Can Ethics be Taught?

Evidence from Securities Exams and Investment Adviser Misconduct*

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Abstract

We study the consequences of a 2010 change in the investment adviser qualification exam that reallocated coverage from the rules and ethics section to the technical material section. Comparing advisers with the same employer in the same location and year, we find those passing the exam with more rules and ethics coverage are one-fourth less likely to commit misconduct. The exam change appears to affect advisers' perception of acceptable conduct, and not just their awareness of specific rules or selection into the qualification. Those passing the rules and ethics-focused exam are more likely to depart employers experiencing scandals. Such departures also predict future scandals. Our paper offers the first archival evidence on how rules and ethics training affects conduct and labor market activity in the financial sector.

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Keywords: ethics; financial misconduct; financial regulation; fraud; investment advisers; professional licensing.

1. Introduction

Financial markets and institutions are shaped by responses to corporate scandals and financial crises. One way this happens is through the design and enforcement of regulation. However, scandals and crises also lead to calls for changes in how market participants are qualified, particularly in ethics, professional conduct, and fiduciary duties (Piper, Gentile, and Parks 1993). For example, in his Presidential address to the American Financial Association, Zingales (2015) says:

> We should not relegate our prescriptive analysis to separate, poorly attended ethics courses, validating the implicit assumption that social norms are a matter of interest only for the less bright students. Several social norms are crucial to the flourishing of a market economy. We should teach them in our regular classes, at the very least emphasizing how violating these norms has a negative effect on reputation.

Similar calls for training in the classroom and on the job followed Enron's failure and the Great Recession (Koehn 2005; Arbogast, Cava, and Orts 2018).

Others question the effectiveness and desirability of professional conduct training (Drucker 1981): "business ethics courses are seen to have been created largely for the sake of appearances and from the imperative of initiating some form of responsive action" (McDonald and Donleavy 1995, pp. 842-843). Another line of criticism acknowledges that, while rules can be taught, beliefs about acceptable conduct guide behavior and these beliefs are formed primarily outside the classroom. Additionally, professional conduct training can be difficult to tailor to the specialized and often ambiguous nature of daily work.

Claims surrounding the consequences of ethics and professional conduct training have not been investigated empirically. A key barrier has been that researchers do not observe the training that individuals receive or how this training affects their behavior. In this paper, we study a change

in the Series 66 exam, which individuals pass before becoming licensed investment advisers.[1] The exam, administered by the Financial Industry Regulatory Authority (FINRA) and designed by the North American Securities Administrators Association (NASAA), comprises two sections. One section focuses on allowable forms of compensation and disclosure requirements ("rules") and prohibitions of unethical business practices (commonly referenced in the securities industry as "ethics", a convention we follow throughout our paper). A second section covers capital market theory, investment vehicle characteristics, ratios, and financial reporting ("technical material").

Starting January 1, 2010, the exam weighted technical and rules/ethics questions equally (50% each), whereas prior, rules/ethics questions received an 80% weight while technical questions received a 20% weight. NASAA altered the content weights "based on responses to (a) survey indicating that dually licensed individuals should have enhanced testing in…(technical) areas" (Cole-Frieman and Mallon 2010). Meanwhile, the exam's cost, length, and time allotted remained constant, as did the qualification received by those passing the exam.

We leverage several features of the exam change and the investment adviser setting to shed light on the consequences of professional conduct training. First, individuals must master a significant amount of rules- and ethics-related material before becoming investment advisers. A popular study guide advises individuals to spend 75-100 hours over 4-8 weeks preparing for the exam (Cohen 2018). After, these advisers provide advice to, typically, unsophisticated investors who rely on their adviser's qualifications and adherence to professional standards. When violations of these standards occur (henceforth, "misconduct"), we observe the date, employee and employer identity, and a description of the incident. Misconduct incidents commonly involve

[1] In this paper, we refer to licensed investment advisers as "investment advisers" or "advisers". We refer to other securities industry employees without this license as "registered representatives" or "representatives".

misrepresentation, unauthorized activity, omission of key facts, and excessive trading to generate commissions rather than mere formalities or violations of obscure rules.

Second, we observe the exact date that advisers pass each securities exam. Rather than develop our own definition of rules and ethics training, we exploit the large reduction in rules and ethics coverage as defined by NASAA from the old to the new exam version. We simply assume that advisers passing the old exam had more rules and ethics training than those passing the new exam.

Third, other common securities exams (including the co-requisite Series 7) did not undergo any change in content around 2010; moreover, individuals working for the same firm-location often take the same exams but at different times. This variation aids our identification strategy by providing a group of advisers with the same employer and qualifications, but different rules and ethics training required to achieve those qualifications. Together, these features help us develop credible evidence on an important but largely unexplored research question.

To study adviser behavior, we compare the change in an adviser's misconduct after they pass the Series 66, across those who took the old versus new exam. We omit those passing the exam in the window surrounding the change enactment, to mitigate selection concerns surrounding strategic exam registration. We include individual fixed effects to account for time-invariant features that could affect behavior, such as an individual's upbringing, gender, and formative career experiences (e.g., Oyer 2008; Shue 2013; Egan, Matvos, and Seru 2018; Clifford, Ellis, and Gerken 2019; Law and Zuo 2019).

Of course, misconduct varies across firms, locations, and time due to differences in internal controls, risk taking, strategy, culture, or regulatory oversight (e.g., Dimmock and Gerken 2012;

Dimmock, Gerken and Graham 2018; Egan, Matvos, and Seru 2019). The second piece of our identification strategy is to compare two advisers working for the same firm and location, and in the same role, but passing different versions of the Series 66 through the inclusion of firm-location-qualification-year fixed effects. In this way, our estimation does not depend on the motive behind the exam change; instead, we simply assume that customer, regulator, and firm oversight of adviser behavior does not depend on the exam version the adviser passed.

We find significantly less misconduct among those passing the more rules- and ethics-focused exam. Our estimates suggest that taking the old exam is associated with a one-quarter reduction in advisers' 0.86% average annual propensity to commit misconduct. Our results are economically meaningful, yet not too large as to be implausible considering the individual nature of advising work and related research linking individual characteristics to misconduct. For example, the exam change is slightly less important than gender (Egan et al. 2018) and much less important than prior misconduct (Egan et al. 2019) for explaining new misconduct.

To this point, we do not discern between selection and treatment explanations for the misconduct differences. In terms of selection, the results could reflect differences between pre- and post-2010 Series 66 passers. For example, advisers passing the old exam have more experience, and the relation between experience and misconduct may be complex. Related, one's proclivity for misconduct could be correlated with their ability to master technical material, which the new exam more heavily weights.

We investigate selection explanations in several ways. First, we compare the misconduct of one individual to another who entered the industry at the same time, through separate year fixed effects for each cohort, and find the same results. Second, we continue to find our results if we limit our sample to individuals with recession experience or passing any qualification exam (Series

66 or other) before 2010. Third, in Figure 1 we compare old and new Series 66 passers in event time. If our results stem from selection on unobservables, then we expect to find differences in pre-exam misconduct across these groups. However, the differences are confined to the post-exam period. Ultimately, while the exam change may affect who becomes an adviser, our research design and these analyses suggest that our evidence of higher misconduct among new exam passers is not solely explained by selection.

Because the exam change reduced coverage of both rules and ethics-based questions, we then investigate why the change appears to affect adviser behavior. One compliance-based interpretation is that advisers passing the new exam are more likely to engage in misconduct simply because they are less aware of the rules. A second, not mutually exclusive explanation is that the exam's focus on ethics alters individuals' perceptions of right and wrong conduct. Our objective is not to fully attribute our main findings to either compliance or ethics-based explanations. Indeed, both classes of explanations could be valid, and both are relevant to understanding the consequences of qualification exams in financial markets (Warren, Gaspar, and Laufer 2014). Rather, given the longstanding debate on ethics training, we aim to establish whether there is *some role* for ethics in explaining the differences in misconduct across old and new exam passers.

We conduct a textual analysis of 64,972 misconduct descriptions, and identify 18,754 incidents involving theft, fraud, and deceit. For these obvious offenses, we presume the exam's reduction in rules coverage was inconsequential, as even industry outsiders would recognize that the adviser engaged in wrongdoing. If our main results were solely explained by compliance, we should find no difference in obvious misconduct between passers of the old and new exam. However, we find a significant difference comparable to that in our main results. Further, we find the misconduct differences across passers of the old and new exam persist for at least three years,

which we would not expect if advisers merely memorize rules rather than draw more fundamental lessons about acceptable conduct from the ethics portion of the exam. In sum, this evidence suggests that our main results cannot be explained by compliance alone, and that the exam change altered advisers' perceptions of acceptable conduct.

In terms of individual characteristics, those passing the exam without prior misconduct appear to respond most to the amount of rules and ethics material covered on their exam. And, the behavior of the least experienced advisers is most sensitive to the extent of rules and ethics testing. These results are consistent with the exam playing a "priming" role, where early exposure to rules and ethics material prepares the individual to behave appropriately later (Cohn and Maréchal 2016). As for firm characteristics, we find the exam's coverage to be less pertinent to those advisers working at firms where misconduct is prevalent. Thus, the contagion of misconduct behavior appears to limit the effectiveness of training in preventing transgressions (Dimmock et al. 2018; Easley and O'Hara 2019).

