J Bus Ethics (2018) 151:743–760
https://doi.org/10.1007/s10551-016-3242-3

Corporate Reputation's Invisible Hand: Bribery, Rational Choice, and Market Penalties

Vijay S. Sampath[1] · Naomi A. Gardberg[2] · Noushi Rahman[3]

Received: 21 June 2015 / Accepted: 14 June 2016 / Published online: 11 July 2016

Abstract Drawing upon rational choice and investor attention theories, we examine how accusations of corporate bribery and subsequent investigations shape market reactions. Using event study methodology to measure loss in firm value for public firms facing bribery investigations from 1978 to 2010, we found that total market penalties amounted to $60.61 billion. We ran moderated multiple regression analysis to examine further the degree to which the unique characteristics of bribery explain variations in market penalties. Companies committing bribery in less corrupt host countries and with the involvement of compromised executives experienced greater market penalties than did other companies. After partitioning share value losses into components for regulatory penalties, class action settlements, and loss to reputation, we found that reputational penalties account for 81.8¢ of every dollar of share value loss. Omission of reputational penalties in rational choice calculus underestimates bribery costs by 4.5 times. The results suggest that firms should not underestimate the importance of market-imposed reputational penalties by merely considering regulator-imposed fines and sanctions.

Keywords Bribery · Market penalties · Event study · Foreign Corrupt Practices Act · Corporate reputation

✉ Vijay S. Sampath
vsampath@jjay.cuny.edu

Naomi A. Gardberg
Naomi.Gardberg@baruch.cuny.edu

Noushi Rahman
nrahman@pace.edu

[1] John Jay College of Criminal Justice, City U. of New York, 524 W59th Street, 53341 Haaren Hall, New York, NY 10019, USA

[2] Baruch College, City U. of New York, One Bernard Baruch Way, Box B9-240, New York, NY 10010, USA

[3] Lubin School of Business, Pace University, One Pace Plaza, W-465, New York, NY 10038, USA

Introduction

The Foreign Corrupt Practices Act (FCPA) and the Organization for Economic Cooperation and Development (OECD) Anti-Bribery Convention prohibit payment of bribes to foreign government officials for business purposes. The latest enforcement report of the OECD Convention found that while four nations, the United States (U.S.), the UK, Germany, and Switzerland, 'actively' enforced anti-bribery laws, about half of the 41 signatory countries had not prosecuted a single case of foreign bribery at the firm or individual level since they joined the convention and another nine countries had 'limited enforcement' (Transparency International 2015). These regulations encapsulate the rational choice framework, which proposes that managers calculate a firm's bribery risk using a rational weighting of gains from contracts obtained by bribery; losses from fines and penalties, if caught; and the probability of being caught (Paternoster and Simpson 1996). If managers underestimate the stigma associated with corruption (Paetzold et al. 2008) and the associated loss in reputational capital (Karpoff et al. 2008b), they will not be deterred from committing bribery.

Given that there has not been much progress in reducing corruption in general (Weismann 2009) and corporate bribery in particular (Gardberg et al. 2012), we suggest that managers are systematically unable to effectively

implement the rational choice framework due to the complexity of multi-country misconduct. In this paper, we argue that critically examining the total costs of losing reputational capital and partitioning these costs into regulator-imposed and market-driven components would reduce the risk of miscalculating the costs and benefits of committing bribery. This approach would assist management to determine more realistically a firm's bribery risks.

Consider Siemens AG, the German engineering/technology firm. In 2008, Siemens paid $1.7 billion in penalties and fines to regulators in the U.S. and Germany to settle bribery charges prosecuted under the FCPA. It also paid over $1 billion in legal and consulting fees to defend itself. Between 2006 and 2008, Siemens restated earnings, two employees were convicted of bribery for diverting the firm's money, its CEO and supervisory head of the board both resigned, and revenues declined by €10 billion ($13.5 billion). Herein, we examine whether Siemens and other FCPA violators are considering the full losses and costs of defying anti-corruption laws and, thus, revisit the rational choice framework and suggest ways it can be more helpful to a firm considering the potential penalties for committing bribery.

Corporate misconduct continues to receive attention from academic scholars and the business media because it costs investors, customers, employees, and society significant resources. Scholars are increasingly examining and documenting corporate illegalities (Mishina et al. 2010), such as corruption (Jensen et al. 2010; Spencer and Gomez 2011) and bribery (Lee et al. 2010; Martin et al. 2007). We have a number of reasons to situate FCPA violations as a distinct and interesting variety of corporate misconduct, including its multi-country complexity and the characteristics of the investigation. First, the payment of bribes is morally objectionable in the U.S. and other OECD countries even when it takes place in foreign jurisdictions where it may be the accepted norm to pay bribes (Darrough 2010). Thus, firms from OECD countries are less likely to bribe than firms from countries that are not signatories to the OECD (Baughn et al. 2010). Here, we examine whether the specific host country where the firm pays the bribe affects investor reactions. Second, in contrast to financial statement fraud where the firm's investors are victims of the misconduct, the victims of bribery are not readily identifiable. The victims could be the citizenry of the country where the bribe was paid or the firm's competitors rather than the firm's primary stakeholders. In other words, the affected parties may not have business relationships with the firm, as is also the case with environmental violations. Third, paying a bribe confers a discernible benefit on the firm and its stakeholders in terms of obtaining business; the firm and the stakeholders are harmed only if the firm is caught for bribery. Finally, unlike other types of misconduct, bribery requires third party involvement, thus necessitating the collusion of both internal and external organizational actors (Pinto et al. 2008; Baker and Faulkner 1993).

Additionally, investigations and U.S. prosecutions of FCPA violations differ from other misconduct investigations in several respects. First, bribery is prosecuted as both a criminal and civil act in OECD countries (Pacini et al. 2002), while other types of misconduct generally are prosecuted as civil acts. Second, immaterial acts of bribery can result in financial penalties that dwarf the value of the *actual* bribe. Third, regulators from the involved countries, including the host and home countries, must coordinate enforcement because multinational enterprises (MNEs) can violate the FCPA in multiple countries. A consequence of the investigations and prosecutions, particularly when they involve multiple regulators, is that they can distract management from attending to the firm's business (Fitch Ratings 2010).

Scholars have examined both high-level and low-level corporate misconduct. Fraudulent financial restatements are at the highest level on the spectrum, as such misconduct is both egregious in nature and reflective of an underlying fraudulent intent at a systemic level (Alexander 1999; Karpoff et al. 2008b). Because revenues of a restating firm are significantly overstated, the market tends to adjust to a more accurate representation of the firm's financial position (Karpoff et al. 2008b). In contrast to financial statement fraud, environmental violations are at the lowest level on the spectrum, as such misconduct is non-egregious, generally lacking underlying intent, and does not affect the customers of the violating firms (Karpoff et al. 2005). Within the spectrum of corporate misconduct, we argue that bribery is a midrange offense, falling between the high and low levels, as bribery is not considered an egregious violation even though the underlying intent at the employee level implies some criminal liability. Moreover, although revenues from outside of the home country could be affected, such revenues typically would represent only a small percentage of the total revenues of the firm.

Taken together, the characteristics of bribery and bribery investigations add complexity to management's rational choice calculation and the stock market's reaction to accusations of wrongdoing. The stock market's reaction, calculated as a "decline in a firm's market value as a result of fraud allegations" (Kang 2008, p. 538), is considered to be a proxy for total social costs from the wrongdoing (Becker 1968). We propose that investor attention theory (Hirshleifer and Teoh 2003), which suggests that mechanisms embedded in news of an FCPA investigation will magnify market reactions to relevant news, complements the rational choice framework. The level of investor

attention will vary depending on the presence of context-specific characteristics or mechanisms.

In this paper, we hope to make three theoretical and empirical contributions to the corporate misconduct literature. First, we reveal the complexity of multi-country misconduct and its effects on managers' rational choice calculations and investors' reactions to the wrongdoings. Second, we introduce potential moderating effects to explain why market reactions appear to vary inconsistently with the rational choice framework. Third, we introduce a midrange offense—bribery—to Karpoff's framework where fraudulent financial restatements (i.e., a high severity offense) are contrasted with environmental violations (i.e., a low severity offense). Through these contributions, our paper broadens the debate on the antecedents to the erosion of ethical values in the corruption context. Although we have not tested the normative aspects of ethics, at the core of corporate corruption is erosion of ethical values on the part of organizational actors, mainly its management and board. The FCPA and the OECD Convention encourage companies to institute measures to prevent and detect foreign bribery as part of their ethics and compliance programs. In addition to our theoretical and empirical contributions, our study has important implications for practice.

In the following sections, we describe corporate misconduct (e.g., Mishina et al. 2010; Lee et al. 2010) and reputational capital research (e.g., Fombrun et al. 2000; Karpoff et al. 2008a) to examine large variations in the market's penalization of corporate corruption. We develop a theoretical model that links the unique characteristics of bribery investigations to three potential moderator effects (i.e., host nation corruption, multiple regulators, and compromised management). Following the research approach of Karpoff and Lott (1993), we perform an event study to measure market penalties for 134 public firms with FCPA investigations from 1978 to 2010. We conclude with a discussion of the added complexity of investor attention on rational choice calculations and the implications for theory and practice.

