Investor Protections and Stock Market Participation:

An Evaluation of Financial Advisor Oversight*

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October 2022

Abstract

We examine a regulatory change in Canada that increased the oversight of financial advisors in five of its ten provinces. This increased oversight of mutual fund dealers reduced households' use of financial advice and their mutual fund holdings. In lieu of mutual funds, households increased their cash holdings. The results are consistent with a decline in delegated investing caused by a negative shock to the supply of advice. The estimates suggest that having a financial advisor is important in facilitating stock market participation. Investments and advisory channels not affected by the regulation—direct equity and bond holdings and advisors affiliated with banks—show no effects, reducing concerns about confounding economic and financial market changes.

1 Introduction

Does regulatory oversight of financial advisors increase households' participation in financial markets? The conventional view is that oversight is necessary to root out fraud, rent seeking and incompetence by financial intermediaries. These frictions act like taxes that raise the cost of delegated investing. Regulations that protect investors by eliminating these costs can therefore increase both delegation and market participation. Policymakers throughout the world have increasingly adopted this point of view. On the heels of the global financial crisis of 2008, many countries expanded oversight of financial advisors and strengthened investor protections with the aim of restoring individual investors' faith in financial markets.[1]

Economists, however, have been less sanguine than policymakers about the benefits of such interventions. Inderst and Ottaviani (2009) highlight the dual role of advisors in prospecting for customers and making investment recommendations. They point out that well-intended regulations governing advisors' recommendations can backfire by inefficiently reducing advisors' efforts to locate new customers. Berk and Van Binsbergen (2022) caution that even uncontroversial rules aimed at eliminating fraud may reduce consumer welfare by muting competition for customers among the honest and skilled professionals who remain in the market. Further, there is the issue of industry self-regulation. Investor protections are commonly implemented through regulatory bodies formed and governed by industry participants themselves. Though advisors and brokerage firms argue that they are well-aligned with customers in eliminating bad behavior, a long literature in economics, beginning with Friedman and Kuznets (1945), urges skepticism. Occupational licensing and supervision can be used to restrict entry and diminish competition (DeMarzo, Fishman, and

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[1]Burke and Hung (2015) summarize the strengthening of protections between 2010 and 2015 in the United Kingdom, Australia, Germany, Singapore, and the European Union. In 2016 the Department of Labor issued its "conflict of interest rule" aimed at strengthening fiduciary duty for advisors and brokers serving retirement investors.

[Hagerty 2005](#)), resulting in increased rents for incumbent firms at the cost of consumers. The common theme of these prognoses is that well-intended regulations can inefficiently reduce the supply of advice, resulting, in equilibrium, in too little client delegation and market participation.

Missing from both policy discussions and the economics literature have been serious empirical evaluations of how investor protections affect households' use of financial advice and participation in financial markets. RAND economists commissioned in 2015 to provide an independent review to the U.S. Department of Labor comment that "[d]espite sweeping regulatory changes in many countries after the financial crisis, there has been little rigorous research investigating the impact of these changes" ([Burke and Hung 2015](#)). We address this shortcoming by studying the advent of rules overseeing investment advisors and brokers in Canada in the early 2000s.

In 2001, five of the ten provincial securities regulators in Canada strengthened investor protections by recognizing the recently formed Mutual Fund Dealers Association (MFDA) as a self-regulatory organization. This recognition came with a mandate: all agents who distribute mutual funds obtain MFDA membership and follow its rules. The MFDA's self-stated objective was to "[regulate] the operations, standards of practice and business conduct of its Members and their representatives with a view to enhancing investor protection and strengthening public confidence in the Canadian mutual fund industry."[2] MFDA oversight had three key ingredients: 1) to establish new standards for business conduct; 2) to impose capital requirements, compliance protocols, and client reporting and disclosure; 3) to create a regulator to supervise and enforce those rules by identifying, punishing, and remedying fraud by its members. The MFDA membership requirement affected a significant share of the retail investment market, as more than half of Canadian households use mutual fund dealers for advice ([Mutual Fund Dealers Association 2012](#)).

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[2]See https://mfda.ca/about/our-history/object/.

The differential adoption of MFDA regulation across provinces provides a unique natural experiment for measuring the causal impact of investor protections. Such regulations typically apply at the federal level and are often instituted in response to significant market downturns such as the global financial crisis. Pre-post event studies of reactive regulations are therefore confounded with financial market developments. Likewise, cross-country evaluations pose the problem of disentangling the effects of investor protection policies from broader legal, institutional, and cultural differences across countries. In the case of MFDA adoption, however, we are able to go a step further. We measure the changes in delegation and market participation in the adopting provinces relative to the changes observed contemporaneously in the non-adopting provinces. We implement this differences-in-differences analysis using data on more than 30,000 households from the Canadian Financial Monitor (CFM), a survey that provides information on households' asset holdings, use of financial advice, demographics, and economic circumstances.

We present two key findings. First, MFDA adoption leads households to reduce their use of financial advisors. We estimate a 3-percentage-point reduction in the likelihood of using a financial advisor, a substantial decline relative to the baseline rate of 35% prior to the regulatory change. This estimated decline is specific to non-bank advisors who were subject to the MFDA membership requirement. In a placebo test, we estimate a substantially smaller and statistically insignificant decline in the use of bank advisors, whose regulatory oversight did not change through this period. Second, we find that MFDA adoption leads to lower rates of financial market participation. We estimate a 2.3-percentage-point decline in the probability of holding mutual fund investments following the regulatory change. In lieu of mutual fund investments, the affected investors invest in low-risk assets like checking and savings accounts or savings bonds, but do not exhibit any change

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in direct stock investments. The latter null finding fits with the nature of the regulatory change, as MFDA oversight affects brokers of mutual funds but has no direct bearing on brokers of stock investments. The net effect on asset allocation is a statistically significant 1.7-percentage point decline in equity share for the average household.

Our interpretation is that the MFDA investor protections caused a negative shock to the supply of advice. Public comments submitted to securities regulators and media coverage at the time suggested that the registration requirement would significantly reduce the supply of financial advisors and leave existing advisors unwilling to serve low-wealth clients. This inward shift in the supply of financial advice leads fewer households to use advisors. Without advice, these households become less likely to take risk, leaving their savings in low-risk accounts rather than purchasing mutual funds. Consistent with the view espoused by Gennaioli, Shleifer, and Vishny (2015), our findings imply that advisors play a crucial role in inducing households to take equity risk. If we combine the estimated changes in equity share and the use of advice as in a Wald estimator from two-stage least squares, we infer that being advised increases the marginal households' allocation to equities by 50%.

We supplement our analysis with administrative data from two large mutual fund dealers to measure the changes in advisors' clienteles and profits around the MFDA requirement. These data detail client demographics alongside precise fees that the advisors charge. We find the advisors charge lower percentage fees following the MFDA requirement but more than offset this decrease by serving wealthier clients. The revenue associated with the average new client increases by 50% after the introduction of the requirement. This shift is the result from the significant change in the advisors' clienteles towards older, wealthier households. These estimates do not support the

hypothesis that the MFDA regulation's only effect was to lower competition.

Our study relates most directly to three recent papers that also evaluate the regulatory oversight of financial advisors. Charoenwong, Kwan, and Umar (2019) show that misconduct complaints increased when the oversight of some investment advisors transitioned from the Securities and Exchange Commission (SEC) to state regulators with fewer resources in 2012. Their findings suggest that fraud and other forms of advisor misconduct increase when regulatory supervision and enforcement weaken. Their analysis sheds important light on how regulatory supervision affects misconduct, but does not consider broader impacts on investors' willingness to delegate to advisors and participate in financial markets, as we do. Both Bhattacharya, Illanes, and Padi (2020) and Egan, Ge, and Tang (2020) show that advisors recommend higher quality annuities when subject to fiduciary duty. Bhattacharya et al. (2020) also find that imposing fiduciary duty caused the exit of broker-dealers but no change in overall sales volume. Using a calibrated model they conclude that fiduciary duty improves welfare by raising the quality of advice without causing significant declines in the quantity of advice. Our findings on mutual fund industry oversight differ from their findings for participation in the annuity market. There are two contextual differences worth noting. It may be that oversight improves the quality of advice more for complex and opaque annuities than it does for mutual funds. Second, the incremental compliance costs may differ between the addition of fiduciary obligation and the broader regulatory change we examine.

Our study also contributes to the literature on investor protections and financial market development started by La Porta, Lopez-de Silanes, Shleifer, and Vishny (2000). This literature focuses on the protections granted to investors through corporate and bankruptcy law, but does not examine rules governing individual investors' interactions with advisors and brokers. Studies of financial

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advisors have documented misconduct and evaluated specific frictions affecting the supply of advice such as conflicts of interest.

