset. Thus, there is no reason to expect investors in our dataset to behave differently from investors in other samples.

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Tables

Table 1: Descriptive statistics

This table presents descriptive statistics on profit characteristics (Panel A), portfolio characteristics (Panel B), client characteristics (Panel C), and advisor characteristics (Panel D). For time-varying variables, beginning-of-period values (*age*, *length of relationship*) or averages over the sample period from January 2002 to June 2005 are reported (all profit and portfolio characteristics). Appendix A provides detailed descriptions of all variables used throughout the study.

	Mean	10%	Median	90%	St.Dev.	N
Panel A: Profit characteristics						
Avg. profit (CHF)	492.34	-18.79	180.43	1,161.36	1,259.13	20,411
Avg. revenues (CHF)	717.73	83.09	330.86	1,587.00	1,437.46	20,411
Avg. expenses (CHF)	225.39	80.79	148.07	451.14	248.62	20,411
Avg. sec. account fee (CHF)	83.00	3.71	35.50	193.14	167.62	20,411
Avg. sec. transaction income (CHF)	183.30	0.00	38.71	416.54	587.17	20,411
Avg. mgmt. fee (CHF)	40.58	0.00	0.00	0.00	305.38	20,411
Avg. other fee/com. income (CHF)	178.74	7.64	95.75	410.71	331.27	20,411
Avg. interest income (CHF)	184.23	3.71	41.29	414.21	649.74	20,411
Panel B: Portfolio characteristics						
Avg. bank wealth (CHF)	307,187	70,689	165,881	584,769	702,225	20,411
Avg. securities account (CHF)	234,321	15,664	111,403	496,614	586,646	20,411
Avg. savings account (CHF)	37,645	0	11,439	100,873	79,025	20,411
Avg. retirment savings (CHF)	5,225	0	0	13,932	18,422	20,411
Avg. checking account (CHF)	21,553	0	6,750	50,553	93,817	20,411
Avg. mortgage (CHF)	31,645	0	0	40,000	201,989	20,411
Avg. loan (CHF)	4,118	0	0	0	54,539	20,411
Avg. # trades	0.91	0.07	0.21	2.07	2.16	20,411
Avg. trading volume (CHF)	25,785	171	5,457	56,793	107,875	20,411
Panel C: Client characteristics						
Client male (d)	0.568	0.000	1.000	1.000	0.495	20,411
Client age (years)	58.88	37.00	60.00	79.00	15.60	20,406
Education (1-7)	3.74	3.00	3.00	7.00	1.54	4,335
Employment, employed (d)	0.622	0.000	1.000	1.000	0.485	16,360
Employment, retired (d)	0.321	0.000	0.000	1.000	0.467	16,360
Swiss (d)	0.724	0.000	1.000	1.000	0.447	20,411
Product information (d)	0.719	0.000	1.000	1.000	0.449	20,411
E-banking account (d)	0.137	0.000	0.000	1.000	0.344	20,411
Length of relationship (years)	6.62	2.17	7.08	8.75	2.41	20,411
Panel D: Advisor characteristics						
Advisor male (d)	0.590	0.000	1.000	1.000	0.492	461
Advisor age (years)	34.47	21.00	33.00	51.00	11.16	371
# children	0.82	0.00	0.00	2.00	1.14	461
Part of bank's management (d)	0.440	0.000	0.000	1.000	0.497	461
# clients	543	0	291	1,069	903	416

Table 2: Determinants of profits

This table presents the results from panel regressions with time fixed effects (Column 1) and panel regressions with client and time fixed effects (Columns 2 to 9). The dependent variable is either the quarterly profit (Columns 1 and 3), the quarterly securities account fee (Column 4), the quarterly securities transaction income (Column 5), the quarterly management fee (Column 6), the quarterly other fee and commission income (Column 7), the quarterly interest income (Column 8), or the quarterly expenses per client (Column 9). All portfolio characteristics are denoted in Swiss Francs and scaled by 1,000 except for *at least one trade (d)* and *# trades*. Appendix A provides detailed descriptions of all variables used throughout the study. The t-values (in parentheses) are based on the cluster-robust variant of the Huber-White (Huber, 1967; White, 1982) sandwich estimator which accounts for the dependence of observations within clusters (different client-quarter observations for one advisor). ***, **, * denote statistical significance at the 1%, 5%, 10% level.

	Profit (CHF)			Securities account fee (CHF)	Securities transaction income (CHF)	Mgmt. fee (CHF)	Other fee/com. income (CHF)	Interest income (CHF)	Expenses (CHF)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Advice characteristics									
% advised trades	317.696***	283.066***		1.727	215.701***	-10.662**	31.593**	0.096	-9.682
	(3.90)	(8.30)		(0.53)	(7.70)	(-2.25)	(2.36)	(0.01)	(-1.52)
% advisor-initiated			321.936***						
			(4.38)						
Managed account (d)	520.141***	675.823***	671.134***	-106.120***	-261.076***	979.900***	244.515***	-63.886	172.219***
	(4.93)	(4.15)	(4.11)	(-5.07)	(-2.97)	(12.98)	(4.55)	(-1.10)	(11.32)
Portfolio characteristics									
Securities account	0.907***	0.867***	0.866***	0.127***	0.106	0.238**	0.165***	0.236	0.072***
	(8.64)	(4.21)	(4.21)	(3.64)	(1.03)	(2.16)	(3.12)	(1.58)	(3.45)
Savings account	0.936***	0.850**	0.849**	-0.006	0.340**	0.041	-0.025	0.443	-0.029
	(6.40)	(2.45)	(2.45)	(-0.23)	(2.57)	(0.71)	(-0.59)	(1.51)	(-1.13)
Retirement savings	-0.681***	-2.194***	-2.199***	-0.048	0.105	-0.296**	-0.189	-1.573***	0.101
	(-3.12)	(-5.04)	(-5.06)	(-1.32)	(0.42)	(-2.32)	(-0.69)	(-5.01)	(1.52)
Checking account	-0.041	-0.563	-0.563	0.028	0.369	0.234**	0.246**	-1.660	-0.128
	(-0.09)	(-0.76)	(-0.76)	(0.44)	(0.90)	(2.23)	(2.27)	(-1.56)	(-1.31)
Mortgage	2.082***	2.211***	2.209***	0.037***	0.152**	-0.051*	-0.099	2.431***	0.248***
	(8.95)	(9.42)	(9.41)	(3.23)	(2.54)	(-1.78)	(-1.62)	(15.11)	(4.07)
Loan	3.044***	2.313**	2.313**	0.090	-0.037	-0.150	-0.113	2.656***	0.006
	(7.28)	(2.47)	(2.47)	(1.62)	(-0.14)	(-1.20)	(-1.06)	(3.54)	(0.10)
At least one trade (d)	129.778***	116.422***	124.817***	3.861***	139.883***	-17.760	9.915***	1.553	23.827***
	(3.39)	(4.94)	(5.14)	(3.22)	(7.62)	(-1.47)	(2.75)	(0.47)	(11.10)
# trades	26.284	20.274*	20.355*	0.668	45.569***	7.225	-0.283	2.881	50.096***
	(1.36)	(1.81)	(1.82)	(1.40)	(5.12)	(1.44)	(-0.08)	(1.40)	(47.98)
Trading volume	3.787***	3.278***	3.282***	0.025	2.914***	0.049	-0.016	0.136	0.079***
	(7.10)	(9.24)	(9.23)	(1.42)	(8.31)	(0.97)	(-0.10)	(1.62)	(3.25)