Background

Corporate Misconduct and Illegality

Corporate misconduct and illegality are corporate behaviors that deviate from social norms. Mishina et al. (2010, p. 702) define corporate illegality as "an illegal act primarily meant to benefit a firm by potentially increasing revenues or decreasing costs." The rational choice model of corporate crime states that managers make the subjective calculations of costs and benefits based on their perceived expectations of punishments and rewards (Paternoster and Simpson 1996). Predicting corporate behaviors in the marketplace by using rational choice theory relies on two key assumptions. First, firms achieve regulatory compliance through an internal system of checks and balances on which regulators can rely. Second, the least amount of intrusion by regulators into internal corporate affairs provides the most efficient and effective means of corporate governance and internal control practices (Shover and Hochstetler 2006).

The rational choice model uses the *efficient capital market hypothesis* (ECMH; Weismann 2009), which mainly measures firm performance in terms of profitability and market valuation via event studies. The ECMH predicts that the total social costs from bribery would reflect in the capital market's response to internalize costs imposed on the firm for committing such an act. The resulting correlation between ECMH and increased corporate governance is partly measured by perceived risk and risk aversive behavior (Stout 2003). For instance, firms that were connected to firms accused of financial reporting fraud through director interlocks experienced declines in market values when news of the misconduct of the associated firms was disclosed (Kang 2008). Contagion effects were more likely when associated firms had weak governance structures, indicating that such firms may have failed to protect investors' interests.

Institutional theory (e.g., Martin et al. 2007; Spencer and Gomez 2011), anomie theory (e.g., Martin et al. 2007), and agency theory (e.g., Zhang et al. 2008) provide complementary explanations of corporate decision-making and misconduct across institutional environments. Managers in successful firms are likely to view the potential benefits of illegality as outweighing the costs when (1) they face great pressure to sustain performance, (2) they are not concerned with the potential costs of illegality because firms' coffers would pay any fines, and (3) they believe that they can outsmart regulators and, thereby, decrease the chances of any indirect negative consequences from illegality (Mishina et al. 2010). These indirect negative consequences stem not only from reputation losses but also from investigation costs and monitoring costs.

Reputational Capital and Market Penalties

Corporate reputations are intangible assets that provide firms with a sustainable competitive advantage (Roberts and Dowling 2002; Shamsie 2003) because they are unique and inimitable (Fombrun and Van Riel 2004; Roberts and Dowling 2002; Shamsie 2003). "A strong reputation can help create either a positional (such as a reputation for quality) or status-based (such as a good or better reputation) competitive advantage for an organization" (Dowling and Moran 2012, p. 26). Companies form their reputations

by their internal firm structures and other means that show for what they stand (Sims 2009). In the U.S., where 70–80 % of market value comes from hard-to-assess intangible assets, such as brand equity, intellectual capital and goodwill, firms are especially vulnerable to events that damage their reputation (Eccles et al. 2007).

Reputational capital refers to the portion of a firm's stock market valuation that stems from its reputation with various stakeholder groups such as customers, investors, and employees. Market penalties refers to the decrease in a firm's market value, as the market expects investors, customers, and suppliers to change the terms of doing business with the firm (Karpoff and Lott 1993) when the unexpected news of misconduct becomes public and the firm's reputation diminishes (Kang 2008). Corporate misconduct affects stakeholders' judgments of both the capability and character of the firm (Mishina et al. 2012). Damage to a firm's reputation includes its inability to hire new talent, the loss of experienced managers and directors, and customer defections (Sims 2009). Scholars have studied reputational losses stemming from many things such as firm misconduct, frauds of private parties (Karpoff and Lott 1993; Alexander 1999; Murphy et al. 2009), investigations of IPO underwriters (Beatty et al. 1998), financial misrepresentations (Karpoff et al. 2008b), product recalls (Bromiley and Marcus 1989), and financial reporting fraud (Kang 2008).

Firms lose market value when news of their misconduct becomes public. The size of that loss depends on how well the event is anticipated (Jarrell and Peltzman 1985; Kang 2008). The penalties imposed by capital markets act as a proxy of an independent estimate of relevant social costs (Becker 1968; Jarrell and Peltzman 1985; Karpoff and Lott 1993). Markets also internalize the direct costs incurred by firms in managing the associated investigations of misconduct, such as fines, penalties, and lawsuit settlements. These scholars suggest that market penalties act as a barometer of how much deterrence capital markets provide against misconduct and whether the deterrence is optimal. In this paper, we estimate losses borne by owners of a firm that is caught bribing and the factors that increase or decrease such owner losses. Toward this end, we integrate rational choice and reputation theories to understand better the loss in firm value and the associated costs of bribery.

Stock market losses are a measure of a firm's total losses from misconduct (Karpoff 2012; Kang 2008). Because direct measures of a firm's reputational capital and loss of reputation in terms of losing customers and facing higher costs are challenging, researchers have measured losses in firm share values as a 'surrogate' for loss in reputational capital (e.g., Karpoff et al. 2008b). To delve deeper into the components of such penalties, these scholars use the residual approach advanced by Jarrell and Peltzman (1985) and Karpoff and Lott (1993) to calculate reputational penalties. Under this approach, total dollar loss in share value is first estimated and then regulator-imposed legal penalties, class action settlements, and other applicable direct costs are subtracted. This is based on the notion that investors would rationally expect firms to incur these penalties and costs when news of misconduct becomes public. For certain types of misconduct, firms incur other direct costs in addition to legal penalties. For instance, firms facing product recalls incur costs related to repairing or destroying defective products (Jarrell and Peltzman 1985), firms violating environmental laws face remediation costs (Karpoff et al. 2005), and firms restating financial statements bear artificial share inflation as part of total firm losses (Karpoff et al. 2008b).

Based on the same rational expectations of investors, the difference between the decline in a firm's market value and legal penalties and context-specific direct costs is a measure reflecting investors' expectations of lost sales and other impairments in the firm's operations. In other words, the resulting unexplained residual is considered to be lost reputation or reputational penalties. However, scholars using this approach consider the residual estimate of lost reputation to be 'crude' estimates (Karpoff 2012; Karpoff et al. 2008b).

Corruption and Bribery

Corporate misconduct ranges from financial restatement fraud, contract violations, bribery, kickbacks, environmental violations, to product-specific accidents. Some misconduct results in corruption as well. Corporate corruption refers to the firm-level violation of moral codes of conduct to attain undue advantage (Rahman and Sampath 2016). Bribery is a form of corruption that involves the giving of something of value, such as cash or a vacation, to influence the receiver to act on one's behalf. Corruption and bribery have received increasing attention from scholars across disciplines because the negative effects of these types of misconduct disrupt markets, increase inequality, and undermine good governance.

A rich body of research exposes the institutional and firm-level factors driving bribery (Chen et al. 2010; Cullen et al. 2004; Galang 2012; Lee et al. 2010; Jensen et al. 2010; Martin et al. 2007). For example, Spencer and Gomez (2011) explore the competing pressures of home and host nation institutional environments. Other studies contrast firms that are likely to bribe with those that are likely to resist bribery (Jensen et al. 2010; Martin et al. 2007; Spencer and Gomez 2011). Lee et al. (2010) demonstrate that firms' bribery behaviors are a function of both their vulnerability and exposure to government officials and corruption. Consequently, some firms are better

able to walk away from a deal that requires bribery than are others. If the costs or consequences of bribery are systematically underestimated, managers may be performing faulty cost–benefit analyses with the results favoring bribery. In the next section, we propose that the characteristics of bribery misconduct can explain market penalties.

Bribery and Market Penalties

Building upon the rational choice and the investor attention literatures, we now introduce a model of bribery and market penalty to examine how corruption investigations affect firm valuation. Our model makes the true cost of corporate corruption explicit. We focus on the offenses that are considered illegal under the FCPA.

In 1977, the U.S. Congress enacted the FCPA in the aftermath of the Watergate scandal. The FCPA primarily prohibits the payment of bribes to foreign government officials, including employees of state-owned enterprises, for the purpose of obtaining or retaining business. It makes bribing foreign government officials for business purposes a *criminal* act for U.S. firms, foreign firms doing business in the U.S., and foreign firms that list shares on one of the U.S. stock exchanges. Under the FCPA, the Securities and Exchange Commission (SEC) and the Department of Justice (DOJ) may prosecute foreign firms operating in the U.S. for bribery committed in a third nation. The FCPA was amended in 1998 to reflect the OECD Anti-Bribery Convention to eliminate corruption that distorts markets and causes income inequality to persist or grow. Since 1998, 41 countries have become signatories to the convention (Transparency International 2015). In recent years, the FCPA has gained media attention as regulators have assumed an active posture in prosecuting anti-bribery laws and have imposed large penalties and fines. The FCPA is the mechanism by which U.S. authorities indicted FIFA executives despite their Swiss residency.

The DOJ and the SEC impose both monetary and non-monetary penalties on firms and individuals for most bribery actions. Monetary penalties include fines and judgments assessed due to civil and criminal actions. These costs constitute a one-time charge to the income statement. Nonmonetary penalties include costs incurred for investigation activities, costs of monitoring initiatives related to compliance and ethics programs, and other costs attributable to a diminished reputation. Compliance costs and fines arising from FCPA violations can negatively affect ratings for firms with modest free cash flow and/or liquidity (Fitch Ratings 2010). For example, in February 2010, Fitch Ratings downgraded the credit rating of Avon Products, Inc., due to its FCPA investigation and compliance-related expenses.

Bribery prosecutions, like prosecutions for other forms of corporate misconduct, may affect stakeholder relationships. Disclosure of bribery acts combined with the assessment of penalties and fines impose additional reputational costs on firms as stakeholders change their expectations for the firm's future. Customers may negotiate lower prices or switch to a competitor because of the stigma associated with the firm paying bribes. Suppliers may impose less favorable trade credit terms and lenders may increase the firm's cost of capital due to the firm's diminished reputation (Karpoff et al. 2008b; Murphy et al. 2009). The expectations that customers, suppliers, and investors will change the terms under which they conduct business with the firm are reflected in a decrease in the firm's market value (Kang 2008). Accordingly, we propose the following baseline hypothesis:

H1 Firms accused of violating the FCPA experience market penalties.

