

# Does a firm's exposure to ethical failures matter to financial markets? A governance perspective

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**Abstract** This paper investigates if a firm's ethical reputation, in conjunction with its governance, affects its standing within financial markets. A firm's ethical reputation, as measured by ethical failures, arises from its involvement in ethical violations and incidents while a comprehensive index proxies for governance. We assess a firm's standing within financial markets through two complementary perspectives, i.e., the level of information asymmetry between managers and investors, as inferred from analyst forecast dispersion and analyst forecast error, and the relation between a firm's earnings and its stock market valuation or return (value relevance). Our results suggest that a firm's ethical reputation affects financial analysts' forecasts as well as the stock market value assigned to its reported earnings. Moreover, it appears that corporate governance moderates such relations, with strong (weak) governance compensating for a weak (strong) ethical reputation. Overall, our evidence shows that ethical failures do not seem to pay.

**Keywords** Corporate governance · Ethical failures · Information asymmetry · Stock markets

## 1 Introduction

The accountability of publicly-listed entities increasingly extends beyond financial performance to encompass the ethics of their actions and decisions. The advent of socially responsible investment is but one driver underlying

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such trend.<sup>1</sup> This paper examines if a firm's exposure to ethical failures, i.e., its ethical reputation, clouds the assessment of its future prospects by financial markets, thus translating into higher information asymmetry between managers and financial markets' participants. We argue that while such ethical failures do affect a firm's standing in financial markets, such effect is conditional upon its governance, which is expected to play a compensating role. In our view, the mapping between a firm's ethical failures and information asymmetry rests on a realization that (1) ethical considerations underlie risk management, (2) effective risk management determines a firm's long-term performance and survival and, (3) various types of risk contribute to information uncertainty.

The proposition that ethics and risk management are related has conceptual as well as empirical foundations. For instance, Godfrey (2005) shows that "good deeds earn chits", i.e., corporate actions that are ethical lead to the creation of moral capital, which provides shareholders with insurance-like protection for a firm's relationship-based intangible assets. He argues that such protection translates into shareholder wealth. Francis and Armstrong (2003) empirically investigate this premise and argue that good ethical practice is essential for effective risk management, with such a connection having significant commercial outcomes. Power (2004, 2008) adopts a more critical stance with respect to the emergence of risk management and argues that risk management real purpose has less to do with threats and opportunities, and more to do with the need for organizational accountability and legitimacy. However, even within that revised purpose, the role of ethics is probably as important.

While risk can indeed be managed, it is difficult to eliminate it completely. Moreover, some risks arise from events, issues or transactions in an unforeseen or unforeseeable manner.<sup>2</sup> Hence, the greater the uncertainty about underlying risks and the effectiveness of a firm's risk management, the greater the information asymmetry between managers and investors and, ultimately, the lower the firm value. For example, there is extensive evidence that risk uncertainty underlies information asymmetry between managers and investors, with detrimental effects on firm value (e.g., Healy and Palepu 2001; Leuz 2003; Palmrose et al. 2004).

The tight mapping between a firm's ethics and its risk management as well as the potential economic importance of risk in shaping investors' appreciation of a firm value underlie this study, which attempts to answer two related questions. On the one hand, do ethical failures affect a firm's standing within financial markets? On the other hand, is such relation conditional upon a firm's governance? For the purpose of the paper, ethical failures arise from a firm's involvement in ethical violations and incidents while its governance is inferred from a comprehensive

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<sup>1</sup> Socially responsible investment (or SRI) can be defined as "Responsible investment is an approach to investment that explicitly acknowledges the relevance to the investor of environmental, social and governance factors, and of the long-term health and stability of the market as a whole. It recognises that the generation of long-term sustainable returns is dependent on stable, well-functioning and well governed social, environmental and economic systems" ([http://unpri.org/wp-content/uploads/1\\_WhatIsResponsibleInvestment.pdf](http://unpri.org/wp-content/uploads/1_WhatIsResponsibleInvestment.pdf)). United Nations Principles for Responsible Investment.

<sup>2</sup> An interesting essay in this regard is Taleb (2010), *The Black Swan*.

index.<sup>3</sup> We assess a firm's standing within financial markets through two complementary perspectives, i.e., the level of information asymmetry between managers and investors as inferred from analyst forecast dispersion and analyst forecast error and the relation between a firm's earnings and its stock market valuation (value relevance).

To attenuate any endogeneity concern between ethical failures and governance, we perform a simultaneous two-stage least square estimation process: in one model, we estimate a firm's propensity to exhibit ethical failures while in a second model, we estimate a firm's information asymmetry or its stock market value, conditional upon its exposure to ethical failures and its governance. Our results show that ethical failures affect financial analysts' forecasts as well as the stock market value (or return) assigned to a firm's reported earnings. Moreover, it appears that corporate governance moderates such relations, with strong (weak) governance compensating for a firm's exposure (lack of exposure) to ethical failures.

The paper contributes to knowledge about business ethics, governance and information dynamics in the following manner. First, we show that a firm's exposure to ethical failures is significantly determined by its geographical reach (number of geographical segments), its ownership (existence of control block), its performance (poor performance implies more failures) and its executive compensation practices. This finding should be of interest to directors and regulators if they aim to reduce a firm's exposure to ethical failures. From an academic perspective, we identify some determinants that underlie ethical failures, thus gaining further insights about business ethics.

Second, consistent with our expectations, we show that exposure to ethical failures translates into higher information asymmetry and lower stock market value, thus implying that ethics (or lack thereof) should be part of the framework underlying information asymmetry between managers and investors, in addition to the traditional economic determinants.

Third, our results extend our understanding of the close relation between a firm's ethics and its governance. On one hand, with respect to a firm's standing within financial markets, solid governance mitigates (compensates) the effect of ethical failures' exposure. On the other hand, it appears that governance, through ownership and compensation, does influence a firm's propensity to face ethical failures.

