On dimensions of corporate misbehavior:

Financial misrepresentation and operational misconduct

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Abstract

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This study examines whether corporate misbehavior toward shareholders and non-shareholders are complements or substitutes. Specifically, I ask whether firms engaged in misconduct against non-shareholders are also likely to mislead investors using financial reports. Using a hand-collected sample of 187 instances of misconduct, I find evidence that during periods in which firms engage in misconduct against non-shareholders, those firms are more prone to financial misrepresentation. This is consistent with financial misrepresentation and misconduct against non-shareholders being complements. That is, firms acting unethically in one domain appear to be engaged in a broader strategy of malfeasance that affects financial reporting. I also find some evidence that firms engaged in misconduct against non-shareholder related parties are subject to fewer internal control weaknesses and SEC enforcement actions, suggesting that misconduct imposing costs on shareholders is a substitute for misconduct imposing costs on customers and employees.

1 Introduction

A large stream of accounting literature addresses incentives and consequences of financial misrepresentation (e.g., Beneish, 1999; Dechow et al., 2006; Dechow et al., 2011, Feroz et al., 1991), which imposes costs on investors when they rely on reporting accuracy. Firm activity (i.e., actions taken by managers or employees, either individually or collectively) also often imposes costs on non-shareholders. Consider three examples of cases that became public in 2015. Citibank deceptively marketed and enrolled customers in credit card add-on products for a decade. Whole Foods overcharged for pre-packaged foods based on mislabeling product weights. Halliburton improperly categorized more than 1,000 workers to deny them overtime pay.[1] These examples illustrate several types of corporate misconduct: deceptive promotion, abusive billing practices, and employee mistreatment. Environmental damage, bribery, price-fixing, financial misreporting, and many other examples also qualify as corporate misconduct.

I define *corporate misconduct* as violation of social norms by individuals or groups in their capacity as corporate agents (managers and employees). In this study, I examine whether firms that engage in firm-performance-improving misconduct within the context of operating activities (*operational misconduct*) are more or less likely to misrepresent financial information. I define *financial misrepresentation* as financial reporting that violates the spirit of Section 13(b) of the 1934 Securities and Exchange Act, which requires firms to keep accurate books and records and mandates a system of internal controls over financial reporting. This definition is consistent with Karpoff et al. (2008ii), whose proxy for financial misrepresentation is simply violations of Section 13(b). As Amiram et al. (2017) note, financial misrepresentation does not

[1] https://www.consumerfinance.gov/about-us/newsroom/cfpb-orders-citibank-to-pay-700-million-in-consumer-relief-for-illegal-credit-card-practices/,https://www.washingtonpost.com/news/morning-mix/wp/2015/07/02/whole-foods-admits-overcharging-blames-employees-and-apologizes/?utm_term=.3597e97606eb, http://www.reuters.com/article/halliburton-wages-idUSL1N11S17T20150922, downloaded April 30, 2017.

necessarily imply financial fraud (with manager scienter) under either the 1933 or 1934 Securities and Exchange Acts.

I do not suggest that one form of misconduct leads to the other, but rather that a relation between these types of misconduct indicates that elements of managers' strategy and/or firm culture cause both. While the accounting literature examines the determinants of financial-reporting misconduct, there is little evidence linking such reporting to misconduct against other stakeholders. Identifying a relation between these phenomena is interesting because it may speak to whether 1) a broader pattern of malfeasance is responsible for both or 2) various types of misconduct represent distinct strategies or cultural dispositions.

There exist plausible reasons to expect either a positive or negative relation between operational misconduct and financial misrepresentation. These behaviors may indicate a general strategy of opportunism designed to maximize managers' personal benefits through incentive compensation contracts and derive improved professional reputation. This possibility accords with the theory of behavioral consistency used in recent finance literature (Cronqvist et al., 2012; Davidson et al., 2015). Behavioral consistency suggests individual managers manifest the same sort of behavior in different settings. Behavioral consistency predicts that managers who act opportunistically toward non-shareholders also do so toward shareholders. Alternatively, firm cultures in which violation of social norms is viewed as acceptable or firms with employee performance incentive plans may lead individuals to act unethically in various settings without explicit instructions from the manager. [2] This line of reasoning suggests a positive association

[2] Generally, I choose to discuss misconduct as a firm-level activity, despite accounting researchers today typically preferring to discuss individuals as the unit of enquiry, since operational misconduct needn't imply manager scienter. Further, regulatory settlement statements, the basis for my operational misconduct sample, typically abstain from identifying responsible individual except in the rare occasion that an individual is criminally convicted. Nonetheless, I sometimes discuss managers as the unit of enquiry, especially when describing managerial opportunism and predictions based on theories concerning individuals rather than groups, such as behavioral

between misconduct toward non-shareholders and shareholders. On the other hand, misconduct against non-shareholders and shareholders may be substitutes. One possibility is that firms engage in misconduct to create value for shareholders. When managers' incentives are well-aligned with those of shareholders, corporate misconduct against non-shareholders and high-quality financial reporting may both be methods by which managers increase their own utility. Another possibility is that engaging in misconduct increases profits above relevant benchmarks (e.g., analysts' forecasts), obviating the need for financial misrepresentation.

To examine the relation between misconduct against shareholders and non-shareholders, I compile a sample of 187 misconduct events from Violation tracker (VT), a database maintained by a public interest group, The Corporate Research Project. I implement models using ordinary least squares (OLS), propensity-score matching (PSM), entropy-balancing (EB) and industry-year-market-value matching (IYM) to examine the tendency of firms engaged in operational misconduct to manipulate financial information. Pooled analyses suggest financial misrepresentation is more common at firms engaged in operational misconduct, as predicted by behavioral consistency.

I conduct several cross-sectional analyses based on operational misconduct egregiousness and whether trust of a related party is violated. These analyses provide more detail about the types of operational misconduct that are most related to financial misrepresentation. I also examine CEO's total beneficial ownership in their firm to evaluate the extent to which compensation-based incentive alignment between managers and shareholders mitigates financial misrepresentation at firms engaged in operational misconduct. Overall, I find that firms engaged in more egregious operational misconduct issue financial reports subject greater levels of

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consistency and agency theory. I do not intend manager-level discussion to necessarily imply that managers are the key actors in all cases of misconduct.

financial misrepresentation than those forms engaged in less egregious operational misconduct. I also find evidence that ex post (but not ex ante) measures of financial misrepresentation are better at firms engaged in operational misconduct violating the trust of non-shareholder related parties compared to firms engaged in operational misconduct that violates the trust of the public generally. This suggests that misconduct against non-related parties is primarily responsible for my main, pooled result and that misconduct against shareholder and non-shareholder related parties could be substitutes.

My study makes two contributions to the literature. First, it offers additional insight into financial misrepresentation by suggesting it may follow from a larger pattern of malfeasance. Whether misconduct against various parties is jointly determined is an important question for accounting practitioners and regulators interested in discovering misconduct. Karpoff et al. (2008ii) find costs imposed on shareholders from the unwinding of accounting irregularities can be enormous (nearly $200 million per firm in their study), including legal fines and penalties, as well as reputational capital impairment that averages seven and a half times more costly than the fines themselves. News of misconduct could be an indicator facilitating timely identification of ongoing financial misrepresentation by regulators and investors, limiting the opportunity managers have to accumulate large misstatements and the damage from their unwinding. If misconduct against non-shareholders indicates the risk of financial misrepresentation, my findings will also be useful for boards of directors and replacement managers seeking to cull their organizations of all forms of misconduct whose news may undermine their efforts to repair reputational damage. Such findings will also be useful to accounting researchers inferring the consequences of financial misrepresentation, since these consequences could be determined by operational misconduct and financial misrepresentation jointly.

Second, my study adds to the line of recent research on the relation between financial reporting and firms' behavior toward non-shareholders. Kim et al. (2012) already investigate the association between financial reporting and *ethical* behavior. They find socially responsible firms are less likely to manage earnings with discretionary accruals and real operating activities. However, Kim et al. (2012) leave open the question of whether their conclusions are generalizable to the *unethical* side of the distribution. My study addresses this gap in our knowledge by examining corporate misconduct, i.e., corporate social *ir*responsibility.

Similar to my study, Caskey and Ozel (2017) investigate corporate misconduct, suggesting that some real earnings management jeopardizes worker safety. They find firms that meet or just beat analyst expectations have more injury and illness rates, suggesting these higher rates result from efforts to manage real activities to avoid missing analyst benchmarks. My study differs in four respects. First, my study is intended to capture associated, but distinct, instances of misconduct. Caskey and Ozel (2017) instead suggest individual instances of real earnings management result in physical to harm workers. Second, my sample consists of violations mostly against customers and the public, rarely employees. Third, Caskey and Ozel (2017) address real earnings management, while four out of eight of my dependent variables are a function of discretionary *accruals*. And finally, they collect their sample from company filings to the Occupational Health and Safety Administration (OSHA) required whenever a serious workplace injury occurs, regardless of fault. I draw my sample from a novel database of settlement agreements between companies and nearly 43 federal agencies, allowing me to capture detailed information about confirmed instances of misconduct, such as violation type, criminality, and penalty amounts. In the next section, I discuss my definition of corporate misconduct, prior literature, and my hypothesis.

2 Motivation and predictions

2.1 Background & motivation

I define misconduct as the violation of social norms. Social norms are understandings that govern acceptable behavior within a society. They can be informal, such as defection from cooperation in the context of repeated interactions with related parties (Axelrod, 1984), e.g., selling a product of lower quality than that to which customers are accustomed. Alternatively, social norms may be formal, such as laws enacted by political authorities (Kelsen, 1991). Corporate misconduct, therefore, is violation of social norms by individuals or groups in their capacity as corporate agents (managers and employees).[3] Under my definition, corporate misconduct is a broad construct, spanning many domains, including firm operations, financial reporting, and personal abuse of subordinates.

Corporate agents engage in activities that violate social norms when the benefits of such behavior outweigh the expected costs associated with discovery of those activities. In certain cases, the benefits of misconduct accumulate to the perpetrator. Sexual harassment is an unambiguous example, benefiting only the perpetrator and imposing costs on the victim, other employees, customers, shareholders, and anyone with an interest in the efficiency of the firm.[4] I classify sexual misconduct as unambiguously *opportunistic*, i.e., misconduct in which the

[3] This definition differs from prior research, which typically leaves corporate misconduct undefined explicitly (e.g., Cox, 1997; Ding and Wu, 2014). The writing in these articles implies that their definition of corporate misconduct relates to damage of social welfare. Such a definition is not ideal in my setting as damage from corporate misconduct often disproportionately affects select stakeholder groups rather than society at large.

[4] Public identification of instances of sexual misconduct by publicly-traded companies' executives is rare and so is not included in my analysis. The wave of sexual misconduct allegations that began in 2017 has largely targeted media-content creators and artists. Accusations against Steve Wynn in late-January 2018 are the only instance of sexual misconduct allegations against the CEO of a publicly-traded company of which I am aware. The news of accusations against Wynn precipitated a nearly 19% reduction in the market value of Wynn Resorts. Bob and Harvey Weinstein, founders of the Weinstein Company and Miramax, are also accused of sexual harassment and abuse. However, the Weinstein Company is privately-held, and Miramax has been a subsidiary of Disney since 1993, before which it was also privately-held. It's interesting to note that all three of these alleged sexual abusers are company founders. This behavior could be facilitated by the outsized social influence these individuals wield at their organizations, a power that could lead to both interpersonal dynamics and board ineffectiveness that facilitate sexual abuse.

manager benefits himself at the expense of other corporate stakeholders. In other forms of misconduct, benefits may accrue to non-perpetrators, as is the case for shareholders when effectively concealed false advertising improves firm performance. My study focuses on this type of misconduct, which I refer to as *operational misconduct*, i.e., performance-improving misconduct within the context of a firm's operating activities that may or may not be opportunistic. The Citibank, Halliburton, and Whole Foods examples in my introduction all qualify as operational misconduct.

Managers or other corporate agents may engage in operational misconduct opportunistically, as is suggested by classical agency theory (Jensen and Meckling, 1976). Executives could benefit from inflated earnings via improved professional reputation and increased incentive compensation. Employees and middle managers could benefit from performance-based incentives adopted by executives. The extent to which managers act opportunistically is determined by factors including the personal moral code of the manager, the moral code of the community and firms in which they live and operate, firm strategic position, regulatory scrutiny, manager abilities, board effectiveness, and auditor effectiveness.

However, it is also possible that operational misconduct is primarily intended to benefit shareholders at the expense of customers, employees, or the general public. Such an objective is consistent with executive's and middle managers appointed role to act in the best interest of shareholders (i.e., efficiently). Many of the same factors are likely to influence such misconduct. Board effectiveness, though, is effectiveness in protecting the interests of shareholders even at the cost of other parties, e.g., debtholders (Jiraporn et al., 2013). So, board effectiveness is unlikely to discourage misconduct that increases risk-adjusted, expected firm value.[5]

[5] Regardless of whether an instance of misconduct is opportunistic or efficient, it is important to the beneficiary that misconduct be concealed. If customers (employees) are able to determine that managers are willing to engage in

Because all corporate misconduct is a function of social norms, which vary among societies and subcultures, operational misconduct is necessarily subjective and context dependent. Accordingly, I examine what I consider an unambiguous form of operational misconduct, violation of laws and regulations. Violation of laws and regulations is, however, a heterogeneous phenomenon that varies along many dimensions. In this paper, I examine three of those dimensions: 1) size of the financial penalty, 2) criminality, and 3) violation of trust.

Financial penalties for the violation of laws and regulations may be paid to the government or an injured party. Fees and penalties imposed by regulators can encourage efficiency by imposing the cost of externalities on decision makers considering a misconduct project. Fines may exceed the specific, identifiable damages caused to other parties if violations are 1) criminal or 2) the result of malicious intent, gross negligence, or willful disregard for the rights of others. Because penalty size captures both 1) damage to social welfare and 2) social reproach customized to particular misconduct activities, I consider high penalty misconduct to be the more egregious than low penalty misconduct.[6]

Criminal and civil law are distinguished by the legal codes governing them and the nature of penalties imposed on violators. Criminal violations are outlined in a penal code and may be punishable by imprisonment. Civil violations include activities that damage the interests of another party, regardless of whether the violation is outlined in a formal penal code. In contrast

misconduct against them, they will price-protect, increasing their reservation price (wage) when transacting with the company. This is costly to the manager and shareholders as high-quality employees depart and profitable customers contract with competitors.

[6] Penalty size is an imperfect proxy for egregiousness. A key weakness is that, assuming regulators are attempting to impose expected fees equal to the costs of misconduct externalities, ex post penalty realizations for misconduct that is difficult to detect will be larger than those of misconduct more easily detected holding egregiousness constant. Another potential criticism of this proxy is that political cost theory suggests large firms will face large penalties. I consider this criticism less serious because the damage to social welfare done by a given instance of misconduct will be greater for large firms than small.

to criminal acts, civil violations, as such, are never punishable by jail time. Accordingly, I consider criminal acts to be the more egregious of the two types.[7]

The third dimension is whether or not the misconduct violates the trust of a related party, such as consumers or employees. Instances of trust-violating misconduct include activities that are profitable only by virtue of the trust granted to a firm by its related parties, e.g., financial misrepresentation, failure to timely recall unsafe products, sales of products of a different quality than is represented in advertising, among others. Trust grows out of repeated interactions and consistent performance within those interactions, building an expectation upon which the parties can rely. Interactions of this sort – where the firm conveys their commitment to a specific pattern of behavior through repeated actions – allow implicit contracts to arise. To clarify the relationship among corporate misconduct, operational misconduct, trust violations, and financial misrepresentation, I provide a Venn diagram in Figure 1.

One recent example of trust-violating misconduct is the Volkswagen (VW) emissions scandal. In 2015, the Environmental Protection Agency publicly announced that VW installed software in vehicles with clean diesel engines detecting testing conditions and changing performance to release lower levels of combustion emissions. These allowed VW vehicles to satisfy clean vehicle certification standards, misleading customers who believe they were purchasing low emission vehicles.[8] Prior to this scandal, VW had become identified with their clean diesel technology, driving revenues for half a decade. The earliest identified models with "defeat devices" clearing emissions certification standards were released in 2009. Compared to

[7] It may be argued that time in jail, say a year, is less severe than the imposition of an outsized fine, say one million dollars. Nonetheless, legal theory considers the threat of imprisonment to be especially severe, which is used as a justification for providing additional protections for criminal, as opposed to civil, defendants (e.g., requirement that guilt be proven beyond a reasonable doubt in criminal cases). This is consistent with my contention that criminal violations are more egregious than civil violations.

[8] http://www.bbc.com/news/business-34324772, downloaded March 24, 2017.

the average of two of VW's main competitors, Ford and General Motors, during the period from 2009 to 2013, VW generated 50% more revenue growth and earned over $380 billion more in revenue.[9] The EPA's regulatory filing precipitated a decline in VW stock value of nearly 40% in just 16 days.

In addition to violation-level cross-sections, I examine CEO beneficial ownership. Equity positions are often granted to CEOs by boards of directors through incentive compensation arrangements with the intention of alleviating agency conflicts between shareholders and managers. Whether such positions encourage or discourage financial misrepresentation or earnings manipulation is an open question in accounting literature. My study is the first to ask whether the level of CEO ownership in firms engaged in operational misconduct affects financial misrepresentation.

2.2 Prior literature on corporate misconduct

Prior research on corporate misconduct spans several literatures including marketing, management, finance, law, and accounting. I offer a brief review of literature in this area, beginning with the determinants of financial misrepresentation. Dechow et al. (2010) summarize earlier literature's findings on the determinants of earnings quality, including firm characteristics such as firm performance and growth, capital market incentives, equity-based compensation, and corporate governance. Dechow et al. (2011) find material misstatements are predicted by declining financial performance, reductions in number of employees, antecedent income-increasing discretionary accruals, aggressive estimates of pension plan returns, and more

[9] The percentage growth rate is based on the summation of annual revenue growth. These figures may be inflated due to a disproportionate exposure of Ford and GM to the American economic crisis beginning in 2008, although it's worth noting that VW was also exposed to the American crisis as well as the ensuing global crisis. Examining the period from 2010 to 2013 yields figures of 30% more revenue growth and more than $339 billion more in revenue for VW compared to the average of Ford and GM.

frequent use of off-balance sheet financing. More recent research links financial-reporting misconduct with firm culture and managerial characteristics. Liu (2016) finds corrupt culture is associated with increased financial misrepresentation.[10] Schrand and Zechman (2012) find managers of firms that receive AAERs for reasons other than fraud are characterized by high levels of overconfidence.

