



Financial Reporting Frauds: A Manifestation of Hubris in the C-Suite? Some Exploratory Evidence

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Abstract

In this paper, we investigate if and how a firm's managerial, governance and market oversight attributes relate with a propensity to financial misreporting. Our sample comprises both firms for which there was a regulatory allegation of financial misreporting accompanied by fines as well as firms matched on industry and size with no evidence of misreporting. Our findings suggest that proxies for managerial hubris (active mergers and acquisitions strategy, complex corporate structure, top-rated managers) fed by fawning media and financial analysts, may be a potential driver of financial misreporting. At an individual level, hubris is characterized by exaggerated self-confidence, arrogance and oblivion to reality. In contrast, governance and market oversight processes do not seem to have been effective in detecting or preventing financial misreporting, with independent boards of directors proving especially ineffectual. Our findings suggest that formal processes may get coopted by a managerial (C-) suite culture that houses hubristic tendencies.

Key words: financial reporting fraud, governance, media, hubris, asset misappropriation

Introduction

The detection and prevention of financial reporting frauds constitute major concerns for market regulators, corporate directors, auditors and investors. There is widespread evidence that revelation of financial reporting fraud most often translates into a sizable loss for investors, much greater than the amount of the fraud itself or the related fines and penalties (Beasley et al. 2010). The consequences in terms of reputation loss and civil or criminal settlements may also be quite important for directors and auditors. In the United States, for example, announcements of fraud at Enron and Worldcom were quickly followed by the bankruptcy of both firms, with equity investors losing everything; and the disappearance of Arthur Andersen, one of the "Big" audit firms.

This paper aims to explore how a firm's externally observable managerial, governance and market oversight features may help determine its likelihood to engage in financial misreporting. We build upon the corporate governance literature to identify organizational features that relate with financial misreporting. We also consider how market oversight mechanisms may complement a firm's own governance processes as a mean to restrain or accentuate financial misreporting tendencies. Beyond governance and market oversight, we introduce managerial hubris as a third dimension that may contribute to a firm engaging in and pursuing a financial misreporting strategy.

Broadly defined, managerial hubris is the attitude within top management (c-suite) toward the outside world and its visualization of its own importance. Hubris is seen as exaggerated pride or self-confidence often resulting in retribution (Merriam-Webster Online Dictionary; Hayward and Hambrick 1997). It derives from Greek mythology in which it was deemed to be man's fatal flaw. "Those excessively confident, presumptuous,

blindly ambitious or otherwise lacking humility were relentlessly struck down by the gods" (Grimal 1986, as reported in Hayward and Hambrick 1997, p. 106). Managerial hubris is a concept which is used to describe and explain entrepreneurs' serial failures (Hayward et al. 2006) as well as the overbidding in takeover battles (Hayward and Hambrick 1997).

The following two examples illustrate why we suggest managerial hubris may play a role in financial misreporting. First consider an entrepreneur who receives the following recognition in rapid succession:

- Country's Entrepreneur of the year
- Outstanding Achievement Award winner from Hollywood
- Honorary university doctorate
- One of the top 50 most powerful persons in an industry
- Appointment as director of one of the country's largest publicly held entities

 We likely assume this person is neither shy nor interested in hiding from the limelight.

 Micheline Charest, the recipient of these honors, was founder, controlling shareholder
 and co-CEO of CINAR, a firm that became the target of endless litigations relating to
 improper use of tax credits, financial misreporting, use of investment tax havens, and
 copyright infringement. Ms. Charest died in 2004 but some court cases from her days as

 Co-CEO (pre-2001) still linger. Financial improprieties, including earnings
 overstatements and improperly handled related party transactions, led to the firm

¹ 1993: Canadian Entrepreneur of the year; 1994: Outstanding Achievement Award winner for Women in Television and Film; 1997: Honorary Doctorate from Wilfrid Laurier University; 1997: 19th among the 50 most powerful women in the world's

entertainment industry (Hollywood); 1999: Appointed director of BCE Inc., one of Canada's largest and most widely-owned companies

restructuring, and eventually being sold at a significant loss to shareholders. Until accused of financial and business misconduct, Ms. Charest had a very public profile.

Instead of undermining her rise to fame, the financial press, business circles and financial analysts, painted glowing profiles of her firm's operations, allowing the firm to raise significant amounts of capital.

Then consider another Canadian entrepreneur whose "products" achieved worldclass status and whose achievements earned him the Order of Canada, who won several
industry awards and who lived a very public life, highlighted in newspapers' society
pages. The rise to fame of Garth Drabinsky and of Livent Inc. was also followed by a
precipitous fall. At its peak, Livent was North America's largest live show organization
and was behind several blockbuster productions such as the Phantom of the Opera or Kiss
of the Spider Woman. Mr. Drabinski's trial took place many years after the events and he
was ultimately convicted. His conviction was upheld by the Appeal Court and confirmed
by the Supreme Court of Canada in March 2012, making him a convicted felon 14 years
after Livent's bankruptcy. As with Ms. Charest, it appears that Mr. Drabinsky's magic
mesmerized bankers, investment bankers, accountants, journalists, analysts and investors
enabling him to raise significant amounts of money despite a business model that was
devouring cash at a fast pace.

Based on the stories of these two successful individuals, we argue that when fed by fawning praise from external parties, CEOs and executives at failed firms can develop an exaggerated self-worth and become immune to (or intolerant of) criticism, thus reinforcing their over-confidence and, indirectly, attenuating the critical skills of stakeholders who should normally monitor management: directors, auditors, analysts,

investment bankers. Such expressions of praise or adulation by external observers may raise an individual's conviction that he/she is right: if media coverage (or analysts) endorse a senior executive's views, he or she must be right. The standing of an individual within his/her organization is also enhanced by such external praise: it becomes difficult to argue against someone who is on the front page of financial newspapers and is the CEO, CFO, CIO etc. of the year. Assuming that the executive has already started to engage in financial misreporting, external praise accompanied by his/her elevated sense of self-worth or arrogance can then translate into an invitation to continue: if no one has noticed anything improper, why not keep at it, especially if there are direct personal benefits to be derived from such actions.

Our analyses are based on a sample of sixteen (16) Canadian firms whose senior executives were accused of financial reporting or disclosure fraud and for which there were formal accusations of financial reporting fraud filed by securities regulators. In each case, at least an administrative fine or penalty was levied. The alleged improprieties took place between 1995 and 2009. We match these troubled firms with comparable counterparts that have not been subjected to allegations of misreporting or fraud and compare them in terms of financial results, governance and, most importantly, managerial influence and hubris. Since we cannot observe or measure directly a CEO's or senior management's hubris, we rely on an indirect measure that comprises the following elements: awards, distinctions or prizes obtained by the CEO or other senior executives, favorable media coverage, favorable analyst coverage (market darling phenomenon) and the fact that the CEO is also the founder of the firm (Hayward et al. 2004)

Overall, qualitative analyses, descriptive statistics and results from multivariate logit regressions suggest that firms that have been the object of financial reporting fraud allegations have the following distinguishing features:

- They have aggressive merger and acquisition strategies (e.g., Nortel);
- They have complex corporate structures, with several layers of holdings and affiliated companies, often in offshore centres (e.g., Semi-Tech or Hollinger);
- Their CEOs and/or other senior executives have received numerous awards,
 prizes, distinctions or other forms of public recognition (e.g., honorary doctorates from universities);
- They have received favorable media coverage;
- They are market "darlings", managing successful initial public offerings or other
 public financings through reputable investment banks and receiving positive
 recommendations from stock market analysts;

These features also contribute to hubris as they elevate executives' visibility within the media and financial markets. They also serve to further inflate hubris tendencies as they build up the ego of the executives on the receiving end of the praise. In contrast, our control sample firms do not exhibit the same features to the same extent. In fact, the differences are quite striking. Hence, we conclude that managerial hubris, as proxied by the attributes highlighted above, seems to be a consistent presence in firms subject to allegations of financial reporting fraud.

