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Unique Characteristics of Management Override Fraud Cases

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Management has a unique ability to perpetrate fraud because it frequently is in a position to directly or indirectly manipulate accounting records and present fraudulent information…Management override of controls can occur in unpredictable ways. (AICPA 2002, AU 316.08)

Introduction

Management override of internal controls has long been recognized as a major impediment to fraud prevention efforts. For example, the American Institute of Certified Public Accountants (AICPA 2005, 2016) identified management override as "the Achilles' Heel" of anti-fraud efforts. The AICPA (2005, 1-2) stated, "Because management is primarily responsible for the design, implementation, and maintenance of internal controls, the entity is always exposed to the danger of management override of controls, whether the entity is publicly held, private, not-for-profit, or governmental." Further, the Association of Certified Fraud Examiners (ACFE 2016) found that override of existing controls is the second most frequently observed internal control weakness that contributed to occupational fraud, with only lack of internal controls being more frequently cited by the ACFE's survey respondents. The ACFE (2012, 6) defines occupational fraud as, "The use of one's occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization's resources or assets."

Under the ACFE's approach, occupational fraud consists of asset misappropriation, corruption and financial statement fraud.

Given the significant threat posed by management override, as well as its frequency in occupational fraud cases, understanding the unique nature of management override fraud is important. However, research to date has been severely limited by a lack of available data. In this study, we use Association of Certified Fraud Examiners (ACFE 2004, 2006, 2008, 2010, 2012, 2014, 2016) survey data on occupational fraud that is made available through the Institute for Fraud Prevention (IFP) to examine how management override fraud cases are unique. Specifically, we compare management override cases to the most common form of fraud contributing factor, cases involving a lack of internal controls. While the AICPA (2005, 2016), Trompeter et al., (2013, 2014), and others have suggested the need for research into management override of internal controls, little is known about how this control deficiency manifests itself due to the lack of research on the issue. As a result, targeted approaches to mitigating the risks posed by management override arguably are underdeveloped because they are based largely on anecdotal evidence of management override, rather than on large sample, formal research studies.

In this exploratory study, we compare ACFE management override fraud cases to cases involving a lack of internal controls, focusing on the nature of the principal perpetrator, fraud incident, and organizational setting. We find several differences between management override frauds and those involving a lack of controls.[1] Management override perpetrators are more likely to be older, senior level, educated males. They are more likely to engage in corruption or financial statement fraud but commit shorter frauds and are less likely to commit material fraud ($\geq$ one percent of organization revenues).

[1] All discussion of the likelihood of management override in our results is relative to frauds involving a lack of internal controls. Our sample has many fewer management override cases (n = 374) than frauds involving a lack of internal controls (n = 994).

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Management override is relatively more common outside of the U.S. Perhaps most striking is that the strength of the organization's anti-fraud environment (specifically, an internal audit function, independent audits of the financial statements, an anti-fraud policy, or a code of conduct are in place) is positively related to the relative likelihood of management override fraud versus fraud involving a lack of internal controls. Thus, it appears that a strong anti-fraud environment creates a deterrent to fraud that motivated fraudsters must circumvent by overriding internal controls.[2]

This study contributes to the academic fraud literature by providing, to our knowledge, the first large sample, empirical evidence that the management override fraud setting is unique in important ways. Prior discussions of management override frauds and ways to address management override have relied largely on anecdotal evidence, often deduced from the autopsy of large, notable frauds. By leveraging the ACFE fraud database, we are able to provide large sample, empirical evidence that management override cases are unique in many ways, including differences in characteristics of the perpetrator, incident, and organization. Such differences were previously undocumented in the literature due to a lack of available data.

From a practice perspective, the findings can aid fraud professionals in assessing fraud risk and ultimately in seeking to prevent fraud. Specifically, the documented existence of two unique fraud settings (i.e., management override versus lack of controls having key differences in perpetrator, fraud, and organizational characteristics) suggests the need for different risk assessments and remedies across the two settings. Our findings reinforce prior recommendations that organizations with a lack of controls should invest to provide adequate safeguards across the organization to prevent, for example, material asset misappropriation. By contrast, organizations with strong anti-fraud environments face the risk of management override, and we encourage such organizations to use technology (e.g., 100 percent journal entry and control testing) and to focus on management's capability (Wolfe and Hermanson 2004) to identify and mitigate override threats.

Background and Research Questions

Management Override

According to Cressey (1950, 1953), a criminologist who developed the attributes of the fraud triangle (pressure, opportunity, and rationalization), individuals who seek to commit fraud must gain a perceived opportunity to do so and believe they can successfully execute and conceal the fraud. The ACFE (2016) finds that this opportunity most commonly comes from a lack of internal controls (twenty-nine percent of cases) or from successful override of internal controls (twenty percent of cases). Further, the ACFE finds that a lack of controls is most commonly related to asset misappropriation cases (thirty percent), and less related to financial statement fraud (twenty-four percent) or corruption (twenty-three percent). By contrast, override is most commonly related to corruption cases (twenty-three percent), and less frequently related to asset misappropriation (twenty percent) or financial statement fraud (seventeen percent). KPMG (2016) also finds that override of controls is common in fraud cases, and they note that the largest frauds in their study involve collusion/override. Further, Hermanson et al., (2012, A48) survey internal auditors and note that "pursuing deviations from policy and management override of controls" is an area of relative internal control weakness in the firms studied.

Perhaps the most basic control failing of an organization is a lack of controls, as fundamental protections simply are missing. Losses from such failures can be significant. By contrast, some organizations implement seemingly properly designed and effective internal controls, but management overrides those controls in order to commit fraud (e.g., AICPA 2002; Caplan 1999; Tipgos 2002).