Our final set of tests examines how advisers respond to workplace scandals. To illustrate, consider the Wells Fargo account fraud that became widely known in 2016. While the fraud was contained in the consumer banking division, a number of Wells Fargo investment advisers noted the deterioration in the firm's culture as their reason for leaving to work for another employer (Flitter and Cowley 2019). We study turnover among all Wells Fargo advisers, and find those passing the old exam are most likely to leave after the scandal broke. Because the Wells Fargo scandal did not relate to investment advisers or rules covered on their qualification exam, these results reinforce how the exam change altered advisers' perception of acceptable conduct, and not just their awareness of the rules.

While Wells Fargo provides an appealing case study, we extend our analysis to the full sample, and study turnover at firms subject to major penalties or company-wide increases in professional violations. We find a similar turnover pattern in this sample, indicating that advisers with more rules and ethics training are less likely to tolerate bad behavior at their firm, and seek employment elsewhere. Building on this, we find that departures of advisers passing the old exam predicts scandals at their former employer the following year.

We make three contributions. First, to our knowledge our paper is the first archival study of the effects of rules and ethics training on professional conduct in financial markets. The large literature on investor protection focuses on the design and consequences of regulation, disclosure laws, and governance mechanisms (Campbell et al. 2011; Dimmock and Gerken 2012; Hail, Tahoun, and Wang 2018; Charoenwong, Kwan, and Umar 2019). A lack of data on individual qualifications and behavior has prevented researchers from investigating what role, if any, ethics training might play. While the exam change could affect selection into the adviser position, our collection of findings suggests a direct role for the ethics component in constraining fraud and influencing employee-firm matching. In this way, our results complement work studying financial literacy and financial education for *consumers* (see Lusardi and Mitchell 2014 for a review).

Second, we add to a growing body of research concerned with understanding the causes of adviser and representative misconduct (Dimmock and Gerken 2012; Egan et al. 2018, 2019; Dimmock et al. 2018; Parsons, Sulaeman, and Titman 2018; Clifford et al. 2019). One impetus for this work is that misconduct affects household saving and stock market participation (Guiso, Sapienza, and Zingales 2008; Gurun, Stoffman, and Yonker 2017).[2]

[2] Our paper also adds to the recent literature on individual misconduct within firms (Davidson, Dey, and Smith 2015; Soltes 2018; Cook et al. 2019).

Third, our results contribute to research on professional labor markets, and licensing in particular (Kleiner 2000). Professional conduct education has long been part of licensing not only for advisers, but also accountants, lawyers, and other non-financial occupations including physicians.[3] In this respect, the study perhaps most related to ours is Clifford and Gerken (2019), who examine how labor mobility provisions in the securities industry affect individuals' decisions about which qualifications to acquire, and how these qualifications relate to their fee model, assets under management, and customer complaints. In line with our findings, they conclude that an adviser's acquisition of professional licenses represents an important investment in their human capital.

2. Setting

2.1. Investment advisers

Investment advisers guide investors engaging capital markets. All investment advisers must register and file certain forms with the SEC under the Investment Advisers Act of 1940, even if their firm's size exempts them from SEC oversight as described in Charoenwong et al (2019).[4] Both the SEC and FINRA, a self-regulatory enforcement agency tasked with protecting investors in the US securities industry, disclose adviser- and firm-specific information on their websites. FINRA's BrokerCheck website notes that "all individuals registered to sell securities or provide investment advice are required to disclose customer complaints and arbitrations, regulatory

[3] For example, 35 state accounting boards require individuals to achieve at least a 90% score on a 40 question ethics exam before receiving the CPA designation. Forty-eight states require prospective lawyers to pass a 60 question ethics exam before being admitted to the bar (the average required score across these states is 81%). The American Board of Physician Specialties requires members to take an ethics course every eight years.

[4] Congress exempted investment adviser firms with less than $25 million from SEC oversight under the Securities Investment Promotion Act of 1996 and increased this threshold to $100 million under the Dodd-Frank Act of 2010.

actions, employment terminations, bankruptcy filings, and criminal or judicial proceedings." This information can be submitted by an individual, their employer, or the regulator.

2.2. Investment adviser licensing exam

Although some representatives happen to provide advice that is incidental to their fundamental business, investment advisers provide fee-based advice. Acknowledging this explicit advisory relationship, regulators set a higher standard of conduct as well as additional licensing requirements for investment advisers relative to registered representatives.[5]

Specific to licensing, these advisers must pass either the Series 65 or 66 exam to provide fee-based advice, though neither exam is independently sufficient: individuals must pass the Series 63 with the 65, or the Series 7 with the 66. Whether an individual takes the combined Series 66 exam or the Series 63 and Series 65 exam is primarily determined by their employer's registration status. The Series 66 exam effectively combines the Series 63 and Series 65 exams but requires individuals to take the Series 7 exam. The industry provides alternative paths since the (co-requisite) Series 7 exam can only be taken by individuals with FINRA sponsorship, i.e., employees of FINRA members. Reinforcing that sponsorship status drives the choice between the two exam paths, Table A1 shows no long run difference in the number of exam passers across the two paths following the exam change.

[5] Whereas investment advisers must meet a fiduciary standard of conduct, other representatives are bound by a suitability standard during the study period, or more recently by Regulation Best Interest (SEC 2019).

Individuals tend to sit for these exams early in their career, though some sit for exams later to upgrade their qualifications. While NASAA develops the 63, 65, and 66 exams, FINRA administers the related licensing for these and other industry exams.

Both the Series 65 and 66 exams cover two broad areas: rules/ethics (specifically, "Laws, Regulations, and Guidelines, including Prohibition on Unethical Business Practices") and technical material ("Economic Factors and Business Information, Investment Vehicle Characteristics, and Client Investment Recommendations and Strategies") (NASAA 2011). Rules/ethics material covers allowable forms of compensation, disclosure requirements, and various aspects of an adviser's fiduciary duty to investment clients. Technical material covers capital market theory, investment vehicle characteristics, ratios, and financial reporting.

While delineating between rules and ethics topics is not always straightforward, the exam categorizes questions in separate categories. NASAA does not disclose exam questions, but we have collected several from a popular Series 66 study guide to illustrate the categorization (Mometrix 2019):

<u>Example Rules Questions:</u>

Describe the registration process.

Describe the obligation to ensure that client security transactions are handled and recorded accurately.

Describe allowable forms of compensation for investment advisers.

Describe the investment adviser's responsibility to disclose the source of any third-party recommendations and reports.

Describe the circumstances in which an investment adviser is permitted to maintain custody of its clients' assets.

<u>Example Ethics Questions:</u>

Discuss the ethical and fiduciary responsibility of advisers regarding the charging of commissions.

Describe the obligation to consider a client's investment objectives when making recommendations.

Describe the conditions that must be met in order for an adviser to ethically take custody of a client's funds.

Describe the fiduciary responsibilities of investment advisers.

Discuss the act of committing fraud by omission.

Example Technical Questions:

Briefly describe modern portfolio theory.

Discuss current ratios and describe what they are useful in measuring.

Define capital gains and describe how capital gains are taxed.

Define S corporations, and describe their usefulness to investors.

Describe the weak form of the efficient market hypothesis.

Define value stocks, and describe how portfolio managers determine if a stock is a value stock.

Define inflation-adjusted return and name the index used to help calculate it.

Calculate the beta for XYZ Company using the following details:

- Risk-Free Rate of Return = 2%
- XYZ Company Rate of Return = 5%
- S&P 500 Index Rate of Return = 7%

Our tests study the 2010 change in the Series 66, announced in September 2009.[6] Prior to January 1, 2010 the exam contained 100 questions, with 80% of the questions covering rules and ethics and 20% covering technical material. Starting January 1, 2010 the composition of the exam was altered such that rules/ethics questions and technical material were equally-weighted. The change was motivated by a desire to increase testing in "Economic Factors and Business Information, Investment Vehicle Characteristics and Client Investment Recommendations and

[6] The earliest reference we can find to the exam change was a blog post on September 16, 2009 (Walks 2009).

Strategies" (Cole-Frieman and Mallon 2010). At the same time, the Series 63 and 65 underwent similar, albeit smaller changes, with the rules/ethics section weights decreasing from 50% to 45%.[7] None of the other major securities exams (e.g., the Series 6, 7, or 24) were affected. The Series 66 changed again in July 2016 with the rules/ethics weight falling from 50% to 45% to match the Series 63 and 65.

