

# How Does a Ban on Kickbacks Affect Individual Investors?\*

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## Abstract

This study investigates how a ban on payments from product providers to financial advisors impacts individual investors' portfolio holdings and portfolio performance. To do so, we exploit a court ruling in Switzerland in 2012 that induced banks to ban kickbacks. We document a significant increase in the portfolio share of own-bank mutual funds and own-bank structured products following the ban, consistent with banks substituting income from kickbacks with income from own products. The poor performance of own-bank products negatively affects portfolio performance. Overall, our results point towards an unintended consequence of consumer protection.

*Keywords:* individual investors, financial advice, conflicts of interest, consumer financial protection, own-bank products

*JEL Classifications:* D14, G11, G21, G28, G51

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# 1 Introduction

Many individuals rely on financial advice when making financial decisions. However, prior research shows that financial advice is often biased as advisors recommend the products for which they receive the highest payments from product providers (so-called kickbacks) rather than the products that are most suitable for the clients (e.g., Bergstresser et al., 2009; Christoffersen et al., 2013; Hoechle et al., 2018; Egan, 2019). Following the financial crisis of 2007/2008, several countries banned inducements paid to financial advisors in an attempt to reduce conflicts of interest.<sup>1</sup> Nevertheless, there is only limited evidence on whether such bans indeed benefit clients. This study examines how a ban on payments from product providers to advisors affects individual investors' portfolio holdings and portfolio performance. To the best of our knowledge, this is the first paper to empirically investigate the impact of a ban on kickbacks at the investor level.

The effectiveness of a ban on payments from providers of financial products to advisors is subject to debate. On the one hand, banning inducements can reduce conflicts of interest and thereby improve the quality of financial advice (e.g., Stoughton et al., 2011; Inderst and Ottaviani, 2012). On the other hand, banning kickbacks can induce financial institutions and their advisors to offset reduced income from banned kickbacks with higher income elsewhere, which might again not be in clients' favor (e.g., Barr et al., 2009; Campbell et al., 2011; Agarwal et al., 2015). Banning kickbacks might also reduce the quality of financial advice as advisors are no longer willing to learn which products are most suitable for the specific needs of clients (e.g., Inderst and Ottaviani, 2012; Oh et al., 2017). Consequently, it is an empirical question whether a ban on inducements is an effective measure to address conflicts of interest of financial advisors.

In this study, we focus on a change in the regulatory environment in Switzerland. In

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<sup>1</sup>For instance, in Switzerland, in 2012, a court ruled that banks have to surrender kickbacks to clients, the U.K. introduced new regulations banning inducements paid to financial advisors in 2013, and the Netherlands imposed a similar ban in 2014. In 2018, the Markets in Financial Instruments Directive (MiFID II) became effective in the E.U., banning inducements paid to financial advisors declaring themselves to be independent. Outside of Europe, Australia and India reformed their financial advice markets and banned the payment of inducements to advisors in 2013. Burke and Hung (2015) provide an overview of regulatory changes in financial advice markets.

Switzerland, as in most other European countries, financial advice is usually provided by bank employees (BlackRock, 2013). In October 2012, the Swiss Federal Supreme Court ruled that banks are no longer allowed to retain kickbacks from providers of mutual funds and structured products if clients delegate portfolio management to the bank because of conflicts of interest. Following this court ruling, one bank after the other started banning kickbacks. The staggered reaction of banks allows us to compare portfolios of clients of banks that ban kickbacks to portfolios of clients of banks that did not yet impose a ban.

Our data stem from a large provider of independent financial advice in Switzerland that analyzes portfolios of bank clients who rely on financial advice. Our final sample consists of approximately 13,000 clients with more than 22,000 portfolios at 42 different banks in Switzerland between 2010 and 2020. Thus, many clients in our sample have portfolios at several banks. This feature of our data enables us to compare the portfolios of the *same* investor at the *same* point in time at different banks, some of which ban kickbacks and others not. Thus, our setting allows us to control for all observable and unobservable client characteristics as well as time trends. Thereby, we can make a big step towards establishing causality.

We start our analysis by investigating the impact of a ban on kickbacks on clients' portfolio holdings. Figure 1 visualizes our main finding. We plot clients' portfolio share of own-bank mutual funds around bans on kickbacks. Banks ban kickbacks in year  $t = 0$ . The figure shows that the average share of own-bank mutual funds remains constant in the three years prior to the ban. However, after the ban, the share of own-bank mutual funds increases substantially. Prior to the ban, own-bank mutual funds account for around 13% of portfolio holdings. Three years after the ban, the share of own-bank mutual funds in clients' portfolios has increased to 30% on average.

In a more formal analysis, we regress portfolio shares in different types of investments on a dummy variable that equals one after banks ban kickbacks, controlling for portfolio characteristics and bank characteristics, and including client fixed effects, bank fixed effects, and time fixed effects. Consistent with Figure 1, we find the fraction of own-bank mutual funds to increase significantly after banks ban kickbacks. We also document a significant

increase in the share of own-bank structured products following a ban on kickbacks. The increase in the share of own-bank products is accompanied by a significant decrease in the share of other ETFs and index funds, and other structured products.

Next, to move closer towards a causal interpretation of our findings, we investigate the dynamics in portfolio shares around bans on kickbacks. We show that there are no differential pre-trends before banks ban kickbacks. We observe a significant increase in the average portfolio share of own-bank products in the year of the ban. The effect also grows over time, with the full effect size occurring two to three years following the ban.<sup>2</sup>

Taken together, we provide strong evidence for an increase in own-bank products following a ban on kickbacks. Our findings are consistent with banks and their financial advisors promoting own-bank products to tap new sources of income, thereby compensating for the lost income from kickbacks.

We then compare own-bank products and other products. Promoting own-bank products is not necessarily harmful to clients. It could be that these products have similar or superior characteristics to other products available on the market. However, our results show that own-bank mutual funds perform significantly worse than other funds. Moreover, we provide evidence that own-bank structured products are more likely to be dominated by other structured products on the market. Thus, own-bank products seem to have inferior characteristics compared to other available products.

Next, we analyze how a ban on kickbacks affects clients' portfolio performance. The poor characteristics of own-bank mutual funds and own-bank structured products likely have an adverse effect on the portfolio performance of clients of banks that ban kickbacks. However, a ban on kickbacks might also reduce the costs of mutual funds and structured products, thereby improving the portfolio performance of individual investors. We document that portfolio alphas, on average, decrease by 40 to 70 basis points p.a. after the ban on kickbacks, suggesting that the ban hurts portfolio performance. Thus, our findings point towards an unintended

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<sup>2</sup>Recent literature highlights that staggered treatments can result in a “bad comparison” problem (e.g., Callaway and Sant’Anna, 2021; Sun and Abraham, 2021; Baker et al., 2022; Barrios, 2022). Therefore, we also analyze the dynamics in portfolio holdings using the approach proposed by Sun and Abraham (2021), which addresses the problem. However, this does not materially change our findings.

consequence of a ban on kickbacks.

We also examine whether our results differ in the cross-section. We expect more sophisticated clients who are wary of banks' and financial advisors' conflicts of interest to be less affected than naïve clients. Consistent with this conjecture, we find that the increase in the fraction of own-bank funds following a ban on kickbacks is attenuated for clients usually considered more sophisticated. This finding supports the notion that sophistication reduces adverse effects of a ban on kickbacks.

Finally, we replicate our tests at the fund level. While effects are strong at the portfolio level, it is unclear whether they are large enough to also matter at the fund level. However, we find that monthly net flows of own-bank mutual funds increase significantly following a ban on kickbacks. This suggests that a ban on kickbacks has meaningful effects not only at the portfolio level, but also at the fund level.

Our study contributes to three strands of the literature. First, our paper relates to the literature on consumer financial protection. So far, only a few papers analyze the effectiveness of limits or bans on inducements paid to financial advisors. These studies draw mixed conclusions. In theoretical work, Stoughton et al. (2011) and Inderst and Ottaviani (2012) argue that naïve clients likely benefit from a ban on inducements, but banning inducements might result in sophisticated clients being worse off. In empirical work, Anagol et al. (2017) examine the impact of a ban on front-end loads on mutual fund flows in India in 2009, but do not find any effect. Sokolinski (2021) documents that when the Israeli government forced mutual fund providers to reduce payments to financial advisors in 2013, the average expense ratio of mutual funds decreased and net fund flows increased. Cookson et al. (2021) show that recommendations of investment platforms in the U.K. are more likely to involve affiliated mutual funds after the U.K. banned kickbacks in 2013. However, investors heavily discount affiliated mutual fund recommendations, leaving mutual fund flows largely unaffected by these recommendations. We add to this literature by investigating the effect of a ban on kickbacks at the investor level rather than at the fund level. This allows us to analyze the entire product menu that is available to individual investors and their financial advisors. Moreover, one requires investor level data to determine portfolio performance. We document a significant

increase in the share of own-bank mutual funds and own-bank structured products in clients' portfolios following a ban on kickbacks, which adversely affects portfolio performance. Thus, we provide evidence of an unintended consequence of consumer protection.<sup>3</sup>

Second, our paper relates to the literature on financial advice. Several studies document a significantly negative relation between financial advice and portfolio performance, likely driven by financial advisors' conflicts of interest (e.g., Hackethal et al., 2012; Foerster et al., 2017; Hoechle et al., 2017, 2018; Chalmers and Reuter, 2020). Using data from a large Swiss bank, Hoechle et al. (2018) provide evidence that financial advisors recommend the products that are most profitable from the bank's point of view rather than the ones that are most suitable for the clients, which adversely affects clients' portfolio performance. They also show that own-bank mutual funds and structured products are among the most profitable products from the bank's perspective. We add to this literature by analyzing whether a ban on kickbacks can reduce conflicts of interest of financial advisors. We find that banning kickbacks induces banks and their financial advisors to push own-bank mutual funds and structured products even more strongly, consistent with banks substituting profits from kickbacks with profits from own-bank products. This negatively impacts clients' portfolio performance. Thus, merely banning kickbacks might not be sufficient to address advisors' conflicts of interest.

Third, our study contributes to the literature on own-bank products. Existing research shows that bank-affiliated mutual funds underperform unaffiliated funds. Various explanations for the documented underperformance have been brought forward, such as banks using affiliated funds to support their underwriting business, their lending business, as well as their own funding (e.g., Hao and Yan, 2012; Ferreira et al., 2018; Gil-Bazo et al., 2020). In a recent paper, Florentsen et al. (2021) find that when clients switch banks, they subsequently switch to affiliated funds of their new bank, indicating that bank affiliation is an important determinant of fund flows. We contribute to this strand of the literature by investigating how flows into own-bank funds change following a ban on kickbacks. We show that banks promote own

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<sup>3</sup>Our results are consistent with findings from the healthcare industry. In the healthcare industry, kickbacks are largely prohibited. Various studies highlight that there is an increasing number of vertically integrated healthcare providers and that these firms heavily engage in self-referrals of patients. There is no evidence that self-referrals improve patient outcomes (e.g., Nakamura et al., 2007; Baker et al., 2016; Cutler et al., 2020).

funds to their retail clients even more so after a change in the regulatory environment that puts pressure on profitability. Because of the poor performance of own-bank funds, clients' portfolio performance worsens following a ban on kickbacks. Hence, our findings support the notion that bank affiliation of funds is a major determinant of fund flows, especially after a ban on kickbacks.

Our results stress the importance of the ongoing debate on the benefits and costs of regulatory changes that aim at reducing conflicts of interest of financial advisors. In the recent past, several countries banned or considered banning inducements paid to financial advisors. In early 2023, the E.U. commission, for instance, announced that it is looking at a complete ban on inducements.<sup>4</sup> However, little is known about the consequences of such bans. We provide evidence of a significant increase in the portfolio shares of own-bank products following a ban on kickbacks that adversely affects clients' portfolio performance, pointing towards an unintended consequence of consumer protection that should be factored into the debate.

## 2 Institutional setting

### 2.1 The market for financial advice in Switzerland

In Switzerland, as in most other European countries, financial advice is typically provided by bank employees. Approximately 38% of individuals make use of financial advice offered by bank employees, whereas 20% consult with other financial advisors (BlackRock, 2013). Banks usually offer two types of financial advice: Bank clients can either make use of optional financial advice provided by bank employees or they can completely delegate account management to the bank. Whereas optional financial advice is often provided free of charge, banks usually charge a fee for account management. In addition, banks and their financial advisors generate income through kickbacks obtained from providers of mutual funds and structured products.

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<sup>4</sup>See, e.g., "EU financial services chief favours banning sales inducements on investment products", *Reuters*, January 6, 2023; "Germany joins battle against EU ban on financial product commission", *Reuters*, January 16, 2023; "Brussels looks at EU-wide ban on inducements for financial advisers", *Financial Times*, January 27, 2023; "Banks fear Irish president front-runner will use Brussels job to hit their profits", *Politico*, February 7, 2023.

In 2012, the overall amount of kickbacks paid in Switzerland was estimated at CHF 4.2 billion (roughly equivalent to USD 4.6 billion) (Finalix, 2014).

## 2.2 The court ruling of the Swiss Federal Supreme Court in 2012

Among Swiss banks, there existed a long-standing practice of retaining kickbacks. However, in January 2012, the Zurich High Court decided that UBS, Switzerland's biggest bank, was obligated to reimburse kickbacks received from mutual funds and structured products to a client who had completely delegated portfolio management to UBS.<sup>5</sup> The court argued that kickbacks create conflicts of interest. UBS filed an appeal with the Swiss Federal Supreme Court against this decision. However, in October 2012, the Swiss Federal Supreme Court confirmed the ruling of the Zurich High Court. The decision of the Federal Supreme Court came as a surprise to the financial industry in Switzerland. The *Financial Times* described the situation as follows:

“[...] a lost appeal that will send shock waves throughout the Swiss private wealth industry.” (“Court tells UBS it must pay back fees”, *Financial Times*, November 11, 2012)

Shortly after the ruling of the Federal Supreme Court, in November 2012, the Swiss Financial Market Supervisory Authority (FINMA), Switzerland's financial market regulator (analogous to the SEC in the U.S.), emphasized that it expects banks to respond adequately to the court ruling:

“Trailer fees received by banks for asset management services belong to the clients. This landmark decision was taken by the Federal Supreme Court on 30 October 2012. In its role as regulator, it does not fall within FINMA's remit to decide and enforce civil law claims between supervised institutions and their clients. In terms of regulation, however, FINMA does expect the banks to take adequate

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<sup>5</sup>Before the lawsuit came to the Zurich High Court, it was heard before the Zurich District Court. However, the Zurich District Court dismissed the action brought by the customer in August 2009.

precautionary measures.” (Swiss Financial Market Supervisory Authority, 2012, p. 3)

In the aftermath of the court ruling, many banks reacted to the court ruling by paying back kickbacks received in the past and by banning kickbacks going forward. Concurrently, they also announced measures to make up for the lost income. For example, UBS stated the following in its fourth-quarter 2012 report:

“Where feasible and applicable, we will switch fund and structured product holdings within our discretionary mandates into holdings that do not carry distribution fees. These changes will be implemented largely in 2013 [...]. This change [...] will mainly pertain to clients booked in Switzerland [...]. The transformation of our product offering also considers recent legislative, regulatory and legal developments, including [...] a court decision in Switzerland. [...] We expect that income will be negatively affected by these changes at least for the next few quarters as we implement pricing changes that could offset some or all of the negative impact.” (UBS, 2012, p. 22)

In the following, we investigate how measures implemented by banks after this court ruling materialized in clients’ portfolios.