Client characteristics									
Client male (d)	11.666								
	(1.23)								
45 $\leq$ client age $<$ 60 (d)	8.596								
	(0.64)								
60 $\leq$ client age $<$ 75 (d)	-16.404								
	(-1.00)								
Client age $\geq$ 75 (d)	-41.814**								
	(-2.00)								
Swiss (d)	-70.578***								
	(-3.09)								
Product information (d)	-61.009***								
	(-3.11)								
E-banking account (d)	-14.385								
	(-0.81)								
Length of rel. (years)	0.623								
	(0.29)								
Advisor characteristics									
Advisor male (d)	3.711								
	(0.18)								
30 $\leq$ advisor age $<$ 45 (d)	-4.451								
	(-0.19)								
Advisor age $\geq$ 45 (d)	-5.946								
	(-0.21)								
# children	19.835*								
	(1.91)								
Part of bank's mgmt. (d)	52.424***								
	(2.91)								
# clients	-0.084***								
	(-3.35)								
Constant	86.312**	63.525	63.485	63.450***	59.209**	-33.923	-9.705	60.519***	98.160***
	(2.31)	(1.28)	(1.28)	(6.94)	(2.21)	(-1.10)	(-0.51)	(2.90)	(20.50)
Client fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.577	0.711	0.711	0.813	0.643	0.474	0.414	0.729	0.694
N	253,142	273,044	273,044	273,044	273,044	273,044	273,044	273,044	273,044

Table 3: Determinants of transaction-related profits

This table presents the results from panel regressions with client and time fixed effects. Only self-managed accounts and quarters with one trade are considered. The dependent variable is either the quarterly profit (Columns 1, 4, and 7), the quarterly securities transaction income (Columns 2 and 5), or the quarterly expenses per client (Columns 3 and 6). The omitted base category is the transactions in Swiss bonds. In Columns 4 to 6, we additionally include the actual size of transactions denoted in Swiss Francs and scaled by 1,000. All regressions include the full set of portfolio characteristics as summarized in Appendix A as controls except for the variables *bank wealth*, *at least one trade (d)*, and *# trades*. In addition, we include the variable *% advised trades* as control. Control variables are not reported for space reasons. Appendix A provides detailed descriptions of all variables used throughout the study. The t-values (in parentheses) are based on the cluster-robust variant of the Huber-White (Huber, 1967; White, 1982) sandwich estimator which accounts for the dependence of observations within clusters (different client-quarter observations for one advisor). ***, **, * denote statistical significance at the 1%, 5%, 10% level.

	Profit (CHF)	Sec. transaction income (CHF)	Expenses (CHF)	Profit (CHF)	Sec. transaction income (CHF)	Expenses (CHF)	Profit (CHF)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Foreign bond (d)	141.546***	101.610***	19.206	72.055	42.398	23.576*	141.576***
	(3.34)	(4.97)	(1.64)	(0.95)	(0.93)	(1.89)	(3.34)
Swiss stock (d)	33.643	56.743*	1.879	-0.077	-23.305	1.952	33.739
	(0.86)	(1.88)	(0.17)	(-0.00)	(-0.54)	(0.14)	(0.86)
Foreign stock (d)	52.076	85.748**	-1.648	-26.235	-34.347	-0.058	52.262
	(0.80)	(2.14)	(-0.10)	(-0.29)	(-0.78)	(-0.00)	(0.80)
Bank-own fund (d)	272.148**	247.261***	-5.954	-183.577	16.545	-5.304	272.281**
	(2.35)	(4.59)	(-0.21)	(-1.42)	(0.18)	(-0.17)	(2.35)
Partner fund (d)	-20.034	-11.334	-7.984	-1.599	-17.826	-3.407	-19.922
	(-0.31)	(-0.46)	(-0.72)	(-0.02)	(-0.40)	(-0.27)	(-0.31)
Other fund (d)	25.225	30.859	-16.789	-37.273	-83.906*	-0.106	25.245
	(0.48)	(1.24)	(-1.10)	(-0.49)	(-1.90)	(-0.01)	(0.48)
Derivative (d)	-24.106	-63.051*	16.560	-51.552	-113.434***	19.688	-23.999
	(-0.36)	(-1.77)	(1.18)	(-0.60)	(-3.11)	(1.36)	(-0.36)
Structured product (d)	133.710**	161.615***	-0.767	38.045	10.764	12.083	154.840*
	(2.33)	(4.89)	(-0.04)	(0.39)	(0.19)	(0.50)	(1.88)
Complex product (d)							-24.729
							(-0.33)
Swiss bonds				2.355	1.593*	0.171	
				(1.52)	(1.79)	(1.33)	
Foreign bonds				3.919***	3.037***	0.060	
				(4.07)	(4.94)	(0.74)	
Swiss stocks				3.462**	4.520***	0.277	
				(2.02)	(3.58)	(1.00)	
Foreign stocks				5.855	6.767***	0.210	
				(1.09)	(5.87)	(0.30)	
Bank-own funds				18.110***	9.233***	0.214	
				(7.05)	(4.17)	(0.80)	
Partner funds				1.720	1.567**	0.046	
				(1.18)	(2.06)	(1.15)	
Other funds				4.222**	5.002***	-0.335	
				(2.07)	(5.38)	(-0.92)	
Derivatives				6.433	6.551***	0.585	
				(1.50)	(4.25)	(0.50)	
Structured products				4.847*	5.532***	-0.142	
				(1.90)	(5.71)	(-0.29)	
Constant	71.984	163.169***	199.946***	85.894	204.923***	196.075***	71.989
	(0.40)	(3.02)	(8.27)	(0.42)	(4.22)	(7.66)	(0.40)
Portfolio characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Client fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.390	0.448	0.444	0.393	0.476	0.444	0.390
N	34,346	34,346	34,346	34,346	34,346	34,346	34,346