Following the 2010 change, the Series 66 exam length (100 questions), time permitted (150 minutes), and cost (roughly $130) remained. However, the minimum passing grade increased from 71% to 75%. The minimum passing grade for the Series 63 (65) increased from 70% to 72% (68% to 72%). Thus, while all three exams experienced similar changes in required passing grades, the reduction in rules/ethics content was much greater for the Series 66 (30%) than for the 63 and 65 (5%).[8]

3. Data, Summary Statistics, and Research Design

3.1. Data

In January 2018, we accessed BrokerCheck's database of adviser and representative records. The database contains all registered advisers and representatives currently employed in the US securities industry at brokerage firms, as well as registered advisers and representatives employed up to ten years prior. Thus, following other work using this data (Egan et al. 2018, 2019; Law and Zuo 2019) our study spans ten years, 2007-2017. Each individual's record contains

[7] The changes received much interest from study guide websites and investment adviser discussion forums. For example, one blog dedicated to the exam stated "If you're one of those people who need deadline pressure in order to actually start studying for the Series 65/66 exams, here you go: the Series 65 and 66 are changing starting January 1st. Yikes! For example, the 45 questions on business practices/ethics is being reduced to 40 on the Series 65. The 80/20 split is changing to 50/50 on the Series 66" (Walks 2009).

[8] And, to the extent that the higher passing grade and more technical training result in more qualified individuals becoming advisers, it would work against us finding an increase in misconduct for those passing the new Series 66.

information about their current employment, previous employment, exams passed (including the type and date), as well as disclosures of customer complaints, arbitrations, regulatory actions, employment terminations, bankruptcy filings, and any civil or criminal proceeding involving them. FINRA does not report failed exam attempts or exam scores. Using these disclosures, we classify misconduct incidents as those fitting into six categories as described in Egan et al. (2019): Civil-Final, Criminal-Final Disposition, Customer Dispute-Award/Judgment, Customer Dispute-Settled, Employment Separation after Allegations, and Regulatory-Final. Appendix B contains an example report from an individual in our sample.

Table 1 describes our sample construction. We start with 8,838,880 individual-firm observations from BrokerCheck from the years 2007-2017, for which we have a full record of advisers and representatives. We then adjust this initial sample in several ways.

First, to reduce concerns about advisers selecting into the old or new exam, we eliminate those passing the Series 66 in the months surrounding January 2010. Figure 2 shows an elevated number of Series 66 passers in November and December 2009, followed by a sharp reversal in January 2010 and February 2010. Table A1 of the online appendix studies the number of exams passed each month in a regression framework, and finds significant evidence of bunching around January 2010. Based on this evidence, our misconduct tests eliminate those advisers passing the Series 66 from October 2009 (the month after the exam change was announced) to March 2010. As nearly half of advisers pass the Series 66 in their first year in the industry, we see little remaining concern about strategic selection into the old or new exam. Nevertheless, we verify that our inferences are the same if we include every adviser or drop those who passed the exam within six months or even a year of January 2010.

Second, we omit observations from those passing the Series 66 after July 2016, when the exam weights (slightly) changed again as discussed in Section 2.2. Last, we omit the year of each adviser's Series 66 exam because we collapse our data at the individual-firm-year level and it is ambiguous whether any misconduct occurred before or after the exam during such years. The remaining 8,500,453 observations form the sample for our misconduct analyses, described below.

3.2. Summary statistics

Table 2, Panel A provides summary statistics for the individual-firm-year observations studied in our misconduct analyses. In a typical individual-firm-year, 0.76% of individuals have a misconduct incident, while 0.22% have an obvious misconduct incident involving fraud, deceit, or theft (further described below). Nearly 8% of individuals have a prior incident on their record. For those with a Series 66 qualification, 0.86% have a misconduct incident while 6.8% have a prior incident. Seventeen percent of advisers exit their employer each year. The typical individual has 13 years of experience. Thirty-seven percent (66%; 15%) of the individuals have passed the Series 6 (Series 7; Series 24). As for the Series 63, (65), 72% (20%) have the qualification. In 20% of the observations, the individual has already passed the Series 66, while 16% have passed the pre-2010 version. Thirty-one percent of individuals have attained qualifications other than those involving these six major exams.

Panel B reports statistics for investment adviser characteristics, measured at the date they pass their Series 66. As of the exam pass date, the average individual has 4.72 years of experience, while 46% are taking the exam during their first year in the industry. We see little pre-exam experience differences across old and new passers: the median for both groups is two years, and

the mean only differs by three months. Four percent of advisers already have a misconduct record from their pre-exam work as a representative.

3.3. Research design

We study individual misconduct using the following linear probability specification:

$$y_{ijt} = \beta_1 \times S66_{it} + \beta_2 \times EthicsS66_i \times S66_{it} + \alpha_i + \alpha_{jct} + \gamma \times Controls_{ijt} + \varepsilon_{ijt} \quad (1)$$

Our specification follows that of Egan et al. (2018, 2019). The unit of observation is individual-firm-year, where *i* indexes individuals, *j* indexes firms, *t* indexes years, and *c* indexes cities. Occasionally, individuals change employers during the year, and in such cases we have more than one observation per individual-year. The dependent variable y_{ijt} is an indicator for whether individual *i* has a misconduct incident at firm *j* in year *t*. $S66_{it}$ is an indicator for whether individual *i* has passed the Series 66 as of year *t*. $EthicsS66_{it}$ is an indicator for whether individual *i* passes the pre-2010 exam, which contained more rules and ethics material.

The main effect for $EthicsS66_{it}$ is absorbed by our inclusion of individual fixed effects (α_i), which account for time-invariant individual characteristics having a sustained effect on behavior. We also include fixed effects for each firm-city-year (α_{jct}). In doing so, we effectively compare the incidence of misconduct among individuals working for the same firm in the same location. This prevents across-firm differences in internal controls, risk taking, strategy, culture, or regulatory oversight from contaminating our analysis. The city-year dimension of the fixed effect accounts for city-specific drivers of misconduct including investor demographics, the state of the economy, as well as the strictness of regulatory enforcement. Following Egan et al. (2019)

we include controls for (log) years of experience, having passed the Series 6, 7, 24, 63, 65, or other qualification exams, and an indicator for whether the individual has ever been disciplined for misconduct prior to the current year. We cluster our standard errors by firm. Clustering instead by individual or individual and firm does not affect our inferences.

4. Results

4.1. Misconduct and exam coverage

Table 3 presents the results from estimating equation (1). Column 1 begins with a relaxed version of equation (1) with only controls and individual and year fixed effects, and subsequent columns augment the fixed effects. The annual propensity to commit misconduct is 0.162% lower among those passing the old exam covering more rules and ethics material. Considering the average annual likelihood of misconduct for Series 66 qualified advisers is 0.86%, this represents nearly a one-fifth difference in new misconduct rates. The signs on our control variables (not tabulated for brevity) are consistent with prior work (e.g., Egan et al. 2018, 2019). Individuals with the Series 7 are more likely to be involved in misconduct incidents. This is natural because such individuals have more responsibility and interact in greater depth with investment clients who file many of the misconduct complaints. Individuals with a history of misconduct are more likely to commit misconduct again, as are those with more experience (who tend to have more clients and more responsibility).

Column 2 introduces fixed effects for each firm, and finds a similar result.[9] To mitigate concerns that time-varying firm heterogeneity explains these initial results, Column 3 adds a firm-year fixed effect. Our results remain. Column 4 estimates our fully saturated equation (1). We

[9] The number of observations declines as we add stricter fixed effects because singletons are dropped.

continue to find a significant difference related to the exam change, now accounting for approximately one-fourth of the average misconduct level for Series 66 qualified advisers.

To benchmark this result, consider that Egan et al. (2018) use a very similar sample period and research design to ours to study differences in misconduct between males and females. In their strictest specification (comparable to our column 4), they find females are roughly one-third less likely to commit misconduct as males. Furthermore, Egan et al. (2019) show that new misconduct is five times more likely for individuals with a history of misconduct. Therefore, the exam change effect size appears both important and plausible.

Finally, column 5 adds a Series 66 dimension to our firm-year-city fixed effect. In this way, we are comparing individuals in the same year with the same role, employer and location. Our results remain, although given the within-fixed effect variation required by this approach (we lose nearly half of our adviser observations, mostly from small cities and branches) we do not continue with this specification.

4.2. Why does misconduct vary with exam coverage?

In this section, we investigate why adviser misconduct varies with the Series 66 exam coverage. Under a treatment explanation, an adviser's conduct is informed in part by the amount of rules and ethics training they have undertaken. By contrast, under a selection explanation, individuals passing the old and new Series 66 are fundamentally different, and therefore their long run propensity for committing misconduct is different. As an example, advisers passing the old exam will be more experienced. Both experience length and exposure to the financial crisis could affect one's view of appropriate interactions with investors. Or, individuals' predisposition for

misconduct behavior may be correlated with their ability to master technical material, which the new exam more heavily weights.[10]

We investigate these selection explanations in four ways. First, we add year fixed effects for each cohort to our main specification by interacting indicators for each calendar year with indicators for each cohort year. Thus, each year we effectively compare the misconduct of one adviser to another who entered the profession in the same year. One drawback of this approach is that because advisers typically take exams early in their career, some of the exam type variation we are interested in gets absorbed, making it harder to find results. Despite this, column 1 of Table 4 shows that we continue to find less misconduct among those advisers passing the old Series 66. If we instead add polynomial experience terms or years of experience fixed effects, our results are the same.