Other studies address the determinants of other kinds of corporate misconduct. Burke et al. (2016) proposes personal greed as the cause of misconduct, suggesting that a society-wide shift toward selfishness, glorification of rich/powerful individuals, and accounting-based incentive compensation all encourage corporate misconduct. Mintzberg et al. (2002) propose that a shift in societal values engendered several myths that contribute to the spread of selfish behavior.[11] Conley and O'Barr (1997) claim firm culture played a major role in Archer Daniels Midland's (ADM's) involvement in the lysine price-fixing scandal of the mid 1990s and tobacco companies' marketing of cigarettes as a safe product. However, Ayers (1991) finds cases of racial discrimination in sales practices are wide-spread among unrelated car dealerships, implying that this is not an organization-specific phenomenon.

Some studies address consequences of misconduct. Karpoff et al. (2008ii) suggest short-window financial penalties for financial misrepresentation are particularly high and mostly derived from reputational damage to market valuations of firm equity. Karpoff et al. (1993) find both financial and non-financial legal violations carry significant reputational and other capital market penalties. They suggest that the discovery of misconduct has an unambiguously negative impact on firm value. However, Tibbs et al. (2011) suggests that misconduct *not* against related

[10] Liu (2016) measures the level of firm corruption using a composite score based on the levels of corruption in the countries corresponding to director and manager surnames.
[11] The authors describe five myths: 1) We are all, in essence, economic man, 2) corporations exist to maximize shareholder value, 3) corporations require heroic leaders, 4) the effective organization is lean and mean, and 5) the rising tide of prosperity lifts all boats.

parties (i.e., non-trust violations), yields abnormally *positive* returns over long-windows (eight-to-ten year) centered on the date of discovery. They find that even misconduct against related parties does not impose *negative*, abnormal returns over the same window.[12] These results are consistent with two alternatives: 1) discovered, non-trust-violating misconduct ultimately increasing firm value despite short-term legal and reputational penalties or 2) firms disposed to engage in misconduct, some of which presumably goes undiscovered, ultimately earning greater returns for shareholders. Davies and Olmedo-Cifuentes (2016) conduct a survey demonstrating that, among forms of non-financial misconduct, trust is damaged most when firms bend the law or fail to tell the truth and least when acting unfairly or irresponsibly.

Turning to the individual consequences of misconduct, Karpoff et al. (2008i) show that personal consequences of financial misstatements to managers are severe, almost always including separation from employment (93% of cases documented in the study) and frequently including criminal charges, fines, or jail time (30%). Compared to financial misrepresentation, individual penalties for violations of customer trust are less severe. Connor and Lande (2012) find about half of managers serving jail time for price fixing are subsequently reemployed in the same industry. Approximately half of those reemployed managers return to the same firm, comparing favorably to the 7% rate identified in Karpoff et al. (2008i) for financial misrepresentation.[13]

[12] The sample used in Tibbs et al. (2011) includes misconduct against non-related parties such as government contractors that make project subcontracts contingent on the payment of kickbacks, violations of federal currency laws, illegal political contributions, and bribes. Misconduct against related parties includes financial misrepresentation, violations of employee privacy, and jeopardizing customer safety.

[13] Connor and Lande (2012) also note anecdotal professional outcomes for managers violating non-shareholder trust are even positive. Testimony in the Archer Daniels Midland trial for lysine price fixing in the 1990s indicated "… the lead (immunized) witness for the prosecution (admitted ADM) paid his entire fine and promoted him to president of one if its largest subsidiaries." In addition, a popular press article (Levine, 2010) tells of a manager who returned to his company with more responsibility than before serving a six-month price-fixing term in prison, implying shareholders view some misconduct favorably.

2.3 Hypothesis development

Plausible reasons exist to expect either a positive or negative relation between operational misconduct and financial misrepresentation. Below I explore possible explanations for both positive and negative relations, as well as one for no relation. First, a positive association could be observed if misconduct activities are part of a larger strategy or propensity to engage in opportunistic behavior toward shareholders and non-shareholders alike. An opportunistic manager can use misconduct against non-shareholders (e.g., cases described previously involving Citibank, Halliburton, and Whole Foods) or accounting discretion to report misleadingly favorable financial information to shareholders. Both tactics increase demand for a company's stock, raising the share price and benefiting the manager through incentive compensation, improved professional reputation, and career opportunities. In the case of violations against non-shareholders, these benefits are achieved through the imposition of risk on shareholders of discovery, which would generate negative returns. The similarity between these two classes of misconduct, both in terms of the benefits gathered and the imposition of costs on shareholders, suggest that a shared opportunistic strategy may manifest both activities, leading to a positive association between misconduct against shareholders and non-shareholders.

A positive relation follows from the theory of behavioral consistency, shown in recent research to describe the actions of managers in other contexts. Cronqvist et al. (2012) show that the personal borrowing behavior of managers is positively associated with the borrowing behavior of firms that those managers lead. Davidson et al. (2015) find CEOs and CFOs with a legal record are more likely to perpetrate fraud and unfrugal CEOs oversee loose internal control environments that result in a higher incidence of fraud among subordinates. If behavioral

consistency describes managerial opportunism, then managers who take advantage of non-shareholder trust for personal gain are likely also to do so with respect to shareholders.

A positive association between opportunistic financial reporting and misconduct against non-shareholder stakeholders is also consistent with research on firm culture. Liu (2016) finds a significant association between the level of corruption in corporate culture and financial misconduct such as earnings management, accounting fraud, option backdating, and insider trading. If corporate culture also leads to misbehavior at the expense of non-shareholders, then corrupt firm cultures may simultaneously lead to both financial misrepresentation and other forms of misconduct.

These two potential explanations of a positive association are not mutually exclusive. I expect that corrupt managers tend to lead corrupt organizations for four possible reasons. First, managers determine firm culture through their strategic choices and authority. Managers are likely to encourage the types of cultures that will complement managers' preferred strategies. Second, managers may also self-select into organizations that already have cultures that facilitate their strategic plans. Third, boards of directors are likely to choose managers whose expected strategic choices are likely to succeed in an organization with the type of culture at their firm.[14] Finally, firm culture may affect the strategic choices of the manager, either because 1) the manager selects strategies facilitated by the firm cultures in which they find themselves or 2) the manager's participation in the firm culture changes the personal preferences of the manager with respect to certain strategic decisions. I do not attempt to disentangle these explanations in my study.

[14] It's also probable that some boards will prefer to hire managers expected to have high ethical standards to lead corrupt organizations if the board is interested in shifting firm culture. This phenomenon is especially likely during reputation repair activities following discovery of misconduct.

Alternatively, financial misrepresentation and operational misconduct may be negatively associated for two reasons. First, operational misconduct could be an activity designed to benefit shareholders. When managers' incentives are well-aligned with those of shareholders, managers will undertake positive net present value projects. Such projects may include certain instances of misconduct that managers perceive as easily concealable and sufficiently profitable. These same incentives may lead to financial reporting that provides high-quality information to shareholders and reduces the cost of capital.

Second, managers have incentives to meet financial benchmarks. Such benchmarks for earnings include executive bonus minimums, analyst expectations, and financial maintenance covenant thresholds. To the extent returns to operations misconduct allow managers to perceive they are not at risk of missing these benchmarks, misconduct alleviates the incentive to misrepresent financials. This prediction is similar to the finding in Cohen et al. (2008) that accrual-based earnings management was replaced by real earnings management following the implementation of Sarbanes-Oxley, a bill increasing the penalties for financial misrepresentation. I argue that an action qualifies both as operational misconduct and real earnings management when it 1) surreptitiously imposes non-trivial costs on non-shareholder related parties and 2) is undertaken to achieve some positive financial reporting outcome. Such is the case with the real earnings management documented in Caskey and Ozel (2017), which significantly impairs the safety of employees. These two explanations suggest a negative relation between financial misrepresentation and operational misconduct.

Lastly, there may be no significant, systematic relation between misconduct in various settings. The early, neoclassical theory of the firm ignores intrafirm dynamics, including such factors such as firm culture and the manager's behavioral tendencies. Under such a theory, firm

projects are perfectly determined by equilibria where marginal revenue equals marginal cost, i.e., features of the markets in which the firm participates. If such a theory is descriptive in my setting *and* factor markets are independent, there is little reason to expect any systematic relation between misconduct toward shareholders and non-shareholders. For example, a shock increasing the cost of capital may encourage financial misrepresentation, but if that shock is uncorrelated with wages, there would be little association between that financial misrepresentation and operational misconduct against employees, regardless of the manager's behavioral preferences or firm culture.

Given these possibilities, I frame my prediction about the relation between operational misconduct and financial misrepresentation bi-directionally and state my hypothesis in null form:

> **H_0: The level of financial misrepresentation by firms engaged in operational misconduct is no different than the level of financial misrepresentation by firms not engaged in misconduct.**

3 Sample selection and research design

3.1 Sample selection

My sample comprises cases of operational misconduct I identify using Violation Tracker (VT), a free and publicly available database. According to their website, VT is "… the first national search engine on corporate misconduct. Version 2.0 covers banking, consumer protection, false claims, environmental, health, safety, price-fixing and bribery cases initiated by 43 federal regulatory agencies and the Justice Department ..."[15, 16] This database consists of

[15] http://www.goodjobsfirst.org/violation-tracker, downloaded March 23, 2017

[16] The Corporate Research Project maintains VT. Their website indicates that it "assists community, environmental and labor organizations in researching and analyzing companies and industries. The Project is designed to be a resource to aid activism. Consequently, our focus is on strategic research, i.e., identifying the information activists can use as leverage to get business to behave in a socially responsible manner." The Corporate Research Project is an affiliate of a broader organization, Good Jobs First, which defines itself as "a national policy resource center for grassroots groups and public officials, promoting corporate and government accountability in economic development and smart growth for working families. We provide timely, accurate information on best practices in

misconduct events for which there has been a settlement between the violating firm and either the Justice Department or other relevant regulatory agency. It contains SEC violations related to misrepresenting the risk of securities for sale by financial institutions but excludes SEC violations related to misstatements of a firm's own financial statements.

I search federal agency filings dated between 2010 and 2017, the entire sample period of VT, beginning with the largest penalty violations. Out of a total VT sample of 161,684, I consider only those instances of misconduct resulting in penalty amounts among the largest 1% of events in the database (1,629 observations). This cutoff includes all VT observations for which the penalty is equal to or exceeds $2,200,000. I choose this high cutoff as it ensures all misconduct in my sample is significant, rather than errors only nominally penalized, and maximizes statistical power.

I require sample observations to be matched to a Compustat gvkey. By manually searching operational misconduct company names in Compustat, I identify 895 instances of misconduct committed by firms for which I have financial statement information. Next, I require all sampled events to have an identifiable misconduct period. VT contains a description of the misconduct event and/or link to supporting documentation of the violation settlement. I make no effort to impute a period of misconduct when such information is absent from the settlement statement. This helps ensure the violation periods I use are accurate. However, this choice also introduces selection bias into my study. For certain kinds of violations, identification of the misconduct period is difficult or statutorily irrelevant. For example, many kinds of environmental violation settlements, such as the BP oil spill, mention no period during which

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state and local job subsidies, and on the many ties between smart growth and good jobs. Good Jobs First works with a very broad spectrum of organizations, providing research, training, communications, and consulting assistance." (http://www.goodjobsfirst.org/about-us, downloaded May 30, 2016)

unsafe activities occurred. Instead, these reference only the date of the damaging event. I lose 416 events due to this criterion, giving me a remaining sample of 479 observations.

I also require my sample observations to have a CRSP permno and a Compustat firm-year observation with total assets immediately preceding the date on which misconduct activities began. These requirements reduce my sample size to 375. I retain only one misconduct event per firm, the one subject to the largest penalty, leaving me with 187 events. My OLS procedure retains only 180 events with sufficient data. Finally, the PSM procedure I use effectively matched only 114 event firms to control firms within a caliper of five percent. I provide a detailed description of both OLS and PSM procedures in Section 3.2

In Table 1, I provide a summary of sample selection by settlement year (Panel A), as well as the distribution of misconduct start date by year (Panel B) and descriptive statistics for violation penalty amounts (Panel C). These penalty amounts are the basis for the variable *PENALTY_HIGH_30*, one of two proxies I use to capture the egregiousness of violations. This variable is equal to one if the violation's penalty is above (below) the 70^{th} (30^{th}) percentile of the distribution by penalty amount within a given sample.[17] The second variable I use to proxy for violation egregiousness is *CRIMINAL*, an indicator equal to one if the federal agency's case is criminal in nature.[18] Criminal cases account for 24% (26%) of my OLS (PSM) sample.

I also bifurcate my sample based on whether each instance of misconduct constitutes a trust violation. I define *trust violation* (*TRST_VLTN*) as misconduct that adversely impacts a related party in the context of that party's direct interactions with the firm. If managers are

[17] I also examined results for different percentiles (80/20, 60/40, and a median split). F-score results are robust to all of these definitions of high and low penalty. AAER results are robust to the 80/20 definition, but not robust to either the 60/40 of median definitions.

[18] *CRIMINAL* is based on a categorical variable available in VT.

behaviorally consistent with respect to stakeholders generally, I expect managers who abuse the trust of customers to also abuse the trust of shareholders by misrepresenting financial reports.

I include as trust violations four types of misconduct based on their VT descriptions: *anti-competitive practices*, *abusive billing or collection practices*, *consumer safety*, and *unlawful or misleading promotion*. *Anti-competitive practices* includes price fixing, bid rigging, allocation of market shares, manipulation of financial benchmarks, discrimination against customers on the basis of race or color, violation of pre-merger waiting periods, and other violations of antitrust laws. *Abusive billing and collection practices* includes billing customers without authorization, making misrepresentations to collect old debts, collecting money customers do not owe, harassing customers and related third parties, disclosing debts to friends, families, and employers, double billing, illegal foreclosure practices, and lying about pricing. *Consumer safety* includes untimely recalls, withholding information from consumers or the CPSC about product defects that create an unreasonable risk of serious injury or death, and issuing misleading statements about product safety issues. *Unlawful or misleading promotion* include paying kickbacks to doctors, promoting drugs for uses not approved as safe and effective by the Food and Drug Administration, mislabeling textiles, misbranding, misrepresenting the risk characteristics of financial securities for sale, failure to properly invest customer segregated funds, deceptive telemarketing, advertising, and sales tactics, violation of privacy assurances, and non-financial-reporting fraud. Few misconduct events involve jeopardizing *employee safety*, and none are retained into my propensity-score matched (PSM) sample. Hence, in my analyses, trust violations are always against consumers.[19]

In Table 2, I summarize misconduct types by industry. Financial institutions including those categorized as depository institutions, nondepository credit institutions, holding and other

[19] Appendix A presents examples of settlement information for each of the trust violation categories.

investment companies, and insurance carriers account for more than a quarter of 180 operational misconduct events in my OLS analysis. None of these are successfully matched using my PSM model due to missing managerial ability measures. The remaining observations retained by the PSM algorithm are spread among 30 different 2-digit SIC codes. Of those 114 events successfully matched by PSM, approximately 16% are related to *Chemical and Allied Products* (SIC 28) firms, many of which are in the pharmaceutical industry. The next largest industry, *Measuring, Photographic, Medical, and Optical Goods & Clocks* (SIC 38), accounts for 11% of the PSM sample. Overall, 49% (40%) of the misconduct events in the OLS (PSM) in are classified as trust violations. Of these 43% (43%) are classified as misleading promotion, the largest single type of trust violation.

3.2 Research Design

3.2.1 Financial misrepresentation variables

To examine the relation between financial misrepresentation and operational misconduct, I regress measures of financial misrepresentation on an indicator that captures ongoing operational misconduct during a particular firm-year. I use several dependent variables designed to capture financial misrepresentation. These include proxies measured both ex ante and ex post with respect to discovery of financial misrepresentation. My ex ante measures include discretionary accruals, both signed (*DA*) and unsigned (*ABSDA*), as well as two versions of F-score from Dechow et al. (2011), *FSCORE1* and *FSCORE2*. *DA* and *ABSDA* are used extensively in prior accounting research as a proxy for earnings management. I use cross-sectional, performance-matched discretionary accruals (Kothari et al., 2005). The F-scores capture the probability of material misstatements. All of these measures will be larger for

financial reports subject to (or suspected of) misrepresentation compared to those subject to no misrepresentation.

My ex post measures capture Security and Exchange Commission (SEC) Accounting and Auditing Enforcement Releases (AAER), as well as three categories of internal control weaknesses. My first measure, *AAER*, is an indicator equal to one when the firm-year's financial reports are subject to an AAER. AAERs identify "financial reporting related enforcement actions concerning civil lawsuits brought by the [SEC] in federal court and notices and orders concerning the institution and/or settlement of administrative proceedings."[20] I also examine internal control weaknesses, though these tests are exploratory since internal control weaknesses could result from 1) manager intervention to manipulate financial reports, 2) strategic or tactical decisions to divert resource away from internal controls (i.e., shirking toward shareholders), or 3) unintentional errors in internal control design or implementation.

I examine three internal control variables. First, *internal control weaknesses* (*ICW*) include any internal control weaknesses reported by managers noted in Audit Analytics, unconditional on the content of their disclosure. Second, *internal control weaknesses – revenue recognition* (*ICWRR*) includes only those ICWs that affect the revenue recognition process. This measure is interesting because revenue recognition is often subject to misrepresentation due to the ease of reclassifying sales from one period to another. However, *ICWRRs* may themselves be unintentional errors resulting from extensive variation in revenue recognition standards across industries and the fact that certain of those standards are complex. Further, trust-violating operational misconduct, always against customers in my sample, could mechanically lead to ICWRRs from material overstatement (understatement) of revenue (warranty expense). Finally, I

[20] https://www.sec.gov/divisions/enforce/friactions.shtml, downloaded May 27, 2018.

also examine *internal control weaknesses – financial fraud* (*ICWFF*), equal to one for any internal control weakness report that mentions financial fraud, zero otherwise.

I choose these measures for their complementary strengths and weaknesses. Ex post measures capture instances of financial misrepresentation about which there is relatively high certainty of existence.[21] However, the weakness of these ex post measures is that they provide a joint test of both financial misrepresentation and discovery, making them incomplete (likely subject to many Type II errors) and biased relative to the entire population of ICWs and AAERs. On the other hand, ex ante measures likely include false positives (Type I errors): instances in which values are high, but which are not properly characterized as financial misrepresentation. Their advantage, however, is that they do not jointly test discovery.