Table 4: Determinants of holding-related profits

This table presents the results from panel regressions with client and time fixed effects. Only self-managed accounts and quarters without any transactions are considered. The dependent variable is either the quarterly profit (Column 1), the quarterly securities account fee (Column 2), the quarterly management fee (Column 3), the quarterly other fee and commission income (Column 4), or the quarterly expenses per client (Column 5). All securities holdings are denoted in Swiss Francs and scaled by 1,000. All regressions include the full set of portfolio characteristics as summarized in Appendix A as controls except for the variables *bank wealth*, *at least one trade (d)*, *# trades*, and *trading volume*. Control variables are not reported for space reasons. Appendix A provides detailed descriptions of all variables used throughout the study. The t-values (in parentheses) are based on the cluster-robust variant of the Huber-White (Huber, 1967; White, 1982) sandwich estimator which accounts for the dependence of observations within clusters (different client-quarter observations for one advisor). ***, **, * denote statistical significance at the 1%, 5%, 10% level.

	Profit (CHF)	Securities account fee (CHF)	Management fee (CHF)	Other fee/com. income (CHF)	Expenses (CHF)
	(1)	(2)	(3)	(4)	(5)
Swiss bonds	-0.113	0.144***	-0.000	0.199	0.220***
	(-0.57)	(7.36)	(-0.26)	(1.59)	(6.27)
Foreign bonds	0.256**	0.272***	0.001	-0.059*	0.082***
	(2.09)	(6.00)	(0.36)	(-1.86)	(2.66)
Swiss stocks	0.288	0.034	0.000	0.030***	0.070**
	(1.26)	(1.22)	(0.08)	(4.67)	(2.54)
Foreign stocks	0.062	0.027	0.000	0.029	0.023***
	(0.70)	(0.91)	(0.70)	(0.73)	(2.87)
Bank-own funds	4.101**	0.677**	0.207	1.451***	0.513*
	(1.99)	(2.03)	(1.04)	(3.18)	(1.78)
Partner funds	1.436***	0.181***	0.005	1.424***	0.217***
	(10.84)	(12.77)	(1.58)	(17.36)	(10.92)
Other funds	0.490**	0.078	0.004	0.395***	0.078
	(2.30)	(0.86)	(0.60)	(3.64)	(1.14)
Derivatives	1.114**	0.325***	-0.002	0.640*	0.533***
	(2.10)	(2.91)	(-0.39)	(1.95)	(6.51)
Structured products	0.369	0.482***	-0.005	-0.239**	0.165*
	(0.54)	(6.05)	(-0.68)	(-2.17)	(1.87)
Constant	28.665	38.147***	-0.057	-54.662***	79.587***
	(0.92)	(12.22)	(-0.24)	(-5.36)	(18.78)
Portfolio characteristics	Yes	Yes	Yes	Yes	Yes
Client fixed effects	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.687	0.870	0.250	0.477	0.451
N	200,451	200,451	200,451	200,451	200,451

Table 5: Univariate comparisons of advised and independent trades

This table presents univariate comparisons of trade characteristics of advised and independent trades. Only purchases of clients that never delegate account management to the bank during our investigation period are considered. 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%, 10% level.

	Mean	Advised	Independent	Difference	t-value	N
Trade size (CHF)	31,774	45,130	30,808	14,321***	16.64	83,567
Swiss bond (d)	0.016	0.017	0.016	0.000	0.21	83,567
Foreign bond (d)	0.168	0.249	0.163	0.087***	16.82	83,567
Swiss stock (d)	0.243	0.148	0.250	-0.102***	-17.22	83,567
Foreign stock (d)	0.148	0.159	0.147	0.012**	2.50	83,567
Bank-own fund (d)	0.009	0.025	0.008	0.017***	12.64	83,567
Partner fund (d)	0.147	0.140	0.148	-0.008	-1.54	83,567
Other fund (d)	0.040	0.026	0.041	-0.015***	-5.48	83,567
Derivative (d)	0.067	0.015	0.071	-0.056***	-16.33	83,567
Structured product (d)	0.085	0.183	0.078	0.105***	27.40	83,567

Table 6: Determinants of advised and independent trades

This table presents the results from logit regressions with time fixed effects (Columns 1 and 2) and logit regressions with client and time fixed effects (Columns 3 to 6). Only purchases of clients that never delegate account management to the bank during our investigation period are considered. The dependent variable is either a dummy variable which equals one for advised trades (Columns 1, 3, and 5) or a dummy variable which equals one for trades that follow an advisor-initiated contact (Columns 2, 4, and 6). The omitted base category is the transactions in Swiss bonds. All regressions include the full set of portfolio characteristics as summarized in Appendix A as controls except for the variables *bank wealth*, *at least one trade (d)*, *# trades*, and *trading volume*. The specifications in Columns 1 and 2 additionally contain all client and advisor characteristics as shown in Appendix A except for *education* and *employment*. In Columns 3 to 6, client characteristics are captured by client fixed effects. Control variables are not reported for space reasons. Appendix A provides detailed descriptions of all variables used throughout the study. In Columns 1 and 2, marginal effects are reported. t-values are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, 10% level.