Finally, studies of stock market participation highlight a variety of individual factors impacting market participation. We show that a random assignment of advisors to households would have a greater effect on participation than many of the variables, such as wealth, age, and education, that prior research finds to correlate the most with the participation decision. This result dovetails with the finding in Foerster, Linnainmaa, Melzer, and Previtero (2017) about the causal effect of the identity of one's advisor. We find that whether or not a household has an advisor is the single most important determinant of stock market participation; Foerster et al. find that, conditional on being advised, *who* the advisor is is the most important determinant of how much risk the household takes.

2 Financial Advisor Oversight in Canada

Canada's oversight of investment sales and brokerage is decentralized, with each province maintaining its own securities commission and regulations. Similar to the regulatory landscape in the U.S., Canada's provincial regulators leave some industry policing to two self-regulatory organizations formed and governed by industry participants. The Mutual Fund Dealers Association (MFDA) oversees firms that exclusively distribute mutual funds and the Investment Industry Regulatory Organization of Canada (IIROC) oversees firms distributing a broader range of investments, including stocks, bonds and options as well as mutual funds. MFDA-registered advisors are an important component of retail investment distribution in Canada. Its 90 members employ more than 78,000 advisors and handle accounts worth C$600B, or nearly 50% of retail investment assets.

After its establishment in June 1998, the draft rules and bylaws were originally posted for comment on June 16, 2000. An overview of public comments given by dealers and advisors reveals particular concern about the compliance costs associated with financial reporting and capital costs created by the minimum capital standards (Mutual Fund Dealers Association 2000). The MFDA was first recognized as a regulatory body by five of the ten Canadian provinces between February and November 2001. These "recognition orders" entail a legal mandate that all mutual fund dealers in those provinces become members of the MFDA and abide by its rules. The provinces thereby implicitly adopted the MFDA rules when they issued a recognition order. As described below, we use the staggered and differential recognition of the MFDA across provinces as a natural experiment for studying changes in financial advisor oversight.

2.1 The Mutual Fund Dealers Association

The formation of the MFDA created a significant regulatory apparatus. The organization's by-laws and membership rules both exceed fifty pages. The by-laws lay out the organization's constitution and basic operating procedures, including its governance structure, membership application process, authority to conduct examinations, and disciplinary process. The institution conducts a full on-site compliance examination at each dealer every three years. It also has fairly broad authority to conduct targeted investigations, whether initiated by a client complaint, a request by a provincial securities commission, or a Board of Directors decision. In 2019 the MFDA opened 450 enforcement cases. To support its activities, the MFDA collects membership fees, which amounted to C$33M in 2020.

2.1.1 MFDA Rules

The MFDA rules establish financial and operational requirements for dealer firms as well as standards of business conduct for dealers and their employees. For example, in terms of advertising and sales, mutual fund dealers should engage in "honest and accurate" advertisement. The financial requirements impose minimum capital levels ranging from C\$25,000 to C\$200,000, with greater requirements for firms that hold client cash. Firms must file unaudited financial reports monthly and audited reports annually. Operationally, the most substantive rules relate to proper segregation of any cash and securities held on behalf of clients. Finally, firms are responsible for their employees' actions: they must have internal supervision via a compliance officer and must maintain insurance against loss through a dishonest or fraudulent act.

MFDA rules contain two main provisions regarding standards of conduct in giving advice. The "know your client" provisions require advisors' due diligence in learning essential facts about their clients' risk tolerance and investment objectives. They also require advisors to ensure the suitability of investments relative to the clients' objectives and to update know-your-client information annually. The second set of provisions relates to advisors' duty to look after clients' interests. The rules do not impose fiduciary obligation—by which advisors must put client interests ahead of their own when conflicting—but instead require advisors to "deal fairly, honestly and in good faith with clients" and not engage in conduct detrimental to the public interest (Canadian Securities Administrators 2012). The constraints on advisor behavior in this dimension are therefore weaker than those imposed on registered investment advisors in, for example, the United States.

The MFDA rules do not allow discretionary trading by an advisor on his or her clients' behalf. Rather, the advisor takes orders from clients or makes recommendations on which the client has

ultimate decision power.

3 Data

3.1 Canadian Financial Monitor

Our primary data source is the Canadian Financial Monitor (CFM), a household survey conducted

by the survey and market research firm Ipsos-Reid. The survey began in January 1999 and was

designed to provide information about households' personal banking, investments, credit and insur-

ance choices. It collects data on roughly 12,000 households per year through monthly interviews.

The survey was designed for use as a repeated cross-section, though some households complete

multiple interviews, typically at an annual frequency. We use the sample weights provided the

CFM in our analyses to compute estimates for a nationally representative population.

In addition to providing a wealth of demographic information, each interview measures house-

holds' asset holdings, including checking and savings accounts, stocks, bonds and mutual funds (by

asset class). Most importantly for our analysis, the survey collects also information on the use of

financial advisors. We use the data from January 1999 through January 2004.

Table 1 displays descriptive statistics for Canadian households. In Panel A we report these

statistics for all households; in Panel B we divide the sample based on the use of a financial advisor

and report statistics related to asset holdings. The average household in the sample, by survey

design, closely resembles the average Canadian household. The average individual is 47 years old;

two-thirds are homeowners; and one-third have a financial advisor. The average household income

is C$49,384 and has assets totaling C$61,992.

We examine households' investment decisions in two ways. First, we measure the fraction of

assets held in cash, bonds, and equity. Second, we compute the fraction of households that own mutual funds, stocks, bonds, and guaranteed investment certificates (GICs), and how many have either a checking or savings account. Mutual funds are the vehicles potentially affected through the increased oversight in the form of the MFDA. In Panel A's sample of all households, 36% own mutual funds, 18% own stocks directly, and 20% own bonds directly. Approximately a third of households own GICs, which are term deposits offered by banks. Almost all households report having either a checking or savings account.

In computing households' allocations into equity as a share of their assets, we count equity mutual funds, direct holdings as equity, and 50% of balanced funds as equity. Bonds consist of bond mutual funds, direct bond holdings and 50% of balanced mutual funds. The average household has 50% in cash and approximately one-quarter each in bonds and equity.

Panel B shows that both participation decisions and asset allocations vary significantly with the use of advisors: allocations into cash decrease (from 51% to 33%) and those in bonds and equity increase when we move from the unadvised to the advised households. The average unadvised household allocates 24% to equity; this average is 36% for the advised households. Participation is higher across the board for advised households: advised households are more likely to hold not only mutual funds but also stocks and bonds directly along with GICs.

These summary statistics indicate that advised households lean away from cash and towards riskier equity and fixed-income assets. However, given that advised households can differ from unadvised households in many dimensions, it is unclear to what extent these differences arise due to client preferences or advisor input. Risk-taking in financial markets may depend on the same (unobserved) household characteristics that influence the demand for advice.

3.2 Administrative Data from Canadian Mutual Fund Dealers

Our other data source is administrative data on client investments and advisory relationships provided by two Canadian Mutual Fund Dealers. These two firms advise just under C$20 billion of assets, representing approximately 5% of the MFDA sector.

Both dealers provided the detailed transaction history and demographic information on a total of 488,806 clients and their advisors. These two firms are the same as those examined in Linnainmaa, Melzer, and Previtero (2021). Whereas Linnainmaa et al. (2021) measure the extent to which advisors follow their own advice in their own trading, we use these data to supplement the CFM data to measure changes in fees and advisors' clienteles following this MFDA requirement. Panel C of Table 1 displays descriptive for the clients of these mutual fund dealers.

4 Identification strategy

We identify the effect of increase oversight of financial advisors by using a regulatory change in the early 2000s that reduced the supply of financial advisors. Specifically, as of February 2001 mutual fund dealers and their agents, such as financial advisors, in Ontario, British Columbia, and Saskatchewan were required to register with the Mutual Fund Dealers Association of Canada (MFDA) and follow the rules and regulations of the MFDA. This requirement expanded to Alberta in April 2001 and to Nova Scotia in November 2001. The remaining five Canadian provinces remained free of this (or comparable) regulation until February 2004 when Quebec created its own regulatory authority. Figure 1 shows the five provinces that introduced the MFDA requirement in 2001, and the five provinces that remained, at the time, free of comparable oversight. Because the regulatory change did not apply to dealers and advisors outside the five provinces, we can use the

residents of the other provinces as a comparison group that was not affected by the registration requirement.

The introduction of the MFDA registration requirement meant that dealers who wished to remain in business were now subject to more stringent regulatory standards, including minimum capital levels as well as audit and financial reporting requirements. These changes appeared to reduce the supply of advisors, and in that way constitute a shock to households' use of advisors that is unrelated to their demand for advisory services.