3.2.2 Ordinary least squares model

To begin my analysis, I implement a multivariate OLS regression. I build this model from the dependent financial misrepresentation variables mentioned above, *VIOLATE*, and several controls listed below that prior literature links to financial misrepresentation (Dechow et al., 1995; Dechow et al., 1996; Beneish et al., 1999; Kothari et al., 2005). My OLS regression is based on the following model, where the dependent variable (*DV*) is alternately 1) *DA*, 2) *ABSDA*, 3) *FSCORE1*, 4) *FSCORE2*, 5) *ICW*, 6) *ICWRR*, 7) *ICWFF*, and 8) *AAER*:

$$DV_t = \beta_0 + \beta_1 VIOLATE_{it} + \beta_2 ROA_{it} + \beta_3 ROA\_SQ_{it} + \beta_3 SIZE_{it} + \beta_3 SIZE\_SQ_{it} + \beta_4 BTM_{it} + \beta_4 BTM\_SQ_{it} + \beta_5 SALES\_GROWTH_{it} + \beta_5 SALES\_GROWTH\_SQ_{it} + \beta_6 LEVERAGE_{it} + \beta_6 LEVERAGE\_SQ_{it} + \sum_{1980}^{2017} \beta_r YEAR_r + \sum \beta_s INDUSTRY_s + \varepsilon_{it} \quad \textbf{(1)}$$

[21] Karpoff et al. (2017) note that 79.3% (46.2%) of AAERs prompt SEC charges for financial misrepresentation (financial fraud).

LEVERAGE is total long-term debt divided by total assets. *ROA* is calculated as income before extraordinary items divided by total assets. *SALES GROWTH* is year over year sales. *SIZE* is the natural logarithm of total assets. *BTM* is book to market, calculated as total assets divided by the market value of equity. *VIOLATE* is an indicator equal to 1 for firm-years subject to misconduct (i.e., firm-years included in the *operational misconduct period* displayed in Figure 2), zero for control firm-years.[22] Since financial misrepresentation may not be linear in these controls, I include squared versions of each to the model. I add year and industry fixed effects to control for macroeconomic shocks and other time-varying differences in misrepresentation. I also cluster standard errors by firm and fiscal year and winsorize all variables except indicators at 1% and 99%.

I apply my model to the period between 1980 and 2017, removing all observations for which there is insufficient data. I also remove all firm-years for which total assets falls below 90% of the smallest value for total assets in my 187 observations operational misconduct sample. That threshold is $27,336. I truncate these small control firm-years to limit the extent to which my selection procedure, focused on the largest penalty violations, creates a mechanical relation between *SIZE* and *INITIAL_VIOLATE*.

I expect the coefficient on *VIOLATE* in (1) to be significantly positive if behavioral consistency describes the relation between misconduct against shareholders and non-shareholders. However, if operational misconduct obviates the need to misrepresent financial reports, I will find a negative coefficient on *VIOLATE*. I present the regression results for (1) in Table 3 and discuss inferences later in Section 4.

[22] Settlement statements are likely to understate the length of the misconduct period. For this reason, I omit non-misconduct firm-years for any firm that has misconduct in any firm-year. This ensures errors in the misconduct periods provided in settlement statements do not introduce misconduct firm-years as potential controls firm-years.

Note in Table 3 that in each of eight regressions presented, no less than two squared control variables are significant. This suggests the relation between financial misrepresentation and the control variables is frequently non-linear. By using OLS, I am required to specify a particular, but unknown, non-linear functional form, calling into question the reliability of my OLS results. To address this potential unreliability, I execute three further tests based on 1) propensity-score matching, 2) entropy-balancing, and 3) matching on a simple, three-factor model. I continue my discussion below by examining each method in sequence, beginning with PSM and a full discussion of the second-stage models. I follow with a description of the EB and three-factor matching procedures.

3.2.3 Propensity-score matching

Using a PSM model provides two key advantages. First, PSM allows me to avoid specifying a particular functional form for the relation between financial misrepresentation and explanatory variables. Second, the counterfactual in my study is the financial misrepresentation of misconduct firms had they not engaged in misconduct. PSM allows me to include only those firm-years that are approximate the propensity of operational misconduct firms to begin violations. However, PSM imposes several important limitations. By restricting my control firms I limit the power of my tests. Also, any inferences from my PSM results are limited to firms that share explanatory variable common support with the matched pairs that survive my PSM algorithm.

My PSM algorithm includes two stages. In the first, I model the propensity of operational misconduct firms to begin violations, matching each operational misconduct firm to a single, nearest-neighbor control firm during the year of operational misconduct inception. For each successfully matched firm, I remove all firm-years from the potential control firm-years

available for subsequent matching (i.e., matching is without replacement). In the second stage, I compare financial misrepresentation between operational misconduct and control firms-years during the period of operational misconduct. The second stage includes both pooled analyses and analyses capturing each of four cross-sections that I expect to affect the relation between operational misconduct and financial misrepresentation: 1) penalty amount, 2) criminality, 3) violation of trust, and 4) CEO's total beneficial ownership.

3.2.3.1 Determinants of operational misconduct

I build my propensity model for operational misconduct based on variables measured at the fiscal-year-end immediately preceding the inception of violation activities. I consider four determinants: 1) managerial ability, 2) firm financial constraint, 3) firm size & complexity, and 4) firm financial performance. First, I consider managerial ability. The ability of a manager to run a firm efficiently likely results from their ability to effectively control business activity. In turn, this above-average ability to control activity within their firm may lead them to over-estimate their ability to conceal operational misconduct. If so, the manager's expected net benefit of operational misconduct, comprised largely by the product of the cost and probability of detection, will be higher for these managers than those of lower ability. On the other hand, a high-ability manager, already efficiently managing their firm, may be able to extract additional performance gains from their company without resorting to operational misconduct. To capture managerial ability, I use the measure from Demerjian et al. (2012) based on efficiently conversion of accounting inputs (expenses and capital) into accounting outputs (revenue and profit).

Second, I expect that the incentive to commit operational misconduct is increasing in *financial constraints*. Highly constrained firms have fewer low-cost opportunities to raise capital,

making them more dependent on cash from operations to run their businesses than the average firm. Misconduct can ease the need for cash through increased collections or reduced disbursements. To capture this construct, I use the dividend/repurchase payout ratio, the Whited and Wu (2006) Index, and leverage. The Whited and Wu Index captures limitations on the ability of firms to raise external funds (though not necessarily the incentive to do so). The index has greater signed values (indicating higher financial constraints) when cash flow is small, the firm issues no dividends and makes no repurchases, total long-term debt is high, size is small, industry sales growth is high, and firm sales growth is low.[23] Payout ratio is a measure of the managers' willingness to return capital to shareholders; large payout ratios suggest managers do not expect to have unfunded positive net present value projects in the intermediate future. Leverage is a key factor determining whether and at what terms a lender is willing to provide an additional loan to a firm.

Next, I expect more frequent operational misconduct among firms with *large, diverse, affected stakeholder bases*. When the damaged stakeholder base is large, misconduct projects may deprive each individual stakeholder of insignificant resources, giving stakeholders little incentive to take remediate actions, such as complaining to a regulator or filing a lawsuit. This makes concealment easier, encouraging misconduct. Hence, I expect operational misconduct firms to have larger stakeholder bases than non-misconduct firms on average. Diverse stakeholder bases comprise individuals with heterogeneous, sometimes conflicting incentives. Such bases make organization of collective actions against violating firms more difficult and, so, concealment easier. I argue size and complexity of a firm are reasonable stand-ins for size and

[23] The Whited and Wu Index is negative for most firms, so negative values closer to zero indicate more highly constrained firms that negative values farther from zero.

diversity of the stakeholder base.[24] To measure size and complexity, I use the natural logarithms of total assets, the number of operating segments, and the number of geographical segments.

Finally, I expect *extreme financial performance*, both strong and weak, increases incentives to commit misconduct. Managers of poorly performing firms may cheat stakeholders as they try to turnaround poor operating performance quickly. On the opposite end of the spectrum, firms with extremely high sales growth will likely see that growth revert to its mean (Nissim and Penman, 2001). If analysts expect growth to persist, managers have pronounced incentives to preserve that growth. To measure performance, I include return on assets, sales growth, and an extreme sales growth indicator.

3.2.3.2 Operational-misconduct propensity model and matching process

My first-stage PSM model is specified as follows:

$$INITIAL\_VIOLATE_{it} = \alpha_0 + \alpha_1 LOG\_MNGR\_ABLTY_{it-1} + \alpha_2 PAYOUT\_RATIO_{it-1} + \alpha_3 WHTD\_WU\_INDX_{it-1} + \alpha_4 LEVERAGE_{it-1} + \alpha_5 SIZE_{it-1} + \alpha_6 LOG\_OP\_SEG_{it-1} + \alpha_7 LOG\_GEO\_SEG_{it-1} + \alpha_8 ROA_{it-1} + \alpha_9 SALES\_GROWTH_{it-1} + \alpha_{10} XTRM\_SLS\_GRWTH_{it-1} + \sum_{1999}^{2011} \sigma_r YEAR_r + \sum \sigma_s INDUSTRY_s \quad \textbf{(2)}$$

LEVERAGE, *ROA*, *SALES_GROWTH*, and *SIZE* are defined above in Section 3.2.2. *LOG_MNGR_ABLTY* is based on the measure developed by Demerjian et al. (2012), increased by two and logged.[25] *PAYOUT_RATIO* is the ratio of the sum of preferred dividends, common

[24] Firm size and complexity are imperfect proxies given that they capture so much more than just the size and diversity of stakeholder base, such as operational efficiency, growth expectations, capital market incentives, etc. Unfortunately, I identify no feasible alternative proxies.

[25] This transformation makes the measure always positive and facilitates distributional symmetry, improving the convergence of my PSM model.

dividends, and share repurchases to total assets. *WHTD_WU_INDX* is a measure of financial constraint based on Whited and Wu (2006). It is a linear combination of cash flow, a dividend indicator variable, total long-term debt, the natural logarithm of total assets, 3-digit SIC industry sales growth, and sales growth.[26] *LOG_OP_SEG* and *LOG_GEO_SEG* are the natural logarithm of the number of segments collected from Compustat. *XTRM_ SLS_GRWTH* is an indicator equal to 1 if the firm is in the highest or lowest quintiles, zero otherwise. All variables except indicators and segment counts are winsorized at the 1% and 99% levels. I present descriptive statistics for the misconduct sample in Table 4, Panel A.

I estimate a Poisson regression based on my determinants model in (2). I choose to use a Poisson process to model the onset of misconduct activities as they are rare events. An early reference to the appropriateness of Poission processes in modeling rare events comes from Ladislaus von Bortkiewicz in his work *The Law of Small Numbers*,[27] where he famously applied the distribution to modeling Prussian cavalry horse-kick injuries. The Poisson distribution's suitability at modeling rare events arises from its skewness at low means. While logistic regression is more common in accounting research, its perfect symmetry leads to potentially significant downward bias in the propensities assigned to rare events, making it less well-suited for my setting. I base my estimation on all firm-years for which there is sufficient determinant variable data, without regard to the availability of data on any other variables to be used in later analyses. This regression provides a fitted value equal to the estimated probability that a firm begins engaging in misconduct in that year. Results of this procedure are presented in Table 4, Panel B.[28, 29]

[26] See Appendix B for *WHTD_WU_INDX* formula.
[27] *Das Gesetz der kleinen Zahlen* (1898).
[28] Inferences from my determinants model are unchanged when a logistic model is used.
[29] In Appendix C, I present an expanded first-stage PSM model with additional explanatory variables.

Note the adjusted R-square statistic is a relatively small 0.218, indicating that approximately 22% of the variation in misconduct inception is explained by the covariates. However, because the primary purpose of this procedure is to conduct matching, the ideal R-squared is not too large. As discussed in Shipman et al. (2017), extremely high explanatory power of the first-stage prediction model impedes the matching procedure by limiting the number of potential match observations with propensity scores comparable to those of treatment firms. This reduces the number of effective matches. Worse yet, it introduces selection bias into the sample based on the relative distributions of p-scores between the misconduct and potential matched control samples. Those p-scores for which the proportion of misconduct firms to potential match firms is particularly extreme (low or high) will be underrepresented in the sample carried forward to the second-stage regressions.

To further assess my chosen model, I conduct a Poisson deviance goodness-of-fit test. The deviance statistic (*D*) is distributed approximately Chi-squared with *n-p* degrees of freedom and is given by

$$D = 2\sum\left\{y_i \log\left(\frac{y_i}{\hat{\mu}_i}\right) - (y_i - \hat{\mu}_i)\right\}.$$

D measures the aggregate deviation of the *INITIAL_VIOLATE* (y_i) from the operational misconduct propensity score estimated by the Poisson model ($\hat{\mu}_i$), with smaller values relative to degrees of freedom indicating a better fit. My deviance statistic is 1199.7, which yields a p-score of 1.00 given 60,193 degrees of freedom, suggesting no significant evidence that my Poisson model is misspecified.

I use these propensity scores to conduct nearest-neighbor matching, requiring all matches fall within 0.05 of the misconduct firm. The 0.05 caliper is designed to 1) maximize the number

of violation firm-years effectively matched with a control firm-year and 2) minimize the distance between each violation firm-year's propensity score and its match firm-year. I evaluate the covariate balance between my misconduct and control samples for the firm-year end immediately preceding the inception of misconduct in Table 4, Panel C. Here I find no significant differences between the operational misconduct and PSM-control samples.

3.2.3.3 Propensity-score-matched second-stage regression analysis

I evaluate differences in my financial misrepresentation dependent variables between operational misconduct firms and control firms at the firm-year level *during* the operational misconduct period and present the results in both univariate and regression analyses. I run both pooled regressions and regressions partitioned cross-sectionally. The pooled regressions are based on the following equation, where the dependent variable (*DV*) is alternately 1) *DA*, 2) *ABSDA*, 3) *FSCORE1*, 4) *FSCORE2*, 5) *ICW*, 6) *ICWRR*, 7) *ICWFF*, and 8) *AAER*:

$$DV_t = \beta_0 + \beta_1 VIOLATE_{it} + \beta_2 ROA_{it} + \beta_3 SIZE_{it} + \beta_4 BTM_{it} + \beta_5 SALES\_GROWTH_{it} + \beta_6 LEVERAGE_{it} + \sum_{1999}^{2016} \beta_r YEAR_r + \sum \beta_s INDUSTRY_s \quad \textbf{(3)}$$

Cross-sectional regressions include the same variables as the pooled regression. Additionally, I include the variable of interest: an independent indicator variable capturing the cross-section (*PENALTY_HIGH_30*, *CRIMINAL*, *TRST_VLTN*, *SHROWN_TOT_50*), as well as interactions between the cross-sectional indicator and the control variables to allow coefficients to vary between cross-sections. The first two cross-sectional variables, *PENALTY_HIGH_30* and *CRIMINAL*, capture the egregiousness of a given instance of operational misconduct. I expect

financial misrepresentation to be more common and significant among firms engaged in egregious operational misconduct.

If behavioral consistency describes managerial behavior toward related-parties, I expect a positive association between *TRST_VLTN*, trust-violating operational misconduct (e.g., lying about product quality, endangering customer safety, financial misrepresentation), and financial misrepresentation. Further, I expect this positive association to be stronger than that between operational misconduct that does not violate the trust of related parties (e.g., excessively polluting, bribing foreign officials) and financial misrepresentation. This is consistent with prior literature that suggests both short window (Karpoff et al, 2008ii; Karpoff and Lott, 1993) and long window (Tibbs et al., 2011) returns are more negative for misconduct that negatively impacts related parties. For analyses based on *PENALTY_HIGH*_30, *CRIMINAL*, and *TRST_VLTN*, I omit the interaction between *VIOLATE* and the cross-sectional indicator as the interaction is identical to the cross-sectional indicator itself.

My final cross-sectional variable, *SHROWN_TOT_50*, is an indicator variable equal to one if the CEO's beneficial ownership in their firm is in the upper half of the distribution across a given operational misconduct and corresponding control sample, zero otherwise. With this variable, I consider the effects of good alignment between shareholder and manager incentives using CEO's total beneficial ownership in their firm as a proxy. Agency theory suggests CEO ownership of companies they manage encourages firm-value maximizing behavior on behalf of CEOs (Jensen and Meckling, 1976; Holmstrom, 1979; Grossman and Hart, 1983). Differences in the extent of incentive alignment during operational misconduct could mitigate potential financial misrepresentation that might otherwise occur during operational misconduct under the theory of behavioral consistency.

3.2.4. Entropy-balanced and three-factor-matched regression analysis

As a robustness check against the PSM analysis, I also adopt a second method that incorporates entropy balancing (EB) (Hainmueller, 2012; Hainmueller and Xu, 2013; McMullin and Schonberger, 2017). EB is a weighting procedure designed to create covariate balance between a treatment and control samples. This is also an objective of PSM. However, whereas PSM retains only a small subset of potential control firms, EB weights each potential control observation with a scaler between zero and one such that the specified moments (in my case, the first and second) of each covariate's control-sample distribution are approximately equal to that of the covariate's misconduct-sample distribution. All members of the misconduct sample are weighted by one. One advantage of EB over traditional PSM is increased power. In the PSM specification, I retain only 114 control firms into the second-stage regressions. In EB, I retain all firm-years with sufficient data and a non-zero weight. Another advantage of EB is the loosening of common support restrictions on the inferences derived from tests.

My application of EB differs from that of Hainmueller (2011) and McMullin and Schonberger (2017). These studies generate their EB weights using the same set of observations to which those weights are applied. Instead, I generate my EB weights using the sample from the first-stage of my PSM procedure, in which the only misconduct firm-year retained for each misconduct event is the initial one. I average the resulting weights by firm and apply these weights to the sample in the second-stage regression, where I regress the financial misrepresentation dependent variables on *VIOLATE*. The second-stage misconduct firm-years include all those for which *VIOLATE* equals one, i.e., periods during which misconduct activities were ongoing.

I use a modified version of the PSM regressions in the EB tests. My objective is to mimic the design choices in the PSM procedure. Accordingly, I use the same set of control variables for both the first-stage PSM model and the EB weighting procedure. Hence, (2) gives the entropy-balanced weighting model, applied only to the first year of operational misconduct activities for each firm. Similarly, (3) gives the second-stage regression to which those entropy balanced weights are applied.

I also perform a third matching algorithm based on just three factors: industry, year, and market value of equity (IYM). This provides another robustness check against my PSM analysis using a simplified model. Industry and year are defined identically to the fixed effects used in the first two models. However, instead of using total assets to proxy for size, I use market value because market value will capture not only firm size and complexity, but other dimensions of my propensity model such as financial constraint and performance. To evaluate this inference, I run simple regressions of *INITIAL_VIOLATE* on 1) *SIZE* and 2) the natural logarithm of the market value of equity. As expected, I find R-squared values of 0.166 and .0128 for *SIZE* and the natural logarithm of market value of equity, respectively. The second-stage regression for the three-factor matching method follows (3).

