Supervisor Informal Authority and Employee Financial Misconduct*

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Abstract

We study the influence of middle managers ("supervisors") on financial misconduct at branches of financial advisory firms. Our most conservative estimates indicate that individual supervisor fixed effects explain as much variation in branch misconduct as firm fixed effects. We find similar evidence when we study supervisors switching firms following branch closures that are unrelated to misconduct, indicating our results are not spuriously generated by matching. Our results are concentrated in firms that theory suggests are most likely to delegate authority to supervisors—firms with complex operations, distant branches, and experienced supervisors. Supervisors affect misconduct through their personnel decisions, attention to employees with past misbehavior, and their own industry rules and ethics training. Our paper is the first to explore the role of supervisor discretion, distinct from firm-level policies or executive characteristics, in influencing financial misconduct.

1. Introduction

Management decisions influence whether financial misconduct occurs. For example, managers decide how employees are compensated and how much to invest in controls and risk management. Prior literature emphasizes executives' role in misconduct oversight (Jiang, Petroni, and Wang 2010; Feng et al. 2011; Biggerstaff, Cicero, and Puckett 2015; Benmelech and Frydman 2015; Davidson, Dey, and Smith 2015; Heese and Perez-Cavazos 2019). This focus is natural because executives make the above decisions, and executives have been implicated in some of the most notorious misconduct cases including Worldcom and Theranos.

However, misconduct regularly involves junior employees and their managers. A recent Global Economic Crime and Fraud Survey reports that half of fraud incidents resulting in losses exceeding $100 million were committed by internal parties, and that non-executive employees are the main perpetrator in 74% of internal cases (PwC 2020). Such misconduct can follow from training, monitoring, disciplining, and personnel decisions that are often the domain of middle managers, whom we refer to as "supervisors". Additionally, in most workplaces, employees more frequently interact with their immediate supervisor than with executives. When fraud is uncovered, it is common for executives to blame "rogue managers" and claim they have delegated authority to them.[1]

Efforts to study the role of supervisors in overseeing misconduct specifically or their authority more generally face several empirical challenges (Prendergast 2002). Few settings permit researchers to link supervisors to their subordinates' behavior, across organizations. Additionally,

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[1] For example, in 2008 a trader at Société Générale caused $7.7B of losses after engaging in a series of unauthorized and fictitious transactions. Management interviews and an auditor's assessment placed blame on the trader's immediate supervisors. ("Société Générale blames managers." K. Bennhold, New York Times, May 22, 2008). Enron Chairman Ken Lay testified that he was a "hands-off manager, who believed in hiring the best people and letting them spread their wings." ("Former Enron Chairman blames others for collapse." W. Goodwyn, NPR, April 25, 2006). When discussing Goldman Sachs' involvement in the 1MDB scandal, CEO Lloyd Blankfein said "These are guys who evaded our safeguards, and lie. Stuff like that's going to happen." ("Goldman blames rogue staff for its 1MDB scandal. That may not wash." P. Henning, New York Times, November 15, 2018).

while supervisors may play an important role, misconduct can manifest from a host of firm-level decisions about compliance, risk-taking, compensation, and auditing. Such factors are difficult to measure on their own and by extension, challenging to isolate from any role that supervisors may play.

In this paper, we study the influence of supervisors on employee misconduct at the universe of firm-city locations ("branches") of U.S. financial advisory firms. We observe branch supervisors because they register with the Financial Industry Regulatory Authority (FINRA) and pass specific qualification exams. We focus on the Series 24 General Securities Principal Exam, which qualifies individuals to supervise and manage branch activities. This exam covers supervision duties similar to those of middle managers in other industries, including personnel decisions, training, controls testing, and recognizing, investigating, and resolving employees' violations of industry regulations. We observe these violations because employees also register with FINRA, which records customer complaints and disciplinary actions. Common examples of misconduct violations include unsuitable investment recommendations, unauthorized activity, and investment fraud. Misconduct in this setting has attracted significant attention from academics, regulators, investors, and the media.

We model branch misconduct using the AKM method (Abowd, Kramarz, and Margolis 1999). This method is well suited for our purposes of understanding delegation to supervisors. Specifically, AKM allows us to estimate the relative importance of firm-level factors and individual supervisors to branch misconduct. Following other work using AKM, we focus on the ratio of supervisor-to-firm contribution to R-Squared, and infer that a higher ratio results from greater delegation.[2]

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[2] This method is also applied in contemporaneous research to assess the relative importance of firms and individuals to various outcomes in executive compensation (Graham, Li, and Qiu 2012), venture capital (Ewens and Rhodes-Kropf 2015), and lending (Bushman et al. 2019; Herpfer 2020).

Supervisors can wield substantial authority in organizations (Fama and Jensen 1983; Baker, Gibbons, and Murphy 1997; Harris and Raviv 2005). The literature describes two types of authority: an executive's formal authority to restrict a supervisor's decisions, and informal authority delegated from an executive to a supervisor to staff branches, oversee operations, and propose investments. Informal authority is thought to prevail when the organization is complex, decision functions are specialized, and supervisors can be trusted. The nature of information is also relevant: soft information such as an employee's traits or their importance to ongoing customer relationships can be difficult to verify or communicate to executives.

At the same time, supervisors may have little scope to influence matters pertaining to misconduct. Aghion and Tirole (1997) argue that a supervisor's "preferred decisions are likely to be very suboptimal for the firm when there are substantial externalities on other divisions, on future (supervisors) of the division, or on the firm as a whole" (p. 14). In our setting, misconduct can harm the firm's reputation, attract major sanctions and regulatory scrutiny, and spill over to other employees at the same branch (Dimmock et al. 2018; Easley and O'Hara 2019). Anticipating this, firms may enforce policies that constrain supervisors' ability to tolerate misconduct or retain deviant employees. Overall, theory offers competing perspectives on the importance of supervisor discretion to misconduct, and a lack of data on supervisors and subordinates has prevented researchers from empirical investigation.

To capture the extent of misbehavior at the supervisor's branch and abstract away from differences in branch size, we measure the proportion of employees at each branch involved in misconduct that year. We model this proportion as a function of BD firm, supervisor, and city-year fixed effects, as well as a host of time-varying branch and supervisor controls. Our estimates suggest that supervisors explain 2.3 times as much variation in misconduct as firm-level factors. R-Squared increases by 16% when we add supervisor fixed effects to the model, versus only 7%

when we add firm fixed effects. For brevity, hereafter we refer to the relative contribution of supervisor to firm-level factors to branch misconduct as the "SF ratio" (in this case 16%/7%=2.3). In terms of magnitudes, the interquartile range for supervisor fixed effects is 0.75%, compared to 0.46% for firm fixed effects and the mean branch misconduct rate of 1.0%.

We conduct a series of robustness tests that consider alternative supervisor and misconduct definitions, omit branches in large cities (where we identify branches with error), omit supervisors who never switch employers, and exclude misconduct incidents involving the supervisor themselves. Our most conservative estimates from these analyses indicate that the SF ratio is approximately 1.4, and in most specifications it exceeds 2.0.

We then study supervisor influence on branch headcount and employee licenses, factors less affected by information asymmetry and therefore more tightly controllable by the firm. We find an SF ratio of just 0.71 (0.56) for headcount (licenses), indicating that our evidence on misconduct is not spuriously generated by, for example, the relative number of supervisors and firms in our sample. Reinforcing this, our misconduct inference is unaffected by randomly eliminating 50% of supervisors from our sample.

We also assess whether supervisor-firm matching mechanically biases our analyses in favor of finding a large role for supervisors. First, we note that our tests contain city-year fixed effects, which makes it unlikely that differences in city-level norms (Parsons, Sulaeman, and Titman 2018), customer demographics, or supervisor labor markets explain our results. Additionally, we re-estimate our baseline model with firm-year fixed effects, such that we compare supervisors who have matched to the same firm in the same period. Compared to the firm fixed effect in our baseline specification, the firm-year fixed effect naturally takes on greater importance (it accounts for any time-varying firm-level decisions surrounding compliance, risk taking,

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compensation, and auditing). But notably, the supervisor contribution to R-Squared is unaffected, and the SF ratio is approximately 1.0.

A second matching concern is that recent branch misconduct is contaminating the supervisor switches providing our identification. We study a subsample of supervisor switches stemming from branch closures where the branch had *no recent misconduct or customer complaints*. The SF ratio using this sample is greater than 2.3.

Our next tests study *how* supervisors influence branch misconduct. First, a necessary condition for our results is that supervisors are delegated authority from headquarters—that is, there should be little scope for supervisor traits to influence branch misconduct if supervisors merely follow company directives in overseeing employee behavior. We draw on theory to develop proxies for when organizations are most likely to delegate authority to supervisors. This work argues that delegation is most likely when the organization's complexity renders formal top-down authority inefficient, when headquarters is at an information disadvantage relative to supervisors, and when supervisors can be trusted (Aghion and Tirole 1997; Baker et al. 1997; Prendergast 2002). Consistent with these arguments, we find the largest SF ratios at firms with investment product mix complexity and distant branches, and when then supervisor has more qualifications and experience.

Second, because misconduct is far more common among past offenders (Dimmock and Gerken 2012; Egan et al. 2019), we study how supervisors influence recidivism. When we model current misconduct, we find the magnitude of the past misconduct coefficient decreases by over two-thirds after supervisor fixed effects are included. Additionally, supervisors explain over six times as much variation as firms in the hiring and departure of employees with a misconduct history. Our evidence suggests that supervisor attention to past offenders plays an important role in whether these employees commit new misconduct.

Third, we study the 2010 change to the Series 66 exam, which reduced coverage for ethics and industry rules material (Kowaleski, Sutherland, Vetter 2020). Many supervisors in our sample take the Series 66, the exam requires significant preparation, and the ethics and rules material is relevant to their branch misconduct oversight. Within a firm-year, we compare misconduct at branches led by supervisors with the old versus new Series 66 qualification. We find lower misconduct at branches led by supervisors holding the old qualification (with more rules and ethics coverage). Differences in experience length across the two exam cohorts do not explain this result.

In our final tests, we model the signed supervisor fixed effect as a function of supervisor characteristics. We find less branch misconduct for female supervisors (Egan, Matvos, and Seru 2018) and those with a clean record during their pre-supervisor career, and weakly less for those who obtained their supervisor qualification during a recession (Schoar and Zuo 2017; Law and Zuo 2020).

We offer three contributions. First, because prior work on financial misconduct oversight addresses firm-level decisions and executive traits, our emphasis on supervisors is novel.[3] We find that supervisors explain more variation in misconduct than firms do. Our evidence suggests that analyses of supervisors are essential to fully understanding the causes and prevalence of financial misconduct.