Moderating Effects of Bribery Characteristics

The current enforcement trend indicates that the internal self-regulatory model of self-policing on which the FCPA and the OECD Convention are based may be failing (Weismann 2009). We propose that characteristics of the corruption and bribery investigations complicate managers' ability to perform an adequate rational choice calculation, especially estimating the indirect negative consequences from the firm's illegal acts (Mishina et al. 2010).

We built our model's next step on the notion that the unique characteristics of bribery misconduct explain the market reactions in terms of market penalties. First, we used rational choice theory to motivate why bribery would have a negative impact on a firm's reputational capital. We then used limited investor attention theory (Hirshleifer and Teoh 2003; Hirshleifer et al. 2009; Andrei and Hasler 2014; Paruchuri and Misangyi 2015) as the mechanism by which certain factors are likely to influence our baseline relationship between bribery investigations and reputational capital. Hirshleifer and Teoh (2003, p. 338) observe that due to investors' limited attention "informationally equivalent disclosures can have different effects on investor perceptions, depending on the form of presentation." Just as investor distraction hypothesis holds that extraneous and unrelated news inhibits market reactions to relevant news (Hirshleifer et al. 2009), so too investor attention hypothesis should hold that extraneous yet related news magnifies market reactions to relevant news. We argue that the level of investor attention will vary depending on the presence of key attention drawing mechanisms.

We have identified three variables that serve as potential moderators of the relationship between bribery accusation

and market penalty—host nation corruption, multiple regulators, and involvement of compromised management and board members. These moderators add complexity to the analysis of multi-market misconduct and the characteristics of bribery. The majority of studies on corporate financial misconduct and reputational penalties have focused on misconduct within one national institutional environment. Yet, FCPA investigations span multiple national institutional environments with different norms and regulations (Kostova and Zaheer 1999; Scott 2014). For example, Mudambi et al. (2013) observed that underlying institutional factors drive corruption levels. Robertson and Watson (2004) link national corruption levels to levels of uncertainty avoidance and masculinity. Countries vary in both bribery regulation and enforcement. Assessments of the value of bribery, the probability of being caught, and the consequences vary across national institutional environments and time. This adds complexity to managers' rational choice calculations and can influence investor reactions as well.

These variables involve relationships between bribery investigation events and market penalty at two levels of analysis: within-level and cross-level (Andersson et al. 2014). Given the saliency of cross-level moderators in the context of firm bribery occurring in foreign countries, we present the influence of cross-level moderators first and within-level moderators later. In the remainder of this section, we theorize about the effects of the three variables—host nation corruption, multiple regulators, and involvement of compromised management and board members—on the baseline relationship between bribery investigation events and market penalty.

Host Nation Corruption

Although bribery is consistently considered an inappropriate and stigmatized activity across national contexts (Cullen et al. 2004; Husted 1999; Spencer and Gomez 2011), nations vary in their tolerance of it (Doh et al. 2003; Lee et al. 2010; Martin et al. 2007). Research demonstrates that the likelihood of a foreign official requesting a bribe increases as the corrupt activities in a nation increase (Murphy et al. 2009) and decreases when businesses take collective actions against paying bribes (Chen et al. 2008). Demand for bribes also depends on a nation's cultural and economic factors (Beets 2005; Davis and Ruhe 2003; Sanyal 2005). In addition, the likelihood of being caught decreases as the corrupt activities in a nation increase. Further, non-compliance with bribery requests will have a greater potential downside in the more corrupt nations (Drabek and Payne 2001). Lee et al. (2010) found that the more pervasive corruption is in a nation, the larger are the bribes.

The particular country in which the bribery occurs may affect each stage of an FCPA investigation. However, corporate misconduct investigations proceed through a fairly predictable process (Karpoff et al. 2008b). The initial investigation announcement shocks stakeholders, including the market, more than do subsequent investigation events. Information about a nation's corruption is quantified and publicized via Transparency International's Corruption Perceptions Index (CPI) scores, which rate the perceived levels of public corruption in 180 nations on a scale from most corrupt to least corrupt. Host nation corruption levels influence foreign direct investment (FDI) inflows (Robertson and Watson 2004) and types (Brouthers et al. 2008). Given the visibility of CPI scores and the expected/unexpected nature of corruption news in host countries with high/low corruption perception, the investor attention model suggests that news of bribery committed in a country with low corruption perception increases investor attention (Hirshleifer and Teoh 2003). Investors are expected to react more sharply when they find that a firm paid bribes in countries perceived as less corrupt than in countries perceived as more corrupt. For instance, investors would be shocked to get news of bribery accusations in Denmark, New Zealand, or Singapore, as opposed to in highly corrupt countries such as Iraq, Nigeria, or Venezuela. Thus, we suggest that corruption allegations in more corrupt countries will result in smaller market penalties than allegations in less corrupt countries.

H2 Host country corruption moderates the relationship between investigation events and market penalty such that higher corruption in host countries results in a smaller market penalty caused by the investigation events.

Participation of Multiple Regulators

Regulators are legal institutions at the country level. Bribery investigations are nested within national corruption perception as well as within legal institutions that prosecute such wrongdoings. Participation of multiple regulators fits the requirement for a cross-level moderator (Andersson et al. 2014). Over time, the number of countries that are signatories of the OECD Convention criminalizing bribery of foreign public officials has increased. In 2010, the number of countries reached 41 signatories. This increase reflects the stigmatization of this type of corruption across national institutional environments. An FCPA prosecution can involve multiple regulators—the DOJ, the SEC, the non-U.S. regulatory authority in the firm's home OECD nation, and the regulatory authority in the nation or nations where the bribery act is committed. For example, 13 regulatory authorities in 12 nations prosecuted Siemens for bribery acts.

Involvement of several regulators in foreign jurisdictions presents the prospect of concurrent investigations and prosecutions. MNE managers risk being distracted from their core business as they deal with the investigations. In addition, it is reasonable to expect greater media coverage of bribery investigations when multiple regulators are simultaneously engaged in prosecuting the firm. Greater media coverage increases investor attention to the misconduct event (Andrei and Hasler 2014; Hirshleifer and Teoh 2003). Thus, we suggest that the participation of multiple regulators results in investors reacting more sharply to the bribery investigation, which in turn results in a greater decline in firm value.

H3 The number of regulators moderates the relationship between investigation events and market penalty such that a higher number of regulators results in a greater market penalty caused by the investigation events.

Involvement of Compromised Management and Board Members

Firms with unethical executives tend to have problems attracting different types of stakeholders and face a decline in market share (Stevens 2013). Research about top management team (TMT) involvement in misconduct has centered on financial misconduct (Arthaud-Day et al. 2006; Fich and Shivdasani 2007). In regulatory enforcement actions for such misconduct, the SEC named the CEO and/or the CFO for some involvement in 89 % of the cases. The SEC criminally indicted about 20 % of these CEOs/CFOs, and over 60 % of those indicted were convicted (Beasley et al. 2010).

In contrast to other types of corporate misconduct, MNEs are responsible for not only the bribery actions of board members, TMTs, middle managers, and line employees but also their agents in other countries. An FCPA investigation may ignite due to the actions of any of the above persons connected with the enterprise. We propose that the involvement of management and/or board members in the bribery act shocks the stakeholders the most when they learn of the initial allegations. TMT involvement kindles a great amount of media coverage of bribery investigations, thereby piquing investor attention (Andrei and Hasler 2014; Hirshleifer and Teoh 2003).

When the TMT is involved in committing illegal acts, it implies that the TMT fostered an organizational culture that promoted illegal behavior. This phenomenon also implies that the board was not effectively performing its oversight function because it was either unaware of the culture or was not taking steps to force management to change the culture. According to Janney and Gove's (2011) findings, firms that have TMTs that govern with a culture promoting corporate social responsibility tend to experience greater negative investor reactions when stock option backdating scandals arise than firms with a culture that does not promote corporate social responsibility. This suggests that TMT's monitoring function is suspect as it is supposed to be in charge of the firm's governance tenor. Involvement of corporate management and/or board members in bribery makes the misconduct look worse than it would look were the misconduct committed by lower level employees. Accordingly, we suggest that management/board member involvement prompts a sharper reaction to bribery investigations than when only lower level employees are involved, thereby resulting in a greater decline in firm value.

H4 Management/board member involvement moderates the relationship between investigation events and market penalty such that management/board member involvement results in a greater market penalty caused by the investigation events.

Methods

Sample and Data

We began our analysis with the population of 182 firms investigated for FCPA violations during the Act's 32-year enforcement history, from 1978 through 2010. We excluded Wyeth Pharmaceuticals because we were unable to find any publicly disclosed information, including firm disclosures that it was subject to an FCPA investigation. Of the 151 public firms prosecuted for FCPA violations, the Center for Research in Securities Prices (CRSPs) listed 134 in its database for the span of the investigations. We identified events for the 134 firms to calculate cumulative abnormal returns (CARs). Four firms had two enforcement actions; therefore, 138 enforcement actions encompassed 134 public firms.