Previous authors have highlighted the significant risks posed by management override of internal controls. For example, the AICPA (2016, 6) states, "With very few exceptions, most of the major fraud cases in the past fifty years that had catastrophic results for the organization were perpetrated by senior members of management circumventing or overriding seemingly sound systems of internal control." Likewise, Beasley et al., (2010) find that in financial statement fraud cases, the CEO and/or CFO is implicated nearly ninety percent of the time. In many fraudulent financial reporting cases, it appears that top management pressured lower-level personnel to override controls (e.g., Pulliam 2003).

Dorminey et al., (2012, 576) describe the extreme nature of management override:

> Of all exposures to fraud, collusion and management override may be the most extreme. Collusive opportunities where controls are circumvented, or where controls may be set aside by management override, must be directly

[2] As discussed in greater detail in the Model section and in the Appendix, the "anti-fraud environment" is measured with respect to the presence or absence of entity-level anti-fraud elements in the ACFE survey (e.g., fraud hotline, internal audit, surprise audits, etc.).

> assessed as an opportunity for fraud. An important distinction here is that collusion works around controls to achieve the opportunity for fraud, while management override voids a control in a specific circumstance. In the latter case, management essentially self-reports that no fraud took place and, as a result, conceals their fraud. Accordingly, any risk assessment—whether for audit risk or fraud risk—must target these aspects of the control environment.

Despite the longtime focus on management override as a major threat to fraud prevention efforts and a plethora of anecdotes to convey the importance of management override, academic research on management override is severely limited by a lack of data. For example, studies of fraudulent financial reporting (e.g., Beasley et al., 2010) typically do not examine internal control weaknesses associated with fraud cases because of limited disclosures about internal control failures in fraud-related enforcement actions issued by the Securities and Exchange Commission (SEC).[3]

Also, since the advent of Sarbanes-Oxley Sections 302 and 404, a number of studies have examined internal control deficiencies (ICDs) disclosed by public companies, but these studies typically have not linked ICDs to instances of fraud, especially occupational fraud (see Schneider et al., (2009) for an early review of this literature). An ICD paper that does consider one form of fraud is by Donelson et al., (2017). Those authors are able to link future financial reporting fraud to prior material weaknesses in entity-wide controls, which provide a "general opportunity" (p. 46) to commit fraud. In other words, an entity-level weakness in internal controls is associated with the likelihood that management subsequently can circumvent account-specific controls in order to commit fraud.

In addition, Bell and Carcello (2000) use pre-SOX proprietary data from an auditing firm to compare fraudulent financial reporting engagements to no-fraud engagements. They find that fraud firms are more likely to have a weak internal control environment. They also find evidence of an interaction between the control environment and management's aggressive attitude.

From an occupational fraud perspective, Wells (2006) provides a detailed case study of university president who used management override of controls to inappropriately misspend approximately $500,000.

Responses to the Risk of Management Override

Despite the limited research on management override, several sources have offered insights or guidance on dealing with management override, mainly from a fraudulent financial reporting perspective. While fraudulent financial reporting may garner the most external auditor attention, asset misappropriation fraud also is relevant to the external auditor when it causes the financial statements to be materially misstated (AICPA 2002).[4]

AU section 316.42 (AICPA 2002) indicates that the auditor should address the risk of management override of internal controls. Further, this guidance highlights that auditors "should design procedures to test the appropriateness of journal entries recorded in the general ledger and other adjustments" (AU 316.58), as well as reviewing accounting estimates (AU 316.63) and "the business rationale for significant unusual transactions" (AU 316.66). Specifically, auditors should consider how fraud risk factors might impact journal entries (i.e., journal entries by unauthorized or unusual personnel or entries with documentation problems), the characteristics associated with fraudulent journal entries (i.e., unusual days, unusual times of the day, or unusual accounts), and nonstandard entries (i.e., period end or post-closing entries) (Apostolou and Crumbley 2008). Additionally, auditors should be especially attuned to the possibility of management bias in assumptions, judgments, and estimates that could lead to income manipulation or material misstatements due to fraud (see Ramos 2003).

PCAOB (2019) AS 2110 also points the importance of assessing the risk of management override. The standard indicates the unique risks in smaller companies (paragraph 69):

> Controls over management override are important to effective internal control over financial reporting for all companies and may be particularly important at smaller companies because of the increased involvement of senior

[3] The SEC now appears to be bringing more enforcement cases related to controls than before, and Foreign Corrupt Practices Act cases involve control issues (see Woodcock 2017). However, in fraud-related SEC enforcement actions, specific mention of internal control failures typically is limited.

[4] AU 316.56 (AICPA 2002) indicates: "…if a particular asset is highly susceptible to misappropriation and a potential misstatement would be material to the financial statements, obtaining an understanding of the controls related to the prevention and detection of such misappropriation and testing the design and operating effectiveness of such controls may be warranted." The standard also points to potential substantive testing and analytical review related to asset misappropriation.

> management in performing controls and in the period-end financial reporting process. For smaller companies, the controls that address the risk of management override might be different from those at a larger company. For example, a smaller company might rely on more detailed oversight by the audit committee that focuses on the risk of management override.

Lanza and Gilbert (2007) recommend obtaining a list of journal entries by person (to examine authorization), by manual or nonstandard (for further analysis), by amount, by general ledger account, by number of transactions, by day of the week or holiday, by suspense accounts, by complex issues, by revenue accounts, with round multiples (i.e., $1,000 or 10,000s), by text entry (i.e., plug, net to zero, etc.), that are above limits, etc. Additionally, management override is more pervasive in top-side journal entries in comparison to subledger journal entries, since subledger manipulation requires collusion (Lanza and Gilbert 2007). Further, Radin (2008) suggests that auditors seeking to identify management override look for journal entries with round numbers, non-standard journal entries, new unlikely business relationships, unusual side agreements, unusually large final period results, employee tips, and differences in operating results between locations.

In addition, Auditing Standard No. 5 (PCAOB 2007, AS 2201.24) directs auditors to consider management override issues and notes, "Controls over management override are important to effective internal control over financial reporting for all companies..." However, PCAOB inspection reports document recent audit deficiencies in tailoring audit responses to the risk of management override (PCAOB 2015).