	Advised (d)	Advisor-initiated (d)	Advised (d)	Advisor-initiated (d)	Advised (d)	Advisor-initiated (d)
	(1)	(2)	(3)	(4)	(5)	(6)
Log(trade size)	0.009***	0.002***	0.237***	0.189***	0.235***	0.184***
	(15.87)	(8.29)	(9.26)	(4.86)	(9.18)	(4.74)
Foreign bond (d)	0.008**	0.003	-0.018	0.116	-0.017	0.120
	(2.17)	(1.42)	(-0.15)	(0.64)	(-0.14)	(0.66)
Swiss stock (d)	-0.005	-0.002	0.198	-0.067	0.195	-0.079
	(-1.57)	(-1.50)	(1.57)	(-0.36)	(1.54)	(-0.42)
Foreign stock (d)	0.011***	0.006**	0.268**	0.239	0.264**	0.222
	(2.71)	(2.49)	(2.07)	(1.25)	(2.04)	(1.16)
Bank-own fund (d)	0.044***	0.013***	0.624***	0.404	0.620***	0.392
	(4.65)	(2.73)	(3.26)	(1.51)	(3.24)	(1.46)
Partner fund (d)	0.002	-0.001	-0.165	0.008	-0.166	0.006
	(0.45)	(-0.31)	(-1.24)	(0.04)	(-1.25)	(0.03)
Other fund (d)	-0.009***	-0.003	-0.543***	-0.366	-0.547***	-0.378
	(-2.59)	(-1.38)	(-3.19)	(-1.37)	(-3.21)	(-1.42)
Derivative (d)	-0.020***	-0.005***	-0.796***	-0.803***	-0.802***	-0.823***
	(-6.75)	(-3.17)	(-4.01)	(-2.77)	(-4.04)	(-2.83)
Structured product (d)	0.031***	0.024***	0.448***	1.002***	-0.703	-0.933
	(5.76)	(5.47)	(3.45)	(5.43)	(-1.56)	(-1.48)
Complex product (d)					1.174***	1.980***
					(2.68)	(3.25)
Portfolio characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Client and advisor characteristics	Yes	Yes	No	No	No	No
Client fixed effects	No	No	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.129	0.132	0.045	0.076	0.046	0.079
N	78,619	78,619	19,585	11,083	19,585	11,083

Table 7: Cross-sectional analysis

This table presents the results from logit regressions with client and time fixed effects. Only purchases of clients that never delegate account management to the bank during our investigation period are considered. The dependent variable is either a dummy variable which equals one for advised trades (Columns 1 and 3) or a dummy variable which equals one for trades that follow an advisor-initiated contact (Columns 2 and 4). The regressions contain the natural logarithm of the trade size as well as all dummy variables for trades in different asset classes as in Columns 3 and 4 of Table 6. The omitted base category is the transactions in Swiss bonds. All regressions also include the full set of portfolio characteristics as summarized in Appendix A as controls except for the variables *bank wealth*, *at least one trade (d)*, *# trades*, and *trading volume*. The dummy variable *Naive (d)* equals one for clients in the four lowest education categories, and zero otherwise. The dummy variable *Trusting (d)* equals one for clients whose client-advisor relationship is of above median length in a specific quarter, and zero otherwise. All explanatory variables are interacted with these dummy variables. Control variables are not reported for space reasons. Appendix A provides detailed descriptions of all variables used throughout the study. In Column 1, marginal effects are reported. t-values are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, 10% level.

	Advised trade (d)	Advisor-initiated (d)	Advised trade (d)	Advisor-initiated (d)
	(1)	(2)	(3)	(4)
Log(trade size)	0.035	0.063	0.217***	0.200***
	(0.39)	(0.52)	(6.19)	(3.45)
Bank-own fund (d)	0.216	0.658	0.285	-0.176
	(0.33)	(0.78)	(1.05)	(-0.44)
Structured product (d)	-0.111	1.383**	-0.003	0.645**
	(-0.23)	(2.11)	(-0.02)	(2.42)
Log(trade size) × Naive (d)	-0.016	-0.153		
	(-0.14)	(-1.01)		
Bank-own fund (d) × Naive (d)	1.235	0.281		
	(1.52)	(0.26)		
Structured product (d) × Naive (d)	0.997*	-0.450		
	(1.70)	(-0.55)		
Log(trade size) × Trusting (d)			0.027	-0.003
			(0.55)	(-0.04)
Bank-own fund (d) × Trusting (d)			0.740*	1.094**
			(1.92)	(2.02)
Structured product (d) × Trusting (d)			0.989***	0.595
			(3.78)	(1.59)
Portfolio characteristics	Yes	Yes	Yes	Yes
Client fixed effects	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes
Pseudo R^2	0.089	0.127	0.059	0.089
N	5,059	3,143	19,585	11,083

Table 8: Performance of advised and independent structured product trades

This table presents the results from OLS regressions. Only purchases in structured products with single stock underlyings of clients that never delegate account management to the bank during our investigation period are considered. In Panel A, the dependent variable is either the 1-year raw return (Columns 1 and 2), the 1-year market-adjusted return (Columns 3 and 4), or the 1-year reference-equity-adjusted return of trades in structured products (Columns 5 and 6). Market-adjusted returns are calculated as the difference between returns of structured products and returns of the SMI (Swiss Market Index). Reference-equity-adjusted returns are calculated as the difference between returns of structured products and returns of underlying stocks. In Panel B, the dependent variable is the daily excess return over the risk-free interest rate of a value-weighted calendar-time portfolio formed on advised trades in structured products (Column 1) or the daily excess return over the risk-free interest rate of a value-weighted portfolio formed on independent trades in structured products (Column 2). Appendix A provides detailed descriptions of all variables used throughout the study. In Panel A, the t-values (in parentheses) are based on the cluster-robust variant of the Huber-White (Huber, 1967; White, 1982) sandwich estimator which accounts for the dependence of observations within clusters (different transactions in structured products with the same underlying stock). In Panel B, the t-values (in parentheses) are based on heteroskedasticity-robust White (1980) standard errors.***, **, * denote statistical significance at the 1%, 5%, 10% level.