Second, our paper illustrates a tradeoff behind organization design decisions in the presence of within-firm information asymmetries (Garicano 2000; Liberti and Mian 2009; Liberti 2018). Executives delegate authority to managers to increase firm value and improve productivity (Bloom, Sadun, and Van Reenan 2012; Lazear, Shaw, and Stanton 2015) and induce effort (Nagar 2002). Our results indicate that achieving such benefits can entail granting discretion that provides

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[3] Egan et al. (2018) find adviser turnover following misconduct depends on both the adviser's and branch manager's gender. Ichino and Maggi (2000) find little role for management quality in explaining absenteeism and misconduct differentials across branches of an Italian bank.

opportunities for misconduct, and in doing so inform analyses of internal corporate governance mechanisms (Acharya, Myers, and Rajan 2011; Gibbons and Roberts 2013). In this respect, our paper relates to Skrastins and Vig (2019), who find that an increase in bank hierarchy (i.e., less branch autonomy) leads to lower returns and more loan term standardization, but also better performance in corrupt markets (i.e., less rent extraction).

Third, our paper adds to the growing literature on human capital in the financial sector (Oyer 2008; Schoar and Zuo 2017; Clifford and Gerken 2019). Our evidence suggests that supervisors meaningfully differ in their tolerance for misconduct and preferences for hiring individuals with past transgressions. These differences relate to the supervisor's past behavior and their conduct training. Conduct training is required in most business school programs and professional qualifications, and regularly mentioned in the context of preparing managers for ethical dilemmas and shaping norms in their organizations (Paine 1994; Boatright 2013; Zingales 2015; Dupont and Karpoff 2019; Kowaleski et al. 2020). Despite great interest, evidence on manager conduct training is scarce. Although the exam change we study affects only some supervisors, our evidence provides motivation for further understanding the consequences of manager conduct training.

2. Setting

2.1 U.S. Financial Advisory Firms

We study branch supervisors, branch misconduct, and personnel decisions in the U.S. financial advisory market, which is explored in a series of recent papers (Dimmock and Gerken 2012; Dimmock et al. 2018; Egan et al. 2018, 2019; Parsons, Sulaeman, and Titman 2018; Charoenwong, Kwan, and Umar 2019; Cook et al. 2020; Kowaleski et al. 2020). Financial advisory firms help investors access financial markets. Workers at these firms can be organized into two

categories: investment advisers who sell financial advice, and financial representatives who primarily execute transactions on behalf of investors but do not receive direct compensation for providing advice.[4] For brevity, we refer to representatives and advisers collectively as "employees."

Employees register with FINRA, an industry regulator tasked with protecting the investing public. FINRA facilitates industry transparency by maintaining a public database of each employee's qualifications, registration status, and employer, as well as customer complaints, arbitrations, civil proceedings, regulatory sanctions, employment terminations, and criminal history. We use this database to construct our sample.

2.2 Supervisors and their principal qualification exams

FINRA Rule 3110 details internal supervision requirements for financial advisory firms. This rule describes "principals," qualified personnel with authority to carry out supervisory responsibilities. FINRA has developed and administers exams to qualify individuals as principals. Several exams (such as the Series 4, 51, and 53) qualify individuals for supervising specific investment products (e.g., options or municipal securities), while the Series 9 and 10 qualify individuals to supervise many types of investment products. By contrast, the Series 24 General Securities Principal Exam qualifies individuals to supervise and manage a broad spectrum of activities including training, staffing, and compliance with industry regulations. According to FINRA, the purpose of the Series 24 exam is "to assess the competency of entry-level General

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[4] Egan et al. (2019) report that "Roughly 84 percent of active SEC-registered investment advisers are also dually registered with FINRA as brokers. Thus, the BrokerCheck data include all brokers and the vast majority of investment advisers."

Securities Principals. It is intended to safeguard the investing public by helping to ensure that General Securities Principals are competent to perform their jobs."[5]

We classify Series 24 license holders as supervisors, for two reasons. First, our goal is to understand delegation and its effect on branch misconduct, and Series 24 holders' responsibilities (further described below) clearly position them to influence employee behavior. Second, the Series 24 is by far the most common principal exam, and studying a large set of supervisors with the same qualification is amenable to our analysis. Nevertheless, we evaluate the robustness of our main results to considering a broader set of principal exam holders.

Using qualification exams to identify branch supervisors comes with a drawback. Series 24 holders can transition back into adviser roles, but we would identify them as supervisors in our data (the transitions are unobservable to us). Importantly, we note that any such transitions bias the SF ratio downward, because we are attributing supervisor authority to individuals who do not actually possess it.

The Series 24 contains 150 questions covering five content areas. We list these areas below, with the number of questions appearing in parentheses and exam topics pertinent to our study in bullets:

1. Supervision of Registration of the Broker-Dealer and Personnel Management Activities (9)

   - Prehire requirements based on background, disciplinary, complaint or financial history and registration/affiliation

   - Requirements for heightened supervision

2. Supervision of General Broker-Dealer Activities (45)

   - Requirements that all activities and systems have proper controls

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[5] This quote, and information that follows in this section can be found in the Series 24 exam outline, accessed on November 20, 2020, available at: https://www.finra.org/sites/default/files/Series_24_Outline.pdf

- Appropriate testing of the firm's procedures and controls

- Regulatory requirements to manage conflicts of interests

- Requirements to train associated persons concerning products and services

- Requirements to conduct due diligence on new products and services and continue risk assessment of existing products and services

- Proper handling and resolution of customer and industry disputes

3. Supervision of Retail and Institutional Customer-Related Activities (32)

- Suitability requirements

- Requirement to recognize red flags, investigate and escalate potential issues

- Commission and markup regulations

- Requirements to provide disclosures concerning products, risks, services, costs, and fees

4. Supervision of Trading and Market Making Activities (32)

- Requirements to implement and enforce trader mandates and to restrict traders to assigned aggregation units

- Prohibited trading activities

- Escalation requirements upon discovery of a prohibited activity

5. Supervision of Investment Banking and Research (32)

- Requirements to conduct and document due diligence of issuers

- Requirements for information barriers

The required passing score for the Series 24 is 70%. The time permitted is 3 hours 45 minutes, and the exam fee is $120.

Figure 1 provides an excerpt of a job posting for a branch supervisor position, listed on a professional networking website. The posting mentions that applicants must have their Series 24, as well as two years of supervision experience in the securities industry. In terms of duties, the posting describes oversight and compliance-related tasks directly related to misconduct including "Conduct ongoing trade review and supervisory functions for retail branch accounts", "Review risk related reports and take appropriate action as necessary", "Identify irregular patterns and trends related to trading activity", and "Assist in responding to regulatory requests from various regulatory bodies."

3. Data and summary statistics

3.1 Data

We accessed BrokerCheck's database of adviser and representative records in January 2018. Each employee's record identifies their current and previous employers, exams passed (including the type and date, but not scores or failed attempts), in addition to disclosures of customer complaints, arbitrations, regulatory actions, employment terminations, bankruptcy filings, and civil and criminal proceedings involving them. BrokerCheck retains records for ten years after the individual has exited the industry. Therefore, we limit our sample to the 2007-2017 period. For this period, we observe the population of firms, and all registered employees and supervisors (including those no longer in the industry).

Because BrokerCheck does not identify specific branches, we follow prior work and treat firm-location pairs as branches (Egan et al. 2018; Law and Zuo 2020).[6] Table 1 describes our sample composition. We consider all branches with a Series 24 holder. We observe at least 90,000

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[6] While BrokerCheck reports the full address for each individual's current employer, it only reports the city for previous employers. Thus, we are unable to develop a more granular location than city for branches. To reduce concerns about our branch identification, we later conduct robustness tests that eliminate the largest cities from our sample.

supervisors, 30,000 branches, and 4,900 firms each year. Conditional on having a supervisor with a Series 24 qualification, the median (average) branch has only one (3.2) supervisor(s). The average firm has 11.6 branches. In total, there are 137,122 unique supervisors, 70,953 unique branches, and 13,644 unique firms in our sample.

3.2 Branch misconduct measure and summary statistics

To measure branch misconduct, we calculate the proportion of employees with a misconduct incident recorded that year (*Branch Misconduct*). We use proportions to prevent branch size differences from skewing our results and to capture the prevalence of misconduct.[7] To illustrate, having two misconduct incidents at one's branch is worse when there are only eight employees than when there are 50, all else equal. We verify our inferences are insensitive to considering alternative approaches (e.g., weighted least squares, alternative misconduct measures, or winsorizing the proportion measure).

We follow the convention in prior literature using this data and classify misconduct incidents as those fitting into the following six categories: Civil-Final, Criminal-Final Disposition, Customer Dispute-Award/Judgment, Customer Dispute-Settled, Employment Separation after Allegations, and Regulatory-Final (Egan et al. 2019). Later, we verify that our results are unaffected if we consider other incidents.

BrokerCheck provides a description for each complaint and misconduct incident disclosure. Our dataset contains over 300,000 such descriptions. The most common misconduct incidents involve unsuitable investment recommendations (21% of incidents), misrepresentation (18%), unauthorized activity (15%), omission of key facts (12%), commission-related issues (9%),

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[7] All else equal, the presence of misconduct is more likely at branches with more employees. Not scaling by headcount can bias the SF ratio upward, for example, when the supervisor switches between branches of different size but the same number of misconduct incidents.

and investment fraud (8%) (these categories are not mutually exclusive). The most severe incidents result in millions of dollars of fines and restitution, probation, and occasionally, the employee being barred from the industry or imprisoned. We focus on these incidents given their severe consequences, and because we want to correctly identify wrongdoing by subordinates. Nevertheless, we also evaluate specifications that consider less serious incidents and dismissed complaints not classified as misconduct.

Table 2, Panel A presents summary statistics for the 394,594 branch-year observations in our sample. Note that these figures occasionally differ from those measured at the *individual-year* level in related work; this merely reflects differences in employees at smaller and larger branches and not differences in datasets (our individual-year level statistics align with what is reported elsewhere). For the typical branch-year, 1.0% of employees are involved in a misconduct incident, and 94% have no misconduct. Conditioning on branch-years with non-zero misconduct, 16% of the employees are involved in misconduct.