The AICPA (2003, AU 316.86) discusses the importance of management override and ultimately points to the board and audit committee as key to the mitigation of this risk:

> Fraudulent financial reporting by upper-level management typically involves override of internal controls within the financial reporting process. Because management has the ability to override controls, or to influence others to perpetrate or conceal fraud, the need for a strong value system and a culture of ethical financial reporting becomes increasingly important. This helps create an environment in which other employees will decline to participate in committing a fraud and will use established communication procedures to report any requests to commit wrongdoing. The potential for management override also increases the need for appropriate oversight measures by those charged with governance…

Building on this notion, the AICPA (2016) outlines several measures for audit committees to enhance their oversight of management and mitigate the risk of management override (also see Silver et al., (2008) for discussion of the audit committee's role in mitigating risks of collusion and management override). These include: "maintaining skepticism," "strengthening committee understanding of the business," "brainstorming to identify fraud risks," "using the code of conduct to assess financial reporting culture," "cultivating a vigorous whistleblower program," and "developing a broad information and feedback network." Within each area, the AICPA offers specific suggestions for audit committee members.

Finally, from a governmental auditing perspective, Hayes (2008, 52) identifies five key indicators that can alert auditors to the presence of management override: "physical dislocation [managers appearing in unusual locations in the organization], bending the rules, exceptions becoming the rule, unusual numbers, and Pssst. Let's just keep this between us, OK?" The author provides specific considerations for auditors who face any of these five indicators.

Research Questions

Overall, academic research on occupational fraud and its relation to management override has been limited by a lack of available data. Specifically, we are not aware of any academic studies that provide insight into the unique nature of management override frauds. Because prior accounting, sociology, and criminology research provides very little insight into management override frauds, we do not attempt to develop theory-driven hypotheses. Rather, consistent with other recent studies using ACFE data (Fleming et al., 2016; Bishop et al., 2017; Hermanson et al., 2017), we conduct an exploratory analysis.

Based on the discussion above, we use ACFE data to examine the following research questions in this study of management override frauds:

RQ1: How do management override fraud cases differ from cases involving a lack of internal controls with respect to characteristics of the principal perpetrator?

RQ2: How do management override fraud cases differ from cases involving a lack of internal controls with respect to characteristics of the fraud incident?

RQ3: How do management override fraud cases differ from cases involving a lack of internal controls with respect to characteristics of the organizational setting?

Sample

As in other recent studies of occupational fraud (e.g., Fleming et al., 2016; Bishop et al., 2017; Hermanson et al., 2017), we use data collected from Certified Fraud Examiners (CFEs) by the ACFE for its biannual *Reports to the Nations* (ACFE 2004, 2006, 2008, 2010, 2012, 2014, 2016). The population of cases made available to academic researchers is 9,725 cases, after the ACFE excludes the largest fraud cases from the sample to avoid reverse engineering those cases to identify specific organizations.[5] As noted in prior studies (e.g., Fleming et al., 2016; Bishop et al., 2017; Hermanson et al., 2017), the ACFE database is a useful source of information on occupational fraud cases over the past many years, and the respondents are experienced CFEs.

Our focus in this study is how occupational fraud cases involving management override of controls differ from those involving a lack of controls. Therefore, we exclude from the sample cases that do not involve management override or a lack of controls. We have 1,466 override cases, less 661 override cases that do not involve management perpetrators, leaving 805 management override cases. We also have 2,561 cases involving a lack of internal controls. After excluding 1,998 observations with missing data, we have a final testing sample of 1,368 cases (374 management override cases and 994 cases with a lack of controls).[6] See Table 1 for details on the sample selection. [See Table 1, pg. 410]

Model

This paper explores how management override fraud differs from frauds with a lack of controls, focusing on principal perpetrators of fraud offenses, fraud incident characteristics, and victim organization attributes, using the following model:

Management override = f (perpetrator characteristics, incident characteristics, and organizational characteristics).

The Appendix summarizes the variables and their definitions. Many of these variables have been used in prior research (e.g., Fleming et al., 2016; Hermanson et al., 2017; Bishop et al., 2017), and we use or adapt language from those studies and the ACFE database to define our variables. [See Appendix, pg. 408]

Dependent Variable

The dependent variable is dichotomous, where management override is coded 1 and lack of internal controls is coded 0.[7] The ACFE (Q56 of the ACFE survey) reports on the "override of internal controls," not management override. To create "management override," the ACFE's "override of existing internal controls" was multiplied by two ACFE categories: Manager/supervisor or Owner/executive/officer/director. The result is the override of internal controls by senior-level personnel (owner, executive, officer, director, manager, or supervisor), which we call "management override" to be consistent with the literature.

Independent Variables

Our exploratory study considers a host of independent variables collected by the ACFE, many of which have been used in other exploratory examinations using the ACFE database. Specifically, there is a series of recent exploratory papers using the ACFE database to examine (a) public versus private company financial statement fraud (Fleming et al., 2016), (b) predator versus situational fraudsters (Hermanson et al., 2017), and (c) collusive versus solo-offender frauds (Bishop et al.,

[5] In addition, before the data are made available to academic researchers, certain continuous variables are altered by a one percent randomization factor, also to prevent reverse engineering to identify specific cases.

[6] Consistent with Hermanson et al., (2017) and Bishop et al., (2017), if the respondent answered other parts of a question, we code blank responses as "no."

[7] We focus on the ACFE's (2016) two most common internal control weaknesses (lack of controls and override), eliminating override frauds committed by employees. The ACFE (2016) also addresses other types of internal control weaknesses that are beyond our scope in this study. For example, the third most common control weakness, lack of management review, would seem to come into play when lower-level personnel commit fraud, while management override occurs when management wants to commit fraud. All of the other control weakness categories examined by the ACFE (2016) each account for ten percent or less of the cases.