Surprisingly, almost all failed firms in our sample possess all the accepted visible signs of good governance such as an independent board, an audit committee, reputable auditors, prestigious investment bankers and even star directors. Hence, board-driven

governance did not show itself to be a firewall against value-destructive actions by management. In fact, evidence from the multivariate logit analysis suggests that while external blockholders attenuate the likelihood that a firm will be subjected to financial misreporting, the presence of a board comprising a majority of independent directors increases such likelihood. Thus, either directors, auditors and investment bankers were incompetent and in awe of the hubris-driven managers or, they simply fully trusted these hubris-driven managers. In that regard, our findings are consistent with those reported by Beasley et al. (2010) who conclude that "Relatively few differences in board of director characteristics existed between firms engaging in fraud and similar firms not engaging in fraud. Also, in some instances, noted differences were in directions opposite of what might be expected." (page iii). ²

The paper offers the following contribution. First, most prior research adopts a linear approach in which relevant attributes, otherwise labeled as red flags, are identified as potential determinants of financial reporting fraud (e.g., Efendi et al. 2007). However, in practice, decisions, actions or events take place in a sequential fashion. Our reliance on a qualitative methodology allows us to integrate a timing dimension into our analysis. In addition, most prior research focusing on executives' decision-making assumes, implicitly or explicitly, that they behave rationally (e.g., agency theory). In contrast, our analysis of the context surrounding financial reporting frauds suggests that executives may exhibit signs of irrational behavior (e.g., hubris). Such a view is consistent with findings by Malmendier and Tate (2005).

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² Beasley et al. (2010) analyze cases of fraudulent financial reporting in the United States between 1998 and 2007.

Second, our approach builds upon and extends prior work that documents that executives' personalities may be conducive to financial reporting fraud. However, while prior research introduces a manager's personality into the determination of fraud, it is often not directly observable (e.g., Carpenter and Reimers 2005) or measured in an expost fashion (Cohen et al. 2008). In either case, it is difficult to derive direct implications for standard-setting and practice. The focus on top management is warranted by the fact that they tend to commit the largest frauds which are most likely to affect the reliability of financial statements (Peltier-Rivest 2007). In contrast, by focusing on externally observable signals and facts, our approach allows to infer the c-suite culture, as driven by its members. The observed links between such evidence and fraud propensity provide useful warning lights to corporate directors, auditors and regulators and may enhance the future effectiveness of these governance mechanisms.

Third, most prior studies on financial reporting fraud focus on U.S.-based evidence. However, institutional arrangements, ownership structures and legal frameworks significantly differ around the world and determinants of financial reporting fraud identified for a U.S. context may or may not be applicable in another context, even a close one like Canada. The fact that potential determinants of fraud may vary across countries raises some questions as to the reliability of universal auditing standards for at least two reasons. For instance, it is probably easier for someone to attain "star" status in Canada, a relatively small country with a few national media and a highly concentrated business elite. In addition, many Canadian firms have a CEO who is also a controlling shareholder or member of a control group: for most countries outside of the United States, such firms can represent 50% or more of publicly traded firms. Hence, according

to the COSO framework, opportunity to commit managerial fraud is certainly quite prevalent around the world. Similarly, for these same firms, CEO-owners have a strong incentive to commit fraud in view of the sizable value of their financial stake. Our findings suggest that neither attribute is associated with the likelihood of misreporting. Hence, while plausible reasons to commit fraud exist, the traditional framework falls short of allowing for a successful differentiation of top management-driven financial reporting fraud and non-fraud cases.

The rest of the paper proceeds as follows. The next section provides a brief overview of the appropriate institutional environment underlying fraud detection as well as prior research on the determinants of financial reporting fraud. The third section develops our conceptual arguments underlying the role of hubris in fraud. The fourth section describes our sample and the methodology used in the paper. Our analysis and findings are then discussed. The last section provides a discussion and a conclusion.

Financial Misreporting: Theory and Evidence

The issue of top management fraud encompasses a vast literature covering many years. The scope of prior research reflects the diversity of what constitutes top management fraud, i.e. willfully undertaking actions to mislead others: embezzlement, insider trading, self-dealings, lying about facts, failing to disclose significant events, corruption, cover-ups, etc. Zahra et al. (2005) provide an exhaustive overview of prior research on the antecedents and consequences of top management fraud. According to them, most studies on financial reporting adopt a governance perspective, with findings generally supporting the view that fraud is committed to enrich managers. However,

studies on financial reporting frauds typically focus on proximate indicators, or red flags, rather than attempting to establish underlying causes or antecedents.

Why a firm's top management decides to engage in unethical or fraudulent financial reporting remains, to a large extent, unexplained. While it is relatively easy to identify environmental, organizational or individual attributes that seem to be associated with the incidence of financial reporting that violates generally accepted accounting principles (GAAP), one can also find such attributes in many other organizational contexts that do not exhibit GAAP violations. Moreover, beyond external or objectives characteristics, it is difficult to infer the interior motives, personalities or combinations of organizational context and personal weakness that drive successful individuals to take the slippery slope of unethical behavior. An additional enigma is why top managers often willingly expand the scope and the scale of their financial reporting manipulations once they have engaged in unethical activities. Several models have been put forward to provide a structured understanding of these questions.

A Market and Incentive Perspective

Jensen (2005) argues that top managers of firms whose shares are overvalued have an incentive to engage in aggressive financial reporting. In his view, a firm's stock market overvaluation, i.e., the difference between a firm's stock market value and its underlying intrinsic value essentially reflects investors' inflated expectations with respect to future earnings. Because these expectations are unlikely to be achieved, management may be tempted to engage in accounting manipulations to raise the level of reported

earnings to match the investors' implied target.³ While some initial manipulations may be within GAAP, declines in the underlying business or the continuation of a stock market bubble may bring managers to violate GAAP to stay afloat. Since they have more to lose if the firm's share price deflates, managers with extensive stock or option holdings are more likely to feel pressure to manipulate earnings.

Efendi et al. (2007) corroborate Jensen's intuition by finding that managers with extensive in-the-money stock option holdings are more likely to restate financial statements in a stock market bubble context. They observe that managers with powerful bonus incentives and tight financial situations are more likely to restate financial statements. Fogarty et al. (2009) also observe that the forces driving top management to engage in value destroying behavior, as described by Jensen (2005), were at play in the accelerated rise and fall of Nortel Networks. Finally, Povel et al. (2007) provide some analytical evidence that is consistent with Jensen's argument. They show that financial reporting frauds peak toward the end of a boom, and get revealed in the ensuing bust. They also find that the incidence of fraud can increase if firms make more information available to the public.