We assess the impact of the registration requirement through the following differences-in-differences model:

$$y_{ipt} = \alpha + \beta \text{ MFDA Required}_{pt} + \gamma_p + \delta_t + \boldsymbol{\eta} \boldsymbol{X}_{it} + \varepsilon_{ipt}, \tag{1}$$

in which subscripts i, p, and t index households, provinces, and months between January 1999 and January 2004, respectively, and γ_p and δ_t denote province and time fixed effects. We set the dependent variable y_{ipt} to measure either the households' use of financial advisors (Section 5.1) as well as their participation and allocation decisions (Sections 5.2 and 5.3). The variable *MFDA Required* is an indicator variable that takes the value of zero in all provinces that do not implement the MFDA requirement before January 2004, zero in the provinces that implement this requirement up to the date of the implement, and one in these provinces for dates after the implementation. This implementation date is February 2001, April 2001, or November 2001 depending on the province. This coefficient on this variable measures the impact of the registration requirement over time. The vector $\boldsymbol{X}_{it}$ contains household-level controls for income, home ownership, education, age and

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retirement status.[3] In some versions of the model we include province and month fixed effects to control more flexibly for differences over time and across provinces. To estimate the model we use weighted least squares, incorporating survey weights from the CFM to provide regression estimates that reflect a nationally representative sample. We cluster the observations by province in calculating Huber-White standard errors.

5 Results

5.1 Use of Financial Advisors following the MFDA Regulation

We first estimate the impact of the registration requirement on households' use of financial advisors. Table 2 reports the regression estimates from three models in which the dependent variable is an indicator for whether the household uses a financial advisor. In the first two regressions we consider the use of *any* financial advisors; in the third regression, we limit the analysis to the use of bank advisors. This regression constitutes a falsification test because advisors affiliated with banks were not affected by the MFDA registration requirement.

The unconditional probability of using an advisor is 34.7%. The estimates in the first two regressions suggest that the registration requirement had a statistically and economically significant effect on the use of financial advisors. The point estimates, which differ in the inclusion of the household controls $\boldsymbol{X}_{it}$, place the marginal effect of the MFDA requirement between -2.7% and -3.2%. The point estimates translate into a proportional decrease of roughly 10%. In each case, the

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[3]Ipsos-Reid codes household income as a categorical variable, and we use indicator variables that represent these categories as controls. We control flexibly for the age of the head of household with indicator variables for 16 five-year age bins covering ages 20 to 100. We code education based on the maximum level of education of the head of household and spouse, and include indicators for each of four categories: high school diploma or less, some college, college degree, and graduate degree.

coefficient is statistically significant at the 1% level.[4] The substantial increase in R^2 accompanying the inclusion of these controls shows that income, home ownership, education, age and retirement status substantially correlate with the demand for advisory services.

The estimated effect in the third regression, in which the dependent variable is about the use of *bank* advisors, is closer to zero at -0.7% and statistically insignificant. The introduction of the MFDA requirement therefore did not significantly alter the use financial bank-affiliated advisors. This finding is consistent with these advisors falling outside the increased regulatory oversight brought on by MFDA.[5]

The MFDA registration requirement plausibly reduced the supply of financial advisors. We emphasize that the use of advisors could have remained unchanged despite this reduction in supply: the advisors remaining in the market following the increase in oversight—both those affiliated with mutual fund dealers and banks—could have picked up the slack and taken in more customers. The estimates in Table 2 suggest that they did not: the *use* of advisors in the affected provinces fell following the introduction of the registration requirement.

5.2   Participation in Financial Markets

In Table 3 we estimate reduced-form regressions to assess the effect that the MFDA requirement has on financial market participation. The dependent variables in these regressions are indicator variables. In the first regression, for example, the indicator variable takes the value of one if the household owns any mutual funds and zero otherwise.

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[4]Clustering with relatively few groups (Canada has ten provinces) provides noisy estimates of standard errors and may lead to overstating the statistical significance of regression coefficients. When we correct for this potential issue by using the wild cluster bootstrap procedure proposed by Cameron, Gelbach, and Miller (2008), we estimate similar, in fact slightly tighter, confidence intervals around the point estimate for β.

[5]In Figure 2 we plot the estimated effects in event time around the introduction of the MFDA requirement for advisors affected by this regulation and for bank-affiliated advisors.

The MFDA requirement, which only affects advisors affiliated with mutual fund dealers, should have a direct effect only on the ownership of mutual funds. That is, because the affected advisors do not directly advise on direct stock and bond investments and do not offer GICs, the participation in *non*-mutual fund segments of financial markets provides another falsification test.

The introduction of the MFDA requirement significantly reduces participation in financial markets through mutual fund ownership. The point estimate is -2.3% for all mutual funds, but almost all of this effect is due to equity mutual funds for which the point estimate is -2.2%. Both of these estimates are statistically significant at the 1% level. The estimates suggest that the increased oversight, by limiting the use of financial advisors, feeds to decrease participation in financial markets. Although this change affects investments in *all* mutual funds, the effect is more pronounced for equity mutual funds. The reason is that advised investors hold significantly more equity mutual funds than bond mutual funds (Foerster, Linnainmaa, Melzer, and Previtero 2017). Increased oversight of advisors affiliated with mutual fund dealers therefore reduces *stock market* participation as well. We assess the economic magnitude of this effect in Section 5.4.

Similar to how bank-affiliated advisors remain outside the scope of the MFDA requirement, so do the investment products offered by these bank advisors. The estimates in the non-mutual funds columns of Table 3 show that the introduction of the MFDA has no statistically significant effect outside mutual funds. Household participation in financial markets through the direct ownership of stocks and bonds remains unchanged after the introduction of the MFDA requirement. Although there could be a substitution effect—an advised household could sell all its direct stock holdings and replace them with equity mutual funds—the estimates suggest that such a substitution effect

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is at best weak.[6]

5.3 Allocation Decisions

Table 4 shows that the MFDA requirement significantly affects households' portfolio compositions. In Panel A we examine the proportions households hold in cash, bonds, and equities before and after the MFDA registration requirement. These categories are the same as those reported in Table 1.

The MFDA requirement significantly alters households' asset allocations: the equity shares decrease by an average of −1.7% in provinces affected by the regulation vis-à-vis those unaffected. This estimate is statistically significant at the 1% level. This 1.7%-decrease is offset by increases in the cash (1%) and bond (0.7%) balances. The estimates indicate that even though the MFDA requirement pertains only to mutual fund holdings, the resulting changes in investments significantly alter investors' portfolios through the adding-up constraint.

5.4 Two-stage Least Squares and the Economic Magnitudes

The reduced-form regressions in Tables 3 and 4 measure the average treatment effect (ATE) of the oversight regulation. In this section we estimate the average effect of the treatment on the treated (ATT) to assess the economic magnitudes of an increase in regulatory oversight. To identify the ATT, we assume that the regulation affects only the financial decisions of those individuals that, at the margin, will now forgo financial advice. We estimate a two-stage least squares model in which the key explanatory variable is the household's use of financial advisor, instrumented by the

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[6]In Figure 2 we plot the estimated effect in event time around the introduction of the MFDA requirement for the decision to hold mutual funds. In Figure A1 in the Appendix we plot these estimated effects for the equity mutual fund ownership and for direct stock ownership.

regulatory change:

$$\text{Use Advisor}_{ipt} \;=\; \alpha_1 + \beta_1 \text{MFDA Required}_{pt} + \gamma_{1p} + \delta_{1t} + \boldsymbol{\eta}_1 \boldsymbol{X}_{it} + \varepsilon_{1ipt}, \tag{2}$$

$$y_{ipt} \;=\; \alpha_2 + \beta_2 \widehat{\text{Use Advisor}}_{ipt} + \gamma_{2p} + \delta_{2t} + \boldsymbol{\eta}_2 \boldsymbol{X}_{it} + \varepsilon_{2ipt}. \tag{3}$$

Each regression includes both household-level controls as well as province and month fixed effects. The first-stage regression is the same regression as that reported in column 1 of Table 2. It provides an estimate of each household's predicted probability of using an advisor ($\widehat{\text{Use Advisor}}_{ipt}$), allowing for variation due to the MFDA Required$_{pt}$ instrumental variable. The second-stage regression uses this predicted probability to provide an estimate of advisors' impact on financial decisions.