2017). The Hermanson et al., and Bishop et al., studies follow much the same research design as the present study, examining differences in perpetrator, fraud incident, and organizational setting characteristics between groups, considering all appropriate variables available in the ACFE data set. Both studies find a number of key differences. Our approach also is to explore differences in perpetrator, fraud incident, and organizational setting characteristics between groups, in this case management override frauds versus frauds involving a lack of internal controls.

Perpetrator Characteristics

We include several fundamental principal perpetrator characteristics in our model: age, position, gender, prior fraud history, tenure, and education. Given that override of controls is a management-level phenomenon, it is reasonable to expect that perpetrators using management override will be more senior than other fraudsters.[8] Criminology research also has considered perpetrator attributes, including age (Levinson et al.,, 1978; Langan and Greenfield 1983; Shover 1983, 1985; Gove 1985; Weisburd et al., 1990; Piquero and Benson 2004) and education (Zara and Farrington 2009; Harris 2011).

Incident Characteristics

The ACFE collects data on several incident characteristics that may distinguish management override frauds from cases involving a lack of controls: number of perpetrators (solo or collusive), type of fraud scheme, and the size and length of the fraud.[9] The ACFE's (2016) most recent report indicates that override is associated with corruption cases, but no other insights into incident characteristics and override are revealed in the literature. Criminology researchers also have examined the length of time over which crime is committed (e.g., Weisburd and Waring 2001; van Koppen et al., 2010).

Organizational Characteristics

Finally, we include a number of organizational characteristics: location (U.S. or non-U.S.), size, organization type, and strength of the anti-fraud environment (see the Appendix, Panel B for specific elements of the anti-fraud environment captured in the ACFE survey, Q51, and one item from Q53; Bishop et al., 2017). It is reasonable to expect that override may be employed in settings with stronger controls, such as in larger public companies (see Ugochuku 2006a, 2006b; Gramling et al., 2010; Hermanson et al., 2012), or in organizations with stronger anti-fraud environments. Also, it is important to note that the ACFE's Q51 examines "entity-level, anti-fraud controls" (ACFE 2018, 26) that reflect elements of the control environment (COSO 2013), as does Q53. We refer to such controls as comprising the "anti-fraud environment" (Bishop et al., 2017; Hermanson et al., 2017).[10] By contrast, the ACFE's Q56 gathers information on the primary (specific) contributing factors that allowed the fraud to occur, and we use Q56 to create the dependent variable.

Results

Descriptive Statistics

As shown in Table 2, Panel A, univariate tests reveal that management override frauds involve older principal perpetrators, larger organizations, a greater number of perpetrators, shorter frauds, and more costly frauds. [See Table 2, pg. 411]

Panel B of Table 2 presents a host of significant differences between management override frauds and frauds involving a lack of controls. Management override frauds are more likely to involve owner/executive/officer/director-level perpetrators, males, perpetrators with no prior frauds, perpetrators with more than five years tenure, and more educated perpetrators. Regarding incident characteristics, management override frauds are less likely to be solo-offender frauds and involve asset misappropriation, more likely to involve corruption and financial statement fraud, and less likely to be material frauds ($\geq$ 1 percent of revenue). Finally, with respect to organization characteristics, management override frauds are less likely in U.S.

[8] Given the exploratory nature of the study, we use two-tailed tests throughout our analysis.

[9] Twenty-three observations do not have information about the fraud type. These observations can be deleted from the main model with no effect on the conclusions. Also, four observations have fraud cost = $1 in the ACFE database. These observations can be deleted from the main model with no effect on the conclusions.

[10] As explained in the Appendix, this variable is constructed based on a cut at the overall median (0.474 in this case). The number of anti-fraud items in the ACFE surveys varies somewhat over time, and we consider all items available in any given survey. In an alternative model, we replace the single anti-fraud environment variable with sixteen individual anti-fraud environment variables regularly gathered in the ACFE surveys.

settings, more likely in public companies, less likely in private companies and not-for-profits, and more likely when the anti-fraud environment is stronger.

Panel C of Table 2 presents descriptive statistics on the presence of several anti-fraud environment elements. All of these elements are more likely to be found in organizations that have experienced management override fraud than those with frauds involving a lack of controls.

Overall, Table 2 highlights numerous significant differences between management override frauds and frauds involving a lack on controls. However, these analyses should be interpreted with caution, as they are only univariate.

Logit Results

In the two sections below, we present the logit results, first for the base model (which includes a single variable for the anti-fraud environment) and then for the expanded model (which examines several specific elements of the anti-fraud environment). In both models, the dependent variable is coded 1 for management override frauds and 0 for frauds involving a lack of controls. Because the study is exploratory, we discuss differences that are significant at $p \leq 0.10$, two-tailed.

Base Model

Table 3 presents the base model logit results. The overall model is highly significant (Chi-Square = 250.4; $p < 0.01$).[11] Management override is associated with older perpetrators, who are more likely to be at the owner/executive/officer/director level. Such individuals would reasonably be in a sound position to override controls.[12] We also find evidence that management override is associated with male perpetrators and more educated perpetrators. Overall, the results for perpetrator characteristics are consistent with the notion that management override is committed by those with formal or informal authority in the organization. [See Table 3, pg. 413]

Regarding incident characteristics, management override is more likely in corruption and financial statement fraud cases. Consistent with the ACFE (2016), it appears that a lack of controls is more likely to be exploited through asset misappropriation, while fraudsters more commonly need to engage in override to commit corruption and financial statement fraud. Management override cases also are shorter than cases involving a lack of internal controls. Management override frauds are less likely to be material to the company ($\geq$ 1 percent of revenue). Given anecdotal evidence about the devastating effects of override, the results regarding material fraud may be somewhat surprising. However, it is important to note that the IFP screens out the very largest frauds from the database before it is made available to researchers. Thus, large, famous cases have been deleted from the sample.