For the average (median) branch, there are 16.5 (4.0) employees, with an industry experience of 17.2 (16.0) years. As for qualifications, 30% (80%, 78%, 31%) of employees have passed the Series 6 (7, 63, 65). Twenty-three percent of employees have the Series 66 qualification. Thirty-seven percent of employees have a qualification other than the Series 6, 7, 24, 63, 65, or 66. At the average branch, 12.4% of employees have a misconduct incident on their record.

Table 2 Panel B describes supervisors. The average supervisor has been in the industry for 18.4 years and has been a supervisor for nine years. Nearly 11% have a misconduct record. As for qualifications, the majority have their Series 7 and 63, while the Series 66 is also common. These characteristics slightly differ across those who remain at the same firm their entire career ("stayers") versus those who switch ("switchers"). Switchers are more likely to have a misconduct

event in their history and an investment adviser licensing exam (the Series 65 or 66). We therefore control for these time-varying characteristics in our main specification.

4. Research design and results

4.1 Research design

Our estimation involves variations of the following OLS regression equation:

$$y_{mbt} = \alpha_{ct} + \alpha_m + \alpha_j + \gamma \times Controls_{mbt} + \varepsilon_{mbt}. \quad (1)$$

The unit of observation is supervisor-branch-year, where m indexes supervisors, b indexes branches of firm j in city c, and t indexes years. The dependent variable is *Branch Misconduct*. We control for city-year fixed effects (α_{ct}) to account for time-varying factors affecting misconduct in a given city including economic conditions; the labor pool (Parsons et al. 2018); investors' age, income, and sophistication (Egan et al. 2019); and regulatory oversight (Kedia and Rajgopal 2011; Charoenwong et al. 2019).

We control for log branch size, as well as the following characteristics averaged across the branch's employees: years experience, qualifications (indicators for having passed the Series 6, 7, 63, 65, 66, or other exam), and misconduct history (an indicator for having a misconduct incident recorded on their record during a previous year). We also control for the proportion of employees passing the old version of the Series 66, to account for the effect of the exam change on the individuals who take it (Kowaleski et al. 2020). Finally, we control for these same characteristics as measured for each supervisor. In general, including time-varying controls for firms and individuals helps account for assortative matching between them (Graham et al. 2012). We cluster standard errors by firm.

The variations of this equation differ in whether they include supervisor (α_m) or firm (α_j) fixed effects, or both. The large number of fixed effects requires us to use a linear model. Under

the AKM approach, separately identifying supervisor and firm fixed effects requires having

supervisors who switch firms. We define switches as instances where the supervisor moves to a

different firm as identified by the firm's Central Registration Depository number. We do not count

movements between branches of the same firm as switches. Studying the full sample of supervisors

and firms between 2007 and 2017, we find 54% of the supervisors are switchers, with 50% of this

group switching more than once.[8]

Our approach most closely resembles that of Ewens and Rhodes-Kropf (2015), who use

the AKM methodology to understand the importance of individual venture capital partners to

investment performance. Like us, they are interested in the relative contribution of individuals and

firms to several low frequency outcomes (their outcome measures include indicators for

acquisitions, failures, and IPOs). Our estimation is also similar to Bertrand and Schoar (2003),

who estimate manager and firm fixed effects on investment, Tobin's Q, leverage, interest coverage,

and dividend ratios.

The following example adapted from Graham et al. (2012) illustrates our approach. The

example assumes that *Branch Misconduct* is net of the effects of the controls included in equation

(1). Suppose there are three supervisors and two BD firms. Supervisor #1 works for firm A, and

their *Branch Misconduct* rate is 0.6%. Supervisor #2 works for firm B, and their *Branch

Misconduct* rate is 0.5%. Supervisor #3 first works for firm A where their branch has a 0.75%

misconduct rate, and later moves to firm B where their *Branch Misconduct* rate is 1%.

The three supervisors and two firms in this example meet what is referred to in the group

fixed effect literature as the "connectedness criterion" (are connected) because of supervisor #3

switching from firm A to firm B. We can use the connection between them to estimate firm and

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[8] Although Table 2, Panel B suggests the proportion of switchers is higher, the number is skewed by multiple supervisor-branch-year observations for each year in which a supervisors switches firms.

supervisor fixed effects, as follows. *Branch Misconduct* for Supervisor #3 is 0.25 percentage points higher at firm B than A, suggesting that all else equal, firm B has a 0.25 percentage point higher firm fixed effect than firm A. Using firm A as the benchmark (equal to zero), then firm B's fixed effect is 0.25%. Supervisor #2's fixed effect is then the difference between their *Branch Misconduct* rate (0.5%) and firm B's fixed effect (0.25%), equal to 0.25%. Likewise we can compute Supervisor #1 and #3's fixed effect as the difference between their *Branch Misconduct* rate at firm A (0.6% and 0.75%, respectively) and firm A's fixed effect (0%), or 0.6% and 0.75% respectively.

Intuitively, the *Branch Misconduct* differential for switching supervisors allows us to estimate the firm fixed effects for all the firms at which she has led branches. Then, with one firm fixed effect identified, the supervisor fixed effects for all supervisors at the firm (both switchers and stayers) can be determined by subtracting the observable determinants and firm fixed effect from their *Branch Misconduct*.

4.2 Results

4.2.1 Main results

Table 3, Panel A presents the main results. Our estimates suggest that 0.16 of the total R-Squared of 0.336 is attributed to supervisor fixed effects, while 0.07 is attributed to firm fixed effects. This indicates that individual supervisors explain 2.3 times as much variation in branch-level misconduct as their firms. Hereafter we refer to our main result as showing an SF ratio of 2.3. Further, we use an *F*-test to reject at the 1% level the null hypothesis that all supervisor fixed effects are identical, while we cannot reject the null of identical firm fixed effects.

To help illustrate our finding, in Figure 2 we plot *Branch Misconduct* around supervisor turnover. Intuitively, we examine supervisor turnover in an event study to see if branches hiring

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different types of supervisors subsequently experience different changes in misconduct. We split the turnover sample into two groups: branches hiring high-misconduct supervisors and branches hiring low-misconduct supervisors. We assign these groups based on the new supervisor having an above- or below-median misconduct rate at their pre-turnover branch. Analogous to Schoar et al. (2020), we subtract the average branch misconduct rate for the pre-turnover period [-2,-1] from all branch-year misconduct rates.[9] Thus, the misconduct rates over the post-turnover period [1,2] represent the *change* in misconduct after the new supervisor joined the branch. We study the four-year window around turnover, and omit year 0 to sidestep difficulties associated with identifying misconduct timing relative to the new supervisor's arrival that year.

The evidence in Figure 2 complements our main result by showing an increase in *Branch Misconduct* following the arrival of a high-misconduct supervisor. We find no such increase for low-misconduct supervisors. Economically, the difference in *Branch Misconduct* changes across the two branch types is 0.1%, or 10% of the sample mean.

Table 3, Panel B reports the distribution of supervisor and firm fixed effects produced by our Panel A estimation. Recall that the average rate of *Branch Misconduct* is 1.0. The interquartile range for supervisor fixed effects is 0.75, compared to 0.46 for firm fixed effects. Thus, not only do supervisor fixed effects explain more variation in misconduct than firm fixed effects, they are larger.

4.2.2 Robustness

In this section, we assess the sensitivity of our main results from Table 3, Panel A. We begin by broadening our definition of supervisor to also include those passing the Series 9 and 10,

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[9] Misconduct increases in the pre-turnover period for both groups, because turnover often results from misconduct (Egan et al. 2019).

as well as the 24 exam following Dimmock et al. (2018). Considering these additional exam holders expands our main sample by only 18%. Column 1 of Table A1 reports an SF ratio of 2.4.

Column 2 revisits our approach of identifying branches using firm-city pairs reported in BrokerCheck. In the largest cities, firms may have multiple physical branches, leading to measurement error in our matching of supervisors to subordinates. When we drop cities with at least 500 firm-city pairs in our sample (Atlanta, Boston, Chicago, Dallas, Houston, Los Angeles, New York, and San Francisco), we find an SF ratio of 2.5. Using thresholds lower than 500 does not affect our inferences.

Table A2 considers alternative specifications and branch misconduct measures. First, in column 1 we restrict our sample to supervisors who switch firms at some point during our 2007-2017 sample period. This specification directly follows Bertrand and Schoar (2003), and mitigates concerns about unobservable differences between switchers and stayers explaining our main result. The SF ratio is 2.0, comparable to our main finding. Column 2 omits our time-varying branch and supervisor controls, and finds the ratio is 1.9.

Next, we study alternative misconduct measures. Column 3 uses *Branch Complaints* as the dependent variable, where complaints include the six misconduct incident types counted in *Branch Misconduct*, plus less serious violations and dismissed allegations. Column 4 measures the number of incidents resulting in damages, sanctions, or settlements. With both alternative measures, we scale by the number of employees at the branch so that our measure is not skewed by large branches. Our evidence is similar to our main finding, in that our SF ratio exceeds 2.0.

Next, we estimate equation (1) using weighted least squares, where the weights are based on the square root of branch headcount. Doing so reduces the influence of smaller branches, where misconduct can result in a skewed *Branch Misconduct* measure. Column 5 shows the SF ratio is 1.6. Similarly, column 6 winsorizes *Branch Misconduct* at the 1% level, and the SF ratio is 1.7.

Last, Column 7 excludes incidents involving the supervisor from *Branch Misconduct*.[10] The SF

ratio is 1.4.

4.2.3 Supervisors' role in branch headcount and licensing

We then decompose the variation in branch headcount (*Log Employee Count*) and the

proportion of branch employees that are licensed investment advisers (*IA*). We expect supervisors

to explain less variation in branch size and employee licensing, as these characteristics are more

influenced by firm strategy and less affected by information asymmetry. For example, UBS

Financial Services tends to have large branches in bigger cities and just over two hundred of their

nearly ten thousand employees are qualified as investment advisers.

Consistent with our prediction, Table 4 finds supervisors explain only 71% (56%) as much

variation as firms in headcount (share of employees that are investment advisers). These findings

provide a benchmark for assessing supervisors' influence on branch misconduct. Additionally,

because we arrive at these weaker findings using our main specification, our inferences

surrounding the importance of supervisors to misconduct are unlikely to be spuriously driven by,

for example, having more supervisors than firms in our sample.

Reinforcing this, we randomly drop 50% of our supervisors and repeat our estimation on a

sample with a more balanced number of connected supervisors and firms. Figure 3 provides a

histogram of the SF ratio from 200 trials of this estimation. The average SF ratio is 2.02, and the

minimum is 1.7.