### **3 Data and variables**

#### **3.1 Data and sample selection**

The dataset used in this study was provided by VZ VermögensZentrum, a leading provider of independent financial advice in Switzerland (<https://www.vermoegenszentrum.ch/en/portrait>). Among other things, VZ VermögensZentrum evaluates portfolios of bank clients. This involves analyzing whether clients’ asset allocation is in line with their risk preferences. They also shed light on portfolio diversification, the cost structure of portfolios, and portfolio performance. This service primarily targets wealthy bank clients who either rely on optional

financial advice provided by the bank or who completely delegate account management to the bank. VZ VermögensZentrum states that it aims for clients with a portfolio value of more than CHF 100,000 (roughly equivalent to USD 104,000). It charges between CHF 100 and CHF 1,000 (roughly equivalent to USD 104 and USD 1,040, respectively) for this service, depending on the scope of the analysis. Individuals who want their financial situation to be evaluated are asked to submit all their account statements. Our dataset is based on the submitted account statements. This feature of our data allows for a comprehensive view of clients' overall financial situation. VZ VermögensZentrum introduced this service in 2009. Therefore, our dataset covers the period from 2010 to 2020. Since bank clients make use of this service at a certain point in time, we observe them only at one point in time, but not over time.

Figure 2 shows the number of portfolios in our initial sample by year. This number is relatively stable over time. It increases from 2,680 in 2010 to 3,289 in 2012, drops to 2,515 in 2016, and again increases to 2,961 in 2019. The number of portfolios is lower in 2020 as our sample ends in the course of 2020. We do not observe a major change in the number of portfolio checks performed by our data provider after the court ruling in 2012, suggesting that the ruling did not alter the demand for portfolio assessments. In a more formal test, we regress the number of portfolio checks performed by our data provider per bank and month on a dummy variable that equals one after banks ban kickbacks, and zero otherwise. Results of this test are reported in Table A1 in the Appendix. While Column 1 does not include any fixed effects, we add bank and year-month fixed effects in Column 2. In both specifications, the coefficient on the dummy variable is not statistically distinguishable from zero and the economic magnitude small. This again indicates that the court ruling and subsequent bans on kickbacks did not alter bank clients' demand for portfolio evaluations.

Our initial sample contains information on 30,468 portfolios of 17,397 clients of banks located in Switzerland. We restrict our sample to the 50 banks with most observations. We only include Swiss banks that offered managed accounts in 2012. Hence, we drop foreign banks, non-banks (e.g., insurance companies), and banks that did not offer managed accounts in 2012. For 42 of these banks, information on their response to the court ruling of 2012 is

available. We collect information from company websites, newspaper articles, and the web. For newspaper articles, we rely on LexisNexis and Factiva. To determine the date on which banks banned kickbacks, we use the earliest date on which either the repayment of past kickbacks or a ban on future kickbacks was announced. Of the 42 sample banks, 33 banks imposed a ban on kickbacks following the court ruling of 2012, two banks had already banned kickbacks before 2012, and seven banks did not impose a ban until the end of our sample period. Most banks banning kickbacks did so between 2013 and 2015. When restricting the sample to these 42 banks, we are left with 22,098 portfolios of 12,922 clients.

To check whether our sample is representative of the Swiss banking landscape, we compute market shares of the banks contained in our final sample based on their total assets in 2020. In 2020, 219 banks operated in Switzerland, excluding 24 subsidiaries of foreign banks. The total assets of these banks amounted to CHF 3,346 billion in 2020 (roughly equivalent to USD 3,785 billion). The 42 sample banks account for 84.4% of total assets of all Swiss banks. Thus, our sample banks represent a significant share of the Swiss banking industry. The four largest banks in Switzerland are UBS, Credit Suisse, Zürcher Kantonalbank, and Raiffeisen. These banks also have the most observations in our final sample, suggesting that the individual shares of banks in our final sample are similar to their market shares. Appendix A provides an overview of the banks contained in our final sample.

### 3.2 Descriptive statistics

Table 1 reports descriptive statistics. Client characteristics are presented in Panel A. Three-fourths of the clients in our sample are male. On average, clients are 62.8 years old. 10.5% of clients in our sample are single, 60.6% are married, 10.0% are divorced, and the remaining 18.9% belong to other categories (e.g., widowed). 65.9% of clients live in urban areas, 11.4% live in rural areas, and 22.7% live in areas classified as neither urban nor rural. This distribution is representative of the Swiss population.<sup>6</sup>

Panel B of Table 1 reports portfolio characteristics. For 13.5% of portfolios, management

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<sup>6</sup>In 2015, 63% of the Swiss population lived in urban areas, 16% lived in rural areas, and the remaining 21% lived in areas that are classified as neither urban nor rural (Swiss Federal Statistical Office, 2017).

is delegated to the bank. Thus, the vast majority of sample clients makes use of optional financial advice. The average client has financial wealth of CHF 890,635 (roughly equivalent to USD 928,000). Clients split their financial wealth across two different banks, on average, resulting in an average portfolio value of CHF 543,407 (roughly equivalent to USD 566,000). Compared to the Swiss population, the clients in our sample represent the wealthier part of the population.<sup>7</sup> However, the average portfolio value of our sample clients is comparable to the average portfolio value of clients of Swiss banks who rely on financial advice.<sup>8</sup> Clients hold, on average, approximately 12 different securities in their portfolios. The average portfolio consists of about 23.5% own-bank mutual funds, 14.9% other mutual funds, 2.9% own-bank ETFs and index funds, 5.0% other ETFs and index funds, 1.3% own-bank structured products, 1.7% other structured products, 20.8% stocks, 7.4% bonds, and 22.3% cash. The cash position includes mainly holdings in checking and savings accounts. The remaining 0.3% are invested in securities we cannot identify.

Panel C of Table 1 provides information on portfolio returns and portfolio alphas of the clients in our sample. As the typical holding period for individual stocks is around one year, we measure portfolio returns and alphas over the next 12 months (e.g., Døskeland and Hvide, 2011; Coval et al., 2021).<sup>9</sup> We assume portfolio weights to remain constant over time.<sup>10</sup> Return data stem from Morningstar (mutual funds, ETFs, and index funds) and Refinitiv (stocks, bonds, and structured products). Cash is assumed to earn the risk-free rate.<sup>11</sup> We determine portfolio alphas using a six-factor model that contains two stock market factors, the investment style factors of Fama and French (1993) and Carhart (1997), and a bond market factor. We employ the Swiss stock market factor, the European stock market factor, the European size factor, the European value factor, and the European momentum factor

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<sup>7</sup>According to estimates from Credit Suisse (2021), the average financial wealth per adult in Switzerland was USD 465,337 in 2020.

<sup>8</sup>In the dataset of Hoechle et al. (2018) from a large Swiss retail bank, the average portfolio value of clients who make use of optional financial advice is CHF 585,008 and the average portfolio value of clients who completely delegate account management to the bank is CHF 735,115.

<sup>9</sup>In our robustness tests, we rerun our analysis assuming a holding period of 24 months. Our results remain qualitatively unchanged.

<sup>10</sup>In one of our robustness tests, we allow portfolio weights to vary over time in line with the performance of the portfolio holdings. This does not materially change our findings.

<sup>11</sup>In our robustness tests, we replicate the analysis excluding cash holdings. Our findings remain similar.

from AQR’s data library (<https://www.aqr.com/Insights/Datasets>). The Markit iBoxx EUR Overall Index serves as the bond market factor. Portfolios in our sample generate an average return of 0.57% per month (6.84% p.a.) over the next 12 months. The average portfolio alpha amounts to -0.03% per month (-0.36% p.a.). Thus, portfolios in our sample tend to underperform common benchmarks. Appendix B provides detailed descriptions of all variables used throughout the study.

### 3.3 Determinants of bans on kickbacks

In our empirical analysis, we exploit the gradual reaction of banks to the ruling of the Federal Supreme Court in October 2012. However, banks’ decision on when to ban kickbacks is potentially not random. Thus, we explore the determinants of bans on kickbacks. To do so, we use a Cox proportional hazard rate model and estimate the probability of banks banning kickbacks in a certain year conditional on various bank characteristics. The characteristics we focus on are bank size as measured by the natural logarithm of total assets, growth as proxied by the year-over-year growth in total assets, capitalization as captured by the bank’s equity over total assets, profitability as measured by the return on total assets, and product mix as proxied by non-interest income as percentage of revenues. Data on bank characteristics are retrieved from Refinitiv.

Results of this analysis are reported in Table 2. In Columns 1 to 5, we only find banks’ product mix to be significantly related to the probability of banning kickbacks. In Column 6, when including all explanatory variables simultaneously, both the growth rate as well as the product mix are significant determinants of a ban on kickbacks. The negative coefficient estimates suggest that growing banks and banks that are more reliant on non-interest income tend to ban kickbacks later. Non-interest income contains income from fee-based activities, such as kickbacks. Thus, this finding is consistent with banks banning kickbacks later if they are more reliant on them. Taken together, the timing of bans on kickbacks is not random, but correlated with bank characteristics. Therefore, regressions that follow include bank characteristics as controls.

## 4 Empirical approach

We estimate the effect of a ban on kickbacks on clients' portfolio holdings using the following regression equation:

$$\begin{aligned} \% \text{ own} - \text{bank products}_{i,k,t} = & \alpha_i + \alpha_k + \alpha_t + \beta \text{Ban on kickbacks } (d)_{k,t} \\ & + \text{Portfolio controls}_{i,k,t} + \text{Bank controls}_{k,t} + \epsilon_{i,k,t} \end{aligned} \quad (1)$$

where  $\% \text{ own} - \text{bank products}_{i,k,t}$  is the portfolio share invested in own-bank products by client  $i$  at bank  $k$  in month  $t$ .  $\alpha_i$  are client fixed effects. In our dataset, we observe each client at only one point in time. Thus, client fixed effects control for all observable and unobservable client characteristics, such as risk preferences and behavioral traits.  $\alpha_k$  are bank fixed effects that control for bank characteristics that remain constant over time, thereby accounting for factors such as bank type and regional focus.  $\alpha_t$  are year-month fixed effects, controlling for the overall time trend, such as the growth of the fund industry and overall economic conditions.  $\text{Ban on kickbacks } (d)_{k,t}$  is a dummy variable that equals one for bank  $k$  in month  $t$  if the bank bans kickbacks following the court ruling of 2012, and zero otherwise.  $\text{Portfolio controls}_{i,k,t}$  represent a set of portfolio characteristics of client  $i$  at bank  $k$  in month  $t$ , such as the portfolio value and the number of securities held in the portfolio.  $\text{Bank controls}_{k,t}$  are different characteristics of bank  $k$  in month  $t$ , such as a bank's size, growth, and product mix.  $\epsilon_{i,k,t}$  is the error term. This regression specification enables us to identify the effect of a ban on kickbacks by comparing portfolio shares of the *same* client  $i$  at the *same* point in time  $t$  at two or more different banks, some of which imposed a ban on kickbacks and others not. If banks and their financial advisors promote own-bank products to generate additional income to replace banned kickbacks, we expect a positive  $\beta$ .

## 5 Empirical analysis

This section contains the results of our empirical analysis. First, we investigate the impact of a ban on kickbacks on clients' portfolio holdings (Section 5.1). Second, we analyze how own-bank products differ from other products (Section 5.2). We then study the effect of a

ban on kickbacks on clients’ portfolio performance (Section 5.3). Next, we examine how our findings differ across clients (Section 5.4). Finally, we investigate potential effects of a ban on kickbacks at the fund level (Section 5.5).

## 5.1 How does a ban on kickbacks affect individual investors’ portfolio holdings?

To test how a ban on kickbacks affects individual investors’ portfolio holdings, we regress portfolio shares invested in own-bank products on a dummy variable that equals one after banks ban kickbacks and zero otherwise, as outlined in equation (1). Depending on the estimated specification, we include controls and fixed effects. In all our regressions, we double-cluster standard errors at the bank and year-month level.

We present the results in Table 3. In Columns 1 to 4, the dependent variable is the portfolio share of own-bank mutual funds. In Column 1, we include neither controls nor fixed effects. We document a significant increase in the portfolio share of own-bank mutual funds following a ban on kickbacks. Specifically, the share of own-bank mutual funds increases by 13.0 percentage points on average. This is economically sizeable given that own-bank mutual funds account for 23.5% of the average sample portfolio. In Column 2, we add the full set of client characteristics and portfolio characteristics as controls, as well as bank fixed effects and time fixed effects. Adding these controls and fixed effects reduces the size of the estimated coefficient by approximately one-third. However, the effect remains statistically significant at the 5% level (t-statistic of 2.35). Column 3 additionally includes client fixed effects. In this regression, we exclude client characteristics as we do not observe clients over time but only at one point in time. Thus, client fixed effects control for all client characteristics. Because of client fixed effects, clients with only one portfolio drop out of the sample, which further reduces the sample size. In this specification, we find that the share of own-bank mutual funds is on average 4.6 percentage points higher in portfolios held at banks that bans kickbacks compared to portfolios held at banks that do not impose a ban. The statistical significance remains unchanged. In Column 4, we further augment the regression with the bank characteristics from Table 2. Including them, however, does not materially impact our

findings.

Next, we test whether a ban on kickbacks also affects holdings in own-bank ETFs and index funds. Thus, in Columns 5 to 8, we use the portfolio share of own-bank ETFs and index funds as dependent variable. We include the same set of controls and fixed effects as in Columns 1 to 4. However, we do not find evidence for a significant change in the fraction of own-bank ETFs and index funds after banks ban kickbacks.

Finally, we investigate portfolio shares of own-bank structured products. Hence, in Columns 9 to 12, the dependent variable is the fraction of own-bank structured products in clients' portfolios. We again use the same regression specifications as before. In Columns 9 and 10, the coefficient on the dummy variable that equals one following banned kickbacks is positive but not statistically significant at conventional levels. However, in our most saturated specifications in Columns 11 and 12, we document a positive and significant increase in the share of own-bank structured products. The coefficient estimate suggests that clients of banks that ban kickbacks experience an increase in the share of own-bank structured products of around 1.0 percentage point. This effect is economically sizeable given that the sample average is 1.3%. Taken together, we find strong evidence that a ban on kickbacks increases the share of own-bank products.

Next, we analyze how portfolio shares in other types of investments evolve around bans on kickbacks. The documented increase in own-bank products implies that clients reduce their shares in other types of investments. We focus on other funds, other ETFs and index funds, other structured products, stocks, bonds, and cash. We run similar regression specifications as in Table 3.

The results are presented in Table 4. The dependent variable is either the portfolio share of other mutual funds (Columns 1 and 2), the portfolio share of other ETFs and index funds (Columns 3 and 4), the portfolio share of other structured products (Columns 5 and 6), the portfolio share of stocks (Columns 7 and 8), the portfolio share of bonds (Columns 9 and 10), or the portfolio share of cash (Columns 11 and 12). We observe a drop in the share of other mutual funds, other ETFs and index funds, other structured products, and cash. For stocks and bonds, we document an increase in the average portfolio share following a ban on

kickbacks. When focusing on the most saturated specification, including client fixed effects, we find the decrease in other ETFs and index funds in Column 4 and the decrease in other structured products in Column 6 to be statistically significant at the 10% level (t-statistics of 1.91 and 1.74, respectively).

Next, to move closer towards a causal interpretation of our findings, we examine the dynamics in the share of own-bank products around bans on kickbacks. To do so, we estimate specifications similar to those in Table 3 but replace the dummy variable that equals one following a ban on kickbacks with a set of lead and lag dummies. Specifically, we create a dummy variable that equals one in the year of the ban on kickbacks, and zero otherwise. We also create dummy variables that equal one if a bank will ban kickbacks in one year (two years, three or more years), and zero otherwise. In addition, we create dummy variables that equal one if a bank has banned kickbacks one year ago (two years ago, three or more years ago), and zero otherwise. The omitted category in the regressions is the dummy that takes the value one if a bank will ban kickbacks in one year.

Table 5 presents the results. In Columns 1 and 2, when focusing on own-bank mutual funds, the coefficients on the dummies capturing the effects prior to the ban on kickbacks are not statistically distinguishable from zero, suggesting that there are no differential pre-trends. In contrast, we find a large and statistically significant increase in the average portfolio share of own-bank mutual funds immediately following the ban on kickbacks. The effect also grows over time, with the full effect size occurring two to three years following the ban. In Columns 3 and 4, when focusing on own-bank ETFs and index funds, we also do not find any pre-treatment effects but weak evidence for a significant decrease in the average portfolio share after banks ban kickbacks. Finally, in Columns 5 and 6, we document a significant difference between the treatment group and the control group prior to the ban on kickbacks for own-bank structured products. However, this difference vanishes once we move closer to the ban. We additionally show that clients' portfolio share of own-bank structured products does not increase significantly immediately after the ban, but the main increase occurs one year after banks ban payments from providers of financial products.