Jensen's model has the appeal of putting financial reporting fraud into a broader stock market context in which there is a dynamic interplay between managers and investors. However, his perspective on the drivers behind financial reporting fraud does not integrate many individual, intra-organizational or social factors that relate to fraudulent behavior. As such, the fraud pattern that emerges from Jensen's argument is consistent with an agency theory view that managers are solely, and rationally, driven by

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³T Feng et al.'s (2011) findings are consistent with the view that CFOs are involved in material accounting manipulations because they succumb to pressure from CEOs

financial incentives, even in terms of their own ethics. In other words, at any point in time, many firms may be in a situation where their shares are overvalued, thus potentially inducing management to engage in financial misreporting. But not all managers fall into that trap, only a minority. Why? To answer this question, it is necessary to integrate other drivers of human behavior.

A Behavioral Perspective

Three recent studies attempt to explain the dynamics of unethical and fraudulent financial reporting using the reasoned action model, which is derived from social psychology and predicts behavioral intentions and corresponding behaviors.

Through a survey of current Chief Financial Officers (CFOs), Gillett and Uddin (2005) investigate the factors linked with CFO intentions to engage in fraudulent financial reporting. The theory of reasoned action assumes that humans are rational and use the information at their disposal in a systematic way, considering all the implications of their actions before deciding to behave in a given way (Ajzen and Fishbein 1980). The final model that emerges from Gillett and Uddin's structural equation analyses reveals that negative belief evaluations may contribute to a reduction in the occurrence of fraudulent financial reporting. A manager's referent groups strongly influence his/her subjective norms and can also attenuate intentions to engage in fraudulent financial reporting. Nevertheless, CFOs in large firms exhibit greater intentions to engage in fraudulent financial reporting. The need for achievement and positive belief evaluations do not seem to influence CFO attitudes. In contrast to expectations and to most audit

standard pronouncements, the managers' compensation structure does not either seem to affect their intentions.

Carpenter and Reimers (2005) use an extension of the reasoned action model, the theory of planned behavior, to examine managers' decision to engage or not in fraudulent financial reporting. In contrast to the theory of reasoned action, the theory of planned behavior assumes control over behavior. Hence, the key to explain an individual's behavior is intentions, which are driven by attitudes toward the behavior, subjective norms and perceived control over the behavior. Results from a survey and from an experiment (both with MBA students) provide strong support for the theory, with attitude having the most influence in predicting behavioral intent. More specifically, Carpenter and Reimers (2005) conclude that "managers' attitudes, shaped by the tone set by top executives, significantly influence managers' decisions to behave unethically or not" (p. 125). Subjective norms also affect behavioral intent, suggesting that further education on ethics would be beneficial. However, the control that participants perceive to have over a decision seems to have little influence on their intention to engage or not in fraudulent financial reporting behavior.

Cohen et al. (2008) provide evidence that is consistent with the fraud triangle being enriched by integrating the theory of planned behavior. According to the authors, the theory of planned behavior provides insights into the importance of managers' personality traits as fraud risk factors. By looking at ex-post rationalizations for discovered fraud cases, as published and discussed in media reports, they infer the role of managers' personality and attitudes in the commitment of fraud. In their view, managers' attitudes toward fraud as well as their ethical values are an important factor to consider

when assessing the potential for a fraud to be committed. They conclude that the theory of planned action maps reasonably well into the fraud triangle model and allows for an enhancement in its explanatory power.

A Governance Perspective

Under the sponsorship of COSO, Beasley et al. (2010) conduct an exhaustive study of fraudulent financial reporting by U.S. firms during the 1998-2007 period. Their sample comprises 347 fraudulent financial reporting occurrences investigated by the U.S. Securities and Exchange Commission. In most of these cases (89%), the SEC named the CEO and/or CFO for some level of involvement, with 20% of these named executives being indicted and 12% convicted. News of fraud allegations has material economic consequences for the involved firms, with significant short term stock price declines (an average of -16%). In the long run, many firms file for bankruptcy or engage in significant restructurings. Looking at a variety of governance mechanisms, they find relatively few differences in board of director characteristics existed between firms subject to fraud allegations and a matched sample of similar firms not engaging in fraud. In fact, some results are contrary to expectations. For instance, firms subject to fraud allegations were more likely to have financial experts on their board than control firms. In light of these findings, Beasley et al. (2010) highlight the importance of further research on the role of governance processes and the interaction of various governance mechanisms. Furthermore, they point toward the need to gain a better understanding of leadership dynamics and behaviours accompanying fraudulent financial reporting.

Managerial Hubris: Theory and Evidence

Hubris and Business Events

According to Hiller and Hambrick (2005), hubris contributes to enhance an executive's core self-evaluation, i.e., how executives evaluate themselves and their relationship with the environment. Executives with very high or hyper core self-evaluation are free of anxiety and have little concern about negative outcomes because they feel that they will ultimately prevail. In other words, "...the upper reaches of core self-evaluation may be thought of as a scientifically validated hubris factor" (Hiller and Hambrick, p. 306.). The authors derive some conceptual predictions about hubris' impact of strategic processes and choices. They predict that CEO hubris, or hyper core self-evaluation, will translate into (among other predictions) 1) less comprehensive strategic decision processes, 2) centralized strategic decision-making, 3) greater deviations from industry trends, 4) greater persistence in pursuing CEO-launched strategies, and 5) more extreme performance. Hence, they expect managerial hubris to manifest itself in directly observable actions or decisions.

Consistent with Hiller and Hambrick's conceptual model, managerial hubris has been identified as a potential explanation for three widespread business phenomena or events:

1) the overbidding taking place in many large takeover fights, 2) the decision to engage in a takeover despite widespread evidence that most acquisitions fail to create value and, 3) the tendency for entrepreneurs to launch new ventures in the shadow of high venture failure rates.

Hayward and Hambrick (1997) investigate whether CEO hubris explains the large size of the premium paid in many acquisitions. They argue that CEOs build up and feed

their hubris from three sources: 1) success attribution to individual leaders reinforced by key organization players (directors, investors, subordinates); 2) media praise; and 3) sense of self-importance, a composite construct comprising self-esteem, narcissism, and need for power. The findings suggest that CEOs thought to exhibit hubris engage in takeovers in a way that is more costly to their shareholders: the extent of the takeover premium is higher for firms with a CEO with visible signs of hubris than for other firms. They are consistent with Ford (2006) who asserts that hubris is one of the key reasons why organizational personnel are prone to fail.

Brown and Sarma (2007) investigate the role of CEO hubris and CEO dominance in a firm's decision to engage in an acquisition. They argue that managerial hubris leads CEOs to overestimate synergies from a particular deal, to underestimate post-acquisition integration problems and to be influenced by the acquisition financing mode. Their work maps closely with Malmendier and Tate's (2005) findings that overconfident CEOs do tend to exhibit higher than average acquisitiveness. Brown and Sarma's proxy for CEO overconfidence or hubris is inspired from Hayward and Hambrick (1997) and relies on media mentions. They measure CEO dominance (or power) through relative compensation. Their findings suggest that both CEO overconfidence and dominance underlie corporate decisions to engage in an aggressive acquisition strategy.