4 Results

4.1 Ordinary least squares

I begin by discussing the results of my OLS analysis presented in Table 3. I find four of eight regressions yield a significant coefficient on *VIOLATE*. In each of these cases, the coefficient is positive, suggesting that firms engaged in operational misconduct against non-shareholders are likely to also misrepresent financial reports to shareholders. In particular three ex ante measures (*DA*, coefficient 0.027, T-statistic 2.98; *FSCORE1*, 0.143, 2.99; *FSCORE2*,

0.146, 2.79) and one ex post measure (*AAER*, 0.016, 1.98) are significantly predicted by ongoing operational misconduct.

This finding is consistent with the theory of behavioral consistency. However, as I mention earlier, more than one of the squared control variables in each regression are significant. This suggests important non-linarites in the relation between financial misrepresentation and its control variables. In drawing valid inferences from an OLS analysis of such a relation, I must accurately specify that relation's particular, non-linear functional form. Since these functional forms are unknown, the reliability of my OLS inferences is dubious. Accordingly, I continue my analysis using PSM, which does not require specification of a precise functional form.

4.2 Determinants of corporate misconduct and propensity-score matching

In Table 4, Panel A, I describe the 114 observations of my sample that survive the first-stage of my PSM analysis, i.e., the determinants model. I provide estimation results for that model in Panel B. Several determinant coefficients are significant: *LOG_MNGR_ABLTY*, *SIZE*, *LOG_OP_SEG*, and *ROA*. The coefficient on *LOG_MNGR_ABLTY* is positive (coefficient 4.097, t-statistic 3.11), suggesting that high ability managers are more likely to engage in operational misconduct. This finding is interesting because it suggests manager traits are an important determinant of detected operational misconduct.[30] The only other coefficient that is significant in the predicted direction is *SIZE* (coefficient 0.798, t-statistic 4.24), suggesting larger firms are more likely to engage in operational misconduct. However, I cannot rule out the possibility that this is an artifact of my selection procedure that emphasized large penalty

[30] Of course, this does not rule out the possibility that firm culture, business model, strategic position, or board preferences are also an important determinant in operational misconduct. Nor does it speak to whether these features play a role in the selection of a manager inclined or able to initiate or manage the firm during operational misconduct.

violations. It is also possible that small firms are engaged in operational misconduct that goes undetected due to their comparatively low political visibility.

Two more coefficients are also significant but not in the predicted direction: *LOG_OP_SEG* (coefficient -0.242, t-statistic -2.29) and *ROA* (coefficient 2.222, t-statistic 2.18). Recall my prediction was that firms with incentives to commit operational misconduct increase with the size and diversity of stakeholder bases. I used number of operating segments as a proxy for size and diversity of stakeholder bases. While my finding that firms with fewer operating segments is contrary to my stakeholder-centric prediction, it is consistent with another, CEO-centric explanation. That is, if a firm has a small number of operating segments, the number of executives are aware of or complicit I operational misconduct could be smaller compared to firms with a large number of operating segments. Further, that smaller group of managers is likely to be subject to higher levels of direct-CEO supervision. This scenario facilitates the CEO's locus of control, i.e., his sense that he has control over the factors that will determine successful execution and concealment of an operational misconduct project, encouraging him to engage in operational misconduct.

Surprisingly, firms with above average return on assets are more likely to begin engaging in operational misconduct. This finding is consistent with two alternative explanations. First, my operational misconduct beginning dates are likely too late on average. I draw these dates from settlement statements issued by regulatory agencies. These documents may only disclose dates of misconduct for which those agencies have been able to accumulate extensive evidence of misconduct. If so, true periods of misconduct may begin prior to my analyses' beginning misconduct dates, meaning that misconduct benefits may already be inflating profits in the year for which *INITIAL_VIOLATE* is equal to one. Second, managers of firms with a long-running

string of abnormally strong performance may feel pressure to maintain that performance, leading to the decision to pursue operational misconduct projects. I believe the insignificantly negative coefficient on *SALES_GROWTH* makes the second explanation somewhat more likely.

Table 4, Panel C presents comparative descriptive statistics for match variables between my treated sample and resulting match sample. I find no evidence that covariates differ significantly between the samples at the 10% level. This allows me to avoid an ad hoc procedure to balance the covariates by dropping matched pairs. Matched variables insignificantly different between treatment and control groups is most commonly achieved in PSM when explanatory power of the first-stage regression is not high, such as my first-stage R-squared of 0.218 presented in Table 4, Panel B.

4.3 Second-stage analyses

4.3.1 Univariate results

4.3.1.1 Pooled analysis

I first present univariate second-stage analyses for both pooled and cross-sectional analyses. In these analyses, I test proxies for financial misrepresentation between operations misconduct and control firms-years during the period of ongoing operations misconduct. In Table 5, Panel A, I examine the results generated by the PSM algorithm. The results indicate that financial misrepresentation is greater among operational misconduct firm-years compared to the PSM-control firm-years. Specifically, both means and medians suggest *DA*, *FSCORE1*, *FSCORE2* are all greater among operations misconduct firm-years than among PSM-control firm years at a significance level of 0.10. Similarly, both mean and median analyses suggest *ICWRR* and *AAER* are all more common among operations misconduct firm-years than among PSM-

control firm-years. However, only the mean (not median) analysis implies *ICWFF* is greater among operational misconduct firm-years.

Turning to Table 5, Panel B, the univariate analyses comparing operations misconduct firm-years to the IYM-control firm-years suggest a similar relation between operational misconduct and financial misrepresentation. Here both means and medians for *DA*, *FSCORE1*, and *FSCORE2* are greater among operations misconduct firms than IYM-control firm-years. However, only the comparative medians for *AAER* suggest they are more common among operations misconduct firms than IYM-control firm-years. Unlike the PSM univariate analysis, none of the univariate analyses of *ICWRR* and *ICWFF* imply a significant difference between operations misconduct firm-years and IYM-control firm-years. The IYM results are mostly consistent with the PSM results; none are contradictory.

4.3.1.2 Cross-sectional analysis

Before discussing the pooled, multivariate analyses, I move ahead to cross-sectional univariate analyses in Table 7. This table presents financial misrepresentation proxies for only those 114 operations misconduct events effectively matched by my PSM algorithm. In Panels A and B, I present the univariate results comparing the financial misrepresentation between high egregiousness and low egregiousness operational misconduct firm-years. In Panel A, I examine high versus low penalty (as captured by *PENALTY_HIGH_30*) operational misconduct firm-years. Here, I find financial misrepresentation is more pronounced among high-penalty firm-years. Specifically, *FSCORE1*, *FSCORE2*, and *ICW* are all greater among high-penalty firm-years compared to low-penalty firm-years based on both the mean and the median analyses. However, *DA* is greater based on the median, but not the mean. In Panel B, I proxy for egregiousness using *CRIMINAL* and find similar results. In particular, *ABSDA*, *ICW*, *ICWRR*,

ICWFF, and *AAER* all suggest that both the mean and the median financial misrepresentation is greater among criminal operations misconduct firm-years compared to non-criminal operations misconduct firm-years. However, contrary to expectations, median *DA* is greater among non-criminal operations misconduct firm-years compared to criminal operations misconduct firm-years.

I present univariate results for the *TRST_VLTN* cross-section in Table 7, Panel C. Many of these are contrary to my prediction based on behavioral consistency. In particular, considering both the mean and the median, *ICW*, *ICWRR*, and *AAER* are significantly more common among non-trust-violating operations misconduct firm-years than among trust-violating operations misconduct firm-years. However, supporting my behavioral consistency prediction, both mean and median analysis of *ABSDA* suggest that trust-violating operations misconduct firm-years are characterized by larger unsigned discretionary accruals than non-trust-violating operations misconduct firm-years.

Finally, in Table 7, Panel D, I present univariate analyses of financial misrepresentation between the operational misconduct firms with managers that have high and low beneficial ownership in their firms (*SHROWN_TOT_50*). Results in Panel D provide little evidence that the level of beneficial ownership by CEOs is an important factor in moderating the relationship between operational misconduct and financial misrepresentation. The only exception is median *FSCORE2*, which implies that *FSCORE2* is greater for operational misconduct firm-years with low levels of CEO beneficial ownership compared to operational misconduct firm-years with high levels of beneficial ownership at a significance level of 0.10.

Altogether, Table 7 presents evidence that firms engaged in more egregious operational misconduct are also engaged in greater levels of financial misrepresentation (Panels A & B).

However, contrary to prediction, Table 7 suggests firms engaged operations misconduct that violates the trust of related parties (i.e., customers in the case of operational misconduct firms surviving the PSM algorithms) have lower levels of financial misrepresentation compared to firms engaged in non-trust-violating financial misrepresentation (Panel C). Finally, I find little evidence in Table 7, Panel D that CEO beneficial ownership is an important determinant of financial misrepresentation among operational misconduct firms.

4.3.2 Regression results

4.3.2.1 Pooled analysis

I now turn to my multivariate regression results, controlling for commonly accepted determinants of financial misrepresentation. In Table 6, I examine pooled regression results. Panel A displays the analyses based on the PSM samples. Here, my univariate results from Table 5, Panel A are supported for all six significant variables (i.e., *DA*, *FSCORE1*, *FSCORE2*, *ICWRR*, *ICWFF*, and *AAER*). In Table 6, Panel A the coefficient on *VIOLATE* is significantly positive for each of these multivariate, cross-sectional regressions. In summary, PSM results reinforce the inferences from the OLS test that *DA*, *FSCORE1*, *FSCORE2*, and *AAER*s tend to be higher (more common) among operational misconduct firm-years. Additionally, PSM results imply certain kinds of internal control weaknesses are also more common.

In Table 6, Panel B, I examine the EB regression results. Recall, I have no corresponding univariate results for these analyses and entropy-balancing is conducted independently for each EB regression. Here, again, I find some support for the idea that financial misrepresentation is greater among operational misconduct firms than the EB-weighted control firms. However, only three of the eight *VIOLATE* coefficients are significantly positive. Specifically, *VIOLATE* significantly predicts *FSCORE1*, *ICW*, and *AAER*.

Moving to Table 6, Panel C, I inspect the regression tests comparing operational misconduct firm-years to IYM-control firm-years. Consistent with corresponding univariate results in Table 5, Panel B, I observe significantly positive coefficients on *VIOLATE* for each of three regressions using *DA*, *FSCORE1*, and *FSCORE2* as a dependent variable. However, the significant univariate difference in AAER median in Table 5, Panel B attenuates after applying controls in Table 6, Panel C. Additionally, despite no corresponding, significant univariate differences, the *VIOLATE* coefficients in the *ABSDA* and *ICWFF* regressions are significant after applying controls. In particular, the *VIOLATE* coefficient in the *ABSDA* regression is significantly negative, contrary to prediction, and the *VIOLATE* coefficient in the *ICWFF* regression is significantly positive, consistent with prediction. Overall, these pooled multivariate results support the corresponding univariate results and the prediction of behavioral consistency that firms engaged in operations misconduct are also likely to issue misrepresented financial reports to shareholders.

4.3.2.2 Cross-sectional analysis

Finally, I consider cross-sectional regression results presented in Table 8. First, I examine the analysis based on penalty-amount in Panel A. Here, consistent with Table 7, Panel A, the coefficients on *PENALTY_HIGH_30* are significantly positive in the *FSCORE1* and *FSCORE2* regressions when including PSM-control firms, suggesting high-penalty operational misconduct firm-years are significantly more likely to materially misstate financial reports than those characterized by low-penalty operational misconduct. However, this inference is not supported by either of the robustness analyses using EB regression or IYM-control firms. Unlike the univariate analyses, after controlling for financial misrepresentation determinants, *AAER* is significantly greater among high-penalty operational misconduct firms. This finding is supported

by results from all three control methods (PSM, EB, and IYM). I also find some evidence *ICWRR* is more commonly identified among high-penalty firm-years using IYM-control firm-years, consistent with prediction. Though, contrary to prediction, *DA* is high among low-penalty firms in the EB results. Overall, results I present in Table 8, Panel A are consistent with more financial misrepresentation among high-penalty operational misconduct firm-years compared to low-penalty firm-years.

I present *CRIMINAL* cross-sectional results in Table 8, Panel B. Recall in Table 7, Panel B, five of the eight measures of financial misrepresentation were significantly greater for criminal operational misconduct firm-years compared to non-criminal firm-years. Surprisingly, none of the coefficients on *CRIMINAL* in Table 8, Panel B are significantly positive, calling into question the inference that criminal operational misconduct firm-years are significantly more likely to misrepresent financial reports compared to non-criminal firms. However, consistent with my expectation, both robustness analyses (EB and IYM) indicate *ICW* and *AAER* are significantly greater among criminal operational misconduct firms. Further, the IYM analysis implies *ICWRR* is significantly greater among criminal firm-years. To summarize, my primary PSM results are insignificant; only the robustness analyses provide evidence that criminal misconduct firms have greater levels of financial manipulation than non-criminal misconduct firms.

In Table 8, Panel C, I report the multivariate regression results using the *TRST_VLTN* cross-section. Here, using PSM-control firm-years, I find all four ex post measures of financial misrepresentation are *lower* for firm-years characterized by operational misconduct violating the trust of related-parties compared to firm-years with operational misconduct that does *not* violate related-party trust. This is generally consistent with the univariate results in Table 7, Panel C, in

which three of four ex post measures of financial misrepresentation are greater for trust-violating operational misconduct firm-years. This is contrary to my prediction that behavioral consistency with respect to relationships with related parties would lead managers to behave similarly toward shareholders and non-shareholder related parties. Instead, this pattern of results implies my inference that financial misrepresentation is more common among operational misconduct firms is driven by non-trust-violating operational misconduct firm-years.

With respect to ex ante measures in Table 8, Panel C, none appear significantly different between trust-violating and non-trust-violating firm-years when using PSM-control firms. Further, in the EB regression using ABSDA as a dependent variable, the coefficient on TRST_VLTN is negative. However, four of eight tests in the robustness analyses are significant in the predicted direction. Overall, results in Panel C are not supportive of my prediction based on behavioral consistency. Though, the findings related to my ex post measures using PSM-control firms provide some evidence of an interesting nuance to my main, pooled results, i.e., that managers sometimes trade-off misconduct against shareholders and non-shareholder related parties. Finally, in Table 8, Panel D, I find no significant evidence that levels CEO beneficial ownership either encourages or protects against financial misrepresentation at firms engaged in operational misconduct. This is generally consistent with the univariate analyses in Table 6, Panel D.

To summarize these findings, I tabulate all coefficients of interest from my multivariate analyses, both pooled and cross-sectional, in Appendix D. In total, I find significant evidence that financial misrepresentation is more common among firms engaged in operational misconduct (Table 6). Further, it appears that this phenomenon is most pronounced among firms engaged in the most egregious forms of operational misconduct (Table 8, Panels A & B).

However, evidence of whether financial misrepresentation is more common among trust-violating or non-trust violating operations misconduct firms is mixed (Table 8, Panel C). Surprisingly, I find evidence that ex post measures of financial misconduct are better among firms engaged in trust-violating operations misconduct, as well as some evidence than ex ante measures are better for those engaged in non-trust-violating operations misconduct.

4.4 Additional analysis – CEO turnover

In this section, I evaluate CEO turnover at operational misconduct firms. If operational misconduct firms' boards of directors lack scienter and view operational misconduct as overall harmful to shareholders, discovery of operational misconduct could lead to abnormally high CEO turnover. One complication in testing this difference is knowing 1) when the board learns of misconduct and 2) how long following discovery will the board view it as optimal to remove the CEO. I reason that in many cases, public discovery will lead to cessation of misconduct activities. However, in cases for which regulator settlement statements disclose the misconduct to the public, removal of the CEO may not occur until sometime following the settlement statement. Therefore, I examine CEO turnover within the window between the violation end date noted in the settlement statement through two years following the record date of the settlement statement. Unfortunately, this period can be long, on average about 3.3 years, sometimes nearly a decade. Accordingly, I caveat these results by acknowledging this long window likely leads to an overstatement of CEO turnover resulting from operational misconduct. Examining all 187 pre-OLS misconduct events I find 76 have CEO turnover data. 55.3% of these 76 operational misconduct firms have CEO turnover within the window stretching from the cessation of misconduct activities to two years following the settlement statement.

I also compare operational misconduct firms to PSM control firms. I require CEO turnover data availability on both the operational misconduct and PSM control firms. For this test, I retain 34 firm-level pairs. Operational misconduct (PSM control) firms have CEO turnover in 44.12% (38.24%) of the cases (t-statistic -0.49). This result suggests little difference CEO turnover and is consistent with the board viewing operational misconduct against non-shareholder related parties as not especially pernicious to shareholder interests. This result is similar to that of Agrawal et. al. (1999) who generate little evidence of CEO turnover among firms identified in the Wall Street Journal as engaging in fraud.[31] Further, my CEO turnover statistics are comparable to those of Connor and Lande (2012), who find approximately half of executives convicted of price-fixing retain their position. As noted earlier, this is favorable to the evidence in Karpoff et al. (2008i) that only 7% of CEOs retain their position after being identified as responsible for financial misrepresentation.

5 Conclusion

In this study I examine the relation between misconduct against shareholders by financial misrepresentation and operational misconduct against non-shareholders. I begin by analyzing the determinants of misconduct against non-shareholders. One contribution of my study is the evidence I provide about the determinants of operational misconduct. This evidence suggests identified misconduct firms tend to be large, profitable, and led by high-ability managers. This is consistent with my expectation that large firms with high ability managers have an increased ability to successfully conceal misconduct.[32] However, contrary to prediction, operational misconduct firms are highly profitable in the year prior to the onset of misconduct activities,

[31] Agrawal (1999) use a sample that contains fraud events that would be categorized as either operational misconduct or financial misrepresentation in my study.
[32] However, the finding that misconduct firms tend to be large could result from selection bias generated from the increased visibility of large firms.

suggesting operational misconduct is generally not a tactic to address poor performance. Also contrary to prediction, operational misconduct firms tend to have fewer operating segments. This is inconsistent with a stakeholder-centric argument that large, diverse stakeholder bases facilitate concealment of operational misconduct. However, it is consistent with a manager-centric, alternative explanation that the managers with a high locus of control tend to engage in operational misconduct more frequently.

Using my sample of firms with misconduct activities spanning years between 1983 and 2016, I find evidence consistent with the notion that during times when firms are engaged in corporate misconduct, they are significantly more prone to misrepresent financial information in external reports. This is supported by both univariate and multivariate analyses and is consistent with the idea that instances of misconduct are often part of a larger pattern of misconduct that manifests through multiple channels.