Finally, the only two organizational characteristics that differentiate management override cases from frauds involving a lack of controls are location and the strength of the anti-fraud environment. Management override is relatively less likely in U.S. settings, which is consistent with prior research (Bishop et al., 2017) that finds collusion to be less common in the U.S. Management override and collusion may frequently occur together. When the anti-fraud environment is stronger, then fraudsters appear to be pushed to overriding controls in order to accomplish their goals. Thus, organizations having strong anti-fraud environments have not necessarily prevented fraud. Rather, they have forced fraudsters into override in order to circumvent the controls.[13]

Expanded Model

In the expanded model, we replace the single anti-fraud environment variable with numerous specific elements of the anti-fraud environment (e.g., a fraud hotline, internal audit, etc.; see the Appendix, Panel B for a listing of the anti-fraud

[11] The maximum VIF is 2.65; therefore, multicollinearity is not a concern.

[12] If we delete the perpetrator position variable and rerun the model in Table 3, the results are very similar. Fraud cost becomes positive and significant at the 0.10 level.

[13] In the main model, we have not-for-profits, other, and no organization type provided in the intercept. If we instead put governmental organizations in the intercept with other and no organization type provided, the results are very similar to those in Table 3. Public company becomes positive and significant at the 0.10 level, indicating that management override is positively related to public companies relative to governmental organizations and others in the intercept.

environment elements). This analysis is shown in Table 4, and the model is significant (Chi-square = 301.8; $p < 0.01$).[14] [See Table 4, pg. 414]

The expanded model reveals that the relevant elements of the anti-fraud environment that differentiate management override cases from cases involving a lack of controls are: an internal audit function, independent audits of the financial statements, an anti-fraud policy, and a code of conduct. Each of these anti-fraud elements is positively related to management override cases. These four elements of the anti-fraud environment appear to be foundational anti-fraud tools that cause determined fraudsters to create their fraud opportunities by overriding controls.

Apart from the anti-fraud environment results, the other results in Table 4 are similar to those in Table 3, with two exceptions.[15] The fraud length and U.S. variables are no longer significant in the expanded model.

Other Analyses

Behavioral Warning Signs

The ACFE also captures information about behavioral warning signs present in each case. These can include such elements as addiction problems, financial difficulties, etc. We added the behavioral warning signs variables to the logit model presented in Table 3 (n = 1,223 due to missing data). Only one of the behavioral warning signs variables is significant (excessive control issues regarding job/unwillingness to share duties or accept oversight) is positive and significant at the 0.05 level), and the results for the other variables are consistent with those presented in Table 3, except that male and corruption are no longer significant at the 0.10 level. Overall, it does not appear that behavioral warning signs are very useful in distinguishing management override frauds from cases involving a lack of controls, after one considers the characteristics included in the base model.

Material Frauds and Collusion

We ran two additional analyses on subsets of the sample. First, we restrict the sample only to "material" frauds (Fraud cost $\geq$ 1% of organization revenues; n = 576) and rerun the base model omitting the material fraud independent variable. The results are consistent with Table 3, except that male, corruption, and fraud length are not significant at the 0.10 level, while public company is positive and significant at the 0.10 level. Second, we restrict the sample only to collusive frauds (Bishop et al., 2017) (n = 587) and rerun the base model omitting the solo fraud independent variable. The results are consistent with Table 3, except that male, corruption, financial statement fraud, and fraud length are not significant at the 0.10 level, while private company is negative ($p < 0.10$).

Discussion and Conclusion

Despite considerable professional and regulatory attention on management override of internal controls, the absence of data has greatly constrained academic research on this important topic. Rather, much of the extant discussion of management override is based on anecdotes, often related to large, notable fraud cases. Using ACFE data, we provide the first large sample, empirical evidence of the unique nature of management override fraud cases, documenting how management override frauds differ from frauds involving a lack of internal controls. We find several differences between management override frauds and frauds involving a lack of internal controls, differences that were not documented in prior research. Thus, we provide a direct contribution to the academic literature by furthering our understanding of management override fraud.

Further, the results regarding the anti-fraud environment highlight the varying nature of fraud risks across organizations. Some organizations simply do not invest in controls and anti-fraud measures, and they can suffer major losses from fraud incidents. However, another type of organization also can be victimized: the organization that invests in anti-fraud measures (e.g., an internal audit function, independent audits of the financial statements, an anti-fraud policy, and a code of conduct) and extensive controls, but still falls prey to those who override the otherwise effective controls. Thus, the results provide

[14] The maximum VIF is 4.11; therefore, multicollinearity is not a concern.

[15] If we delete the perpetrator position variable and rerun the model in Table 4, the results are very similar. Fraud cost becomes positive and significant at the 0.10 level, and employee support programs becomes positive and significant at the 0.05 level. Internal audit is no longer significant. Also, if we put governmental organizations into the intercept instead of not-for-profits, the results are very similar, except that internal audit is no longer significant.

large sample, empirical support for the existence of two fundamentally different settings for fraud, the lack of controls setting and the override setting.

From a practice perspective, the existence of these two different fraud settings logically suggests the need for different assessments and solutions to the fraud problem in different settings, with the ultimate goal of reducing the incidence of fraud. Organizations with a lack of controls should invest to provide adequate safeguards in the organization to prevent, for example, material asset misappropriation. Such efforts would remove the "low hanging fruit" from the reach of potential fraudsters. Such organizations then would need to begin to prepare for the challenges presented by the override setting, as they eliminate the gaping holes in the control system.

For organizations with effective controls and sound anti-fraud environments, the issue is more complex. As many have noted, management designs and implements the controls, and as a result, management is in a unique position to override the controls. As discussed earlier, many parties have provided guidance or advice on dealing with management override, typically focusing on fraudulent financial reporting and efforts by auditors and board members. We fully support these prior messages, but we also believe that more can be done along two critical lines to mitigate the risk of fraud.