Hayward, Shepherd and Griffin (2006) put forward a hubris theory of entrepreneurship. They examine why so many ventures get started despite the abysmal rates of success of new ventures. In their view, venture founders are aware that most new ventures fail and are relatively well-informed. Their willingness to start a new venture simply reflects their belief that they can beat the odds of failure, a belief that relies on

their overconfidence, or hubris, in 1) knowledge, 2) prediction and, 3) personal abilities. Environmental complexity and dynamism as well as successful prior new venture experiences are expected to enhance hubris in these three dimensions. Moreover, overconfident entrepreneurs are likely to launch their venture with fewer resources, tend to overcommit resources to focal ideas and opportunities and manage with a skimpy financial safety net.

Hubris and Financial Reporting

A recent study hints at executive over-confidence as a potential explanation for financial misreporting. Schrand and Zechman (2012) examine a small sample of firms that have been subjected to SEC Accounting and Auditing Enforcement Releases (AAER). They conclude that executive over-confidence may have led the firms to feed the market with excessively optimistic forecasts that translated into unrealistic expectations. As the actual results came up short of initial forecasts, executives entered into the slippery slope of misreporting to make up any shortfall. Comparing with a sample of control firms not subject to such SEC enforcement, Schrand and Zechman (2012) observe that CEOs of misreporting firms exhibit traits of overconfidence as to their abilities and importance within the organization.

Petit and Bollaert (2012) identify managerial hubris as a potential catalyst for firms to engage in disastrous strategies or actions. According to the authors, outcomes that are often attributed to over-confidence may be a manifestation of hubris once the concept is better defined. They build on work in mythology, psychology and philosophical ethics to put forward a framework depicting top executive hubris. They conclude that hubris

among CEOs rests first and foremost on their power, which in the context of their relation with the world, lead them to consider themselves "...above the laws of the gods." Such a cognitive perspective can translate into fraud, manipulations of rules and laws and contempt toward authorities. Linking Petit and Bollaert's (2012) comments with Schrand and Zechman (2012) findings, one may conclude that financial misreporting may reflect managerial hubris, and not merely an optimistic bias or over-confidence.

Building upon the view put forward by Petit and Bollaert (2012), we argue that a fuller understanding of financial misreporting can be gained by adopting a comprehensive framework encompassing externally observable indications of managerial hubris, governance, and market monitoring. By looking at a limited sample of actual cases of fraudulent financial reporting, we hope to bridge the gaps between the red flag approach that characterizes our institutions, the narrow financial incentives focus that permeates most prior research on fraudulent financial reporting and our lack of knowledge about antecedents of financial reporting fraud that are directly observable. We view managerial hubris as providing a powerful conceptual and analytical tool to revisit the determinants of financial reporting frauds.

We recognize that, in most firms, CEO or managerial hubris is not completely unrestricted, since the board of directors can constrain managers from taking actions that are too-self-serving or detrimental to shareholders. There is evidence that vigilant boards, or strong governance or monitoring, can influence corporate outcomes, even those that directly relate to the CEO such as executive compensation (e.g., Core et al. 1999). Hayward and Hambrick (1997) provide evidence demonstrating, that vigilant boards can moderate CEO hubris and attenuate its impact on takeover premiums. This would lead us

to expect strong governance to reduce the impact of managerial hubris on financial misreporting.

However, the interface between hubris and governance may be less straightforward for financial misreporting. In contrast to executive compensation or takeovers, which must be formally approved by the board, managerial frauds are not typically a topic of board discussion beforehand. In addition, formal governance attributes such as directors' independence have been shown to be ineffectual if not associated with competence, expertise and/or intense activity (e.g., Chen and Zhou 2007). If governance and monitoring mechanisms that appear strong are ineffectual, this may reinforce and facilitate managerial hubris. Last, Hiller and Hambrick (2005, 311) raise the possibility that politically or socially astute CEOs with hyper core self-evaluation may "...engage in centralized and unilateral decision-making but still allow others in the organization to have the impression that they have a voice or input to the decision." In other words, CEOs with hubris can manipulate processes to create proper appearances while pushing their own views. Such manipulations can extend to external parties such as directors, auditors, investment bankers or analysts whose involvement in the firm is episodic or part-time and, hence, who may not have all the required information to confront senior executives. Appearances of good governance or intense external monitoring will help reinforce a CEO's own self-image and conviction that he/she is beyond reproach, even as frauds are under way. In light of these opposing views, we refrain from making any predictions on the role played by strong governance in mitigating managerial hubris.

Field Setting and Methodology

The study focuses on the population of financial misreporting cases that occurred in Canada between 1995 and 2009 among publicly traded firms.⁴ The selection criterion is for a firm to have been pursued and/or sanctioned by securities authorities during that period for GAAP violations or asset misappropriations which were not properly disclosed. Hence, other cases of securities fraud such as insider trading or embezzlement are not covered (unless they relate to GAAP violations or asset misappropriations). Sixteen (16) such firms are identified from the web site of the Ontario Securities Commission as having had cease-trading orders accompanied by financial statement refilings or errors. We adopt a clinical study approach which allows us to delve into the stories underlying each instance of misreporting. We also perform multivariate analyses to better understand the role played by managerial hubris.

The firms engaged in financial misreporting are matched on a one-to-one basis with firms where there is no evidence of improper financial reporting (in the years before and after). The matching criteria are industrial sector (four- or two-digit SIC codes) and firm size (sales).

The information used for the analysis is obtained solely from public sources: proxy statements, audited financial statements, annual reports, management discussion and analysis, Ontario Securities Commission briefs or reports, press releases and media articles, and briefs for court proceedings. The last two sets of documents are extracted from ABIINFORM and Lexis/Nexis.

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⁴ We refrain from using the terms fraud or fraudulent when describing the instances of financial misreporting comprising the sample. In Canada, only under rare circumstances are executives or entrepreneurs convicted of fraud under criminal laws. In that regard, the conviction of Garth Drabinsky (Livent) is an exception rather than the norm.

Findings and Analysis

Descriptive Information

Overview of Case Firms

Table 1 provides a list of the case firms (with matched firms indicated below) as well as the nature of the allegations filed by regulators. The improprieties fall into three broad categories: 1) GAAP violations (accounting), 2) asset misappropriations (assets), and 3) incomplete or fraudulent disclosure (disclosure). However, the specifics of each case are quite varied. In the case of Atlas Cold Storage, 2002 net earnings were ultimately found to be overstated by \$37.4 million due to overstatements of accounts receivable, prepaid expenses, capital assets and goodwill; and understatements of accounts payable and accruals. Since asset misappropriation often implies that financial statements were misleading, it is difficult to disentangle the two. More than \$100 million in assets evaporated at Philip Services in its metals recycling business due to improper trading. Its 1996 earnings were restated from net income of \$40 million to a loss of \$20 million as a result. In the case of Bre-X, the discovery of a major gold deposit was eventually exposed as a hoax. Finally, the CINAR case encompasses tax evasion, incomplete disclosure and asset misappropriation. CINAR was accused to have falsely represented the citizenship of its artistic creators to obtain special tax credits from the Canadian government. Over \$120 million in the firm's liquid assets were subsequently found to have been transferred to the Caribbean without the board's approval, with more than \$40 million still missing to this day.