Figure 3 visualizes the dynamics in the share of own-bank mutual funds around bans on

kickbacks. The figure confirms the absence of diverging pre-trends. Moreover, it shows the significant increase immediately following the ban on kickbacks.

Recent literature documents that estimated coefficients from settings with staggered treatments can be biased (e.g., Callaway and Sant’Anna, 2021; Sun and Abraham, 2021; Baker et al., 2022; Barrios, 2022). This is because already-treated units act as comparison units, potentially resulting in a “bad comparison” problem. To address this concern, we re-estimate the coefficients from Table 5 using the test proposed by Sun and Abraham (2021). In their approach, staggered treatment effects are first estimated separately and then aggregated. Never-treated units are used as control group. We report the results of this robustness test in Table A2 in the Appendix. Estimates for own-bank mutual funds are very similar to the estimates shown in Table 5. For own-bank ETFs and index funds as well as for own-bank structured products, results are somewhat more pronounced compared to our baseline specifications in Table 5. This suggests that our results are not driven by a “bad comparison” problem.

So far, we performed our analysis within Switzerland and exploited the staggered reaction of Swiss banks to the court ruling of 2012. Next, we run a between-country comparison. The independent financial advisor that provided us with the data not only offers its services in Switzerland but also in Germany. The German sample provides information on 1,151 portfolios of 757 clients of banks located in Germany. While the regulatory environment changed in Switzerland following the court ruling of 2012, we are not aware of a similar change in Germany around that time, suggesting that portfolios of clients of banks located in Germany serve as an ideal control group. Thus, we investigate how portfolio shares of clients of banks located in Switzerland evolve vis-à-vis portfolio shares of clients of banks located in Germany. To do so, we adapt equation (1) in the following way:

$$\begin{aligned} \% \text{ own} - \text{bank products}_{i,k,t} = & \alpha_k + \alpha_t + \gamma \text{Switzerland}(d)_k + \delta \text{Post 2012}(d)_t \\ & + \beta \text{Switzerland}(d)_i \times \text{Post 2012}(d)_t + \text{Client controls}_{i,t} + \text{Portfolio controls}_{i,k,t} + \epsilon_{i,k,t} \end{aligned} \quad (2)$$

where  $\text{Switzerland}(d)_k$  is a dummy variable that equals one for clients of Swiss banks and zero for clients of German banks.  $\text{Post 2012}(d)_t$  is a dummy variable that takes the value one

after the ruling of the Swiss Federal Supreme Court in October 2012, and zero otherwise. If the court ruling led to a disproportionate increase in the portfolio share of own-bank products in Switzerland compared to Germany, we expect the  $\beta$  to be positive.

We present the results from equation (2) in Table 6. The dependent variable is either the portfolio share of own-bank mutual funds (Columns 1 and 2), own-bank ETFs and index funds (Columns 3 and 4), or own-bank structured products (Columns 5 and 6). In Column 1, we include neither controls nor fixed effects. We find the coefficient on the dummy variable that equals one for clients of Swiss banks and zero for clients of German banks to be statistically insignificant, suggesting that both groups of clients have similar portfolio shares of own-bank mutual funds before the court ruling of 2012. The coefficient on the dummy that takes the value one after October 2012 is also not statistically distinguishable from zero. Thus, the share of own-bank mutual funds remains largely unchanged for clients of banks located in Germany after the court ruling. In contrast, the coefficient on the interaction term is positive and highly statistically significant (t-statistic of 3.51). The coefficient estimate suggests that the portfolio share of own-bank mutual funds increases by 9.1 percentage points on average for clients of Swiss banks after the court ruling compared to clients of German banks. In Column 2, we add client characteristics and portfolio characteristics as control variables as well as bank fixed effects and time fixed effects. In this specification, the effect is economically similar, but statistically weaker. However, it remains significant at the 5% level (t-statistic of 2.42). Clients of Swiss banks also experience a significant increase in the fraction of own-bank ETFs and index funds in their portfolios compared to clients of German banks after 2012 (Columns 3 and 4). However, for the portfolio share of own-bank structured products, we do not find a significant difference between clients of banks located in Switzerland and clients of banks located in Germany after the court ruling (Columns 5 and 6). Nevertheless, this analysis points towards an economically sizable effect of a ban on kickbacks on the retail financial sector in Switzerland.

In summary, we provide robust evidence for an increase in own-bank products in investors' portfolios following a ban on kickbacks. Results are strongest for own-bank mutual funds. We also find some evidence for an increase in the share of own-bank structured products. Results

for own-bank ETFs and index funds are mixed. Our findings are consistent with banks promoting own-bank products to tap new sources of income to replace banned kickbacks.

## 5.2 How do own-bank products differ from other products?

In the next step, we compare own-bank products and other products held by clients in our sample. Inducing individual investors to buy own-bank products is not necessarily harmful as long as own-bank products have characteristics similar to those of other products available on the market. If own-bank products have characteristics superior to those of other products, promoting them could even benefit clients. We start by comparing holdings in own-bank mutual funds and holdings in other mutual funds.<sup>12</sup> We obtain data on mutual funds from Morningstar. For this analysis, we restrict the sample to mutual fund holdings of clients of banks that ban kickbacks.

Table 7 presents univariate comparisons of holdings in own-bank and other mutual funds. In Panel A, we find that own-bank mutual funds are about 50% smaller than other mutual funds. Moreover, own-bank mutual funds are on average 1.6 years younger. This difference can be explained by banks setting up new own funds following the court ruling of 2012. Specifically, 18.1% of own-bank mutual funds were launched after 2012, whereas only 8.3% of other mutual funds were set up after the court ruling. Own-bank mutual funds are significantly more likely to be balanced funds and less likely to be pure stock funds or pure bond funds.

Panel B compares the costs of own-bank mutual funds and other mutual funds. Expense ratios and front-end loads of own-bank mutual funds are slightly below expense ratios and front-end loads of other mutual funds. However, own-bank mutual funds charge significantly higher deferred loads. Thus, the fee structure of own-bank mutual funds discourages investors more from switching funds.

Panel C sheds light on the performance of holdings in own-bank mutual funds and holdings in other mutual funds. We first compare funds' Morningstar rating, which is based on funds' past performance. The average Morningstar rating of holdings in own-bank funds is signif-

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<sup>12</sup>Note that a mutual fund can be an own-bank fund for some clients and a non-own-bank fund for other clients, depending on where clients hold their portfolios.

icantly worse than the average rating of holdings in other funds. We then compute mutual fund returns and alphas over the next 12 months. Returns and alphas are net of expenses (but before loads). To determine alphas, we use the six-factor model from before that contains two stock market factors, the investment style factors of Fama and French (1993) and Carhart (1997), and a bond market factor. Both own-bank mutual funds and other mutual funds deliver negative alphas, suggesting that they underperform common benchmarks on average. Moreover, holdings in own-bank mutual funds perform significantly worse than those in other mutual funds over the following 12 months, both in terms of raw returns and alphas. The poor performance of own-bank funds is consistent with findings of existing research (e.g., Hao and Yan, 2012; Ferreira et al., 2018; Gil-Bazo et al., 2020). Taken together, there is not much evidence that own-bank mutual funds have characteristics superior to those of other mutual funds. If anything, their characteristics are inferior to those of other mutual funds available on the market.

We then run a similar analysis for structured products. To do so, we obtain data from Derivative Partners, an independent provider of information on structured products. The database covers all retail structured products issued in Switzerland between 2010 and 2020, and listed on the SIX Structured Products Exchange, Switzerland’s main exchange for structured products. We restrict the sample to structured product holdings of clients of banks that ban kickbacks.

Results of this comparison are reported in Table 8. As shown in Panel A, own-bank structured products exhibit a significantly larger issuance volume than other structured products. Additionally, we find that own-bank structured products tend to have shorter maturities, implying that the turnover in own-bank structured products is higher. Moreover, own-bank products are significantly more likely to be participation products, capital protection products, and leverage products, and they are significantly less likely to be yield enhancement products.<sup>13</sup>

In Panel B, we compare the cost parameters of structured products in our sample. Ex-

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<sup>13</sup>Participation products have a linear payoff profile, capital protection products have a convex payoff profile, and yield enhancement products have a concave payoff profile. Leverage products can have either linear, convex, or concave payoff profiles.

pense ratios are only available for tracker certificates.<sup>14</sup> For this subset, we find the average expense ratio of own-bank structured products to be significantly higher than that of other structured products. We also examine whether own-bank structured products are more often dominated by publicly available products than other structured products. To this end, we follow the approach of Egan (2019) who focuses on reverse convertibles and categorize a reverse convertible as dominated if there exists another reverse convertible with the same price, issued on the same date, on the same underlying(s), with the same time to maturity but with a strictly higher coupon.<sup>15</sup> Thus, for dominated products, at least one publicly available product exists with which investors would always be better off. We find that own-bank structured products are significantly more likely to be dominated than other structured products. Specifically, the fraction of dominated own-bank structured products is approximately twice that of dominated other structured products. In summary, own-bank structured products are on average more expensive and more often dominated than other structured products.

Thus, overall, neither own-bank mutual funds nor own-bank structured products exhibit superior characteristics compared to other products in our sample. Rather, the characteristics of own-bank products tend to be worse than those of other products.

### **5.3 How does a ban on kickbacks affect individual investors' portfolio performance?**

Next, we examine how a ban on kickbacks affects clients' portfolio performance. So far, our results suggest that banks and their financial advisors induce clients to purchase own-bank products with inferior characteristics following a ban on kickbacks. This likely has a negative impact on portfolio performance. However, a ban on kickbacks may also reduce the costs of funds and structured products, which, in turn, might positively affect portfolio performance. To analyze the effect of a ban on kickbacks on portfolio performance, we explore whether portfolios of clients who experience a ban on kickbacks perform better or worse than those of

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<sup>14</sup>Tracker certificates belong to the category of participation products. They simply track the performance of the underlying.

<sup>15</sup>Reverse convertibles belong to the category of yield enhancement products. Reverse convertibles offer a higher coupon compared to standard fixed-rate bonds. At maturity, investors receive their initial investment if the underlying is above the strike, or they receive the underlying if the underlying has fallen below the strike.

clients of banks that do not ban kickbacks. We again employ regression specifications similar to those in Table 3.

Table 9 reports the results from the performance analysis. In Columns 1 and 2 (Columns 3 and 4), we use portfolio returns (portfolio alphas) as the dependent variable. We report a drop in both portfolio returns and portfolio alphas after banks ban kickbacks. While the effect is not statistically significant for returns, coefficients are significant for alphas, either at the 5% level (Column 4) or at the 10% level (Column 3). More specifically, alphas decrease by 3.5 basis points per month (42 basis points p.a.) in Column 3 and by 6.2 basis points per month (74 basis points p.a.) in Column 4. This finding suggests that a ban on kickbacks hurts portfolio performance.

However, it could be that we overestimate the performance effect for some banks in our sample. This is because banks implemented the ban on kickbacks in two distinct ways. Whereas some banks in our sample started to avoid products paying kickbacks, others did not switch to products without kickbacks but forward kickbacks obtained from product providers to clients. For the latter banks, we potentially overestimate the adverse impact of a ban on kickbacks on performance since reported returns (net of kickbacks) are too low relative to actual returns (gross of kickbacks). As European funds are not required to disclose distribution fees (which include kickbacks), we cannot add back distribution fees for the clients of these banks.

We address this concern in two ways. First, we provide a back-of-the-envelope calculation to show that the potential estimation error is unlikely to alter our conclusion. According to various reports, kickbacks account for about 30% to 40% of the average expense ratio of European funds (e.g., Lipper, 2007; European Fund and Asset Management Association, 2011). The average expense ratio of mutual funds in our sample is about 1.2% p.a. Based on these estimates, kickbacks in our sample amount to approximately 50 basis points ( $= 40\% \times 1.2\%$ ). Moreover, about 40% of clients' portfolios is invested in mutual funds. Hence, this back-of-the-envelope calculation suggests that forwarding kickbacks could improve portfolio performance by approximately 20 basis points, holding everything else constant ( $= 40\% \times 1.2\% \times 40\%$ ). This is clearly below the 40 to 70 basis point drop in alphas reported in Table

9. Thus, it is unlikely that adding back forwarded kickbacks changes our conclusion.

Second, we rerun Table 9 separately for banks that switched to products not paying kickbacks and for banks that forward kickbacks. The results are presented in Table A3 in the Appendix. In Panel A (Panel B), we restrict the sample to banks that avoid products with kickbacks (forward kickbacks). The decrease in portfolio alphas following the ban on kickbacks is between 90 and 160 basis points p.a. in Panel A. This suggests that clients of banks that switched to products without kickbacks are clearly worse off after the ban. Estimates in Panel B are both economically and statistically weaker. For banks that forward kickbacks, coefficient estimates point towards a 10 to 50 basis point drop in yearly portfolio alphas. Comparing this to our back-of-the-envelope calculation, clients of banks that forward kickbacks appear to be either slightly worse off or equally well off after the ban.

Conversely, it could also be that we underestimate the performance effect of a ban on kickbacks. This is because some banks increased other fees, such as account fees, following the court ruling of 2012 to compensate for banned kickbacks. If this is the case, reported returns (gross of account fees) are too high relative to actual returns (net of account fees). To shed light on the development of account fees during our investigation period, we collect information on the annual securities account fees of the five largest banks in our sample. Figure A1 in the Appendix shows account fees of these banks over time. There is a clear upward trend in account fees during our sample period. However, annual account fees rise by only 10 basis points or less between 2010 and 2020. Thus, increases in account fees are rather small compared to the performance effects documented in Table 9. Consequently, including changes in account fees in our analysis is unlikely to alter our main findings.

We also analyze whether our results are robust to alternative calculations of clients' portfolio performance. Table A4 in the Appendix presents the estimates from these robustness tests. So far, we computed portfolio performance over the following 12 months. While the typical holding period for individual stocks is indeed around one year, existing studies also suggest that it takes individual investors more than a year to turn over their entire portfolio (e.g., Døskeland and Hvide, 2011; Bhattacharya et al., 2012; Hoechle et al., 2018; Coval et al., 2021). Thus, in Panel A of Table A4, we examine whether our results hold when measuring

portfolio performance over the next 24 months. Moreover, in our baseline specification, we hold portfolio weights constant over time. In Panel B, we allow portfolio weights to vary in line with the performance of portfolio holdings. Furthermore, in our main specification, we assume that cash earns the risk-free rate. In Panel C of Table A4, we replicate our analysis excluding cash holdings. Across all three panels, results are similar to Table 9. The ban on kickbacks adversely affects portfolio performance. Whereas the effect is not statistically significant for returns (except for Column 1 of Panel A), we find statistically significant effects for alphas (except for Column 3 of Panel C). Thus, the performance pattern we observe is robust to alternative calculations of portfolio performance.

Finally, we compare the portfolio performance of clients of banks located in Switzerland to the portfolio performance of clients of banks located in Germany before and after the court ruling of 2012. To do so, we use a regression setting similar to the one in Table 6. To determine portfolio alphas, we augment our six-factor model with a German stock market factor. The results of this test are reported in Table A5 in the Appendix. We find the coefficient on the interaction term to be negative and statistically significant across all specifications (except for Column 2 of Panel B). Thus, portfolios of Swiss clients experience a drop in both returns and alphas following the court ruling of 2012 compared to portfolios of German clients, suggesting that the change in the regulatory environment in Switzerland adversely affects the portfolio performance of Swiss clients.

Taken together, we find a negative impact of a ban on kickbacks on portfolio performance. Hence, all our evidence points towards an unintended consequence of a ban on kickbacks.

#### **5.4 How do the results differ in the cross-section?**

Next, we analyze which clients are particularly affected by the increase in own-bank products following the ban on kickbacks. We conjecture that more sophisticated clients who are wary of financial advisors' conflicts of interest are less affected than naïve clients. Following existing studies, we take the portfolio value and the portfolio diversification as proxies for sophistication (e.g., Feng and Seasholes, 2005; Hirshleifer et al., 2008; Barber et al., 2016).