I then conduct several analyses of the operational misconduct period based on four cross-sectional variables: *PENALTY_HIGH_30*, *CRIMINAL*, *TRST_VLTN*, and *SHROWN_TOT_50*. In the penalty-amount and criminality analyses, I find evidence generally consistent with the idea that financial misrepresentation is more common or severe for firms engaged in more egregious forms of misconduct. This is consistent with my expectation. I find little evidence that high levels of CEO beneficial ownership encourage good reporting either among firms generally or specifically among those firms engaged in operational misconduct. However, the CEO beneficial ownership analysis results could be limited by the low power imposed by Execucomp data restrictions.

Finally, contrary to expectation, I find that operational misconduct against consumers is associated with lower ex post measures of financial misrepresentation. This finding could arise

from two conditions. First, operational misconduct against related parties may alleviate incentives for financial misrepresentation to achieve important benchmarks. Second, a third factor, such as governance (e.g., incentive compensation, close relationships with board members, highly effective audit committee, etc.), could limit opportunities to misrepresent financials. These limited opportunities could encourage misconduct against other related parties. This conjecture is consistent with the result of my additional analysis that CEO turnover is not significantly more common among operational misconduct firms compared to controls. However, I do not have an explanation about why misconduct against the general public or the government might not also be an acceptable substitute for financial misreporting.

Inferences from the results of this study could be limited by several issues. First, my PSM and IYM samples are small (between 100 and 150 matched pairs), limiting the power of my tests, especially those designed to evaluate cross-sectional differences. Second, certain elements of my setting and design bias against the finding of results. These include the possibility that matched firms are also engaged in misconduct that never becomes public. Also, my determinants model for operational misconduct shares variables with well-accepted determinants of financial reporting. This model may inadvertently control away some of the differences in financial misrepresentation in the second-stage analyses. Third, my F-score variables may be sensitive not just to financial misrepresentation but also operational misconduct, biasing upward F-score estimates of the probability of financial misrepresentation among operational misconduct firms. This possibility is consistent with my trust-violation cross-sectional results in which F-score and ex post measures of financial misrepresentation (*ICW*s, *ICWRR*s, *ICWFF*s, and *AAER*s) are sometimes oppositely signed. This casts some doubt on the inferences I draw from F-score analyses in this study.

Additionally, another caveat is offered by literature suggesting earnings management to smooth earnings can be informative (Badertscher et al., 2012; Subramanyam, 1996; Tucker and Zarowin, 2006). In such a scenario, financial misrepresentation isn't misconduct against shareholders at all. While it is unlikely that inflated earnings is predictive of cash flows following the unwinding of the misconduct activities in my sample, managers could be attempting to inform shareholders of future results under the assumption that misconduct activities will go undiscovered. My finding of upward earnings management among misconduct firms, then, could be evidence of managers' efforts to inform shareholders about their expectations of abnormally positive results. I do not attempt to rule out this explanation. Finally, I do not attempt to identify the relative importance of manager psychology and firm culture in the manifestation of corporate misconduct in this study. I consider this an important question to address in future research.

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Figure 1

Venn diagram for subcategories of corporate misconduct

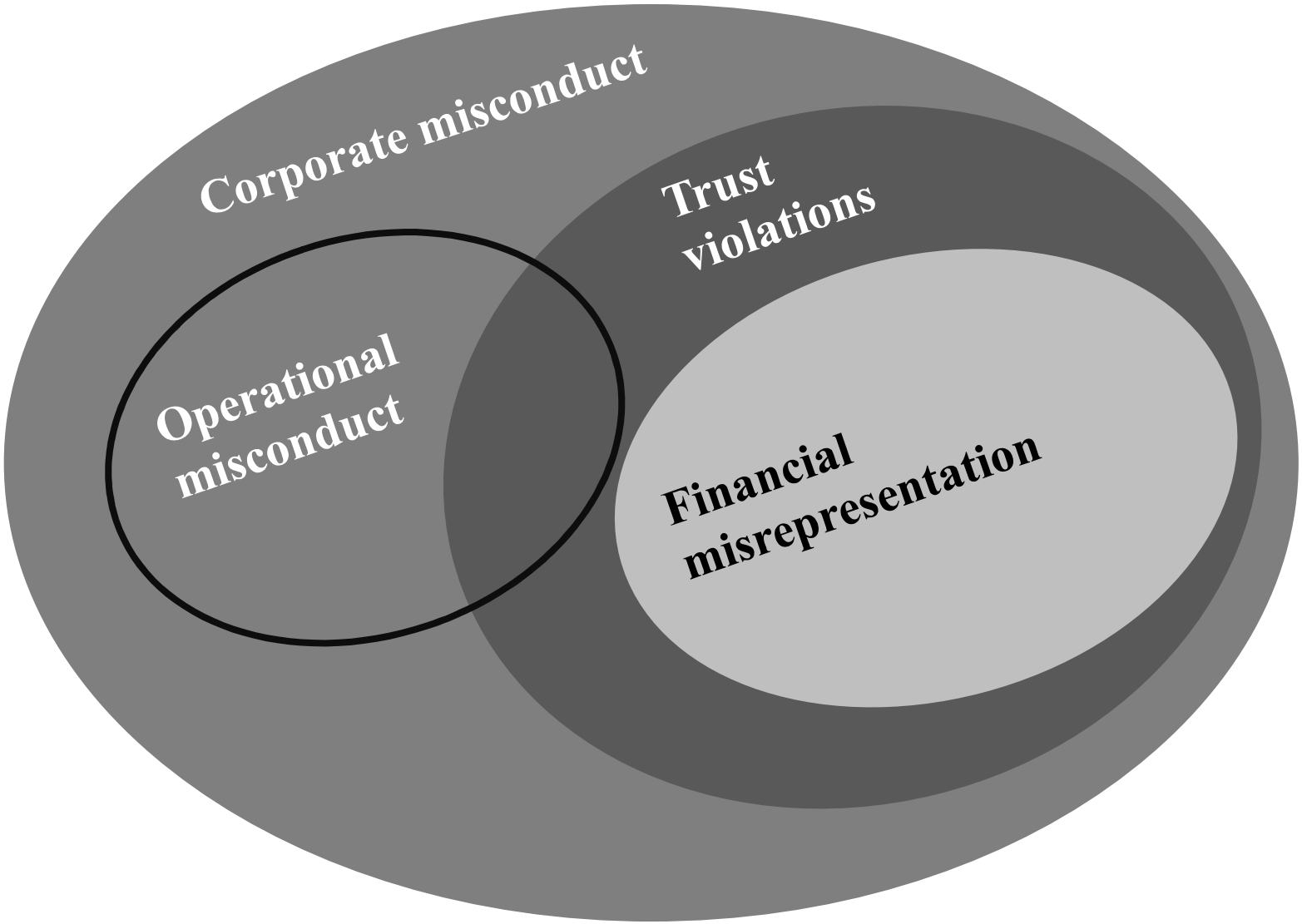

Figure 2

Timeline of misconduct, news, and recovery

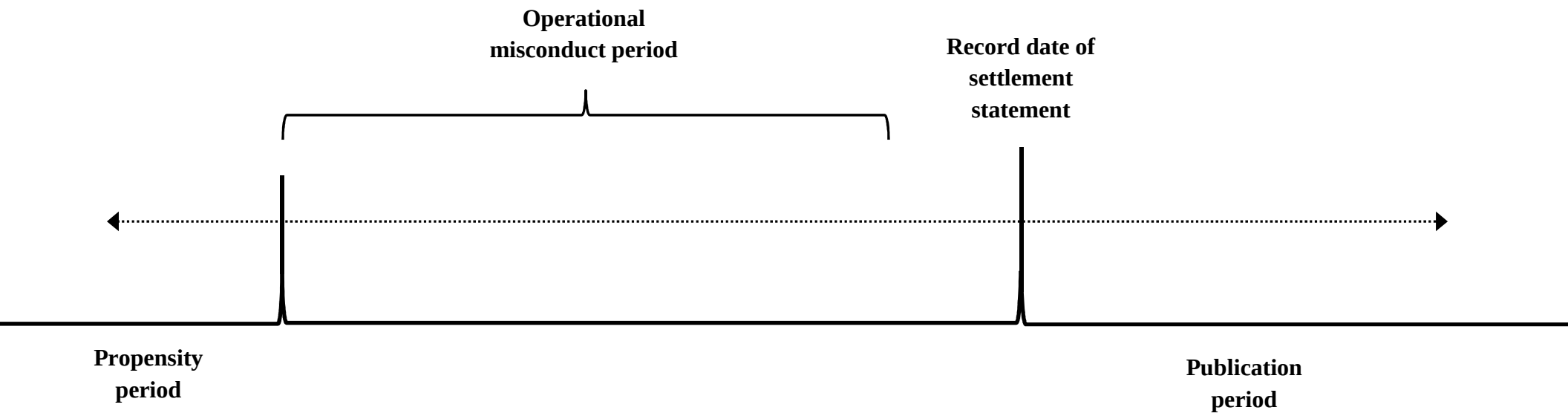

TABLE 1

Panel A: Operational misconduct sample attrition by settlement date

	2016	2015	2014	2013	2012	2011	2010	Removed	Total
Collected from Violation Tracker	86	442	259	245	231	207	159		1,629
Unable to match to Compustat gvkey	(38)	(229)	(99)	(90)	(114)	(106)	(58)	(734)	895
Unable to identify period of misconduct activites	(14)	(100)	(70)	(78)	(49)	(59)	(46)	(416)	479
No Compustat observation with total assets for matching year	(3)	(15)	(11)	(9)	(5)	(2)	(7)	(52)	427
No CRSP permno available	(4)	(13)	(9)	(9)	(7)	(1)	(9)	(52)	375
Keep only largest penalty misconduct event for a given firm	(15)	(41)	(40)	(30)	(34)	(16)	(12)	(188)	187
Data unavailable on OLS explanatory variable(s)		(2)		(1)	(3)		(1)	(7)	180
Unable to match based on propensity score (data availablity or off-support)	(4)	(16)	(9)	(12)	(8)	(10)	(7)	(66)	114
Misconduct observations retained in propensity-score matching	8	26	21	16	11	13	19		114

Table 1, Panel A provides operational misconduct sample attrition by settlement date with the enforcing agency. My operations misconduct sample comprises 187 operations misconduct events after retaining only the largest penalty misconduct event for each firm. 180 (114) firm events remain following the OLS (PSM) procedure. Violation Tracker (VT) is the basis of this sample. VT begins in 2010 and contains regulatory and legal filings by 43 federal regulatory agencies against companies both public and private, as well as domestic and international. During the sample period (2010-2017), Violation Tracker contains referenences to 161,684 federal cases against businesses. I attempt to identify gvkeys for the 1,629 misconduct events involving the largest penalty amount. This includes all misconduct events penalized by $2,200,000 or more.

TABLE 1

Panel B: Distribution of misconduct by start date

	OLS		PSM	
Year	Count	Percentage	Count	Percentage
1983	1	0.6%		
1984	1	0.6%		
1985	1	0.6%		
1988	1	0.6%		
1994	1	0.6%		
1996	2	1.1%		
1997	1	0.6%		
1998	4	2.2%		
1999	5	2.8%	3	2.6%
2000	8	4.4%	5	4.4%
2001	11	6.1%	8	7.0%
2002	16	8.9%	14	12.3%
2003	16	8.9%	11	9.6%
2004	18	10.0%	15	13.2%
2005	20	11.1%	14	12.3%
2006	22	12.2%	14	12.3%
2007	13	7.2%	8	7.0%
2008	12	6.7%	9	7.9%
2009	11	6.1%	7	6.1%
2010	8	4.4%	3	2.6%
2011	3	1.7%	2	1.8%
2012	5	2.8%	1	0.9%
Total	180	100.0%	114	100.0%

Panel C: Distribution of sampled penalty amounts

	OLS	PSM
Mean	$ 174,642,788	$ 73,863,337
Max	9,300,000,000	1,200,000,000
Q3	67,324,000	44,300,000
Median	28,099,367	18,500,000
Q1	7,750,000	5,858,165
Min	2,231,250	2,290,000

Table 1, Panel B displays the relative frequency of beginning years of violation activity for the 180 (114) surviving the OLS (PSM) prcedures. Panel C describes the distribution of penalty amounts.

TABLE 2
Panel A: Distribution of OLS operational misconduct sample by violation type and industry

	Trust violation						
	Anti-Competitive Practices	Abusive Billing or Collection Practices	Consumer Safety	Illegal or Misleading Promotion	**Non-trust violation**	Number	Percentage
Firms Grouped by 2-digit SIC Code:							
10 Metal Mining					1	1	1%
12 Coal Mining					1	1	1%
13 Oil and Gas Extraction					5	5	3%
20 Food and Kindred Products					5	5	3%
28 Chemicals and Allied Products	6			15	6	27	15%
29 Petroleum Refining and Related Industries					2	2	1%
32 Stone, Clay, Glass, and Concrete Products					1	1	1%
33 Primary Metal Industries	1				2	3	2%
34 Fabricated Metal Products	1				1	2	1%
35 Industrial and Commercial Machinery and Computer Equipment	1				3	4	2%
36 Electronic & Other Electrical Equipment & Components	3				5	8	4%
37 Transportation Equipment	1		4		3	8	4%
38 Measuring, Photographic, Medical, & Optical Goods, & Clocks			2	2	9	13	7%
42 Motor Freight Transportation					2	2	1%
44 Water Transportation					1	1	1%
45 Transportation by Air	2					2	1%
47 Transportation Services	1					1	1%
48 Communications		2	1	1	2	6	3%
49 Electric, Gas and Sanitary Services	1				1	2	1%
50 Wholesale Trade - Durable Goods					1	1	1%
51 Wholesale Trade - Nondurable Goods	1				4	5	3%
52 Building Materials, Hardware, Garden Supplies and Mobile Homes					1	1	1%
53 General Merchandise Stores					1	1	1%
55 Automotive Dealers and Gasoline Service Stations					2	2	1%
56 Apparel and Accessory Stores			1			1	1%
59 Miscellaneous Retail		2			3	5	3%
60 Depository Institutions	5	3		8	12	28	16%
61 Nondepository Credit Institutions	1	4		1		6	3%
62 Holding and Other Investment Offices				8		8	4%
63 Insurance Carriers		1			3	4	2%
67 Holding and Other Investment Offices		1				1	1%
73 Business Services	1	1		2	4	8	4%
79 Amusement and Recreation Services					1	1	1%
80 Justice, Public Order and Safety	3				7	10	6%
82 Educational Services				1		1	1%
87 Engineering, Accounting, Research, and Management Services					1	1	1%
99 Nonclassifiable Establishments	1				1	2	1%
	29	14	8	38	91	180	100%
	16%	8%	4%	21%	51%		

Table 2 provides a two dimensional distribution of 114 operations misconduct events effectively matched by the PSM procedure. Events are arranged by misconduct type, grouped by misconduct's violation of trust, and industry, captured using two-digit SIC code. Violation are grouped into 6 types that encompass all observations in the treated sample.

TABLE 2

Panel B: Distribution of PSM operational misconduct sample by violation type and industry

	Trust violation						
	Anti-Competitive Practices	Abusive Billing or Collection Practices	Consumer Safety	Illegal or Misleading Promotion	**Non-trust violation**	Number	Percentage
Firms Grouped by 2-digit SIC Code:							
10 Metal Mining					1	1	1%
12 Coal Mining					1	1	1%
13 Oil and Gas Extraction					6	6	5%
20 Food and Kindred Products			1		5	6	5%
28 Chemicals and Allied Products	6			8	4	18	16%
29 Petroleum Refining and Related Industries					1	1	1%
32 Stone, Clay, Glass, and Concrete Products					1	1	1%
33 Primary Metal Industries	1				2	3	3%
34 Fabricated Metal Products	1				2	3	3%
35 Industrial and Commercial Machinery and Computer Equipment	1				4	5	4%
36 Electronic & Other Electrical Equipment & Components	3				4	7	6%
37 Transportation Equipment	1		4			5	4%
Optical Goods, & Clocks			2	2	8	12	11%
Optical Goods, & Clocks							
42 Motor Freight Transportation					2	2	2%
44 Water Transportation					1	1	1%
45 Transportation by Air	2					2	2%
47 Transportation Services	1					1	1%
48 Communications		2		1	2	5	4%
50 Wholesale Trade - Durable Goods					1	1	1%
51 Wholesale Trade - Nondurable Goods	1				3	4	4%
Supplies & Mobile Homes					1	1	1%
Supplies and Mobile Homes							
53 General Merchandise Stores					1	1	1%
55 Automotive Dealers and Gasoline Service Stations					2	2	2%
56 Apparel and Accessory Stores			1			1	1%
59 Miscellaneous Retail		2			3	5	4%
73 Business Services		1		1	5	7	6%
79 Amusement and Recreation Services					1	1	1%
80 Justice, Public Order and Safety	3				6	9	8%
82 Educational Services				1		1	1%
Management Services					1	1	1%
	20	5	8	13	68	114	100%
	18%	4%	7%	11%	60%		

Table 2 provides a two dimensional distribution of 114 operations misconduct events effectively matched by the PSM procedure. Events are arranged by misconduct type, grouped by misconduct's violation of trust, and industry, captured using two-digit SIC code. Violation are grouped into 6 types that encompass all observations in the treated sample.

