

The consequences to managers for financial misrepresentation [☆]

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Abstract

We track the fortunes of all 2,206 individuals identified as responsible parties for all 788 Securities and Exchange Commission (SEC) and Department of Justice (DOJ) enforcement actions for financial misrepresentation from January 1, 1978 through September 30, 2006. Fully 93% lose their jobs by the end of the regulatory enforcement period. Most are explicitly fired. The likelihood of ouster increases with the cost of the misconduct to shareholders and the quality of the firm's governance. Culpable managers also bear substantial financial losses through restrictions on their future employment, their shareholdings in the firm, and SEC fines. A sizeable minority (28%) face criminal charges and penalties, including jail sentences that average 4.3 years. These results indicate that the individual perpetrators of financial misconduct face significant disciplinary action.

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1. Introduction

Do managers suffer personal consequences for cooking the books? Much popular sentiment holds that they do not. “They lie, they cheat, they steal and they’ve been getting away with it for too long,” claims a *Fortune* magazine cover article about financial misrepresentation.¹ This perception helps explain several features of the Sarbanes-Oxley Act of 2002 (SOX), which increased criminal penalties for financial fraud, created new

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¹*Fortune* magazine, March 18, 2002 cover and accompanying story headline.

classes of financial fraud, and increased CEOs' and CFOs' personal exposure to liability for financial misrepresentation.

Prior research shows that firm shareholders endure large losses when their firms are accused of misconduct.² But there is little evidence on whether the individual perpetrators bear direct costs. Whether they do has important implications for public policy and corporate governance. Evidence that perpetrators suffer personal consequences would support the view that the current mix of firm governance, managerial labor markets, and regulatory oversight does, in fact, discipline illegal behavior. Evidence to the contrary would suggest that most firms' governance is ineffective in deterring managerial misconduct, and would support arguments for additional regulatory intervention.³

We examine a range of consequences to individuals who are caught cooking the firm's financial records. Our data consist of a unique, hand-collected sample of all 788 SEC and DOJ enforcement actions for financial misrepresentation from January 1, 1978 through September 30, 2006. Through public releases and court filings, the SEC and DOJ identify the individuals responsible for the misrepresentation, the interval over which the violation occurred, and (usually) the date the misconduct was revealed to the public. This information allows us to identify the perpetrators with a high degree of precision and to determine whether they: (1) lose their jobs, (2) are barred from similar employment with other companies, (3) lose wealth through their stockholdings, (4) are assessed fines by the SEC, and (5) are subject to criminal charges filed by the DOJ.

Several previous papers examine one aspect of the potential costs borne by managers—whether they lose their jobs. But the evidence is mixed, with some papers inferring that perpetrators frequently lose their jobs and others concluding that they do not.⁴ We show that all of these papers use an empirical method that is not well suited for the task. As a result, they omit the ousters of many culpable managers (Type I error) and incorrectly attribute the turnover of innocent managers to the firm's misconduct (Type II error). In Section 2 we show that the procedure used by [Desai, Hogan, and Wilkins \(2006\)](#), for example, generates a Type I error of 47.2% and a Type II error of 66.1% when applied to our data. That is, it misses 47.2% of all managers who cooked the books and lost their jobs, while 66.1% of the turnovers it tallies involve managers who are not identified by the SEC as culpable parties. We hasten to add that our criticism of these previous papers is not of their logic or execution. Such efforts used the best available approach and lacked the data we now have on hand.

Our analysis shows that most culpable managers do, in fact, lose their jobs. Of 2,206 individuals identified by regulators as culpable parties, 93.4% lose their jobs during the violation or enforcement periods. Most are fired, indicating that they do not leave their jobs voluntarily. We also find that the likelihood of removal is positively related to the size of the misconduct's harm to shareholders and the quality of the firm's governance. In particular, the likelihood of removal is positively related to the board's independence and the holdings of outside blockholders.

Culpable individuals suffer consequences beyond losing their jobs. The SEC has barred or is in the process of barring 693 individuals (31%) from future employment as an officer or director in a public firm. The average culpable manager owns 6.5% of the firm's equity and experiences a loss in stock value of \$15.3 million when the misconduct is revealed. SEC fines average an additional \$5.7 million. In addition, 617 (28%) of these individuals have been charged with criminal violations. To date, 469 of these individuals have pleaded guilty or been convicted and sentenced to an average 4.3 years in jail and 3 years of probation. In total, the evidence indicates that the large majority of managers who are caught cooking the books lose their jobs. Many also face

²See [Karpoff and Lott \(1993\)](#), [Alexander \(1999\)](#), the US General Accounting Office (GAO) (2002), and [Karpoff, Lee, and Martin \(2008a\)](#).

³Summaries of such arguments are found in [Arlen \(2007\)](#) and [Jackson and Roe \(2007\)](#). See [Atkins \(2005\)](#) for an SEC Commissioner's argument for a greater reliance on individual penalties rather than firm-level penalties, and [La Porta, Lopez-de-Silanes, and Shleifer \(2006\)](#) for evidence on enforcement regimes around the world. For an overview of the debate over the optimal mix of individual and firm-level penalties, see [Arlen and Carney \(1992\)](#), [Polinsky and Shavell \(1993\)](#), and [Arlen and Kraakman \(1997\)](#). This literature implies that firm-level penalties, i.e., those paid by shareholders, can be efficient if internal mechanisms work to discipline culpable managers, because firm-level monitoring and control can be less costly than direct monitoring by regulators.

⁴See [Feroz, Park, and Pastena \(1991\)](#), [Agrawal, Jaffe, and Karpoff \(1999\)](#), [Alexander \(1999\)](#), [Beneish \(1999\)](#), [Arthaud-Day, Certo, Dalton, and Dalton \(2006\)](#), and [Desai, Hogan, and Wilkins \(2006\)](#). These papers are discussed in more detail in Section 2.

diminished employment prospects, monetary and non-monetary sanctions, and criminal penalties. Overall, the consequences to these individuals are very significant.

This paper proceeds as follows. In Section 2 we review related research and describe the problems that arise in previous attempts to examine whether managers lose their jobs when they engage in corporate misconduct. Section 3 describes our data and the protracted process of most regulatory enforcement actions for financial misrepresentation. In Section 4 we describe the job termination and attrition rates of individuals named as culpable parties by the SEC and DOJ in their enforcement proceedings. Section 5 presents the results of multivariate tests that examine the factors that contribute to whether a manager loses his or her job for cooking the books. Section 6 documents other consequences to the culpable managers, including penalties imposed by the SEC and DOJ, non-monetary sanctions, jail sentences, and losses through their shareholdings in the affected company. Section 7 provides concluding remarks.

2. Previous research

Several papers examine whether managers lose their jobs when their firms engage in misconduct and are discovered. Feroz, Park, and Pastena (1991) report that 72% of the firms that were subjects of SEC Accounting and Auditing Enforcement Releases (AAERs) between 1982 and 1989 fired at least one manager. Similarly, Desai, Hogan, and Wilkins (2006) and Arthaud-Day, Certo, Dalton, and Dalton (2006) conclude that managers tend to lose their jobs following the earnings restatements in the database assembled by the US General Accounting Office (now the Government Accountability Office (GAO), 2003).

In contrast, Beneish (1999) concludes that, following earnings overstatements, “managers’ employment losses ... are similar in firms that overstate earnings and in firms that do not.” Similarly, Agrawal, Jaffe, and Karpoff (1999) examine top executive turnover among firms identified in the “Fraud” and “Crime” listings in the General Section of the *Wall Street Journal Index*. In multivariate tests that control for other influences on managerial turnover, they conclude that top executive turnover does not increase significantly following the discovery of fraud.⁵

Although they reach different conclusions, these studies use a similar empirical approach. Each identifies a specific event (e.g., an earnings restatement or news of a legal violation) and measures turnover among a fixed set of executive titles (e.g., CEO, President, and Board Chair) during a fixed window around the event. Any unusual turnover, controlling for contemporaneous turnover in matched control firms and other firm-specific characteristics, is attributed to the misconduct.

Consider, for example, USA Detergents, Inc., one of the events in the GAO (2003) database that is examined by Desai, Hogan, and Wilkins (2006) and Arthaud-Day, Certo, Dalton, and Dalton (2006). Eight senior managers at USA Detergents, Inc. conspired to inflate income in the last two quarters of 1996, and the company corrected these misrepresentations by restating its earnings on August 11, 1997. Desai, Hogan, and Wilkins (2006) count turnovers among the CEO, President, and Board Chair during the two-year period after the restatement date. For this firm there is one such turnover, involving President Giulio Perillo.