We next identified events surrounding the enforcement actions reported in Shearman and Sterling's *FCPA Digest*, published in 2011, to build our event study database. We augmented these data with Trace International's Compendium of FCPA cases (2011). We searched for the terms 'bribery,' 'bribe,' 'Foreign Corrupt Practices Act,' 'FCPA,' and 'Oil for Food' using Factiva, Lexis-Nexis, PACER, and 10-K Wizard. We searched SEC releases posted at www.sec.gov and DOJ press releases to obtain missing data. For class-action lawsuits related to FCPA enforcement actions, we searched the Stanford Securities Class Action Clearinghouse database.

Dependent Variable

We operationalized our dependent variable, *market penalty*, as loss of CAR, consistent with the literature (e.g., Kang 2008). We calculated CAR over the 2-day window surrounding five events (Karpoff et al. 2008a) using the standard event study method on the basis that any financially relevant information that is newly revealed to investors will be instantaneously incorporated into stock prices (McWilliams and Siegel 1997).

An investigation comprises five events (Karpoff et al. 2008a). First, a *trigger or accusation event* denotes the first disclosure of a potential foreign bribery violation. Common accusation events include whistleblower charges, voluntary disclosures in SEC filings or through press releases, internal audit disclosures, and actions by foreign law enforcement agencies. Second, an *investigation event* occurs when regulators perform an informal inquiry to gather information about the allegations. During the investigation period, a firm may publicly disclose that it is the subject of an informal inquiry or that it has become a formal investigation target. Third, a *regulatory event* occurs if regulators proceed with the investigation. Fourth, a *resolution event* occurs on the date that enforcement of the bribery action concludes. Fifth, 'other' *event* is an event that does not fall into any of the aforementioned categories, such as regulators' raids of corporate offices or the resignation of the firm's CEO or of a board member in response to a bribery enforcement event. We identified 331 events for the 134 firms. These 331 events formed the sample to test H1–4.

We calculated the abnormal returns using the EVENTUS program (e.g., Paruchuri and Misangyi 2015; Pfarrer et al. 2010) for an estimation window to estimate normal returns extending back 255 days prior to and ending 46 days before the event date. We measured abnormal stock returns over 2-day event windows using the market-adjusted method (e.g., Janney and Gove 2011). Scholars have used 2-day event windows in previous studies on financial misrepresentation (Beasley et al. 2010; Palmrose et al. 2004; Karpoff and Lott 1993).

Hypothesized Moderating Effects

We ran an OLS regression where we retested bribery *accusation* event (H1) to test the hypothesized moderating effects. Karpoff and associates (2008b) note that the accusation or trigger event has a more salient effect on CAR than the investigation, regulatory, resolution, and 'other' events. Thus, we coded bribery accusation as 1 and coded all other bribery-related activities as 0. We centered the main effects prior to creating the moderating effect variables to facilitate interpretation of the results (Aguinis 2004).

We used archival data to measure the hypothesized moderating effects. We calculated host country *national corruption perceptions* (H2) from Transparency International's CPI (Brouthers et al. 2008; Robertson and Watson 2004), which captures arbiters' perceived levels of public corruption in 180 nations on a scale from 0 (most corrupt) to 10 (least corrupt). Host country *national corruption perception* is equal to the mean 2010 CPI score for nations where bribes were paid. *Multiple regulators* (H3) is a count of the number of regulatory agencies prosecuting the firm. *Management or board involvement* (H4) is a dichotomous variable coded 1 if the firm's management or a board member is involved, otherwise 0.

Control Variables

We included several control variables that influence reputation capital or affect the market's sensitivity to corporate misbehavior. *Assets* refers to the natural log of the firm's market capitalization one day prior to the revelation of bribery. We coded *American Depository Receipts* (ADRs) as a dichotomous variable where ADR equals 1, otherwise 0. Stock prices of foreign firms with ADRs tend to fluctuate less than do those of foreign firms listed on U.S. exchanges. We controlled for *UN Oil-for-Food program* investigations using a dichotomous variable where 1 is an enforcement action resulting from the Oil-for-Food program, otherwise 0 (Shearman and Sterling 2010). Companies participating in the Oil-for-Food program were concurrently under investigation. *Subsidiary* is a dichotomous variable that we coded 1 if the allegation involved a subsidiary, otherwise 0. We also controlled for *Voluntary disclosure*, which is a dichotomous variable that we coded 1 if the firm voluntarily disclosed the misconduct to regulators, otherwise 0. Studies have shown that voluntary disclosure reduces penalties (Janney and Gove 2011). We controlled for *Accounting violations*, reflecting the possible entrenchment of accounting weaknesses in corporate systems based on contemporaneous information in bribery accusation announcements. We coded the violation 1 when the announcement revealed financial misrepresentation (Karpoff et al. 2008a) such as the possible hiding of alleged bribery in the firm's accounting records (indicated by terms such as 'improper payment(s),' 'books and records,' and/or 'internal controls' violations), otherwise 0. We also controlled for the 'main' effects of the hypothesized moderating variables.

Analyses

We calculated abnormal returns using 306 of the 331 events described above for which usable returns were

Table 1 Results of financial event study for firms investigated for bribery

Market-adjusted returns model[a]						
Event types	Mean CAR[b]	Negative/positive[c]	t[d]	Generalized sign test Z	Mean[e]	Sum[e]
All events[f]	−1.85	200/106***	−8.18***	−5.22***	−198.06	−60,605.48
Accusation	−2.94	71/30***	−8.65***	−3.93***	−313.57	−31,671.23
Investigation	−1.01	17/12	−1.58	−0.69	−243.36	−7057.35
Regulatory	−1.99	8/8	−1.39	0.00	−105.95	−1695.21
Resolution	−0.31	37/28	−0.14	−0.63	1.68	111.13
Other	−1.96	67/28***	−5.28***	−4.04***	−213.61	−20,292.81

Event window is 2-day or days 0 and 1. Two-tailed tests

* $p < .05$, ** $p < .01$, *** $p < .001$

[a] CRSP value-weighted index

[b] Values are percentages

[c] This column contains the ratio of negative–positive abnormal returns for the event dates

[d] Standard parametric tests

[e] Millions of dollars

[f] $n = 306$ event dates for 134 associated firms

available. We then performed two significance tests of the abnormal stock returns.

First, we ran a standardized parametric test to assess whether the excess returns were significantly different from 0 (Brown and Warner 1985; MacKinlay 1997). Second, we ran the generalized sign test, where the null hypothesis states that the proportion of the positive or negative events is the same as in the estimation period. This test is more robust to outliers than the standard parametric test (Cowan 1992). Both tests should be significant to support hypotheses where the dependent variable is CAR (McWilliams and Siegel 1997). We used the results of the event study as our dependent variable in the regressions to test the remaining hypotheses.

Results

The sample firms experienced a statistically significant ($p < 0.001$) 2-day mean decline in CAR of 1.85 %. We apportioned the decline in CAR into accusation, investigation, regulatory, resolution, and 'other' events. The 2-day mean decline in CAR of 2.94 % for accusation events and 1.96 % for each of the 'other' events were statistically significant ($p < 0.001$; see Table 1). Thus, all events' significance levels are driven by (a) accusation events and (b) 'other' events but not by other events like investigation, regulatory, and resolution. The investigation, regulatory, and resolution events are anticipated at the time of accusation and, as such, these subsequent events are not found to be significant; conversely, the 'other' event component is unanticipated. Thus, we find further support for H1.

We calculated market losses suffered by firms due to corporate bribery investigations. We then evaluated whether the firms could have behaved as rational actors in terms of estimating market reactions to disclosure of these investigations. We computed the magnitude of dollar losses (Karpoff and Lott 1993) by multiplying each firm's CAR by the closing market value of its outstanding common stock one day before news of the bribery event became public. We calculated overall market loss by summing the change in market value across firms. The 1.85 % decline in CAR translates to a market capitalization loss of $60.61 billion or a per-event mean market capital loss of $198.06 million. For the bribery accusation events, the mean loss in market capital amounts to $31.67 billion or a per-event mean market capital loss of $313.57 million.

Table 2 contains the means, standard deviations, and correlations for our study variables. The mean negative 2-day CAR was 1.85 %. About 33 % of bribery-related events were accusation events, and 46 % of accused firms voluntarily disclosed the investigation to regulators. On average, 86 % of sample firms were accused of accounting violations for covering up the corruption via false entries and internal control weaknesses; an average of 2.48 regulators were involved in each investigation, and 12 % of management/board members participated in the bribery investigation. Foreign firms with ADRs comprised 15 % of the sample. Fourteen percent of firms were accused of violations related to the UN's *Oil-for-Food* program. Subsidiaries committed 61 % of bribery violations. The mean CPI for all nations named in bribery prosecutions since 1978 is 3.27 (cf. countries that received CPI ratings of 3.3 in 2010, which included Albania, India, Jamaica, and

Table 2 Descriptive statistics and pairwise Pearson correlations

	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
(1) Market penalty[a]	−0.02	0.05										
(2) Accusation[c]	0.33	0.45	−0.19***									
(3) National corruption perception	3.27	1.29	0.17**	−0.02								
(4) Multiple regulators	2.48	1.96	0.07	−0.07	−0.08							
(5) Management/board involvement[c]	0.12	0.33	−0.26***	−0.07	−0.25***	−0.12						
(6) Accounting violation[c]	0.86	0.35	−0.08	−0.04	−0.06	0.22***	−0.02					
(7) Voluntary disclosure[c]	0.46	0.50	−0.01	0.07	−0.04	−0.05	−0.05	0.20***				
(8) Asset size[b]	8.95	2.02	0.27***	−0.03	0.06	0.38***	−0.27***	0.08	−0.19***			
(9) ADR[c]	0.15	0.36	0.08	−0.02	−0.10	0.43***	0.00	0.01	−0.15*	0.37***		
(10) Oil for Food[c]	0.14	0.35	0.03	−0.00	0.37***	0.24***	−0.04	0.05	−0.21***	0.16**	0.11	
(11) Subsidiary[c]	0.61	0.49	−0.10	−0.02	−0.11	0.03	0.27***	0.15**	0.20***	−0.13*	0.01	0.02

$n = 306$ events for 134 firms

* $p < .05$, ** $p < .01$, *** $p < .001$

[a] Cumulative abnormal return

[b] Logarithm

[c] Correlations corresponding to these dichotomous variables are Spearman

Liberia). Chevron was the largest firm with mean assets of $137.7 billion, while Venturian Corporation was the smallest firm with mean assets of $21 million.