## 2 Hypothesis development

### 2.1 Ethics and governance

The mapping between a firm's ethical failures, its risk profile and, ultimately, its standing among financial markets' participants such as financial analysts, rests

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<sup>3</sup> The measurement of ethics is a multi-dimensional challenge as it can be viewed from either individual or organizational perspectives. Moreover, an organization's ethical stand or behavior can also be analyzed by surveying or canvassing its employees or other key stakeholders (e.g., Elango et al. 2010) or by observing actual outcomes that result from ethical failures (Staubus 2005). In the current paper, we adopt the latter approach.

within an institutional context in which ethics are increasingly viewed as critical (Baucus 1994; Misangyi et al. 2008). For instance, in a speech to the Global Economic Policy Forum held at New York University in 2013, Federal Reserve Bank of New York President William Dudley argued that the stability of the financial system rested on bank executives' respect for the law and ability to assess the broader impact on society of their actions. More specifically, Mr. Dudley stated that "There is evidence of deep-seated cultural and ethical failures at many large financial institutions.... Whether this is due to size and complexity, bad incentives or some other issues is difficult to judge, but it is another critical problem that needs to be addressed". More broadly, the World Business Council for Sustainable Development (WBCSD), a CEO-led organization, echoes Mr. Dudley's views when it states that "The starting point for the WBCSD's work is based on the fundamental belief that a coherent Corporate Social Responsibility (CSR) strategy, based on sound ethics and core values, offers clear business benefits. Sustainable development rests on three fundamental pillars: economic growth, ecological balance, and social progress."<sup>4</sup> These views are consistent with an extensive body of empirical research that provides some evidence of a positive association between financial performance and corporate ethics (e.g., Margolis et al. 2007; Orlitzky et al. 2003; Van Beurden and Gossling 2008; Verschoor 1998). Van Beurden and Gossling (2008) even state that "Good Ethics is Good Business". However, it must be pointed out that the measurement of corporate ethics encompasses many aspects of social performance beyond ethical issues.

Moreover, a firm's ethics are increasingly viewed as underpinning its risk profile. In this regard, Carlo V. Di Florio, director of Compliance Inspections and Examinations at the US Securities and Exchange Commission states that, "Leading standards have recognized the centrality of ethics and have explicitly integrated ethics into the elements of effective compliance and enterprise risk management." Moreover, he considers that "Organizations are making meaningful changes to embrace this trend and implement leading practices to make their regulatory compliance and risk management programs more effective".<sup>5</sup> While Mr. Di Florio's views may be deemed to reflect a regulator's perspective, they find an echo among risk management specialists. Hence, in an essay on the theme of "Ethics and Risk Management", a director emeritus of the Insurance Institute of America states that risk management and ethics both depend on the other, with good risk management requiring good ethics; and good ethics requiring good risk management. Focusing on the ethical side of the equation, he implies that, for an organization to manage its risks well, everyone who represents that organization must practice good ethics. Conversely, he argues that an organization that permits or encourages unethical actions by anyone who represents can be deemed not to practice good risk management.<sup>6</sup> Consistent with these views, ethics and integrity are an integral part of the COSO Enterprise Risk Management framework, underlying the assessment of the organizational culture comprises that internal environment.<sup>7</sup>

<sup>4</sup> See Reference World Business Council for Sustainable Development.

<sup>5</sup> See Reference Di Florio (October 17, 2011).

<sup>6</sup> See Reference Head (February 2005).

<sup>7</sup> See Reference Committee of Sponsoring Organizations (2013).

The circumstances surrounding the 2010 Michigan oil spill from a pipeline owned by Enbridge Inc. can be used as an illustration of the links between corporate ethics, risk management and markets (Enbridge is one of the firms comprising our sample). On July 26, 2010, a pipeline owned by Enbridge Inc., a Canadian firm, ruptured, causing a spill of more than 1000,000 US gallons of oil into the nearby Kalamazoo River. It was deemed to be one of the largest pipeline-caused oil spills in US history. However, subsequent investigations revealed that the disaster was preceded by several safety violations by the firm.<sup>8</sup> In its report about the spill, the US National Transportation Safety Board (NTSB) noted that Enbridge had a “culture of deviance” with respect to safety laws and regulations.<sup>9</sup> As a result of the spill and subsequent regulatory enquiries, Enbridge faced the following consequences: (1) a fine of \$US 3.7 million, the largest ever imposed by the US NTSB for an oil spill, (2) clean-up costs of more than \$US 1 billion, (3) additional expenditures to upgrade its other facilities, (4) potential delays and roadblocks in its expansion plans in the United States.<sup>10</sup> Looking at the situation, investors and analysts are bound to revisit their priors as to the firm's earnings and cash flow prospects.

Concurrent with the advent of social responsibility investing, there is increasingly an understanding within society that corporate governance extends to how a firm engages and manages its relations with its key stakeholders. More specifically, many investors do expect such relations to be conducted in a way that is guided by more than just regulatory or legal requirements to encompass an ethical dimension. For instance, Donaldson and Preston (1995, page 19) highlight that while the American Law Institute's *Principles of Corporate Governance* (1992) clearly affirms the central corporate objective of “enhancing corporate profit and shareholder gain,” it immediately introduces qualifications: “Even if corporate profit and shareholder gain are not thereby enhanced,” the corporation must abide by law and may “take into account ethical considerations” and engage in philanthropy (Sec. 2.01a, b, 1992, page 69). According to Donaldson and Preston (1995), the American Law Institute's view explicitly affirms the stakeholder concept that a modern corporation has legitimate concerns about a variety of interdependent stakeholder groups such as employees, customers, suppliers, and members of the communities in which the corporation operates (1992, page 72). Such concerns are consistent with social and ethical considerations often being conducive to a firm's long-run value creation.

A similar situation prevails in Canada, especially since the Supreme Court of Canada's BCE ruling in the BCE Inc. v. 1976 Debenture holders case. In its judgment, the Court reaffirmed its previous view that directors' duties extend to a broad set of stakeholders by stating that “...Where conflicting interests arise, it falls to the directors of the corporation to resolve them in accordance with their fiduciary duty to act in the best interests of the corporation. The cases on oppression, taken as a whole, confirm that this duty comprehends a duty to treat individual stakeholders

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<sup>8</sup> See Reference DuBois (August 24, 2010).

<sup>9</sup> See Reference Leblanc (July 30, 2012).

<sup>10</sup> See References Lemphers (July 10, 2012); Hasemeyer (December 2, 2013).

affected by corporate actions equitably and fairly...” “...commensurate with the corporation’s duties as a responsible corporate citizen.”[vii, 81–83]<sup>11</sup> By pointing out that directors’ duties encompass taking into consideration stakeholders’ interests beyond shareholders’, the ruling squarely brings ethics into the realm of corporate governance. Hence, in assessing the Supreme Court’s ruling, Bone (2010) concludes that “Therefore, modern Canadian corporations may be wise to stay ahead of the curve and begin their transformation into a new era of corporate ethics in relation to corporate citizenship.”