One problem with this approach is that Perillo was not a party to the misrepresentation and his turnover should not have been counted. Rather, he was appointed interim President and Chief Operating Officer 11 days before the restatement date and resigned six months later. We label this a Type II error in Desai, Hogan, and Wilkins’s approach because it counts a turnover that it should not. This approach also incurs a Type I error whenever it misses the turnover of a culpable manager. In the USA Detergents, Inc. case, all eight of the culpable managers left the firm. The Desai, Hogan, and Wilkins (2006) approach misses six of these individuals because they do not hold the titles of CEO, President, or Board Chair. It also misses the departure of President Frank Valdez, named by the SEC as a culpable party, because he left the firm before the date in the GAO database. And it misses the departure of CEO and Chairman Uri Evan, also identified by the SEC as

⁵Alexander (1999, Table 4) also reports evidence of employee or managerial turnover in a large fraction of firms accused of a federal crime (see also Alexander, 2007). In a new working paper, Agrawal and Cooper (2007) examine turnover among top executives in firms that announce earnings-decreasing restatements. The empirical method in this paper is similar to those of the papers discussed in this section. Helland (2006) and Fich and Shivdasani (2007) examine turnover among directors and officers of firms targeted by securities class actions for fraudulent activities.

a culpable party, because he did not leave the firm until the SEC served him a “Wells Notice” over four years after the GAO date.⁶

The USA Detergents, Inc. example illustrates a systematic tendency in prior studies to misclassify managerial turnover. To measure the magnitude of these errors, we replicated the [Desai, Hogan, and Wilkins \(2006\)](#) empirical method for the 41 firms in the GAO database that also are in our sample of firms targeted by SEC enforcement actions. There are 66 CEO, President, or Board Chair turnovers over a two-year event window starting from the GAO-identified restatement date. Applying the screening process used by [Desai, Hogan, and Wilkins](#), we eliminate ten of these turnovers due to the executive’s age or because the firm was acquired. Of the remaining 56 executive turnovers, regulators identified 19 as perpetrators and 37 not as perpetrators. This yields a 66.1% Type II error rate ($= 37/56$). Our data also indicate that 36 perpetrators were associated with these firms (and lost their jobs), so the event method fails to detect 17 ($= 36-19$) of these perpetrators, resulting in a 47.2% Type I error rate ($= 17/36$).

Applying the [Desai, Hogan, and Wilkins](#) procedure to our full sample reveals an even larger Type I error of 67%. The [Agrawal, Jaffe, and Karpoff \(1999\)](#) and [Beneish \(1999\)](#) procedures use longer event windows and therefore have smaller Type I error rates of 36% and 52%, respectively. But because of their longer event windows, these latter studies undoubtedly have larger Type II errors. (We do not calculate the exact Type II errors for these studies because we would have to replicate their data sets to do so.)

An additional problem results if researchers do not control for the number of executives that occupy the pre-set positions. Put succinctly, the probability of observing a turnover in any given year is greater at firms with three individuals occupying the chairman, president, and CEO posts than at firms with one individual occupying all three posts. [Desai, Hogan, and Wilkins \(2006\)](#), for example, find that at least one turnover occurs among the executives occupying the positions of chairman, president, and CEO in 87 of 146 firms (59.6%) in the two years following a restatement, compared to 51 (34.9%) in a control sample matched on industry, firm size, and firm age. This difference may be influenced by the fact that the total number of executives in the top three positions is 340 in the restatement sample, but only 181 in the control firms. Consistent with this critique, the variable that [Agrawal, Jaffe, and Karpoff \(1999\)](#) use in their analysis to control for the number of executives per firm produces the most significant coefficient in their regression.⁷

In summary, previous studies of misconduct-related turnover use data that have extremely large classification errors. This may explain why these otherwise meticulous studies reach conflicting conclusions. In the following sections we address these problems by tracking the employment of the individuals identified by the SEC and DOJ as the perpetrators of the misconduct. We also document these individuals’ wealth losses from their equity positions in the firm, as well as the explicit monetary and non-monetary penalties imposed by regulators, and criminal charges.

3. Data on culpable manager turnover

3.1. The enforcement process

Our sample consists of all enforcement actions initiated by the SEC and DOJ from January 1, 1977 through September 30, 2006 for violation of one or more of three provisions of the Securities Exchange Act of 1934,

⁶To repeat, our criticism is of the data available to prior researchers, not of their research design or execution. We highlight the approach taken by [Desai, Hogan, and Wilkins \(2006\)](#) because it is the most recent of these papers. [Desai, Hogan, and Wilkins \(page 90\)](#) explicitly recognize that their approach will miss some relevant turnovers, i.e., have a positive Type I error.

⁷Even tests that focus exclusively on the CEO position have this problem, because some firms have more than one CEO over the observation period. Yet another problem arises when researchers erroneously assume that all AAERs represent actions taken against perpetrators of misconduct. Some AAERs are issued to forewarn firms of practices that may lead to disciplinary actions. For example, the SEC initiated an administrative proceeding relating to a material overstatement by a Japanese subsidiary of Boston Scientific. (See Securities Exchange Act Release 34-43183, also assigned AAER-1295.) Upon discovery, the firm promptly undertook remedial actions, made appropriate public disclosures, and cooperated with the SEC investigation. The SEC undertook no disciplinary action against the firm or any individual, but issued the AAER to put firms on notice to adjust their internal controls to avert similar problems. A post-event method using AAERs erroneously would count the turnover of Peter M. Nicholas (founder, CEO, Chairman, and President), who relinquished the titles of CEO and President to James Tobin approximately four months after the GAO date. We can find no evidence that Nicholas’ departure was related to the SEC’s administrative proceeding.

as amended by the Foreign Corrupt Practices Act of 1977: (i) 15 U.S.C. §§ 78 m(b)(2)(A), which requires firms to keep and maintain books and records that accurately reflect all transactions; (ii) 15 U.S.C. §§ 78 m(b)(2)(B), which requires firms to devise and maintain a system of internal accounting controls; and (iii) 15 U.S.C. §§ 78 m(b)(5), which establishes that no person shall knowingly circumvent or knowingly fail to implement a system of internal accounting controls or knowingly falsify any book, record, or account. All enforcement actions initiated by the SEC for financial misrepresentation include charges brought under at least one of these three provisions. These enforcement actions typically include other charges, on which we report in Table 1.

Table 1

Regulatory enforcement actions for financial misrepresentation

This table summarizes the number of firms, individuals, cases, and SEC releases related to a comprehensive sample of all 788 enforcement actions for financial misrepresentation from January 1, 1978 through September 30, 2006. All violations include actions under the books and records, internal controls, or circumvention provisions of the Securities and Exchange Commission Act of 1934, as amended by the Foreign Corrupt Practices Act of 1977. The enforcement actions center around 788 target firms at which the misrepresentation occurred. Most enforcement actions involve charges brought under multiple cases, and Panel B reports the number of unique administrative proceedings, civil litigation, and criminal case numbers. As presented in Panel C, each case has one or more named respondents (firms or individuals). Panel D presents the number of unique SEC release numbers assigned to public releases concerning the enforcement actions.

Panel A: Enforcement actions	<i>N</i>
Total number of enforcement actions	788
SEC involved	782
DOJ involved	240
Number with books and records violations (15 U.S.C. §§ 78 m(b)(2)(A))	747
Number with internal controls violations (15 U.S.C. §§ 78 m(b)(2)(B))	675
Number with circumvention violations (15 U.S.C. §§ 78 m(b)(5))	334
Number that include fraud violations	622
Number that include insider trading violations	159
Number that include Sarbanes-Oxley violations	40
Panel B: SEC and DOJ proceedings	
Administrative	1,157
Civil	1,130
Criminal	457
Panel C: Respondents	
Total number of firms named as respondents	916
Number of actions in which the subject firm is named as a respondent	607
Number of subsidiary/parent firms named as respondents	42
Number of related agent firms named as respondents	267
Numbers of individuals named as respondents	3,164
Employees	2,206
CEOs	515
Top 3 Executives (CEO, President, or Board Chair)	723
All executive employees	1,433
Non-executive employees	773
Non-employees (agents)	958
Panel D: SEC enforcement releases (total = 3,130)	
Administrative Releases	1,526
Securities Act Releases	189
Exchange Act Releases	1,285
Investment Advisers Act Releases	13
Investment Company Act Releases	8
Public Utility Holding Company Act Releases	2
Administrative Law Judge Releases	29
Litigation Releases	1,604
Number receiving a secondary designation as an Accounting and Auditing Enforcement Release (AAER)	1,959

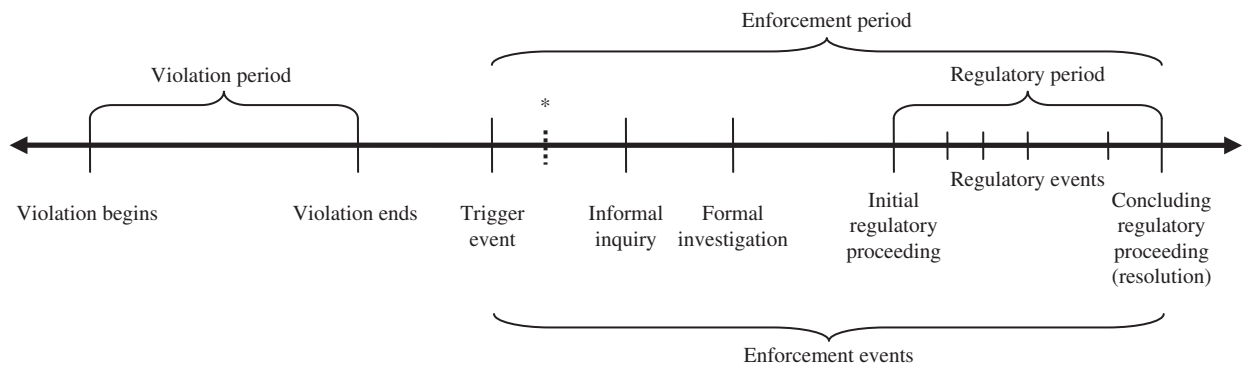


Fig. 1. Timeline of an enforcement action. *The initial filing of a private lawsuit frequently occurs soon after the trigger event.