Specifically, we compute the natural logarithm of the portfolio value and the natural logarithm of the number of securities contained in the portfolio. To test our conjecture, we use our main specifications from Columns 2 and 3 of Table 3 and interact the ban on kickbacks dummy with our sophistication measures.

The results are shown in Columns 1 to 4 of Table 10. In all specifications, the dependent variable is the fraction of own-bank mutual funds in clients' portfolios. We continue to find a positive and statistically significant coefficient on the dummy variable that equals one after kickbacks are banned, except for Column 2 where the coefficient is positive but not statistically significant at conventional levels. However, the negative and mostly significant coefficients on the interaction terms imply that the effect is weaker for more sophisticated investors. Hence, sophistication indeed seems to reduce adverse effects of a ban on kickbacks.

We also examine whether our results differ between clients who completely delegate account management to the bank and clients who rely on optional financial advice. To do so, we interact the ban on kickbacks dummy with a dummy variable that equals one for portfolios managed by the bank. The results of this test are presented in Columns 5 and 6 of Table 10. The coefficient on the interaction term is positive, suggesting that the effect is stronger for accounts managed by the bank. However, the estimates are not statistically significant at conventional levels.

## 5.5 How does a ban on kickbacks affect mutual fund flows?

So far, we performed all our analyses at the portfolio level. In this final section, we replicate our tests at the fund level. While effects are strong at the portfolio level, it is unclear whether the impact of the ban at the portfolio level is large enough to also matter at the fund level. We start by looking at monthly fund flows. Mutual fund data stem from Morningstar. We restrict the sample to own-bank mutual funds.

In Figure 4, we plot percentage monthly net flows of own-bank mutual funds around bans on kickbacks. Banks ban kickbacks in year  $t = 0$ . Average monthly net flows of own-bank mutual funds are close to zero in the three years prior to the ban. However, in the year of

the ban, monthly flows surge to over 0.7%. Three years after the ban, average monthly net flows have increased to approximately 1.6%.

We also examine potential effects on mutual fund flows in a more formal way. To do so, we regress percentage monthly net flows of mutual funds on our dummy variable that equals one after banks ban kickbacks and zero otherwise. Depending on the estimated specification, we include controls and fixed effects.

Table 11 presents the results. Column 1 neither includes controls nor fixed effects. In this specification, we find the coefficient on the ban on kickbacks dummy to be positive and statistically significant. Consistent with Figure 4, average monthly net flows increase by 1.5 percentage points after the ban. In Column 2, we add control variables as well as fund fixed effects and year-month fixed effects. This reduces the size of the coefficient estimate. However, the effect remains economically sizeable and statistically significant. This indicates that a ban on kickbacks not only has strong effects at the portfolio level, but also at the fund level.

## 6 Conclusion

In this paper, we study how a ban on kickbacks affects individual investors' portfolio holdings and portfolio performance. To do so, we exploit a court ruling in Switzerland that induced banks to ban kickbacks. We find that the share of own-bank mutual funds and own-bank structured products increases significantly following a ban on kickbacks. We also document that own-bank mutual funds and own-bank structured products have characteristics that are inferior to those of other products. Consistent with this finding, we present evidence that clients' portfolio performance decreases significantly following a ban on kickbacks. We also show that the increase in the portfolio share of own-bank products is attenuated for investors who are usually considered more sophisticated. Finally, we document that effects are not only strong at the portfolio level, but also at the fund level. Overall, our findings are consistent with banks replacing income from banned kickbacks with income from own products, adversely affecting clients' portfolio performance. Thus, we provide evidence of an

unintended consequence of consumer protection.

To the best of our knowledge, our paper is the first to investigate the effect of a ban on kickbacks at the investor level. Thus, our results are of particular importance in light of the ongoing debate on the benefits and costs of regulatory changes that aim at reducing conflicts of interest of financial advisors. As highlighted in the introduction, potential unintended consequences of such regulatory changes should be factored into the current debate.

## References

- Agarwal, S., S. Chomsisengphet, N. Mahoney, and J. Stroebel, 2015, Regulating consumer financial products: Evidence from credit cards, *Quarterly Journal of Economics* 130, 111-164.
- Anagol, S., V. Marisetty, R. Sane, and B. Venugopal, 2017, On the impact of regulating commissions: Evidence from the Indian mutual funds market, *World Bank Economic Review* 31, 241-270.
- Baker, L.C., M.K. Bundorf, and D.P. Kessler, 2016, The effect of hospital/physician integration on hospital choice, *Journal of Health Economics* 50, 1-8.
- Baker, A., D.F. Larcker, and C.Y. Wang, 2022, How much should we trust staggered difference-in-differences estimates?, *Journal of Financial Economics* 144, 370-395.
- Barber, B.M., X. Huang, and T. Odean, 2016, Which factors matter to investors? Evidence from mutual fund flows, *Review of Financial Studies* 29, 2600-2642.
- Barr, M.S., S. Mullainathan, and E. Shafir, 2009, The case for behaviorally informed regulation, in D. Moss and J. Cisternino (editors): New perspectives on regulation, 25-62, The Tobin Project, Cambridge.
- Barrios, J.M., 2022, Staggeringly problematic: A primer on staggered DiD for accounting researchers, Working Paper, Washington University in St. Louis.
- Bergstresser, D., J.M.R. Chalmers, and P. Tufano, 2008, Assessing the costs and benefits of brokers in the mutual fund industry, *Review of Financial Studies* 22, 4129-4156.
- Bhattacharya, U., A. Hackethal, S. Kaesler, B. Loos, and S. Meyer, 2012, Is unbiased advice to retail investors sufficient? Answers from a large field study, *Review of Financial Studies* 25, 975-1032.
- BlackRock, 2013, Global investor pulse survey.
- Burke, J., and A.A. Hung, 2015, Financial advice markets: A cross-country comparison, Working Paper, RAND.
- Callaway, B., and P.H.C. Sant'Anna, 2021, Difference-in-differences with multiple time periods, *Journal of Econometrics* 225, 200-230.
- Campbell, J.Y., H.E. Jackson, B.C. Madrian, and P. Tufano, 2011, Consumer financial protection, *Journal of Economic Perspectives* 25, 91-114.
- Carhart, M.M., 1997, On persistence in mutual fund performance, *Journal of Finance* 52, 57-82.
- Chalmers, J., and J. Reuter, 2020, Is conflicted advice better than no advice?, *Journal of Financial Economics* 138, 366-387.
- Christoffersen, S.E., R. Evans, and D.K. Musto, 2013, What do consumers' fund flows maximize? Evidence from their brokers' incentives, *Journal of Finance* 68, 201-235.
- Cookson, G., T. Jenkinson, H. Jones, and J.V. Martinez, 2021, Best buys and own brands: Investment platforms' recommendations of mutual funds, *Review of Financial Studies* 34, 227-263.
- Coval, J.D., D. Hirshleifer, and T. Shumway, 2021, Can individual investors beat the market?, *Review of Asset Pricing Studies* 11, 552-579.
- Credit Suisse, 2021, Global wealth databook 2021, <https://www.credit-suisse.com/media/assets/corporate/docs/about-us/research/publications/>

[global-wealth-databook-2021.pdf](#).

Cutler, D.M., L. Dafny, D.C. Grabowski, S. Lee, and C. Ody, 2020, Vertical integration of healthcare providers increases self-referrals and can reduce downstream competition: The case of hospital-owned skilled nursing facilities, Working Paper, NBER.

Døskeland, T.M., and H.K. Hvide, 2011, Do individual investors have asymmetric information based on work experience?, *Journal of Finance* 66, 1011-1041.

Egan, M., 2019, Brokers versus retail investors: Conflicting interests and dominated products, *Journal of Finance* 74, 1217-1260.

European Fund and Asset Management Association, 2011, Fund fees in Europe: Analyzing investment management fees, distribution fees, and operating expenses, <https://www.efama.org/newsroom/news/fund-fees-europe-ter-report>.

Fama, E.F., and K.R. French, 1993, Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics* 33, 3-56.

Feng, L., and M.S. Seasholes, 2005, Do investor sophistication and trading experience eliminate behavioral biases in financial markets?, *Review of Finance* 9, 305-351.

Ferreira, M.A., P. Matos, and P. Pires, 2018, Asset management within commercial banking groups: International evidence, *Journal of Finance* 73, 2181-2227.

Florentsen, B., U. Nielsson, P. Raahauge, and J. Rangvid, 2021, How important is affiliation between mutual funds and distributors for fund flows?, *Review of Finance*, 1-39.

Finalix, 2014, Retrozessionen – Wie weiter?

Foerster, S., J.T. Linnainmaa, B.T. Melzer, and A. Previtero, 2017, Retail financial advice: Does one size fit all?, *Journal of Finance* 72, 1441-1482.

Gil-Bazo, J., P. Hoffmann, and S. Mayordomo, 2020, Mutual funding, *Review of Financial Studies* 33, 4883-4915.

Hackethal, A., M. Haliassos, and T. Jappelli, 2012, Financial advisors: A case of babysitters?, *Journal of Banking and Finance* 36, 509-524.

Hao, G.Q., and X.S. Yan, 2012, The performance of investment bank-affiliated mutual funds: Conflicts of interest or informational advantage?, *Journal of Financial and Quantitative Analysis* 47, 537-565.

Hirshleifer, D.A., J.N. Myers, L.A. Myers, and S.H. Teoh, 2008, Do individual investors cause post-earnings announcement drift? Direct evidence from personal trades, *Accounting Review* 83, 1521-1550.

Hoechle, D., S. Ruenzi, N. Schaub, and M. Schmid, 2017, The impact of financial advice on trade performance and behavioral biases, *Review of Finance* 21, 871-910.

Hoechle, D., S. Ruenzi, N. Schaub, and M. Schmid, 2018, Financial advice and bank profits, *Review of Financial Studies* 31, 4447-4492.

Inderst, R., and M. Ottaviani, 2012, How (not) to pay for advice: A framework for consumer financial protection, *Journal of Financial Economics* 105, 393-411.

Lipper, 2007, Lipper fund industry insight reports – Analysis of distribution fees in Europe, <https://www.fondsprofessionell.de/upload/attach/9594.pdf>.

Nakamura, S., C. Capps, and D. Dranove, 2007, Patient admission patterns and acquisitions of “feeder” hospitals, *Journal of Economics and Management Strategy* 16, 995-1030.

Oh, N.Y., J.T. Parwada, E.K.M. Tan, 2017, Should indirect brokerage fees be capped?

- Lessons from mutual fund marketing and distribution expenses, *Journal of Financial and Quantitative Analysis* 52, 781-809.
- Sokolinski, S., 2023, Regulating commission-based financial advice: Evidence from a natural experiment, *Journal of Financial and Quantitative Analysis* 58, 1359-1389.
- Stoughton, N.M., Y. Wu, and J. Zechner, 2011, Intermediated investment management, *Journal of Finance* 66, 947-980.
- Sun, L., and S. Abraham, 2021, Estimating dynamic treatment effects in event studies with heterogeneous treatment effects, *Journal of Econometrics* 225, 175-199.
- Swiss Federal Statistical Office, 2017, Raumgliederung der Schweiz – Gemeindetypologie und Stadt/Land-Typologie 2012, <https://dam-api.bfs.admin.ch/hub/api/dam/assets/2543323/master>.
- Swiss Financial Market Supervisory Authority, 2012, Supervisory measures – Retrocessions, [https://www.finma.ch/~media/finma/dokumente/dokumentencenter/4dokumentation/finma-mitteilungen-archiv/finma-mitteilung-41-2012.pdf?sc\\_lang=en](https://www.finma.ch/~media/finma/dokumente/dokumentencenter/4dokumentation/finma-mitteilungen-archiv/finma-mitteilung-41-2012.pdf?sc_lang=en).
- UBS, 2012, Fourth-quarter 2012 report, <https://www.ubs.com/content/dam/static/epaper/pdf/Quarterly%20Report%204Q2012%20-%20en.pdf>.

## Tables

**Table 1: Descriptive statistics**

This table presents descriptive statistics on client characteristics (Panel A), portfolio characteristics (Panel B), and performance characteristics (Panel C). Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study.

|                                             | Mean    | 25%     | Median  | 75%     | Std. dev. | N      |
|---------------------------------------------|---------|---------|---------|---------|-----------|--------|
| <b>Panel A: Client characteristics</b>      |         |         |         |         |           |        |
| Male (d)                                    | 0.766   | 1.000   | 1.000   | 1.000   | 0.424     | 12,922 |
| Age (years)                                 | 62.80   | 57.00   | 63.00   | 69.00   | 9.30      | 11,823 |
| Single (d)                                  | 0.105   | 0.000   | 0.000   | 0.000   | 0.306     | 12,892 |
| Married (d)                                 | 0.606   | 0.000   | 1.000   | 1.000   | 0.489     | 12,892 |
| Divorced (d)                                | 0.100   | 0.000   | 0.000   | 0.000   | 0.300     | 12,892 |
| Urban (d)                                   | 0.659   | 0.000   | 1.000   | 1.000   | 0.474     | 12,156 |
| Rural (d)                                   | 0.114   | 0.000   | 0.000   | 0.000   | 0.318     | 12,156 |
| <b>Panel B: Portfolio characteristics</b>   |         |         |         |         |           |        |
| Managed account (d)                         | 0.135   | 0.000   | 0.000   | 0.000   | 0.341     | 22,098 |
| Financial wealth (CHF)                      | 890,635 | 242,046 | 495,211 | 989,569 | 1,332,487 | 12,922 |
| # portfolios per client                     | 1.90    | 1.00    | 1.00    | 2.00    | 1.37      | 12,922 |
| Portfolio value (CHF)                       | 543,407 | 104,821 | 261,499 | 593,057 | 943,249   | 22,098 |
| # securities                                | 12.38   | 2.00    | 8.00    | 19.00   | 13.48     | 22,098 |
| % own-bank funds                            | 23.50   | 0.00    | 0.00    | 41.14   | 33.26     | 22,098 |
| % other funds                               | 14.87   | 0.00    | 0.59    | 20.04   | 24.40     | 22,098 |
| % own-bank ETFs/index funds                 | 2.91    | 0.00    | 0.00    | 0.00    | 9.52      | 22,098 |
| % other ETFs/index funds                    | 4.97    | 0.00    | 0.00    | 3.48    | 12.50     | 22,098 |
| % own-bank structured products              | 1.30    | 0.00    | 0.00    | 0.00    | 5.33      | 22,098 |
| % other structured products                 | 1.65    | 0.00    | 0.00    | 0.00    | 7.05      | 22,098 |
| % stocks                                    | 20.81   | 0.00    | 4.10    | 34.02   | 29.13     | 22,098 |
| % bonds                                     | 7.44    | 0.00    | 0.00    | 4.60    | 17.22     | 22,098 |
| % cash                                      | 22.27   | 0.00    | 5.99    | 32.68   | 31.80     | 22,098 |
| % other                                     | 0.30    | 0.00    | 0.00    | 0.00    | 3.06      | 22,098 |
| <b>Panel C: Performance characteristics</b> |         |         |         |         |           |        |
| Monthly portfolio return (%)                | 0.57    | 0.18    | 0.55    | 0.93    | 0.58      | 21,936 |
| Monthly portfolio alpha (%)                 | -0.03   | -0.32   | -0.01   | 0.19    | 0.55      | 21,929 |