In this context, the ethics of how firms, through decisions by directors and management, deal with stakeholders such as employees, customers or suppliers have potential implications for financial markets, either directly or indirectly. On one hand, there is evidence that building better relations with key stakeholders such as employees, customers, suppliers, and communities enhances shareholder value as it contributes to the development of long-term, intangible, valuable assets which can be sources of competitive advantage (e.g., Amir and Lev 1996; Hillman and Keim 2001; Anderson et al. 2004), with ethics partially underlying such relations. On the other hand, improved risk management capabilities are another potential benefit from enhanced relations with stakeholders (Kytle and Ruggie 2005). However, empirical evidence in this regard is mixed at best (Godfrey et al. 2009).

## 2.2 Hypotheses

There is now considerable theoretical and empirical support for the argument that nonfinancial information about a firm (either disclosed by the firm itself or from third party sources), especially with respect to its relations with its key stakeholders, relates to the level of information asymmetry between a firm’s managers and investors (Dhaliwal et al. 2012; Shroff et al. 2013). Moreover, there are theoretical arguments (e.g., Healy and Palepu 2001) and empirical evidence (e.g., Richardson 2000) suggesting that information asymmetry between a firm’s management and other stakeholders contribute to increase uncertainty surrounding a firm’s underlying earnings. Such uncertainty severely compromises other stakeholders’ ability to correctly assess and predict a firm’s future earnings and performance.

In this regard, critical nonfinancial information is the state of a firm’s relations with its key stakeholders, i.e., stakeholders with whom it interacts on a regular and business-like way such as employees, customers and suppliers. Such relations underlie a firm’s ongoing operations and performance and, ultimately, its value. For instance, Jensen (2001) puts forward the concept of enlightened value maximization, i.e., the need for managers to consider the interests of stakeholders when making decisions while retaining the maximization of long-run firm value as a deciding criterion for solving or managing issues among stakeholders. Jensen’s view implies that, for a firm, disregarding or omitting to consider stakeholders’ interests raises concerns about its future performance and its long-term value creation.

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<sup>11</sup> Supreme Court of Canada. *BCE Inc. v. 1976 debenture holders*. 2008 SCC 69 (June 20, 2008)

An indication of how managers consider stakeholders' interests in their decision-making is the presence (or frequency) of ethical failures, i.e., instances in which a firm is found to have acted in a way that harms stakeholders' interests. The revelation of such an issue undermines any management claim that it conducts its business in a way that is consistent with long-term value creation and positive for stakeholders. The existence of such ethical issues with a firm's stakeholders clouds the appreciation of a firm's economic and financial prospects, especially in an institutional context in which there social responsible investing is both gaining recognition as a worthwhile endeavour as well as assets under management (Rhodes 2010). Moreover, according to many observers, ethical failures by market participants, such as organizations and their management, contribute to making markets less transparent, less efficient and more prone to moral hazard (Cragg and Matten 2011). Hence, we put forward the following hypotheses:

**Hypothesis 1a:** A firm's involvement in ethical failures translates into higher information asymmetry.

**Hypothesis 1b:** A firm's involvement in ethical failures translates into lower stock market valuation.

Through their pivotal role in corporate governance, boards of directors' actions or reactions underlie the information asymmetry between firm managers and financial markets (Cormier et al. 2010). There is evidence that solid governance enhances the quality of financial information conveyed by firms (Lin and Hwang 2010) and, therefore, potentially attenuates information asymmetry between managers and financial markets (e.g., under various contexts, Chung et al. 2010; Farber 2005; Kanagaretnam et al. 2007; Song et al. 2010). Hence, we expect that for firms, other things being equal, the effect of ethical failures on information asymmetry and firm value is moderated by solid governance. A potential argument to support such a view is that external directors, by focusing on the interests of shareholders and monitoring managerial actions, mitigate unethical behaviours by removing opportunities for concealment (Gabbonieta et al. 2013; Kesner et al. 1986).

Hence, we put forward the following hypotheses:

**Hypothesis 2a:** Corporate governance moderates the relation between ethical failures and information asymmetry.

**Hypothesis 2b:** Corporate governance moderates the relation between ethical failures and stock market valuation.

### 3 Method

#### 3.1 Sample

The sample comprises Canadian firms in the S&P/TSX index of the Toronto stock exchange for 2012. While 233 firms are in the index, there are missing data for 23

firms. This gives a final sample of 210 observations for the stock market value regressions. We have 28 missing data for forecast dispersion and forecast error (final sample of 182 firms). Several reasons underlie our choice of Canada. First, data on ethical failures is available for Canadian firms, which is not necessarily the case elsewhere. Second, the focus on ethical failures within firms from a single country, in this case Canada, ensures that we have inter-firm comparability: expanding the sample to other countries may undermine this attribute of the data. Third, there is an established and validated measure of corporate governance among Canadian firms, i.e., the ratings attributed by Board Games, a ranking which is published by the *Globe and Mail*, Canada's largest national newspaper. This measure has been used in several published papers (e.g., Bates and Hennessy 2010; Foerster and Huen 2004).

Financial data is collected from Compustat and Stock Guide. Governance scores come from Board Games rankings published on annual basis by *The Globe & Mail*, a leading Canadian newspaper. In this paper, ethical failures refer to a lack of integrity of a firm's with others like government, customers, suppliers, competitors, stock market, and society. Ethical failures are measured based on a grid comprising 13 items and the information is collected from the ABI/Inform Global database and from three distinct sources: (1) Business, Economics: local and regional business publications; (2) Business, Finance, Economics: journals, company profiles, *Wall Street Journal*; (3) Canadian Newsstand, which offers broad access to the full text of Canadian newspapers (*Montreal Gazette*, *National Post* and *Toronto Star*) (See "Appendix").

Sample firms operate in the following industries: Financial; Real Estate; Materials; Energy; Industrials; Consumer discretionary; Consumer staple; Utilities; Telecommunications; Information technology; and Health care.

### 3.2 Empirical models

Within our research setting, endogeneity between ethical failures and information asymmetry (proxied by forecast dispersion and forecast error) as well as stock market valuation may critically affect our results. Endogeneity tests (reported in the results section) confirm such interrelations and justify relying on a system of simultaneous equations. The following simultaneous equations summarize the approach adopted in the paper.