Fig. 1 depicts the typical sequence of events surrounding a federal securities enforcement action.⁸ We use the term “action” to signify the full chain of public releases that relate to a specific company where the books are suspect. Enforcement actions commonly include a mixture of administrative, civil, and criminal proceedings that may implicate the firm itself, other affiliated firms, or individuals employed by or otherwise associated with the firm. Most of these proceedings are publicly disclosed when the SEC files Administrative Releases or Litigation Releases. Some civil and criminal proceedings initiated by the DOJ are disclosed via press releases.

Enforcement actions often follow a conspicuous announcement related to the firm that draws the SEC’s scrutiny. These trigger events generally are firm-initiated disclosures of potential problems. Common trigger events include self-disclosures of malfeasance, restatements, auditor departures, and unusual trading. Investigations by other federal agencies such as the Department of Defense and Environmental Protection Agency are another source of trigger events, along with delayed SEC filings, management departures, whistleblower charges, and routine reviews by the SEC. Our collection process back-fills the trigger events based on references found in subsequent federal filings. Such filings identify specific trigger events and dates in 575, or 73.0%, of the enforcement actions.

We find a much higher incidence of firm-initiated trigger announcements than do Dyck, Morse, and Zingales (2007), who attribute more discovery of “frauds” to people who are outside the firm. This may represent differences in our samples. The Dyck et al. sample is based on the Stanford Securities Class Action Clearinghouse. As reported in Karpoff, Lee, and Martin (2008b), fewer than 50% of the enforcement actions in our sample are accompanied by securities class action or derivative lawsuits. Likewise, many class action lawsuits have no accompanying SEC enforcement action.

Following a trigger event the SEC gathers information through an informal inquiry that, if warranted, grows to a formal investigation. During the investigation period the targeted firm may issue a press release indicating that it is the target of an SEC informal inquiry or formal investigation. These press releases occur an average of seven months after the violation period ends.

After an investigation, the SEC decides to drop the case, proceed with an administrative or civil action, and/or refer it to the DOJ for parallel criminal prosecution. If civil action is warranted, the SEC will send the target(s) a Wells Notice, indicating its intent to initiate civil proceedings against the firm and/or selected individuals. Dropped cases are not reported and do not appear in the sample. Some enforcement actions are settled quickly and resolved simultaneously upon the SEC’s initial release of information about the case. But most actions unfold over multiple regulatory proceedings. The SEC makes all of the administrative and most of the civil charges against firms and individuals, while the DOJ pursues the remaining civil charges and all of the criminal charges.

Our information regarding enforcement activities is collected from several sources. We use Lexis-Nexis’ FEDSEC:SECREL library for information on SEC securities enforcement actions, the FEDSEC:CASES

⁸For more information, see the Securities and Exchange Commission (1973), Lucas (1997), Cox, Thomas, and Kiku (2003), or Karpoff, Lee, and Martin (2008a).

library for information on litigated enforcement actions, and the Academic Business News, General News, and Legal Cases libraries for news releases (frequently issued by defendant firms) about each enforcement action. Our second source of information is the SEC's Web site at <http://www.sec.gov>, which contains all SEC public releases relating to enforcement actions since September 19, 1995. Our third source is the DOJ itself, which provided us with further data on enforcement outcomes. Our fourth source, for information on several high-profile cases, is the DOJ's Corporate Fraud Task Force Web site at <http://www.usdoj.gov>.

For each enforcement action we collect the following information from the proceedings' filings: the date and type of proceeding, the period over which the violation occurred, each law or rule violated, job titles, names, ages, and dates of employment of all individual respondents, and all penalties and sanctions against each respondent. We also record the event that triggered the action if it is provided in the filings. These data are supplemented by searching the firms' public filings and Lexis-Nexis for the first public revelation of an informal inquiry or formal investigation by the SEC or DOJ and the date a Wells Notice was received. If the firms do not appear in the Center for Research in Security Prices or Compustat databases, trading and financial information is gathered manually from the companies' SEC filings, Compact Disclosure/SEC, regulatory proceedings, and Lexis-Nexis. Board data, insider holdings, and blockholder ownership are gathered from regulatory proceedings, proxy statements, or 10-K SEC filings.

3.2. Data on enforcement activities

Table 1 summarizes the events that constitute our comprehensive sample of SEC and DOJ enforcement actions for financial misrepresentation. As indicated in Panel A, there are 788 enforcement actions, 782 involving the SEC through administrative and civil proceedings and 240 involving the DOJ through civil and criminal proceedings. Most of these actions involve violations of more than one of the three key provisions that are triggered in financial misrepresentation charges; 747 involve violations of the books and records provision, 675 involve violations of the internal controls provision, and 334 involve violations of the circumvention provision. In addition, 622 of the actions include charges of fraud under the 1933 Securities Act or 1934 Securities Exchange Act. Fraud charges indicate that regulators believe at least one person acted with intent to misrepresent the firm's financials. A total of 159 of the 788 actions include charges of insider trading. Although 320 of the 788 actions (40.6%) have violation periods that include the post-SOX period, only 40 of these actions (12.5%) invoke SOX provisions.

Most of the 788 enforcement actions involve a complicated mix of charges brought under the SEC's and DOJ's different types of authority. Panel B of Table 1 tallies the different administrative, civil, and criminal proceedings among the 788 enforcement actions. On average, the SEC and DOJ together bring action under 1.5 different administrative proceedings, 1.4 civil proceedings, and 0.6 criminal proceedings per enforcement action.

Each of the 788 enforcement actions can involve more than one culpable firm or individual. As reported in Panel C, there are a total of 916 firms named, including the target firms, subsidiaries or parent firms, and firms that aided in the violation such as auditors, brokers, bankers, consultants, attorneys, vendors, suppliers, and customers. Target firms are named in only 607 of the 788 actions. Thus, 181 of the target firms were not named either because they were not deemed culpable, or they ceased operations as a result of bankruptcy or acquisition. Of the 309 non-target firms named, 42 were either a subsidiary or parent of the target firm and 267 were non-related agent firms.

A total of 3,164 individuals were named as respondents, including 2,206 employees of the target firms and 958 non-employee agents. In the following analyses we focus on the consequences to the 2,206 culpable employees. Of these, 515 were CEOs and 723 held one or more of the Top 3 titles of CEO, President, or Board Chair. A total of 1,433 were executives of any type (including the Top 3), and 773 were non-executive employees.

Panel D tallies by classification the 3,130 regulatory enforcement releases issued as part of the 788 enforcement actions. A total of 1,604 Litigation Releases, designated with an LR- prefix, were issued for proceedings involving civil lawsuits brought by the SEC in federal court. A total of 1,526 Administrative Proceedings were issued under the auspices of the various acts that empower the SEC. The Administrative Proceedings fall in six categories: 189 violations of the 1933 Securities Act (designated by a 33- prefix); 1,285

Table 2

Age and job tenure of respondents for SEC and DOJ enforcement actions

This table presents summary information on the age and job tenure of individual respondents related to all 788 SEC and DOJ enforcement actions for financial misrepresentation from January 1, 1978 through September 30, 2006. Age, tenure at firm, and tenure at position are measured in years as of the beginning of the violation period.

	CEO only		Top 3 executives		All executives		Non-executive employees		All employees	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Median	Mean
<i>N</i>	515		723		1,433		773		2,206	
Age	51.9	51.0	52.0	51.0	49.6	49.0	44.9	44.0	48.3	48.0
Tenure at firm	6.7	4.5	6.0	4.0	4.5	2.3	1.5	0.0	3.4	0.9
Tenure in position	4.5	2.6	4.2	1.8	3.0	0.8	0.9	0.0	2.3	0.0

violations of the 1934 Securities Exchange Act (designated by a 34- prefix); 13 violations of the 1940 Investment Advisers Act (designated by an IA- prefix); eight violations of the 1940 Investment Company Act (designated by an IC- prefix); and two violations of the 1935 Public Utility Holding Act (designated by a 35- prefix). Releases that invoke more than one act have separate release numbers assigned to the same release with the primary release number determined by the earliest act's passage date. Twenty-nine additional releases involve opinions and orders issued by Administrative Law Judges in contested administrative proceedings.⁹

In 1982 the SEC began to assign a secondary designation, an AAER, to some—but not all—public enforcement releases if the proceeding involves accountants or auditors.¹⁰ AAERs frequently are used to construct samples of firms that misrepresent their financial statements (e.g., Feroz, Park, and Pastena, 1991; Bonner, Palmrose, and Young, 1998). AAER designations, however, are not limited to financial misrepresentation actions. They also do not cover all such actions. As indicated in Panel D of Table 1, an AAER number is assigned for only 1,959 (63%) of the 3,130 releases in our sample. A total of 107 (14%) of the 788 enforcement actions in the sample had *no* releases with an AAER designation. The DOJ follows no formal release protocol, so information concerning criminal actions comes from DOJ press releases, actual district court filings, Lexis-Nexis searches, or information provided directly by the DOJ.

4. Turnover among culpable individuals

4.1. Descriptive data on the perpetrators

Table 2 presents summary information on the age, tenure, and time in position for four groups of culpable individuals at the beginning of their involvement in the misrepresentation. The beginning date is defined as the beginning of the violation period (as defined by the SEC and DOJ) or the individual's first day of employment at the firm, whichever is later. On average, the 515 CEOs identified as perpetrators are 52 years old at the start of the violation, have been with their firms 6.7 years, and have been CEOs for 4.5 years.