We report the estimates from this analysis in Table 5. We first investigate the effect of financial advisors on participation. Financial advisors increase the likelihood of owing any mutual funds by 72.4 percentage points (SE = 18.1%). This economically large effect is not entirely unexpected: MFDA regulation targets mutual fund dealers and, therefore, if it reduces the use of financial advisors, the effect should be the most pronounced in the ownership of mutual funds. Because of the large magnitude of this effect, and because many mutual funds are equity mutual funds, the use of advisors also has a causal effect on stock market participation. As in Table 3, our measure of stock market participation includes not only the mutual-fund channel affected by the MFDA requirement, but also direct stockholdings (a channel unaffected by the MFDA requirement). Advisors increase stock market participation by 43.9 percentage points (SE = 21.3%).

We also investigate the effects of financial advisors on asset allocations. Having a financial advisor increases the share of risky (equity) assets by 52.3 percentage points (SE = 16.4%). This

increase in risky assets comes from similar reductions in the safer assets, cash and bonds. Financial advisors in fact reduce investments in cash and equivalent assets by 31.3 percentage points (SE = 14.0%) and in bonds by 21.1 percentage points. These estimates and their statistical significance are consistent with the reduced-form estimates reported in Tables 3 and 4; the incremental information in Table 5 is that the IV estimates measure the marginal effect of having an advisor rather than the marginal effect of the MFDA regulation.

We report the ordinary-least squares estimates next to the IV estimates. The difference between the IV and OLS estimates measures the extent to which the use of financial advisors is endogenous. For example, if the use of financial advisors is independent of all household characteristics and preferences, the IV and OLS estimates should, on average, be close to each other. The main endogeneity concern that we address with the IV regression is the possibility that the households who are more likely to participate in the financial markets are also more likely to seek financial advice. That is, these households would participate to the same extent with or without financial advisors. If so, the OLS estimates for the marginal effect would overstate the advisors' causal effect on participation.

In Table 5, however, for both the participation decisions (mutual funds and equities) and for the share of assets invested in equities, the IV estimate is *larger*, not smaller, than the OLS estimate. The difference between the two estimators suggests that advisor use indeed correlates with the error term in the OLS regression but that the direction of the effect is the opposite from that hypothesized above. The downward bias in the OLS estimate suggests that individuals who are comfortable holding mutual funds and risky assets even when left on their own appear to be less likely to solicit an advisor's input. Or, conversely, financial advisors appear to be key in getting

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households to take financial risks. It is the households who are reluctant to enter financial markets on their own who are disproportionately more likely to enter the market *only* when accompanied by an advisor. This evidence is consistent with the model of financial advisors as money doctors who mitigate clients' anxieties (Gennaioli, Shleifer, and Vishny 2015).

In the context of the MFDA oversight regulation, the evidence in Table 5 suggests that the effect of losing an advisor is more severe exactly for those clients who might need advisors the most to overcome their reluctance to take equity risk.

5.5 Robustness test: Matched differences-in-differences analysis

The analyses in Tables 2, 3, and 4 implicitly assume that the households in the treated provinces are not different from those in the control provinces in ways that would bias the differences-in-differences estimates. Although we have no reason to suspect that this would be the case, we repeat these analyses in a matched difference-in-difference framework.

In Table A1 we kernel match the treated and control groups using propensity-score weights.[7] We match households in these two groups by income, education, age, homeownership, and retirement status. The goal of this analysis is to evaluate whether the results from the non-matched analysis are sensitive to any differences in these characteristics that also correlate with the use of advisors and the asset allocation decisions. Table A1 shows that the remaining differences between the two groups are economically small.

Tables A2, A3, and A4 show, one at a time, that the matched differences-in-differences estimates are close to our main estimates. We find, for example, that (1) the estimated effect of the MFDA requirement for the use of advisors is now -3.5% (SE = 1.1%), which slightly exceeds the estimate

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[7]See Heckman, Ichimura, and Todd (1997, 1998).

of -2.7% (SE = 0.7%) in Table 2; (2) the estimated effect on the ownership of any mutual funds is -3.5% (SE = 0.6%), which also slightly exceeds the estimate of -2.3% (SE = 0.7%) in Table A3; and (3) the estimated effect on the proportion of assets allocated into equities is -2.0% (SE = 0.6%), which is similar to the estimate of -1.7% (SE = 0.5%) in Table 4. In short, these matched sample estimates give no indication that the main tests are sensitive to the differences in the socio-demographic characteristics of the households residing in the treated and control provinces.

5.6 Participation following the MFDA Regulation Conditional on Client Assets

The estimates in Table 5 suggest that the effects of the MFDA regulation on stock market participation may depend on client characteristics: if individuals who are less likely to participate when left on their own are more likely to seek financial advice, then the regulation may have a greater impact on those with *unconditionally* lower participation rates. Mankiw and Zeldes (1991), Vissing-Jørgensen (2003), and Van Rooij, Lusardi, and Alessie (2011), and many others, find that wealth correlates positively with stock market participation. If so, we would expect the effects of the MFDA regulation on participation to depend on the level of household assets.

In Table 6 we modify the analyses of the use of advisors (Table 2) and the participation decision (Table 3) by adding the interaction between the level of household assets and the MFDA requirement. The econometric models are otherwise the same differences-in-differences specifications as in the earlier analyses.

In the first column the dependent variable is an indicator variable for the use of advisors. The slope on the direct effect, *Assets Below Median*, is -15.7% and statistically highly significant. This estimate indicates that households with fewer assets are less likely to have financial advisors. Although we estimate the MFDA requirement to have a different effect on the wealthy and poor

households, the difference in the effects, -1%, is just 1.4 standard errors away from zero. That is, we cannot reject the null hypothesis that the wealthy and poor households lose advisors (or fail to find new advisors) at the same intensity following the MFDA requirement.[8]

In the remaining columns we measure the effects of the MFDA requirement on the participation decisions conditional on household assets. *Assets Below Median* is significantly negative in the regressions in which the dependent variable measures the ownership of mutual funds and equities. The last column, however, shows that, *conditional* on owning equities, low-wealth households' risky shares are higher.

Consistent with the hypothesis that the MFDA requirement should affect low-wealth households more, the estimated interaction between the MFDA requirement and the low-assets indicator variable is significantly negative in the participation regressions. That is, the MFDA requirement has a pronounced effect of lowering the stock market participation rate among low-wealth households. In fact, with this interaction, the direct effect of the MFDA requirement—which measures the regulation's effect on the high-wealth households—is negative but statistically insignificant in the "any equities" regressions and marginally significant in the "any mutual funds" regression.

How is the estimated interaction for the MFDA requirement and low assets statistically significant in the asset ownership regressions, but not in the use-of-advisors analysis? The net effect on the participation decision following the MFDA requirement depends on two channels: (1) the change in the use of advisors and (2) the reliance on advisors when making participation decisions. Even if the MFDA requirement caused both the wealthy and poor households to lose—or, from the perspective of as-of-yet-unadvised households, not gain—advisors at the same intensity, the effect

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[8]The economic magnitude suggested by the point estimates is large, with the MFDA requirement having a $1.0/2.5 = 40\%$ larger effect on the use of advisors by households with fewer assets. In Table 8 we estimate this difference using the larger administrative data set in which we can observe the flow of *new* clients and find an economically large and statistically highly significant effect.

on participation could still be large: it would occur if wealthy households are likely to participate even when not guided by advisors. Indeed, this is precisely the effect indicated by the differences between the IV and OLS coefficients in Table 3.

6   Changes in Fees and Advisors' Clienteles following the MFDA Regulation

The benefit of the Canadian Financial Monitor data, which we have used so far, is that it includes both the advised and unadvised households, a feature crucial for drawing inferences about the effects of the MFDA requirement on the use of financial advisors and stock market participation. The downside of these data is that they do not consistently track the same households over time nor keep track of who their financial advisors, if any, are. If the MFDA requirement decreases the number of financial advisors, as the estimates in Table 2 indicate, some previously advised households will go unadvised and some households who would find advise (if advisors remained more plentiful) remain unadvised.

In this section we use administrative data from the two MFDA dealers described in Section 3.2 to measure changes in the fees that clients pay and advisors' clienteles following the onset of the MFDA regulation.

6.1   Changes in Percentage and Dollar Fees

In Table 7 we measure changes in client fees around the MFDA regulation. We measure fees both as a fraction of the client assets under management (first three columns) and as the average dollar fee per client. We focus on clients that the advisors begin advising either before or after the MFDA

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regulation goes into effect. For each investor who enters the sample, we compute the average percentage or dollar fee over the first year. The fees in the first column are inclusive all the costs that accrue to the investor: the estimate includes management expense ratios, front-end loads, and back-end loads, and we adjust for any savings that advisors sometimes pass on their clients from sales commissions. In the second column we measure, more narrowly, the value-weighted average management expense ratio (MER) charged by the funds that investors hold. In the third column, we first standardize MERs by computing, each month, the percentile rank of each fund's MER relative to all other funds in the same asset class.