Panel A: Determinants of the performance of structured product trades

	1-year raw return (%)		1-year market-adjusted return (%)		1-year reference-equity-adjusted return (%)	
	(1)	(2)	(3)	(4)	(5)	(6)
Advised (d)	0.126	3.641*	0.930	1.366	-0.023	2.215*
	(0.09)	(1.84)	(0.95)	(0.84)	(-0.02)	(1.71)
Advisor-initiated (d)		-5.964***		-0.740		-3.799*
		(-2.73)		(-0.37)		(-1.98)
Constant	4.597***	4.601***	-5.068***	-5.067***	-5.552***	-5.550***
	(5.78)	(5.85)	(-5.32)	(-5.33)	(-5.15)	(-5.21)
Client fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.378	0.381	0.109	0.109	0.049	0.052
N	4,249	4,249	4,249	4,249	4,249	4,249

Panel B: Performance of calendar-time portfolios formed on advised and independent structured product trades

	Daily excess portfolio return (%)	
	Portfolio of advised trades	Portfolio of independent trades
	(1)	(2)
Alpha (%)	-0.009	-0.015
	(-0.17)	(-0.30)
Reference-equity portfolio excess return	0.487***	0.624***
	(8.72)	(10.25)
ATM call option factor excess return	-0.000	-0.004*
	(-0.06)	(-1.68)
ATM put option factor excess return	0.001	0.003
	(0.31)	(0.97)
Adj. R^2	0.168	0.184
N	846	846

Figures

Figure 1: Number of trades around advisory contacts

This figure shows the number of trades around advisory contacts. The contact between the client and the advisor takes place on day t = 0. There are 154,846 trades in non-managed accounts in total between January 2002 and June 2005, of which 10,105 transactions take place within the time period from t = 0 to t = 4 after an advisory contact.

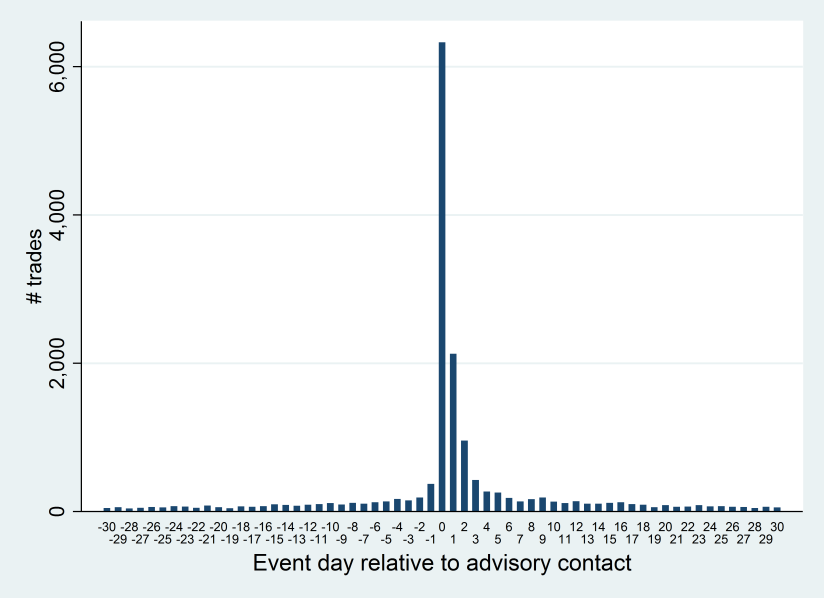
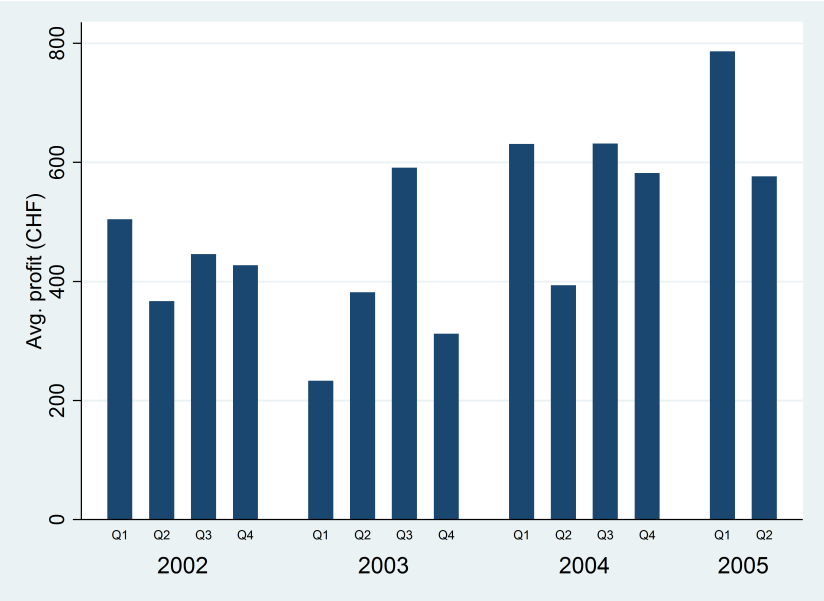


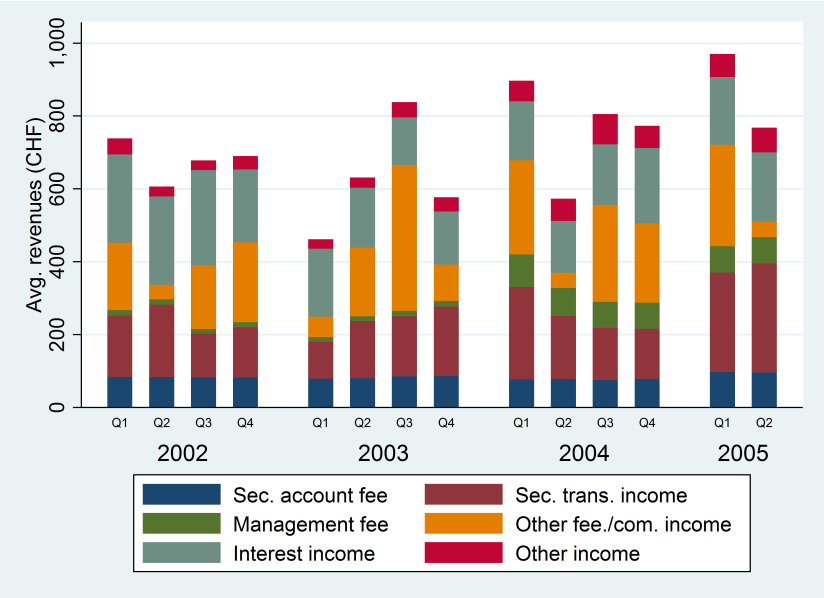
Figure 2: Average profit and revenues per client over time

These figures show the average quarterly profit per client (Panel A) and the average quarterly revenues by profit center and client (Panel B) between January 2002 and June 2005.