Moving to the next column, we add Presidents and Board Chairs to the CEOs to produce the Top 3 cohort examined by other researchers (e.g., Agrawal, Jaffe, and Karpoff, 1999; Desai, Hogan, and Wilkins, 2006). This group includes 723 CEOs, Presidents, and Board Chairs; the mean age is 52 years, the mean tenure at the firm is 6.0 years, and the mean tenure in the current position is 4.2 years. Among all 1,433 executive respondents, the mean age is 49.6, the mean tenure at the firm is 4.5 years, and the mean tenure in the current position is 3.0 years.

Our data on the employment histories of the additional 773 non-executive perpetrators are imperfect because firms are not required to provide employment information on non-executives in such regulatory filings

⁹These include, but are not limited to, such actions as an Initial Decision, Supplemental Initial Decision, Administrative Proceedings Ruling, Opinions, Order Denying Motions for Reconsideration, Order for Summary Affirmance and Filing Opposing Petition for Review, Order Remanding Proceeding, Order Denying Disqualification of Commission, Modifying Order, and Finality Order.

¹⁰See Accounting and Auditing Enforcement Release No. AAER-1, 1982 SEC LEXIS 2565, May 17, 1982.

Table 3

Termination rates of employee respondents named in enforcement actions for financial misrepresentation

Termination rates of 2,206 employee respondents named in enforcement actions for financial misrepresentation from January 1, 1978 through September 30, 2006. Each cell in Panel A presents the number of individuals whose employment was terminated by the given event date, the percentage of the column total, and the cumulative percentage for the column. The column titled “Average months” presents the average number of months until the event date, counting from the beginning of the violation period or the employee’s initial date of employment, whichever is later. Panel B presents a log-rank test of the equality of the survivor functions.

Panel A: Termination rates						
	Average months	CEO only	Top 3 executives	All executives	Non-executive employees	All employees
Number of respondents		515	723	1,433	773	2,206
<i>Terminated by:</i>						
End of violation period	27.4	104 20.2	158 21.9	320 22.3	196 25.4	516 23.4
Trigger event	28.6	56 10.9	79 10.9	164 11.4	84 10.9	248 11.2
SEC investigation date	34.6	31.1 138 26.8	32.8 192 26.6	33.8 369 25.8	36.2 199 25.7	34.6 568 25.8
Initial SEC or DOJ proceeding	54.7	57.9 98 19.03	59.3 139 19.23	59.5 310 21.63	62.0 188 24.32	60.4 498 22.6
Final proceeding	85.5	76.9 59 11.5	78.6 82 11.3	81.2 156 10.9	86.3 74 9.6	83.0 230 10.4
Final proceeding + 90 days	88.5	88.4 3 0.6	89.9 5 0.7	92.0 5 0.4	95.9 0 0.0	93.4 5 0.2
Not terminated	–	88.9 57 10.7	90.6 68 9.4	92.4 109 7.6	95.9 27 3.5	93.6 136 6.2
Unknown	–	100.0 0 0.0	100.0 0 0.0	100.0 0 0.0	99.4 5 0.6	99.8 5 0.2
Total	–	100.0 515	100.0 723	100.0 1,433	100.0 773	100.0 2,206
Panel B: Log-rank test of the equality of the survivor function						
Group	Failures observed	Failures expected	Failures observed	Failures expected		
CEO only	458	498.4	458	486.5		
Top 3 executives	655	683.8	655	667.8		
All executives	1,324	1,316.2	1,324	1,282.7		
Non-executive employees	741	714.2				
All employees	2,065	2,030.4				
Total	5,243	5,243.0	2,437	2,437.0		
	$\chi^2(3) =$	8.14	$\chi^2(2) =$	4.19		
	$\text{Pr} > \chi^2 =$	0.043	$\text{Pr} > \chi^2 =$	0.123		

as the firm’s proxy or 10-K reports. Some of this information is provided in the legal filings and releases associated with the enforcement proceedings. When it is not, we determine an individual’s age, tenure at the firm, tenure at his or her position, and (in Table 3) turnover from other news reports and company filings. For these 773 non-executive employees, the mean age is 44.9, the mean tenure at the firm is 1.5 years, and the mean tenure in their position is 0.9 years. The median tenures of zero for the non-executive perpetrators reflect the fact that most joined the firm after the misrepresentation was underway.

4.2. Turnover rates

Panel A of Table 3 presents the job termination rates for each of these four groups of culpable employees. Consider the top row labeled “End of violation period.” The “CEO only” column indicates that 104 of the 515 culpable CEOs (20.2%) lost their jobs before the end of this period. An additional 56 (10.9%) culpable CEOs lost their jobs by the trigger date, 138 more lost their jobs by the SEC’s investigation date, and 98 more lost their jobs by the date of the SEC’s or DOJ’s initial proceeding. Cumulatively, 76.9% of all 515 culpable CEOs were replaced *before* the initial public release of formal action by the SEC or DOJ. By the time of the last regulatory proceeding, 88.4% had been dismissed. Because we rely on quarterly filings for these turnover data, we include a “Final proceeding + 90 days” row to account for any turnover that occurs shortly after the regulatory intervention. Our results are insensitive to this distinction.

Culpable employees with less prestigious job titles experience even higher rates of attrition. For example, by the end of the violation period 21.9% of the culpable Top 3 executives, 22.3% of all culpable executives, and 25.4% of all culpable non-executive employees were dismissed. By the time of the final proceeding, 89.9% of the culpable Top 3 executives, 92.0% of all culpable executives, and 95.9% of all culpable non-executive employees were dismissed.

In Panel A, the cumulative termination percentage at each event is higher for non-executive employees than for executives. To examine whether this difference is statistically significant, we compute survivor functions for each group. Panel B of Table 3 presents the results of a log-rank test for equality of the survivor functions (see Cleves, Gould, and Gutierrez, 2004). Considering all four groups, we reject the hypothesis of equality of the survivor functions (p -value = 0.043). We cannot, however, reject the hypothesis of equality of the survivor function between the three groupings of executives (p -value = 0.12). This indicates that the survival rate is lower for non-executives than for executives, but the differences in survival rates among executives is not statistically significant at normal levels.

Fig. 2 illustrates the attrition rate of culpable executives. It plots in time the fraction of all 1,433 executives who remain at their posts following their initial exposure to the risk of turnover (Date 0). Exposure begins at the date the violation began, as identified in the regulatory proceedings, or the date the executive began employment with the firm, whichever is later.¹¹ Exactly 1,283 (89.5%) culpable executives remain with their firms 12 months after Date 0, and 376 (26.2%) remain 48 months after Date 0.

As Fig. 2 illustrates, a large fraction of culpable managers leave their jobs before the trigger date. Many more leave before regulators take any formal action. As discussed earlier, this explains why previous studies miss the turnover of many perpetrators.

4.3. Comparisons to turnover rates among non-culpable executives

Table 3 and Fig. 2 demonstrate that most culpable managers leave their jobs during the violation and enforcement periods. But these periods are quite lengthy. As indicated in the “Average months” column of Table 3, the violation period persists for an average 27.4 months, ending an average of 1.2 months before the trigger date. The enforcement period—from the Trigger event until the Final proceeding—averages an additional 57.0 months. These long periods raise the possibility that turnover among culpable managers, while high, is not much different than among managers who are not charged with financial misrepresentation.

To investigate this possibility, we use the ExecuComp database to create two benchmarks of normal managerial turnover, and compare them to the subset of our culpable executives who also are tracked by ExecuComp. ExecuComp data cover only 144 of the enforcement actions and 145 of the culpable executives in our sample. This subset of culpable executives has a termination rate that is similar to that for our overall sample, as 134 (92.4%) have termination dates in the ExecuComp data. The first benchmark of normal turnover is based on turnover among all unaccused executives from these same 144 targeted firms. The second benchmark is based on turnover among all executives at non-targeted firms covered by ExecuComp.

¹¹A total of 402 (28%) of the 1,433 executive respondents joined the firm after the financial misrepresentation was underway. For these executives, the risk of turnover begins from the date the individual joined the firm.

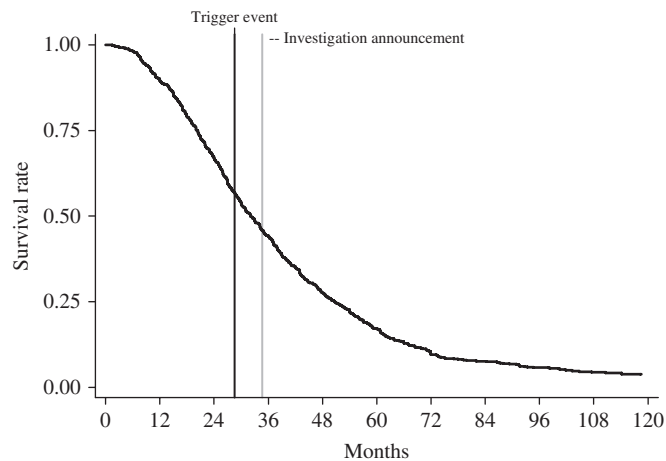


Fig. 2. Job survival function for culpable executives. This figure presents the job survival rates for 1,433 executives named as respondents in SEC enforcement actions for financial misrepresentation from January 1, 1978 through September 30, 2006. Date 0 is the later of the date the violation began or the date the executive began employment with the firm, and represents the beginning of the period in which the executive could lose his or her job for participating in the violation. Two common events in most enforcement actions are also portrayed: the trigger event, which is the first public revelation that a possible regulatory violation has occurred, and which occurs on average 28.6 months after Date 0; and the investigation announcement, which is the first public announcement that the firm is target of an informal inquiry or formal investigation by the SEC, and which occurs on average 34.6 months after Date 0.