4.2.4 Matching

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[10] We include such incidents in our main specification because many relate to oversight of branch activities or employees. For example, misconduct incidents involving supervisors with CRD #2460258, #627383, and #1415675 mention "failure to supervise," "not properly supervising activities of (third party)", and "breach of the duty to supervise" respectively.

Next, we consider whether endogenous matching between supervisors and firms mechanically generates our evidence surrounding the relative importance of supervisors and firms to misconduct. In general, it is not obvious whether individual-group matching tilts AKM estimation in favor of individuals or firms. Additionally, if matching is based on time-invariant supervisor and firm characteristics, or on observables we control for in equation (1), then our approach actually provides a straightforward way to mitigate the matching problem. For example, work related to ours finds evidence of assortative matching: employees with a misconduct history match to firms with high misconduct (Egan et al. 2019). Equation (1) controls for the supervisor's own misconduct history, as well as time-invariant supervisor features including their overall disposition toward fraudulent behavior (formed based on, say, their upbringing or religion).

Of course, our baseline specification cannot account for time-varying unobservable matching factors. Therefore, we interpret our findings with the same caution as other work on individual fixed effects, and investigate several specific matching concerns.

First, financial misconduct rates vary greatly across the U.S. due to differences in norms (Parsons et al. 2018), enforcement (Charoenwong et al. 2019), and investor demographics. Labor market conditions and misconduct can also depend on local economic circumstances. Our estimation includes city-year fixed effects, which by design hold the aforementioned factors constant. The relative importance of supervisor to firm fixed effects is relatively similar if we omit these fixed effects our use a coarser approach (e.g., state or FINRA district-year). More broadly, assortative matching implies that similar supervisors join the same firm. However, we find meaningful differences in experience, qualifications, and own misconduct history for supervisors at the same firm (and control for these traits).

Second, we compare supervisors working for the same firm at the same time by replacing the firm fixed effect in equation (1) with a firm-year fixed effect. This mitigates the matching

concern by holding constant time-varying firm-level attributes such as performance, growth, or reputation that can explain why certain supervisors match to their firm in a specific period. This estimation also holds constant firm characteristics such as corporate governance, compliance, risk-taking, compensation, and auditing that can affect misconduct but are difficult to measure. Not surprisingly, Table 5, Panel A shows that in this augmented model more of the total R-Squared is attributed to the firm-year fixed effect (0.17) than the firm fixed effect from the relaxed model (0.07). Nevertheless, the supervisor contribution to R-Squared is unchanged at 0.16, and comparable to the firm-year component.[11]

Third, the circumstances surrounding supervisor turnover are relevant to identifying biases that may arise from matching. If supervisors move to firms that are a better match for their preferred branch misconduct profile, then in general this will overstate the importance of firm fixed effects and bias against our finding of stronger supervisor fixed effects. To illustrate, consider a firm with a low tolerance for misconduct that dismisses a supervisor for a transgression at their branch. If the supervisor subsequently places at a different firm with higher tolerance for misconduct, then this will make the firm fixed effect appear larger. The same logic will apply to instances where the supervisor departs one firm because they are uncomfortable with its culture and match with another where misconduct is less common.

Turnover is rarely exogenous, but some switches provide cleaner variation to study than others. As an example Fee, Hadlock, and Pierce (2013) estimate CEO styles by studying a sample of CEO deaths, health-related resignations, and natural retirements. Although our dataset does not record deaths or health problems, there are a sizable number of branch closures that force supervisors to find a new employer. To exploit this, we identify supervisors who switch firms after

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[11] Additionally, our Table A2, column 1 also reports that our results are unaffected by limiting our sample to switchers, indicating that unobservable differences between switchers and stayers are not biasing our SF ratio.

their branch disappears from BrokerCheck and their new employer has a different Central Registration Depository (CRD) number than the old one. We expect supervisor switches in this sample to be less prone to the concerns about endogenous turnover articulated in Fee et al. (2013). Table 5, Panel B column 1 shows a SF ratio of 2.1.

Branch closures arise from a range of causes, spanning merger and acquisition activity, consolidations, economic conditions, and competition. BrokerCheck does not record the causes of branch closures or provide a list of mergers and acquisitions. Our approach of relying on changes in the supervisor's firm CRD number alone to identify switches could be imprecise if, following a merger and acquisition transaction, the supervisor remains at their branch but the firm's CRD number has changed. We therefore conduct a battery of additional tests to ensure our switcher sample does not include such cases.

Column 2 eliminates cases where the supervisor's firm CRD number changes but their "new" branch includes the majority of employees from her previous branch (as would occur with a merger or acquisition). The SF ratio is 2.7. Column 3 conducts a textual analysis of the new and old firm's business name, and eliminates switches where the names are similar. Specifically, we remove switches where either parts of firms' business names or entire firms' business names show Levenshtein-based string similarity ratios of 0.8 or more.[12] The SF ratio is 2.1. To ensure supervisors are not at the same physical branch, column 4 requires switchers to change to a branch in a different state. The SF ratio is 1.2.

To further abstract away from misconduct-related turnover, columns 5 and 6 eliminate instances where the supervisor's past branch experienced any misconduct or FINRA-logged customer complaints in the two years before their closure. Our identification then comes from

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[12] We calculate string similarity ratios after removing the most common terms (e.g., "Financial", "Investment", "Advisor") from business names.

differences between (1) the supervisor's new branch, and (2) the closing branch immediately (two years) before the closure if the branch (had) did not have misconduct during the two-year pre-closure window. We also impose the same sample restriction from column 2 concerning the number of co-moving employees. Supervisors continue to explain more than 2.3 times as much variation in misconduct as firms.

Overall, this analysis helps reduce concerns about matching mechanically biasing the decomposition in favor of supervisors. We find a larger role for supervisors as firms after controlling for time-varying location and firm effects, and after studying a sample of switches caused by branch closures that did not involve misconduct.

4.2.5 Team moves

Occasionally, supervisors switch to a new branch along with a large portion of their past branch's employees ("team moves"). Such switches provide an additional setting to understand how much supervisors influence branch misconduct, because supervisors and the co-moving employees have a working relationship and tacit understanding of how industry rules and firm policies will be enforced.

Table 6, column 1 repeats our estimation of equation (1) on a sample of branches where the supervisor joined the branch with at least 50% of their prior branch's employees. The SF ratio is 2.3, comparable to our main result. Columns 2 and 3 require at least 75% and 90%, respectively, of the prior branch's employees to move with the supervisor. The SF ratio is similar.

5. How supervisors influence misconduct

5.1 Delegated authority

For supervisor traits to affect branch misconduct, the supervisor must have authority to make important decisions about overseeing employee behavior. In other words, at firms where headquarters makes the important decisions affecting misconduct at branches, there should be little scope for supervisor training or other traits to matter.

Our next tests seek to tie our main results to the degree to which the firm delegates authority to its supervisors. While delegation inside an organization is not readily observable to those outside, theory provides guidance on which firms are more likely to delegate authority to supervisors (Fama and Jensen 1983; Aghion and Tirole 1997; Baker et al. 1997). This work emphasizes how information asymmetries within an organization can make delegation more desirable. For example, delegation prevails when headquarters lacks the information to monitor and make value-maximizing decisions, when formal (i.e., top-down) authority is impractical given the firm's complexity, and when employees can be trusted to make decisions.

Based on this work, we develop partitions for firm and supervisor characteristics we expect to correlate with more delegation. First, we measure whether the supervisor's branch is more than 500 miles from headquarters, under the assumption that distant branches are harder to monitor. Using other thresholds (e.g., 1,000 miles) or basing the partition on the average distance between the firm's branches and its headquarters does not affect our inferences. Second, we count the different investment product types that the firm offers (debt, derivatives, investment advisory services, mortgage backed securities, mutual funds, private placements, and variable life insurance) and categorize firms based on whether they have more than the sample average.

As for supervisor characteristics, we split supervisors based on whether they have more than nine years of experience (the sample average) in the supervisor role. We presume experienced supervisors are more likely to have their own "style" and less inclined to follow their firm's norms. We also consider whether the supervisor has a misconduct incident on their record from their spell

as a representative or adviser. Last, we separate supervisors based on whether they have passed an above average number of securities exams (three) as of that year.

We predict that the relation between supervisor training and branch misconduct should be stronger for more distant branches, firms with product mix complexity and more qualified, experienced supervisors without a misconduct record. To investigate these predictions, we estimate our equation (1) on subsamples formed based on our partitions, such that each subsample is comprised of switching and staying supervisors meeting the connectedness criterion (Ewens and Rhodes-Kropf 2015). Table 7 presents our results organized in two panels based on our partitions (Panel A for firm and branch characteristics; Panel B for supervisor characteristics).

Panel A, column 1 studies distance. Our SF ratio is over 9.5 at distant branches (top panel), versus only 1.7 at near branches (bottom panel). Column 2 shows the SF ratio is 14.4 at firms with more product complexity, compared to 3.6 at firms with less.[13] As for supervisor characteristics, Panel B shows that supervisors matter more when they have more experience and qualifications. Interestingly, we find the SF ratio is larger for supervisors with past misconduct, but the difference (0.1) is slight. Overall, the results point to greater delegation to branches that are more difficult to directly monitor, and to more trustworthy supervisors.

5.2 Supervisor attention and decisions

To further understand how supervisors influence misconduct, we study (1) their attention to specific employees at high risk for committing misconduct, and (2) their personnel decisions.

First, we study recidivism. In this market, employees with a misconduct history are five times as likely as those without a history to commit new misconduct (Dimmock and Gerken 2012; Egan et al. 2019). Table A3 revisits our main results and presents the coefficients for specifications

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[13] We lack product data for part of our sample, and therefore our SF estimates for this column are not directly comparable to our main results using the full sample.

without (column 1) and with (column 2) supervisor fixed effects. Column 1 finds that the share of branch employees with a misconduct history predicts future misconduct (*Br. Misconduct Ever %* is significantly positive). However, once we add supervisor fixed effects, the coefficient on this variable attenuates by over two-thirds. This evidence suggests that supervisor attention to employees with a misconduct history influences whether the employee reoffends.

Second, we build on this finding by examining personnel decisions. The Series 24 exam material emphasizes how supervisors must screen applicants based on their "background, disciplinary, complaint, or financial history" and ensure the "proper handling and resolution of customer and industry disputes." Moreover, as in other industries, employees with longer tenure tend to accumulate responsibility and power. Then, the decision to hire, retain, or promote a misbehaving employee can lead to additional misconduct through two channels: (1) further misconduct from the individual herself, and (2) colleague misconduct resulting from her influence ("contagion") (Dimmock et al. 2018; Easley and O'Hara 2019).