Panel A: Average profit per client over time



Panel B: Average revenues by profit center and client over time



Appendix

Appendix A: Variable descriptions

This table defines the variables used throughout the study. The source of the data and the frequency of occurrence of the variable is provided (in parentheses). Client and advisor characteristics are time-invariant as they are collected by the bank on the date of the account opening and overwritten if new information is provided by clients.

Variable	Description	Source (frequency)
Profit characteristics		
Profit (CHF)	Profit the bank generates with each individual client defined as revenues minus expenses (in Swiss Francs)	Bank (quarterly)
Revenues (CHF)	Contains all revenues that can be assigned to a client. This includes the securities account fee, the securities transaction income, the management fee, other fee and commission income, interest income, and other income (in Swiss Francs)	Bank (quarterly)
Expenses (CHF)	Contains all costs that can be assigned to a client. This includes labor costs of financial advisors as well as third-party charges (in Swiss Francs)	Bank (quarterly)
Securities account fee (CHF)	Contains the fees the client pays for the securities account. The client either pays a minimum fee or a percentage of the securities portfolio. The securities account fee is paid semi-annually. In order to smooth its distribution, we spread it evenly over the quarter preceding the payment and the quarter of the actual payment (in Swiss Francs)	Bank (quarterly)
Securities transaction income (CHF)	Contains all fees and commissions from securities transactions. This includes the fees and commissions directly charged by the bank and transaction-related kickbacks the bank receives from product providers (in Swiss Francs)	Bank (quarterly)
Management fee (CHF)	Contains the fees the client pays when delegating account management to the bank. The management fee is paid semi-annually. In order to smooth its distribution, we spread it evenly over the quarter preceding the payment and the quarter of the actual payment (in Swiss Francs)	Bank (quarterly)
Other fee and commission income (CHF)	Contains all fees and commissions other than the securities account fee, the securities transaction income, and the management fee. This includes recurring kickbacks the bank receives from product providers, fees for account keeping, fees for payment transactions, and fees for credit cards (in Swiss Francs)	Bank (quarterly)
Interest income (CHF)	Contains the net interest income from savings, mortgages, and loans calculated according to the market interest rate method. The market interest rate method assumes that assets and liabilities are refinanced at current market conditions (in Swiss Francs)	Bank (quarterly)

Advice characteristics		
Advised	Dummy variable that equals one for trades executed within five days of an advisory contact, that is, between t = 0 and t = 4, and zero otherwise	Bank (daily)
Advisor-initiated	Dummy variable that equals one for advised trades that follow a contact that was initiated by the advisor, and zero otherwise	Bank (daily)
% advised trades	Number of advised trades per quarter / Total number of trades per quarter	Bank (quarterly)
% advisor-initiated	Number of trades that follow advisor-initiated contacts per quarter / Total number of trades per quarter	Bank (quarterly)
Managed account	Dummy variable that equals one for clients that delegate account management to the bank in a specific quarter, and zero otherwise	Bank (quarterly)
Portfolio characteristics		
Bank wealth (CHF)	Total wealth a client holds at our bank. This position is not netted against mortgages and loans (in Swiss Francs)	Bank (quarterly)
Securities account (CHF)	Value of securities portfolio of a client (in Swiss Francs)	Bank (quarterly)
Savings account (CHF)	Amount of money a client holds in the savings account. This does not include retirement savings (in Swiss Francs)	Bank (quarterly)
Retirement savings (CHF)	Amount of money a client holds in the retirement savings account (in Swiss Francs)	Bank (quarterly)
Checking account (CHF)	Amount of money a client holds in the checking account (in Swiss Francs)	Bank (quarterly)
Mortgage (CHF)	Outstanding mortgage balance of a client (in Swiss Francs)	Bank (quarterly)
Loan (CHF)	Outstanding loan balance of a client (in Swiss Francs)	Bank (quarterly)
At least one trade	Dummy variable that equals one for client-quarters with at least one trade, and zero otherwise	Bank (quarterly)
# trades	Number of trades a client executes per quarter	Bank (quarterly)
Trading volume (CHF)	Value of all transactions executed by a client in a specific quarter (in Swiss Francs)	Bank (quarterly)
Client characteristics		
Client male	Dummy variable that equals one for male clients and zero for female clients	Bank (time-invariant)
Client age	Client's age (in years)	Bank (yearly)
Education	Client's education (1: unskilled; 2: semiskilled; 3: apprenticeship/ vocational education; 4: high school; 5: higher vocational education; 6: technical college; 7: university)	Bank (time-invariant)
Employment, employed	Dummy variable that equals one for employed clients, and zero otherwise	Bank (time-invariant)
Employment, retired	Dummy variable that equals one for retired clients, and zero otherwise	Bank (time-invariant)