To compare the termination rates of culpable executives with our two benchmarks, we measure the time to termination from the executive's date of initial employment at the firm. Fig. 3 depicts the survivor functions for the 145 culpable executives in the ExecuComp database and for each of the two comparison groups.

The first comparison group consists of the 1,895 unaccused executives from the 144 targeted firms. Of these, 437 (23.1%) have termination dates reported in ExecuComp. As illustrated in Fig. 3, the culpable executives leave their firms at significantly higher rates than the unaccused executives at the same firms. Table 4 reports a non-parametric log-rank test for differences in these survival functions. The χ^2 of 151.5 (p -value < .0001) indicates that culpable executives have significantly higher termination rates than unaccused executives at the same firms.

The top line in Fig. 3 represents the survival function of all 28,194 executives at all 2,560 non-target firms covered by ExecuComp. A total of 5,778 (21%) of these non-target executives have termination dates recorded in ExecuComp. As reported in Table 4, the non-parametric log-rank test yields a χ^2 of 296.4 (p -value < .0001), indicating that culpable executives have significantly higher termination rates than executives in firms that are not targeted by SEC or DOJ enforcement actions for financial misrepresentation. These results indicate that culpable managers leave their jobs at significantly higher and faster rates than other managers at their same firms, and than other managers in general.

The final row in Table 4 reveals that non-respondent executives at target firms leave their jobs at a significantly higher rate than their counterparts at non-targeted firms ($\chi^2 = 25.5$, p -value < .0001). This evidence indicates that even non-respondent managers at targeted firms face higher-than-normal turnover rates. This could reflect the ouster of guilty individuals who are not named as respondents by the SEC and DOJ. It could also reflect a high degree of internal turmoil and change at targeted firms, or the effects of stigma from proximity to the misconduct. Cannella, Fraser, and Lee (1995), and Semadeni, Cannella, Fraser, and Lee (2008) analyze such stigma.

4.4. Stated reasons for job termination

Not only are culpable managers removed at unusually high rates; the reasons for their removal indicate that most do not leave their jobs voluntarily. We are able to determine this because the SEC's releases typically summarize the respondents' employment history and the reasons for their removal. Additional information on the reasons for dismissal are reported in EDGAR filings and in articles carried by Lexis-Nexis.

Table 5 contains a summary of the stated reasons for removal. Of the 515 culpable CEOs, 300 (58.3%) were forcibly removed from their positions, i.e., fired. An additional 113 (21.9%) CEOs resigned or retired, but under

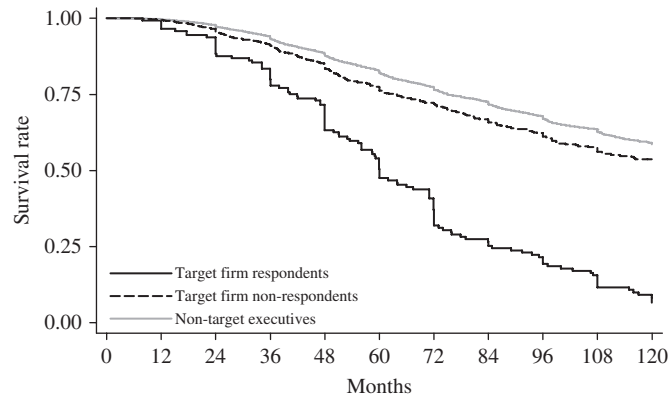


Fig. 3. Survivor functions of culpable executives and two comparison groups included in ExecuComp. Survivor functions for three groups using data from the ExecuComp database. Target firm respondents include 145 executives included in the ExecuComp data and also identified as a culpable party by the SEC and/or DOJ. Target firm non-respondents (Unaccused executives) include all 1,895 executives in the ExecuComp data from the same firms as the culpable individuals, but who are not named as culpable parties. Non-target executives include all 28,194 executives included in the ExecuComp data from firms not targeted by SEC and DOJ enforcement activities for financial misrepresentation.

circumstances that we cannot assert were involuntary (e.g., these include retirements “to spend more time with my family,” and other likely euphemisms for ouster). Thirteen more were removed in a change of control, 29 were removed because the company was in financial distress, and three committed suicide or died. The proportions are similar for the other cohorts. Among all employee respondents, 62% were fired and 22% resigned or retired, eight died, 36 were removed in control transactions, and 144 lost their jobs because of their companies’ financial distress.

For comparisons, consider the reasons for removal reported by other researchers. Investigating turnover among CEOs, Chairs, and Presidents following large stock price changes, Warner, Watts, and Wruck (1988) find that only one out of 230 executives who left their positions was fired. Ten more left because of “poor performance,” and five left because of a “policy difference.” None of the other categories listed by Warner, Watts, and Wruck indicate that the executives left involuntarily. Thus, a total of only 16 of 230 (7%) appear to have left their positions involuntarily. Weisbach (1988) examines CEO resignations and reports similar numbers. Only 21 out of 286 (7%) turnovers in his sample left for reasons that reflect negatively on the CEO’s performance (including four who left because of “Scandal”).

In contrast, the data in Table 5 indicate that most of the executives caught cooking the books leave their jobs for reasons that are directly related to their misconduct. Most do not leave their jobs voluntarily.

In summary, 92.4% of all executives who are identified as culpable parties by the SEC and DOJ, and 95.9% of all non-executive respondents, have their employment terminated before 90 days following the final regulatory proceeding date. These percentages are much larger than those reported in previous studies. This is because we track the job status of all individuals identified by regulators as perpetrators of the financial misrepresentation, and avoid the very large classification (Type I and Type II) errors that accompany prior research designs. Turnover rates of culpable executives are significantly higher than among other managers at their same firms, or among executives in general. Furthermore, a majority of the culpable managers were fired. This evidence indicates that managers who are caught cooking the books do, indeed, tend to lose their jobs, and that their dismissals are directly linked to their misconduct.

5. Cross-sectional differences in job survival and termination

5.1. Univariate comparisons of retained vs. terminated culpable managers

As reported in Tables 3 and 5, not all culpable managers lose their jobs. A total of 109 culpable executives, including 57 culpable CEOs, remained with the firm 90 days beyond the final regulatory proceeding. Why are these executives not terminated?

Table 4

Termination rates and log-rank test for equality of survivor function for executives in ExecuComp

Termination rates and pairwise log-rank tests for equality of the survivor functions for three groups of executives in the ExecuComp database. The first group, “Respondent executives in target firms,” consists of executives named as respondents in SEC or DOJ enforcement actions for financial misrepresentation (the culpable managers in our dataset who are also listed in the ExecuComp data). The second group consists of unaccused executives from the same firms as the culpable managers. The third group consists of all executives at firms not targeted for financial misrepresentation. Each cell in the second and fourth columns presents the number of executives in the group, the number terminated, and percent terminated. The last column provides the results of a log-rank test for the equality of survivor function between the two groups.

Test group	<i>N</i> Terminated percent	Comparison group	<i>N</i> Terminated percent	χ^2 Pr > χ^2
Respondent executives at target firms	145	Unaccused executives at target firms	1,895	151.46
	134		437	0.000
	92.4%		23.1%	
Respondent executives at target firms	145	All executives at non-target firms (firms not targeted for financial misrepresentation enforcement actions)	28,194	296.43
	134		5,778	0.000
	92.4%		20.5%	
Unaccused executives at target firms	1,895	All executives at non-target firms (firms not targeted for financial misrepresentation enforcement actions)	28,194	25.47*
	437		5,778	0.000
	23.1%		20.5%	

*Equivalent to a stratified log-rank test for equality of survivor function between executives at target firms and executives at non-target firms.

Table 5

Reasons given for employment termination of respondents named in enforcement actions for financial misrepresentation

Stated reasons for job termination for 2,206 employee respondents named in enforcement actions for financial misrepresentation from January 1, 1978 through September 30, 2006. Each cell presents the reason given for the number of individuals whose employment was terminated and the percentage of the column total. The observation time period is the number of days from the beginning of the violation to 90 days following the final proceeding date. Termination is measured from the beginning of the violation (not the beginning of employment). Forced Termination includes dismissals, forced resignations or retirements, and (in a small number of cases) demotions or reassignments. Change in Control includes terminations due to mergers, proxy fights, and change in majority ownership. Financial Distress includes terminations due to bankruptcy, liquidation, seizure, receivership, dissolution, cessation, and registration revocation.

<i>N</i> (column %)	CEO only	Top 3 executives	All executives	Non-executive employees	All employees
Number of respondents	515	723	1,433	773	2,206
Not terminated	57	68	109	32	141
	(11.1%)	(9.4%)	(7.6%)	(4.1%)	(6.4%)
Forced termination	300	434	856	512	1,368
	(58.3%)	(60.0%)	(59.7%)	(66.2%)	(62.0%)
Resigned or retired	113	159	343	146	489
	(21.9%)	(22.0%)	(23.9%)	(18.9%)	(22.2%)
Death	3	4	6	2	8
	(0.6%)	(0.6%)	(0.4%)	(0.3%)	(0.4%)
Change in control	13	15	22	14	36
	(2.5%)	(2.1%)	(1.5%)	(1.8%)	(1.6%)
Financial distress	29	43	93	51	144
	(5.6%)	(6.0%)	(6.5%)	(6.6%)	(6.5%)
Unknown	0	0	4	16	20
	–	–	(0.3%)	(2.1%)	(0.9%)

We hypothesize that several forces affect whether a culpable executive loses his or her job, including: (i) the size of the harm imposed by the financial misrepresentation, (ii) the firm’s governance, (iii) other firm characteristics, and (iv) characteristics of the violation. Table 6 reports on univariate comparisons of these characteristics for the 109 surviving and 1,324 terminated executives. Table 7 reports on multivariate logistic regressions for job survival using these same variables.