Table 3 presents the results of our tests of H2–4. We reported two-tailed significance for regression coefficients pertaining to our a priori hypotheses and control variables.

In Model 1, we regressed our control variables on market penalty. *Asset size* is statistically significant ($p < 0.001$). In Model 2, we retested H1, which suggests that bribery *accusation* events lead to larger market penalties as compared to other events. Consistent with our expectation, bribery *accusation* events is positive and statistically significant ($\beta = -0.023$; $p < .001$).

We hypothesized that host country *national corruption perception* (H2) strengthens the negative association between a bribery accusation event and market penalty. In Model 3, we tested the moderating effect of *national corruption perception* in the presence of a bribery accusation event. Consistent with our expectations, a*ccusation* × *national corruption perception* is negative and statistically significant ($\beta = -0.011$; $p < 0.05$), supporting H2.

In Model 4, we tested H3, which suggests that involvement of regulators from multiple jurisdictions strengthens the negative relationship between accusation and market penalty (H3). The hypothesized moderating effects were not statistically significant. As such, H3 is not supported.

In Model 5, we tested H4, which suggests that involvement of a firm's management/board members in the associated wrongdoing strengthens the negative relationship between accusation and market penalty. As expected, *accusation* × *management/board member involvement* is negative and statistically significant ($\beta = -0.049$; $p < 0.01$).

Model 6 tests the combined main effect and moderators. The interaction effects between *accusation* and *management/board member involvement* ($\beta = -0.043$; $p < 0.05$) and *national corruption perception* ($\beta = -0.011$; $p < 0.05$) are statistically significant. The full model is significant ($F = 7.54$; $p < 0.001$) with an explained variance of 24 %. To ensure that multi-collinearity did not affect our analysis, we examined the variance inflation factors (VIFs). The mean VIF for Model 7 was 1.40, which is well within acceptable guidelines (Hair et al. 1998).

All models were statistically significant. Of the control variables, *management/board member involvement*, *accounting violation*, and *asset size* are statistically significant across models. Management/board member involvement results in a larger market penalty, indicating that market reactions are worse when these corporate elites participate in bribery misconduct. *Accounting violation* results in a larger market penalty, suggesting that

Table 3 Results of OLS models predicting market penalty

	Model 1 Controls	Model 2 Main effects	Model 3	Model 4 Moderating effects	Model 5	Model 6 Full model
Hypothesized						
Bribery (H1)		−0.023*** (0.006)	−0.024*** (0.006)	−0.023*** (0.006)	−0.023*** (0.006)	−0.023*** (0.006)
Bribery × national corruption perception (H2)			−0.011* (0.001)			−0.011* (0.001)
Bribery × multiple regulators (H3)				0.001 (0.003)		0.001 (0.003)
Bribery × Management/board involvement (H4)					−0.049** (0.018)	−0.043* (0.018)
Controls						
National corruption perception	−0.005* (0.002)	−0.005* (0.002)	−0.001 (0.003)	−0.005* (0.002)	−0.005* (0.002)	−0.002 (0.003)
Multiple regulators	−0.001 (0.002)	−0.001 (0.002)	−0.001 (0.002)	−0.001 (0.002)	−0.001 (0.002)	−0.001 (0.002)
Management/board involvement	−0.036*** (0.008)	−0.038*** (0.008)	−0.039*** (0.008)	−0.039*** (0.008)	−0.028** (0.009)	−0.030*** (0.009)
Accounting violations	−0.015* (0.008)	−0.017* (0.007)	−0.017* (0.007)	−0.017* (0.007)	−0.012* (0.007)	−0.017* (0.007)
Voluntary disclosure	−0.006 (0.006)	−0.004 (0.006)	−0.003 (0.006)	−0.004 (0.006)	−0.004 (0.006)	−0.003 (0.006)
Asset size	0.005*** (0.002)	0.005*** (0.002)	0.006*** (0.002)	0.005*** (0.002)	0.005*** (0.002)	0.005*** (0.002)
ADR	0.003 (0.009)	0.004 (0.009)	0.003 (0.008)	0.004 (0.009)	0.003 (0.008)	0.003 (0.008)
Oil for food	−0.001 (0.008)	−0.000 (0.008)	−0.000 (0.008)	−0.000 (0.008)	−0.002 (0.008)	−0.001 (0.008)
Subsidiary	0.004 (0.006)	0.004 (0.006)	0.004 (0.006)	0.004 (0.006)	0.004 (0.006)	0.003 (0.006)
Constant	−0.049** (0.012)	−0.043** (0.015)	−0.044** (0.015)	−0.043** (0.015)	−0.041** (0.015)	−0.043** (0.018)
F statistic	7.23***	8.38***	8.27***	7.60***	8.49***	7.54***
Variance explained (R^2)	0.17	0.21	0.23	0.21	0.23	0.24

n for all models = 306. Two-tailed tests

* $p < .05$, ** $p < .01$, *** $p < .001$

corruption entrenchment in accounting systems increases uncertainty about the resources needed to rectify the violations. Lower *asset size* is associated with higher market penalties. It seems that smaller firms are penalized more severely than are larger firms on the notion that they have fewer resources to fend off a bribery prosecution; moreover, a prosecution could lead to a greater disruption of the business, resulting in loss of investor confidence.

To interpret the moderating effects, we drew interaction plots using values one standard deviation above and below the mean (Aiken and West 1991; Aguinis 2004) (see Fig. 1). We defined high national corruption perception as one standard deviation above the mean and low national corruption perception as one standard deviation below the mean. For management/board involvement, a dichotomous variable, we used 0 and 1 for low and high involvement, respectively. We coded the bribery accusation event as 1. We coded all other events associated with the FCPA investigation as 0. Figure 1a depicts the interaction of national corruption perception and accusation. The figure clearly shows that market penalty is greater when bribery accusation occurs in a nation with low corruption perception than when it occurs in a nation with high corruption perception.

Figure 1b illustrates the interaction of management/board member involvement and accusation on market penalty. Market penalty is higher when management/board members are involved and even greater at the initial accusation.

Reputational Penalty

Following Peltzman (1981), Jarrell and Peltzman (1985), and Karpoff and Lott (1993), we calculated the total loss in share value, which represents the change in the firm's market value when news of the bribery is disclosed. This change in market value includes investors' expectations that regulators will impose legal penalties and that losses will stem from lost sales and impaired operations (Karpoff et al. 2008b). The total dollar loss for all events comprising the 76 bribery enforcement actions that were completed by 31 December 2010 amounted to $22.84 billion with a mean dollar loss of $300.58 million (median dollar loss of $19.87 million).

We subsequently calculated net residual losses after deducting monetary penalties levied at the investigation conclusion from total dollar loss in share values, and also monetary penalties for bribery related actions comprised of fines and class action settlements. Regulators imposed fines totaling $4.11 billion on 64 of the 76 firms for which prosecutions were completed during the period 1978–2010, resulting in a mean fine of $54.04 million (median fine of $3.89 million; see Table 4).

Of the nine class action lawsuits, two were dismissed. The settlements totaled $47.30 million. The total reputation loss amounted to $18.69 billion with a mean of $245.92 million (median of $15.99 million). Using point estimates, we partitioned the aggregate share value losses from all events into three components: legal fines, class action settlements, and reputational penalties (Karpoff et al. 2008b). Using means, we found that for every $1 of share value loss, 18¢ represents legal fines, 0.2¢ relates to class action settlements, and 81.8¢ represents reputation loss. Expressed in terms of CAR, the total dollar loss corresponds to a mean CAR of −3.46 %. The fines and class action settlements comprise 0.62 and 0.01 % of CAR, respectively. Accordingly, the reputational penalty effect is 2.83 % (see Table 5).