[Insert Table 1]

Very few cases were settled in court. One particularity of the Canadian legal system concerning white collar crime is the slowness of the procedures. While the Conrad Black-Hollinger case was tried in the United States because it related to a U.S.-based subsidiary of Hollinger, the Ontario Securities Commission civil proceedings against Conrad Black and other senior executives of Hollinger are still pending and were recently postponed (such proceedings were started more than four years ago). Similarly, in the Livent case, while the frauds allegedly took place between 1993 and 1998, criminal court proceedings only started in the summer of 2008, with a verdict being pronounced in 2009 and appeal options exhausted in 2012. The monetary fines or penalties that were eventually imposed on parties involved in cases of alleged fraudulent reporting are also relatively minor compared with the magnitudes of the amounts involved. Only the initiation of civil class action suits allows investors to be partially compensated for their losses (although the perpetrators of the frauds themselves are rarely affected). For instance, at YBM Magnex, the \$120 million settlement was paid from the firm's assets (\$35 million) and by a group of former auditors, directors, investment bankers and attorneys (\$85 million).

Table 2 allows for a comparative analysis of the sample firms' peak stock market valuation, and sales and earnings, as initially reported, in the period preceding or concurrent to the alleged fraudulent activities. One can infer from the evidence that the economic sanctions are of much greater magnitude than the regulatory ones. In almost all cases, when comparing the firm's share price peak prior to the announcement of the alleged fraudulent incident to the most recent value, it appears that investors lost almost everything. Twelve out of sixteen firms ultimately went bankrupt and were either liquidated or restructured, with pre-fraud investors' ownership being extensively diluted

if not eliminated altogether. Two firms, Atlas and CINAR, were taken over. Atlas shareholders were able to recoup about 50% but CINAR investors received less than 10% of the firm's former peak value. In almost all cases, i.e. in all firms except Laidlaw and Mount Real, the principals involved in the fraudulent activities lost significant amounts of money, if not all their firm-specific wealth as they were significant shareholders.

While it appears that case firms are overvalued compared to matched firms (median price-to-sales ratio of 3.4 vs. 2.1 and median price-to-earnings ratio of 100 vs. 24), such differences are not statistically significant at conventional levels (p < 0.10), thus undermining Jensen's (2005) argument.

[Insert Table 2]

Governance

Table 3 provides an analysis of the case firms through the lens of a governance template, focusing on several well-known oversight mechanisms: the existence of a major blockholder (> 10% ownership) able to and with incentive to oversee management, a board comprising a majority of independent directors (as per regulatory requirements), the existence of an audit committee, the presence of star directors (directors serving on multiple boards of publicly-traded firms), the presence of a prestige auditor (Big 6, Big 5 or Big 4 depending upon the period) and the presence of a prestige investment bank (equity or debt issue managed or co-managed by a leading Canadian or international investment bank). Case firms and control firms do not differ on any of these dimensions, except for the presence of a blockholder: control firms are more likely to have a major blockholder than case firms.

[Insert Table 3]

Managerial Influence

Table 4 provides an overview of variables proxying for or enhancing managerial influence: CEO ownership; complex corporate structure; merger, acquisition and divestiture activities; nature of business model; and founding CEO. We compare case firms and control firms to determine if there are significant differences between the two groups; and to identify potential determinants of financial misreporting.

The firm's CEO was an important shareholder, if not the controlling shareholder, in a sizable majority of case firms (13 out of 16). This gave ample opportunity to override internal controls and governance processes. A similar situation prevails among control firms, with no significant difference between both groups.

Many case firms had complex corporate structures. Atlas Cold Storage was an income trust, a Canadian legal structure that is unincorporated and which allows cash flows from the underlying operating assets to flow through shareholders without being subject to corporate income taxes. Hollinger was controlled by a pyramid of holding companies that were ultimately controlled by Conrad Black while its operating assets were held in a U.S.-based firm (Hollinger International) that had a dual-class share structure. Despite its relatively small size (disclosed assets of less than \$100 million), Mount Real was part of a corporate structure that included hundreds of affiliated and subsidiary companies. Semi-Tech had publicly traded affiliates in both America and Asia. YBM Magnex had numerous subsidiaries in Eastern Europe and in the Caribbean, in addition to operations in the United States. St. Genevieve was also part of a group of publicly traded junior mining companies with exploration activities around the world that were ultimately controlled by the same shareholder, who also happened to be CEO of St.

Genevieve. While case firms were more likely to exhibit such structures than control firms, the resulting difference is not statistically significant at conventional levels.

Almost all case firms had extremely active merger, acquisition and divestiture activities prior or during the time the fraudulent behaviour took place, with the difference between case and control firms being statistically significant. In fact, merger and acquisition activity among control firms is almost non-existent. For instance, within the span of three years (1998-2001), Hollinger purchased and then sold most of its Canadian newspaper properties (the buyer, CanWest Global, paid \$3 billion for these assets). These properties were first shuffled into a new corporate entity, Hollinger International, which then promptly issued stock to the public. Between 2002 and 2005, Mount Real engaged in numerous transactions in which it sold some of its underlying operations to other entities to acquire controlling or influential interests in these firms, booking sizable dilution gains in the process. It transferred some of its assets into a new income trust through an initial public offering. It also sold its acceptance business to an overseas finance firm for a nominal amount while retaining much of the credit risk. Over the span of a few years, Semi-Tech acquired the Singer and Pfaff brands and operating assets (sewing machines) as well as the Akai and Sansui electronics businesses, acquisitions which significantly multiplied its size. Laidlaw engaged in a complete overhaul of its operations, selling its waste disposal business to acquire a controlling interest in a larger U.S.-based entity (Safety-Kleen), acquiring numerous emergency transportation services in the United States (ambulatory services) as well as ground transportation (Greyhound buses) in addition to its core business of school children transportation. In its 1998 annual report, CINAR reported that more than 50% of its growth in 1997 and 1998 was a result

of acquisitions and, in early 1999 it acquired another production firm, EduSoft, for \$40 million.

A particular feature of most firms involved in fraudulent reporting was the unique or uncommon nature of their business models, with the difference between case firms and control firms being significant. In fact, it was extremely difficult to match many of the case firms with a control firm with similar activities (as per the 4-digit SIC). The best example emanates from Mount Real's 2003 MD&A:

Mount Real's business is management accounting, information management and media services. Mount Real uses "TMI" Tactics Marketing Intelligence, a business intelligence system, for the management of proprietary and non-proprietary consumer databases.