First, while many have pointed to journal entry review as key to identifying management override, in today's environment, 100 percent testing of transactions and controls is becoming quite feasible (see Tysiac 2015). Real-time, 100 percent testing of journal entries and controls can be a powerful tool against management override.[16] Systems now can automatically identify unusual journal entries (e.g., odd time of day, income-increasing entry in closing process, etc.) for immediate investigation. In addition, continuous controls testing can help to identify efforts to override otherwise functioning controls, such as segregation of duties violations. Overall, we encourage boards, auditors, and management to embrace technology in the fight against management override.

Second, we also believe that it is vital to consider the capability dimension of fraud, as developed by Wolfe and Hermanson (2004). Capability refers to the skill set needed to commit fraud, and it includes position and coercion skills, both of which naturally play into successful management override of controls. Similar to this notion is Crowe Horwath's (Marks and Crowe Horwath 2010) focus on arrogance and competence as additional elements to develop a Fraud Pentagon. Under either perspective, boards, auditors, and management should carefully focus on their leaders to understand who may have the skill set and inclination to override controls by coercing others to violate policy. Such a focus "on the people" can complement the technology focus above.

We also highlight an important question requiring additional inquiry, possibly through experimental research: why do firms with stronger anti-fraud environments have such relative difficulty with management override of control? Although conjecture, it is possible that such an organization becomes complacent or overconfident with its anti-fraud environment. It is also possible that management compensates for unethical behavior by promoting other aspects of the anti-fraud environment. It is important to recognize that a fraudster's goal is to deceive, deflect, or distract, and part of this charade can involve the creation of an apparently strong anti-fraud environment, so that others ultimately lower their level of skepticism and decide not to dig deeper. This can leave management the opportunity to override controls in a number of ways, including persuasion (playing against their humanity) or coercion (power or threats). Further, can real-time auditing be robustly implemented to become an effective anti-fraud deterrent when management is observed to be hostile to certain controls? Would greater, more substantive involvement of other governance mechanisms, such as enhanced internal audit or bolstered audit committee oversight, be effective at supplementing an otherwise effective anti-fraud environment and deter management from overriding the system of controls? These issues warrant further attention and development.[17]

We conclude with a broad call for additional research on the relation between internal control weakness types and the nature of occupational fraud. For example, the ACFE (2016) identifies other types of internal control weaknesses that were beyond the scope of this study, including lack of management review and poor tone at the top. We encourage additional research into these and other types of control weaknesses. Also, with respect to management override, this study reflects a first step toward understanding the unique nature of management override cases. We encourage additional research in such areas as public sector fraud and fraudulent financial reporting, so as to broaden our understanding of this important fraud element.

[16] The ACFE has started to gather data on "proactive data monitoring/analysis" as part of the anti-fraud environment. In the most recent ACFE (2018) survey, use of such an approach is relatively limited.

[17] We thank an anonymous reviewer for raising these issues.

Despite the limitations of the present study, we believe that it provides important initial empirical evidence about the unique nature of management override fraud.

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Appendix: **Variable Names and Descriptions**

Panel A: Base Model	**Description**
Dependent Variable*	Management override (override of internal controls by senior-level personnel: owner, executive, officer, director, manager, or supervisor) = 1; Lack of internal controls = 0.
Independent Variables	
Perpetrator Characteristics	
Age	The age of the principal perpetrator.
Position	The principal perpetrator's position within the victim organization: owner / executive / officer / director = 1; else 0.
Male	Principal perpetrator's gender: male = 1; else 0.
No Prior Fraud	Principal perpetrator had not been convicted of or accused of a fraud with a prior organization = 1; else 0.
Perpetrator Tenure	Principal perpetrator had been employed with the victim organization more than 5 years = 1; else 0.
> High School Education	The principal perpetrator completed more than a high school degree (e.g., some college or greater) = 1; else 0.
Incident Characteristics	
Solo Fraud	Number of perpetrators is one = 1; else 0.
Asset Misappropriation	The fraud act included asset misappropriation = 1; else 0.
Corruption	The fraud act included corruption = 1; else 0.
Financial Statement Fraud	The fraud act included financial reporting fraud = 1; else 0.
Fraud Cost – Total	The natural log of the total cost of the fraud in dollars.
Length of Fraud	The amount of time in months that the scheme had been ongoing before it was initially discovered. The natural log of this variable is used in the logistic regression analyses.
Material Fraud	Fraud cost $\geq$ 1% of organization revenues = 1; else 0.
Organization Characteristics	
United States	The fraud occurred in the United States = 1; else 0.
Organization Size	The natural log of the victim organization's approximate gross annual revenue (or budget, if a government entity) in U.S. dollars at the time the fraud occurred.
Organization Type:	
Public Company	Publicly held company = 1; else 0.
Private Company	Privately held company = 1; else 0.
Governmental Organization	Government agency = 1; else 0.
Anti-fraud Environment	The quality of the anti-fraud environment is calculated as follows: Step 1: calculate the percentage of anti-fraud controls in place from ACFE survey Q51 and one item from Q53; Step 2: the anti-fraud environment is = 1, if the percentage from step 1 $\geq$ overall median percentage (0.474); else 0.

* The ACFE (Q56) reports on the "override of internal controls," not management override. To create "management override," the ACFE's "override of existing internal controls" was multiplied by two ACFE categories: Manager/supervisor or Owner/executive/officer/director. The result is the override of internal controls by senior-level personnel: Owner, executive, officer, director, manager, or supervisor.