The estimates in the first column show that, before the MFDA requirement, the average fee paid by clients is 2.49%. This estimate is consistent with studies that find that, in global comparisons, Canadian mutual funds have been among the most expensive. Khorana, Servaes, and Tufano (2009), for example, report an asset-weighted average fee of 2.56% for Canadian equity mutual funds. The slope on the *MFDA Required* variable is −40 basis points. This estimate indicates that the adoption of the MFDA requirement lowered the percentage fee that the typical client pays on their advice. The finding that advisors charge their new clients lower fees is not sensitive to how we measure fees. The estimates based on the more narrow MER-only measures are similar to the first regression that measures the all-in fees that clients pay.

The dollar fee regression in the last column shows that the decrease in percentage fees is more than fully offset by the increase in client assets. Whereas the typical client that joins before the regulation pays $492.9 for advice over the first year of the advisor-client relationship, this dollar fee increases by $271.9 for clients who join after the regulation. Because dollar fee equals, by definition, the client fee times the client assets under management, these estimates indicate that

the post-regulation clients have significantly larger portfolios than those who join pre-regulation.

The estimates in the first three columns do not support the hypothesis that the MFDA regulation's only effect was to lower competition. In the Berk and Van Binsbergen (2022) economy, for example, fees would increase because even competition from "charlatans" is beneficial (from the viewpoint of fees) in that it forces the good actors to compress their fees. These estimates *are* consistent with the idea that advisors have a fixed cost for servicing clients. An advisor with a large number of low-wealth clients would have to charge higher percentage fees to attain the same level of profitability as an advisor with a smaller number of high-wealth clients. If the regulation allowed advisors to increase the size of the average client, advisors may have responded to the regulation by lowering the fees.

6.2   Changes in Client Assets

The estimates in Table 8 confirm that the post-regulation clients' investment portfolios are significant larger than those of the pre-regulation clients'. The average portfolio value increases by two-thirds from C$18,872 in the pre-MFDA period to C$31,459 in the post-MFDA period. This difference in portfolio values is statistically highly significant.

The second column quantifies this shift by comparing the portfolio values of the post-MFDA clients to the distribution of the portfolio values in the pre-MFDA sample. In this regression the dependent variable takes the value of one if the client's portfolio value is below the median portfolio value of the pre-MFDA client. This regression shows that the fraction of clients with low portfolio values decreases by 21.1 percentage points (SE = 4.9 pp).

This regression measures, from the viewpoint of advisors, the same "use of advisors" effect as we measured in Table 6 from the households' viewpoint. In the survey data low-asset households go

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unadvised at 40% higher rate than the wealthier households after the MFDA requirement, but this estimate is not statistically significantly different from zero. The difference in Table 8 is that, in addition to the larger number of observations, we measure the portfolio values of *new* clients. That is, we ask whether the new clients that advisors begin to serve following the MFDA requirement are wealthier than the ones that they attracted prior to the requirement.

How can advisors attract wealthier clients post-MFDA regulation, and why did not they do so pre-MFDA regulation? To see the mechanism, suppose that we have an economy in which all households are advised: there are many advisors and every household is matched with one. If we now introduce a regulation that randomly removes some advisors, some households will be newly unadvised. The remaining advisors can look at this pool of the unadvised and pick and choose: which of these potential clients are the most profitable at the margin? The existing advisors should compete for the wealthy clients, walking down the list of unadvised clients until they reach the point of saturation. In this world the advisors who remain in business after the regulation would thus sign up wealthier-than-average clients.[9]

The finding that the low-wealth clients are the ones who go unadvised after the introduction of the MFDA regulation is not entirely an unforeseen consequence. This possibility was one of the issues raised in the public comments submitted to securities regulators before the MFDA regulation was finalized; the stated concern was that the registration requirement would decrease the supply of advisors and leave existing advisors unwilling to serve low-wealth clients. The patterns of participation and the use of advisors in Tables 6 and 8 support this prediction.

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[9]The actual data are more complicated than this stylized example. The decrease in the number of advisors affects both existing and potential clients: (1) when an advisor exists the business, her clients either go unadvised or find a new advisor and (2) a client who is about to seek financial advice is less likely to find an advisor if many advisors have exited the business. The argument above about the surviving advisors having the luxury of choice, however, remains.

6.3 Changes in Client Demographics

Table 9 shows that the MFDA regulation has an effect on advisors' clienteles that extends beyond the portfolio sizes. In this analysis we use the information from the Know-Your-Client forms that advisors collect from their clients.

The economically and statistically largest shift in demographics relates to client age: the average client who joins post-MFDA regulation is 6.7 years older than the pre-MFDA client. The fraction of clients who are above the early retirement age doubles from 5.3 to 10.8 percentage points.[10] The differences in gender, financial knowledge, and net worth are neither statistically nor economically significant. Although there is an effect on salary—which is coded on a six-point scale—this effect is intertwined with age: the average salaries decrease because a larger number of the post-MFDA clients are retirees.

7   Conclusions

We study the effect of investor protections on households' financial market participation using Canadian provinces' 2001 adoption of new rules governing mutual fund distributors. Households residing in the five provinces that adopt the regulations reduce their holdings of mutual funds and the use of financial advice compared to households in other provinces with unchanged investor protections. Our estimates are consistent with regulatory costs causing a negative shock to the supply of advice, leading to fewer delegated purchases of mutual funds. In lieu of mutual funds, households in provinces adopting the investor protections hold larger balances in low-risk, low-return bank deposits and savings bonds.

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[10]In the Canada Pension Plan, individuals can retire with full benefits at age 65. However, they have an option of retiring at age 60 in exchange for permanently reduced benefits.

Viewed together, our findings imply that advice is important in facilitating financial market participation and risk-taking. Households' low rate of stock market participation has been a puzzle due to the significant return premium that the non-participants forgo. Our analysis suggests that burdensome regulation can exacerbate underparticipation, particularly for lower-wealth clients that become unprofitable to serve net of regulatory costs. The use of financial advisors appears to have an economically large causal effect on stock market participation: the difference between having and not having an advisor translates to a difference of 44% in the stock market participation rate.

Much of the literature on the stock market participation puzzle adopts the viewpoint that households have full agency over their participation decisions; this literature looks for variables and economic mechanisms related to education, IQ scores, wealth, lack of stock market awareness, and non-standard preferences to explain why many households *choose* not to assume equity risk.[11] Our results suggest that a large part of nonparticipation may stem through frictions related to the delegation channel: if we reduce the supply of financial advisors, a household is less likely to have a financial advisor, and those left without advice are less likely to enter the markets on their own. Importantly for this explanation, we find that it is the households who are less likely to enter the markets on their own who are, all else equal, disproportionately more likely to seek financial advice. This explanation for nonparticipation has starkly different policy implications than the explanations that place full agency on the households and ignores the delegation channel.

We find that the decrease in the supply of advisors post-MFDA regulation benefited the advisors who remained in the market. Although advisors charged lower percentage fees after the regulation, the increase in client assets more than offset this decrease. The picture that emerges is that the

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[11]See, for example, Christiansen, Joensen, and Rangvid (2008) (education), Vissing-Jørgensen (2003) (wealth), Grinblatt, Keloharju, and Linnainmaa (2011) (IQ), Hong, Kubik, and Stein (2004) (lack of stock market awareness) and Epstein and Schneider (2007) and Dow and Werlang (1992) (Knightian uncertainty and ambiguity aversion).

removal of a large number of advisors spoilt the remaining advisors for choice: these remaining advisors chose to serve mostly the wealthier of the newly unadvised clients. This increase in the profitability of the average client coincides with the decreased participation rate among the low-wealth households.

We emphasize that our analysis does not provide a welfare evaluation of Canada's investor protections. We cannot conclude whether households benefit, on net, from greater oversight. In particular, we do not have the data necessary to identify regulatory benefits such as a reduction in fraud or an improvement in the suitability of advisors' recommendations. Nevertheless, we believe it is noteworthy that a policy aimed at strengthening public confidence in the mutual fund industry led to a decline in participation in that market. In that way, our findings highlight a difficult trade-off regulators face—the regulatory burden that goes along with eliminating bad practices may well reduce the supply of advice and, by extension, households' financial market participation.