Equations 1 and 2 represent the empirical model used to assess the relation between ethical failures, corporate governance and information asymmetry (as proxied by either analyst forecast error or dispersion):

$$\begin{aligned} \text{FORDIS/FORERROR} = & \text{BETA} + \text{ANFOL} + \text{NEGEPS} + \text{ETHICAL FAILURES} \\ & + \text{ETHICAL FAILURES} \times \text{GOV} + \text{GOV} \end{aligned} \quad (1)$$

$$\begin{aligned} \text{ETHICAL FAILURES} = & \text{GEOGSEG} + \text{BUSSEG} + \text{CONTBLOC} + \text{MTB} \\ & + \text{ROA} + \text{SIZE} + \text{BOARDCOMP} \\ & + \text{COMPENSATION} + \text{SHAREHOLDRIGHTS} \\ & + \text{GOVDISCL} \end{aligned} \quad (2)$$



Equations 3 and 4 represent the empirical model used to assess the relation between ethical failures, corporate governance and stock market valuation. The valuation model is inspired by the work of Feltham and Ohlson (1995) and Amir and Lev (1996). Such a model maps a firm's book value and earnings into its stock market valuation.

$$\begin{aligned} \text{PRICE} = & \text{EQPS} + \text{EPS} + \text{EPS} \times \text{GOV} + \text{EPS} \times \text{ETHICAL FAILURES} \\ & + \text{EPS} \times \text{ETHICAL FAILURES} \times \text{GOV} + \text{ETHICAL FAILURES} \\ & + \text{ETHICAL FAILURES} \times \text{GOV} + \text{GOV} \end{aligned} \quad (3)$$

$$\begin{aligned} \text{ETHICAL FAILURES} = & \text{GEOGSEG} + \text{BUSSEG} + \text{CONTBLOC} + \text{MTB} \\ & + \text{ROA} + \text{SIZE} + \text{BOARDCOMP} + \text{COMPENSATION} \\ & + \text{SHAREHOLDRIGHTS} + \text{GOVDISCL} \end{aligned} \quad (4)$$

The definitions of the various variables are as follows: FORDIS: Forecast dispersion scaled by lag price; FORERROR: Absolute value of forecast error scaled by lag price; BETA: Systematic risk; NEGEPS: Binary variable for negative earnings; ANFOL: Number of analysts following a firm; PRICE: Stock price at year-end; EQPS: Equity per share; EPS: Earnings per share; ETHICAL FAILURES: Number different ethical failures; GOV: Governance score. GEOGSEG: Number of geographic segments; Number of business segments; CONTBLOC: percentage of voting shares that are closely held; MTB: Market to book ratio; ROA: Return on asset; SIZE: Natural log of Total assets; BOARDCOMP: Board composition; COMPENSATION: Shareholding and compensation; SHAREHOLDRIGHTS: Shareholders rights; GOVDISCL: Governance disclosure (see Table 1 for a complete definition of variables and their measurement).

### 3.3 Explanatory variables of asymmetry and stock market valuation

Prior research suggests that stronger corporate governance should be associated with less information asymmetry and should improve analyst forecast accuracy (Vafeas 2000; Dey 2005). A negative (positive) association is expected between GOV and information asymmetry (stock market valuation).

There is potentially a gap between a firm's governance and the actual social sustainability of its underlying activities, as measured by ethical lapses and failures it faces. We expect that a firm's exposure to ethical failures will increase (decrease) information asymmetry (stock market valuation). We also expect that the impact of ethical failures on information asymmetry (stock market valuation) is moderated by corporate governance. The selection of the ethical failures is based upon the assessment that they reflect the conduct of business relations with critical stakeholders, i.e., employees, customers, suppliers. These stakeholders, and the state of the relation between them and the firm, are deemed to be instrumental in enhancing firm value (e.g., Jensen 2001).

Patton and Verardo (2010) observe that the increase in systematic risk is greater for earnings announcements with larger positive or negative surprises, and with

**Table 1** Variable definitions

<i>ETHICAL FAILURES</i>	We measure ethical failures based on a grid comprising 13 items (see Appendix Table 7). Information is collected from the ABI/Inform Global database. Key words used are based on the ethical failures grid. Measured by the number of different ethical failures of a firm for year 2011. Internal consistency estimates (Cronbach's alpha) show that the variance of components is quite systematic (alpha = 0.74)
<i>GOV</i>	Governance score for 2011, based on The Globe and Mail's annual report on corporate governance. The grid is based on 100 marks. Board composition: 31 marks; Shareholding and compensation: 26 marks; Shareholder rights: 31 marks; Disclosure: 12 marks
<i>FORDIS</i>	Analyst earnings forecast dispersion (standard deviation of forecasts) for 2012 scaled by lag price. Collected from Compustat
<i>FORERROR</i>	Absolute value of earnings forecast error for 2012 (net earnings minus earnings forecast) scaled by lag price. Collected from Compustat
<i>PRICE</i>	Stock price at the end of 2011 extracted from Stock Guide
<i>BETA</i>	Beta is extracted from Stock Guide database and is computed based on percentage stock price change week over week for a period of 260 weeks ending at the end of 2011 fiscal year
<i>NEGES</i>	An indicator variable taking the value of 1 if earnings are negative, 0 otherwise
<i>ANFOL</i>	Number of financial analysts following a firm. Extracted from Compustat
<i>EQPS</i>	Equity per share
<i>EPS</i>	Earnings per share
<i>GEOGESG</i>	Number of geographic segments (1 out of 7 segments—Canada, USA, South America, Europe, Asia, Africa, Australia and New Zealand). Extracted from Stock Guide
<i>BUSSEG</i>	Number of business segments. Extracted from Stock Guide
<i>CONTROL (%)</i>	Percentage of voting shares that are closely held (percentage of votes attached to the shares of a firm held by directors, and individuals or companies that own more than 10 % of shares outstanding. Extracted from Stock Guide
<i>MTB</i>	Market-to-Book ratio
<i>ROA</i>	Earnings/Total assets for 2011
<i>SIZE</i>	Natural log of total assets at the end of 2011

greater analyst forecast dispersion. We expect a positive association between BETA and FORDIS/FORERROR.