Second, we construct a sample around more comparable cohorts. Specifically, we evaluate the sensitivity of our results to limiting our sample of advisers and representatives to those passing a securities exam (either the Series 66 or some other exam) before 2010 (column 2), and those with pre-2010 work experience (column 3).[11] Our results remain; moreover the coefficient on $S66\ x\ Ethics\ S66$ is similar to our baseline results (Table 3). Column 4 eliminates advisers who passed the Series 66 outside of the 2008-2011 period, such that our identification comes from advisers passing the exam during the same narrow window (though we continue to omit the October 2009-March 2010 passers). Again, our results remain.

[10] Yet another selection explanation relates to individuals strategically timing their exam around the change. However, recall from Section 3.1 that we eliminate advisers passing the Series 66 between the change announcement date and several months after enactment, suggesting this particular selection explanation is unlikely.

[11] Restricting the Post 2010 Series 66 sample to advisers with recession work experience produces the same results.

Third, we perform a placebo test. We study the timing of individuals' Series 7 exam, which did not undergo any content change around 2010. Although nearly all Series 66 passers also passed the precursor Series 7 exam, only a third of those that pass Series 7 go on to pass the Series 66. This provides a relevant setting to examine confounding cohort effects. If our main results come from factors affecting securities exam passers around 2010 rather than the change in Series 66 coverage, then we expect to find differences in misconduct among those passing the Series 7 before versus after 2010. Column 5 reports no such difference.

Fourth, we study advisers' misconduct in event time around their obtaining the Series 66 qualification. Specifically, we estimate a version of equation (1) in which we replace the treatment indicator by event time dummies for years t-1, t=0, t+1, t+2, and >=t+3 (t-2 is the holdout).[12] The sample is limited to the subset of advisers passing the Series 66. Point estimates on our event time dummy variables can be interpreted as the event time differences in misconduct propensities between individuals taking the old versus new exam. If advisers passing the old and new exam differ in some fundamental way, then we would expect pre-exam differences in their misconduct. However, Figure 1 reveals no such differences.

The foregoing analysis suggests the reduction in the Series 66 rules and ethics coverage had a direct effect on advisers' conduct. We now study whether this only relates to advisers' awareness of the rules (e.g., compliance), or also their beliefs about appropriate conduct (e.g., ethics). Of course, both types of explanations could apply, and fully distinguishing between them is not possible in our setting. Instead, our objective is to establish whether ethics appears to play *some role* in generating our findings, by examining adviser behavior in greater detail.

[12] As we use lagged control variables, our sample begins in 2007, and the exam changed in 2010, t-2 is the earliest date we can use.

We perform a textual analysis of our misconduct incident descriptions, and flag those involving fraud, theft, and deceit. For example, we flag incidents containing variations of the following terms and their synonyms: deception, embezzle, fabricate, fake, falsify, forgery, impersonate, lie, misappropriate, misrepresent, omission, omit, and steal. Of the 64,972 misconduct incidents in our sample window, only 18,754 get flagged. We refer to these incidents as *Obvious Misconduct*. Such misconduct seems more likely to result from an adviser's lapse in ethical judgment than their ignorance about specific securities industry rules. In other words, we assume that even individuals outside the securities industry without knowledge of its rules would find something inherently wrong with the adviser's conduct.

Table 5 presents the results of estimating equation (1) using an indicator for *Obvious Misconduct* as the dependent variable. We find those advisers passing the old exam are less likely to engage in obvious misconduct, compared to advisers at the same firm location passing the new exam. This suggests that interpretations based on compliance or rules awareness cannot fully explain our results. Reinforcing this inference, Figure 1 shows that the misconduct differences between old and new exam passers persist, statistically and economically, for at least three years. Interpretations based on rules awareness would predict event time decay in our coefficients, as individuals forget specific rules covered by the exam and learn others more pertinent to their daily work. By contrast, under an ethics-based interpretation, misconduct differences between old and new exam passers persist, because individuals draw more lasting lessons from ethics material.

4.3. How do individual and firm characteristics relate to exam coverage and misconduct?

Our next tests study how the characteristics of the individual or their employer affect the relation between exam content and misconduct. For individual characteristics, we consider

whether they had a misconduct record (*Prior Misconduct at S66*), as well as their experience in the securities industry (*Yrs Exp at S66*), before passing the Series 66. For firm characteristics, we measure the percent of other advisers and representatives at the firm with misconduct that year (*Firm Misconduct*). We also assess firm size according to whether the firm (branch, defined as a firm-city combination) has 500 (10) or fewer advisers and representatives. Our tests augment equation (1) with interactions for these individual and firm variables.

In these analyses, we tabulate only the coefficients for $S66\ x\ Ethics\ S66$ and its interaction with individual (Table 6) or firm (Table 7) characteristics; however, our regression includes all two-way and main effects not subsumed by our fixed effects, as well as our controls from equation (1). Column 1 of Table 6 shows a significantly positive coefficient on the triple interaction term for prior misconduct, indicating that the rules/ethics content of the Series 66 is less relevant to those with a misconduct record before the exam. Column 2 studies the length of each adviser's experience when they passed the exam. We find the exam content is most relevant to those who are new to the profession: $S66\ x\ Ethics\ S66$ is most negative and significant for those passing the exam with two or fewer years of experience. The triple interaction for those with three years of experience is less negative and only marginally significant. We find no effect for those with four or more years of experience.

Overall, our analysis of individual characteristics indicates that the effects of rules and ethics training on behavior depends on when the adviser passes the exam. Those already engaging in misconduct, or having spent several years working in the securities industry, respond least or not at all. This result echoes one respondent to a Wall Street Journal recruiter survey who said "If you're not ethical by the time you're 27, no classroom experience is going to make a difference" (Alsop 2007). Our finding that the exam change is most consequential to advisers with less pre-

exam experience also reduces concerns that selection explains our main results, because entry-level advisers have less discretion over the exam version they take.

Table 7 studies firm characteristics. In column 1 we find the rules and ethics coverage is less consequential for advisers working at firms where misconduct is more widespread (the interaction with *Firm Misconduct* is positive). Economically, doubling the prevalence of misconduct at a firm reduces the misconduct difference between old and new exam passers by nearly half. Column 2 studies firm size, and finds no effect of the exam change for advisers working at small firms (*S66* x *Ethics S66* + *S66* x *Ethics S66* x *Small Firm* is statistically indistinguishable from zero). Column 3 repeats this test for small branches. Again, we find less of an effect of the exam change for advisers at small branches (although the t-statistic for the triple interaction is only 1.47).

4.4. Advisers' responses to ethical scandals

How does the extent of an adviser's rules and ethics training affect their willingness to remain with an employer violating professional standards and drawing attention for its behavior? A salient example of one such employer in our sample is Wells Fargo, one of the largest financial institutions and adviser employers in the US. Starting in 2011, Wells Fargo branch employees began creating fake savings, checking, and credit card accounts without client authorization. The extent of the fraud became widely known in 2016, when the Consumer Financial Protection Bureau (CFPB) revealed that thousands of employees opened over two million fake accounts. Resulting fines and sanctions totaled $185 million, while settlements have exceeded $3 billion.

The fraud had repercussions beyond the consumer banking division of Wells Fargo. A New York Times article describes the reaction of Melissa Kinnard, a former Wells Fargo investment

adviser: “Frustrated by what she saw as the bank’s culture, Ms. Kinnard quit in January” (Flitter and Cowley 2019).[13] Incidentally, Kinnard passed the old Series 66 exam, and has no reported misconduct during her 33-year career in the securities industry.

Table 8 studies all Wells Fargo advisers and representatives, and investigates whether the propensity to remain at the firm after the scandal broke relates to the Series 66 coverage.[14] Each year, we measure an indicator for whether the individual exits Wells Fargo. We model the exit indicator as a function of time, our Series 66 variables, controls, polynomials for years of experience, and city x year fixed effects. While the CFPB announcement, Senate Banking Committee Hearing, fine announcement, and share price drop occurred in fall 2016, reports of an aggressive sales culture at the bank appeared before. In 2015, the City of Los Angeles sued Wells Fargo “for pressuring employees of its retail bank to commit fraudulent acts, such as opening customer accounts without their approval” (Rudegeair 2015). Later that year, the Office of the Comptroller of the Currency and the San Francisco Federal Reserve created probes of their own (Glazer 2015). Ultimately, the CFPB built upon these investigations in 2016 as later revealed in FOIA documents (CFPB 2018). We therefore experiment with different event windows and samples.

Column 1 shows that starting in 2015, those advisers passing the old Series 66 exam are 2.8% more likely than those passing the old exam to exit. This represents a meaningful margin above the 12.9% average exit rate for this sample. Column 2 repeats the test with a sample beginning in 2013 instead of 2012, and finds similar results. Columns 3 and 4 use the year 2016

[13] Interestingly, in April 2017 Wells Fargo CEO Tim Scott announced an initiative to rehire 1,000 employees who were wrongfully terminated or had quit in protest of fraud (Keller 2017).
[14] Wells Fargo operates several subsidiaries with advisers, and we include all of them.

as the beginning of the post-fraud revelation period, and again finds advisers with the old Series 66 qualification are more likely to leave Wells Fargo.