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Figure 1: **MFDA Registration Requirement in Canada, 2002.** Mutual fund dealers and their agents in five Canadian provinces were required to register with the Mutual Fund Dealers Association of Canada (MFDA) and follow the rules and regulations of the MFDA. This requirement went into effect in February 2001 in Ontario, British Columbia, and Saskatchewan; in April 2001 in Alberta; and in November 2001 in Nova Scotia. The other five provinces had neither MFDA requirement nor any comparable oversight until February 2004.
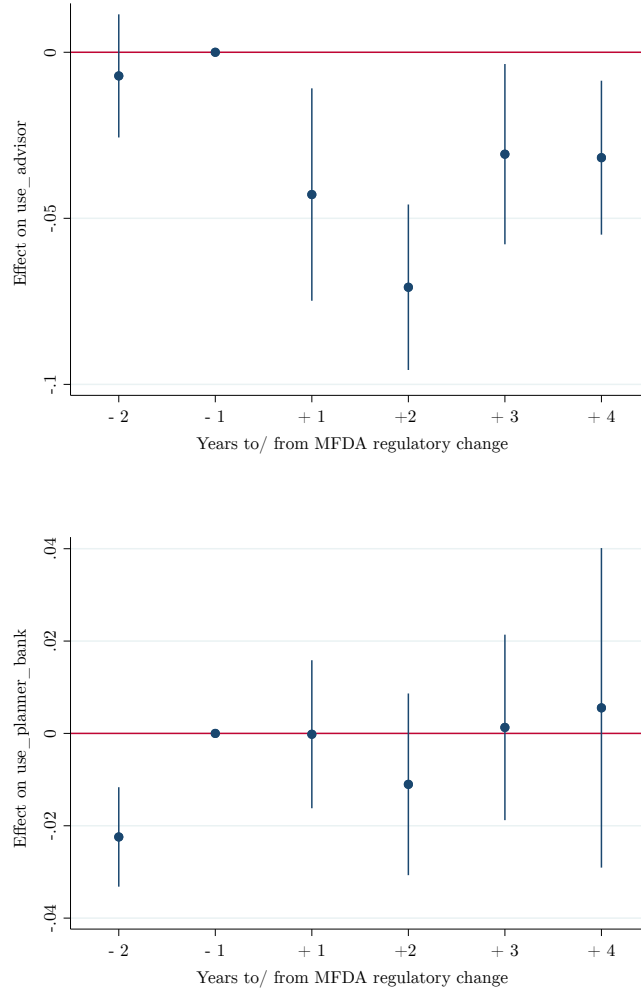
Figure 2: **The Effects of the Regulatory Change on the Use of Financial Advisors.**
The top panel shows the estimated effect of the MFDA regulation on the probability of using a
mutual fund advisor (i.e., the treated advisors). The bottom panel reports the MFDA effects on
the probability of using a bank advisor (i.e., the placebo test). We plot the differences-in-differences
coefficients between the treated and control provinces. The omitted category is the year prior to
the introduction of the regulation in the treated province.
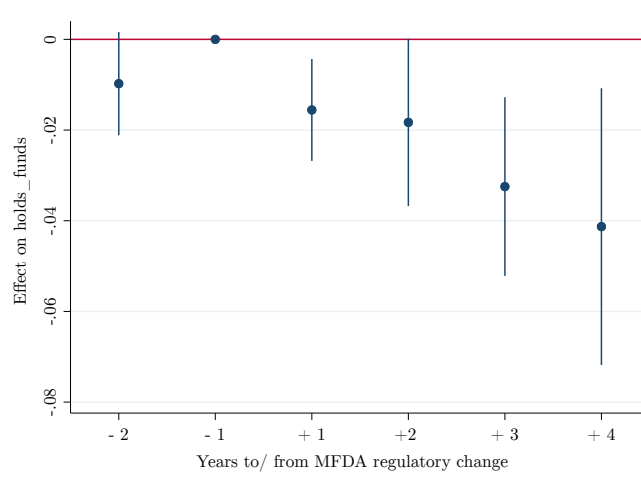
Figure 3: **The Effects of the Regulatory Change on Asset Allocation.** The figure shows the estimated effect of the MFDA regulation on the probability of owning mutual funds. We plot the differences-in-differences coefficients between the treated and control provinces. The omitted category is the year prior to the introduction of the regulation in the treated province.

Table 1: Descriptive statistics from survey and administrative data

Panels A and B report summary statistics from the Canadian Financial Monitor survey of Canadian households conducted by Ipsos-Reid. The data are the monthly surveys from January 1999 through January 2004. All the statistics are reported using survey weights. In Panel A we report information for the entire sample. *Age* is that of the head of household. *Education* is the maximum level of education of the head of household and spouse. The indicator variable *Retired* takes the value of one if the head of household is retired and zero otherwise. In Panel B we report financial information delineated by the household's use of financial advisor. In Panel C we report summary statistics for those 42,148 clients of two Canadian mutual fund dealers that sign up with an advisor from one year before to one year after the province in which they reside adopts the MFDA requirement. Advisors collect risk tolerance, financial knowledge, salary, and net worth information from their clients using know-your-client forms.

Panel A: All households

Variable	Mean	Std. Dev.
Age	46.6	15.3
Education (%)		
HS diploma or less	30.9	46.2
Some college	22.7	41.9
College degree	36.8	48.2
Graduate degree	9.6	29.4
Retired (%)	13.9	34.6
Homeowner (%)	66.0	47.4
Use financial advisor? (%)	34.7	47.6
Income ($)	49,384	34,160
Assets ($)	61,992	149,307
Asset allocations (%)		
Cash	50.8	42.1
Bonds	25.1	32.5
Equity	24.1	33.7
Participation decisions (%)		
Mutual funds	36.3	48.1
Stocks directly	18.2	38.6
Bonds directly	19.6	39.7
GICs	30.9	46.2
Checking or savings account	97.8	14.8

Panel B: Households with and without a financial advisor

Variable	With Advisor		Without Advisor	
	Mean	Std. Dev.	Mean	Std. Dev.
Asset allocations (%)				
Cash	32.7	36.7	51.1	42.2
Bonds	31.1	32.0	25.4	33.1
Equity	36.2	35.4	23.5	33.8
Participation decisions (%)				
Mutual funds	57.5	49.4	33.5	47.2
Stocks directly	29.4	45.6	18.7	39.0
Bonds directly	27.5	44.7	19.8	39.9
GICs	42.7	49.5	30.7	46.1
Checking or savings account	98.7	11.5	97.5	15.5

Panel C: Administrative data from two Canadian mutual fund dealers on new clients ($N = 42{,}148$)

		Mean	10th	25th	50th	75th	90th
Demographics	Age	44.6	28.5	35.7	44.3	53.3	61.0
	Female	51.4					
Investment	Account value, $K	27.2	1.0	3.4	10.6	29.8	68.1
portfolio	Equity share (%)	77.0	47.8	60.6	85.6	100	100

Know-your-client records

Financial knowledge		Salary		Net worth	
Low	27.6%	$30–50K	33.6%	Under $35K	1.7%
Moderate	63.4%	$50–70K	36.8%	$35–60K	9.3%
High	9.0%	$70–100K	17.1%	$60–100K	16.5%
		$100–200K	12.1%	$100–200K	11.1%
		$200–300K	0.3%	Over $200K	61.4 %
		Over $300K	0.2%		

Table 2: Change in the Use of Financial Advisors following the MFDA Regulation

This table reports results from a regression of financial advisor usage on an indicator variable *MDFA required*. This variable is equal to one in the provinces adopting the MFDA regulation in the months following the adoption and zero otherwise. In columns 1 and 2, the outcome variable is an indicator variable that takes the value of one if the household uses any financial advisor and zero otherwise. In column 3, the outcome variable is an indicator variable that takes the value of one if the household uses a bank-employed financial advisor and zero otherwise. The estimates are computed using CFM survey sampling weights. All analyses include province and year fixed effects. In columns 2 and 3 we also include household controls for retirement status, homeownership, (categories of) age, education, and (categories of) income. The monthly survey data from CFM begin in January 1999 and ends in January 2004. Robust Huber-White standard errors are clustered at the province level.

| | Dependent Variable: Indicator for Using an Advisor | | |
	Any Advisor		Bank Advisor
MFDA Required	-0.027^{***}	-0.032^{***}	-0.007
	(0.007)	(0.006)	(0.012)
Observations	56,303	56,303	56,303
R-squared	0.01	0.07	0.09
Province and year FEs?	Y	Y	Y
Household controls?	N	Y	Y

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

Table 3: Participation in Financial Markets following the MFDA Regulation

This table reports results from a regression of asset ownership on an indicator variable *MDFA Required.* This variable is equal to one in the provinces adopting the MFDA regulation in the months following the adoption. In column 1, the outcome is an indicator variable equal to one if the household owns any mutual funds and zero otherwise. In column 2, the outcome variable is an indicator variable for ownership of equity mutual funds. In column 3, we investigate ownership of direct equity investments (individual stocks). In column 4, we analyze if the household owns any equity investment; we classify equity mutual funds, balanced mutual funds, and direct stockholdings as equity investments. In columns 5 to 8, the outcomes variables capture ownership of bonds, guaranteed investment certificates or GICs (a form of term deposits), and checking or saving accounts. All analyses include province and year fixed effects, and household controls for: retirement status, homeownership, (categories of) age, education, and (categories of) income. The monthly survey data from CFM begin in January 1999 and ends in January 2004. Robust Huber-White standard errors are clustered at the province level.