**Table 2: Determinants of bans on kickbacks**

This table presents the results from Cox proportional hazard rate models. We estimate the probability of banks banning kickbacks in a certain year conditional on various bank characteristics. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the bank level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                            | (1)               | (2)               | (3)               | (4)               | (5)                 | (6)                  |
|----------------------------|-------------------|-------------------|-------------------|-------------------|---------------------|----------------------|
| Log(assets)                | -0.004<br>(-0.03) |                   |                   |                   |                     | -0.022<br>(-0.13)    |
| Growth in assets (%)       |                   | -0.024<br>(-1.03) |                   |                   |                     | -0.092**<br>(-2.18)  |
| Equity-to-assets ratio (%) |                   |                   | -0.070<br>(-0.78) |                   |                     | -0.073<br>(-0.71)    |
| Return on assets (%)       |                   |                   |                   | -1.368<br>(-0.97) |                     | 0.683<br>(0.38)      |
| % non-interest income      |                   |                   |                   |                   | -0.032**<br>(-2.11) | -0.048***<br>(-2.85) |
| Pseudo R <sup>2</sup>      | 0.000             | 0.004             | 0.003             | 0.007             | 0.031               | 0.060                |
| N                          | 138               | 134               | 138               | 138               | 138                 | 134                  |

**Table 3: Own-bank products around bans on kickbacks**

This table presents the results from OLS regressions with client, bank, and time fixed effects. The dependent variable is the portfolio share in different types of investments. The variable *Ban on kickbacks (d)* equals one after a bank bans kickbacks, and zero otherwise. The variables *Male (d)*, *Log(age)*, *Single (d)*, *Married (d)*, *Divorced (d)*, *Urban (d)*, *Rural (d)*, *Log(portfolio value)*, *Log(# securities)*, *Log(assets)*, *Growth in assets*, *Equity-to-assets ratio*, *Return on assets*, and *% non-interest income* are used as controls. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the bank and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                          | % own-bank funds    |                   |                   |                   | % own-bank ETFs/ index funds |                   |                   |                   | % own-bank structured products |                 |                   |                   |
|--------------------------|---------------------|-------------------|-------------------|-------------------|------------------------------|-------------------|-------------------|-------------------|--------------------------------|-----------------|-------------------|-------------------|
|                          | (1)                 | (2)               | (3)               | (4)               | (5)                          | (6)               | (7)               | (8)               | (9)                            | (10)            | (11)              | (12)              |
| Ban on kickbacks (d)     | 12.951***<br>(2.75) | 7.834**<br>(2.35) | 4.577**<br>(2.34) | 4.683**<br>(2.18) | 0.609<br>(0.38)              | -2.644<br>(-1.07) | -1.577<br>(-1.37) | -1.758<br>(-1.45) | 0.021<br>(0.04)                | 1.218<br>(1.49) | 0.987**<br>(2.20) | 1.152**<br>(2.27) |
| Client controls          | No                  | Yes               | No                | No                | No                           | Yes               | No                | No                | No                             | Yes             | No                | No                |
| Portfolio controls       | No                  | Yes               | Yes               | Yes               | No                           | Yes               | Yes               | Yes               | No                             | Yes             | Yes               | Yes               |
| Bank controls            | No                  | No                | No                | Yes               | No                           | No                | No                | Yes               | No                             | No              | No                | Yes               |
| Client fixed effects     | No                  | No                | Yes               | Yes               | No                           | No                | Yes               | Yes               | No                             | No              | Yes               | Yes               |
| Bank fixed effects       | No                  | Yes               | Yes               | Yes               | No                           | Yes               | Yes               | Yes               | No                             | Yes             | Yes               | Yes               |
| Year-month fixed effects | No                  | Yes               | Yes               | Yes               | No                           | Yes               | Yes               | Yes               | No                             | Yes             | Yes               | Yes               |
| Adj. R <sup>2</sup>      | 0.038               | 0.276             | 0.451             | 0.452             | 0.001                        | 0.171             | 0.180             | 0.181             | -0.000                         | 0.045           | 0.125             | 0.134             |
| N                        | 22,098              | 19,223            | 12,363            | 10,193            | 22,098                       | 19,223            | 12,363            | 10,193            | 22,098                         | 19,223          | 12,363            | 10,193            |

34

[illegible]

**Table 5: Dynamics in own-bank products around bans on kickbacks**

This table presents the results from OLS regressions with client, bank, and time fixed effects. The dependent variable is the portfolio share in different types of investments. The variable *Year of ban (d)* equals one in the year in which a bank bans kickbacks, and zero otherwise. The variable *2 years before (d)* ( $\leq 3$  years before (d)) equals one if a bank will ban kickbacks in two years (three or more years), and zero otherwise. The variable *1 year after (d)* (*2 years after (d)*,  $\geq 3$  years after (d)) equals one if a bank has banned kickbacks one year ago (two years ago, three or more years ago), and zero otherwise. The omitted category is the variable *1 year before (d)* that equals one if a bank will ban kickbacks in one year, and zero otherwise. The variables *Male (d)*, *Log(age)*, *Single (d)*, *Married (d)*, *Divorced (d)*, *Urban (d)*, *Rural (d)*, *Log(portfolio value)*, and *Log(# securities)* are used as controls. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the bank and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                           | % own-bank funds    |                    | % own-bank ETFs/<br>index funds |                    | % own-bank<br>structured products |                     |
|---------------------------|---------------------|--------------------|---------------------------------|--------------------|-----------------------------------|---------------------|
|                           | (1)                 | (2)                | (3)                             | (4)                | (5)                               | (6)                 |
| $\leq 3$ years before (d) | -1.184<br>(-0.53)   | -0.408<br>(-0.22)  | 1.160<br>(0.96)                 | 0.228<br>(0.40)    | -1.040***<br>(-2.96)              | -0.666**<br>(-2.04) |
| 2 years before (d)        | 0.127<br>(0.10)     | -0.563<br>(-0.40)  | 0.621<br>(0.98)                 | 0.274<br>(0.69)    | -0.451<br>(-1.55)                 | -0.223<br>(-0.54)   |
| Year of ban (d)           | 3.639***<br>(4.91)  | 2.418**<br>(2.37)  | -1.093<br>(-1.29)               | -0.991<br>(-1.51)  | 0.393<br>(1.25)                   | 0.495<br>(1.42)     |
| 1 year after (d)          | 7.934***<br>(3.77)  | 5.934***<br>(3.49) | -2.163<br>(-1.25)               | -1.876*<br>(-1.88) | 1.123<br>(1.66)                   | 1.364***<br>(3.30)  |
| 2 years after (d)         | 12.405***<br>(3.85) | 6.850***<br>(3.32) | -3.114<br>(-1.25)               | -1.497<br>(-1.26)  | 1.258<br>(1.55)                   | 1.027<br>(1.62)     |
| $\geq 3$ years after (d)  | 14.582***<br>(3.52) | 7.558**<br>(2.69)  | -4.800*<br>(-1.71)              | -2.558<br>(-1.47)  | 1.762<br>(1.52)                   | 1.277<br>(1.67)     |
| Client controls           | Yes                 | No                 | Yes                             | No                 | Yes                               | No                  |
| Portfolio controls        | Yes                 | Yes                | Yes                             | Yes                | Yes                               | Yes                 |
| Client fixed effects      | No                  | Yes                | No                              | Yes                | No                                | Yes                 |
| Bank fixed effects        | Yes                 | Yes                | Yes                             | Yes                | Yes                               | Yes                 |
| Year-month fixed effects  | Yes                 | Yes                | Yes                             | Yes                | Yes                               | Yes                 |
| Adj. R <sup>2</sup>       | 0.279               | 0.452              | 0.176                           | 0.180              | 0.048                             | 0.126               |
| N                         | 19,223              | 12,363             | 19,223                          | 12,363             | 19,223                            | 12,363              |

**Table 6: Own-bank products of Swiss clients and German clients over time**

This table presents the results from OLS regressions with bank and time fixed effects. The dependent variable is the portfolio share in different types of investments. The variable *Switzerland (d)* equals one for clients of banks located in Switzerland, and zero otherwise. The variable *Post 2012 (d)* equals one after the ruling of the Swiss Federal Supreme Court in October 2012, and zero otherwise. The variables *Log(age)*, *Single (d)*, *Married (d)*, *Divorced (d)*, *Log(portfolio value)*, and *Log(# securities)* are used as controls. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the bank and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                                        | % own-bank funds   |                   | % own-bank ETFs/<br>index funds |                   | % own-bank<br>structured products |                   |
|----------------------------------------|--------------------|-------------------|---------------------------------|-------------------|-----------------------------------|-------------------|
|                                        | (1)                | (2)               | (3)                             | (4)               | (5)                               | (6)               |
| Switzerland (d)                        | 5.616<br>(1.02)    | 8.239<br>(0.59)   | 1.126<br>(1.52)                 | -1.384<br>(-1.20) | 1.147**<br>(2.42)                 | 0.154<br>(0.15)   |
| Post 2012 (d)                          | 0.114<br>(0.05)    |                   | 0.390**<br>(2.17)               |                   | 0.115<br>(0.66)                   |                   |
| Switzerland (d) $\times$ Post 2012 (d) | 9.111***<br>(3.51) | 8.557**<br>(2.42) | 1.642**<br>(2.08)               | 2.056*<br>(1.88)  | -0.081<br>(-0.19)                 | -0.086<br>(-0.19) |
| Client controls                        | No                 | Yes               | No                              | Yes               | No                                | Yes               |
| Portfolio controls                     | No                 | Yes               | No                              | Yes               | No                                | Yes               |
| Bank fixed effects                     | No                 | Yes               | No                              | Yes               | No                                | Yes               |
| Year-month fixed effects               | No                 | Yes               | No                              | Yes               | No                                | Yes               |
| Adj. R <sup>2</sup>                    | 0.020              | 0.273             | 0.011                           | 0.164             | 0.002                             | 0.041             |
| N                                      | 23,243             | 20,748            | 23,243                          | 20,748            | 23,243                            | 20,748            |

**Table 7: Univariate comparison of own-bank funds and other funds**

This table presents univariate comparisons of fund characteristics (Panel A), fund costs (Panel B), and fund performance (Panel C) of own-bank mutual funds and other mutual funds. We restrict the sample to holdings in mutual funds of clients of banks that ban kickbacks. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Means of the subgroups are tested for equality using a standard t-test. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                                      | Own-bank<br>funds | Other funds | Difference   | t-value | N      |
|--------------------------------------|-------------------|-------------|--------------|---------|--------|
| <b>Panel A: Fund characteristics</b> |                   |             |              |         |        |
| Total net assets (CHF million)       | 1,226.22          | 2,395.64    | -1,169.42*** | -37.10  | 49,349 |
| Age (years)                          | 10.75             | 12.35       | -1.60***     | -14.37  | 49,349 |
| Launched after 2012 (d)              | 0.181             | 0.083       | 0.098***     | 32.50   | 49,349 |
| Equity (d)                           | 0.346             | 0.443       | -0.097***    | -22.19  | 49,303 |
| Fixed income (d)                     | 0.289             | 0.316       | -0.027***    | -6.43   | 49,303 |
| Balanced (d)                         | 0.280             | 0.072       | 0.208***     | 62.94   | 49,303 |
| <b>Panel B: Fund costs</b>           |                   |             |              |         |        |
| Expense ratio (%)                    | 1.22              | 1.24        | -0.02***     | -3.21   | 52,876 |
| Front-end load (%)                   | 3.10              | 3.19        | -0.09***     | -4.98   | 47,201 |
| Deferred load (%)                    | 0.76              | 0.49        | 0.28***      | 21.20   | 25,334 |
| <b>Panel C: Fund performance</b>     |                   |             |              |         |        |
| Morningstar rating (1-5)             | 3.20              | 3.55        | -0.35***     | -30.43  | 29,582 |
| Monthly return (%)                   | 0.35              | 0.37        | -0.02***     | -2.84   | 49,265 |
| Monthly alpha (%)                    | -0.11             | -0.02       | -0.09***     | -11.63  | 48,138 |

**Table 8: Univariate comparison of own-bank structured products and other structured products**

This table presents univariate comparisons of structured product characteristics (Panel A) and structured product costs (Panel B) of own-bank structured products and other structured products. We restrict the sample to holdings in structured products of clients of banks that ban kickbacks. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Means of the subgroups are tested for equality using a standard t-test. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                                                    | Own-bank<br>structured<br>products | Other<br>structured<br>products | Difference | t-value | N     |
|----------------------------------------------------|------------------------------------|---------------------------------|------------|---------|-------|
| <b>Panel A: Structured product characteristics</b> |                                    |                                 |            |         |       |
| Issuance volume (CHF million)                      | 207.72                             | 29.64                           | 178.08***  | 20.09   | 3,671 |
| Time to maturity (years)                           | 2.13                               | 2.33                            | -0.21***   | -3.40   | 4,058 |
| Participation (d)                                  | 0.340                              | 0.240                           | 0.099***   | 8.35    | 5,759 |
| Capital protection (d)                             | 0.154                              | 0.121                           | 0.033***   | 3.60    | 5,759 |
| Yield enhancement (d)                              | 0.343                              | 0.602                           | -0.258***  | -20.34  | 5,759 |
| Leverage (d)                                       | 0.163                              | 0.036                           | 0.126***   | 16.33   | 5,759 |
| <b>Panel B: Structured product costs</b>           |                                    |                                 |            |         |       |
| Expense ratio (%)                                  | 0.88                               | 0.79                            | 0.09**     | 1.99    | 625   |
| Dominated (d)                                      | 0.059                              | 0.032                           | 0.027***   | 2.82    | 1,849 |

**Table 9: Portfolio performance around bans on kickbacks**

This table presents the results from OLS regressions with client, bank, and time fixed effects. The dependent variable is either the portfolio return (Columns 1 and 2) or the portfolio alpha (Columns 3 and 4). The variable *Ban on kickbacks (d)* equals one after a bank bans kickbacks, and zero otherwise. The variables *Male (d)*, *Log(age)*, *Single (d)*, *Married (d)*, *Divorced (d)*, *Urban (d)*, *Rural (d)*, *Log(portfolio value)*, and *Log(# securities)* are used as controls. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the bank and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                          | Monthly portfolio return (%) |                   | Monthly portfolio alpha (%) |                     |
|--------------------------|------------------------------|-------------------|-----------------------------|---------------------|
|                          | (1)                          | (2)               | (3)                         | (4)                 |
| Ban on kickbacks (d)     | -0.036<br>(-1.39)            | -0.009<br>(-0.38) | -0.035*<br>(-1.83)          | -0.062**<br>(-2.04) |
| Client controls          | Yes                          | No                | Yes                         | No                  |
| Portfolio controls       | Yes                          | Yes               | Yes                         | Yes                 |
| Client fixed effects     | No                           | Yes               | No                          | Yes                 |
| Bank fixed effects       | Yes                          | Yes               | Yes                         | Yes                 |
| Year-month fixed effects | Yes                          | Yes               | Yes                         | Yes                 |
| Adj. R <sup>2</sup>      | 0.363                        | 0.503             | 0.228                       | 0.240               |
| N                        | 19,086                       | 12,168            | 19,080                      | 12,159              |

**Table 10: Cross-sectional analysis**

This table presents the results from OLS regressions with client, bank, and time fixed effects. The dependent variable is the portfolio share in different types of investments. The variable *Ban on kickbacks (d)* equals one after a bank bans kickbacks, and zero otherwise. The variables *Male (d)*, *Log(age)*, *Single (d)*, *Married (d)*, *Divorced (d)*, *Urban (d)*, *Rural (d)*, *Log(portfolio value)*, and *Log(# securities)* are used as controls. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the bank and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                                       | % own-bank funds     |                   |                      |                    |                      |                    |
|---------------------------------------|----------------------|-------------------|----------------------|--------------------|----------------------|--------------------|
|                                       | (1)                  | (2)               | (3)                  | (4)                | (5)                  | (6)                |
| Ban on kickbacks (d)                  | 57.846***<br>(3.67)  | 8.060<br>(0.88)   | 13.483***<br>(4.60)  | 6.329***<br>(2.83) | 8.150***<br>(3.46)   | 4.061**<br>(2.43)  |
| Log(portfolio value)                  | 0.146<br>(0.19)      | 1.440**<br>(2.31) | -1.920***<br>(-4.49) | 1.248**<br>(2.19)  | -1.488**<br>(-2.51)  | 1.415**<br>(2.27)  |
| Log(# securities)                     | -2.605**<br>(-2.13)  | -1.324<br>(-1.26) | -0.077<br>(-0.05)    | -0.479<br>(-0.50)  | -3.820***<br>(-2.79) | -1.698*<br>(-1.91) |
| Managed account (d)                   |                      |                   |                      |                    | 6.300<br>(0.64)      | -0.473<br>(-0.09)  |
| Ban (d) $\times$ Log(portfolio value) | -4.058***<br>(-3.10) | -0.290<br>(-0.43) |                      |                    |                      |                    |
| Ban (d) $\times$ # securities         |                      |                   | -0.449***<br>(-3.95) | -0.184*<br>(-1.97) |                      |                    |
| Ban (d) $\times$ Managed account (d)  |                      |                   |                      |                    | 1.085<br>(0.11)      | 6.449<br>(1.01)    |
| Client controls                       | Yes                  | No                | Yes                  | No                 | Yes                  | No                 |
| Portfolio controls                    | Yes                  | Yes               | Yes                  | Yes                | Yes                  | Yes                |
| Client fixed effects                  | No                   | Yes               | No                   | Yes                | No                   | Yes                |
| Bank fixed effects                    | Yes                  | Yes               | Yes                  | Yes                | Yes                  | Yes                |
| Year-month fixed effects              | Yes                  | Yes               | Yes                  | Yes                | Yes                  | Yes                |
| Adj. R <sup>2</sup>                   | 0.283                | 0.451             | 0.286                | 0.453              | 0.279                | 0.452              |
| N                                     | 19,223               | 12,363            | 19,223               | 12,363             | 19,223               | 12,363             |