TABLE 3

Ordinary least squares regression of financial misrepresentation on operational misconduct

	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
VIOLATE	0.027***	-0.011	0.143***	0.146***	0.008	0.002	0.003	0.016**
	(2.98)	(-0.53)	(2.99)	(2.79)	(0.61)	(0.34)	(1.40)	(1.98)
ROA	-0.039**	-0.095***	-0.282***	-0.399***	-0.044***	-0.005*	-0.001**	0.000
	(-2.06)	(-5.19)	(-3.81)	(-5.06)	(-5.98)	(-1.77)	(-2.30)	(0.82)
ROA_SQ	-0.002	0.001	-0.003	-0.003	-0.001***	-0.000*	-0.000**	0.000
	(-1.60)	(0.69)	(-0.74)	(-1.03)	(-4.18)	(-1.79)	(-2.11)	(0.73)
SIZE	-0.005	-0.031***	0.027**	0.060***	-0.060***	0.002	0.000	0.001
	(-0.87)	(-5.77)	(2.24)	(3.44)	(-10.53)	(1.41)	(0.54)	(1.47)
SIZE_SQ	0.000	0.001***	-0.001	-0.003**	0.003***	-0.000***	-0.000	0.000
	(0.89)	(3.06)	(-0.97)	(-2.48)	(8.42)	(-3.29)	(-0.15)	(0.58)
BTM	-0.004	-0.010	-0.106***	-0.119***	0.046***	0.007***	0.000	-0.002***
	(-0.49)	(-1.38)	(-4.27)	(-4.84)	(9.21)	(2.97)	(1.12)	(-3.56)
BTM_SQ	0.001	0.002	0.009***	0.011***	-0.002**	-0.001**	-0.000	0.000***
	(0.59)	(1.49)	(2.64)	(3.04)	(-2.06)	(-2.45)	(-0.70)	(2.66)
SALES_GROWTH	0.039***	0.039***	1.109***	1.048***	0.020***	0.004*	-0.000	0.003***
	(2.77)	(7.27)	(22.57)	(20.71)	(3.64)	(1.86)	(-0.20)	(6.51)
SALES_GROWTH_SQ	-0.004***	-0.002***	-0.024***	-0.038***	-0.001	-0.001	0.000	-0.000***
	(-2.94)	(-3.15)	(-4.02)	(-7.69)	(-0.72)	(-1.56)	(0.46)	(-5.10)
LEVERAGE	-0.015	-0.035**	0.721***	0.682***	0.024*	-0.009	-0.002	0.004
	(-0.49)	(-2.12)	(8.22)	(6.41)	(1.82)	(-1.22)	(-0.75)	(1.31)
LEVERAGE_SQ	0.034*	0.084***	0.356***	0.536***	0.002	0.006	0.002	-0.002
	(1.87)	(6.04)	(4.35)	(4.96)	(0.26)	(1.32)	(0.88)	(-1.24)
Intercept	0.002	0.212***	0.553	0.095	0.429***	0.077***	0.000	0.012***
	(0.06)	(8.86)	(.)	(0.84)	(9.84)	(3.61)	(0.09)	(3.61)
n	181,421	181,421	165,304	150,319	59,205	59,205	59,205	#######
R-squared	0.014	0.183	0.295	0.281	0.075	0.017	0.003	0.010
Industry and year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by firm	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by year	Y	Y	Y	Y	Y	Y	Y	Y

Table 3 reports results of OLS regressions of financial misrepresentation proxies on *VIOLATE* and control variables. Regressions include all firm-years during the period from 1980 to 2017 with at least one instance of on-going operational misconduct with sufficient data and total assets in excess of $27,336. The coeffient of interest is VIOLATE, equal to one for observations in the misconduct sample and zero for those in the matched, control sample. Coefficient point estimates and corrsponding levels of significance are provided. Regressions include fiscal-year and 2-digit SIC fixed effects and standard error clustering by firm and year. T-statistics are provided in parentheses.

*p-value less than 0.10; **p-value less than 0.05; ***p-value less than 0.01

TABLE 4

Panel A: Descriptive statistics, propensity-score-match variables

	Count	Mean	SD	Min	Q1	Median	Q3	Max
Operations misconduct determinants								
Manager-level								
LOG_MNGER_ABLTY	114	0.73	0.09	0.58	0.66	0.71	0.77	0.95
Financial constraints								
PAYOUT_RATIO	114	0.03	0.05	0.00	0.00	0.02	0.06	0.23
WHTD_WU_INDX	114	-0.41	0.10	-0.62	-0.48	-0.42	-0.35	-0.16
LEVERAGE	114	0.24	0.25	0.00	0.06	0.19	0.33	1.84
Size and complexity								
LOG_AT	114	8.24	1.88	4.42	6.93	8.29	9.71	12.49
LOG_OP_SEG	114	0.87	0.74	0.00	0.00	1.10	1.61	1.95
LOG_GEO_SEG	114	0.99	0.72	0.00	0.00	1.10	1.61	2.30
Financial performance								
ROA	114	0.07	0.10	-0.55	0.03	0.06	0.11	0.38
SALES_GROWTH	114	0.16	0.22	-0.33	0.04	0.11	0.24	1.28
XTRM_SLS_GRWTH	114	0.21	0.41	0.00	0.00	0.00	0.00	1.00

Table 4, Panel A reports distributional statistics of determinant model variables for the 114 sampled and effectively matched violation-firm-year-ends immeditaely prior to the inception of violation activities in firm operations. Appendix B provides variable definitions.

TABLE 4
Panel B: Match regression

Dependent variable: *VIOLATE*	Prediction	Coef.	z-statistic	p-value
LOG_MNGR_ABLTY	+	4.097	3.11	0.002
PAYOUT_RATIO	-	-0.289	-0.26	0.792
WHTD_WU_INDX	+	1.144	0.34	0.732
LEVERAGE	+	-0.116	-0.32	0.748
SIZE	+	0.798	4.24	<0.001
LOG_OP_SEG	+	-0.242	-2.29	0.022
LOG_GEO_SEG	+	0.208	1.34	0.181
ROA	-	2.222	2.18	0.029
SALES_GROWTH	-	-0.105	-0.43	0.667
XTRM_SLS_GRWTH	+	-0.012	-0.04	0.971
Intercept		-17.442	-12.54	<0.001
n		60,251		
Pseudo R-squared		0.218		
Poisson deviance goodness-of-fit		1199.7		
Industry fixed effects		Y		
Year fixed effects		Y		
Standard errors clustered by firm		Y		
Standard errors clustered by year		Y		

Table 4, Panel B provides the results of the Poisson determinants model for the inception of operations misconduct violation activity. *PRE-VIOLATE* , an indicator for misconduct activity, is regressed on the proxies for manager ability, size and diversity of stakeholder bases, financial constraints, and performance. Coefficient point estimates and my prediction of their signs are reported, as well as levels of significance. The Poisson deviance goodness-of-fit is small relative to sample size, suggesting no significant evidence that the Poisson model is poorly specified. Fitted values from this regression are used as propensity scores on which to conduct nearest-neighbor matching to identify the matched control sample used in later analyses. Appendix B provides variable definitions.

TABLE 4

Panel C: Comparative descriptive statistics, propensity-score-match variables

	Mean			Median		
	Control	Violation	T-value	Control	Violation	p-value
Manager characteristics						
LOG_MNGER_ABLTY	0.788	0.728	0.01	0.705	0.707	0.223
Financial constraints						
PAYOUT_RATIO	0.038	0.033	0.57	0.010	0.017	0.382
WHTD_WU_INDX	-0.403	-0.409	0.53	-0.407	-0.416	0.399
LEVERAGE	0.219	0.242	-0.82	0.198	0.189	0.452
Size and complexity						
SIZE	8.049	8.238	-0.78	8.272	8.294	1.000
LOG_OP_SEG	0.851	0.869	-0.19	1.099	1.099	0.315
LOG_GEO_SEG	1.045	0.995	0.52	1.099	1.099	0.207
Financial performance						
ROA	0.083	0.068	0.84	0.070	0.064	1.000
SALES_GROWTH	0.162	0.156	0.19	0.107	0.114	0.399
XTRM_SLS_GRWTH	0.211	0.211	0.00	0.000	0.000	1.000
N	114	114				

Table 4, Panel C reports covariate means and medians for both the operations misconduct and control samples, providing evidence of balance between these two samples that suggests the matching procedure has been effective at identifying an appropriately matched control sample. Differences between the means are tested for statistical significance using t-tests; those between medians are tested for significance using Wilcoxon sign rank tests.

TABLE 5

Panel A: Propensity-score-matched, financial-reporting quality univariate results, pooled

		Mean			Median		
	n	Control	Violation	T-statistic	Control	Violation	p-value
*Discretionary accruals, signed**	1,172	-0.075	0.031	-2.29	-0.015	0.001	0.097
*Discretionary accruals, unsigned**	1,172	0.248	0.301	-1.24	0.077	0.083	0.875
F-score 1	1,174	1.033	1.395	-6.43	0.925	1.171	<0.001
F-score 2	1,142	1.100	1.467	-5.66	0.971	1.201	<0.001
Internal control weakness	612	0.065	0.072	-0.32	0.000	0.000	0.756
Internal control weakness - revenue recognition	612	0.003	0.026	-2.36	0.000	0.000	0.039
Internal control weakness - financial fraud	612	0.000	0.010	-1.74	0.000	0.000	0.250
AAER	1,226	0.003	0.036	-3.89	0.000	0.000	<0.001

Table 4 provides a pooled univariate comparison of financial-reporting quality between operations misconduct firm years and propensity-score-matched control firm-years. Differences between the means are tested for statistical significance using t-tests; those between medians are tested for significance using Wilcoxon signed-rank tests.

*Discretionary accruals are based on the performance adjusted modified-Jones model.

TABLE 5

Panel B: Industry-year-market-value-matched, , financial-reporting quality univariate results, pooled

		Mean			Median		
	n	Control	Violation	T-statistic	Control	Violation	p-value
*Discretionary accruals, signed**	1,144	-0.099	0.012	-2.21	-0.008	0.002	0.055
*Discretionary accruals, unsigned**	1,144	0.263	0.290	-0.58	0.078	0.085	0.545
F-score1	1,134	1.043	1.356	-5.63	0.931	1.146	<0.001
F-score2	1,114	1.089	1.416	-5.11	0.943	1.156	<0.001
Internal control weakness	678	0.080	0.062	0.90	0.000	0.000	0.392
Internal control weakness - revenue recognition	678	0.015	0.024	-0.84	0.000	0.000	0.581
Internal control weakness - financial fraud	678	0.000	0.006	-1.42	0.000	0.000	0.500
AAER	1,508	0.020	0.033	-1.60	0.000	0.000	0.096

Table 4 provides a pooled univariate comparison of financial-reporting quality between operations misconduct firm years and industry-year-market-value-matched control firm-years. Differences between the means are tested for statistical significance using t-tests; those between medians are tested for significance using Wilcoxon signed-rank tests.

*Discretionary accruals are based on the performance adjusted modified-Jones model.

TABLE 6

Panel A: Propensity-score-matched, financial misrepresentation regression results, pooled

	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
VIOLATE	0.068*	-0.016	0.171**	0.165**	0.005	0.032*	0.018**	0.027**
	(1.65)	(-0.71)	(2.52)	(2.15)	(0.11)	(1.78)	(2.56)	(2.31)
ROA	0.102	-0.199	-0.687	-1.068	0.001	0.013	-0.005	-0.007
	(0.33)	(-0.79)	(-1.29)	(-1.40)	(0.01)	(0.32)	(-0.29)	(-0.25)
SIZE	0.017	-0.012	0.009	0.013	-0.026**	-0.013*	-0.003**	-0.005*
	(0.96)	(-1.11)	(0.36)	(0.42)	(-2.36)	(-1.88)	(-2.40)	(-1.81)
BTM	0.021	-0.028	-0.019	-0.023	0.042	-0.009*	0.002	-0.008
	(0.56)	(-1.05)	(-0.65)	(-0.71)	(1.58)	(-1.77)	(0.29)	(-1.28)
SALES GROWTH	0.051	0.079	1.320***	1.488***	0.067	-0.028	-0.014**	0.022
	(0.76)	(0.98)	(4.55)	(4.46)	(0.93)	(-1.07)	(-2.22)	(0.90)
LEVERAGE	-0.036	-0.043	1.053***	1.445***	-0.078***	0.076	0.010*	0.053**
	(-0.43)	(-0.40)	(3.23)	(3.50)	(-3.30)	(1.30)	(1.89)	(2.17)
Intercept	-0.407**	-0.235	0.083	-0.038	0.313***	0.113*	0.089	0.129***
	(-2.03)	(-1.16)	(0.23)	(-0.09)	(2.71)	(1.65)	(.)	(3.64)
n	1062	1062	1054	1054	510	560	560	1100
R-squared	0.045	0.280	0.351	0.355	0.117	0.117	0.069	0.178
Industry and year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by firm	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by year	Y	Y	Y	Y	Y	Y	Y	Y

Table 6, Panel A reports second-stage regression results using dependent variables intended to capture financial misrepresentation. Regressions include all firm-years during the operations misconduct periods with sufficient data on the dependent variables and regressors for both the operations misconduct and propensity-score-matched control samples. The coeffient of interest is VIOLATE, equal to one for observations in the misconduct sample and zero for those in the matched, control sample. Coefficient point estimates and corrsponding levels of significance are provided. Regressions include fiscal-year and 2-digit SIC fixed effects and standard error clustering by firm and year. T-statistics are provided in parentheses.

*p-value less than 0.10; **p-value less than 0.05; ***p-value less than 0.01

TABLE 6

Panel B: Entropy-balanced regression results, pooled

	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
VIOLATE	0.074	-0.049	0.111**	0.069	0.046*	0.021	0.006	0.021*
	(1.44)	(-1.34)	(2.05)	(1.05)	(1.83)	(1.07)	(1.46)	(1.66)
ROA	-0.257	-0.235**	-0.593	-2.400	0.026	0.007	0.020	0.007
	(-1.69)	(-2.07)	(-1.39)	(-1.48)	(0.19)	(0.10)	(0.63)	(0.29)
SIZE	-0.012	0.003	-0.016	0.005	-0.035**	-0.015	-0.005	-0.003
	(-0.75)	(0.20)	(-0.41)	(0.10)	(-2.55)	(-1.40)	(-1.65)	(-0.44)
BTM	-0.030	-0.016	-0.003	-0.069	0.066***	0.004	0.008	-0.011
	(-0.85)	(-0.55)	(-0.08)	(-1.13)	(5.04)	(0.69)	(0.78)	(-1.10)
SALES_GROWTH	-0.050	0.056	1.715***	2.034***	-0.100***	-0.019	-0.001	0.012
	(-1.03)	(1.28)	(8.46)	(6.63)	(-3.20)	(-0.55)	(-0.23)	(0.73)
LEVERAGE	-0.110	-0.128	1.224***	1.451***	-0.010	-0.016	0.004	0.037
	(-1.03)	(-0.89)	(3.32)	(3.14)	(-0.27)	(-0.62)	(0.64)	(1.09)
n	103664	103664	99083	92194	33961	33961	33961	104716
R-squared	0.031	0.340	0.359	0.357	0.256	0.166	0.054	0.164
Industry and year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by industry	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by year	Y	Y	Y	Y	Y	Y	Y	Y

Table 6, Panel B reports entropy-balanced regression results using dependent variables intended to capture financial misrepresentation. Regressions include all firm-years during the operations misconduct periods with sufficient data on the dependent variables and regressors for both the operations misconduct and entropy-balance-weighted control samples. To facilitate comparability with propensity-score matching results, all covariates used in the first-stage propensity-score matched regresssions are entropy balanced. Control firm-year weights from this procedure are averaged by firm and applied in these second-stage regressions. The coeffient of interest is VIOLATE, equal to one for observations in the violation sample and zero for those in the matched, control sample. Coefficient point estimates and corrsponding levels of significance are provided. Regressions include fiscal-year and 2-digit SIC fixed effects and standard error clustering by firm and year. T-statistics are provided in parentheses.

*p-value less than 0.10; **p-value less than 0.05; ***p-value less than 0.01

TABLE 6
Panel C: Industry-year-market-value matched regression results, pooled

	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
VIOLATE	0.113*	-0.090*	0.231***	0.232***	0.021	0.012	0.007*	0.009
	(1.96)	(-1.96)	(3.59)	(3.14)	(0.84)	(0.58)	(1.72)	(0.74)
ROA	-0.261	-0.124	0.383	0.248	-0.064	-0.039	-0.004	0.049
	(-0.92)	(-0.57)	(1.56)	(0.79)	(-0.72)	(-0.87)	(-1.03)	(1.11)
SIZE	-0.039*	0.004	0.003	-0.000	-0.013	-0.009	-0.001	0.003
	(-1.90)	(0.22)	(0.11)	(-0.01)	(-1.45)	(-1.23)	(-1.30)	(0.70)
BTM	-0.026	-0.017	0.156*	0.176*	-0.009	0.003	-0.002	-0.014
	(-0.88)	(-0.48)	(1.66)	(1.70)	(-0.59)	(0.58)	(-1.14)	(-1.24)
SALES GROWTH	-0.023	0.057**	0.367**	0.403**	-0.038	-0.008	-0.001	0.007
	(-0.33)	(2.18)	(2.04)	(2.08)	(-1.59)	(-0.95)	(-0.46)	(0.80)
LEVERAGE	-0.004	0.109	1.493***	1.985***	0.059	0.026	0.008	0.046
	(-0.03)	(0.92)	(3.73)	(3.76)	(0.94)	(0.86)	(1.49)	(1.45)
Intercept	0.240	0.044	-0.051	-0.099	0.324***	0.128**	0.000	-0.106
	(1.22)	(0.29)	(-0.20)	(-0.31)	(3.73)	(2.22)	(0.03)	(-1.33)
n	1072	1072	1040	1040	596	596	596	1370
R-squared	0.051	0.320	0.312	0.332	0.176	0.083	0.078	0.143
Industry and year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by industry	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by year	Y	Y	Y	Y	Y	Y	Y	Y

Table 6, Panel C reports second-stage regression results using dependent variables intended to capture financial misrepresentation. Regressions include all firm-years during the operations misconduct periods with sufficient data on the dependent variables and regressors for both the operations misconduct and industry-year-market-value-matched control samples. The coeffient of interest is VIOLATE, equal to one for observations in the misconduct sample and zero for those in the matched, control sample. Coefficient point estimates and corrsponding levels of significance are provided. Regressions include fiscal-year and 2-digit SIC fixed effects and standard error clustering by firm and year. T-statistics are provided in parentheses.

*p-value less than 0.10; **p-value less than 0.05; ***p-value less than 0.01

TABLE 7
Panel A: Univariate results by penalty dollar amount

		Small penalty	Large penalty	T-statistic	z-score	p-value
*Discretionary accruals, signed**	mean	0.048	0.157	-0.89		0.374
	median	-0.008	0.016		-2.09	0.037
	n	179	166			
*Discretionary accruals, unsigned**	mean	0.390	0.309	0.69		0.491
	median	0.087	0.086		0.32	0.751
	n	179	166			
F-score 1	mean	1.310	1.539	-1.76		0.079
	median	1.109	1.312		-3.47	<0.001
	n	177	175			
F-score 2	mean	1.371	1.638	-1.89		0.060
	median	1.156	1.373		-3.57	<0.001
	n	174	169			
Internal control weakness	mean	0.015	0.080	-1.83		0.069
	median	0.000	0.000		-1.82	0.069
	n	66	112			
Internal control weakness - revenue recognition	mean	0.000	0.036	-1.55		0.122
	median	0.000	0.000		-1.54	0.123
	n	66	112			
Internal control weakness - financial fraud	mean	0.000	0.018	-1.09		0.278
	median	0.000	0.000		-1.08	0.280
	n	66	112			
AAER	mean	0.028	0.033	-0.30		0.767
	median	0.000	0.000		-0.29	0.768
	n	179	180			

Table 7, Panel A provides univariate results, comparing the financial misrepresentation variable means and medians between the two cross-sections of penalty amount across misconduct firm-years successfully matched by the propensity-score-matching algorithm. The cross-section is captured by an indicator variable equal to one if the penalty-amount is in the upper (lower) 30% of the distribution of penalty amounts after limiting the sample to firms with at least one year with data on the given financial-reporting-quality variable. Those firms between the 30th and 70th percentiles of the distribution are omitted from the analysis. Differences between the means are tested for statistical significance using t-tests; those between medians are tested for significance using Wilcoxon rank sum tests.
*Discretionary accruals are based on the performance adjusted modified-Jones model.