Additional Models and Robustness Checks

We ran several additional models to check the robustness of our results. We identified 22 observations with associated confounding events, such as earnings announcements and public financial statement filings (e.g., 10-K, 10-Q, and

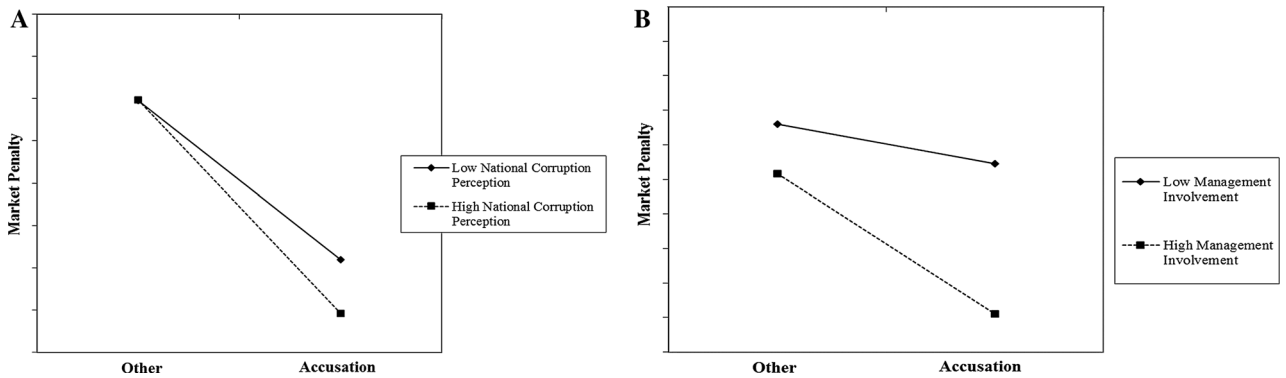

Fig. 1 Interaction of bribery and its characteristics on market penalty. **a** Moderating effect of national corruption perception on the relationship between accusation and market penalty. **b** Moderating effect of management/board involvement on the relationship between accusation and market penalty

20-F). We reran the financial event study analyses excluding these events. Results of our analyses were robust. A plausible explanation for the consistent results is that the confounding news was related to the firm's performance (e.g., a bribery announcement included as part of a quarterly or annual financial statement filing). Since traditional event study methods incorporate firms' stock prices over a 1-year trading period, four announcements of firm performance (four quarters) are controlled for when running these methods. Thus, we retained all observations in our analyses.

We calculated mean CAR for the 306 events under other accepted event study methods, such as the market method, Fama–French method, and volume method. We estimated both 2- and 3-day mean CAR using these methods. Under all of the methods, the sample firms experienced statistically significant mean CAR ($p < 0.001$ for the market and Fama–French methods, and $p < 0.05$ for the volume method).

We reran the models after winsorizing market penalty at the 0.01 and 0.99 levels; the results were unaffected. We also empirically tested and confirmed that the CPI scores from 1995 to 2010 were relatively stable over that period, enabling us to use the 2010 CPI scores to operationalize the *national corruption perception* variable across study years. We also reran the models, controlling separately for the following variables: *time*, using the Act's age at the time of resolution; *industry*; *clustering* (firms that had more than one event); OECD Convention (1999); and Sarbanes–Oxley passage (2002). The results were unchanged.

Table 4 Annual fines imposed as a result of bribery enforcement actions (1978–2010)

Years	*n*	Fines[a] ($)
1978	1	0.00
1980	3	0.01
1986	1	0.00
1989	2	1.11
1991	1	0.00
1995	1	24.80
1996	1	0.30
1997	1	0.30
2000	1	0.30
2001	1	0.10
2002	3	18.15
2003	1	0.00
2004	3	2.42
2005	3	37.77
2006	4	90.24
2007	13	176.21
2008	8	100.64
2009	9	2329.95
2010	17	1324.96
Total	76	4107.26

$n = 76$ enforcement actions for public companies through 31 December 2010

[a] Aggregate millions of dollars

Discussion and Conclusions

In this study, we sought to (a) examine the full cost of FCPA investigations given their unique characteristics, (b) explain the variations in market penalties as experienced by investors, and (c) ascertain the components of share value losses. During this process, we contributed to the recent research on corporate wrongdoing and market penalties (Karpoff 2012) by studying mid-level offenses as well as better specifying the costs underlying the rational choice model of corporate misconduct (Paternoster and Simpson 1996). We demonstrated that complexities of multi-country misconduct complicate rational choice

Table 5 Components of firms' losses for firms investigated for bribery

	Aggregate ($ millions)	Mean ($ millions)	Median ($ millions)
Total dollar loss[1]	22,844.24	300.58	19.87
		Percent of total dollar loss	
Partitioned into:		Based on means	Based on medians
Legal penalties			
Fine effect	4107.26	17.98 %	19.55 %
Class action effect	47.30	0.20 %	0.00 %
Reputation loss[2]	18,689.68	81.82 %	80.45 %

$n = 76$

[1] *Total dollar loss* is the estimated change in the market capitalization due to bribery-related announcements. This loss is partitioned into portions that can be ascribed to regulator fines, class action settlements, and reputation loss

[2] *Reputation loss* is the residual of the Total Dollar Loss after accounting for fines and class action settlement effects

calculations. Moreover, given that bribery appears to be fairly widespread and costly in terms of share value losses and erosion of corporate ethics (Jackson 2000), our study considered the population of public firms prosecuted during the 32-year span of the FCPA. We note that there is one unpublished paper studying bribery in the FCPA context (Karpoff et al. 2015); however, this paper does not conceptualize and test bribery characteristics as moderators explaining additional variance in the market's negative reactions.

Bribery, Market Penalties, and Reputational Penalties

We found that the market penalties imposed on a firm's reputational capital are large—the mean CAR is −1.85 %, translating to a mean market penalty of $198.06 million. We also found strong support for our hypotheses that characteristics of bribery cases explain variations in market penalties. We drew upon investor attention theory to complement rational choice theory to delve further into the mechanisms that provoke sharper reactions from investors when news of bribery investigations is revealed. We explain the variance in market penalty as a function of the characteristics of corporate bribery, namely bribery acts that were conducted in foreign jurisdictions and bribery acts that involved management/board members. Peng and Xiong (2006) argued and reported that limited investor attention is attributable to investors processing more market and sector-wide information than firm-specific information. We report competing findings that investor attention increases for firm-specific or within-level moderators more so than for sector-wide or cross-level moderators. In addition, we expanded the research on corporate misconduct and market penalties as summarized by Karpoff (2012) by considering misdeeds executed in foreign markets. We note that arbiters anticipate bribery in more corrupt host countries, but not in less corrupt host countries.

The inclusion of main effect and moderators in the model increased explained variance from 17 to 24 %. The host country corruption perception moderating effect (H2) is supported, suggesting that the bribery–market penalties relationship is stronger for countries that are less corrupt than for countries that are more corrupt. In the presence of a bribery accusation event, an increase in national corruption perception by one standard deviation from the mean value leads to an additional increase in the market penalty of 3.12 %. Thus, for less corrupt countries, the 3.12 % increase translates to an increase in the total market penalty of $988 million in relation to the $31.67 billion market penalty for bribery accusation events.

We also found that the bribery–market penalties relationship is stronger when management/board members are involved in the bribery. For instance, Halliburton's CAR declined 3.75 % ($615 million) when the news was first revealed that Albert Jack Stanley, the CEO of KBR, a Halliburton subsidiary, was alleged to have been involved in the firm's bribery. He later pleaded guilty to the underlying charges, for which he was sentenced to 30 months in prison, followed by 3 years of probation, and fined $10.8 million. The average impact of the moderating effect of management/board member involvement increases the market penalty by 4.98 % at the time of bribery accusation. Thus, when management/board members are involved, the 4.98 % translates to an increase in average market penalty of $1.58 billion for bribery accusation events in relation to the $31.67 billion market penalty for these events.

We found lack of significance for multiple regulators in the bribery-market penalties relationship, and the relationship was not in the predicted direction. Regulators bring actions separately while coordinating their efforts with other regulators in parallel proceedings. We operationalized multiple regulators based on the number of regulators involved in prosecuting the bribery action, which does not take into account either the quality of regulatory enforcement or the effectiveness of the collaboration. There are various gradations of enforcement quality. For example, at the first level in the U.S., the SEC and the DOJ bring separate civil and criminal prosecutions, respectively, against a firm. At the next level, in OECD countries where many of the non-U.S. companies are headquartered, Transparency International (2015) rated member countries' enforcement levels as falling into four categories: active, moderate, limited, and little or no enforcement. At the last level, regulatory enforcement in different host countries could vary. We conjectured that when more regulators prosecute a firm for committing bribery (mean is 2.48 regulators), investors are more likely to be attentive to such large-scale prosecutions. However, our results suggest that perhaps fewer regulators indicate better collaboration among the regulators. The relationship between the number of regulators and bribery prosecution seems less linear that what we expected it to be. Future research could consider the complexities associated with the quality of regulatory enforcement and the optimum level of regulator collaboration when multiple regulators work in tandem to prosecute corporate bribery.

Our results show that bribery, as a midrange corporate misconduct, negatively affects firm valuation by 1.85 %. Such a penalty is neither very high (i.e., compared to market penalties for high-level corporate misconduct), nor very low (i.e., compared to market penalties for low-level corporate misconduct). The market's efficiency is reflected

in our findings in that they show that midrange corporate offenses yield mid-level market penalties.

In summary, our findings suggest that if bribery is a rational choice (e.g., Lee et al. 2010), then firms need to factor not only potential market penalties but also reputational penalties into their cost–benefit analyses. When evaluating potential benefits from bribery, firms need to consider that U.S. enforcement guidelines provide regulators with mechanisms to recover bribe benefits in the form of disgorgement. Therefore, the benefits from bribing vanish when firms are caught. As such, any notions by management that the firm may come out ahead even when it is caught should be considered in the rational choice framework. We demonstrated that a focus on legal penalties alone overlooks the most important cost—reputational costs—to shareholders of firms that commit acts of foreign bribery. By highlighting the different cost components of bribery, we are able to estimate better the true social costs of such corporate misconduct (Becker 1968). For every $1 share value loss resulting from a bribery prosecution, the legal penalties amount to only 18.2¢, while the reputation loss is much more significant, 81.8¢. On average, the invisible hand of the market penalizes firms by about 4.5 times more than the visible hand of regulators.