Swiss	Dummy variable that equals one for clients living in Switzerland and zero for clients living abroad	Bank (time-invariant)
Product information	Dummy variable that equals one for clients receiving product information, and zero otherwise	Bank (time-invariant)
E-banking account	Dummy variable that equals one for clients with e-banking access, and zero otherwise	Bank (time-invariant)
Length of relationship	Number of years since account was opened (in years). This variable is missing for some clients in our sample that opened their account before December 1995. We assume that these customers created their account in December 1995	Bank (yearly)
Advisor characteristics		
Advisor male	Dummy variable that equals one for male advisors and zero for female advisors	Bank (time-invariant)
Advisor age	Advisor's age (in years)	Bank (time-invariant)
# children	Number of children of an advisor	Bank (time-invariant)
Part of bank's management	Dummy variable that equals one for advisors that are part of the bank's management, and zero otherwise	Bank (time-invariant)
# clients	Number of clients managed by an advisor	Bank (time-invariant)
Trade characteristics		
Trade size (CHF)	Trade size (in Swiss Francs)	Bank (daily)
Log(trade size)	Natural logarithm of trade size	Bank (daily)
Swiss bond(s)	Dummy variable that equals one for transactions in Swiss bonds, and zero otherwise (Tables 3, 5, and 6), trade size in Swiss bonds (in Swiss Francs; Columns 4 to 6 in Table 3), or portfolio holdings in Swiss bonds (in Swiss Francs; Table 4)	Bank (daily)
Foreign bond(s)	Dummy variable that equals one for transactions in foreign bonds, and zero otherwise (Tables 3, 5, and 6), trade size in foreign bonds (in Swiss Francs; Columns 4 to 6 in Table 3), or portfolio holdings in foreign bonds (in Swiss Francs; Table 4)	Bank (daily)
Swiss stock(s)	Dummy variable that equals one for transactions in Swiss stocks, and zero otherwise (Tables 3, 5, and 6), trade size in Swiss stocks (in Swiss Francs; Columns 4 to 6 in Table 3), or portfolio holdings in Swiss stocks (in Swiss Francs; Table 4)	Bank (daily)
Foreign stock(s)	Dummy variable that equals one for transactions in foreign stocks, and zero otherwise (Tables 3, 5, and 6), trade size in foreign stocks (in Swiss Francs; Columns 4 to 6 in Table 3), or portfolio holdings in foreign stocks (in Swiss Francs; Table 4)	Bank (daily)
Bank-own fund(s)	Dummy variable that equals one for transactions in bank-own mutual funds, and zero otherwise (Tables 3, 5, 6, and 7), trade size in bank-own mutual funds (in Swiss Francs; Columns 4 to 6 in Table 3), or portfolio holdings in bank-own mutual funds (in Swiss Francs; Table 4)	Bank (daily)

Partner fund(s)	Dummy variable that equals one for transactions in mutual funds of partner firms, and zero otherwise (Tables 3, 5, and 6), trade size in mutual funds of partner firms (in Swiss Francs; Columns 4 to 6 in Table 3), or portfolio holdings in mutual funds of partner firms (in Swiss Francs; Table 4). If there is an explicit distribution partnership between our bank and the mutual fund provider, we classify funds of this firm as partner mutual funds	Bank (daily)
Other fund(s)	Dummy variable that equals one for transactions in other mutual funds, and zero otherwise (Tables 3, 5, and 6), trade size in other mutual funds (in Swiss Francs; Columns 4 to 6 in Table 3), or portfolio holdings in other mutual funds (in Swiss Francs; Table 4). This includes all mutual funds that are neither bank-own funds nor funds of a partner firm	Bank (daily)
Derivative(s)	Dummy variable that equals one for transactions in derivatives, and zero otherwise (Tables 3, 5, and 6), trade size in derivatives (in Swiss Francs; Columns 4 to 6 in Table 3), or portfolio holdings in derivatives (in Swiss Francs; Table 4). The majority of derivatives are options and warrants	Bank (daily)
Structured product	Dummy variable that equals one for transactions in structured products, and zero otherwise (Tables 3, 5, 6, and 7), trade size in structured products (in Swiss Francs; Columns 4 to 6 in Table 3), or portfolio holdings in structured products (in Swiss Francs; Table 4)	Bank (daily)
Complex product(s)	Dummy variable that equals one for transactions in structured products with non-linear payoff profiles, and zero otherwise	SIX Swiss Exchange (daily)
Performance measures		
Market-adjusted return	Difference between the return of the structured product and the return of the SMI (Swiss Market Index)	SIX Swiss Exchange, Datastream (daily)
Reference-equity-adjusted return	Difference between the return of the structured product and the return of the underlying stock	SIX Swiss Exchange, Datastream (daily)
Risk-free rate	Swiss 3-month LIBOR	Datastream (daily)
Excess portfolio return	Excess return over the risk-free interest rate of a value-weighted portfolio formed on structured products	Datastream (daily)
Reference-equity portfolio excess return	Excess return over the risk-free interest rate of a value-weighted portfolio formed on underlying stocks of structured products	Datastream (daily)
ATM call (put) option factor excess return	Excess return over the risk-free interest rate of a portfolio containing at-the-money call (put) options. Following Agarwal and Naik (2004), on the first trading day of each month, we purchase an at-the-money European call (put) option on the SMI (Swiss Market Index) that expires in the next month. We then hold this option for one month and sell it on the first trading day of the following month. We select the at-the-money option as the one whose strike price is closest to the current index value	Datastream (daily)

Appendix B: Results from robustness tests

Table A1: Determinants of profits – robustness tests

This table presents the results from panel regressions with time and client (client-advisor) fixed effects. The dependent variable is the quarterly profit per client. In Column 1, only trades that take place on the day of the advisory contact are classified as advised transactions. In Column 2, the regression contains combined client-advisor fixed effects rather than client fixed effects. In Column 3, the quarterly profit and portfolio characteristics are winsorized at the 1% level and the 99% level except for the variables *at least one trade (d)* and *loan*. In Column 4, we use the inverse hyperbolic sine of quarterly profit and portfolio characteristics except for the variable *at least one trade (d)*. In Column 5, only Swiss clients are considered. In Column 6, only foreign clients are considered. All portfolio characteristics are denoted in Swiss Francs and scaled by 1,000 except for *# trades*. Appendix A provides detailed descriptions of all variables used throughout the study. The t-values (in parentheses) are based on the cluster-robust variant of the Huber-White (Huber, 1967; White, 1982) sandwich estimator which accounts for the dependence of observations within clusters (different client-quarter observations for one advisor). ***, **, * denote statistical significance at the 1%, 5%, 10% level.