Through our management accounting services, we assist clients by reporting and interpreting relevant data required by our clients to make logical decisions which are consistent with their growth objectives. Our information management services play an even greater role in assisting clients to grow their business by outsourcing the management of their consumer databases for both prospecting and fulfillment purposes. TMI involves the management of consumer databases for direct marketing purposes. The better we manage information the better our clients are served. Mount Real's media services, including Publisher Services, Magazine Subscriptions and Publish-IT, have allowed the company to further the client relationship and assist the clients we work with to be more profitable. These relationships are developed through traditional media services, such as magazine bundling, and through the growing online media sector allowing Mount Real and our clients to cross-promote other products and services. Leveraging the internet by providing more online products and services also helps accelerate growth and reduce unit costs.

What exactly is Mount Real's business? One would be hard-pressed to answer. YBM Magnex provides another illustration of an uncommon business model in its 1996 annual report:

YBM Magnex International, Inc. and subsidiaries (the "Company") is a manufacturer and distributor of high energy neodymium-iron-hydrogen-boron permanent magnets produced in a wide range of sizes, configurations and magnetic properties. The magnet product line also includes rare earth cobalt, ferrite and aluminum-nickel magnets. In addition, the Company salvages materials as part of magnet production and generates additional revenue by buying crude oil, adding neodymium powder to absorb sulphur content which reduces costs to refiners, and selling the oil.

Indeed, in both the Mount Real and YBM Magnex cases, the receivers appointed to manage and liquidate the firms eventually stated that they could not find any trace of operations actually taking place in these firms prior to their failure, despite income statements reporting millions of dollars in sales. In the case of Mount Real, the receiver appointed by the securities regulator found out that while the firm reported revenues of \$46 million in 2004 and of \$19 million in the first nine months of 2005, its internal budgets showed revenues that barely exceeded \$7,000 a week, i.e., less than \$400,000 for a year (Robillard 2005). Bre-X, Getty Copper and St.Genevieve are also interesting cases as they were junior mining exploration firms with "prospects" around the world, their valuation being based upon investors' assessment of their likelihood of discovering promising sites or reserves. Atlas, CINAR, Fareport, Livent, Philips Services, Semi-Tech, TeeCom also had the unique particularity of being the only publicly-traded firm active in their industrial sector in Canada for the period under consideration.

Most case firms (13 out of 16) had a CEO who was also the founder, a strong indication of managerial influence and an indicator of a risky fraud environment according to audit and COSO guidelines. However, control firms also exhibit the same trait, with a majority also having a founder-CEO.

Overall, there is some indication that CEOs of case firms had influence over their management, i.e., power. However, case firms only significantly differ from control firms on a few dimensions: the uncommon nature of their business model; and an active merger, acquisition, and divestiture agenda. This seems to suggest that while managerial influence may be a necessary condition for financial misreporting to occur, it is not sufficient.

[Insert Table 4]

Indicators of Hubristic Tendencies

Table 4 also shows the profile of case firms (vs. control firms) with respect to several variables that proxy for senior management's hubristic tendencies: top-rated CEO or senior executive; stock market darling; media coverage of corporate success; inclusion in the TSX index; and analyst coverage. The use of media mentions and public awards to measure managerial hubris is consistent with arguments put forward by Hayward, Rindova and Pollock (2004).

Senior executives at 9 out of 16 case firms received awards or significant public recognition, a significantly higher number than among senior executives of control firms. Similarly, 8 out of 16 case firms were well-recognized market darlings at their peak, receiving extremely favourable analyst coverage while 14 out of 16 had positive media coverage (cover stories, reports, profiles, etc.). Very few of the control firms received such positive coverage, either for their CEO, other senior executives or for the firm itself. The following quotes highlight key illustrations of these three aspects of public visibility:

Bre-X

• 1997: David Walsh, CEO, is named Developer of the Year and John Felderhof, Chief Geologist, Prospector of the Year by the Prospectors and Developers Association of Canada.

CINAR

- 1998: Micheline Charest is named Canadian Woman in Communications of the Year.
- 1998: Cinar is recognized by an analyst as "extremely well-managed" and "second to none in terms of delivering shareholder value" (Analyst's report).
- 1999: Micheline Charest ranks as the 19th most influential woman in the entertainment world by The Hollywood Reporter.
- 1999: Micheline Charest is in the top 3 of the 100 most successful women-owned businesses according to Canadian Business (largest Canadian independent business magazine).

Fareport Capital

• 1998: The company is pointed out as an example of successful taxi strategy in the Report to Review the Toronto Taxi Industry by the Toronto Task Force to Review the Taxi Industry: "The principles in the Fareport strategy are all supported in the proposed recommendations".

Hollinger

- CEO-owner Conrad M. Black is reviewed in two-well known biographies
 - Newman, P.C. The Establishment Man: A Portrait of Power.
 Toronto: McClelland and Stewart, 1982;
 - o Siklos, Richard. *Shades of Black*. Toronto: McClelland & Stewart, 1995.
- 1990: CEO-owner Conrad M. Black made an officer of the Order of Canada.
- 1992: CEO-owner Conrad M. Black appointed to the Queen's Privy Council in Canada.
- 1993: CEO-owner Conrad M. Black writes his own biography (*Conrad Black: A Life in Progress*, 1993).
- 1998: Largest newspaper group in Canada and third largest in the world
- 2001: CEO-owner Conrad M. Black takes seat as Peer of the United Kingdom, Lord Black of Crossharbour.

Knowledge House

- 2000: Named New Business of the Year at the Metro Halifax Business Awards.
- 2000: Ranks first in year-over-year sales and employee growth among Top 101 companies in Atlantic Canada.
- 2000: Chosen as the Canadian training agency for Intel of Canada's Teach to the Future program.
- 2001: Dan Potter, CEO, is appointed as chairman of Nova Scotia Business, a government agency set up to finance Nova Scotia businesses, attract investment to the province and develop trade.

Laidlaw

- 1998: The Alumni Achievement Award (Ryerson University) is awarded to James Bullock, CEO.
- James Bullock serves as Governor and Chair of the Board of Governors of Ryerson University for six years.

Livent

- 1994-1995: "Show Boat" is the highest grossing production on Broadway, setting the all-time record for the largest box office advance for a revival/re- creation, and repeatedly breaking the record for the highest weekly Broadway box office gross in history.
- 1994-1995: "Show Boat" is most honored show on Broadway, winning five Tony Awards.
- 1994-1995: "Show Boat" is the winner of five New York Drama Desk Awards.

• Other awards and acclaims for Phantom of the Opera, Kiss of the Spiderwoman, etc..

Mount Real

- 2003: Honeybee Technology, an affiliate, places 12th on Deloitte & Touche Canadian Technology Fast 50 Winners according to Canadian Corporate News.
- 2002-2003: Lino Matteo, CEO, and Joseph Petticchino, COO, are highlighted in the advertising campaign of a major Canadian university after Mount Real agrees to finance a scholarship.

Philip Services

- 1994: Is named Canada's fastest growing company by Canadian Business, Canada's most widely read business monthly magazine.
- 1994: CEO-founder and COO-founder are named Entrepreneurs of the Year by the jury of the Ernst & Young Entrepreneur of the Year Awards. Award given by Canada's Governor-General (Business Wire, November 2, 1994).
- 1995 and 1996: Places top 10 on Profit Magazine's Top 100 most profitable companies list.