TABLE 7
Panel B: Univariate results by criminal charges

		Non-criminal	Criminal	T-statistic	z-score	p-value
*Discretionary accruals, signed**	mean	0.026	0.044	-0.20		0.844
	median	0.006	-0.017		2.02	0.044
	n	441	145			
*Discretionary accruals, unsigned**	mean	0.220	0.547	-3.87		<0.001
	median	0.080	0.104		-2.96	0.003
	n	441	145			
F-score 1	mean	1.415	1.338	0.68		0.498
	median	1.198	1.127		1.38	0.169
	n	435	152			
F-score 2	mean	1.486	1.417	0.53		0.597
	median	1.206	1.184		0.77	0.444
	n	420	151			
Internal control weakness	mean	0.039	0.171	-3.94		<0.001
	median	0.000	0.000		-3.85	<0.001
	n	230	76			
Internal control weakness - revenue recognition	mean	0.013	0.066	-2.52		0.012
	median	0.000	0.000		-2.49	0.013
	n	230	76			
Internal control weakness - financial fraud	mean	0.000	0.040	-3.06		0.002
	median	0.000	0.000		-3.02	0.003
	n	230	76			
AAER	mean	0.015	0.082	-4.13		<0.001
	median	0.000	0.000		-4.07	<0.001
	n	455	158			

Table 7, Panel B provides univariate results, comparing the financial misrepresentation variable means and medians between criminal and non-criminal misconduct firm-years successfully matched by the propensity-score-matching algorithm. The cross-section is captured by an indicator variable equal to one if the misconduct is criminal, zero otherwise. Differences between the means are tested for statistical significance using t-tests; those between medians are tested for significance using Wilcoxon rank sum tests. Differences between the means are tested for statistical significance using t-tests; those between medians are tested for significance using Wilcoxon rank sum tests.
*Discretionary accruals are based on the performance adjusted modified-Jones model.

TABLE 7
Panel C: Univariate results by whether misconduct violates trust

		Non-trust violation	Trust violation	T-statistic	z-score	p-value
*Discretionary accruals, signed**	mean	0.014	0.056	-0.52		0.600
	median	0.007	-0.011		1.39	0.164
	n	351	235			
*Discretionary accruals, unsigned**	mean	0.228	0.411	-2.44		0.015
	median	0.075	0.091		-2.36	0.019
	n	351	235			
F-score 1	mean	1.362	1.446	-0.83		0.407
	median	1.146	1.195		-1.32	0.186
	n	353	234			
F-score 2	mean	1.400	1.567	-1.43		0.153
	median	1.173	1.246		-1.88	0.093
	n	340	231			
Internal control weakness	mean	0.117	0.021	3.28		0.001
	median	0.000	0.000		3.22	0.001
	n	163	143			
Internal control weakness - revenue recognition	mean	0.049	0.000	2.71		0.007
	median	0.000	0.000		2.68	0.007
	n	163	143			
Internal control weakness - financial fraud	mean	0.018	0.000	1.63		0.104
	median	0.000	0.000		1.62	0.104
	n	163	143			
AAER	mean	0.043	0.020	2.46		0.014
	median	0.000	0.000		2.45	0.007
	n	351	245			

Table 7, Panel C provides univariate results, comparing the financial misrepresentation variable means and medians between trust-violating and non-trust-violating misconduct firm-years successfully matched bythe PSM algorithm. The cross-section is captured by an indicator variable equal to one if the misconduct violates related-party trust, zero otherwise. Differences between the means are tested for statistical significance using t-tests; those between medians are tested for significance using Wilcoxon rank sum tests. Differences between the means are tested for statistical significance using t-tests; those between medians are tested for significance using Wilcoxon rank sum tests.
*Discretionary accruals are based on the performance adjusted modified-Jones model.

TABLE 7
Panel D: Univariate results by CEO beneficial ownership

		Low ownership	High ownership	T-statistic	z-score	p-value
*Discretionary accruals, signed**	mean	0.066	0.086	-0.17		0.866
	median	-0.007	0.001		-0.70	0.484
	n	135	140			
*Discretionary accruals, unsigned**	mean	0.284	0.359	-0.64		0.521
	median	0.078	0.070		0.02	0.985
	n	135	140			
F-score 1	mean	1.504	1.338	1.33		0.185
	median	1.290	1.163		1.56	0.119
	n	139	140			
F-score 2	mean	1.623	1.424	1.31		0.193
	median	1.375	1.211		1.80	0.072
	n	139	139			
Internal control weakness	mean	0.067	0.041	0.79		0.433
	median	0.000	0.000		0.78	0.433
	n	90	98			
Internal control weakness - revenue recognition	mean	0.033	0.020	0.55		0.585
	median	0.000	0.000		0.54	0.587
	n	90	98			
Internal control weakness - financial fraud	mean	0.000	0.000	.		.
	median	0.000	0.000		0.00	1.000
	n	90	98			
AAER	mean	0.014	0.034	-1.12		0.264
	median	0.000	0.000		-1.12	0.265
	n	145	148			

Table 7, Panel C provides univariate results, comparing the financial misrepresentation variable means and medians between the two cross-sections of total CEO beneficial ownership across misconduct firm-years successfully matched by the propensity-score-matching algorithm. The cross-section is captured by an indicator variable equal to one if the CEO's beneficial ownership is in the upper (lower) 50% of the distribution of beneficial ownership during operations misconduct periods for both misconduct and propensity-score-matched samples. Differences between the means are tested for statistical significance using t-tests; those between medians are tested for significance using Wilcoxon rank sum tests.
*Discretionary accruals are based on the performance adjusted modified-Jones model.

TABLE 8
Panel A: Penalty-amount cross-section regression results

PROPENSITY-SCORE-MATCHED	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
PENALTY_HIGH_30	-0.333	-1.004	1.530**	1.632**	0.028	0.085	0.052	0.096*
	(-1.25)	(-1.43)	(2.40)	(2.23)	(0.15)	(1.26)	(1.38)	(1.67)
VIOLATE	0.051	0.087	0.153	0.147	0.092**	0.004	0.009	0.003
	(0.93)	(1.21)	(1.64)	(1.43)	(2.01)	(1.30)	(1.24)	(0.37)
n	616	616	628	628	330	330	330	640
R-squared	0.120	0.334	0.407	0.426	0.384	0.110	0.189	0.325
ENTROPY-BALANCED								
PENALTY_HIGH_30	-0.879*	-0.630	0.478	0.391	0.240	0.006	0.021	0.257**
	(-1.78)	(-1.32)	(0.69)	(0.46)	(1.50)	(0.14)	(0.79)	(2.15)
VIOLATE	0.191	0.001	0.121	0.098	0.010	-0.001	-0.006	-0.007
	(1.60)	(0.02)	(1.65)	(1.13)	(0.39)	(-0.17)	(-0.68)	(-0.60)
n	100235	100235	95514	88952	32710	32710	32710	100881
R-squared	0.095	0.338	0.374	0.386	0.273	0.105	0.111	0.239
INDUSTRY-YEAR-MARKET-VALUE-MATCHED								
PENALTY_HIGH_30	0.057	-0.015	0.290	0.637	0.331	0.305***	0.024	0.261**
	(0.35)	(-0.13)	(0.52)	(1.20)	(1.57)	(2.95)	(1.06)	(2.41)
VIOLATE	0.043	-0.051	0.185**	0.173*	-0.067**	-0.034	0.002*	-0.032
	(0.96)	(-1.26)	(2.06)	(1.91)	(-2.02)	(-1.45)	(1.78)	(-1.56)
n	598	598	576	576	378	378	378	816
R-squared	0.053	0.414	0.368	0.406	0.243	0.127	0.265	0.226
Controls and interacted controls	Y	Y	Y	Y	Y	Y	Y	Y
Industry and year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by industry	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by year	Y	Y	Y	Y	Y	Y	Y	Y

Table 8, Panel A reports second-stage, penalty-amount cross-section regression results using dependent variables intended to capture financial misrepresentation. Regressions include certain firm-years during the operations misconduct periods with sufficient data on the dependent variables and regressors for both the operations misconduct sample and one of three respective control samples. *VIOLATE* is equal to one for observations in the misconduct sample and zero for control firm-years. *PENALTY_HIGH_30* is equal to one for the subset of misconduct firm-years falling into the upper 30% of penalty amounts in each of three misconduct samples. *PENALTY_HIGH_30* is equal to zero for those misconduct firm-years falling in the lower 30% of penalty amounts in each of three misconduct samples and all control firm-years. Misconduct-firm years with penalty amounts falling between the 30th and 70th percentile of the penalty amount distributions are omitted from the analysis. Also included in the regressions (but not tabulated) are the six control variables included in the pooled, second-stage regression displayed in Table 5, as well as another six control variables formed by interacting each of the first six control variables with *PENALTY_HIGH_30*, allowing the control coefficients to vary between the cross-sections. Coefficient point estimates and corresponding levels of significance are provided. Regressions include fiscal-year and 2-digit SIC fixed effects and standard error clustering by firm and year. T-statistics are provided in parentheses.

*p-value less than 0.10; **p-value less than 0.05; ***p-value less than 0.01

TABLE 8
Panel B: Criminality cross-section regression results

PROPENSITY-SCORE-MATCHED	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
CRIMINAL	-0.205	-0.466	-0.640	-0.847	0.229	0.227	0.183	0.142
	(-0.27)	(-0.74)	(-0.96)	(-1.02)	(0.56)	(1.24)	(1.45)	(0.90)
VIOLATE	0.067	-0.027	0.207***	0.200**	0.013	0.012	0.002	0.016
	(1.39)	(-1.50)	(2.86)	(2.46)	(0.33)	(1.15)	(0.43)	(1.14)
n	1062	1062	1054	1054	560	560	560	1100
R-squared	0.049	0.287	0.360	0.367	0.240	0.151	0.119	0.220
ENTROPY-BALANCED								
CRIMINAL	-0.532	-0.645***	-0.596	-0.949	0.411**	0.154	0.032	0.368*
	(-1.04)	(-2.93)	(-1.43)	(-1.61)	(2.29)	(0.86)	(0.44)	(1.75)
VIOLATE	0.087	-0.071	0.133**	0.089	0.021	0.012	0.001	0.003
	(1.06)	(-1.41)	(2.31)	(1.41)	(1.03)	(1.06)	(0.36)	(0.28)
n	100536	100536	95812	89250	32874	32874	32874	101182
R-squared	0.040	0.349	0.362	0.367	0.291	0.184	0.061	0.216
INDUSTRY-YEAR-MARKET-VALUE-MATCHED								
CRIMINAL	0.113	0.043	-0.832	-0.844	0.728***	0.608***	0.152	0.285**
	(0.36)	(0.15)	(-1.16)	(-0.99)	(4.05)	(3.10)	(1.41)	(1.98)
VIOLATE	0.121**	-0.083**	0.264***	0.276***	-0.007	-0.009	0.000	-0.005
	(2.04)	(-2.04)	(3.73)	(3.40)	(-0.29)	(-0.54)	(0.03)	(-0.39)
n	1072	1072	1040	1040	596	596	596	1370
R-squared	0.055	0.322	0.317	0.340	0.226	0.164	0.137	0.173
Controls and interacted controls	Y	Y	Y	Y	Y	Y	Y	Y
Industry and year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by industry	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by year	Y	Y	Y	Y	Y	Y	Y	Y

Table 8, Panel B reports second-stage, criminal cross-section regression results using dependent variables intended to capture financial misrepresentation. Regressions include all firm-years during the operations misconduct periods with sufficient data on the dependent variables and regressors for both the operations misconduct sample and one of three respective control samples. *VIOLATE* is equal to one for observations in the misconduct sample and zero for control firm-years. *CRIMINAL* is equal to one for the subset of misconduct firm-years subject to criminal violations, zero otherwise. Also included in the regressions (but not tabulated) are the six control variables included in the pooled, second-stage regression displayed in Table 5, as well as another six control variables formed by interacting each of the first six control variables with *CRIMINAL* , allowing the control coefficients to vary between the cross-sections. Coefficient point estimates and corresponding levels of significance are provided. Regressions include fiscal-year and 2-digit SIC fixed effects and standard error clustering by firm and year. T-statistics are provided in parentheses.

*p-value less than 0.10; **p-value less than 0.05; ***p-value less than 0.01

TABLE 8
Panel C: Trust-violation cross-section regression results

PROPENSITY-SCORE-MATCHED	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
TRST_VLTN	0.514	-0.163	0.528	0.579	-0.457***	-0.131**	-0.036**	-0.057*
	(1.19)	(-0.80)	(1.04)	(0.94)	(-4.18)	(-2.34)	(-2.41)	(-1.71)
VIOLATE	0.048***	-0.037	0.149**	0.122	0.091**	0.050*	0.028**	0.037**
	(3.06)	(-1.36)	(1.96)	(1.48)	(2.40)	(1.92)	(2.22)	(2.26)
n	1062	1062	1054	1054	560	560	560	1100
R-squared	0.048	0.282	0.405	0.418	0.272	0.139	0.077	0.185
ENTROPY-BALANCED								
TRST_VLTN	0.264	-0.296**	0.694*	0.605	-0.320***	-0.133	0.013	0.005
	(1.08)	(-2.18)	(1.73)	(1.23)	(-3.22)	(-1.58)	(0.30)	(0.07)
VIOLATE	0.085	-0.055	0.107	0.070	0.072***	0.032	0.016**	0.026
	(1.57)	(-0.99)	(1.47)	(0.96)	(3.28)	(1.67)	(2.40)	(1.69)
n	100536	100536	95812	89250	32874	32874	32874	101182
R-squared	0.033	0.344	0.372	0.373	0.278	0.180	0.079	0.167
INDUSTRY-YEAR-MARKET-VALUE-MATCHED								
TRST_VLTN	0.563*	0.007	0.694*	0.757*	-0.019	-0.056	-0.013	0.085
	(1.86)	(.)	(1.95)	(1.79)	(-0.10)	(-0.89)	(-1.27)	(1.22)
VIOLATE	0.076	-0.074***	0.218***	0.199**	0.057*	0.034	0.010*	0.022
	(.)	(-3.56)	(2.80)	(2.26)	(1.72)	(1.31)	(1.82)	(1.42)
n	1072	1072	1040	1040	596	596	596	1370
R-squared	0.057	0.321	0.334	0.359	0.189	0.101	0.082	0.151
Controls and interacted controls	Y	Y	Y	Y	Y	Y	Y	Y
Industry and year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by industry	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by year	Y	Y	Y	Y	Y	Y	Y	Y

Table 8, Panel C reports second-stage, trust-violation cross-section regression results using dependent variables intended to capture financial misrepresentation. Regressions include all firm-years during the operations misconduct periods with sufficient data on the dependent variables and regressors for both the operations misconduct sample and one of three respective control samples. *VIOLATE* is equal to one for observations in the misconduct sample and zero for control firm-years. *TRST_VLTN* is equal to one for the subset of misconduct firm-years subject to related-party trust violations, zero otherwise. Also included in the regressions (but not tabulated) are the six control variables included in the pooled, second-stage regression displayed in Table 5, as well as another six control variables formed by interacting each of the first six control variables with *TRST_VLTN* , allowing the control coefficients to vary between the cross-sections. Coefficient point estimates and corresponding levels of significance are provided. Regressions include fiscal-year and 2-digit SIC fixed effects and standard error clustering by firm and year. T-statistics are provided in parentheses. Missing T-values indicate a variance-covariance matrix with negative eigenvalues, and is therefore, neither full rank nor positive definite.

*p-value less than 0.10; **p-value less than 0.05; ***p-value less than 0.01

TABLE 8
Panel D: CEO-beneficial-ownership cross-section regression results

PROPENSITY-SCORE-MATCHED	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
VIOLATE_ST_50_INT	-0.176	0.128	0.090	0.136	-0.060	-0.034	0.000	0.042
	(-1.26)	(1.00)	(0.63)	(0.79)	(-0.88)	(-0.80)	(.)	(0.62)
SHROWN_TOT_50	0.116	-0.780	-0.675	-0.860	0.251	0.150	0.000	-0.042
	(0.28)	(-1.33)	(-0.77)	(-0.84)	(1.25)	(1.30)	(.)	(-0.89)
VIOLATE	0.116	-0.079	0.036	-0.005	0.104**	0.059	0.000	0.016
	(0.93)	(-0.88)	(0.33)	(-0.04)	(2.11)	(1.57)	(.)	(0.86)
n	429	429	435	435	303	303	303	445
R-squared	0.242	0.317	0.428	0.409	0.234	0.186	.	0.166
ENTROPY-BALANCED								
VIOLATE_ST_50_INT	-0.113	-0.106	-0.008	-0.001	-0.037	-0.048	0.010	-0.000
	(-0.69)	(-1.10)	(-0.11)	(-0.01)	(-0.89)	(-1.49)	(1.24)	(-0.01)
SHROWN_TOT_50	1.010	0.483	-0.268	-0.098	0.204	-0.082	0.006	-0.030
	(1.57)	(1.21)	(-0.55)	(-0.17)	(1.55)	(-0.71)	(0.29)	(-0.42)
VIOLATE	0.170	0.041	0.115	0.065	0.074*	0.059	-0.001	0.022
	(0.95)	(0.41)	(1.52)	(0.72)	(1.84)	(1.77)	(-0.21)	(1.18)
n	100536	100536	95812	89250	32874	32874	32874	101182
R-squared	0.036	0.343	0.362	0.365	0.270	0.183	0.063	0.167
INDUSTRY-YEAR-MARKET-VALUE-MATCHED								
VIOLATE_ST_50_INT	-0.275	0.139	-0.062	-0.032	-0.037	-0.012	0.000	-0.016
	(-0.66)	(0.62)	(-0.23)	(-0.10)	(-0.50)	(-0.29)	(.)	(-0.46)
SHROWN_TOT_50	-0.718	0.032	-0.226	-0.197	0.184	-0.041	0.000	-0.203**
	(-1.10)	(0.08)	(-0.51)	(-0.37)	(0.64)	(-0.35)	(.)	(-2.02)
VIOLATE	0.320	-0.225	0.116	0.104	0.058	0.054	0.000	0.049*
	(0.92)	(-1.00)	(0.66)	(0.50)	(1.24)	(1.33)	(.)	(1.80)
n	359	359	350	350	328	328	328	461
R-squared	0.325	0.424	0.495	0.495	0.178	0.170	.	0.227
Controls and interacted controls	Y	Y	Y	Y	Y	Y	Y	Y
Industry and year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by industry	Y	Y	Y	Y	Y	Y	Y	Y
Standard errors clustered by year	Y	Y	Y	Y	Y	Y	Y	Y

Table 8, Panel D reports second-stage, CEO-beneficial-ownership cross-section regression results using dependent variables intended to capture financial misrepresentation Regressions include all firm-years during the operations misconduct periods with sufficient data on the dependent variables and regressors for both the operations misconduct sample and one of three respective control samples. *VIOLATE* is equal to one for observations in the misconduct sample and zero for control firm-years. *SHROWN_TOT_50* is equal to one for the subset of misconduct firm-years falling into the upper 50% of CEO-beneficial-ownership across each of three misconduct and three control samples, zero otherwise. *VIOLATE_ST_50_INT* is an interaction of *VIOLATE* and *SHROWN_TOT_50*, equal to one when each of *VIOLATE* and *SHROWN_TOT_50* are both also equal to one. Also included in the regressions (but not tabulated) are the six control variables included in the pooled, second-stage regression displayed in Table 5, as well as another six control variables formed by interacting each of the first six control variables with *SHROWN_TOT_50* , allowing the control coefficients to vary between the cross-sections. Coefficient point estimates and corresponding levels of significance are provided. Regressions include fiscal-year and 2-digit SIC fixed effects and standard error clustering by firm and year. T-statistics are provided in parentheses. Missing T-statistics related to *Internal control weaknesses - financial fraud* occur because not observations are subject to internal control weaknesses with disclosures that meantion financial fraud.