Table 6

Univariate comparisons for retained and terminated executives

Univariate comparisons of the 109 executives who were not terminated by the firm and the 1,324 terminated executives. The column titled “Test statistic” reports the parametric t test for equality of proportions and means and, where medians are presented, the non-parametric Wilcoxon rank-sum test statistic. Provable loss % is the percentage decline in market capitalization from its high point during the violation period to the date the misconduct is publicly revealed. CHM/CEO duality indicates that the CEO also is board chair. Unaccused CHM/CEO duality indicates that the CEO also is board chair and is not named as a culpable party.

	Statistic	Retained (<i>N</i> = 109)	Terminated (<i>N</i> = 1,324)	Test statistic	<i>p</i> -Value
Panel A: Size of harm measure					
Provable loss %	Mean	57.3	66.4	−5.05	<.001
	Median	57.2	72.2	−4.73	<.001
Panel B: Governance characteristics					
Board size	Mean	7.0	7.1	−0.10	0.921
	Median	6.0	6.0	−0.34	0.733
Board independence %	Mean	34.4	40.3	−2.30	0.022
	Median	33.3	42.9	−2.62	0.009
CHM/CEO duality	<i>N</i>	83	916		
	% of total	76.2	69.2	1.52	0.128
Unaccused CHM/CEO duality	<i>N</i>	10	196		
	% of total	9.2	14.8	−1.61	0.107
Respondent ownership %	Mean	17.1	9.1	4.81	<.001
	Median	7.8	1.0	5.05	<.001
Other respondent ownership %	Mean	14.5	14.2	0.16	0.874
	Median	4.1	4.7	−0.36	0.719
Non-respondent blockholder ownership %	Mean	20.4	33.7	−5.19	<.001
	Median	11.8	29.0	−5.61	<.001
Non-respondent insider ownership %	Mean	7.5	15.9	−4.25	<.001
	Median	3.6	8.1	−4.68	<.001
Panel C: Firm characteristics					
Market capitalization (\$mm)	Mean	2,197.0	1,803.1	0.40	0.690
	Median	29.0	50.6	−1.73	0.089
Development stage/reverse merger firm	<i>N</i>	10	189		
	% of total	9.2	14.3	−1.48	0.139
Firm declared bankruptcy during violation or enforcement period	<i>N</i>	17	613		
	% of total	15.6	46.3	−6.21	<.001
Panel D: Characteristics of the violation					
Fraud charges included	<i>N</i>	87	1,199		
	% of total	79.8	90.6	−3.55	<.001
Insider trading charges included	<i>N</i>	16	430		
	% of total	14.7	32.5	−3.86	<.001
Only administrative action taken	<i>N</i>	26	168		
	% of total	23.9	12.7	3.27	0.001
Charges dismissed	<i>N</i>	5	6		
	% of total	4.6	0.5	4.75	<.001

(i) *Size of the harm*: We hypothesize that managers’ likelihood of job loss increases with the cost imposed on outside shareholders. To measure this cost we use an estimate of “provable loss,” a term used to establish damage awards in many class action lawsuits (see Karpoff, Lee, and Martin, 2008b). In our tests, provable loss equals -1 times the percentage change in the firms’ market capitalization from its highest point during the violation period to the first day news of a possible violation is revealed. (We multiply by -1 to express provable loss as a positive number.)

Provable loss is only one of several measures that can be used to measure the cost to outside shareholders. In results that are available upon request, we find that provable loss more closely tracks regulators’ estimates

Table 7

Logistic regressions of the turnover of executives cooking the books

Logistic regressions of the turnover of executives accused of misconduct in all 788 SEC and DOJ enforcement actions for financial misrepresentation between January 1, 1978 and September 30, 2006. The (untransformed) dependent variable equals one if the executive named as a respondent was terminated between the beginning of the violation period and 90 days after the final resolution proceeding filing date. Each cell presents the odds ratio (exponentiated coefficient) and its corresponding p-value using robust standard errors. Observations are clustered at the firm level to adjust standard errors for intra-firm correlation. See Table 6 and the text for variable definitions. Superscripts ^a, ^b, and ^c indicate significance at the 0.10, 0.05 and 0.01 levels.

		CEO only	Top 3 executives	All executives
Size of harm measure	Provable loss %	2.5081	3.3177	3.8039
		0.091 ^a	0.020 ^b	0.005 ^c
Governance characteristics	Board size	0.9593	0.9636	0.9396
		0.518	0.531	0.193
	Board independence %	6.9359	8.2199	8.2850
		0.025 ^b	0.012 ^b	0.002 ^c
	CHM/CEO duality	0.9987	0.9549	1.2026
		0.998	0.925	0.646
	Unaccused CHM/CEO duality		1.6577	2.2871
			0.479	0.087 ^a
	Respondent ownership %	0.7265	0.4269	0.3595
		0.699	0.254	0.132
Other respondent ownership %	0.5040	1.1231	1.4311	
	0.560	0.916	0.652	
Non-respondent	5.5626	7.5321	3.5476	
	Blockholder ownership %	0.078 ^a	0.032 ^b	0.088 ^a
Non-respondent	11.4435	17.7341	50.7394	
	Insider ownership %	0.083 ^a	0.062 ^a	0.011 ^b
Firm characteristics	ln(Market capitalization)	0.9673	0.9738	1.0286
		0.694	0.760	0.712
	Development stage/reverse merger firm	2.6824	3.6823	2.1476
		0.084 ^a	0.029 ^b	0.137
Firm declared bankruptcy	5.8581	5.6632	4.9351	
	0.000 ^c	0.000 ^c	0.000 ^c	
Characteristics of the Violation	Fraud charges included	2.2597	1.5604	1.5485
		0.070 ^a	0.323	0.277
	Insider trading charges included	1.7360	1.9212	2.3240
		0.190	0.129	0.025 ^b
	Only administrative action taken	0.7273	0.6569	0.4673
		0.536	0.341	0.022 ^b
	Charges dismissed	0.1673	0.0996	0.1095
		0.039 ^b	0.008 ^c	0.002 ^c
Constant	0.5010	0.5782	0.5347	
	0.494	0.546	0.422	
Statistics	<i>N</i>	515	723	1,433
	<i>N</i> failed	458	655	1,324
	<i>N</i> clusters	485	550	648
	Log likelihood	−144.06	−175.73	−304.98
	Pseudo <i>r</i> -square	0.1960	0.2205	0.2090
	χ^2	61.93	65.44	86.76
	<i>p</i> -Value	0.000 ^c	0.000 ^c	0.000 ^c

of damages from 10-b class action lawsuits than do alternate measures discussed by Carleton, Weisbach, and Weiss (1996) and Dyl (1999). Regardless, the empirical results we present are not sensitive to our choice among these alternate measures of shareholder loss.¹²

Panel A of Table 6 shows that, consistent with expectations, provable loss is higher, on average, for terminated executives (66%) than for retained executives (57%). The difference is statistically significant at the .001 level using either a parametric t-test or a non-parametric Wilcoxon rank-sum test.

(ii) *Firm governance*: Most commentators argue that the quality of a board's oversight decreases with board size, increases with its independence, and is lower when the CEO also chairs the board (e.g., see Jensen, 1993; Yermack, 1996; or Boone, Field, Karpoff and Raheja, 2007). This implies that the likelihood of a culpable manager's ouster will be positively related to board independence, and negatively related to board size and the CEO/Board Chair duality indicator variable. The univariate comparisons in Panel B of Table 6, however, indicate that only board independence is associated with a higher likelihood of dismissal for culpable managers.

Among culpable CEOs, a larger fraction of those who are not terminated also hold the title of board chair (76%) compared to those who were terminated (69%). This relation is reversed among unaccused CEOs who chair the board; however, these differences are not significant at normal levels, so we postpone further discussion of these variables until the multivariate tests.

We also examine the impact of four measures of ownership. As reported in Panel B of Table 6, the shareholdings of retained executives are higher, on average, than for terminated executives (17% vs. 9%). Non-respondent block ownership is lower (20% vs. 34%) and non-respondent insider ownership is lower (8% vs. 16%) at firms with retained executives. These results suggest that culpable executives are more likely to hold onto their jobs when they have significant stockholdings and when outside blockholders and other insiders own less stock. The fraction of shares held by other respondents (i.e., other culpable managers), however, is not different among the groups of terminated and retained culpable managers.

(iii) *Firm characteristics*: Panel C of Table 6 reports on firm size for the groups of retained and terminated executives. Firm size is measured as the natural logarithm of market capitalization on the day before the beginning of the violation period. The mean size is insignificantly larger for the retained group, but the median is smaller.