	Dependent Variable: Indicator for Asset Ownership						
	Mutual funds			Equity,			Checking
		Equity		direct or			or
	Any	funds	Stocks	indirect	Bonds	GICs	Savings
MFDA Required	-0.023^{***}	-0.022^{***}	-0.003	-0.014^{*}	-0.001	0.005	0.001
	(0.007)	(0.006)	(0.010)	(0.008)	(0.007)	(0.005)	(0.002)
Observations	56,303	56,303	56,303	56,303	56,303	56,303	56,303
R-squared	0.19	0.12	0.12	0.21	0.05	0.09	0.03
Province & year FEs?	Y	Y	Y	Y	Y	Y	Y
Household controls?	Y	Y	Y	Y	Y	Y	Y

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

Table 4: Allocation Decisions following the MFDA Regulation

This table reports results from a regression of asset allocation on an indicator variable *MDFA Required*. This variable is equal to one in the provinces adopting the MFDA regulation in the months following the adoption. The dependent variable is the fraction of total financial assets invested in specific asset classes. In column 1, the outcome variable is the fraction of cash assets (checking and saving accounts, and money market funds) over total financial assets; in column 2, the outcome is the fraction of bond assets (bonds, GICs, and fixed income funds) over total financial assets; and in column 3, the outcome is the fraction of equity assets (individual stocks and equity and balanced mutual funds) over total financial assets. All analyses include province and year fixed effects, and household controls for: retirement status, homeownership, (categories of) age, education, and (categories of) income. The monthly survey data from CFM begin in January 1999 and ends in January 2004. Robust Huber-White standard errors are clustered at the province level.

	Dependent Variable:		
	Proportion of Assets Allocated		
	Cash	Bonds	Equity
MFDA Required	0.010^*	0.007^{**}	-0.017^{***}
	(0.005)	(0.003)	(0.005)
Observations	54,712	54,712	54,712
R-squared	0.19	0.07	0.17
Province and year FEs?	Y	Y	Y
Household controls?	Y	Y	Y

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

Table 5: Measuring the Effects of Increased Regulatory Oversight: IV vs. Least Squares Estimates

This table reports results from ordinary least squares (OLS) and two-stage least squares (IV) regressions of financial behaviors on an indicator variable equal to one if the household uses a financial advisor. In the IV regressions we instrument the use of financial advisors with an indicator equal to one in the provinces adopting the MFDA regulation in the months following the adoption. Each row reports results for a different outcome variable. The first two regressions measure financial market participation. *Mutual funds* is an indicator variable that takes the value of one if the household owns any mutual funds and zero otherwise. *Equities (direct or indirect)* takes the value of one if the household owns any equity or balanced funds or has direct stockholdings and zero otherwise. The other three regressions measure effect on asset allocations. The outcome variables are the fractions of the total financial assets invested in cash, bond, or equities. We report the averages and definitions of these asset classes in the description of Table 4. All analyses include province and year fixed effects, and household controls for: retirement status, homeownership, (categories of) age, education, and (categories of) income. Robust Huber-White standard errors are clustered at the province level.

| | The effect of financial advisors | | | | Fixed effects | |
	OLS	IV	N	R^2	Province	Time
Participation (%)						
Mutual funds	0.151***	0.724***	56,303	0.21	Y	Y
	(0.011)	(0.181)				
Equities	0.140***	0.439**	56,303	0.23	Y	Y
(direct or indirect)	(0.008)	(0.213)				
Asset allocations (%)						
Cash	−0.133***	−0.313**	54,712	0.21	Y	Y
	(0.003)	(0.140)				
Bonds	0.062***	−0.211**	54,712	0.08	Y	Y
	(0.008)	(0.102)				
Equity	0.071***	0.523***	54,712	0.18	Y	Y
	(0.009)	(0.164)				

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

Table 6: Use of Advisors and Participation following the MFDA Regulation Conditional on Client Assets

This table reports results from a regression of financial advisor usage and asset ownership on indicator variables *MDFA Required* and *Assets Below Median*, and their interaction. *MDFA Required* is equal to one in the provinces adopting the MFDA regulation in the months following the adoption and *Assets Below Median* is equal to one for households below the median in asset values. In column 1, the outcome is an indicator variable that takes the value of one if the household uses any financial advisor and zero otherwise. In column 2, the outcome is an indicator variable equal to one if the household owns any mutual funds and zero otherwise. In column 3, the outcome variable is an indicator variable for ownership of any equities, either through direct ownership or mutual funds. In column 4, the outcome variable is the proportion of assets in equities, with direct stock ownership and equity and balanced mutual funds counted as equities. All analyses include province and year fixed effects, and household controls for: retirement status, homeownership, (categories of) age, education, and (categories of) income. The monthly survey data from CFM begin in January 1999 and ends in January 2004. Robust Huber-White standard errors are clustered at the province level.

| | | Dependent Variable: | | |
| | | Asset Ownership | | |
	Any Advisor	Any Mutual Funds	Any Equities	Percent Equities
MFDA Required	−0.025***	−0.008*	−0.000	−0.007
	(0.007)	(0.004)	(0.008)	(0.008)
MFDA Required × Assets Below Median	−0.010	−0.023**	−0.020**	−0.015
	(0.007)	(0.010)	(0.007)	(0.010)
Assets Below Median	−0.157***	−0.456***	−0.491***	0.296***
	(0.005)	(0.010)	(0.006)	(0.011)
Observations	56,303	56,303	56,303	54,712
R-squared	0.09	0.35	0.38	0.31
Province & year FEs?	Y	Y	Y	Y
Household controls?	Y	Y	Y	Y

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

Table 7: Client Fees following the MFDA Regulation

This table reports results from a regression of client fees on an indicator variable *MDFA Required.* This variable is equal to one in the provinces adopting the MFDA regulation in the months following the adoption. In column 1, the outcome is the fees the advisor earns as percentage of assets under management. In column 2, the outcome is the management expense ratio that the client pays as percentage of assets under management. In column 3, the outcome is the management expense ratio that the client pays as a percentile rank within each mutual fund asset class. In column 4, the outcome is dollar amount of these fees. *Mean Value (pre-MFDA)* is the average value of the outcome variable in the pre-MFDA period. All analyses include province and year fixed effects. The data are administrative records from two Canadian mutual fund dealers. We take the first 12 months of observations from each client when they first enter the sample and measure the fees in dollars and as a fraction of assets during this period. Robust Huber-White standard errors are clustered at the investor level.

	Dependent Variable:			
	Client Fees as % of AUM	Client MER as % of AUM	Client MER as Percentile within Asset Class	Client Fees as $ Value
MFDA Required	−0.40***	−0.32***	−0.10***	271.86***
	(0.09)	(0.05)	(0.03)	(71.38)
Mean Value (pre-MFDA)	2.49	2.40	0.43	492.87
Observations	172,700	172,700	172,700	172,700
R-squared	0.012	0.031	0.034	0.008
Province & year FEs?	Y	Y	Y	Y

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

Table 8: Client Assets following the MFDA Regulation

This table reports results from a regression of portfolio value on an indicator variable *MDFA Required*. This variable is equal to one in the provinces adopting the MFDA regulation in the months following the adoption. The two dependent variables are *Portfolio Value* and $\mathbb{1}$*(Low Portfolio Value)*. The former is measured in dollars. The latter is an indicator variable that is equal to one for investors whose portfolio value is below the median relative to the pre-MFDA distribution of portfolio values. *Mean Value (pre-MFDA)* is the average value of the outcome variable in the pre-MFDA period. All analyses include province and year fixed effects. The data are administrative records from two Canadian mutual fund dealers. We measure clients' account values over the first 12 months of observations starting from the day each investor enters the sample. Robust Huber-White standard errors are clustered at the investor level.

	Dependent Variable:	
	Portfolio Value	$\mathbb{1}$(Low Portfolio Value)
MFDA Required	12,587.60***	−0.211***
	(2,532.66)	(0.049)
Mean Value (pre-MFDA)	18,871.98	0.500
Observations	172,700	172,700
R-squared	0.012	0.008
Province & year FEs?	Y	Y

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

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Table 9: Changes in Advisors' Clienteles following the MFDA Regulation

This table reports results from a regression of client demographics on an indicator variable *MDFA Required*. This variable is equal to one in the provinces adopting the MFDA regulation in the months following the adoption. In columns 1 and 3, the outcome is an indicator variable that takes the value of one for either female clients or clients older than 60 years. In column 2, the outcome is the client's age in years. In columns 4 through 6, the outcome is a categorical variable from the Know-Your-Client forms, indicating the client's financial knowledge, salary, and net worth. All analyses include province and year fixed effects. The data are administrative records from two Canadian mutual fund dealers. We measure each client's age as of the date they first enter the sample. Robust Huber-White standard errors are clustered at the investor level.