**Table 11: Flows of own-bank mutual funds around bans on kickbacks**

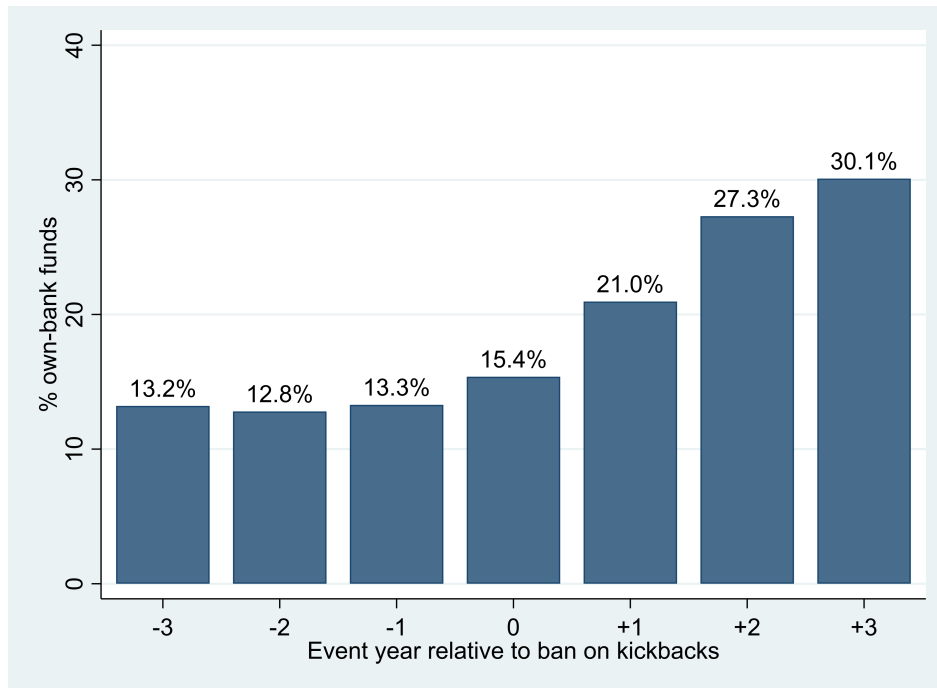
This table presents the results from OLS regressions with fund and time fixed effects. The dependent variable are the percentage monthly net flows of own-bank mutual funds. The variable *Ban on kickbacks (d)* equals one after a bank bans kickbacks, and zero otherwise. The variables *Log(total net assets)* and *Monthly return<sub>t-1</sub>* are used as controls. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the fund and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                          | Monthly net flows (%) |                   |
|--------------------------|-----------------------|-------------------|
|                          | (1)                   | (2)               |
| Ban on kickbacks (d)     | 1.480***<br>(7.04)    | 0.558**<br>(2.21) |
| Fund controls            | No                    | Yes               |
| Fund fixed effects       | No                    | Yes               |
| Year-month fixed effects | No                    | Yes               |
| Adj. R <sup>2</sup>      | 0.021                 | 0.173             |
| N                        | 28,808                | 28,673            |

## Figures

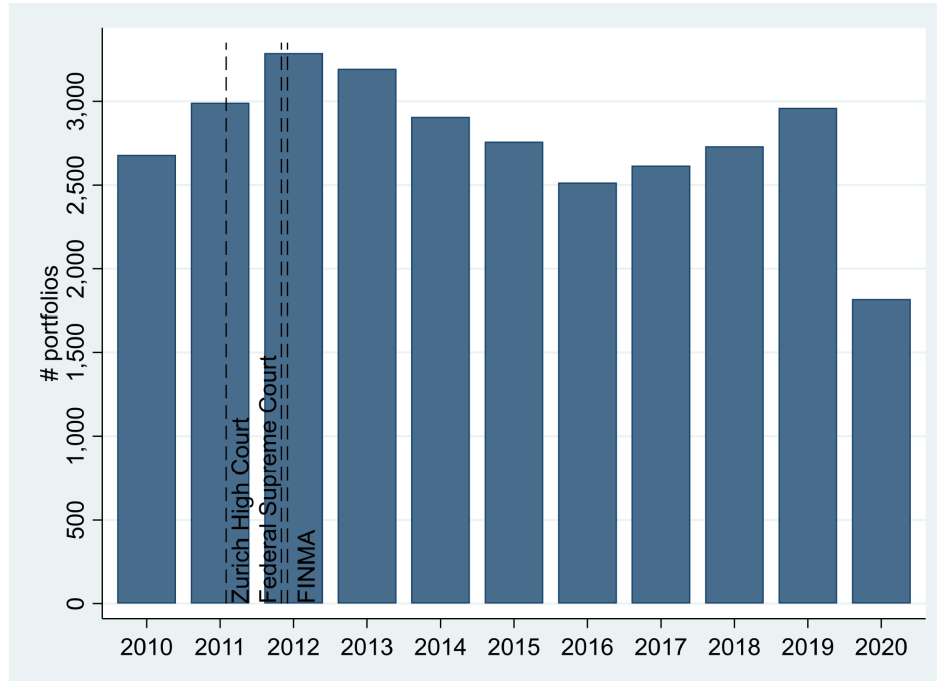
**Figure 1: Own-bank funds around bans on kickbacks**

This figure shows the average portfolio share of own-bank mutual funds around bans on kickbacks. Banks ban kickbacks in year  $t = 0$ .



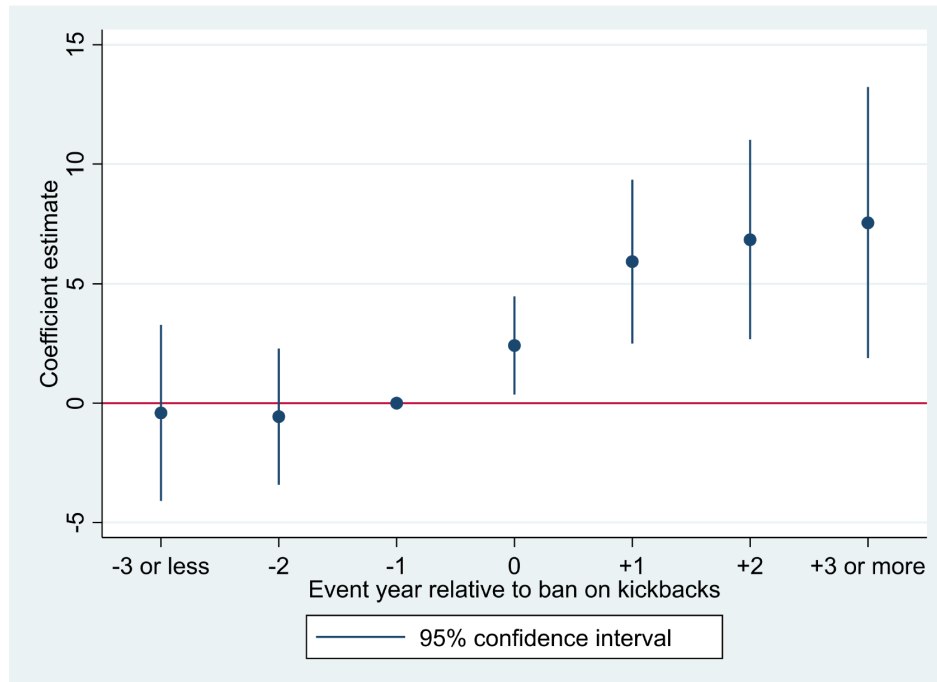
**Figure 2: Number of portfolios over time**

This figure shows the number of portfolio checks performed by our data provider by year.



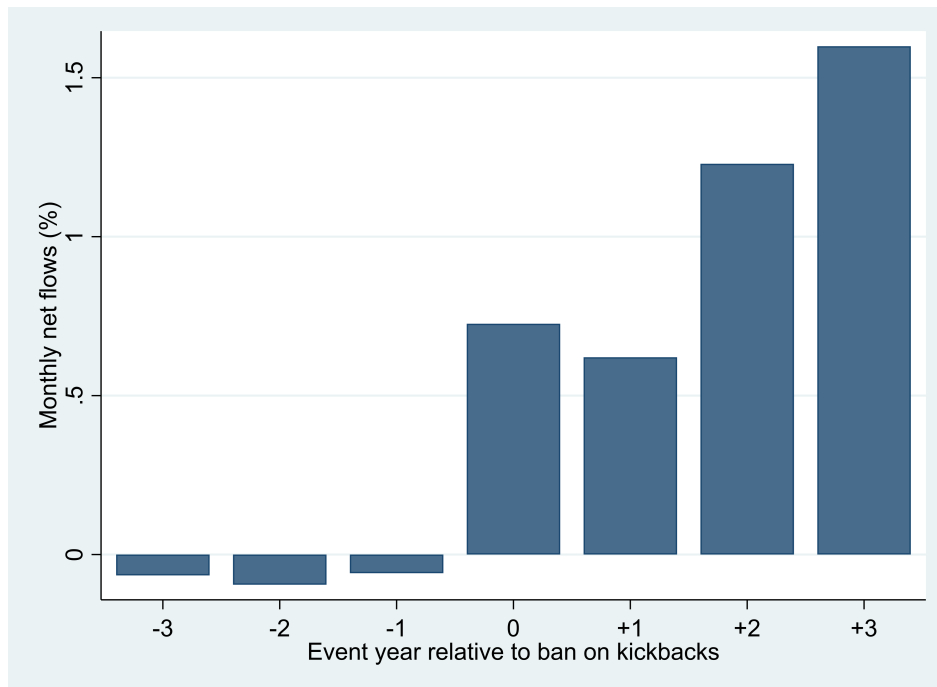
**Figure 3: Dynamics in own-bank funds around bans on kickbacks**

This figure shows the difference in the average portfolio share of own-bank mutual funds between the treatment group and the control group around bans on kickbacks, controlling for portfolio characteristics and including client fixed effects, bank fixed effects, and time fixed effects. Banks ban kickbacks in year  $t = 0$ . The figure shows point estimates together with 95% confidence intervals.



**Figure 4: Flows of own-bank funds around bans on kickbacks**

This figure shows average monthly net flows of own-bank mutual funds around bans on kickbacks. Banks ban kickbacks in year  $t = 0$ .



## Appendix A: Banks

This table provides an overview of the banks contained in our final sample.

|    | Bank                                    | # obser-<br>vations | % of<br>observa-<br>tions in<br>sample | Total<br>assets in<br>2020<br>(CHF<br>million) | % of<br>total<br>assets in<br>sample | Ban on<br>kickbacks (at<br>least in parts) | Source                                                                                                                 |
|----|-----------------------------------------|---------------------|----------------------------------------|------------------------------------------------|--------------------------------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 46 | 1 UBS                                   | 4,478               | 19.73%                                 | 767,586                                        | 26.63%                               | May 2013                                   | “Die Bank gewinnt immer”, <i>Neue Zürcher Zeitung</i> , July 15, 2013                                                  |
|    | 2 Raiffeisen                            | 3,135               | 13.81%                                 | 259,653                                        | 9.01%                                | June 2014                                  | “Retrozessionen: Jetzt wollen viele Banken vorbildlich sein”, <i>Tages-Anzeiger</i> , June 12, 2014                    |
|    | 3 Credit Suisse                         | 2,873               | 12.66%                                 | 799,041                                        | 27.72%                               | July 2014                                  | “Credit Suisse verzichtet auf Retrozessionen”, <i>Neue Zürcher Zeitung</i> , October 31, 2013                          |
|    | 4 Zürcher Kantonalbank                  | 2,220               | 9.78%                                  | 187,620                                        | 6.51%                                | No ban                                     | “ZKB 2012: Reingewinn sinkt um 22.8% auf 594 Mio; Bruttogewinn -17.2% auf 706 Mio”, <i>AWP</i> , February 8, 2013      |
|    | 5 Migros Bank                           | 1,306               | 5.76%                                  | 50,769                                         | 1.76%                                | February 2013                              | “CH Banken verzichten künftig bei Mandaten auf Retrozessionen”, <i>AWP</i> , February 4, 2013                          |
|    | 6 Berner Kantonalbank                   | 798                 | 3.52%                                  | 36,422                                         | 1.26%                                | November 2015                              | “Flucht nach vorne”, <i>Schweizer Bank</i> , November 20, 2015                                                         |
|    | 7 Bank Cler                             | 571                 | 2.52%                                  | 19,907                                         | 0.69%                                | July 2013                                  | “Bank Coop ohne Retrozessionen”, <i>Appenzeller Zeitung</i> , June 26, 2014                                            |
|    | 8 Valiant Bank                          | 569                 | 2.51%                                  | 33,093                                         | 1.15%                                | May 2015                                   | “Valiant vereinfacht ihre Vermögensberatung”, <i>AWP</i> , April 29, 2015                                              |
|    | 9 Luzerner Kantonalbank                 | 553                 | 2.44%                                  | 48,741                                         | 1.69%                                | February 2013                              | “LUKB/Retrozessionen: Kunden informiert – nur geringe Rückzahlungen erwartet”, <i>AWP</i> , February 5, 2013           |
|    | 10 Basellandschaftliche<br>Kantonalbank | 477                 | 2.1%                                   | 29,770                                         | 1.03%                                | January 2013                               | “BLKB 2012: Leicht höherer Gewinn – Zufrieden mit Swissquote-Kooperation”, <i>AWP</i> , March 1, 2013                  |
|    | 11 Aargauische Kantonalbank             | 466                 | 2.05%                                  | 31,777                                         | 1.1%                                 | January 2014                               | “Aargauische Kantonalbank leitet Retrozessionen weiter”, <i>AWP</i> , November 6, 2013                                 |
|    | 12 Neue Aargauer Bank                   | 422                 | 1.86%                                  | 23,644                                         | 0.82%                                | April 2014                                 | “NAB-CEO Bühlmann kündigt für April neue ‘Super-Dienstleistungspakete’ an”, <i>Aargauer Zeitung</i> , March 4, 2014    |
|    | 13 VZ Depotbank                         | 409                 | 1.8%                                   | 4,737                                          | 0.16%                                | No ban after<br>2012, but before           | “Banken kämpfen um Kickbacks”, <i>Sonntags Zeitung</i> , January 20, 2013                                              |
|    | 14 Basler Kantonalbank                  | 364                 | 1.6%                                   | 35,790                                         | 1.24%                                | October 2014                               | “Die BKB wird zur unabhängigen Beraterbank”, <i>AWP</i> , September 1, 2014                                            |
|    | 15 St. Galler Kantonalbank              | 340                 | 1.5%                                   | 38,354                                         | 1.33%                                | March 2013                                 | “Flucht nach vorne”, <i>Schweizer Bank</i> , November 20, 2015                                                         |
|    | 16 Bank Zweiplus                        | 301                 | 1.33%                                  | 506                                            | 0.02%                                | January 2015                               | “Fundstars ‘New Generation’: das Vergütungsmodell für die retrofreie Zukunft”, <i>Bank Zweiplus</i> , January 19, 2015 |
|    | 17 Banque Cantonale Vaudoise            | 247                 | 1.09%                                  | 52,278                                         | 1.81%                                | No ban                                     | “BCV 2012: Bruttogewinn stabil – Komfortable Eigenkapitalquote”, <i>AWP</i> , February 14, 2013                        |
|    | 18 Clientis Bank                        | 246                 | 1.08%                                  | 4,826                                          | 0.17%                                | Not available                              |                                                                                                                        |