We then use this case study to motivate an analysis of employee turnover following evidence of a marked shift in the behavior of their colleagues in our entire sample. The first of the four misconduct measures we study is *Misconduct Shock*, based on the percent of a firm's advisers and representatives involved in a misconduct incident that year. The second is *Misconduct Ever Shock*, based on the percent of a firm's advisers and representatives with a misconduct incident from a prior year on their record. Thus, the first measure considers the flow of new misconduct, while the second considers the misconduct history of individuals currently working at the firm, which varies with changes in hiring policies. Our third (fourth) measure is *Penalty Amount Shock* (*Penalty Number Shock*) which uses the firm's dollar amount of (number of incidents with) damages granted, sanctions or settlements per individual.

The analysis proceeds in four steps. First, for each firm-year we model the four misconduct measures described above as a function of firm size (equal to the log individual count) and firm and year fixed effects. The firm and year fixed effects help us detect deviations in misconduct relative to the firm's long run average and the industry as a whole. We focus on within-firm deviations rather than levels because firm misconduct culture differs and we presume each individual matched to their firm knowing something about its culture. Second, we extract the residual from the step one regression as our proxy for changes in the firm's misconduct culture. Third, we create an indicator for residuals above the 95^{th} percentile for the sample. Fourth, we model individual exits from the firm as a function of our Series 66 variables and their interaction with this indicator, as well as the controls and fixed effects from equation (1).

To ensure the individual was not involved in the scandal, we omit individuals with a misconduct incident on their record that year. Because an adviser's propensity to depart their employer may vary with experience, we replace our log experience control from equation (1) with first, second, and third order experience terms. If we instead include years of experience fixed effects, we find similar results.

We present results in Table 9. First note that the coefficient for *S66* x *Ethics S66* is negative and significant in all columns, indicating that advisers passing the old exam are less likely to leave firms *not* experiencing scandals. This follows directly from our main finding that such advisers commit less misconduct (Table 3), and related literature finding significantly greater turnover among individuals engaging in misconduct (e.g., Table 8 of Egan et al. 2019). For example, advisers with more ethics training may be less likely to be terminated for cause, resulting in them exhibiting lower turnover rates at behaving firms.

We now turn our attention to the triple interaction coefficients of interest. Column 1 shows that at firms experiencing a spike in misconduct that year, advisers with more rules and ethics training are 2.7% more likely to leave. This represents about one-sixth of the average turnover rate for advisers in this sample. Column 2 shows a negative but insignificant coefficient on *Misconduct Ever Shock*. Thus, a spike in new misconduct incidents (column 1) appears more likely to trigger turnover in our old Series 66 passers than a rise in the number of advisers with a misconduct history (say, due to hiring advisers with such histories or turnover among those without them).

In terms of financial penalties, both the dollar amount of penalties and the number of incidents involving payment predict turnover for old Series 66 passers, but only the latter are statistically significant at conventional levels. Overall, our results suggest that rules and ethics

training affects employer-employee matching through advisers' willingness to remain at firms experiencing scandals.

Our final tests examine an implication of these turnover results: departures by advisers with more ethics training predict future scandals. Based on our Table 9 findings, we examine whether advisers prefer to leave firms *before* a scandal breaks. For example, firms may hire individuals with misconduct records, fail to punish transgressions, underinvest in controls that protect investors, or pursue more aggressive sales strategies. Advisers with more ethics training may respond by leaving, before such developments manifest in misconduct.

We study individual exits from firms as a function of these firms' future misconduct, using the lead (year $t+1$) value of our firm misconduct indicators from Table 9. As before, we control for experience polynomials and omit individuals engaging in misconduct themselves that year.

Table 10 presents the results. Column 1 shows that, compared to advisers passing the new exam, advisers passing the old exam are 6.5% more likely to leave firms with major scandals and misconduct on the horizon. Notably, the coefficient for *S66* x *Ethics S66* x *Misconduct Shock*$_{t+1}$ is more than double the analogous coefficient based on the contemporaneous misconduct shock from column 1 of Table 9. Columns 2 and 3 also find larger coefficients than the analogous columns in Table 9, while column 4 finds a smaller, although still significant, coefficient.

Overall, our results are consistent with 1) advisers observing signals of future misconduct at their firm, and 2) advisers with more ethics training being just as likely to leave before the signals manifest in misconduct as after. Then, departures of certain types of advisers can reveal the firm's future misconduct. Of course, we cannot observe the exact circumstances under which departures occur. Rather than resignations, departures of ethics-trained advisers may be

involuntary, perhaps because the individual refuses to participate in aggressive sales practices, or underperforms in firms where such practices are embraced. However, such departures would also predict future misconduct at the firm.

5. Conclusion

We study a 2010 change in the Series 66 exam, which qualifies individuals as investment advisers. The exam shifted emphasis from rules and ethics to technical topics. We use this shift to proxy for the extent of advisers' rules and ethics training, and study their conduct and labor market activity through their career. Comparing two advisers at the same firm location, with the same qualifications, in the same year, we find those with more rules and ethics training are one-fourth less likely to commit misconduct. The misconduct differences are best explained by the exam content change having a direct effect on adviser behavior, instead of unobservable differences between old and new exam cohorts. While both compliance and ethics-based interpretations for our misconduct results may be valid, our analysis of obvious offenses suggests the exam influences perceptions of right and wrong, and not only awareness of specific rules.

We find the exam change was less consequential for those engaging in misconduct before their exam, or working for firms where misconduct is common. As such, prior infractions and contagion of misconduct behavior appears to reduce the effectiveness of the exam at preventing transgressions. Finally, we show when a firm is experiencing a spike in misconduct and financial sanctions, those advisers with more rules and ethics training are more likely to leave. Such departures also predict future misconduct and sanctions.

Overall, our results can be understood through the lens of Becker's model of crime (1968, 1992). In this model, "many people are constrained by moral and ethical considerations, and did

not commit crimes even when they were profitable and there was no danger of detection… The amount of crime is determined not only by the rationality and preferences of would-be criminals, but also by the economic and social environment created by… opportunities for employment, schooling, and training programs." (Becker 1992, pp. 41-42). In our context, ethics training can affect an individual's behavior by increasing the value of their reputation, as well as the psychological costs of committing misconduct. But such effects will be moderated by the employer's culture, which affects the stigma of offenses, as well as the individual's beliefs about appropriate conduct.

While we cannot evaluate all of the tradeoffs behind adviser training, our results are relevant to discussions and analyses of investment adviser misconduct. More importantly, to our knowledge we present the first large sample evidence of rules and ethics training affecting the conduct and labor market activity of individuals in the financial industry.

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Appendix A: Variables Definitions

Dependent Variable	Definition
Misconduct	An indicator equal to one for individuals involved in a misconduct incident at the firm that year and zero otherwise. Following Egan et al. (2019), misconduct incidents include the following categories: Civil-Final, Criminal-Final Disposition, Customer Dispute-Award/Judgment, Customer Dispute-Settled, Employment Separation after Allegations, and Regulatory-Final.
Obvious Misconduct	An indicator equal to one for individuals involved in an obvious misconduct incident at the firm that year and zero otherwise. From our original set of misconduct incidents, we use textual analysis to classify obvious cases as those involving fraud, theft, or deception as described in the text.
Exit Firm	An indicator equal to one for individuals who leave their employer that year and zero otherwise.
Log # Exams	The natural logarithm of the number of securities exams passed that month.
Independent Variables	
Series 66	An indicator equal to one for individual-years after the individual has passed the Series 66 and zero otherwise.
Ethics 66	An indicator equal to one for advisers who pass the Series 66 before January 1, 2010 and zero otherwise. The variable is recorded as zero until the individual passes the Series 66.
New Placebo Series 7	An indicator equal to one for individuals who pass the Series 7 on or after January 1, 2010 and zero otherwise. The variable is recorded as zero until the individual passes the Series 7.
Prior Misconduct at S66	An indicator equal to one for advisers who had a misconduct incident on their record when they passed the Series 66 exam.
Yrs Exp at S66	A series of indicator variables each equal to one for advisers with various years of experience in the securities industry when they passed the Series 66 exam and zero otherwise.
Firm Misconduct	The percent of advisers and representatives at the firm with a misconduct incident that year. We measure this for each individual-year observation by omitting the individual themselves from the average calculation to avoid a mechanical relation.
Small Firm	An indicator equal to one for firms with 500 or fewer advisers and representatives and zero otherwise.
Small Branch	An indicator equal to one for firm-city pairs with 10 or fewer advisers and representatives and zero otherwise.
Misconduct Shock	An indicator equal to one for firm-years with an abnormal level of new misconduct that year. We classify an abnormal firm-year as one where the residual from a regression with size controls and year and firm fixed effects is above the 95^{th} percentile.