Implications for Practice

Because bribery investigations cause firms to incur significant costs in terms of declines in market value, firms should implement effective compliance and ethics programs to internalize legal codes of conduct (Gordon and Miyahe 2001). These programs would enable management and board members to avoid or minimize market penalties to the firm prosecuted for bribery. Bribery prevention is also in their self-interests because tainted elites are likely to be dismissed or prosecuted. If self-policing fails, the results can be disastrous in terms of lost reputation and the intrusion of regulators into the affairs of the firm. Moreover, given the 3- to 5-year average lifespan of a bribery prosecution, management is likely to be distracted from the day-to-day business activities.

Our study informs firms about the benefits of implementing anti-corruption strategies and engaging with stakeholders in disclosing these strategies. Firms should sufficiently disclose information about their anti-corruption strategies to stakeholders so that these stakeholders can hold them accountable for any transgressions (Hess 2009). The strategies should not be superficial but, instead, supported by policies and management systems, including anti-corruption training for employees and business partners, and systems to monitor corruption violations (Healy and Serafeim 2016). These scholars report that firms with low ratings for disclosing their anti-corruption strategies had a higher frequency of citations in subsequent articles on corruption than those firms with high ratings.

National institutional environments that reinforce the propensity for bribery rather than diminish it stymie the implementation of these compliance programs. This may occur even in countries that are signatories to the OECD Convention. Host country employees or agents may underestimate the reach of the FCPA, especially when local officials are lax or corrupt. MNE managers may need additional training to make rational choices given this variation in norms and regulations across national institutional environments. Our study makes the multi-country complexity of this corruption explicit.

The balance between the visible hand portion and the invisible hand portion of the punishment has consequences on what will be the main deterrent of various types of corporate misconduct and crime. Unlike Bromiley and Marcus (1989), we found that the stock market reaction complements and even magnifies the regulators' controls. The literature tells us that offenses that cause direct, serious, and immediate harm to stakeholders are best deterred through invisible hand punishments (Karpoff et al. 2008a), whereas third-party type offenses (e.g., environmental violations) are best deterred through visible hand punishments (Karpoff et al. 2005). This study informs us that midrange corporate offenses (e.g., bribery) are best deterred by both visible and invisible hand punishments because bribery-related reputational penalty is on average 4.5 times that of legal fines. A stronger and more pronounced case for focusing on market and reputational penalties should be made to prevent decision-makers from underestimating the high costs of engaging in bribery.

Limitations and Further Research

All event studies suffer from limitations (McWilliams and Siegel 1997). We used closing stock prices to calculate CARs. It is possible for a few news announcements to occur after trading hours; as such, using the next day opening stock prices instead of the same day closing prices could show the appropriate CARs in these instances. In addition, using intraday returns might have provided different results.

We demonstrated the negative effects of corruption investigations on firm performance. However, we do not know how many instances of bribery remain undisclosed. It is possible that the overall rational choice model points to a decision to commit bribery rather than to resist bribery. Further, it appears that regulators did not enforce disgorgement of bribery benefits during the first 25 years of the Act. However, more recently, disgorgement is increasingly being enforced. Future research should examine how the change in enforcement practice by regulators affects the rational

choice framework of firms as they consider the costs and benefits of bribery. This has major implications on practice because management needs to consider an additional element of potential negative consequence to the firm when they estimate the costs of bribery.

Our model examined characteristics of bribery investigations to understand variations in market penalties. Future research could consider the regulatory officials' evaluation of corporate bribery and the antecedents for legal fines. Future research could also examine other firm characteristics such as intangible assets or FDI portfolio to estimate the probability of being caught. In addition, future research could examine the time it takes for a firm's reputation (Sims 2009) or stock price to recover (Knight and Pretty 1999) to determine whether the firm bears a permanent stigma or is able to restore relationships with its stakeholders (Pfarrer et al. 2008). Another area for future research could be further refinement of reputational penalties based on collecting data regarding (a) investigation costs, and (b) monitoring costs when outside monitors are appointed at the time of bribery settlement. While companies incur costs related to these activities, public disclosure of these costs was scant during our study period.

In conclusion, market penalty is a mechanism by which the market punishes corporate misconduct. The reputational penalty for corporate corruption dwarfs monetary fines and sanctions. Our results suggest that the market is a complement to regulatory enforcement rather than a substitute for enforcement actions. The rational firm will adopt strict anti-corruption measures and calculate both the direct and indirect costs of bribery investigations.

Acknowledgments We gratefully acknowledge feedback from an earlier draft of this manuscript presented during the 2011 Academy of Management Conference. We thank Masako Darrough, Suresh Govindaraj, Lilac Nachum, Nafis Rahman and Stone Shi for their invaluable feedback while reviewing earlier versions of this paper. Support for this project was provided by a PSC-CUNY Award, jointly funded by The Professional Staff Congress and The City University of New York.

References

Aguinis, H. (2004). *Regression analysis for categorical moderators*. New York: Guilford Press.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Alexander, C. (1999). On the nature of the reputational penalty for corporate crime: Evidence. *Journal of Law and Economics, 42*(1), 489–526.

Andersson, U., Cuervo-Cazurra, A., & Nielsen, B. B. (2014). Explaining interaction effects within and across levels of analysis. *Journal of International Business Studies, 45*(9), 1063–1071.

Andrei, D., & Hasler, M. (2014). Investor attention and stock market volatility. *Review of Financial Studies,*. doi:10.1093/rfs/hhu059.

Arthaud-Day, M. L., Certo, S. T., Dalton, C. M., & Dalton, D. R. (2006). A changing of the guard: Executive and director turnover following corporate financial restatements. *Academy of Management Journal, 49*(6), 1119–1136.

Baker, W., & Faulkner, R. (1993). The social organization of conspiracy. *American Sociological Review, 58*(6), 837–860.

Baughn, C., Bodie, N. L., Buchanan, M. A., & Bixby, M. B. (2010). Bribery in international business transactions. *Journal of Business Ethics, 92*(1), 15–32.

Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Neal, T. L. (2010). *Fraudulent financial reporting, 1998–2007: An analysis of U.S. public companies*. New York: COSO.

Beatty, R., Bunsis, H., & Hand, J. (1998). The indirect economic penalties in SEC investigations of underwriters. *Journal of Financial Economics, 50*(2), 151–186.

Becker, G. (1968). Crime and punishment: An economic approach. *Journal of Political Economy, 76*(2), 169–217.

Beets, S. D. (2005). Understanding the demand-side issues of international corruption. *Journal of Business Ethics, 57*(1), 65–81.

Bromiley, P., & Marcus, A. (1989). The deterrent to dubious corporate behavior: Profitability, probability and safety recalls. *Strategic Management Journal, 10*(2), 233–250.

Brouthers, L. E., Gao, Y., & McNicol, J. P. (2008). Corruption and market attractiveness influences on different types of FDI. *Strategic Management Journal, 29*(6), 673–680.

Brown, S. J., & Warner, J. B. (1985). Using daily stock returns: The case of event studies. *Journal of Financial Economics, 14*(1), 3–31.

Chen, C. J., Ding, Y., & Kim, C. (2010). High-level politically connected firms, corruption, and analyst forecast accuracy around the world. *Journal of International Business Studies, 41*(9), 1505–1524.

Chen, Y., Yasar, M., & Rejesus, R. M. (2008). Factors influencing the incidence of bribery payouts by firms: A cross-country analysis. *Journal of Business Ethics, 77*(2), 231–244.

Cowan, A. R. (1992). Nonparametric event study tests. *Review of Quantitative Finance and Accounting, 2*(4), 343–358.

Cullen, J. B., Parboteeah, K., & Hoegl, M. (2004). Cross-national differences in managers' willingness to justify ethically suspect behaviors: A test of institutional anomie theory. *Academy of Management Journal, 47*(3), 411–421.

Darrough, M. N. (2010). The FCPA and the OECD Convention: Some lessons from the U.S. experience. *Journal of Business Ethics, 93*(2), 255–276.

Davis, J. H., & Ruhe, J. A. (2003). Perceptions of country corruption antecedents and outcomes. *Journal of Business Ethics, 43*(4), 275–288.

Doh, J., Rodriquez, P., Uhlenbruck, K., Collins, J., & Eden, L. (2003). Coping with corruption in foreign markets. *Academy of Management Executive, 17*(3), 114–127.

Dowling, G., & Moran, P. (2012). Corporate reputations. *California Management Review, 54*(2), 25–42.

Drabek, Z., & Payne, W. (2001). *The impact of transparency on foreign direct investment*. Working paper ERAD-99-02. Geneva: World Trade Organization.

Eccles, R., Newquist, S., & Schatz, R. (2007). Reputation and its risks. *Harvard Business Review, 85*(2), 104–114.

Fich, E. M., & Shivdasani, A. (2007). Financial fraud, director reputation, and shareholder wealth. *Journal of Financial Economics, 86*(2), 306–336.

Fitch Ratings. (2010). *U.S. Foreign Corrupt Practices Act—No minor matter*. Retrieved June 17, 2012, from http://www.reuters.com/article/idUSTRE6504MX20100601.

Fombrun, C., Gardberg, N., & Barnett, M. (2000). Opportunity platforms and safety nets: Corporate citizenship and reputational risk. *Business and Society Review, 105*(1), 85–106.

Fombrun, C., & van Riel, C. (2004). *Fame and fortune*. Upper Saddle River, NJ: FT-Prentice Hall.

Galang, R. M. N. (2012). Victim or victimizer: Firm responses to government corruption. *Journal of Management Studies, 49*(2), 429–462.

Gardberg, N. A., Sampath, V., & Rahman, N. (2012). Corruption and corporate reputation: The paradox of buffering and suffering. In *Proceedings of the seventy-second annual meeting of the Academy of Management*. doi:10.5465/AMBPP.2012.206. ISSN 1543-8643.