|    |                                |     |       |               |               |                               |                                                                                                                |
|----|--------------------------------|-----|-------|---------------|---------------|-------------------------------|----------------------------------------------------------------------------------------------------------------|
| 19 | Zuger Kantonalbank             | 244 | 1.08% | 16,915        | 0.59%         | January 2015                  | “ZGKB-CEO: Kantonalbank für weiteres Wachstum gut aufgestellt”, <i>AWP</i> , January 26, 2016                  |
| 20 | Baloise Bank                   | 217 | 0.96% | 8,569         | 0.3%          | January 2015                  | “Jahresbericht 2015”, <i>Baloise Bank</i> , 2016                                                               |
| 21 | Bank Julius Bär                | 202 | 0.89% | 100,503       | 3.49%         | December 2013                 | “Schacher um Retros: Banken setzen auf Zermürbung”, <i>Handelszeitung</i> , January 15, 2014                   |
| 22 | Thurgauer Kantonalbank         | 196 | 0.86% | 28,707        | 1%            | February 2013                 | “Geschäftsbericht 2013”, <i>Thurgauer Kantonalbank</i> , 2014                                                  |
| 23 | Bank Vontobel                  | 166 | 0.73% | 21,898        | 0.76%         | No ban                        | “Retrozessionen; Weitere Banken zahlen”, <i>Beobachter</i> , March 8, 2013                                     |
| 24 | Graubündner Kantonalbank       | 157 | 0.69% | 31,195        | 1.08%         | February 2013                 | “GKB-CFO: Guidance in Tendenz ‘vorsichtig’ – Geldabflüsse im Offshore-Geschäft”, <i>AWP</i> , February 8, 2013 |
| 25 | Bank J. Safra Sarasin          | 148 | 0.65% | 24,986        | 0.87%         | January 2015                  | “Jahresbericht 2015”, <i>Bank J. Safra Sarasin</i> , 2016                                                      |
| 26 | Bank Linth LLB                 | 147 | 0.65% | 8,300         | 0.29%         | July 2014                     | “Retrozessionen: Jetzt wollen viele Banken vorbildlich sein”, <i>Tages-Anzeiger</i> , June 12, 2014            |
| 27 | Schwyzner Kantonalbank         | 125 | 0.55% | 21,426        | 0.74%         | January 2013                  | “Retrozessionen: Jetzt wollen viele Banken vorbildlich sein”, <i>Tages-Anzeiger</i> , June 12, 2014            |
| 28 | LGT Bank                       | 107 | 0.47% | 9,889         | 0.34%         | No ban                        | “Millionen warten auf die Bankkunden”, <i>Liechtensteiner Vaterland</i> , February 27, 2021                    |
| 29 | WIR Bank                       | 105 | 0.46% | 5,701         | 0.2%          | No ban                        | “Allgemeine Geschäftsbedingungen der WIR Bank Genossenschaft”, <i>WIR Bank</i> , January 1, 2022               |
| 30 | acervis Bank                   | 94  | 0.41% | 4,874         | 0.17%         | January 2014                  | “Retrozessionen; Weitere Banken zahlen”, <i>Beobachter</i> , March 8, 2013                                     |
| 31 | Hypothekarbank Lenzburg        | 80  | 0.35% | 5,923         | 0.21%         | March 2013                    | “Wenn das Bankdepot teurer wird”, <i>Toggenburger Tagblatt</i> , December 16, 2014                             |
| 32 | Banque Cantonale de Fribourg   | 79  | 0.35% | 26,714        | 0.93%         | Not available                 |                                                                                                                |
| 33 | Schaffhauser Kantonalbank      | 64  | 0.28% | 8,837         | 0.31%         | January 2014                  | “Geschäftsbericht 2013”, <i>Schaffhauser Kantonalbank</i> , 2014                                               |
| 34 | Rahn & Bodmer                  | 56  | 0.25% | Not available | Not available | March 2013                    | “Retrozessionen; Weitere Banken zahlen”, <i>Beobachter</i> , March 8, 2013                                     |
| 35 | Banque Pictet                  | 52  | 0.23% | 35,321        | 1.23%         | December 2012                 | “Schacher um Retros: Banken setzen auf Zermürbung”, <i>Handelszeitung</i> , March 15, 2014                     |
| 36 | Nidwaldner Kantonalbank        | 52  | 0.23% | 5,884         | 0.2%          | January 2017                  | “Jahresbericht 2015”, <i>Nidwaldner Kantonalbank</i> , 2016                                                    |
| 37 | Obwaldner Kantonalbank         | 52  | 0.23% | 5,519         | 0.19%         | January 2014                  | “Obwaldner KB im ersten Halbjahr mit gehaltenem Gewinn”, <i>AWP</i> , July 22, 2014                            |
| 38 | Banque Cantonale de Genève     | 51  | 0.22% | 27,335        | 0.95%         | No ban                        | “BCGE-CEO: Streben weiterhin Wachstum der Kundenvermögen um 1.9% jährlich an”, <i>AWP</i> , February 26, 2013  |
| 39 | Regiobank                      | 50  | 0.22% | 3,512         | 0.12%         | Not available                 |                                                                                                                |
| 40 | Reichmuth                      | 50  | 0.22% | Not available | Not available | Not available                 |                                                                                                                |
| 41 | Banque Lombard Odier           | 49  | 0.22% | 17,976        | 0.62%         | Not available                 |                                                                                                                |
| 42 | AEK Bank                       | 49  | 0.22% | 4,994         | 0.17%         | No ban after 2012, but before | “AEK Bank 1826: Neuorganisation stärkt Privatbankdienstleistungen”, <i>Presseportal</i> , February 3, 2010     |
| 43 | Banque Cantonale Neuchâteloise | 48  | 0.21% | 11,512        | 0.4%          | January 2014                  | “BCN im 1. Halbjahr mit leicht rückläufigem Bruttogewinn”, <i>AWP</i> , July 17, 2014                          |

|                                      |                      |        |       |           |       |               |                                                                                                                                                  |
|--------------------------------------|----------------------|--------|-------|-----------|-------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 44                                   | Glarner Kantonalbank | 47     | 0.21% | 7,049     | 0.24% | November 2015 | “Flucht nach vorne”, <i>Schweizer Bank</i> , November 20, 2015                                                                                   |
| 45                                   | Lienhardt            | 46     | 0.2%  | 1,066     | 0.04% | Not available |                                                                                                                                                  |
| 46                                   | Urner Kantonalbank   | 38     | 0.17% | 3,572     | 0.12% | January 2013  | “Geschäftsbericht 2013”, <i>Urner Kantonalbank</i> , 2014                                                                                        |
| 47                                   | VP Bank              | 38     | 0.17% | 2,298     | 0.08% | Not available |                                                                                                                                                  |
| 48                                   | Dreyfus              | 37     | 0.16% | 2,623     | 0.09% | Not available |                                                                                                                                                  |
| 49                                   | Bank EEK             | 37     | 0.16% | 1,719     | 0.06% | No ban        | “Informationen über Drittschädigungen”, <i>Bank EEK</i> , January, 2022                                                                          |
| 50                                   | Alpha Rheintal Bank  | 35     | 0.15% | 2,712     | 0.09% | January 2015  | “Alpha Rheintal Bank: Gewinn steigt 2015 um 9.2%, Dividende reduziert um Eigenmittel zu stärken”, <i>Schweizeraktien.net</i> , February 25, 2016 |
| Sample banks                         |                      | 22,098 |       | 2,823,031 |       |               |                                                                                                                                                  |
| All Swiss banks                      |                      |        |       | 3,346,142 |       |               |                                                                                                                                                  |
| Sample banks as % of all Swiss banks |                      |        |       | 84.37%    |       |               |                                                                                                                                                  |

## Appendix B: Variable descriptions

This table provides detailed descriptions of all variables used throughout the study.

| Variable                  | Description                                                                                                                                                        |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ban on kickbacks          |                                                                                                                                                                    |
| Ban on kickbacks (d)      | Dummy variable that equals one if a bank bans kickbacks, and zero otherwise                                                                                        |
| 1 year before (d)         | Dummy variable that equals one if a bank will ban kickbacks in one year (two years, three or more years), and zero otherwise                                       |
| 2 years before (d)        |                                                                                                                                                                    |
| ≤3 years before (d)       |                                                                                                                                                                    |
| 1 year after (d)          | Dummy variable that equals one if a bank has banned kickbacks one year ago (two years ago, three or more years ago), and zero otherwise                            |
| 2 years after (d)         |                                                                                                                                                                    |
| ≥3 years after (d)        |                                                                                                                                                                    |
| Client characteristics    |                                                                                                                                                                    |
| Male (d)                  | Dummy variable that equals one for male clients and zero for female clients                                                                                        |
| Age (years)               | Client's age (in years)                                                                                                                                            |
| Log(age)                  | $Ln(age)$                                                                                                                                                          |
| Single (d)                | Dummy variable that equals one for single clients, and zero otherwise                                                                                              |
| Married (d)               | Dummy variable that equals one for married clients, and zero otherwise                                                                                             |
| Divorced (d)              | Dummy variable that equals one for divorced clients, and zero otherwise                                                                                            |
| Urban (d)                 | Dummy variable that equals one for clients living in urban areas, and zero otherwise                                                                               |
| Rural (d)                 | Dummy variable that equals one for clients living in rural areas, and zero otherwise                                                                               |
| Portfolio characteristics |                                                                                                                                                                    |
| Managed account (d)       | Dummy variable that equals one for portfolios managed by the bank, and zero otherwise                                                                              |
| Financial wealth (CHF)    | Value of all portfolios the client holds at different banks (in Swiss Francs)                                                                                      |
| # portfolios per client   | Number of portfolios the client holds at different banks. If a client holds several portfolios at the same bank, these portfolios are combined into one portfolio  |
| Portfolio value (CHF)     | Value of the portfolio (in Swiss Francs). If a client holds several portfolios at the same bank, these portfolios are combined into one portfolio                  |
| Log(portfolio value)      | $Ln(portfolio\ value)$                                                                                                                                             |
| # securities              | Number of different securities contained in the portfolio. If a client holds several portfolios at the same bank, these portfolios are combined into one portfolio |
| Log(# securities)         | $Ln(\# securities)$                                                                                                                                                |

|                                |                                                           |
|--------------------------------|-----------------------------------------------------------|
| % own-bank funds               | <i>Value of all securities in the respective category</i> |
| % other funds                  | <i>Portfolio value</i>                                    |
| % own-bank ETFs/index funds    |                                                           |
| % other ETFs/index funds       |                                                           |
| % own-bank structured products |                                                           |
| % other structured products    |                                                           |
| % stocks                       |                                                           |
| % bonds                        |                                                           |
| % cash                         |                                                           |
| % other                        |                                                           |

### Performance characteristics

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monthly portfolio return (%) | Average monthly raw return of the portfolio over the next 12 months. We assume the portfolio weights to remain constant over time. Raw returns are net of expenses (but before loads). Cash is assumed to earn the risk-free rate. This variable is winsorized at the 1% level and the 99% level                                                                                                                                                                                                                                                                                                                                                                 |
| Monthly portfolio alpha (%)  | Average monthly alpha of the portfolio over the next 12 months. Portfolio alphas are calculated using a six-factor model. The six-factor model includes a Swiss stock market factor, a European stock market factor, a European size factor, a European value factor, a European momentum factor, and a European bond market factor. We use equity factors from AQR. The Markit iBoxx EUR Overall Index serves as the bond market factor. We assume the portfolio weights to remain constant over time. Alphas are net of expenses (but before loads). Cash is assumed to earn the risk-free rate. This variable is winsorized at the 1% level and the 99% level |

### Fund characteristics

|                                |                                                                                                                            |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Total net assets (CHF million) | Fund's total net assets (in million Swiss Francs)                                                                          |
| Log(total net assets)          | $Ln(\text{total net assets})$                                                                                              |
| Age (years)                    | Fund's age (in years)                                                                                                      |
| Launched after 2012 (d)        | Dummy variable that equals one for funds launched after 2012, and zero otherwise                                           |
| Equity (d)                     | Dummy variable that equals one for funds that are assigned to the global broad category "Equity", and zero otherwise       |
| Fixed income (d)               | Dummy variable that equals one for funds that are assigned to the global broad category "Fixed income", and zero otherwise |
| Balanced (d)                   | Dummy variable that equals one for funds that are assigned to the global broad category "Allocation", and zero otherwise   |

### Fund costs

|                    |                                     |
|--------------------|-------------------------------------|
| Expense ratio (%)  | Share class' expense ratio          |
| Front-end load (%) | Share class' maximum front-end load |
| Deferred load (%)  | Share class' maximum deferred load  |

### Fund performance

|                          |                                                                                                                                                                                          |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Morningstar rating (1-5) | Share class' Morningstar rating                                                                                                                                                          |
| Monthly return (%)       | Average monthly raw return of the share class over the next 12 months. Raw returns are net of expenses (but before loads). This variable is winsorized at the 1% level and the 99% level |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monthly alpha (%) | Average monthly alpha of the share class over the next 12 months. Alphas are calculated using a six-factor model. The six-factor model includes a Swiss stock market factor, a European stock market factor, a European size factor, a European value factor, a European momentum factor, and a European bond market factor. We use equity factors from AQR. The Markit iBoxx EUR Overall Index serves as the bond market factor. Alphas are net of expenses (but before loads). This variable is winsorized at the 1% level and the 99% level |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Fund flows

|                       |                                                                                                                                                           |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monthly net flows (%) | $\frac{\text{Monthly net flows}}{\text{Total net assets at the end of the previous month}}$ This variable is winsorized at the 1% level and the 99% level |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Structured product characteristics

|                               |                                                                                    |
|-------------------------------|------------------------------------------------------------------------------------|
| Issuance volume (CHF million) | Structured product's issuance volume (in million Swiss Francs)                     |
| Time to maturity (years)      | Structured product's time to maturity at issuance (in years)                       |
| Participation (d)             | Dummy variable that equals one for participation products, and zero otherwise      |
| Capital protection (d)        | Dummy variable that equals one for capital protection products, and zero otherwise |
| Yield enhancement (d)         | Dummy variable that equals one for yield enhancement products, and zero otherwise  |
| Leverage (d)                  | Dummy variable that equals one for leverage products, and zero otherwise           |

#### Structured product costs

|                   |                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Expense ratio (%) | Structured product's expense ratio. This variable is only available for tracker certificates                                                                                                                                                                                                                                                                                |
| Dominated (d)     | Dummy variable that equals one for dominated products, and zero otherwise. This variable is only available for reverse convertibles. We categorize a reverse convertible as dominated if there exists another reverse convertible with the same price, issued on the same date, on the same underlying(s), with the same time to maturity but with a strictly higher coupon |

#### Bank characteristics

|                            |                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------|
| # portfolios per bank      | Number of portfolios our data provider evaluates per bank each month                                         |
| Assets                     | Bank's total assets at the end of the current fiscal year                                                    |
| Log(assets)                | $\ln(\text{assets})$                                                                                         |
| Growth in assets (%)       | Bank's growth in total assets from the end of the previous fiscal year to the end of the current fiscal year |
| Equity                     | Bank's common equity at the end of the current fiscal year                                                   |
| Equity-to-assets ratio (%) | $\frac{\text{Equity}}{\text{Assets}}$                                                                        |
| Net income                 | Bank's net income in the current fiscal year                                                                 |
| Return on assets (%)       | $\frac{\text{Net income}}{\text{Assets}}$                                                                    |
| Non-interest income        | Bank's non-interest income in the current fiscal year                                                        |
| Revenue                    | Bank's total revenue in the current fiscal year                                                              |
| % non-interest income      | $\frac{\text{Non-interest income}}{\text{Revenue}}$                                                          |