Misconduct Ever Shock	An indicator equal to one for firm-years with an abnormal percent of individuals with a misconduct history that year. We classify an abnormal firm-year as one where the residual from a regression with size controls and year and firm fixed effects is above the 95th percentile.
Penalty Amount Shock	An indicator equal to one for firm-years with an abnormal level of damages granted, sanctions, and settlements per individual that year. We classify an abnormal firm-year as one where the residual from a regression with size controls and year and firm fixed effects is above the 95th percentile.
Penalty Number Shock	An indicator equal to one for firm-years with an abnormal percent of individuals attracting damages, sanctions, and settlements that year. We classify an abnormal firm-year as one where the residual from a regression with size controls and year and firm fixed effects is above the 95th percentile.

Appendix B: Example Investment Adviser Record on BrokerCheck

This Figure provides an excerpt from an example investment adviser record, retrieved from BrokerCheck in September 2019.

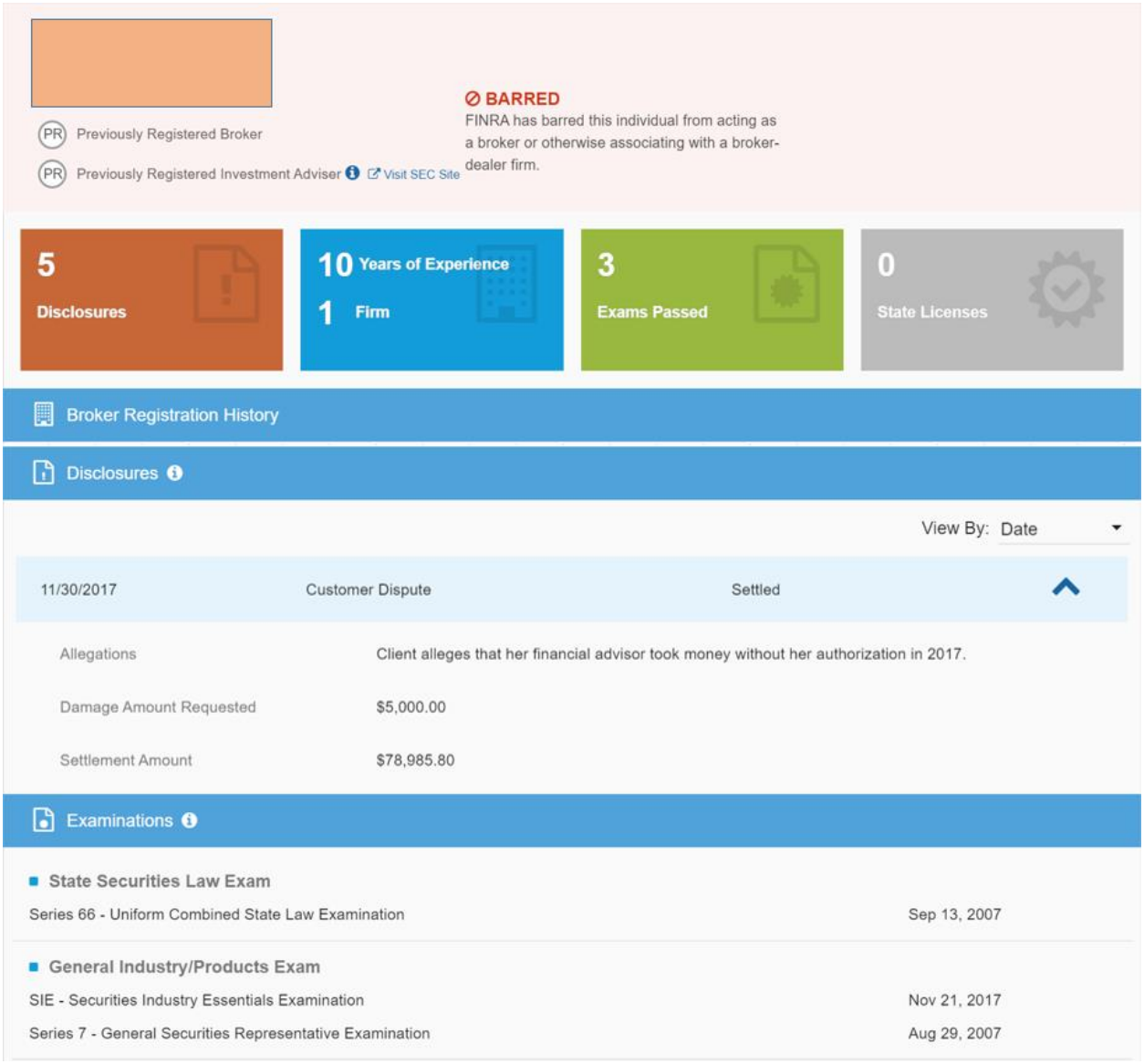

Figure 1: Series 66 Exam Type and Misconduct in Event Time

This Figure plots event year coefficients and confidence intervals from the following regression:

$$y_{ijt} = \sum_{t-2}^{t\geq 3} \beta \times Ethics66_i \times S66_{it} + S66_{it} + \alpha_i + \alpha_{jt} + \gamma \times Controls_{it} + \varepsilon_{ijt}$$

The X-axis labels the event year(s) for each coefficient marking an event year relative to the investment adviser's exam at t=0. We omit the indicator for t-2, which serves as the benchmark period. Vertical bands represent 90% confidence intervals for the point estimates in each event year and are calculated based on standard errors clustered at the firm level. We drop event-time observations prior to t-2 to ensure common support for pre- and post-Series 66 exam passers.

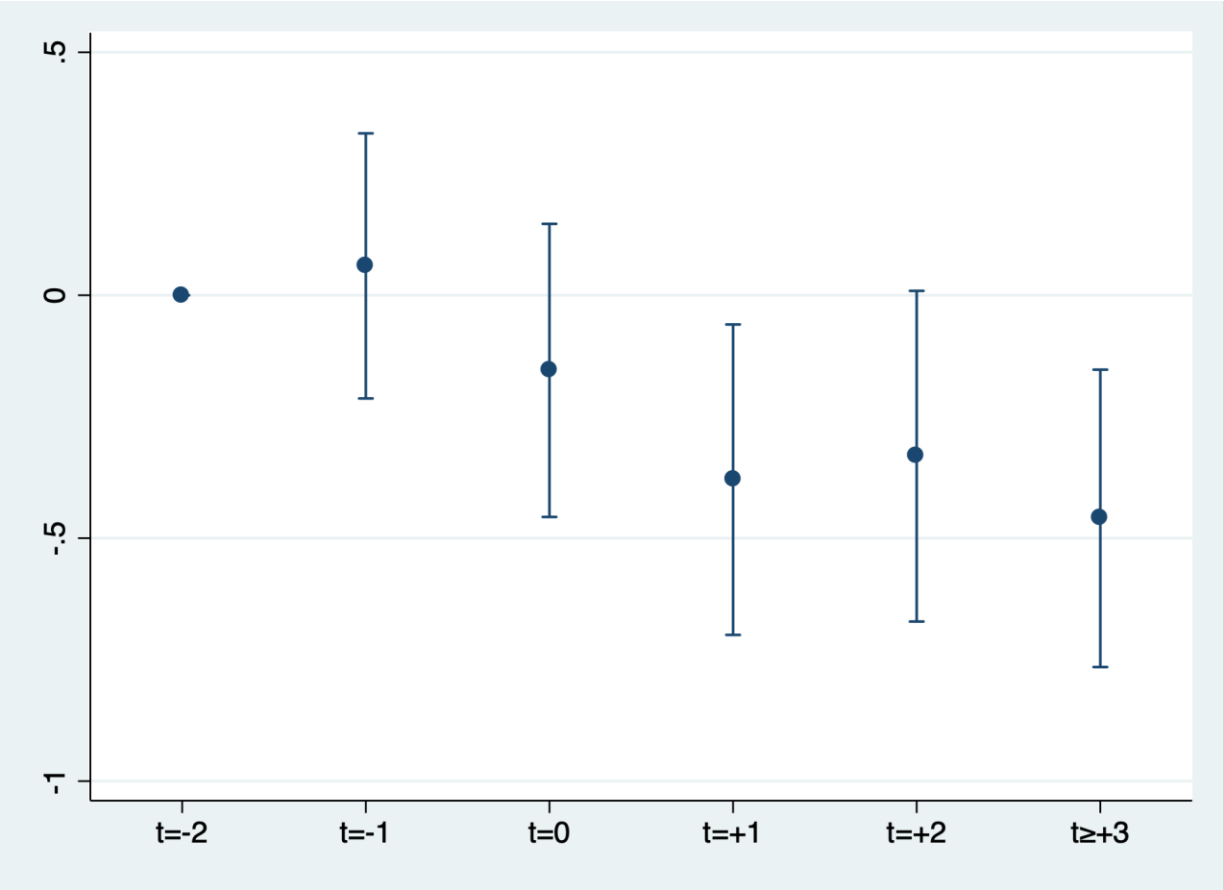

Figure 2: Exams Passed by Exam Type between September 2009 and April 2010

This Figure presents the share of exam passers by month and exam type. Each month, we divide the number of exam passers by the number of exam passers for the calendar year ("Month Shares").