Semi-Tech

- June 1997: Fourth on the list of the world's 200 fastest growing companies compiled by Deloitte & Touche Consulting Group.
- Fall 1997: Is named Canada's 10th largest employer.
- Fall 1997: Is a member of Team Canada delegation to China, headed by country's prime minister.

St. Genevieve

• "I could have predicted this would happen because {Gauthier} is the best promoter of this generation," said MacDonald Mines president Frank Smeenk regarding a major discovery in Cuba and the announcement of a major international financing (as reported by Peter Kennedy, Financial Post, February 1, 1996, p. 25).

Tee-Comm

• 1995-1996: Popular stock for investor wanting to get on the satellite TV trend according to Silicon Investor web site.

YBM

• March 1996: Listed on the TSX and in the TSE 300 index. Receives glowing buy recommendations from Nesbitt Burns and First Marathon.

These quotes and citations show that at some point prior to the discovery of fraudulent activities, almost all sample firms or their top executives were the objects of

glowing media, society or stock market reports. In our view, the prevalence of such favorable coverage may have either enhanced the willingness of perpetrators of fraudulent activities to pursue their actions or removed successful CEOs from carefully monitoring their executive team. A comment by one of Canada's richest investors, Hal Jackman, former lieutenant-governor of Ontario and controlling shareholder of a financial empire, further illustrates the potential removal from business reality that hubris can create. Talking about Conrad Black, a former friend, who was moving up on the British social circuit, he labeled him "a parvenu drifting away from reality. I can't understand his priorities. He does too much entertaining and not enough business." (Tom Bower, 2006, Conrad the Barbarian, Sunday Times, October 22)

At least ten of the sample firms were also at some point a component of the Toronto Stock Exchange Index, a status that is typically preceded by an investigation by the Exchange authorities and which is accompanied by increased scrutiny by market participants. The counterpart of this fact is that index membership does confer some prestige and recognition to a firm's senior executives. Finally, while the data is sketchier in that regard, it does appear that 13 out of 16 firms were subjected to active analyst coverage during the period, albeit not always positive. For both of these variables, we infer that control firms exhibited significantly lower scrutiny on the basis of statistically significant differences in frequencies.

Recap of Descriptive Evidence

Case firms' CEOs and senior management appear to have been subjected to appropriate oversight and scrutiny by well-informed and independent "principals" or

"monitors" such as directors, auditors, investment bankers, analysts, and stock market authorities, with the above-mentioned red flags being visible to all these agents at most times. Such a finding contrasts with Hayward and Hambrick (1997) who provide evidence that vigilant boards may be less influenced by managerial hubris, thus attenuating takeover premiums.

That governance and market monitoring failed so dramatically in these instances raises two questions. First, were some players being co-opted by financial incentives, i.e., additional fees in the case of auditors, investment bankers and even directors? This is a possibility but independence in fact is difficult to test for many of these parties. Second, adopting a counter-intuitive approach, was the appearance of good governance and active market monitoring used by fraud perpetrators as a cover for their fraudulent activities? By creating an aura around top management and actions, governance actors and market monitors prevented further enquiry and comforted fraud perpetrators' sense of control over the course of events. Hence, fraudulent activities could keep going on despite governance and monitoring that was in appearance quite good. In some sense, visible governance and market monitoring mechanisms may have facilitated fraudulent activities, not hindered them. Hayward et al. (2004) allude to this potential outcome.

It is striking that all sample firms and/or their senior executives received coverage that can have enhanced executives' self-confidence or arrogance and comforted them in their ability to engage in fraudulent activities without being caught, i.e., fed their hubris. Overall, using the conceptual and empirical frameworks developed by Hiller and Hambrick (2005), it does appear that senior executives or CEOs involved in the financial misreporting cases reported in this study may have built up hubris, as reflected in a

fawning press or analyst coverage. Moreover, such hubris may help us understand how the alleged frauds were committed, and grew, as strategic decision-making appeared more intuitive and centralized than formalized and decentralized. Since almost all firms went bankrupt, we can certainly infer that their performance was extreme. Consistent with Greek mythology, the culprits ultimately received retribution for their acts.

Consistent with the framework proposed by Petit and Bollaert (2011), it can be inferred that in a few cases, culprits fell above the law. For instance, following Micheline Charest's death in 2004, an ex-CINAR employee said that "...even if everything was illegal at CINAR, in her mind, she was right". Well-known Canadian business consultant Marcel Cote, who has advised many of Canada's leading entrepreneurs, adds that "...for this type of businessperson, rules are for ordinary people, they do not apply to them..." A few weeks after it was revealed that CINAR had committed tax fraud, Micheline Charest made a luncheon presentation in which she said that "CINAR only did what everybody else was doing. CINAR needed to do it to survive and succeed in the business". 5 At Hollinger, Conrad Black expressed no remorse at his trial and defended his position up to the last minute. Moreover, disclosed emails show a complete disrespect for minority shareholders' interests and rights. ⁶ At St. Genevieve, commenting upon the improper transfer of \$20 million from two related entities to prop up a third one, former CEO Pierre Gauthier said that it was done in the interest of the company at the time since mining exploration firms were being negatively affected by the Bre-X scandal.⁷

⁵ Francine Pelletier. 2008. La femme qui ne se voyait plus aller ("The woman who lost touch with reality" free translation). TV Documentary. Radio-Canada.

⁶ GeorgeTombs. Op. cit.

⁷ Paul Bagnell. 1998. St. Genevieve, KWG Blame Bre-X. The Financial Post, March 28.

It appears also that for some sample firms and managers, prior instances of violating laws and regulations were common. For instance, David Walsh, CEO of Bre-X, went bankrupt a few years before and was able to reemerge because of his wife's personal fortune. Prior to the disclosure and illegal fund transfer scandals, CINAR had allegedly been involved for many years in tax fraud, the case being settled out-of-court. In 1978, Conrad Black seized control of a predecessor firm to Hollinger from the widows of the founding-controlling shareholders in a quick transaction that was always perceived to be a major, if not ruthless, coup. That transaction, which earned him the nickname of "Conrad the Barbarian", was quickly forgotten when the Globe and Mail, Canada's leading newspaper, anointed him Businessman of the Year for 1978 (Bower 2006). There were documented instances of the principals' underground connections in the cases of Semi-Tech (Chinese triads), YBM Magnex (Russian mob) and Mount Real.⁸

Multivariate Analyses

We pursue our analysis by conducting multivariate analyses that allow to identify drivers or determining attributes of firms subject to financial misreporting. These results are reported in Tables 5 and 6. All analyses are conducted using both case and control firms.

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⁸ Sidewinder. 1997. Chinese Intelligence Services and Triads Financial Links in Canada. Royal Canadian Mounted Police-Canadian Secret Intelligence Services joint report. June 24.; Theresa Tedesco. 1999. Securities charges filed against Ontario Premier. The National Post, Tuesday, November 02; L. Perreaux and Tu Thanh Ha. 2008. Key members of Montreal Mafia plead guilty in drugs, extortion case. The Globe and Mail, September 18. The judge presiding over the receivership of Mount Real qualified it as a "sham" (Quebec Superior Court Justice Jean-Yves Lalonde, February 8, 2007).