Gordon, K., & Miyahe, M. (2001). Business approaches to combating bribery: A study of codes of conduct. *Journal of Business Ethics, 34*(3), 161–173.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis with readings*. Englewood Cliffs, NJ: Prentice Hall.

Healy, P. M., & Serafeim, G. (2016). An analysis of firms' self-reported anticorruption efforts. *The Accounting Review, 91*(2), 489–511.

Hess, D. (2009). Catalyzing corporate commitment to combating corruption. *Journal of Business Ethics, 88*(4), 781–790.

Hirshleifer, D., Lim, S. S., & Teoh, S. H. (2009). Driven to distraction: Extraneous events and underreaction to earnings news. *Journal of Finance, 64*(5), 2289–2325.

Hirshleifer, D., & Teoh, S. H. (2003). Limited attention, information disclosure, and financial reporting. *Journal of Accounting and Economics, 36*(1–3), 337–386.

Husted, B. W. (1999). Wealth, culture and corruption. *Journal of International Business Studies, 30*(2), 339–360.

Jackson, T. (2000). Management ethics and corporate policy: A cross-cultural comparison. *Journal of Management Studies, 37*(3), 349–369.

Janney, J. J., & Gove, S. (2011). Reputation and corporate social responsibility aberrations, trends, and hypocrisy: Reactions to firm choices in the stock option backdating scandal. *Journal of Management Studies, 48*(7), 1562–1585.

Jarrell, G., & Peltzman, S. (1985). The impact of product recalls on the wealth of sellers. *Journal of Political Economy, 93*(2), 512–536.

Jensen, N. M., Li, Q., & Rahman, A. (2010). Understanding corruption and firm responses in cross-national firm-level surveys. *Journal of International Business Studies, 41*(9), 1481–1504.

Kang, E. (2008). Director interlocks and spillover effects of reputational penalties from financial reporting fraud. *Academy of Management Journal, 51*(3), 537–555.

Karpoff, J. M. (2012). Does reputation work to discipline corporate misconduct? In M. L. Barnett & T. G. Pollock (Eds.), *The Oxford handbook of corporate reputation* (pp. 361–382). London: Oxford University Press.

Karpoff, J. M., Lee, D., & Martin, G. (2008a). The consequences to managers for financial misrepresentation. *Journal of Financial Economics, 88*(2), 193–215.

Karpoff, J. M., Lee, D., & Martin, G. (2008b). The cost to firms of cooking the books. *Journal of Financial and Quantitative Analysis, 43*(3), 581–612.

Karpoff, J. M., Lee, D., & Martin, G. (2015). *The value of bribery to bribe paying firms*. Working paper. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1573222.

Karpoff, J. M., & Lott, J., Jr. (1993). The reputational penalty firms bear from committing criminal fraud. *Journal of Law and Economics, 36*(2), 757–802.

Karpoff, J. M., Lott, J., & Wehrly, E. (2005). The reputational penalties for environmental violations: Empirical evidence. *Journal of Law and Economics, 48*(2), 653–675.

Knight, R. F., & Pretty, D. J. (1999). Corporate catastrophes, stock returns and trading volume. *Corporate Reputation Review, 2*(4), 363–378.

Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *Academy of Management Review, 24*(1), 64–81.

Lee, S.-H., Oh, K., & Eden, L. (2010). Why do firms bribe? Insights from control theory into firms' exposure and vulnerability to corruption. *Management International Review, 50*(6), 775–796.

MacKinlay, A. C. (1997). Event studies in economics and finance. *Journal of Economic Literature, 35*(1), 13–39.

Martin, K., Cullen, K., Johnson, J., & Parboteeah, K. (2007). Deciding to bribe: A cross-level analysis of firm and home country influences on bribery activity. *Academy of Management Journal, 50*(6), 1401–1422.

McWilliams, A., & Siegel, D. (1997). Event studies in management research: Theoretical and empirical issues. *Academy of Management Journal, 40*(3), 626–657.

Mishina, Y., Block, E. S., & Mannor, M. J. (2012). The path dependence of organizational reputation: How social judgment influences assessments of capability and character. *Strategic Management Journal, 33*(5), 459–477.

Mishina, Y., Dykes, B. J., Block, E. S., & Pollock, T. G. (2010). Why "good" firms do bad things: The effects of high aspirations, high expectations, and prominence on the incidence of corporate illegality. *Academy of Management Journal, 53*(4), 701–722.

Mudambi, R., Navarra, P., & Delios, A. (2013). Government regulation, corruption and FDI. *Asia–Pacific Journal of Management, 30*(2), 487–511.

Murphy, D., Shrieves, R., & Tibbs, S. (2009). Understanding the penalties associated with corporate misconduct: An empirical examination of earnings and risk. *Journal of Financial and Quantitative Analysis, 44*(1), 55–83.

OECD anti-bribery convention: *Progress report 2009*. *Enforcement of the OECD Convention on combating bribery of foreign public officials in international business transactions*. Retrieved June 17, 2012, from http://www.transparency.org/news_room/in_focus/2009/oecd_pr_2009.

Pacini, C., Swingen, J. A., & Rogers, H. (2002). The role of the OECD and EU convention in combating bribery of foreign public officials. *Journal of Business Ethics, 37*(4), 385–405.

Paetzold, R. L., Dipboye, R. L., & Elsback, K. D. (2008). A new look at stigmatization in and of organizations. *Academy of Management Review, 33*(1), 186–193.

Palmrose, Z., Richardson, V., & Scholz, S. (2004). Determinants of market reactions to earnings restatements. *Journal of Accounting and Economics, 37*(1), 59–89.

Paruchuri, S., & Misangyi, V. F. (2015). Investor perceptions of financial misconduct: The heterogeneous contamination of bystander firms. *Academy of Management Journal, 58*(1), 169–194.

Paternoster, R., & Simpson, S. (1996). Sanction threats and appeals to morality: Testing a rational choice model of corporate crime. *Law and Society Review, 30*(3), 549–583.

Peltzman, S. (1981). The effects of FTC advertising regulation. *Journal of Law and Economics, 24*(3), 403–448.

Peng, L., & Xiong, W. (2006). Investor attention, overconfidence and category learning. *Journal of Financial Economics, 80*(3), 563–602.

Pfarrer, M. D., Decelles, K. A., Smith, K. G., & Taylor, M. S. (2008). After the fall: Reintegrating the corrupt organization. *Academy of Management Review, 33*(3), 730–748.

Pfarrer, M. D., Pollock, T. G., & Rindova, V. P. (2010). A tale of two assets: The effects of firm reputation and celebrity on earnings surprises and investors' reactions. *Academy of Management Journal, 53*(5), 1131–1152.

Pinto, J., Leana, C. R., & Pil, F. K. (2008). Corrupt organizations or organizations of corrupt individuals? Two types of organization-level corruption. *Academy of Management Review, 33*(3), 685–709.

Rahman, N., & Sampath, V. (2016). Corruption. In C. Carroll (Ed.), *The SAGE encyclopedia of corporate reputation* (pp. 229–234). New York: Sage.

Roberts, P. W., & Dowling, G. R. (2002). Corporate reputation and sustained superior financial performance. *Strategic Management Journal, 23*(12), 1077–1093.

Robertson, C. J., & Watson, A. (2004). Corruption and change: The impact of foreign direct investment. *Strategic Management Journal, 25*(4), 385–396.

Sanyal, R. (2005). Determinants of bribery in international business: The cultural and economic factors. *Journal of Business Ethics, 59*(1/2), 139–145.

Scott, W. R. (2014). *Institutions and organizations: Ideas, interests, and identities* (4th ed.). Thousand Oaks, CA: Sage Publication.

Shamsie, J. (2003). The context of dominance: An industry-driven framework for exploiting reputation. *Strategic Management Journal, 24*(3), 199–215.

Shearman and Sterling LLP. (2010). *FCPA Digest*: *Cases and review releases relating to bribes to foreign officials under the Foreign Corrupt Practices Act of 1977*. Retrieved January 15, 2011, from http://www.shearman.com/files/upload/FCPA-Digest-Spring-2010.pdf.

Shover, N., & Hochstetler, A. (2006). *Choosing white-collar crime*. New York: Cambridge University Press.

Sims, R. (2009). Towards a better understanding of organizational efforts to rebuild reputation following an ethical scandal. *Journal of Business Ethics, 90*(4), 453–472.

Spencer, J., & Gomez, C. (2011). MNEs and corruption: The impact of national institutions and subsidiary strategy. *Strategic Management Journal, 32*(3), 280–300.

Stevens, B. (2013). How ethical are U.S. business executives? A study of perceptions. *Journal of Business Ethics, 117*(2), 361–369.

Stout, L. (2003). The mechanisms of market inefficiency: An introduction to the new finance. *Journal of Corporation Law, 28*(4), 635–669.

Trace International. (2011). *Trace compendium*. Retrieved January 15, 2011, from https://secure.traceinternational.org/compendium.

Transparency International. (2015). *Exporting corruption*: *Assessing enforcement of the OECD Convention on Combating Foreign Bribery*. Retrieved March 12, 2016, from http://www.transparency.org/exporting_corruption/.

Weismann, M. (2009). The Foreign Corrupt Practices Act: The failure of the self-regulatory model of corporate governance in the global business environment. *Journal of Business Ethics, 88*(4), 615–661.

Zhang, X., Bartol, K. M., Pfarrer, M. D., & Khanin, D. M. (2008). CEOs on the edge: Earnings manipulation and stock-based incentive misalignment. *Academy of Management Journal, 51*(2), 241–258.