*p-value less than 0.10; **p-value less than 0.05; ***p-value less than 0.01

Appendix A: Examples of operational misconduct trust violations collected from Violation Tracker

Below are examples of descriptions provided in VT and linked supporting documentation on federal agency websites for selected observations included in my sample:

Employee safety

> "The U.S. Department of Transportation today announced more than $2.4 million in fines against Enbridge Energy Partners, LP for violations of federal pipeline safety regulations. On Nov. 28, 2007, two Enbridge employees were killed when repairs to an Enbridge pipeline on their Lakehead system in Clearbrook, Minn. caused leaking crude oil to ignite.
>
> An extensive accident investigation conducted by the Pipeline and Hazardous Materials Safety Administration (PHMSA) found Enbridge failed to safely and adequately perform maintenance and repair activities, clear the designated work area from possible sources of ignition, and hire properly trained and qualified workers. PHMSA's year-long investigation led to issuance of a notice of proposed violation to Enbridge and a subsequent hearing, prior to this final order."

Anti-competitive practices

> "Bank of America entities have agreed to pay a total of $137.3 million in restitution to federal and state agencies for its participation in a conspiracy to rig bids in the municipal bond derivatives market and as a condition of its admission into the Department of Justice's Antitrust Corporate Leniency Program, the Department of Justice announced today."

Consumer safety

> "The U.S. Consumer Product Safety Commission (CPSC) announced today that Hewlett-Packard Company (HP), of Palo Alto, Calif., has agreed to pay a civil penalty of $425,000. The settlement agreement (pdf) has been provisionally accepted by the Commission (3-1).
>
> The settlement resolves staff allegations that HP knowingly failed to report immediately to CPSC, as required by federal law, that certain lithium-ion battery packs contained a defect or created an unreasonable risk of serious injury or death. The lithium-ion battery packs can overheat, posing a fire and burn hazard to consumers. The packs were shipped with new HP Notebook computers, sold as accessories or provided as spare parts for various HP models.
>
> CPSC staff alleges that by September 2007, HP knew of about 22 incidents associated with the lithium-ion battery packs. At least two of these incidents resulted in injuries to consumers. HP also was aware that at least one consumer apparently went to the hospital. HP did not receive any information on the consumer's injuries or treatment, if any. CPSC staff also alleges that between

March 2007 and April 2007, HP conducted a study, from which it obtained additional information about the lithium-ion battery packs.

HP did not notify the Commission about the incidents or the study until July 25, 2008. By that time, CPSC staff alleges that the firm was aware of at least 31 incidents involving the lithium-ion battery packs.

In October 2008, HP and CPSC announced a recall of about 32,000 lithium-ion battery packs. HP sold notebook computers for between $700 and $3,000 that contained the lithium-ion battery packs, as did computer and electronics stores nationwide and various Web retailers. Lithium-ion battery packs that were sold separately for use with the notebook computers retailed for between $100 and $160.

Federal law requires manufacturers, distributors, and retailers to report to CPSC immediately (within 24 hours) after obtaining information reasonably supporting the conclusion that a product contains a defect which could create a substantial product hazard, creates an unreasonable risk of serious injury or death, or fails to comply with any consumer product safety rule or any other rule, regulation, standard, or ban enforced by CPSC.

In agreeing to the settlement, HP denies CPSC staff allegations that the lithium-ion battery packs (or the notebooks with which the packs were used) could create an unreasonable risk of serious injury or death, or that HP violated the reporting requirements of the Consumer Product Safety Act."

Abusive billing or collection practices

"As part of a $105 million settlement with federal and state law enforcement officials, AT&T Mobility LLC will pay $80 million to the Federal Trade Commission to provide refunds to consumers the company unlawfully billed for unauthorized third-party charges, a practice known as mobile cramming. The refunds are part of a multi-agency settlement that also includes $20 million in penalties and fees paid to 50 states and the District of Columbia, as well as a $5 million penalty to the Federal Communications Commission.

In its complaint against AT&T, the FTC alleges that AT&T billed its customers for hundreds of millions of dollars in charges originated by other companies, usually in amounts of $9.99 per month, for subscriptions for ringtones and text messages containing love tips, horoscopes, and "fun facts." In its complaint, the FTC alleges that AT&T kept at least 35 percent of the charges it imposed on its customers."

Unlawful or misleading promotion

"The Justice Department, along with federal and state partners, today announced a $7 billion settlement with Citigroup Inc. to resolve federal and state civil claims related to Citigroup's conduct in the packaging, securitization, marketing, sale and issuance of residential mortgage-backed securities (RMBS) prior to Jan. 1,

2009. The resolution includes a $4 billion civil penalty – the largest penalty to date under the Financial Institutions Reform, Recovery and Enforcement Act (FIRREA). As part of the settlement, Citigroup acknowledged it made serious misrepresentations to the public – including the investing public – about the mortgage loans it securitized in RMBS. The resolution also requires Citigroup to provide relief to underwater homeowners, distressed borrowers and affected communities through a variety of means including financing affordable rental housing developments for low-income families in high-cost areas. The settlement does not absolve Citigroup or its employees from facing any possible criminal charges.

This settlement is part of the ongoing efforts of President Obama's Financial Fraud Enforcement Task Force's RMBS Working Group, which has recovered $20 billion to date for American consumers and investors.

"This historic penalty is appropriate given the strength of the evidence of the wrongdoing committed by Citi," said Attorney General Eric Holder. "The bank's activities contributed mightily to the financial crisis that devastated our economy in 2008. Taken together, we believe the size and scope of this resolution goes beyond what could be considered the mere cost of doing business. Citi is not the first financial institution to be held accountable by this Justice Department, and it will certainly not be the last."

The settlement includes an agreed upon statement of facts that describes how Citigroup made representations to RMBS investors about the quality of the mortgage loans it securitized and sold to investors. Contrary to those representations, Citigroup securitized and sold RMBS with underlying mortgage loans that it knew had material defects. As the statement of facts explains, on a number of occasions, Citigroup employees learned that significant percentages of the mortgage loans reviewed in due diligence had material defects. In one instance, a Citigroup trader stated in an internal email that he "went through the Diligence Reports and think[s] [they] should start praying . . . [he] would not be surprised if half of these loans went down. . . It's amazing that some of these loans were closed at all." Citigroup nevertheless securitized the loan pools containing defective loans and sold the resulting RMBS to investors for billions of dollars. This conduct, along with similar conduct by other banks that bundled defective and toxic loans into securities and misled investors who purchased those securities, contributed to the financial crisis."

Appendix B: Variable definitions

Variable	Definition
Cross-sectional variables	
CRIMINAL	Indicator variable equal to one for firm-year observations subject to a criminal violation based on data available in Violation Tracker
PENALTY_HIGH_30	Indicator variable equal to one (zero) for firm-year observations subject to a violation resulting in a penalty amount in the upper (lower) 30 percent of the distribution for a given operational misconduct sample, missing otherwise.
SHROWN_TOT_50	Indicator variable equal to one (zero) for firm-year observations in which the CEO's total beneficial ownership in their firm is in the upper (lower) half of all firm-years in a given set of operations-misconduct and control samples.
TRST_VLTN	Indicator variable equal to one for firm-year observations during which the firm engaged in misconduct that violated the trust of a related party, zero otherwise.
Operational misconduct variables	
INITIAL_VIOLATE	Indicator variable equal to one for the firm-fiscal-year that includes the inception of misconduct activities
VIOLATE	Indicator variable for firm-fiscal-years during which misconduct activity occurred

Second-stage regression dependent variables

AAER	Securities and Exchange Commission Accounting and Auditing Enforcement Releases; equal to one if the firm was subject to such a release, zero otherwise.
ABSDA	Unsigned, cross-sectional, performance-matched discretionary accruals, controlling for change in sales, level of property, plant, and equipment, and return on assets (Kothari et al., 2005)
DA	Signed, cross-sectional, performance-matched discretionary accruals, controlling for change in sales, level of property, plant, and equipment, and return on assets (Kothari et al., 2005)
FSCORE1	F-score capturing propensity to issue materially misstated financials using only financial statement variables (Dechow et al., 2011)
FSCORE2	F-score capturing propensity to issue materially misstated financials using both financial statement variables and non-financial variables (Dechow et al., 2011)
ICW	Internal control weaknesses; equal to one if the firm released financial statements in that year over which the manager reported inadequate internal controls over financial reporting, zero otherwise.
ICWFF	Internal control weaknesses with documentation suggesting financial fraud was identified; equal to one if the firm was subject to such an internal control weakness, zero otherwise
ICWRR	Internal control weaknesses with documentation suggesting revenue recognition is affected; equal to one if the firm was subject to such an internal control weakness, zero otherwise

First and second-stage regression control variables

BTM	Book-to-market, calculated total assets divided by the market value of equity. Market value of equity is calculated as Compustat's number of common shares outstanding multiplied by the price at fiscal-year-end
BTM_SQ	Square of *BTM*
LEVERAGE	Leverage, calculated as total liabilities divided by total equity
LEVERAGE_SQ	Square of *LEVERAGE*

LOG_GEO_SEG Number of geographical segments reported on Compustat, logged. Where no geographical segment information is available, this variable is equal to one before logging, zero after.

LOG_MNGR_ABLTY Managerial ability measure developed by Demerjian et al. (2012), increased by two, then logged

LOG_OP_SEG Number of operating segments reported on Compustat, logged. Where no operating segment information is available, this variable is equal to one before logging, zero after.

PAYOUT_RATIO Sum of common dividends, preferred dividends, and share repurchases divided by total assets

ROA Return on assets, calculated as the ratio of income before extraordinary items to beginning total assets

ROA_SQ Square of

SALES_GROWTH Year-over-year sales growth

SALES_GROWTH_SQ Square of *SALES_GROWTH*

SIZE Natural logarithm of total assets

SIZE_SQ Square of *SIZE*

WHTD_WU_INDX Index developed by Whited and Wu (2006) to measure the ability of a firm to raise external capital; it is equal to

- -0.091 multiplied by cash flow
- Minus 0.062 multiplied by an indicator equal to one if the firm pays dividends or repurchases shares, zero otherwise
- Plus 0.021 multiplied by total long-term debt
- Minus 0.044 multiplied by the natural logarithm of total assets
- Plus 0.102 multiplied by three-digit SIC industry sales growth
- Minus 0.035 multiplied by cash.

XTRM_SLS_GRWTH Extreme sales growth indicator equal to one if *SG* is in the upper or lower quintile of three-digit SIC industry sales growth, zero otherwise

Appendix C: Propensity-score matching model with additional determinants

Dependent variable: *VIOLATE*	Prediction	Coef.	z-statistic	p-value
LOG_MNGR_ABLTY	+	6.924	3.45	0.001
PAYOUT_RATIO	-	-6.540	-1.77	0.077
WHTD_WU_INDX	+	1.028	0.15	0.878
LEVERAGE	+	0.113	0.15	0.884
SIZE	+	0.758	2.19	0.028
LOG_OP_SEG	+	-0.175	-0.72	0.474
LOG_GEO_SEG	+	0.256	0.80	0.425
ROA	-	0.853	0.48	0.631
SALES_GROWTH	-	-0.005	-0.01	0.994
XTRM_SLS_GRWTH	+	-0.492	-1.00	0.317
AUD_COM_PCT_FIN_EXP	+	0.743	1.31	0.190
CBOARD	-	-0.156	-0.48	0.630
LOG_OPT_UNEX_EXER_EST_VAL	+	0.029	0.61	0.545
LOG_OPT_EXER_VAL	-	-0.045	-1.11	0.268
Intercept		-49.944	0.00	0.999
n		7,304		
Pseudo R-squared		0.268		
Industry fixed effects		Y		
Year fixed effects		Y		
Standard errors clustered by firm		N		
Standard errors clustered by year		N		

Appendix C provides the results of a Poisson determinants model for the inception of operations misconduct violation activity. The regression is identical to the PSM first-stage model presented in Table 3, Panel B, except additional variables are included that impose substantial data restrictions, limiting the sample size compared to Table 3, Panel B. Additional variables are defined as follows: 1) *AUD_COM_PCT_FIN_EXP* is the percentage of audit committee members with financial expertise, 2) *CBOARD* is an indicator variable equal to one if the board is staggered, zero otherwise, 3) *LOG_OPT_UNEX_EXER_EST_VAL* is the natural logarithm of the estomated value of unexercised, exerciseable options owned by the CEO, and 4) *LOG_OPT_EXER_VAL* is the natural logarithm of the value of CEO-exercised options. Additional explanatory variables were also considered but inclusion here resulted in a non-concave log-likelihood function that does not permit the Poisson regression to converge. As with other explanatory variables, each new variable is measured in the period prior to the inception of operational misconduct. Coefficient point estimates and my prediction of their signs are reported, as well as levels of significance.

Appendix D: Results summary

	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
PSM regression, pooled								
VIOLATE	0.068*	-0.016	0.171**	0.165**	0.005	0.032*	0.018**	0.027**
	(1.65)	(-0.71)	(2.52)	(2.15)	(0.11)	(1.78)	(2.56)	(2.31)
EB regression, pooled								
VIOLATE	0.074	-0.049	0.111**	0.069	0.046*	0.021	0.006	0.021*
	(1.44)	(-1.34)	(2.05)	(1.05)	(1.83)	(1.07)	(1.46)	(1.66)
IYM regression, pooled								
VIOLATE	0.113*	-0.090*	0.231***	0.232***	0.021	0.012	0.007*	0.009
	(1.96)	(-1.96)	(3.59)	(3.14)	(0.84)	(0.58)	(1.72)	(0.74)
Penalty-amount cross-sectional regressions								
PSM								
PENALTY_HIGH_30	-0.333	-1.004	1.530**	1.632**	0.028	0.085	0.052	0.096*
	(-1.25)	(-1.43)	(2.40)	(2.23)	(0.15)	(1.26)	(1.38)	(1.67)
EB								
PENALTY_HIGH_30	-0.879*	-0.630	0.478	0.391	0.240	0.006	0.021	0.257**
	(-1.78)	(-1.32)	(0.69)	(0.46)	(1.50)	(0.14)	(0.79)	(2.15)
IYM								
PENALTY_HIGH_30	0.057	-0.015	0.290	0.637	0.331	0.305***	0.024	0.261**
	(0.35)	(-0.13)	(0.52)	(1.20)	(1.57)	(2.95)	(1.06)	(2.41)

Appendix D: Results summary, continued

	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
Criminality cross-sectional regressions								
PSM								
CRIMINAL	-0.205	-0.466	-0.640	-0.847	0.229	0.227	0.183	0.142
	(-0.27)	(-0.74)	(-0.96)	(-1.02)	(0.56)	(1.24)	(1.45)	(0.90)
EB								
CRIMINAL	-0.532	-0.645***	-0.596	-0.949	0.411**	0.154	0.032	0.368*
	(-1.04)	(-2.93)	(-1.43)	(-1.61)	(2.29)	(0.86)	(0.44)	(1.75)
IYM								
CRIMINAL	0.113	0.043	-0.832	-0.844	0.728***	0.608***	0.152	0.285**
	(0.36)	(0.15)	(-1.16)	(-0.99)	(4.05)	(3.10)	(1.41)	(1.98)
Trust-violation cross-sectional regressions								
PSM								
TRST_VLTN	0.514	-0.163	0.528	0.579	-0.457***	-0.131**	-0.036**	-0.057*
	(1.19)	(-0.80)	(1.04)	(0.94)	(-4.18)	(-2.34)	(-2.41)	(-1.71)
EB								
TRST_VLTN	0.264	-0.296**	0.694*	0.605	-0.320***	-0.133	0.013	0.005
	(1.08)	(-2.18)	(1.73)	(1.23)	(-3.22)	(-1.58)	(0.30)	(0.07)
IYM								
TRST_VLTN	0.563*	0.007	0.694*	0.757*	-0.019	-0.056	-0.013	0.085
	(1.86)	(.)	(1.95)	(1.79)	(-0.10)	(-0.89)	(-1.27)	(1.22)

Appendix D: Results summary, continued

	Discretionary accruals, signed	Discretionary accruals, unsigned	F-score 1	F-score 2	Internal control weaknesses	Internal control weaknesses - revenue recognition	Internal control weaknesses - financial fraud	AAERs
Beneficial ownership cross-sectional regressions								
PSM								
VIOLATE_ST_50_INT	-0.176	0.128	0.090	0.136	-0.060	-0.034	0.000	0.042
	(-1.26)	(1.00)	(0.63)	(0.79)	(-0.88)	(-0.80)	(.)	(0.62)
EB								
VIOLATE_ST_50_INT	-0.113	-0.106	-0.008	-0.001	-0.037	-0.048	0.010	-0.000
	(-0.69)	(-1.10)	(-0.11)	(-0.01)	(-0.89)	(-1.49)	(1.24)	(-0.01)
IYM								
VIOLATE_ST_50_INT	-0.275	0.139	-0.062	-0.032	-0.037	-0.012	0.000	-0.016
	(-0.66)	(0.62)	(-0.23)	(-0.10)	(-0.50)	(-0.29)	(.)	(-0.46)

Appendix D displays all coefficients of interest for all multivariate regression results earlier presented in Tables 5 and 7. T-statistics are provided in parentheses.

*p-value less than 0.10; **p-value less than 0.05; ***p-value less than 0.01