## Appendix C: Additional tests

**Table A1: Number of portfolios around bans on kickbacks**

This table presents the results from OLS regressions with bank and time fixed effects. The dependent variable is the number of portfolios our data provider evaluates per bank and month. The variable *Ban on kickbacks* ( $d$ ) equals one after a bank bans kickbacks, and zero otherwise. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the bank and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                          | # portfolios per bank |                   |
|--------------------------|-----------------------|-------------------|
|                          | (1)                   | (2)               |
| Ban on kickbacks ( $d$ ) | 0.421<br>(0.41)       | -0.092<br>(-0.23) |
| Bank fixed effects       | No                    | Yes               |
| Year-month fixed effects | No                    | Yes               |
| Adj. $R^2$               | 0.000                 | 0.406             |
| N                        | 5,352                 | 5,352             |

**Table A2: Dynamics in own-bank products around bans on kickbacks – approach of Sun and Abraham (2021)**

This table presents the results from OLS regressions with client, bank, and time fixed effects. The dependent variable is the portfolio share in different types of investments. The variable *Year of ban (d)* equals one in the year in which a bank bans kickbacks, and zero otherwise. The variable *2 years before (d)* ( $\leq 3$  years before (d)) equals one if a bank will ban kickbacks in two years (three or more years), and zero otherwise. The variable *1 year after (d)* (*2 years after (d)*,  $\geq 3$  years after (d)) equals one if a bank has banned kickbacks one year ago (two years ago, three or more years ago), and zero otherwise. The omitted category is the variable *1 year before (d)* that equals one if a bank will ban kickbacks in one year, and zero otherwise. The variables *Male (d)*, *Log(age)*, *Single (d)*, *Married (d)*, *Divorced (d)*, *Urban (d)*, *Rural (d)*, *Log(portfolio value)*, and *Log(# securities)* are used as controls. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. We employ the approach of Sun and Abraham (2021) and use banks that do not ban kickbacks after the court ruling of 2012 as control group. Standard errors are double-clustered at the bank and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

|                           | % own-bank funds    |                    | % own-bank ETFs/<br>index funds |                      | % own-bank<br>structured products |                    |
|---------------------------|---------------------|--------------------|---------------------------------|----------------------|-----------------------------------|--------------------|
|                           | (1)                 | (2)                | (3)                             | (4)                  | (5)                               | (6)                |
| $\leq 3$ years before (d) | 1.554<br>(1.22)     | 1.083<br>(0.55)    | 2.144***<br>(3.72)              | 0.747<br>(1.41)      | -0.557***<br>(-3.15)              | -0.369<br>(-1.37)  |
| 2 years before (d)        | 1.139<br>(1.56)     | 0.133<br>(0.10)    | 0.945***<br>(3.99)              | 0.471<br>(1.15)      | -0.121<br>(-1.13)                 | -0.014<br>(-0.06)  |
| Year of ban (d)           | 3.388***<br>(4.01)  | 2.098*<br>(1.83)   | -1.762***<br>(-2.81)            | -1.432**<br>(-2.46)  | 0.408<br>(1.44)                   | 0.528*<br>(1.75)   |
| 1 year after (d)          | 8.718***<br>(4.74)  | 6.577***<br>(4.67) | -3.585**<br>(-2.19)             | -3.022***<br>(-2.72) | 1.281**<br>(2.39)                 | 1.438***<br>(3.05) |
| 2 years after (d)         | 14.503***<br>(4.77) | 8.600***<br>(3.50) | -5.137*<br>(-2.00)              | -2.961**<br>(-2.30)  | 1.707**<br>(2.29)                 | 1.344**<br>(2.42)  |
| $\geq 3$ years after (d)  | 16.153***<br>(3.84) | 8.992***<br>(2.85) | -5.953**<br>(-2.05)             | -3.646*<br>(-1.96)   | 2.354**<br>(2.32)                 | 1.787**<br>(2.63)  |
| Client controls           | Yes                 | No                 | Yes                             | No                   | Yes                               | No                 |
| Portfolio controls        | Yes                 | Yes                | Yes                             | Yes                  | Yes                               | Yes                |
| Client fixed effects      | No                  | Yes                | No                              | Yes                  | No                                | Yes                |
| Bank fixed effects        | Yes                 | Yes                | Yes                             | Yes                  | Yes                               | Yes                |
| Year-month fixed effects  | Yes                 | Yes                | Yes                             | Yes                  | Yes                               | Yes                |
| Adj. R <sup>2</sup>       | 0.284               | 0.455              | 0.191                           | 0.187                | 0.063                             | 0.138              |
| N                         | 19,223              | 12,363             | 19,223                          | 12,363               | 19,223                            | 12,363             |

**Table A3: Portfolio performance around bans on kickbacks – banks that use products without kickbacks vs. banks that forward kickbacks**

This table presents the results from OLS regressions with client, bank, and time fixed effects. The dependent variable is either the portfolio return (Columns 1 and 2) or the portfolio alpha (Columns 3 and 4). The variable *Ban on kickbacks (d)* equals one after a bank bans kickbacks, and zero otherwise. The variables *Male (d)*, *Log(age)*, *Single (d)*, *Married (d)*, *Divorced (d)*, *Urban (d)*, *Rural (d)*, *Log(portfolio value)*, and *Log(# securities)* are used as controls. In Panel A, we restrict the sample to banks that use products without kickbacks. In Panel B, we restrict the sample to banks that forward kickbacks. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the bank and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

**Panel A: Banks that use products without kickbacks**

|                          | Monthly portfolio return (%) |                     | Monthly portfolio alpha (%) |                     |
|--------------------------|------------------------------|---------------------|-----------------------------|---------------------|
|                          | (1)                          | (2)                 | (3)                         | (4)                 |
| Ban on kickbacks (d)     | -0.069**<br>(-2.64)          | -0.076**<br>(-2.36) | -0.075***<br>(-3.05)        | -0.133**<br>(-2.79) |
| Client controls          | Yes                          | No                  | Yes                         | No                  |
| Portfolio controls       | Yes                          | Yes                 | Yes                         | Yes                 |
| Client fixed effects     | No                           | Yes                 | No                          | Yes                 |
| Bank fixed effects       | Yes                          | Yes                 | Yes                         | Yes                 |
| Year-month fixed effects | Yes                          | Yes                 | Yes                         | Yes                 |
| Adj. R <sup>2</sup>      | 0.375                        | 0.523               | 0.240                       | 0.222               |
| N                        | 13,305                       | 6,340               | 13,303                      | 6,336               |

**Panel B: Banks that forward kickbacks**

|                          | Monthly portfolio return (%) |                 | Monthly portfolio alpha (%) |                   |
|--------------------------|------------------------------|-----------------|-----------------------------|-------------------|
|                          | (1)                          | (2)             | (3)                         | (4)               |
| Ban on kickbacks (d)     | -0.027<br>(-0.76)            | 0.019<br>(0.36) | -0.012<br>(-1.07)           | -0.039<br>(-0.61) |
| Client controls          | Yes                          | No              | Yes                         | No                |
| Portfolio controls       | Yes                          | Yes             | Yes                         | Yes               |
| Client fixed effects     | No                           | Yes             | No                          | Yes               |
| Bank fixed effects       | Yes                          | Yes             | Yes                         | Yes               |
| Year-month fixed effects | Yes                          | Yes             | Yes                         | Yes               |
| Adj. R <sup>2</sup>      | 0.363                        | 0.510           | 0.252                       | 0.197             |
| N                        | 7,008                        | 2,054           | 7,004                       | 2,052             |

**Table A4: Portfolio performance around bans on kickbacks – robustness tests**

This table presents the results from OLS regressions with client, bank, and time fixed effects. The dependent variable is either the portfolio return (Columns 1 and 2) or the portfolio alpha (Columns 3 and 4). The variable *Ban on kickbacks (d)* equals one after a bank bans kickbacks, and zero otherwise. The variables *Male (d)*, *Log(age)*, *Single (d)*, *Married (d)*, *Divorced (d)*, *Urban (d)*, *Rural (d)*, *Log(portfolio value)*, and *Log(# securities)* are used as controls. In Panel A, we compute the portfolio performance over the next 24 months. In Panel B, we compute the portfolio performance assuming time-varying portfolio weights. In Panel C, we compute the portfolio performance excluding cash holdings. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the bank and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

**Panel A: Portfolio performance over the next 24 months**

|                          | Monthly portfolio return (%) |                   | Monthly portfolio alpha (%) |                    |
|--------------------------|------------------------------|-------------------|-----------------------------|--------------------|
|                          | (1)                          | (2)               | (3)                         | (4)                |
| Ban on kickbacks (d)     | -0.041*<br>(-1.79)           | -0.021<br>(-0.93) | -0.032**<br>(-2.46)         | -0.032*<br>(-1.96) |
| Client controls          | Yes                          | No                | Yes                         | No                 |
| Portfolio controls       | Yes                          | Yes               | Yes                         | Yes                |
| Client fixed effects     | No                           | Yes               | No                          | Yes                |
| Bank fixed effects       | Yes                          | Yes               | Yes                         | Yes                |
| Year-month fixed effects | Yes                          | Yes               | Yes                         | Yes                |
| Adj. R <sup>2</sup>      | 0.197                        | 0.416             | 0.127                       | 0.203              |
| N                        | 19,087                       | 12,168            | 19,086                      | 12,168             |

**Panel B: Portfolio performance with time-varying portfolio weights**

|                          | Monthly portfolio return (%) |                   | Monthly portfolio alpha (%) |                    |
|--------------------------|------------------------------|-------------------|-----------------------------|--------------------|
|                          | (1)                          | (2)               | (3)                         | (4)                |
| Ban on kickbacks (d)     | -0.035<br>(-1.36)            | -0.008<br>(-0.32) | -0.034*<br>(-1.78)          | -0.061*<br>(-1.92) |
| Client controls          | Yes                          | No                | Yes                         | No                 |
| Portfolio controls       | Yes                          | Yes               | Yes                         | Yes                |
| Client fixed effects     | No                           | Yes               | No                          | Yes                |
| Bank fixed effects       | Yes                          | Yes               | Yes                         | Yes                |
| Year-month fixed effects | Yes                          | Yes               | Yes                         | Yes                |
| Adj. R <sup>2</sup>      | 0.369                        | 0.506             | 0.219                       | 0.233              |
| N                        | 19,086                       | 12,168            | 19,080                      | 12,159             |

**Panel C: Portfolio performance without cash**

|                          | Monthly portfolio return (%) |                   | Monthly portfolio alpha (%) |                    |
|--------------------------|------------------------------|-------------------|-----------------------------|--------------------|
|                          | (1)                          | (2)               | (3)                         | (4)                |
| Ban on kickbacks (d)     | -0.029<br>(-1.20)            | -0.000<br>(-0.01) | -0.049<br>(-1.56)           | -0.100*<br>(-1.87) |
| Client controls          | Yes                          | No                | Yes                         | No                 |
| Portfolio controls       | Yes                          | Yes               | Yes                         | Yes                |
| Client fixed effects     | No                           | Yes               | No                          | Yes                |
| Bank fixed effects       | Yes                          | Yes               | Yes                         | Yes                |
| Year-month fixed effects | Yes                          | Yes               | Yes                         | Yes                |
| Adj. R <sup>2</sup>      | 0.521                        | 0.547             | 0.237                       | 0.206              |
| N                        | 17,083                       | 9,549             | 17,070                      | 9,530              |

**Table A5: Portfolio performance of Swiss clients and German clients over time**

This table presents the results from OLS regressions with bank and time fixed effects. The dependent variable is either the portfolio return (Column 1) or the portfolio alpha (Column 2). The variable *Switzerland (d)* equals one for clients of banks located in Switzerland, and zero otherwise. The variable *Post 2012 (d)* equals one after the ruling of the Swiss Federal Supreme Court in October 2012, and zero otherwise. The variables *Male (d)*, *Log(age)*, *Single (d)*, *Married (d)*, *Divorced (d)*, *Urban (d)*, *Rural (d)*, *Log(portfolio value)*, and *Log(# securities)* are used as controls. In Panel A, we compute the portfolio performance over the next 12 months. In Panel B, we compute the portfolio performance over the next 24 months. In Panel C, we compute the portfolio performance assuming time-varying portfolio weights. In Panel D, we compute the portfolio performance excluding cash holdings. Appendix A provides an overview of the banks contained in our final sample. Appendix B provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the bank and year-month level. t-statistics are provided in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

**Panel A: Portfolio performance over the next 12 months**

|                                 | Monthly portfolio return (%) | Monthly portfolio alpha (%) |
|---------------------------------|------------------------------|-----------------------------|
|                                 | (1)                          | (2)                         |
| Switzerland (d)                 | 0.268**<br>(2.19)            | 0.256<br>(1.53)             |
| Switzerland (d) × Post 2012 (d) | -0.284***<br>(-3.80)         | -0.190*<br>(-1.95)          |
| Client controls                 | Yes                          | Yes                         |
| Portfolio controls              | Yes                          | Yes                         |
| Bank fixed effects              | Yes                          | Yes                         |
| Year-month fixed effects        | Yes                          | Yes                         |
| Adj. R <sup>2</sup>             | 0.361                        | 0.252                       |
| N                               | 20,593                       | 20,585                      |

**Panel B: Portfolio performance over the next 24 months**

|                                 | Monthly portfolio return (%) | Monthly portfolio alpha (%) |
|---------------------------------|------------------------------|-----------------------------|
|                                 | (1)                          | (2)                         |
| Switzerland (d)                 | 0.154***<br>(2.92)           | -0.005<br>(-0.11)           |
| Switzerland (d) × Post 2012 (d) | -0.113*<br>(-1.73)           | -0.022<br>(-0.38)           |
| Client controls                 | Yes                          | Yes                         |
| Portfolio controls              | Yes                          | Yes                         |
| Bank fixed effects              | Yes                          | Yes                         |
| Year-month fixed effects        | Yes                          | Yes                         |
| Adj. R <sup>2</sup>             | 0.198                        | 0.118                       |
| N                               | 20,594                       | 20,592                      |

**Panel C: Portfolio performance with time-varying portfolio weights**

|                                        | Monthly portfolio return (%) | Monthly portfolio alpha (%) |
|----------------------------------------|------------------------------|-----------------------------|
|                                        | (1)                          | (2)                         |
| Switzerland (d)                        | 0.263**<br>(2.30)            | 0.248<br>(1.57)             |
| Switzerland (d) $\times$ Post 2012 (d) | -0.288***<br>(-3.79)         | -0.207**<br>(-2.06)         |
| Client controls                        | Yes                          | Yes                         |
| Portfolio controls                     | Yes                          | Yes                         |
| Bank fixed effects                     | Yes                          | Yes                         |
| Year-month fixed effects               | Yes                          | Yes                         |
| Adj. R <sup>2</sup>                    | 0.367                        | 0.244                       |
| N                                      | 20,593                       | 20,585                      |

**Panel D: Portfolio performance without cash**

|                                        | Monthly portfolio return (%) | Monthly portfolio alpha (%) |
|----------------------------------------|------------------------------|-----------------------------|
|                                        | (1)                          | (2)                         |
| Switzerland (d)                        | 0.045<br>(0.52)              | 0.362*<br>(1.68)            |
| Switzerland (d) $\times$ Post 2012 (d) | -0.198**<br>(-2.50)          | -0.276**<br>(-2.45)         |
| Client controls                        | Yes                          | Yes                         |
| Portfolio controls                     | Yes                          | Yes                         |
| Bank fixed effects                     | Yes                          | Yes                         |
| Year-month fixed effects               | Yes                          | Yes                         |
| Adj. R <sup>2</sup>                    | 0.518                        | 0.262                       |
| N                                      | 18,460                       | 18,445                      |

**Figure A1: Account fees over time**

This figure shows annual securities account fees of the five largest banks in our sample over time.