Analyst forecasts precision is likely to improve, as more information about a company is processed and disclosed by analysts (Alford and Berger 1999). Hope (2003a) documents a negative relationship between the number of analyst following and forecast error. Thus, a negative association is expected between ANFOL and FORDIS/FORERROR.

Hope (2003a) documents that negative earnings are associated with more forecast error, suggesting that earnings is more difficult to predict for companies that experience losses. Consistent with Hope (2003a, b), an indicative variable for negative earnings is used. We anticipate a positive relationship between this binary variable and FORDIS/FORERROR.

### 3.4 Explanatory variables of ethical failures

Ethical failures arise from various sources and in several contexts (e.g., McKendall and Wagner 1997). Nevertheless, the conduct of business transactions in different sectors and across several geographical regions (and cultures) is likely to represent a major concern in this regard. Thus, operating in several businesses and/or geographical contexts facilitates ethical failures (and corporate illegality) because of the complexity that this structure creates. There is substantive documentation that business practices and customs vary considerably across sectors and geographical regions, thus increasing the risk that a firm will experience some mishap (e.g., Crane and Matten, 2010). Hence, we expect complexity of operations, as proxied by the number of business segments (BUSSEG) and the number of geographic segments (GEOGSEG), to be positively associated with a firm's involvement in ethical failures.

Consistent with the arguments put forward by Greve et al. (2010), we do expect corporate governance to affect the opportunity by a firm's managers to engage in illegal activities. In this regard, closely-held ownership, often by a family, potentially leads to agency conflicts and does raise ethical concerns. While the evidence with respect to the mapping between a firm's ownership and its ethics is ambiguous as to its direction, it is less controversial as to the existence of a relation (e.g., Fogel 2006; Lubatkin et al. 2007). Hence, we expect that a closely held ownership (CONTBLOC) may alter governance and influence ethical failures.

Finally, we expect a firm's profitability (ROA) to be associated with ethical failures (Fombrun 1997). Firm size (SIZE) and market-to-book ratio (MTB) are introduced as control variables.

## 4 Results

### 4.1 Descriptive statistics

Table 2 provides descriptive statistics about sample firms' financial variables. We document that information asymmetry is quite low as expressed by forecast dispersion (mean of forecast dispersion, scaled by lag price, of 0.01) and forecast error (mean of forecast error in absolute value, scaled by lag price, of 0.03), a systematic risk (beta) lower than the market beta at 0.76, and a high analyst following (mean of 13.64 analysts). On average, firms operate in two geographic segments (2.02) and two business segments (1.82).

Table 3 reports on ethical failures and governance scores. The mean number of different ethical failures is 0.18 while total ethical failures exceed 0.50 on average. The mean total score of corporate governance is 65.1. Board composition (19.37) and Shareholder rights (21.46) present the highest mean scores. Considering the maximum scores allowed within each component, we get a mean relative score of 0.67 for Board composition (19.37/29), 0.57 for Compensation (15.93/28), 0.66 for Shareholders rights (20.46/31) and 0.72 for Disclosure (8.60/12).

**Table 2** Descriptive statistics: financial variables

Variable	Mean	SD	Min.	Max.
FORDIS	0.010	0.013	0.001	0.156
FORERROR	0.031	0.045	0.000	0.346
PRICE	25.763	32.630	0.185	437.01
BETA	0.716	2.551	-15.027	8.385
NEGEPS	0.180	0.385	0	1
ANFOL	13.639	7.075	0	45
EQPS	15.064	25.466	0.358	358.9
EPS	1.484	2.021	-6.24	8.69
GEOGSEG	2.022	1.474	1	7
BUSSEG	1.825	1.253	1	7
CONTBLOC (%)	17.289	19.975	0.01	84.09
MTB	2.265	2.531	0.010	20.794
ROA	0.044	0.088	-0.561	0.291
ASSET (in billion \$)	26.883	96.205	0.145	751.702

*FORDIS* Forecast dispersion scaled by lag price, *FORERROR* Absolute value of forecast error scaled by lag price, *PRICE* Stock price at year-end, *BETA* Systematic risk, *ANFOL* Number of analysts following a firm, *EQPS* Equity per share, *EPS* Earnings per share, *ETHICAL FAILURES* Number different ethical failures, *GOV* Governance score, *GEOGSEG* Number of geographic, *BUSSEG* Number of business segments, *CONTBLOC* percentage of voting shares that are closely, *MTB* Market to book ratio, *ROA* Return on asset, *ASSET* Total assets

**Table 3** Descriptive statistics: ethical failures and corporate governance

N: 210	Mean	SD	Min.	Max.
<i>Ethical failures</i>				
Number of different ethical failures <sup>a</sup>	0.182	0.461	0	4
Total ethical failures	0.507	1.478	0	15
<i>Corporate governance</i>				
Board composition	19.365	4.920	5	29
Shareholding and compensation	15.929	6.107	2	28
Shareholder rights	21.462	6.137	6	31
Disclosure	8.603	5.732	1	12
Total	65.101	16.539	29	96

<sup>a</sup> Based on the presence or absence of the element (maximum one point for an element)

## 4.2 Multivariate results

Within our research setting, endogeneity between ethical failures and information asymmetry (proxied by forecast dispersion and forecast error) as well as stock market valuation may critically affect our results. We first assess whether or not an interaction exists between these variables using the Hausman test (residuals of

Ethical failures model added to FORDIS, FORERROR and PRICE models). Based on this procedure, we reject the null hypothesis of no endogeneity with respect to FORDIS and Ethical failures ( $t = 2.05$ ;  $p < 0.04$ ), FORERROR and ETHICAL FAILURES ( $t = 2.13$ ;  $p < 0.04$ ), as well as PRICE and ETHICAL FAILURES ( $t = 3.28$ ;  $p < 0.01$ ). Therefore, these variables are treated endogenously and we rely on a two-stage estimation models. The software used is STATA. We exclude observations with standardized residuals exceeding two from our regressions. Since there is no evidence of a contemporaneous correlation of errors across equations, we rely on a 2SLS estimation procedure rather than a 3SLS.