				Dependent Variable:		
				Financial Knowledge	Salary	Net Worth
	$\mathbb{1}$(Female)	Age	$\mathbb{1}$(Age $>$ 60)	(1 to 3)	(1 to 6)	(1 to 5)
MFDA Required	-0.069	6.708***	0.055***	-0.074	-0.332***	-0.067
	(0.078)	(1.416)	(0.020)	(0.095)	(0.120)	(0.155)
Mean Value (pre)	0.466	41.182	0.053	1.790	2.059	4.156
Observations	103,867	103,867	103,867	103,867	103,867	103,867
R-squared	0.002	0.018	0.008	0.032	0.006	0.015
Province & year FEs?	Y	Y	Y	Y	Y	Y

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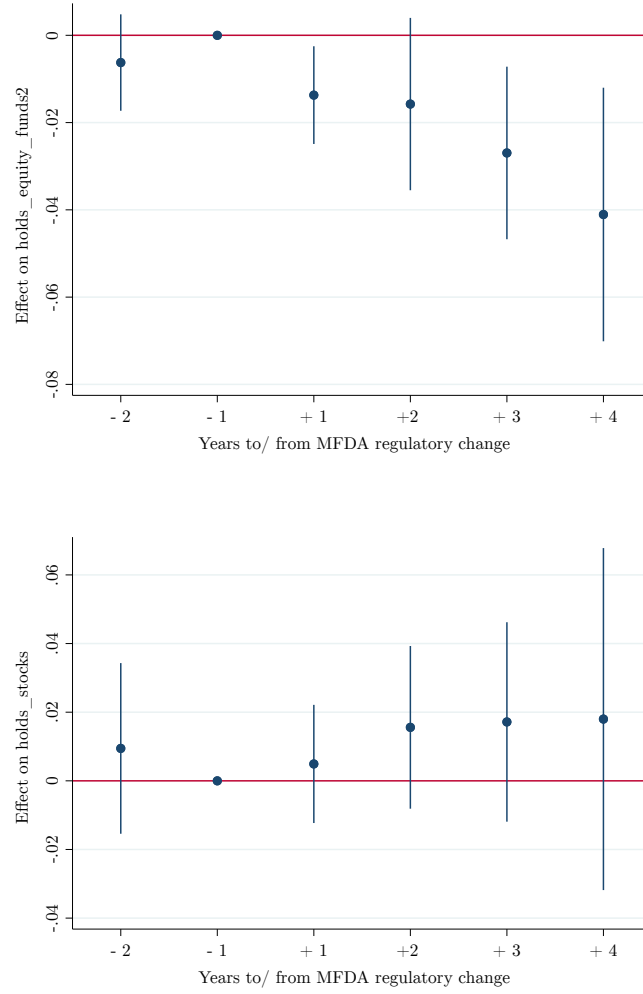*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Figure A1: **The Effects of the Regulatory Change on Asset Allocation.** The top panel shows the estimated effects of the MFDA regulation on the probability of holding equity mutual funds. The bottom panel shows the effects on the probability of owning individual stocks (our placebo test). We plot the differences-in-differences coefficients between the treated and control provinces. The omitted category is the year prior to the introduction of the regulation in the treated province.

Table A1: Treated vs. Control Groups: Comparison of Socio-demographic Characteristics

This table reports demographic characteristics of the treated and control groups matched by socio-demographic characteristics. We match treated and control households based on retirement status, homeownership, (categories of) age, education, and (categories of) income using propensity-score weights following Heckman, Ichimura, and Todd (1997, 1998). We do match on the use of financial advisors, but report the usage rates for the matched treated and control households.

	Means				
	Control Group	Treated Group			
Variable	($N = 8{,}129$)	($N = 16{,}874$)	Difference	t-value	p-value
Age	44.39	45.33	0.94	1.64	0.13
Education (coded as 1–6)	3.63	3.57	-0.06	1.50	0.17
Retired (%)	8.51	10.36	1.85^*	1.92	0.09
Homeowner (%)	75.16	77.10	1.94	0.51	0.62
Income ($)	47,705	47,913	208	0.21	0.84
Use financial advisor? (%)	41.9	42.7	0.8	0.97	0.36

$^{***}\ p < 0.01,\ ^{**}\ p < 0.05,\ ^*\ p < 0.1$

Table A2: Change in the Use of Financial Advisors following the MFDA Regulation (Matched DiD)

This table reports results from a regression of financial advisor usage on an indicator variable *MDFA required*. This variable is equal to one in the provinces adopting the MFDA regulation in the months following the adoption. In columns 1, the outcome variable is an indicator variable that takes the value of one if the household uses any financial advisor and zero otherwise. In column 2, the outcome variable is an indicator variable that takes the value of one if the household uses a bank-employed financial advisor and zero otherwise. The estimates are computed using CFM survey sampling weights. All analyses include province and year fixed effects. Treated and control households are matched based on retirement status, homeownership, (categories of) age, education, and (categories of) income. The monthly survey data from CFM begin in January 1999 and ends in January 2004. Robust Huber-White standard errors are clustered at the province level.

	Dependent Variable: Indicator for Using an Advisor	
	Any Advisor	Bank Advisor
MFDA Required	−0.035***	−0.008
	(0.011)	(0.008)
Observations	56,303	56,303
R-squared	0.00	0.01
Province and year FEs?	Y	Y

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

Table A3: Participation in Financial Markets following the MFDA Regulation (Matched DiD)

This table reports results from a regression of asset ownership on an indicator variable *MDFA Required*. This variable is equal to one in the provinces adopting the MFDA regulation in the months following the adoption. In column 1, the outcome is an indicator variable equal to one if the household owns any mutual funds and zero otherwise. In column 2, the outcome variable is an indicator variable for ownership of equity mutual funds. In column 3, we investigate ownership of direct equity investments (individual stocks). In column 4, we analyze if the household owns any equity investment; we classify equity mutual funds, balanced mutual funds, and direct stockholdings as equity investments. In columns 5 to 8, the outcomes variables capture ownership of bonds, guaranteed investment certificates or GICs (a form of term deposits), and checking or saving accounts. All analyses include province and year fixed effects. Treated and control households are matched based on retirement status, homeownership, (categories of) age, education, and (categories of) income. The monthly survey data from CFM begin in January 1999 and ends in January 2004. Robust Huber-White standard errors are clustered at the province level.

	Dependent Variable: Indicator for Asset Ownership						
	Mutual funds			Equity,			Checking
		Equity		direct or			or
	Any	funds	Stocks	indirect	Bonds	GICs	Savings
MFDA Required	-0.035^{***}	-0.032^{***}	0.007	-0.018^{**}	-0.007	0.014	-0.001
	(0.006)	(0.007)	(0.009)	(0.006)	(0.004)	(0.010)	(0.002)
Observations	56,303	56,303	56,303	56,303	56,303	56,303	56,303
R-squared	0.01	0.01	0.00	0.01	0.01	0.00	0.00
Province & year FEs?	Y	Y	Y	Y	Y	Y	Y

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

Table A4: Allocation Decisions following the MFDA Regulation (Matched DiD)

This table reports results from a regression of asset allocation on an indicator variable *MDFA Required*. This variable is equal to one in the provinces adopting the MFDA regulation in the months following the adoption. The dependent variable is the fraction of total financial assets invested in specific asset classes. In column 1, the outcome variable is the fraction of cash assets (checking and saving accounts, and money market funds) over total financial assets; in column 2, the outcome is the fraction of bond assets (bonds, GICs, and fixed income funds) over total financial assets; and in column 3, the outcome is the fraction of equity assets (individual stocks and equity and balanced mutual funds) over total financial assets. All analyses include province and year fixed effects. Treated and control households are matched based on retirement status, homeownership, (categories of) age, education, and (categories of) income. The monthly survey data from CFM begin in January 1999 and ends in January 2004. Robust Huber-White standard errors are clustered at the province level.

	Dependent Variable:		
	Proportion of Assets Allocated		
	Cash	Bonds	Equity
MFDA Required	0.009*	0.011*	−0.020***
	(0.005)	(0.005)	(0.006)
Observations	54,712	54,712	54,712
R-squared	0.00	0.00	0.01
Province and year FEs?	Y	Y	Y

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