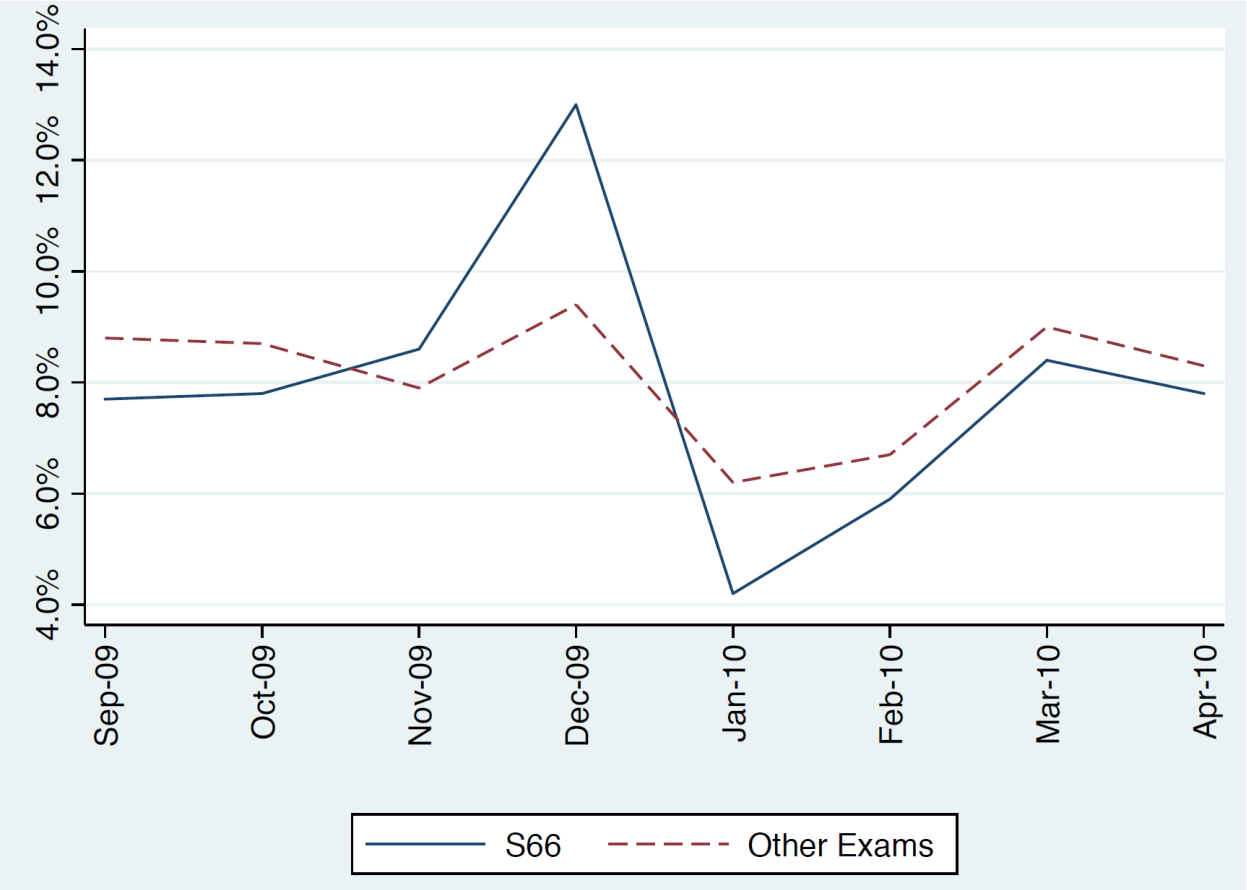

Table 1: Sample Construction for Misconduct Analysis

This table describes our sample construction.

Firm-Adviser-Year observations from 2007-2017	8,838,880
Less Observations from:	
Advisers who pass the S66 between October 2009 and March 2010	(73,159)
Advisers who pass the S66 after July 2016	(90,626)
Year of Adviser's S66 Exam	(174,642)
Final Sample for Table 3-6 misconduct analyses	8,500,453

Table 2: Summary Statistics

This table summarizes the individual-firm-year and exam passer variables in our sample. In Panel B, we measure characteristics of only Series 66 passers at the time they passed their exam.

Panel A: Individual-Firm-Year Variables

	Mean	Std Dev	25%	50%	75%	N
Misconduct (%)	0.76	8.71	0.00	0.00	0.00	8,500,453
Egregious Misconduct (%)	0.22	4.69	0.00	0.00	0.00	8,500,453
Misconduct Ever (%)	7.88	26.94	0.00	0.00	0.00	8,500,453
Exit Firm	0.17	0.37	0.00	0.00	0.00	8,500,453
Years Experience	12.96	9.59	5.00	11.00	19.00	8,500,453
S6	0.37	0.48	0.00	0.00	1.00	8,500,453
S7	0.66	0.48	0.00	1.00	1.00	8,500,453
S24	0.15	0.35	0.00	0.00	0.00	8,500,453
S63	0.72	0.45	0.00	1.00	1.00	8,500,453
S65	0.20	0.40	0.00	0.00	0.00	8,500,453
S66	0.20	0.40	0.00	0.00	0.00	8,500,453
Ethics S66	0.16	0.37	0.00	0.00	0.00	8,500,453
Other Exam	0.31	0.46	0.00	0.00	1.00	8,500,453

Panel B: Series 66 Exam Passer Characteristics

	Mean	Std Dev	25%	50%	75%	N
Years Experience at Series 66 Date	4.72	6.19	1.00	2.00	6.00	263,924
Misconduct Ever at Series 66 Date	0.04	0.20	0.00	0.00	0.00	263,924

Table 3: Exam Coverage and Adviser Misconduct

This table models individual misconduct as a function of exam coverage using equation (1). The unit of observation is individual-firm-year. The dependent variable is *Misconduct*, the flow of new misconduct for the individual during the year. The regression sample is defined in Table 2. Reported below the coefficients are t-statistics calculated with standard errors clustered at the firm level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix A for variables definitions.

	(1)	(2)	(3)	(4)	(5)
	Misconduct	Misconduct	Misconduct	Misconduct	Misconduct
S66	0.210***	0.217***	0.113**	0.054	
	[4.53]	[4.70]	[2.33]	[1.07]	
S66 x Ethics S66	-0.162*	-0.168*	-0.197**	-0.238***	-0.201**
	[-1.82]	[-1.92]	[-2.38]	[-2.88]	[-2.24]
Adj R-Sq.	0.166	0.169	0.178	0.214	0.219
N	8,423,524	8,421,628	8,379,914	7,851,574	7,630,507
Controls	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	No	No	No
Individual FEs	Yes	Yes	Yes	Yes	Yes
Firm FEs	No	Yes	No	No	No
Firm x Year FEs	No	No	Yes	No	No
Firm x Year x City FEs	No	No	No	Yes	No
Firm x Year x City x S66 FEs	No	No	No	No	Yes

Table 4: Exam Coverage and Adviser Misconduct—Robustness Analysis

This table models individual misconduct as a function of exam coverage using equation (1). The unit of observation is individual-firm-year. The dependent variable is *Misconduct*, the flow of new misconduct for the individual during the year. The regression sample is defined in Table 1, and further restricted as labeled in the column headers. Reported below the coefficients are t-statistics calculated with standard errors clustered at the firm level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix A for variables definitions.

	(1) Misconduct	(2) Misconduct	(3) Misconduct	(4) Misconduct	(5) Misconduct
	Full Sample	Has Pre-2010 Exam	Has Recession Experience	Series 66 2008-2011	Full Sample
S66	0.004	0.069	0.070	0.095	
	[0.07]	[1.31]	[1.34]	[1.11]	
S66 x Ethics S66	-0.155*	-0.214**	-0.214**	-0.332***	
	[-1.82]	[-2.40]	[-2.40]	[-3.27]	
S7 x New Placebo S7					-0.039
					[-0.37]
Adj R-Sq.	0.214	0.226	0.225	0.213	0.217
N	7,851,535	6,574,094	6,638,732	6,449,919	7,696,320
Controls	Yes	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes	Yes
Firm x Year x City FEs	Yes	Yes	Yes	Yes	Yes
Cohort Year x Year FEs	Yes	No	No	No	No

Table 5: Exam Coverage and Obvious Misconduct

This table models obvious misconduct as a function of exam coverage using equation (1). The unit of observation is individual-firm-year. The dependent variable is *Obvious Misconduct*, the flow of new misconduct involving fraud, theft, or deception for the individual during the year. Reported below the coefficients are t-statistics calculated with standard errors clustered at the firm level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix A for variables definitions.