#### 4.2.1 Ethical failures and information asymmetry

Panel A of Table 4 presents 2SLS regressions on the incidence of ethical failures on information asymmetry and how corporate governance moderates this relation. Based on prior literature that documents their potential role in determining forecast dispersion and forecast errors, BETA, ANFOL and NEGEPS are used as control variables in the regressions. Consistent with hypothesis 1a, a firm's involvement in ethical failures (ETHICAL FAILURES) is positively associated with FORDIS ( $0.091$ ;  $p < 0.05$ ). Consistent with hypothesis 2a, the association is moderated for firms with good governance since the coefficient on the interaction term ETHICAL FAILURES  $\times$  GOV is negative ( $-0.001$ ;  $p < 0.05$ ). Moreover, the sum of coefficients ETHICAL FAILURES and ETHICAL FAILURES  $\times$  GOV is statically close to zero (joint test F:  $1.49$ ;  $p < 0.223$ ), which is consistent with Hypothesis 2a. In other words, strong corporate governance would cancel out the negative impact of ethical failures on information asymmetry. Similar results are obtained for FORERROR.

#### 4.2.2 Determinants of ethical failures

Panel B of Table 4 reports 2SLS regressions on the relation between ethical failures corporate governance, and information asymmetry. One corporate governance attribute related to COMPENSATION is associated with less ethical failures,<sup>12</sup> is associated with less ethical failures. Consistent with our expectation, a firm's profitability (ROA) is negatively associated with ethical failures: hence, as stated early by Fombrun (1997), profitability is not incompatible with a firm's ethical stand, on the contrary. Finally, the extent of a firm's international activities (number of geographical segments: GEOGSEG) and a concentrated ownership (CON-TBLOC) are positively associated with ethical failures. This is consistent with prior work showing that the broader the activity and geographical scope of a firm, the more it becomes exposed to ethical risks.

Taking the variables' mean values (see Table 2) and multiplying each of them by the appropriate estimated coefficient provides an impact of 0.0165 on FORDIS for

<sup>12</sup> For shareholding and compensation, marks are allowed if the CEO is required to own shares, if rules prohibit executives to use derivatives to retain legal ownership, if the firm provides details of compensation policies, etc.

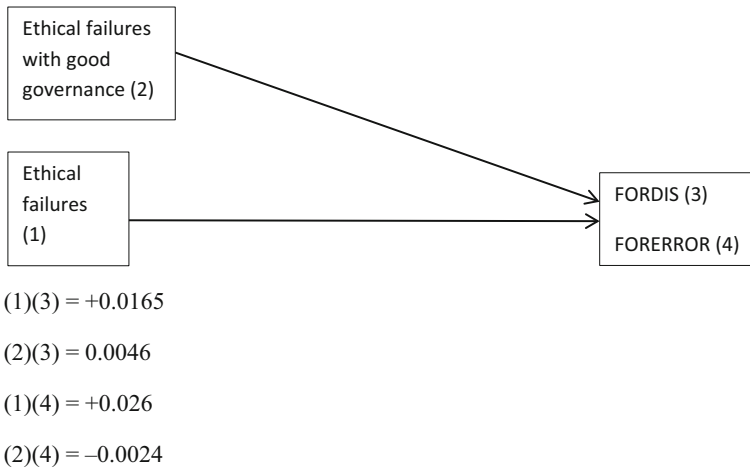
**Table 4** Two-stage-least-square estimation of the relationship between information asymmetry and ethical failures in interaction with corporate governance

		Prediction	FORDIS	FORERROR
<i>Panel A</i>				
BETA		+	0.001*	-0.002
NEGEPS		+	-0.001	-0.001
ANFOL		-	-0.001*	-0.001*
ETHICAL ISSUES		+	0.091**	0.143***
ETHICAL ISSUES × GOV		±	-0.001**	-0.002**
GOV		-	0.001	0.001
R <sup>2</sup>			13.2 %	23.4 %
F-Statistic			4.45 (0.00)	15.7 (0.00)
F tests of coefficient difference ETHICAL FAILURES + ETHICAL FAILURES × GOV = 0			1.49 (0.223)	1.83 (0.177)
			Ethical failures	Ethical failures
<i>Panel B</i>				
GEOGSEG	+		0.024**	0.031**
BUSSEG	+		0.005	0.010
CONTBLOC	±		0.002**	0.002**
MTB	+		0.014	0.010
ROA	-		-0.645**	-0.552**
SIZE	+		0.006	0.012
BOARDCOMP	-		0.003	0.005
COMPENSATION	-		-0.009**	-0.008*
SHAREHOLDRIGHTS	-		0.007	0.007
GOVDISCL	-		0.001	0.001
R <sup>2</sup>			10.1 %	8.7 %
F-Statistic			1.96 (0.02)	1.70 (0.05)
N			182	182

\*  $p < 0.10$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ . One-tailed if directional prediction, two-tailed otherwise

*ETHICAL FAILURES* Number of different ethical failures, *FORDIS* Forecast dispersion, *FORERROR* Forecast error, *BETA* Systematic risk, *NEGEPS* Binary variable for negative earnings, *ANFOL* Number of analysts following a firm, *ETHICAL FAILURES* Number different ethical failures, *GOV* Governance score, *GEOGSEG* Number of geographic segments, *BUSSEG* Number of business segments, *CONTBLOC* percentage of voting shares that are closely held, *MTB* Market to book ratio, *ROA* Return on asset, *SIZE* Log of Total Assets, *BOARDCOMP* Board composition, *COMPENSATION* Shareholding and compensation, *SHAREHOLDRIGHTS* Shareholders rights, *GOVDISCL* Governance disclosure

firms involved in ethical failures ( $0.182 \times 0.091$ ) and an insignificant impact on *FORDIS* (0.0046) for firms with a good governance ( $0.182 \times 0.091 - 0.182 \times 0.001 \times 65 = 0.0046$ ). Similar results are observed for *FORERROR* ( $0.182 \times 0.143 = 0.026 - 0.002 \times 0.182 \times 65 = -0.0024$ ) (Fig. 1).