Panel B: Anti-Fraud Environment Details (Q51 of ACFE Survey, except last item is Q53)	**Description**
A fraud hotline	A fraud hotline or other anonymous reporting mechanism = 1; else 0.
Internal audit	An internal audit or fraud examination department = 1; else 0.
Surprise audits	Surprise audits performed on a frequent basis = 1; else 0.
Independent audits - F/S	Independent audits of the organization's financial statements = 1; else 0.
Independent audits - IC	Independent audits of the organization's internal controls over financial reporting = 1; else 0.
Management review	Regular management review = 1; else 0.
Mandatory rotation	Mandatory rotation of job duties or mandatory vacations = 1; else 0.
Rewards for whistleblowers	Rewards for whistleblowers = 1; else 0.
Fraud / ethics training – Employees	A fraud awareness or ethics training program for employees = 1; else 0.
A fraud or ethics training – Management	A fraud awareness or ethics training program for managers/executives and = 1; else 0.
Anti-fraud policy	A formal anti-fraud or fraud prevention policy = 1; else 0.
Code of conduct	A formal code of conduct = 1; else 0.
Audit committee	An independent audit committee = 1; else 0.
Management certification - F/S	Management certification of the organization's financial statements = 1; else 0.
Employee support programs	Employee support programs = 1; else 0.
Background checks	The victim organization conducted a background check on the perpetrator prior to the investigation of this fraud (a). = 1; else 0.

Note: Many variable names/descriptions in Table 1 are used or adapted from the ACFE studies, Hermanson et al., (2017), and/or Bishop et al., (2017) (without quotes).

Table 1: Sample Selection

Panel A: Full Sample

Override of existing internal controls	1,466	19.2%
Lack of internal controls (such as lack of physical safeguards or lack of segregation of duties, etc.)	2,561	33.5%
	4,027	
Lack of competent personnel in oversight roles	526	6.9%
Poor tone at the top (ethical tone set by management)	693	9.1%
Lack of independent checks/audits	334	4.4%
Lack of management review (of internal controls, processes, accounts, or transactions)	1,427	18.6%
Lack of Employee fraud education	162	2.1%
Lack of clear lines of authority	122	1.6%
Lack of reporting mechanism (e.g., hotline)	37	0.5%
Other	325	4.2%
	7,653	100.0%
Not answered and surveys where question was not asked	2,072	
Total sample	9,725	

Panel B: Testing Sample

Override of existing internal controls	1,466	19.2%
Perpetrator of override fraud not Owner/executive/officer/director or Manager/supervisor	(661)	
Management override of existing internal controls	805	10.5%
Lack of internal controls (such as lack of physical safeguards or lack of segregation of duties, etc.)	2,561	33.5%
	3,366	
Missing independent variable data	(1,998)	
Testing sample	1,368	

Note: The ACFE surveys ask, “According to the CFE the following was the most important contributing factor that allowed this fraud to occur? (Choose one)”

Table 2: Descriptive Statistics

Panel A: Continuous Variables

Management Override (n = 374)	**Mean**		**Median**	**Std Dev**	**Min**	**Max**
Age	44.6		45.0	8.53	22.0	70.0
Size	18.8		18.8	3.45	0.0	30.6
Number of Perpetrators	2.8		2.0	4.33	1.0	50.0
Fraud Length	25.8		18.0	27.08	1.0	180.0
Fraud Cost	12.5		12.4	2.05	6.2	18.6
Lack of Internal Controls (n = 994)	**Mean**		**Median**	**Std Dev**	**Min**	**Max**
Age	41.8	***	41.0	10.00	18.0	80.0
Size	17.1	***	16.6	3.64	0.0	28.3
Number of Perpetrators	2.3	*	1.0	5.41	1.0	120.0
Fraud Length	31.0	***	24.0	40.83	1.0	700.0
Fraud Cost	12.0	***	12.0	2.24	0.0	19.1

Panel B: Dichotomous Variables

	Management Override (n = 374)		**Lack of Internal Controls (n = 994)**		
	Freq	**Percent**	**Freq**	**Percent**	
Perpetrator Characteristics					
Position: Owner / Executive / Officer / Director	90	24.1%	123	12.4%	***
Male	293	78.3%	589	59.3%	***
No Prior Fraud	306	81.8%	770	77.5%	*
Perpetrator Tenure	196	52.4%	471	47.4%	*
> High School Ed.	303	81.0%	664	66.8%	***
Incident Characteristics					
Solo Fraud	172	46.0%	609	61.3%	***
Asset Misappropriation	310	82.9%	906	91.1%	***
Corruption	181	48.4%	287	28.9%	***
Financial Statement Fraud	44	11.8%	65	6.5%	***
Material Fraud	105	28.1%	471	47.4%	***
Organization Characteristics					
United States	169	45.2%	611	61.5%	***
Organization Type:*					
Public Company	147	39.3%	196	19.7%	***
Private Company	119	31.8%	459	46.2%	***
Governmental Org.	56	15.0%	169	17.0%	
Not-for-Profit	34	9.1%	142	14.3%	**
Anti-fraud Environment	237	63.4%	369	37.1%	***

* The intercept includes forty-six observations with no organization type provided, as well as not-for-profits and other.

Panel C: Anti-Fraud Environment Details (Dichotomous)

Anti-Fraud Environment Details	Management Override (n = 374)		Lack of Internal Controls (n = 994)		
	Freq	**Percent**	**Freq**	**Percent**	
A fraud hotline	232	62.0%	379	38.1%	***
Internal audit	300	80.2%	527	53.0%	***
Surprise audits	125	33.4%	213	21.4%	***
Independent audits - F/S	337	90.1%	689	69.3%	***
Independent audits - IC	263	70.3%	491	49.4%	***
Management review	244	65.2%	428	43.1%	***
Mandatory rotation	73	19.5%	105	10.6%	***
Rewards for whistleblowers	35	9.4%	57	5.7%	**
Fraud or ethics training - Employees	183	48.9%	306	30.8%	***
Fraud or ethics training - Management	186	49.7%	313	31.5%	***
Anti-fraud policy	193	51.6%	290	29.2%	***
Code of conduct	325	86.9%	598	60.2%	***
Audit committee	261	69.8%	459	46.2%	***
Management certification - F/S	278	74.3%	508	51.1%	***
Employee support programs	190	50.8%	412	41.4%	***
Background checks	190	50.8%	386	38.8%	***

Significance: $\leq$ 0.01 ***, $\leq$ 0.05 **, $\leq$ 0.10 * (two tailed).
In Panels B and C, Chi-square tests evaluate the yes/no mix by group.