	(1) Obvious Misconduct
S66	0.023
	[1.20]
S66 x Ethics S66	-0.146***
	[-3.60]
Adj R-Sq.	0.147
N	7,851,574
Controls	Yes
Individual FEs	Yes
Firm x Year x City FEs	Yes

Table 6: Individual Characteristics

This table models individual misconduct as a function of exam coverage and individual characteristics using equation (1). The unit of observation is individual-firm-year. The dependent variable is *Misconduct*, the flow of new misconduct for the individual during the year. *Prior Misconduct at S66* is an indicator for whether the individual had a misconduct record at the time they passed the Series 66. *Yrs Exp at S66* is an indicator for various levels of adviser years of experience at the time they passed the Series 66. Reported below the coefficients are t-statistics calculated with standard errors clustered at the firm level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix A for variables definitions.

	(1) Misconduct	(2) Misconduct
S66 x Ethics S66	-0.399***	
	[-5.12]	
S66 x Ethics S66 x Prior Misconduct at S66	0.036***	
	[3.76]	
S66 x Ethics S66 x <=2 Yrs Exp at S66		-0.589***
		[-5.09]
S66 x Ethics S66 x 3 Yrs Exp at S66		-0.411
		[-1.53]
S66 x Ethics S66 x 4 Yrs Exp at S66		-0.095
		[-0.46]
S66 x Ethics S66 x >=5 Yrs Exp at S66		-0.071
		[-0.56]
Adj R-Sq.	0.214	0.214
N	7,851,574	7,851,574
Controls, Main and Two-Way Effects	Yes	Yes
Individual FEs	Yes	Yes
Firm x Year x City FEs	Yes	Yes

Table 7: Firm Characteristics

This table models individual misconduct as a function of exam coverage and firm characteristics using equation (1). The unit of observation is individual-firm-year. The dependent variable is *Misconduct*, the flow of new misconduct for the individual during the year. *Firm Misconduct* is the percent of advisers and representatives at the firm with a misconduct incident on their record before that year. *Small Firm* (*Small Branch*) is an indicator for firms (firm-city combinations) with fewer than 500 (10) advisers and representatives. Reported below the coefficients are t-statistics calculated with standard errors clustered at the firm level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix A for variables definitions.

	(1) Misconduct	(2) Misconduct	(3) Misconduct
S66 x Ethics S66	-0.324***	-0.286***	-0.259***
	[-3.73]	[-3.48]	[-3.15]
S66 x Ethics S66 x Firm Misconduct	0.204***		
	[4.15]		
S66 x Ethics S66 x Small Firm		0.330***	
		[3.82]	
S66 x Ethics S66 x Small Branch			0.142
			[1.57]
Adj R-Sq.	0.215	0.214	0.214
N	7,851,574	7,851,574	7,851,574
Controls, Main and Two-Way Effects	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes
Firm x Year x City FEs	Yes	Yes	Yes

Table 8: Exam Coverage and Advisers' Response to Ethical Scandals: Wells Fargo

This table models individual turnover as a function of exam coverage. The unit of observation is individual-firm-year. The dependent variable is *Exit Firm*, an indicator equal to one if the individual leaves the firm that year. The sample is limited to individuals employed by Wells Fargo and the years labeled at the top of the column. Reported below the coefficients are t-statistics calculated with standard errors clustered at the city level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix A for variables definitions.

	(1)	(2)	(3)	(4)
	Exit Firm	Exit Firm	Exit Firm	Exit Firm
	Year>2011	Year>2012	Year>2011	Year>2012
S66 x Ethics S66 x Year>=2015	0.028***	0.031***		
	[3.18]	[3.39]		
S66 x Ethics S66 x Year>=2016			0.040***	0.042***
			[4.87]	[5.22]
Adj R-Sq.	0.052	0.047	0.052	0.047
N	200,074	167,077	200,074	167,077
Controls and Main Effects	Yes	Yes	Yes	Yes
Controls for Polynomials of Experience	Yes	Yes	Yes	Yes
City x Year FEs	Yes	Yes	Yes	Yes

Table 9: Exam Coverage and Advisers' Response to Ethical Scandals: Full Sample

This table models individual turnover as a function of exam coverage. The unit of observation is individual-firm-year. The dependent variable is *Exit Firm*, an indicator equal to one if the individual leaves the firm that year. *Misconduct Shock* (*Misconduct Ever Shock*) is an indicator equal to one for firm-years where the abnormal misconduct that year (the percent of advisers and representatives with a misconduct history) is above the 95th percentile. *Penalty Amount Shock* (*Penalty Number Shock*) is an indicator equal to one for firm-years where the damages granted, sanctions, and settlements per individual (percent of advisers and representatives attracting damages, sanctions, and settlements) is above the 95th percentile. Reported below the coefficients are t-statistics calculated with standard errors clustered at the firm level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix A for variables definitions.

	(1)	(2)	(3)	(4)
	Exit Firm	Exit Firm	Exit Firm	Exit Firm
S66 x Ethics S66	-0.026***	-0.025***	-0.029***	-0.029***
	[-3.48]	[-3.29]	[-3.79]	[-3.77]
S66 x Ethics S66 x Misconduct Shock	0.027***			
	[2.94]			
S66 x Ethics S66 x Misconduct Ever Shock		0.022		
		[1.21]		
S66 x Ethics S66 x Penalty Amount Shock			0.009	
			[1.58]	
S66 x Ethics S66 x Penalty Number Shock				0.051**
				[2.28]
Adj R-Sq.	0.359	0.359	0.359	0.359
N	7,787,627	7,787,627	7,787,627	7,787,627
Controls and Main Effects	Yes	Yes	Yes	Yes
Controls for Polynomials of Experience	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes
Firm x Year x City FEs	Yes	Yes	Yes	Yes

Table 10: Exam Coverage, Adviser Exits, and Future Ethical Scandals

This table models individual turnover as a function of exam coverage. The unit of observation is individual-firm-year. The dependent variable is *Exit Firm*, an indicator equal to one if the individual leaves the firm that year. *Misconduct Shock* (*Misconduct Ever Shock*) is an indicator equal to one for firm-years where the abnormal misconduct *next year* (the percent of advisers and representatives with a misconduct history *next year*) is above the 95th percentile. *Penalty Amount Shock* (*Penalty Number Shock*) is an indicator equal to one for firm-years where the damages granted, sanctions, and settlements per individual *next year* (percent of advisers and representatives attracting damages, sanctions, and settlements *next year*) is above the 95th percentile. Reported below the coefficients are t-statistics calculated with standard errors clustered at the firm level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix A for variables definitions.

	(1)	(2)	(3)	(4)
	Exit Firm	Exit Firm	Exit Firm	Exit Firm
S66 x Ethics S66	-0.030***	-0.025***	-0.031***	-0.030***
	[-3.80]	[-3.31]	[-4.06]	[-3.84]
S66 x Ethics S66 x Misconduct Shock$_{t+1}$	0.065***			
	[4.09]			
S66 x Ethics S66 x Misconduct Ever Shock$_{t+1}$		0.024***		
		[2.92]		
S66 x Ethics S66 x Penalty Amount Shock$_{t+1}$			0.013***	
			[3.07]	
S66 x Ethics S66 x Penalty Number Shock$_{t+1}$				0.034***
				[3.75]
Adj R-Sq.	0.359	0.359	0.359	0.359
N	7,787,627	7,787,627	7,787,627	7,787,627
Controls and Main Effects	Yes	Yes	Yes	Yes
Controls for Polynomials of Experience	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes
Firm x Year x City FEs	Yes	Yes	Yes	Yes

Online Appendix to:

Can Ethics be Taught?

Evidence from Securities Exams and Investment Adviser Misconduct

September 2019

This online appendix tabulates additional analyses not reported in the paper.

Table A1: Exam Bunching

This table models the number of exams passed as a function of time. The dependent variable is the log number of exams passed. The unit of observation is exam type-month-year. The sample in column 1 contains observations from the Series 6, 7, 24, 63, 65, and 66. The sample in column 2 contains only observations from the Series 63, 65, and 66, which all experienced a similar change in minimum passing grade around January 2010. Reported below the coefficients are t-statistics calculated with standard errors clustered at the month-year level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix A for variables definitions.

	(1)	(2)
	Log # Exams	Log # Exams
Oct 2009 x S66	0.015	-0.010
	[0.43]	[-0.21]
Nov 2009 x S66	0.215***	0.322***
	[6.11]	[6.78]
Dec 2009 x S66	0.464***	0.388***
	[13.16]	[8.17]
Jan 2010 x S66	-0.440***	-0.295***
	[-12.48]	[-6.22]
Feb 2010 x S66	-0.203***	-0.091*
	[-5.75]	[-1.91]
Mar 2010 x S66	-0.133***	-0.054
	[-3.78]	[-1.13]
Adj R-Sq.	0.954	0.960
N	336	144
Cluster by Month-Year	Yes	Yes
Sample Years	2008-2011	2008-2011
Sample Exams	All	S63, S65, S66
Coeffs for all Month x S66	Yes	Yes
Month-Year FEs	Yes	Yes
Exam Type FEs	Yes	Yes