In Table 8, Panel A we model the share of branch employees hired, dismissed, and promoted each year with a misconduct history. Our promotion proxy is the obtainment of any qualification exam.[14] Our assumption is that while individuals register for exams, there is less incentive to do so without the tacit support of their supervisor. For example, the supervisor influences whether the employee is granted additional responsibility upon passing the exam, and may also reimburse them for registration fees and provide study time during work hours.

Column 1 (2) shows that supervisors explain six (8.5) times as much variation in the share of hires (departing employees) with a misconduct history. Supervisor influence over promotion decisions is less striking (though the SF ratio is still greater than 1.0), likely owing to the discretion individuals have over exam registration. In sum, our evidence here reinforces the importance of

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[14] See FINRA qualification exams for description: https://www.finra.org/registration-exams-ce/qualification-exams

personnel decisions to the supervisor role, as detailed in the Series 24 exam material and job postings we have collected.

Finally, we consider the supervisor's training in industry rules and ethics. Specifically, we study a 2010 change in the Series 66 investment adviser qualification exam, making use of the fact that many supervisors are qualified to work as investment advisers. The North American Securities Administrators Association (NASAA), responsible for developing the exam, reduced the weight on rules and ethics material from 80% to 50% "based on responses to (a) survey indicating that dually licensed individuals should have enhanced testing in…(technical) areas" (Cole-Frieman and Mallon 2010). Exam failures are common and study guides recommend individuals spend 75-100 hours preparing for the exam—far more preparation than for the CFA, CPA, or bar exams.[15,16,17] Therefore, we presume the supervisors with the Series 66 qualification spend significant time studying rules and ethics material that is pertinent to branch misconduct oversight.

We focus on branches with only one supervisor, which allows us to pinpoint both the supervisor-employee oversight relationship and the supervisor's training. We also eliminate observations where the supervisor passed the Series 66 exam between October 2009 and March 2010. These individuals pose a threat to identification because their selection into the old or new exam may be strategic.[18] We model our branch misconduct measure as a function of whether the supervisor has the old Series 66 qualification (with more rules and ethics coverage), the controls from equation (1), and firm-year and State-year fixed effects.

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[15] "Prepare for your CFA exams," Stammers, R., June 21, 2018. Accessed at https://www.investopedia.com/articles/professionaleducation/08/prepare-cfa-exams.asp

[16] The CPA Ethics Exam Explained," Roger CPA Review Team, 2020. Accessed at https://www.rogercpareview.com/blog/cpa-ethics-exam-explained

[17] "MPRE – How much to study?," TopLawSchools, March 17, 2017. Accessed at http://www.top-law-schools.com/forums/viewtopic.php?f=41&t=300445

[18] Omitting advisers passing the Series 66 around a wider window surrounding the exam change does not affect our inferences.

Column 1 of Table 8, Panel B shows that supervisors with more rules and ethics training oversee branches with less misconduct. Column 2 adds fixed effects for each experience level, to address the concern that our initial finding stems from an experience length or cohort effect unrelated to exam coverage. Our results in this specification remain significant.

In sum, our evidence in this section suggests that supervisors shape their branch misconduct through authority delegated to them, which they use in overseeing employees at high risk for reoffending and making personnel decisions. Their training in ethics and industry rules also predicts misconduct at their branch.

6. Supervisor characteristics

In our final tests, we study whether supervisor fixed effects on branch misconduct relate to the supervisor's observable traits. We follow the manager fixed effects literature and focus on time-invariant supervisor traits and the prevailing economic conditions when the individual became a supervisor (Schoar and Zuo 2017; Schoar et al. 2020). The traits we consider include misconduct history, gender, and whether the individual became a supervisor during a recession year as defined by NBER. Because we consider misconduct history, we remove this control from equation (1) before re-estimating the supervisor fixed effect, to avoid a mechanical relation.

Table 9, Panel A summarizes these characteristics as of the supervisor's Series 24 exam. Five percent of supervisors have a misconduct record upon passing the Series 24. Females comprise 21% of the supervisor sample (based on having a traditionally female first name).[19] One-fifth of supervisors pass the Series 24 during a recession.

Panel B models the supervisor fixed effects as a function of these characteristics. The unit of observation is supervisor, and to facilitate interpretation we standardize the fixed effects to mean

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[19] We evaluate first names using Python's "gender guesser" package.

zero standard deviation one. Positive coefficients in this table imply that branch misconduct under this supervisor tends to be abnormally high, after controlling for observables and firm and city-year fixed effects. Column 1 shows that supervisors with a misconduct history from their pre-Series 24 position also have a higher fixed effect. Economically, branches led by supervisors with a prior misconduct history have a 0.287 standard deviation higher misconduct rate.

Similar to the Egan et al. (2018) evidence of less misconduct among female advisers, we find female supervisors have lower branch misconduct than their male counterparts. Finally, we find individuals becoming supervisors during recession periods oversee branches with less misconduct, but the relation is not significant at conventional levels. Column 2 repeats these tests after two-way clustering by the firm and city-year of the supervisor's Series 24 observation. Our inferences remain.

7. Conclusion

We study branches of U.S. financial advisory firms to understand the role of supervisors in influencing financial misconduct. Motivating our investigation, recent survey evidence indicates that fraud is more commonly perpetrated by middle managers or junior staff than executives (PwC 2020). Our most conservative estimates suggest individual supervisor fixed effects explain as much variation in branch misconduct as firm-level factors, which receive the majority of attention in the literature. Many of our analyses point to supervisors being at least twice as important as firms to branch misconduct. By comparison, supervisors are less important to understanding branch headcount or employee licensing, which are less affected by headquarters-branch information asymmetry.

Delegation and supervisor attention to misbehaving employees helps explain how supervisors influence branch misconduct. Our results are concentrated in instances where theory suggests the supervisor is more likely to have authority delegated to them—distant branches, firms

with product complexity, and supervisors who can be trusted given their experience and qualifications. Supervisor fixed effects are important to understanding whether employees with a misconduct record are hired by the branch, reoffend, take on additional responsibility, or exit the firm. Individual supervisors' training in industry rules and ethics also appears to reduce branch misconduct.

Our paper is the first to quantify and explore in depth the supervisor's role, distinct from firm-level policy, in overseeing financial misconduct. In doing so, we complement research on how executives and firm-level policies influence misconduct, and work on organization design in financial markets.

We conclude with two caveats about our findings that we hope motivate additional research on supervisors and financial misconduct. First, we cannot observe the returns that advisory firms generate for their clients. While misconduct imposes direct and indirect costs, the choice of supervisor involves tradeoffs surrounding returns and other considerations, and therefore the optimal rate of misconduct is not zero.

Second, while the financial advisory setting permits us to explore supervisor oversight of misconduct in unprecedented detail, it is unique in both the nature of client relationships and regulatory oversight. Although we study the full set of supervisors for a large segment of the financial sector and document aspects of the supervisor's role that appear common to many industries, additional work is necessary to understand how our findings generalize to other settings. Our analysis of conduct training involves a narrower set of supervisors affected by the 2010 Series 66 exam change. We view our analysis of this change as providing initial evidence warranting further investigation, especially given the ongoing interest in conduct training and fraud, and the various types of training provided to managers.

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Appendix A: Variables Definitions

	Definition
SF Ratio	The ratio of supervisor fixed effect contribution to R-Squared to firm fixed effect contribution to R-squared, when estimating equation (1).
Switcher	An individual who changes employers, as identified by the firm Central Registration Depository Number, during their career as a supervisor.
Stayer	An individual who does not change employers, as identified by the firm Central Registration Depository Number, during their career as a supervisor.
Branch Misconduct	The proportion of employees at the branch with a misconduct disclosure that year. 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.
Employee Count	The headcount at the branch. We count financial representatives and investment advisers.
IA	The proportion of branch employees licensed as investment advisers, based on them having passed either the Series 63 and 65 or the Series 7 and 66.
Branch Complaints	The proportion of employees at the branch involved with any incident disclosure that year
Branch Damages	The total incidents resulting in damages, sanctions, and settlements per employee at the branch.
Hires with Misconduct Record	The proportion of new employees at the branch with past misconduct.
Departures with Misconduct Record	The proportion of departing employees at the branch with past misconduct.
Promotions with Misconduct Record	The proportion of promoted employees at the branch with past misconduct. Our proxy for promotions is the obtainment of any securities exam qualification.
Supervisor Training	An indicator equal to one when the branch supervisor passed the Series 66 before 2010, and zero otherwise.
Misconduct Record	An indicator variable equal to one for individuals who have past misconduct before becoming a supervisor, and zero otherwise.
Female	An indicator variable equal to one for individuals we identify as females based on their first name, and zero otherwise.

Figure 1: Branch Supervisor Job Posting
This Figure presents an excerpt from a job posting for a branch supervisor, listed on a popular professional networking website. We have redacted the company name and location from the posting for confidentiality purposes.

Financial services broker/dealer with offices throughout the U.S. seeks an **Onsite Series 24 Principal** to work at the ▮▮▮▮▮▮▮ branch office.

You will be primarily responsible for monitoring retail account activity. You will be charged with contacting sales staff to implement corrective actions and ensuring compliance with the firm's policies and procedures as well as industry regulations. In addition, you will play an active role in various supervisory and surveillance related processes.