A much higher fraction of the firms at which culpable managers are terminated declare bankruptcy between the beginning of the violation and the final proceeding (46% vs. 16%). This is consistent with Gilson's (1989) finding of a positive relation between financial distress and executive turnover. Regulators claim that they scrutinize micro-cap firms particularly closely for evidence of financial manipulation, implying closer monitoring of the managers of such firms. We find that firms in development stage or that went public through a reverse merger are relatively frequent among the group of terminated managers (14% vs. 9%), but this difference is not significant.

(iv) *Characteristics of the violation*: Panel D of Table 6 indicates that the characteristics of the violation significantly influence the likelihood of termination for culpable managers. Fraud charges are less common among the retained group than among the terminated group of managers (80% vs. 91%), as are charges of insider trading (15% vs. 32%). A higher fraction of the retained managers faced only administrative actions—as opposed to more serious civil or criminal charges—than the managers who lost their jobs (24% vs. 13%). And, although few charges are dismissed, the fraction of retained managers against whom all charges were dismissed is higher than for the terminated managers (4.6% vs. 0.5%).

5.2. Multivariate tests for the determinants of culpable executive turnover

Table 7 reports on multivariate logistic regressions to examine the factors affecting the likelihood that a culpable manager will be ousted from the firm. The (untransformed) dependent variable equals one if the

¹²Alternate measures also are discussed by Hall and Lazear (2000) and Barclay and Torchio (2001). We thank the referee for the suggestion to explore different measures of shareholders' loss.

culpable executive leaves the firm before 90 days after the final regulatory proceeding.¹³ The regressors are the variables presented in Table 6 and discussed in Section 5.1.

The first column in Table 7 reports on the 515 CEOs named as respondents in SEC enforcement actions. The second column is based on the 723 respondents with any of the titles of CEO, President, or Board Chair. The third column is based on the 1,433 respondents with any executive position in the firm. Rather than reporting the raw coefficients, for each regressor we report the odds ratio (i.e., the exponentiated coefficient) and its corresponding *p*-value using robust standard errors. Odds ratios greater than one indicate that the regressor is positively related to turnover likelihood, whereas odds ratios less than one indicate that the regressor is negatively related to turnover likelihood. To account for possible intra-firm correlation of turnover among executives, observations are clustered by enforcement action.

The results generally are consistent with the univariate comparisons, as the size of the harm and the quality of the firm's governance both help explain the likelihood of turnover. The coefficient for provable loss is greater than one and statistically significant, indicating that turnover is more likely when shareholders' losses are high. Among the governance variables, turnover is positively related to board independence and, for non-CEO executives, the presence of a strong CEO who is also the board chair. The likelihood of turnover is also positively related to the ownership of outside blockholders and of insiders who are not party to the misconduct. These results indicate that culpable managers are more likely to lose their jobs when they impose high costs on their shareholders and when they face strong accountability from directors, top managers, blockholders, and other insiders who are not parties to the financial misrepresentation.

The likelihood of turnover is relatively high when the firm declares bankruptcy and when the firm is a development-stage firm. This indicates that turnover is more likely when the firm is in financial trouble or consists primarily of growth opportunities. Characteristics of the violation are less important, although CEO turnover is more likely when the violation involves fraud, and for all executives as a group, the likelihood of turnover is greater when insider trading charges are included and lower when the violation leads to administrative actions only (i.e., include no civil or criminal charges). In all three regressions, turnover is less likely when the charges against the manager are dismissed.

5.3. Robustness checks

We conducted a number of sensitivity tests to probe the robustness of these results. King and Zeng (1999) point out that coefficient estimates and standard errors can be biased in logistic regressions that use data with rare events. More than 90% of the culpable managers leave their jobs, so retention (coded zero in our tests) is a rare event. To examine the potential for bias, we re-estimated the regressions in Table 7 using the "RELOGIT" command available in Stata (see Tomz, King, and Zeng, 1999). The results are virtually identical to those in Table 7.

We also examined alternate measures of the size of the harm and additional firm characteristics such as leverage and whether the firm's audits contained going-concern language. We examined additional characteristics of the violation, including the number of code violations and the length of the violation and enforcement periods. These characteristics, however, are not significantly related to the likelihood of termination, and their presence in the regressions does not qualitatively alter the results in Table 7.

Overall, these results indicate that managers who are caught cooking the books are more likely to lose their jobs when their activities are particularly harmful and when strong parties who are not involved in the misconduct (e.g., independent boards, strong CEOs, large blockholders, and other insiders) are present to hold the perpetrators accountable. Culpable managers tend to face discipline through the firm's internal governance, and particularly when such governance is strong.

¹³We adopt a cutoff 90 days after the final regulatory proceeding because quarterly reports reveal an executive's absence up to 90 days after the actual departure. Using the calendar date of the final regulatory date has no noticeable effect on the results, as only five executives move to the ousted category during this interval.

Table 8

Monetary, civil and criminal sanctions against respondents

Panel A presents the monetary sanctions imposed on individuals charged in all 788 SEC and DOJ enforcement actions for financial misrepresentation between January 1, 1978 and September 30, 2006. The civil non-monetary sanctions against individual respondents are shown in Panel B. The criminal non-monetary sanctions are in Panel C, with the corresponding sentencing information in Panel D.

	CEO only	Top 3 executives	All executives	Non-executive employees	All employees
Total individual respondents	515	723	1,433	773	2,206
Panel A: Civil non-monetary sanctions					
Type of sanction:					
Administrative	83	134	368	242	610
Civil	457	627	1,175	554	1,729
Officer & director bar	175	243	427	105	532
Pending	46	61	135	26	161
Accountant bar	12	31	161	80	241
Pending			11	5	16
Other professional bar	22	32	53	32	85
Pending	7	7	11	2	13
Panel B: Criminal non-monetary sanctions					
Indictments	139	190	394	223	617
Acquitted	1	4	16	12	28
Died	3	4	7	3	10
Awaiting trial	18	24	66	39	105
Convicted/pled guilty	117	157	302	167	469
Sentence pending	19	25	66	53	119
Unknown sentences	11	16	25	15	40
Known sentences	87	116	211	99	310
Panel C: Sentences					
Prison	83	102	168	66	234
Total years	479.9	579.8	849.1	154.5	1,003.6
Average	5.8	5.7	5.1	2.3	4.3
Probation	20	30	62	39	101
Total years	68.7	97.7	189.8	130.0	319.8
Average	23.4	3.3	3.1	3.3	3.2
Halfway house	2	3	7	—	7
Total months	7	10	41	—	41
Average	3.5	3.3	5.9	—	5.9
Home detention	4	7	23	13	36
Total months	26	47	138	72	210
Average	6.5	6.7	6.0	5.5	5.8
Supervised release	10	14	29	13	42
Total months	312	420	840	408	1,248
Average	31.2	30.0	29.0	31.4	29.7
Community service	5	10	16	8	24
Total hours	3,500	5,100	8,500	7,300	15,800
Average	700.0	510.0	531.3	912.5	658.3
Panel D: Monetary sanctions (\$mm)					
Total fines	214.0	1,798.9	2,049.1	15.8	2,064.9
Total disgorgement	3,208.6	8,643.2	9,807.8	585.8	10,393.6
Total monetary sanctions imposed	3,422.6	10,442.1	11,856.9	601.6	12,458.5
Average per individual	6.7	14.4	8.3	0.8	5.7

6. Legal penalties imposed on culpable managers

6.1. Non-monetary sanctions and debarments

In addition to the prospect of losing their jobs, culpable managers face a variety of potential penalties imposed by the SEC, DOJ, and private lawsuits. This section reports on the non-monetary penalties imposed by the SEC and DOJ. These range from relatively minor slaps on the wrist (e.g., orders to cease-and-desist from the activity) to jail time.

Panel A of Table 8 summarizes the non-monetary penalties imposed on individual respondents via civil sanctions initiated by the SEC. Of the 723 Top 3 executive respondents, 134 (18.5%) received administrative sanctions. Civil sanctions vary from minor cease-and-desist orders to career-threatening prohibitions from appearing before the SEC as an accountant, attorney, broker, or banker, or from being involved with the issuance or promotion of public securities. A total of 627 (86.7%) Top 3 executives were respondents in civil litigation initiated by the SEC, which tends to result in larger penalties.

One substantive civil penalty is debarment, because it restricts the individual's employment opportunities in the field where he or she has established substantial human capital. A total of 243 (34%) of the Top 3 executives are barred from serving as officers or directors of public companies or companies that register with the SEC, and 61 (8.4%) more have bars pending. Thirty-one (4.3%) are CPAs barred from appearing before the SEC as accountants, and 39 (5.4%) more are barred (or have bars pending) from appearing before the SEC as an attorney, broker, banker, or other securities related profession. The debarment rates for the CEO, all executives, and all employee cohorts are similar to those of the Top 3 executives.

These data shed light on an important follow-up question to the data in our previous sections; namely, do dismissed executives simply find similar employment at other companies? The high rates of debarments indicate that, for a substantial fraction of culpable executives—over 40%—the answer is clearly no. These individuals are prohibited from serving as officers or directors of public companies. Anecdotes from our sample indicate that many of these former executives find employment in less lucrative careers, such as real estate or automobile sales.