**Fig. 1** Relations between ethical failures, governance and information asymmetry (based on regression coefficients and variables mean values)

#### 4.2.3 Ethical failures and stock market valuation

Panel A of Table 5 reports on the value relevance of earnings, considering ethical failures and corporate governance. First, results show that corporate governance enhances the value relevance of earnings since the coefficient on  $EPS \times GOV$  is positive and significant (0.021;  $p < 0.05$ ). Second, also as expected, ETHICAL FAILURES reduces the value relevance of earnings (coefficient on the interaction terms  $EPS \times ETHICAL FAILURES = -43.651$ ;  $p < 0.05$ ). This is consistent with hypothesis 1b. Third, consistent with hypothesis 2b, corporate governance moderates the impact of ethical failures on a firm's stock market valuation since the coefficient on the interaction term  $EPS \times ETHICAL FAILURES \times GOV$  is positive and significant (0.401;  $p < 0.05$ ). Overall, taking the variables' mean values (see Table 2) and multiplying each of them by the appropriate estimated coefficient provides an impact of EPS on price of 4.366\$ in absence of ethical failures ( $2.942 \times 1.484 = 4.366$ ), a negative impact on pricing of EPS ( $-7.424$ ) in the presence of ethical failures ( $2.942 \times 1.484 = 4.366 - 43.651 \times 1.484 \times 1.82 = -11.789 = -7.424$ ), and a small impact of  $-0.0385$  in the presence of a good governance ( $2.942 \times 1.484 = 4.366 - 43.651 \times 1.484 \times 0.182 = -11.789 = 0.401 \times 1.484 \times 0.182 \times 65 = 7.039 = -0.0385$ ).

However, the joint test regarding the sum of the coefficients  $EPS + EPS \times GOV + EPS \times ETHICAL FAILURES + EPS \times ETHICAL FAILURES \times GOV$  is different from zero ( $F = 3.28$ ;  $p < 0.071$ ) suggesting that corporate governance does not completely compensate for ethical failures in the valuation of earnings. Thus, governance partially substitutes for ethical failures in the valuation of earnings by stock markets.<sup>13</sup> This is consistent with Hypothesis 2b. Our results

<sup>13</sup> Taking the third quintile of governance score (score of 80), there is a quasi-perfect substitution between governance and ethical failures.

**Table 5** Two-stage-least-square estimation of the relationship between share price and ethical failures in interaction with corporate governance

N: 210	Prediction	PRICE
<i>Panel A</i>		
EQPS	+	0.933***
EPS	+	2.942***
EPS × GOV	+	0.021**
EPS × ETHICAL FAILURES	–	–43.651**
EPS × ETHICAL FAILURES × GOV	±	0.401**
ETHICAL FAILURES	–	5.899
ETHICAL FAILURES × GOV	±	0.172
GOV	+	0.009
R <sup>2</sup>		56.3 %
F-Statistic		39.2 (0.00)
F test of coefficient difference		
EPS + EPS × GOV + EPS × ETHICAL FAILURES + EPS × ETHICAL FAILURES × GOV = 0	3.28 (0.071)	
		Ethical failures
<i>Panel B</i>		
GEOGSEG	+	0.039***
BUSSEG	+	0.008
CONTBLOC	±	0.003***
MTB	+	0.008
ROA	–	–0.365*
SIZE	+	0.027**
BOARDCOMP	–	0.007
COMPENSATION	–	–0.011**
SHAREHOLDRIGHTS	–	0.005
GOVDISCL	–	–0.001
R <sup>2</sup>		11.0 %
F-Statistic		2.20 (0.01)

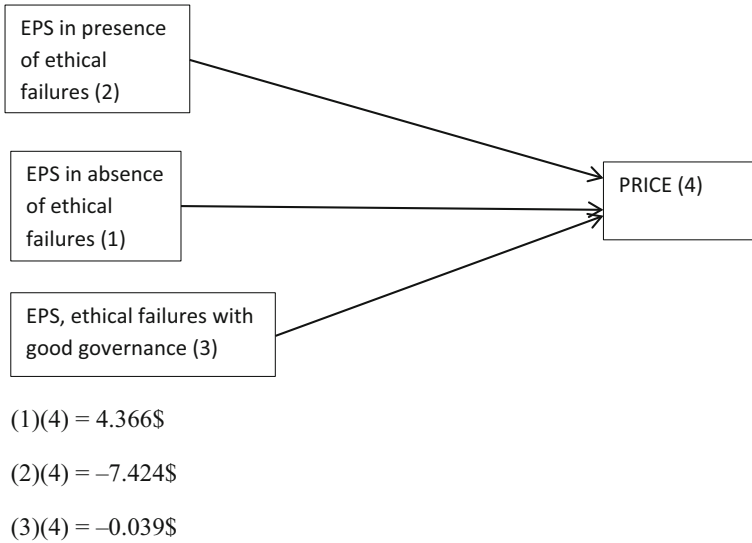
\*  $p < 0.10$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ . One-tailed if directional prediction, two-tailed otherwise

*ETHICAL FAILURES* Number of different ethical failures, *PRICE* Stock price at year-end, *EQPS* Equity per share, *EPS* Earnings per share, *GOV* Governance score, *GEOGSEG* Number of geographic segments, *BUSSEG* Number of business segments, *CONTBLOC* percentage of voting shares that are closely held, *MTB* Market to book ratio, *ROA* Return on asset, *SIZE* Log of Total Assets, *BOARDCOMP* Board composition, *COMPENSATION* Shareholding and compensation, *SHAREHOLDRIGHTS* Shareholders rights, *GOVDISCL* Governance disclosure

suggest that a substitution effect between governance and ethical failures in their relation with stock market valuation.

<sup>14</sup> Hausman test (residuals of Ethical failures model added to Stock market return model) does not show the presence of endogeneity ( $t = 1.43$ ;  $p < 0.154$ ).





**Fig. 2** Relations between ethical failures, governance and share price (based on regression coefficients and variables mean values)

Panel B of Table 5 reports results from the 2SLS estimation of the determinants of ETHICAL FAILURES. These results are more or less similar to those reported in Panel B of Table 3, with the addition of a positive relation between CONTBLOC and ETHICAL FAILURES, a finding that is consistent with some of the governance literature (e.g., Fogel 2006) (Fig. 2).

Prior research argues price-based models may suffer from an omitted correlated variable, the scale factor. Brown et al. (1999) argue that if a firm has a two-to-one stock split, stock prices and accounting variables such as book values and earnings per share would be halved. This could result in a multiplicative scale factor in the variables used in the price model. As a sensitivity analysis, Table 6 shows results from an OLS regression with stock market return as a dependent variable, i.e., using a price change rather than price level approach.<sup>14</sup> Overall, the evidence provided by such analysis is consistent with results reported in Table 5. Although the coefficient on  $EPSLgPRICE \times GOV$  is not significant ( $p < 0.42$ ), consistent with hypothesis 2b, corporate governance moderates the impact of ethical failures on a firm's stock market valuation since the coefficient on the interaction term  $EPSLgPRICE \times ETHICAL FAILURES$  is negative ( $-0.756$ ;  $p < 0.01$ ) while  $EPSLgPRICE \times ETHICAL FAILURES \times GOV$  is positive and significant ( $0.001$ ;  $p < 0.05$ ). Contrary to results on price-based model, we observe that main effects on ETHICAL FAILURE ( $-0.197$ ;  $p < 0.01$ ) and ETHICAL FAILURE  $\times$  GOV ( $0.003$ ;  $p < 0.01$ ) are significant in assessing stock market return. This provides further support for hypotheses 1b and 2b.