Specifically You Will
- Conduct ongoing trade review and supervisory functions for retail branch accounts;
- Respond to requests from the firm on various supervision and surveillance related issues;
- Conduct Branch Reviews/Exams;
- Act as a primary contact person for questions pertaining to accounts and the branch;
- Review/approve various activities and other documents requiring the review as a S24 principal
- Review risk related reports and take appropriate action as necessary;
- Identify irregular patterns and trends related to trading activity
- Conduct email reviews as needed;
- Assist in responding to regulatory requests from various regulatory bodies

Qualifications
- Series 4, 7, 24, and 65 or 66 licenses required (Series 4 license preferred)
- Minimum 2 years of Supervision experience within the securities industry;
- Post-secondary education;
- Strong knowledge of securities transactions
- Familiarity with account suitability data
- Highly organized
- Excellent proficiency with MS Office particularly Word, Excel and Outlook;
- Excellent verbal and written communication skills;
- Well developed and proven customer service and interpersonal skills;
- Strong multi-tasking skills and the ability to work under pressure;
- Excellent group dynamics and the desire to work in a team environment

Seniority Level
Associate

Industry
Insurance, Financial Services, Investment Management

Employment Type
Full-time

Job Functions
Finance, Sales

Figure 2: Supervisors and Branch Misconduct in Event Time
This Figure plots branch misconduct rates around supervisor turnover for two groups: (1) branches hiring a high-misconduct supervisor (above median misconduct rate during the pre-transition period [-2,-1]), and (2) branches hiring a low-misconduct supervisor (below median misconduct rate during the pre-transition period [-2,-1]). To construct this figure, we subtract the branch's misconduct rate over the pre-transition period [-2, -1] from all branch-year misconduct rates. Year 0 is omitted.
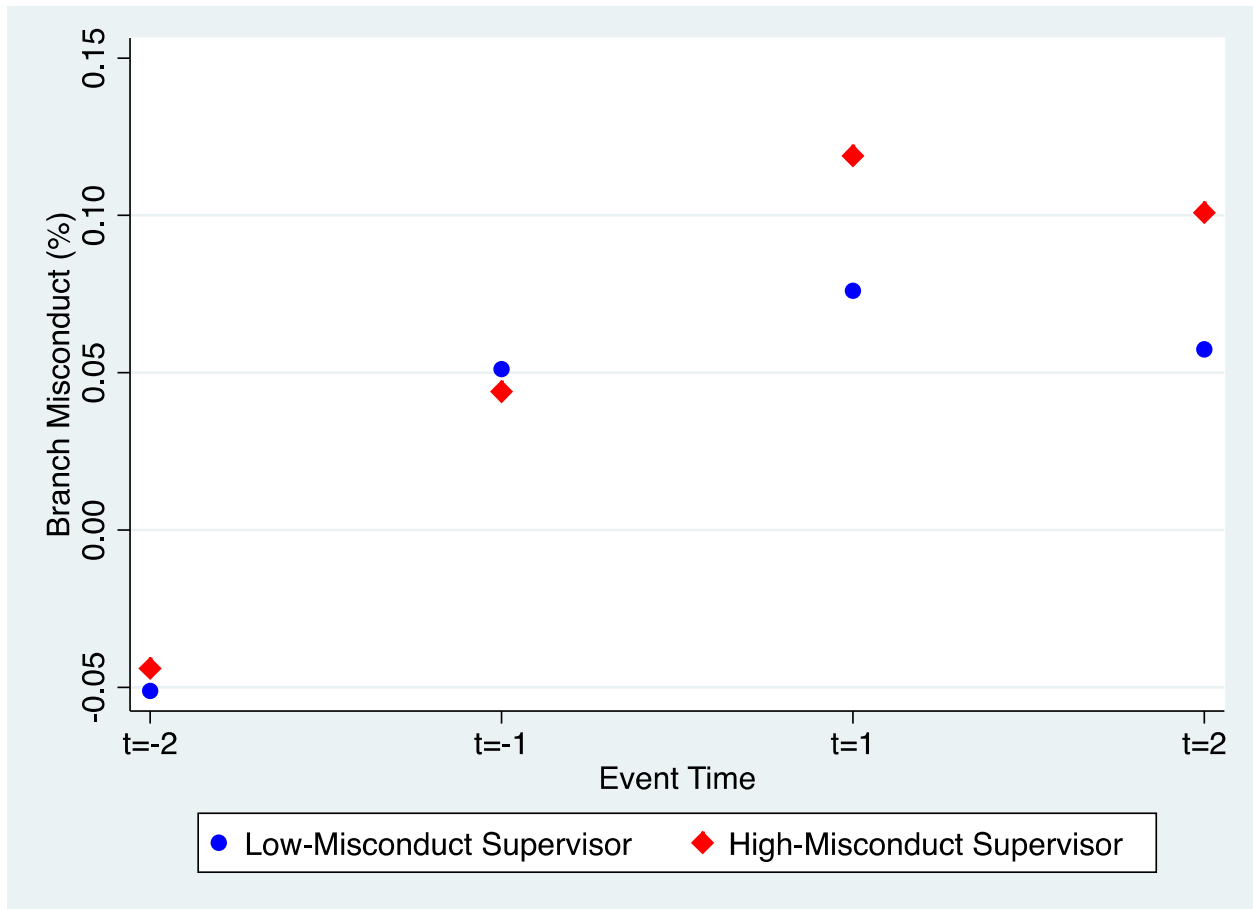
Figure 3:
This Figure presents a histogram of SF ratios resulting from an estimation that randomly drops 50% of the supervisors in our sample. We use equation (1) to model *Branch Misconduct* for the remaining sample of connected supervisors and firms.
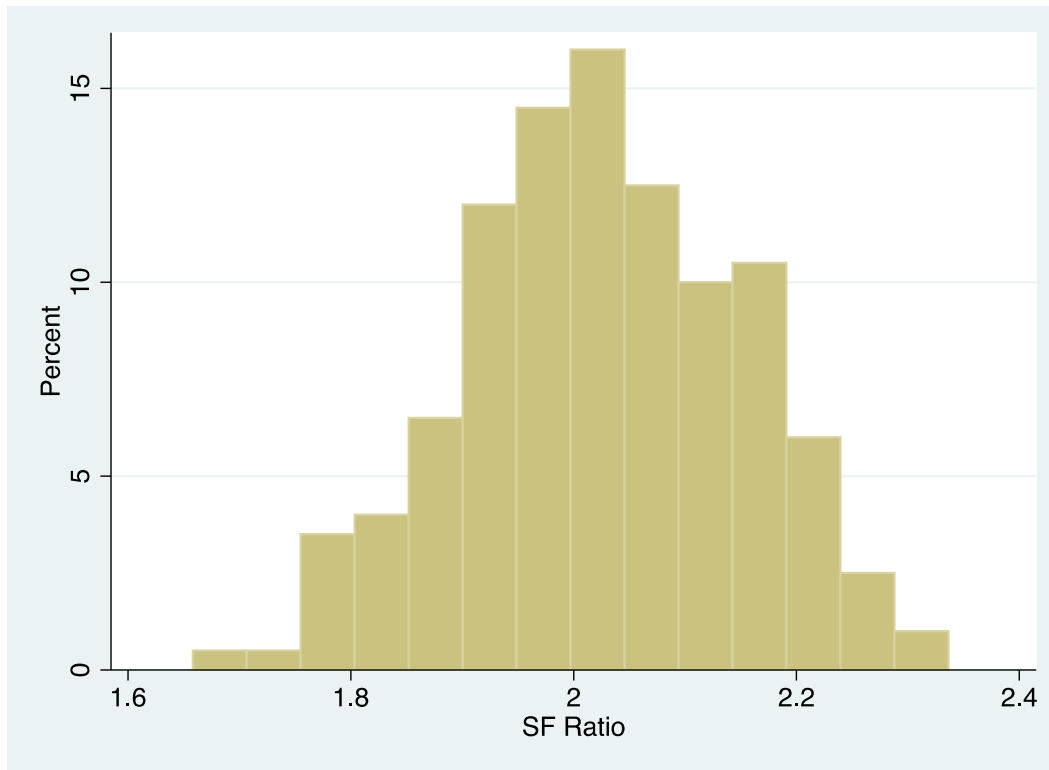
Table 1: Sample

This table describes our sample composition in terms of the number of unique supervisors, branches, and firms each year.

Year	#Supervisors	#Branches	#Firms
2007	90,431	39,339	8,414
2008	95,590	39,547	8,458
2009	96,296	39,999	8,357
2010	96,545	38,201	8,230
2011	97,619	37,172	7,960
2012	97,631	36,359	7,560
2013	97,170	35,000	7,176
2014	97,172	33,905	6,793
2015	97,150	33,053	6,350
2016	96,522	31,829	5,772
2017	95,145	30,190	4,926

Table 2: Summary Statistics

Panel A describes the average misconduct rate, experience, and qualifications for employees at each branch. The unit of observation is branch-year. Panel B describes the same variables for supervisors. The unit of observation is supervisor-year. We tabulate our supervisor variables separately for switchers and stayers. Switchers are those who change employers at least once during their career as a supervisor, while stayers are those who remain at the same employer their entire career as a supervisor. In the right hand column, we report the statistical difference between switcher and stayer means, where *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix A for variables definitions.

Panel A: Branch-Years

	Mean	Std Dev	25%	50%	75%	N
Branch Misconduct	0.01	0.07	0.00	0.00	0.00	394,594
Br. Years Experience	17.02	7.32	11.75	16.00	21.09	394,594
Br. Employee Count	16.50	103.96	2.00	4.00	11.00	394,594
Br. Series 6	0.30	0.35	0.00	0.14	0.50	394,594
Br. Series 7	0.80	0.27	0.67	0.94	1.00	394,594
Br. Series 63	0.78	0.26	0.64	0.86	1.00	394,594
Br. Series 65	0.31	0.34	0.00	0.20	0.50	394,594
Br. Series 66	0.23	0.29	0.00	0.09	0.38	394,594
Br. Other Exam	0.37	0.34	0.00	0.33	0.54	394,594
Br. Old Series 66	0.44	0.46	0.00	0.00	1.00	394,594
Br. Misconduct Ever	0.12	0.24	0.00	0.00	0.14	394,594

Panel B: Supervisor-Branch-Years

	Switchers			Stayers			Total			Difference
	N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev	p-value
Supervisor Years Experience	845,097	18.35	8.67	419,535	18.51	9.42	1,264,632	18.40	8.92	***
Experience as Supervisor	845,097	9.07	7.00	419,535	8.96	7.60	1,264,632	9.03	7.21	**
Su. Misconduct Ever	845,097	0.12	0.32	419,535	0.09	0.29	1,264,632	0.11	0.31	***
Su. Series 6	845,097	0.21	0.41	419,535	0.21	0.40	1,264,632	0.21	0.41	
Su. Series 7	845,097	0.93	0.26	419,535	0.92	0.28	1,264,632	0.92	0.26	***
Su. Series 63	845,097	0.82	0.39	419,535	0.81	0.39	1,264,632	0.82	0.39	***
Su. Series 65	845,097	0.32	0.47	419,535	0.25	0.43	1,264,632	0.29	0.46	***
Su. Series 66	845,097	0.54	0.50	419,535	0.48	0.50	1,264,632	0.52	0.50	***
Su. Other Exam	845,097	0.22	0.41	419,535	0.17	0.38	1,264,632	0.20	0.40	***
Su. Old Series 66	845,097	0.19	0.39	419,535	0.14	0.35	1,264,632	0.17	0.38	***

Table 3: Branch Misconduct Decomposition

Panel A models branch misconduct using equation (1). The unit of observation is supervisor-branch-year. The dependent variable is *Branch Misconduct*, the proportion of employees at the branch with a misconduct disclosure that year. The relative importance of the respective fixed effect is calculated as $\frac{cov(y, FE)}{var(y)}$ following Ewens and Rhodes-Kropf (2015). In parentheses, we report the percentages of the R-Squared attributed to the supervisor and firm fixed effects. We also report F-Statistics for tests of the joint significance of the respective fixed effects, as well as the number of switchers, stayers, and firms in our estimation. Panel B summarizes the supervisor and firm fixed effects from estimating equation (1), expressed in percent to facilitate interpretation.