	Profit (CHF)					
	Alternative definition	Client-advisor fixed effects	Winsorized	Inverse hyperbolic sine transformation	Only Swiss clients	Only foreign clients
	(1)	(2)	(3)	(4)	(5)	(6)
Advice characteristics						
% advised trades	323.391***	281.266***	180.446***	0.310***	308.620***	216.575***
	(5.85)	(11.48)	(9.14)	(2.98)	(6.09)	(5.76)
Managed account (d)	673.254***	701.311***	409.447***	0.342*	953.479***	452.652**
	(4.13)	(4.60)	(6.51)	(1.77)	(3.26)	(2.59)
Portfolio characteristics						
Securities account	0.867***	0.872***	0.823***	0.219***	0.973***	0.381
	(4.21)	(4.27)	(17.51)	(9.71)	(4.27)	(1.52)
Savings account	0.850**	0.810**	0.625***	0.161***	0.990**	0.324
	(2.45)	(2.19)	(7.96)	(11.19)	(2.48)	(1.54)
Retirement savings	-2.195***	-2.502**	-2.266***	-0.314***	-1.852***	-1.274
	(-5.03)	(-2.45)	(-7.74)	(-11.25)	(-4.13)	(-0.53)
Checking account	-0.563	-0.610	1.917***	0.227***	-0.681	1.597***
	(-0.76)	(-0.85)	(17.28)	(14.02)	(-0.97)	(3.25)
Mortgage	2.210***	2.125***	2.322***	0.656***	2.176***	6.507**
	(9.41)	(8.53)	(19.82)	(22.29)	(8.96)	(2.15)
Loan	2.312**	2.189**	0.763***	0.452***	1.899*	4.294***
	(2.47)	(2.02)	(2.93)	(10.32)	(1.66)	(6.13)
At least one trade (d)	120.723***	112.107***	48.543***	-0.705***	95.995***	131.566***
	(5.04)	(7.34)	(3.64)	(-8.28)	(3.47)	(3.29)
# trades	20.314*	20.723**	-21.847***	-0.669***	30.529**	-7.116
	(1.81)	(2.42)	(-4.86)	(-10.97)	(2.20)	(-0.46)
Trading volume	3.279***	3.250***	5.968***	0.779***	3.025***	4.087***
	(9.24)	(10.90)	(35.26)	(33.79)	(8.94)	(5.18)
Constant	63.468	85.246*	20.342	0.404***	-5.776	288.667***
	(1.28)	(1.68)	(1.42)	(3.69)	(-0.11)	(3.54)
Client fixed effects	Yes	No	Yes	Yes	Yes	Yes
Client-advisor fixed effects	No	Yes	No	No	No	No
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.711	0.713	0.781	0.482	0.703	0.745
N	273,044	273,044	273,044	273,044	199,600	73,444

Table A2: Determinants of advised and independent trades – structured product trades pre-listing

This table presents the results from logit regressions with client and time fixed effects. Only purchases of clients that never delegate account management to the bank during our investigation period are considered. The dependent variable is either a dummy variable which equals one for advised trades (Column 1) or a dummy variable which equals one for trades that follow an advisor-initiated contact (Column 2). The regressions contain the natural logarithm of the trade size as well as all dummy variables for trades in different asset classes as in Columns 3 and 4 of Table 6. The omitted base category is the transactions in Swiss bonds. All regressions also include the full set of portfolio characteristics as summarized in Appendix A as controls except for the variables *bank wealth*, *at least one trade (d)*, *# trades*, and *trading volume*. Control variables are not reported for space reasons. Appendix A provides detailed descriptions of all variables used throughout the study. In Column 1, marginal effects are reported. t-values are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, 10% level.

	Advised trade (d)	Advisor-initiated (d)
	(1)	(2)
Structured product (d)	0.378***	0.810***
	(2.86)	(4.32)
Structured product, pre-listing (d)	0.465***	1.160***
	(3.01)	(6.11)
Portfolio characteristics	Yes	Yes
Client fixed effects	Yes	Yes
Time fixed effects	Yes	Yes
Pseudo R^2	0.046	0.082
N	19,585	11,083

Table A3: Determinants of managed account trades

This table presents the results from a logit regression with time fixed effects (Column 1) and logit regressions with client and time fixed effects (Columns 2 and 3). Only purchases of clients that delegate account management to the bank at least once during our investigation period are considered. The dependent variable is a dummy variable which equals one for trades in managed accounts. The omitted base category is the transactions in Swiss bonds. All regressions include the full set of portfolio characteristics as summarized in Appendix A as controls except for the variables *bank wealth*, *at least one trade (d)*, *# trades*, and *trading volume*. The specification in Column 1 additionally contains all client and advisor characteristics as shown in Appendix A except for *education* and *employment*. In Columns 2 and 3, client characteristics are captured by client fixed effects. Control variables are not reported for space reasons. Appendix A provides detailed descriptions of all variables used throughout the study. In Column 1, marginal effects are reported. t-values are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, 10% level.

	Managed account (d)		
	(1)	(2)	(3)
Log(trade value)	-0.054***	-0.658***	-0.647***
	(-25.86)	(-14.82)	(-14.44)
Foreign bond (d)	0.120***	2.328***	2.334***
	(13.29)	(7.06)	(7.08)
Swiss stock (d)	-0.064***	-0.628*	-0.622*
	(-2.76)	(-1.77)	(-1.75)
Foreign stock (d)	0.001	0.566	0.572
	(0.04)	(1.57)	(1.59)
Bank-own fund (d)	0.112***	2.576***	2.611***
	(15.08)	(7.05)	(7.14)
Partner fund (d)	0.112***	2.212***	2.232***
	(11.75)	(6.62)	(6.67)
Other fund (d)	0.220***	2.943***	2.964***
	(14.64)	(8.93)	(8.98)
Derivative (d)	-0.531***	-3.924***	-3.869***
	(-9.85)	(-5.01)	(-4.94)
Structured product (d)	0.100***	1.781***	2.234***
	(12.06)	(5.04)	(5.27)
Complex product (d)			-0.637*
			(-1.94)
Portfolio characteristics	Yes	Yes	Yes
Client and advisor characteristics	Yes	No	No
Client fixed effects	No	Yes	Yes
Time fixed effects	Yes	Yes	Yes
Pseudo R^2	0.292	0.519	0.519
N	33,970	10,389	10,389