6.2. Criminal penalties

As summarized in Panels B and C of Table 8, a substantial fraction of culpable managers are subject to criminal penalties. A total of 190 (26.3%) of the 723 Top 3 executives and 617 (28.0%) of the 2,206 total culpable employees were indicted for their activities. Acquittal occurs rarely for individuals indicted for criminal violations. Four of the 190 (2.1%) Top 3 executives were acquitted, while 28 of the 617 (4.5%) of the All Employees cohort were acquitted. Four of the indicted Top 3 executives and ten of the All Employees died before sentencing (including Kenneth Lay, the former Chairman and CEO of Enron, following his July 2006 criminal conviction). Respondents awaiting trial include 24 Top 3 executives and 105 total employees. The DOJ obtained convictions or guilty pleas from 157 of the 190 (83%) indicted Top 3 executives. Sentences are pending for 25 Top 3 executives, and we are unable to find criminal sentencing information on 16 others.

Panel C summarizes the known sentencing information. A total of 1,003.6 years of prison have been imposed on perpetrators, with 102 Top 3 executives receiving an average sentence of 5.7 years. The average sentence for All Employees is 4.3 years. Top 3 executives that receive probation receive an average of 3.3 years, while the average probation among the All Employees group is 3.2 years. Other methods of incarceration include confinement to a halfway house, home detention, supervised release, and mandated community service.

6.3. Monetary sanctions

Panel D of Table 8 summarizes the monetary fines imposed by regulators, including the SEC, DOJ, and state attorneys general. It is important to note that, as of October 1, 2006, 182 (23.1%) of the enforcement actions have ongoing proceedings, indicating that additional penalties may be imposed in these actions.

Table 9

Ownership and wealth losses

This table presents the ownership and share value losses of employee respondents to charges of financial misrepresentation. Ownership is measured as close as possible to the market revelation of the transgression or the last reported ownership prior to bankruptcy, whichever is earlier. Wealth loss is determined by multiplying the percentage ownership by the change in market capitalization measured on the revelation date. The market-adjusted wealth loss is the wealth loss minus the change in value from a hypothetical investment of the same number of dollars in the CRSP value-weighted portfolio. The revelation date is the earlier of the date that problems were first disclosed to the public or the date of bankruptcy. For firms that filed bankruptcy, the settlement, if any, for the equity class was used to determine market capitalization. The maximum wealth loss is measured using the day the firm had the highest closing market capitalization over the period from the beginning of the violation to the market revelation date. The minimum wealth loss is measured using the market capitalization at the beginning of the violation period. Market-adjusted wealth loss is computed using the value-weight return of all stocks in CRSP. The average period of time over which the maximum wealth loss is measured is 13.6 months, and 31.9 months for the minimum wealth loss.

	CEO only		Top 3 executives		All executives		Non-executive employees		All employees	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<i>N</i>	515		723		1,433		773		2,206	
Ownership %	20.1	12.9	17.5	10.0	9.7	1.1	0.5	0.0	6.5	0.0
Regulatory penalties:										
<i>N</i>	243		334		615		294		909	
Total (\$mm)	3,422.6		10,442.1		11,856.9		601.6		12,458.5	
Per respondent fined (\$mm)	14.1	0.2	31.3	0.2	19.3	0.1	2.1	0.0	13.7	0.1
Per all respondents (\$mm)	6.7	0.0	14.4	0.0	8.3	0.0	0.8	0.0	5.7	0.0
Wealth loss (\$mm):										
Upper bound	48.4	4.8	38.7	3.5	23.4	0.8	0.4	0.0	15.3	0.0
Lower bound	5.8	0.6	5.7	0.4	1.8	0.0	0.1	0.0	1.2	0.0
Market-adjusted wealth loss (\$mm)										
Upper bound	46.1	5.6	36.9	3.9	22.1	1.0	0.4	0.0	14.5	0.0
Lower bound	13.1	1.7	12.2	1.0	5.4	0.1	0.3	0.0	3.6	0.0

A total of 334 of the 723 culpable Top 3 executives received fines from regulators. These executives were fined a total of \$1.80 billion and ordered to disgorge another \$8.64 billion in ill-gotten gains. On a per-person basis, the average unconditional monetary penalty for the 723 Top 3 executives is \$14.4 million. The fines imposed on non-executive employees tend to be smaller, averaging only \$0.8 million. Among all culpable employees, the unconditional mean fine is \$5.7 million.

6.4. Wealth effects via stockholdings

In addition to the penalties meted out by regulatory authorities and courts, perpetrators typically lose from their shareholdings in the target firm when their financial misrepresentation is discovered. To estimate the magnitude of such losses, we gather ownership information from regulatory filings (10-Ks and proxy statements) and the proceedings filings. As reported in Table 9, mean ownership per respondent among Top 3 executives is 17.5% of the firm (the median is 10.0%) measured as close as possible to the trigger event. Mean ownership per respondent among all employees is 6.5% (the median is 0.02%).

We provide upper and lower bound estimates of the wealth loss experienced by managers. The “upper bound wealth loss” is related to “provable loss” (used in the tests reported in Table 7) and is consistent with Federal guidelines for estimating economic loss in securities suits (see Hall and Lazear, 2000). The upper bound wealth loss is the product of the manager’s ownership times the firm’s largest decline in market capitalization as measured from the violation period’s peak value to its value on the day news of a possible violation is revealed. We label this upper bound wealth loss because it values the manager’s shares as though they were acquired at the highest possible price induced by the misrepresentation. The market-adjusted upper bound wealth loss subtracts the dollar return on an equivalent investment using the value-weighted index of all

stocks in CRSP. Using this measure, the mean (median) wealth loss is \$46.1 (\$5.6) million for CEOs, \$36.9 (\$3.9) million for top executives, \$22.1 (\$1.0) million for all executives, and \$14.5 (\$0.03) million for all employees. While assuming the respondent purchased all shares when the firm's market capitalization is at its peak may seem unreasonable, it does, however, reveal the loss in the respondent's shareholdings from their highest value.

“Lower bound wealth loss” is calculated similarly to “upper bound wealth loss” except the change in market capitalization is measured from the last trading day preceding the violation period. The mean (median) market-adjusted wealth loss using this more conservative estimate is \$13.1 (\$1.7) million for CEOs, \$12.2 (\$1.0) million for top executives, \$5.4 (\$0.1) million for all executives, and \$3.6 (\$0.01) million for all employees.

Overall, the data in Tables 8 and 9 indicate that regulators and lawsuits impose explicit costs on a substantial fraction of culpable managers. Among the group of 1,433 culpable executives, 39% are debarred from serving as officers or directors of public companies and 27.5% face criminal indictments. The mean regulatory penalty for these executives is \$8.3 million, and our estimate of the average loss from their personal holdings of their firms' stock ranges from \$5.4 million to \$22.1 million. Similarly large pecuniary and non-pecuniary penalties are imposed on the cohorts of culpable CEOs, Top 3 executives, and non-executive employees. Finally, it must be noted these results are understated because the proceedings have not concluded in 180 of the 788 (23%) enforcement actions.

7. Conclusions

Previous research establishes that shareholders lose substantial value when their firms are charged with misconduct. This paper provides evidence that managers who are responsible for the misconduct also suffer meaningful personal consequences. We track the fortunes of all 2,206 employees named as culpable parties in SEC and DOJ releases for all 788 regulatory enforcement actions brought from January 1, 1978 through September 30, 2006 for financial misrepresentation. Our main findings are as follows:

(1) Most (93.6%) of all employees cited by the SEC or DOJ as responsible parties for financial reporting violations lose their jobs. Among culpable executive employees, the fraction is 92.4%. Culpable managers lose their jobs at significantly higher rates than unaccused managers at the same firms, and than managers at non-targeted firms. A majority of culpable managers are explicitly fired—a dramatic result compared to the very low incidence of explicit firings in most studies of managerial turnover.

(2) Culpable managers are more likely to lose their jobs when their activities are particularly harmful to shareholders and when they face strong governance controls. The likelihood of dismissal is positively related to board independence, the ownership of large blockholders and other insiders, and for non-CEOs, the presence of a strong CEO who is not party to the misconduct. Culpable managers are more likely to keep their jobs when the SEC drops its charges against them.

(3) In addition to the prospect of ouster, culpable managers face legal penalties and direct losses in the values of their shares. The average culpable executive ($n = 1,433$) owns 9.7% of the firm's equity and experiences a loss in stock value ranging between \$1.8 million and \$23.4 million when the misconduct is revealed. SEC fines average an additional \$8.3 million, and 562 (39.2%) of the executives have been barred or are in the process of being barred from serving as an officer or director in a public firm. In addition, 394 (27.5%) culpable executives have been charged with criminal violations. To date, 168 of these individuals have pleaded or been found guilty and sentenced to an average 5.05 years in jail and 3.06 years of probation. Similar fractions of culpable non-executive employees ($n = 773$) have faced such regulatory and criminal penalties.

We begin this article by quoting from *Fortune* magazine: “They lie, they cheat, they steal and they've been getting away with it for too long.”¹⁴ The evidence, however, belies such popular sentiment. Managers who are caught misrepresenting their companies' financial statements typically lose their jobs and substantial personal wealth through their ownership stakes in the firm. Regulators impose additional penalties on many of these managers, including fines, non-monetary sanctions, and criminal penalties. It is noteworthy that only

¹⁴*Fortune* magazine, March 18, 2002 cover and accompanying story headline.

40 (5.1%) of the 778 enforcement actions in our sample invoke Sarbanes-Oxley provisions. Thus, firms' internal governance and the SEC's and DOJ's oversight worked to penalize much financial misrepresentation even before the 2002 Sarbanes-Oxley Act. In short, a more accurate version of the sentiment in the *Fortune* article would be: "Some managers may lie, cheat, and steal, but most face serious consequences when they are caught."

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