Panel A: Branch Misconduct Decomposition

	Branch Misconduct
Relative importance of estimates in R². %'s are fraction R² explained by covariate.	
Supervisor Fixed Effect	0.16 (43%)
Firm Fixed Effect	0.07 (19%)
F-Stat Supervisor Fixed Effect	1.01***
F-Stat Firm Fixed Effect	0.26
R-Sq.	0.336
N	1,233,153
# Switchers	74,637
# Stayers	56,771
# Firms	12,471
City x Year FE	Yes

Panel B: Supervisor and Firm Fixed Effects

	Mean	SD	P10	P25	P50	P75	P90	N
Supervisor FE (%)	0.000	2.350	-1.233	-0.764	-0.487	-0.012	2.511	1,233,153
Firm FE (%)	0.000	1.378	-0.598	-0.321	-0.062	0.135	0.535	1,233,153

Table 4: Branch Headcount, Licensing, and Misconduct Decomposition

This table models branch headcount, licensing, and misconduct using equation (1). The unit of observation is supervisor-branch-year. The dependent variables are (1) *Log Employee Count;* and (2) *IA,* the proportion of employees that are qualified investment advisers. The relative importance of the respective fixed effect is calculated as $\frac{cov(y,FE)}{var(y)}$. In parentheses, we report the percentages of the R-Squared attributed to the supervisor and firm fixed effects. We also report F-Statistics for tests of the joint significance of the respective fixed effects, as well as the number of switchers, stayers, and firms in our estimation.

	(1)	(2)
	Log Employee Count	IA
Relative importance of estimates in R-Sq. %'s are fraction R-Sq. explained by covariate.		
Supervisor Fixed Effect	0.19 (20%)	0.20 (22%)
Firm Fixed Effect	0.27 (28%)	0.36 (39%)
F-Stat Supervisor Fixed Effect	11.57***	9.08***
F-Stat Firm Fixed Effect	5.75***	3.41***
R-Sq.	0.948	0.901
N	1,233,153	1,233,153
# Switchers	74,637	74,637
# Stayers	56,771	56,771
# Firms	12,471	12,471
City x Year FE	Yes	Yes

Table 5: Matching Analysis
This table estimates equation (1) using different specifications and samples to assess the sensitivity of our Table 3, Panel A results to matching concerns. The unit of observation is supervisor-branch-year. The dependent variable is *Branch Misconduct*, the proportion of employees at the branch with a misconduct disclosure that year. Panel A includes firm-year fixed effects. The switchers in Panel B are limited to those matching with new employers after their branch closed, and further reduced as follows. In column 2, we eliminate switchers where the supervisor moved with at least half of the closing branch's employees to the same new branch. Column 3 eliminates switchers where the new firm's name bears any semblance to the old firm's name. Column 4 eliminates switchers where the supervisor's new employer is in the same state as their old employer. In column 5 (6), we eliminate switchers where the supervisor moved with at least half of the closing branch's employees to the same new branch *and* switchers whose closing branch had any misconduct (customer complaints) in the two years before the closure.

The relative importance of the respective fixed effect is calculated as $\frac{cov(y,FE)}{var(y)}$. In parentheses, we report the percentages of the R-Squared attributed to the supervisor and firm fixed effects. We also report F-Statistics for tests of the joint significance of the respective fixed effects, as well as the number of switchers, stayers, and firms in our estimation.

Panel A: Firm x Year Estimation

	(1) Branch Misconduct
Relative importance of estimates in R-Sq. %'s are fraction R-Sq. explained by covariate.	
Supervisor Fixed Effect	0.16 (36%)
Firm x Year Fixed Effect	0.17 (38%)
F-Stat Supervisor Fixed Effect	1.00
F-Stat Firm x Year Fixed Effect	2.12***
R-Sq.	0.446
N	1,204,767
# Switchers	74,457
# Stayers	56,110
# Firms	9,314
City x Year FEs	Yes
Firm x Year FEs	Yes
Sample	Full

Panel B: Branch Closures

	(1) Branch Misconduct	(2) Branch Misconduct	(3) Branch Misconduct	(4) Branch Misconduct	(5) Branch Misconduct	(6) Branch Misconduct
Relative importance of estimates in R-Sq. %'s are fraction R-Sq. explained by covariate.						
Supervisor Fixed Effect	0.17 (45%)	0.18 (44%)	0.17 (45%)	0.17 (42%)	0.19 (47%)	0.19 (47%)
Firm Fixed Effect	0.08 (21%)	0.07 (16%)	0.08 (21%)	0.13 (34%)	0.08 (20%)	0.08 (20%)
F-Stat Supervisor Fixed Effect	0.90	1.03***	0.89	0.94	1.06***	1.06***
F-Stat Firm Fixed Effect	0.24	0.16	0.09	0.24	0.07	0.06
R-Sq.	0.375	0.409	0.374	0.398	0.399	0.402
N	643,062	521,644	639,795	539,281	503,401	494,082
# Switchers	18,268	9,320	18,124	10,098	9,069	8,946
# Stayers	56,406	56,058	56,385	56,205	56,042	56,032
# Firms	10,110	7,905	10,057	8,883	7,662	7,509
Controls	Yes	Yes	Yes	Yes	Yes	Yes
City x Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Sample	Closures	Closures, No team moves	Closures, No Fuzzy Match	Closures, Sup. Leaves State	Col. (2) Closures, No recent misconduct	Col. (2) Closures, No recent complaints

Table 6: Team Moves
This table models branch misconduct using equation (1). The unit of observation is supervisor-branch-year. The dependent variable is *Branch Misconduct*, the proportion of employees at the branch with a misconduct disclosure that year. The switchers in all columns are limited to those who move to the same new branch at the same time as a sizable fraction of their old branch's employees, as labeled at the bottom of each column. The relative importance of the respective fixed effect is calculated as $\frac{cov(y,FE)}{var(y)}$. In parentheses, we report the percentages of the R-Squared attributed to the supervisor and firm fixed effects. We also report F-Statistics for tests of the joint significance of the respective fixed effects, as well as the number of switchers, stayers, and firms in our estimation.

	(1)	(2)	(3)
	Branch Misconduct	Branch Misconduct	Branch Misconduct
Relative importance of estimates in R-Sq. %'s are fraction R-Sq. explained by covariate.			
Supervisor Fixed Effect	0.18 (47%)	0.18 (46%)	0.18 (46%)
Firm Fixed Effect	0.08 (21%)	0.08 (21%)	0.08 (21%)
F-Stat Supervisor Fixed Effect	0.87	0.87	0.87
F-Stat Firm Fixed Effect	0.21	0.20	0.20
R-Sq.	0.384	0.392	0.394
N	517,429	493,488	480,330
# Switchers	9,020	7,188	6,186
# Stayers	56,262	56,225	56,209
# Firms	8,681	8,322	8,180
City x Year FEs	Yes	Yes	Yes
Sample	≥50% Team Move	≥75% Team Move	≥90% Team Move

Table 7: Branch Misconduct and Delegated Authority
This table models branch misconduct using equation (1). Panel A studies firm and branch characteristics, while Panel B studies supervisor characteristics. Each column forms subsamples based on our proxies for delegated authority, as labeled. The bottom part of the table reports the ratio of supervisor-to-firm contribution to R-Squared for each subsample. The unit of observation is supervisor-branch-year. The dependent variable is *Branch Misconduct*, the proportion of employees at the branch with a misconduct disclosure that year. The relative importance of the respective fixed effect is calculated as $\frac{cov(y,FE)}{var(y)}$. In parentheses, we report the percentages of the R-Squared attributed to the supervisor and firm fixed effects. We also report F-Statistics for tests of the joint significance of the respective fixed effects, as well as the number of switchers, stayers, and firms in our estimation.

Panel A: Firm & Branch Characteristics

	(1)	(2)
	Branch Misconduct	Branch Misconduct
Relative importance of estimates in R-Sq. %'s are fraction R-Sq. explained by covariate.		
	Distance > 500	Diverse Products (≥5)
Supervisor Fixed Effect	0.29 (64%)	0.24 (60%)
Firm Fixed Effect	0.04 (9%)	0.03 (6%)
F-Stat Supervisor Fixed Effect	1.14***	1.23***
F-Stat Firm Fixed Effect	0.07	0.03
# Switchers	34,796	52,669
# Stayers	15,015	28,973
# Firms	2,099	686
R-Sq.	0.400	0.386
N	332,050	590,451
City x Year FEs	Yes	Yes
	Distance ≤ 500	Focused Products (<5)
Supervisor Fixed Effect	0.16 (36%)	0.22 (50%)
Firm Fixed Effect	0.10 (21%)	0.06 (14%)
F-Stat Supervisor Fixed Effect	1.03***	1.28***
F-Stat Firm Fixed Effect	0.28	0.10
# Switchers	56,034	33,084
# Stayers	33,562	18,759
# Firms	8,168	3,068
R-Sq.	0.422	0.432
N	653,810	341,093
City x Year FEs	Yes	Yes
Ratio: Supervisor Fixed Effect / Firm Fixed Effect		
Top	9.53	14.41
Bottom	1.67	3.59

Panel B: Supervisor Characteristics

	(1) Branch Misconduct	(2) Branch Misconduct	(3) Branch Misconduct
Relative importance of estimates in R-Sq. %'s are fraction R-Sq. explained by covariate.			
	High Exp Sup ($\geq$10)	Clean Record Sup	High Quals Sup ($\geq$3)
Supervisor Fixed Effect	0.19 (49%)	0.14 (41%)	0.16 (44%)
Firm Fixed Effect	0.08 (20%)	0.07 (20%)	0.07 (20%)
F-Stat Supervisor Fixed Effect	0.93	1.32***	0.90
F-Stat Firm Fixed Effect	0.22	0.31	0.27
# Switchers	40,330	67,650	45,270
# Stayers	24,571	52,253	28,617
# Firms	9,583	11,510	9,730
R-Sq.	0.393	0.351	0.354
N	502,857	1,097,374	705,799
City x Year FEs	Yes	Yes	Yes
	Low Exp Sup (<10)	Sup Has Past Misc.	Low Quals Sup (<3)
Supervisor Fixed Effect	0.19 (48%)	0.18 (39%)	0.17 (43%)
Firm Fixed Effect	0.08 (21%)	0.08 (18%)	0.09 (23%)
F-Stat Supervisor Fixed Effect	1.08***	0.83	0.91
F-Stat Firm Fixed Effect	0.26	0.25	0.29
# Switchers	58,305	9,007	33,668
# Stayers	44,024	4,699	28,483
# Firms	9,571	4,662	8,629
R-Sq.	0.400	0.461	0.388
N	703,314	121,912	507,185
City x Year FEs	Yes	Yes	Yes
Ratio: Supervisor Fixed Effect / Firm Fixed Effect			
Top	2.46	2.08	2.16
Bottom	2.31	2.18	1.86

Table 8: Personnel Decisions and Supervisor Training

Panel A models personnel decisions and branch misconduct using equation (1). The unit of observation is supervisor-branch-year. The dependent variable in column 1 (2; 3) is *Hires with Misconduct Record* (*Departures with Misconduct Record; Promotions with Misconduct Record*). These variables measure the proportion of the branch's hires, departing employees, and employees obtaining a securities exam qualification respectively, who have a misconduct history. The relative importance of the respective fixed effect is calculated as $\frac{cov(y,FE)}{var(y)}$. In parentheses, we report the percentages of the R-Squared attributed to the supervisor and firm fixed effects. We also report F-Statistics for tests of the joint significance of the respective fixed effects, as well as the number of switchers, stayers, and firms in our estimation.