Table 3: Logit Results—Base Model

Management Override v Lack of Internal Controls	**Logit**		
Variable	**Estimate**	**Odds Ratio**	**p-value**
Intercept	-3.4500		**<0.01**
Perpetrator Characteristics			
Age	0.0318	1.032	**<0.01**
Position: Owner / Executive / Officer / Director	1.0198	2.773	**<0.01**
Male	0.2888	1.335	**0.08**
No Prior Fraud	0.1014	1.107	0.55
Perpetrator Tenure	-0.0245	0.976	0.87
> High School Ed.	0.4496	1.568	**0.07**
Incident Characteristics			
Solo Fraud	-0.0226	0.978	0.89
Asset Misappropriation	-0.0520	0.949	0.80
Corruption	0.4071	1.502	**0.01**
Financial Statement Fraud	0.4810	1.618	**0.05**
Fraud Cost	0.0412	1.042	0.32
Length of Fraud	-0.1474	0.863	**0.04**
Material Fraud	-0.7403	0.477	**<0.01**
Organization Characteristics			
United States	-0.4011	0.670	**<0.01**
Size	0.0073	1.007	0.80
Public Company	0.2754	1.317	0.23
Private Company	-0.1811	0.834	0.39
Governmental Org.	-0.1800	0.835	0.46
Anti-fraud Environment	0.8897	2.434	**<0.01**
Number of Observations Used	1,368		
Model Chi-Square	250.4		**<0.01**
2 Log L: Intercept	1,604.9		
-2 Log L: Intercept & Covariates	1,354.6		
Hosmer-Lemeshow (GOF)	0.52		
Model Pseudo R-Square	15.6%		
Management Override	374		
Lack of Internal Controls	994		

Note 1: P-values are two-tailed. Bold = $p \leq 0.10$.
Note 2: We manually computed the Box-Tidwell test for non-linearity. Age and fraud cost showed signs of non-linearity. The logistic regression was re-run (not presented) by adding a squared term for age and substituting the natural log of age into the model. The model had been run using the natural log of fraud cost, so no changes were made to the model related to fraud cost. The results are qualitatively the same as those presented. We used "linktest" in STATA to test the model for linearity, and the model passed.
Note 3: We find no evidence of influential observations using SAS "INFLUENCE" (see Pregibon 1980).

Table 4: Logit Results—Expanded Model Including Anti-Fraud Elements

Management Override v Lack of Internal Controls	**Logit**		
Variable	**Estimate**	**Odds Ratio**	**p-value**
Intercept	-5.1311		**<0.01**
Perpetrator Characteristics			
Age	0.0380	1.039	**<0.01**
Position: Owner / Executive / Officer / Director	1.0992	3.002	**<0.01**
Male	0.2985	1.348	**0.08**
No Prior Fraud	0.0345	1.035	0.84
Perpetrator Tenure	-0.0268	0.974	0.86
> High School Education	0.4236	1.528	**0.01**
Incident Characteristics			
Solo Fraud	-0.0529	0.949	0.74
Asset Misappropriation	0.0114	1.011	0.96
Corruption	0.3358	1.399	**0.04**
Financial Statement Fraud	0.4962	1.642	**0.05**
Fraud Cost	0.0437	1.045	0.30
Length of Fraud	-0.0960	0.908	0.18
Material Fraud	-0.5745	0.563	**0.01**
Organization Characteristics			
United States	-0.1643	0.849	0.32
Size	-0.0038	0.996	0.90
Public Company	0.1347	1.144	0.57
Private Company	-0.1810	0.834	0.41
Governmental Org.	-0.2808	0.755	0.27
Anti-Fraud Environment			
A fraud hotline	0.1379	1.148	0.48
Internal audit	0.3683	1.445	**0.09**
Surprise audits	0.0371	1.038	0.83
Independent audits – F/S	0.6831	1.980	**<0.01**
Independent audits – IC	-0.0759	0.927	0.68
Management review	0.2213	1.248	0.19
Mandatory rotation	0.1180	1.125	0.56
Rewards for whistleblowers	0.1161	1.123	0.66
Fraud or ethics training – Employees	-0.1059	0.899	0.69
Fraud or ethics training – Management	0.0962	1.101	0.71
Anti-fraud policy	0.3088	1.362	**0.08**
Code of conduct	0.8023	2.231	**<0.01**
Audit committee	-0.1877	0.829	0.33
Management certification – F/S	0.2096	1.233	0.25
Employee support programs	-0.2436	0.784	0.16
Background checks	0.3500	1.419	**0.02**
Number of Observations Used	1,368		
Model Chi-Square	301.8		**<0.01**
2 Log L: Intercept	1,604.9		
-2 Log L: Intercept & Covariates	1,303.2		
Hosmer-Lemeshow (GOF)	0.15		
Model Pseudo R-Square	18.8%		
Management Override	374		
Lack of Internal Controls	994		

Note 1: P-values are two-tailed. Bold = $p \leq 0.10$.

Note 2: We manually computed the Box-Tidwell test for non-linearity. Age and fraud cost showed signs of non-linearity. The logistic regression was re-run (not presented) by adding a squared term for age and substituting the natural log of age into the model. The model had been run using the natural log of fraud cost, so no changes were made to the model related to fraud cost. The results are qualitatively the same as those presented. We used "linktest" in STATA to test the model for linearity, and the model passed.
Note 3: We find no evidence of influential observations using SAS "INFLUENCE" (see Pregibon 1980).