<sup>14</sup> Hausman test (residuals of Ethical failures model added to Stock market return model) does not show the presence of endogeneity ( $t = 1.43$ ;  $p < 0.154$ ).

**Table 6** OLS estimation of the relationship between stock market return and ethical failures in interaction with corporate governance (robust estimators)

N: 210	Prediction	Coefficient
<i>Panel A</i>		
INVLgPRICE	±	-0.382***
EPSLgPRICE	+	0.375***
ChEPSLgPRICE	±	-0.109
EPSLgPRICE*GOV	+	0.003
EPSLgPRICE × ETHICAL FAILURES	-	-0.756**
EPSLgPRICE × ETHICAL FAILURES × GOV	±	0.001**
ETHICAL FAILURES	-	-0.197***
ETHICAL FAILURES × GOV	±	0.003***
GOV	+	-0.005
R-Square		31.3 %
F-Statistic		5.50 (0.00)
F test of coefficient difference		
EPSLgPRICE + EPSLgPRICE × GOV + EPSLgPRICE × ETHICAL FAILURES + EPSLgPRICE × ETHICAL FAILURES × GOV = 0	9.30 (0.002)	

*InvLagPrice* 1/Lag Price; *EPSLagPrice*: *CHEPSLagPrice* (Change in *EPS/LagPrice*); *ETHICAL FAILURES* Number of different ethical failures, *GOV* Governance score

\*  $p < 0.10$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ . One-tailed if directional prediction, two-tailed otherwise

## 5 Discussion and conclusion

The main purpose of the paper is to assess the mapping between a firm's exposure to ethical failures and its governance in affecting the level of information asymmetry between stakeholders and managers and stock market valuation. The underlying arguments are to the effect that (1) exposure to ethical failures creates uncertainty regarding the firm's future prospects and, consequently, compromises financial analysts' ability to forecast future earnings and, (2) such information asymmetry in financial markets translates into a situation in which exposure to ethical failures affects a firm's stock market valuation downward. Our analyses are performed using a sample of relatively large Canadian firms that are followed by financial analysts. Our results are consistent with expectations and suggest that while ethical failures translate into higher information asymmetry and lower stock market valuation, it appears that corporate governance moderates (attenuates) such relations, thus playing a substitution role. In other words, in terms of information asymmetry or earnings stock market valuation, strong corporate governance compensates for the existence of ethical failures in a firm's relations with its key stakeholders. However, the lack of ethical failures will not nullify the information asymmetry and earnings valuation impact of weak corporate governance.

The finding that corporate governance, per se, does not prevent ethical failures suggests that relations with key stakeholders are not necessarily a primary concern for boards of directors. That finding contrasts strongly with the views expressed by

the Supreme Court of Canada in several recent rulings and by the impression conveyed by several firms that social responsibility concerns are now critical in their governance, strategy and operations, e.g., through CSR reports or the setting up of CSR committees at the board level. Moreover, there is some evidence that financial performance does relate with a key dimension of CSR, environmental performance (e.g., Clarkson et al. 2008). However, looking at the mapping between a firm's environmental governance and its environmental performance, Rodrigue et al. (2013) do observe that the relation is rather weak, with directors focusing mostly on compliance and on avoiding specific risks. With respect to ethical failures, one can infer from our results that boards take action once such failures are revealed (hence the compensating effect) rather than preventing their occurrence (which would imply a complementary effect). Hence, our results provide further evidence in support of the view put forward by Rodrigue et al. (2013) that boards of directors are not necessarily pro-active when it comes to their firm's social responsibility, which encompass both environmental and ethical failures.

It must be pointed out as well that the existence of a compensating relation between corporate governance and the negative impact of ethical issues on information asymmetry does not necessarily imply that good governance can serve to conceal unethical behaviour. Specifically, it implies that ethical failures do not have as much impact on information asymmetry when a firm exhibits good governance: a potential explanation for this finding is the ability of firms with good governance to reassure financial markets as to the potential effects of such an ethical failure, by clarifying its impact on future earnings and cash flows.

Another possible role of good governance is that of reassuring financial market that the board and executives are committed to sanctioning ethical failures and to preventing further ethical failures in the future.

Our study is subject to some limitations, which may also warrant further research. For instance, within the context of this study, ethical failures are viewed as equivalent in terms of severity (i.e., 1 or 0). In practice, such standardization may or may not be warranted as some failures may be more damaging than others. In addition, the study does not take into account that ethical failures may be context-specific (e.g., an action may be ethical in Canada but not so in the United States and vice versa). The focus on a single country does attenuate the impact of this issue. A second limitation is related to the fact that ethical failures that we use in our analyses are only those that have been discovered and made public.

To gain further insights regarding the process by which corporate governance mechanisms ultimately relate to ethical failures and directors' involvement in furthering a firm's interactions with its stakeholders, a promising avenue would be to engage into a qualitative data collection effort through interviews with corporate governance actors (e.g., directors, institutional investors, managers). However, getting access to these actors could be a challenge as the topic being discussed is relatively sensitive in most organizations.

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Jarislowsky Chair in Corporate Governance (Concordia University) and the Institute for the Governance of Public and Private Organizations. All usual caveats apply.

## Appendix

See Table 7.

**Table 7** Ethical grid

	Number of different ethical failures	Total ethical failures
Violation of labour code	0.020	0.101
Discrimination based on race and gender	0	0
Non-compliance with trade laws on pricing	0.034	0.048
Exploitation of child labor	0	0
Unfair competition, fines for non-compliance	0.010	0.010
Products: management of health and human security	0.084	0.224
False advertising	0	0
Industrial spying	0	0
Influence peddling	0	0
Fraud	0.029	0.029
Corruption	0	0
Illegal financing of political parties	0	0
Bribes	0.005	0.005
Total	0.182	0.507

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