Panel B models *Branch Misconduct* as a function of the supervisor's training. The unit of observation is branch-year. The sample is limited to branch-years with only one supervisor. *Supervisor Training* is an indicator equal to one for supervisors with the pre-2010 Series 66 qualification, which contained more rules and ethics coverage. Experience fixed effects refer to indicators for each possible year of supervisor experience length.

Panel A: Personnel Decisions

	(1) Hires With Misconduct Record	(2) Departures With Misconduct Record	(3) Promotions with Misconduct Record
Relative importance of estimates in R². %'s are fraction R² explained by covariate.			
Supervisor Fixed Effect	0.07 (12%)	0.09 (17%)	0.11 (26%)
Firm Fixed Effect	0.01 (2%)	0.01 (2%)	0.07 (16%)
F-Stat Supervisor Fixed Effect	1.15***	1.11***	1.23***
F-Stat Firm Fixed Effect	0.31	0.34	0.38
R-Sq.	0.556	0.559	0.444
N	866,270	778,408	846,451
# Switchers	70,068	69,311	67,796
# Stayers	45,053	41,798	46,183
# Firms	7,996	7,767	7,057
City x Year FE	Yes	Yes	Yes
Sample	Full	Full	Full

Panel B: Supervisor Training

	(1) Branch Misconduct	(2) Branch Misconduct
Supervisor Training	-0.337*	-0.366*
	[-1.84]	[-1.77]
Adj R-Sq.	0.079	0.064
N	28,626	28,145
Controls	Yes	Yes
Firm x Year FEs	Yes	Yes
State x Year FEs	Yes	Yes
Experience FEs	No	Yes

Table 9: Supervisor Fixed Effects and Supervisor Traits
This table summarizes supervisor traits and relates them to the supervisor fixed effects we estimate using equation (1), without the supervisor misconduct record control. Panel A summarizes supervisor traits as of the year they became a supervisor. Panel B models signed supervisor fixed effects as a function of supervisor traits. To facilitate interpretation, we standardize these fixed effects to mean zero, standard deviation one. The unit of observation is supervisor. In column 2, we cluster standard errors based on the individual's firm and city-year when they became a supervisor. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Panel A: Summary Statistics

	N	Mean	SD
Misconduct Record	106,838	0.05	0.21
Female	106,838	0.21	0.41
Became Supervisor During Recession	106,838	0.20	0.40

Panel B: Signed Supervisor Fixed Effects

	Signed Supervisor Fixed Effects	
	(1)	(2)
Misconduct Record	0.280***	0.280***
	[19.10]	[10.08]
Female	-0.045***	-0.045***
	[-6.01]	[-6.09]
Became Supervisor During Recession	-0.009	-0.009
	[-1.13]	[-0.89]
Cluster	No	Yes
N	106,878	106,878
R²	0.004	0.004

Online Appendix to:

Supervisor Informal Authority and Employee Financial Misconduct

December 2020

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

Table A1: Sample Robustness
This table estimates equation (1) using different samples to assess the sensitivity of our Table 3, Panel A results. The unit of observation is supervisor-branch-year. The dependent variable is *Branch Misconduct*, the proportion of employees at the branch with a misconduct disclosure that year. In column 1, we broaden our definition of supervisor to include those passing the Series 9 and 10, as well as the 24 exam. Column 2 eliminates the eight largest cities from our sample, based on the number of branches in each city.

The relative importance of the respective fixed effect is calculated as $\frac{cov(y,FE)}{var(y)}$. In parentheses, we report the percentages of the R-Squared attributed to the supervisor and firm fixed effects. We also report F-Statistics for tests of the joint significance of the respective fixed effects, as well as the number of switchers, stayers, and firms in our estimation.

	(1)	(2)
	Branch	Branch
	Misconduct	Misconduct
Relative importance of estimates in R-Sq. %'s are fraction R-Sq. explained by covariate.		
Supervisor Fixed Effect	0.16 (48%)	0.17 (43%)
Firm Fixed Effect	0.07 (20%)	0.07 (17%)
F-Stat Supervisor Fixed Effect	1.04***	0.95
F-Stat Firm Fixed Effect	0.26	0.21
R-Sq.	0.329	0.345
N	1,455,735	878,746
# Switchers	86,582	58,135
# Stayers	69,781	38,867
# Firms	12,767	10,027
City x Year FE	Yes	Yes

Table A2: Specification Robustness

This table modifies equation (1) to assess the sensitivity of our Table 3, Panel A results. The unit of observation is supervisor-branch-year. In column 1, we follow Bertrand and Schoar (2003) and limit our sample to switching supervisors. Column 2 estimates equation (1) without controls. In column 3 (4), the dependent variable is *Branch Complaints* (*Branch Damages*) the proportion of employees with a complaint on their record that year (dollar damages, sanctions, and settlements per employee). Column 5 uses weighted least squares, where the weights are based on the square root of branch headcount. Column 6 winsorizes *Branch Misconduct* at the 1% level. In column 7, we omit any misconduct incident involving the supervisor, and models the remaining misconduct (*Subordinate Misconduct*) using equation (1). The relative importance of the respective fixed effect is calculated as $\frac{cov(y,FE)}{var(y)}$. In parentheses, we report the percentages of the R-Squared attributed to the supervisor and firm fixed effects. We also report F-Statistics for tests of the joint significance of the respective fixed effects, as well as the number of switchers, stayers, and firms in our estimation.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Branch	Branch	Branch	Branch	Branch	Branch	Subordinate
	Misconduct	Misconduct	Complaints	Damages	Misconduct	Misconduct	Misconduct
Relative importance of estimates in R-Sq. %'s are fraction R-Sq. explained by covariate.							
Supervisor Fixed Effect	0.14 (42%)	0.13 (41%)	0.16 (45%)	0.15 (47%)	0.11 (30%)	0.05 (14%)	0.12 (34%)
Firm Fixed Effect	0.07 (21%)	0.07 (22%)	0.07 (18%)	0.06 (18%)	0.07 (19%)	0.03 (8%)	0.08 (25%)
F-Stat Supervisor Fixed Effect	0.85	1.00	1.11***	0.92	0.77	0.97	1.06***
F-Stat Firm Fixed Effect	0.36	0.27	0.25	0.22	0.33	0.33	0.33
R-Sq.	0.341	0.331	0.365	0.320	0.368	0.363	0.335
N	822,715	1,233,153	1,233,153	1,233,153	1,233,153	1,233,153	1,148,226
# Switchers	74,531	74,637	74,637	74,637	74,637	74,637	73,120
# Stayers	0	56,771	56,771	56,771	56,771	56,771	54,100
# Firms	11,037	12,471	12,471	12,471	12,471	12,471	10,466
Controls	Yes	No	Yes	Yes	Yes	Yes	Yes
City x Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Method	B&S	AKM	AKM	AKM	AKM, WLS	AKM, Winsorized	AKM

Table A3: Branch Misconduct

This table tabulates all controls for equation (1) without (column 1) and with (column 2) supervisor fixed effects. The unit of observation is supervisor-branch-year. The dependent variable is *Branch Misconduct*, the proportion of employees at the branch with a misconduct disclosure that 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.

	(1)	(2)
	Branch Misconduct	Branch Misconduct
Br. LN Years Experience	-0.0002	0.0031***
	[-0.37]	[6.33]
Br. LN Employee Count	-0.0004***	-0.0006***
	[-4.48]	[-5.49]
Br. Series 6	0.0017**	0.0008
	[2.46]	[0.99]
Br. Series 7	0.0006	0.0006
	[0.74]	[0.67]
Br. Series 63	0.0015**	0.0011
	[2.49]	[1.45]
Br. Series 65	0.0036***	0.0039***
	[5.33]	[4.81]
Br. Series 66	0.0032***	0.0019**
	[4.54]	[2.08]
Br. Other Exam	-0.0008	-0.0004
	[-1.56]	[-0.57]
Br. Old Series 66	-0.0001	0.0004
	[-0.40]	[1.48]
Br. Misconduct Ever	0.0252***	0.0079***
	[18.31]	[3.62]
Su. Years Experience	0.0001*	-0.0010***
	[1.69]	[-2.78]
Su. Misconduct Ever	-0.0001	-0.0381***
	[-1.02]	[-20.05]
Su. Series 6	0.0001	0.0000
	[0.70]	[-0.02]
Su. Series 7	-0.0002	0.0015
	[-1.57]	[1.17]
Su. Series 63	-0.0001	-0.0013***
	[-0.82]	[-3.24]
Su. Series 65	0.0000	-0.0006
	[0.50]	[-1.07]
Su. Series 66	-0.0001	-0.0008**
	[-0.83]	[-2.31]
Su. Old Series 66	0.0000	-0.0002
	[0.24]	[-0.28]
Su. Other Exam	0.0000	-0.0003
	[-0.33]	[-1.45]
City x Year FE	Yes	Yes
Firm FE	Yes	Yes
Supervisor FE	No	Yes
R-Sq.	0.228	0.336
N	1,237,915	1,233,153