To obtain a more parsimonious set of variables, we conduct principal component factor analyses (Table 5). First, in Table 5A, we provide results of such analyses on the governance and monitoring variables. Only variables with correlations > 0.40 are retained. We observe that firms with a blockholder typically have a less independent board and a Big 4(5) auditor (board and audit control factor). In addition, firms with star directors typically conduct equity or debt issues through prestige investment banks (prestige factor). Both factors explain 48.16% of cumulative variance among governance and monitoring variables.

Second, in Table 5B, we provide the results of the principal component analysis on CEO power and hubris proxy variables. The first factor, labeled Complexity and Pressures, implies that firms with an active M&A strategy typically exhibit a complex corporate structure, have a top-rated CEO or senior management, are stock market darlings and gather favorable press coverage. The second factor, labeled CEO influence, implies that having a founder CEO often relates with having an owner CEO. Both factors explain 62.8% of cumulative variance.

Both sets of factors are then used in a logit regression as determinants of engaging in financial misreporting or not (Table 6). The model performs reasonably well, with an overall classification rate of 93.3% (vs. benchmark of 50%) with pseudo R-squares of 67.8% (Cox and Snell) and 90.4% (Nagelkerke). The evidence emanating from the logit regression is that the Hubris-Complexity and Pressures factor increases the likelihood that a firm engages in financial misreporting while the Governance-Board and audit monitoring factor reduces the likelihood that a firm engages in financial misreporting. Results also suggest that Hubris dominates the likelihood of financial misreporting. More

specifically, a 10% increase in the magnitude of the Hubris-Complexity and Pressures factor raises by 17% the likelihood that a firm will be involved in financial misreporting. In contrast, a 10% increase in the magnitude of the Governance-Board and audit monitoring factor reduces by 6% the likelihood that a firm will be involved in financial misreporting. While initially surprising, the finding that an independent board may be associated with a greater propensity to observe financial misreporting is not inconsistent with recent findings on the financial crisis which show that financial institutions with more independent boards were more likely to engage in risky business strategies that ultimately jeopardized their survival (reported in Magnan and Markarian 2011). In other words, preoccupied with earnings growth and maximization, such boards may turn a blind eye to the manner by which it is attained.

More specifically, firms with an active M&A strategy, complex structures, top rated CEOs and executives, market darling status and favorable media coverage are more likely to be found engaging in financial misreporting. All these variables are indicators or point toward the presence of hubristic tendencies among senior management, especially the CEO. In contrast, firms with an external blockholder, boards comprising less independent members and a Big 4 auditor are less likely to be found engaging in financial misreporting. Such a finding is consistent with Armstrong et al. (2010) view that independent directors are not necessarily the best monitors in situations where there are significant information asymmetries between a firm and the market, as would be the case for firms with active M&A strategies and complex structures.

That other indicators of CEO power (CEO influence factor) do not translate into greater propensity to engage in financial misreporting does undermine some of the views put forward in auditing standards and fraud detection guidelines.

As executives engage in the slippery slope of deception that accompanies fraud, impropriety or deception, their hubris can be fed or enhanced by positive or fawning external exposure as well as by precedent obscure or forgotten events that comfort them into their likelihood of success in avoiding detection. Our observation is consistent with Schrand and Zechman (2012) who note that executive over-confidence can often be seen as a prelude to fraud.

Conclusion

The purpose of the paper was to analyze cases of fraudulent financial reporting or disclosure that took place between 1995 and 2009 in Canada. A few key findings emerge. First, similar to prior evidence, some governance-related red flags can be identified for all cases. However, in the context of Canada's corporate landscape, such red flags may be identified in scores of other firms that are without any hint of impropriety and, as such, emerge as somewhat useless in understand financial misreporting and even deceptive. Second, to develop a powerful template of factors related with fraudulent activities, we assess case firms' governance quality as well as the extent of market monitoring to which they are subjected. In both instances, we conclude that in almost all cases sample firms had adequate cover for fraud or impropriety as a result of good governance in appearance and extensive stock market scrutiny through the use of prestige investment bankers or analyst coverage. Third, we discover that almost all sample firms and/or their CEO were

the objects of positive media or analyst coverage in the period preceding or concurrent to the fraudulent activities. In our view, such coverage translated into a higher sense of self-confidence or invulnerability among the executives, i.e., managerial hubris. Managerial hubris either led guilty executives further down the path of deception and fraud or, alternatively, pulled their supervising executives away from efficient and effective monitoring.

The study provides an extension as well as a powerful contrast to prior U.S.-based evidence. The picture of fraudulent financial reporting and disclosure that emerges is not linear, and is unlikely to be solely driven by red flags which, in any case, would describe a large fraction of Corporate Canada. More attention needs to be given to signals and indications that create an appearance of good governance but are in reality deception once looked through the prism of senior management's hubris. Indeed, it is highly likely that managerial hubris is present in U.S. cases of fraudulent financial reporting as well:

The MCI deal...has become the stuff of legend. (Joseph McCafferty, CFO Magazine)

Scott is being celebrated as one of the country's outstanding CFOs (Cynthia Cooper, 2007, Extraordinary Circumstances, p. 158)

The above quotes refer to Scott Sullivan, former Chief Financial Officer of Worldcom, who is now serving a five-year prison term for his involvement in the massive financial reporting fraud that led to Worldcom's ultimate collapse.

The study also brings the pursuit of fraud by managers outside the realm of managerial rationalism that has characterized much prior research on the phenomenon. So far, the economic (e.g., agency theory) or behavioral (e.g., planned behavior) theories that have been used to investigate managerial fraudulent intent and/or actions essentially

assume rationality. Inferring that irrationality, as reflected in hubris, may explain corporate frauds is consistent with findings on other managerial actions such as takeover fights.

The study's key limitation is the small sample size (16 case firms plus 16 control firms), and does represent the population of firms sanctioned by the Ontario Securities Commission with a cease-trade order for improper or fraudulent financial reporting or disclosure. However, the small sample does allow for a deeper investigation of the context surrounding each fraud case. In addition, our analysis suggests that prior research may be misleading in its identification of rational or corporate attributes as fraud determinants, thus omitting the human element that hubris represents from their canvas. Finally, while our tentative model is more explanatory than predictive, it opens up a new research area as it brings a new concept into accounting research.

Future research may attempt to provide further validation to the emergent model through interviews with concerned individuals as well as with formal quantitative studies through experiments or actual data (expanding from actual fraud to lesser offences). The study provides auditors and regulators with a rich template to identify or analyze cases of financial reporting fraud and severely undermines the view being put forward by many institutional investors that "check-list" governance is an effective monitoring tool.

Moreover, while the red flag template does include attitude and rationalization as psychological factors underlying fraud, both are very specific and linked to definite actions. As such, they are more after-the-fact themes and are not terribly useful as leading identifiers. In contrast, managerial hubris, while captured in this paper by media quotes or mentions, is more likely to be transparent when asking executives about their plans,

realizations, future strategies, coups, etc. Inconsistencies between executives' statements and observable facts or realities, outlandish claims, and a lack of concern for operational details can be signals that managerial hubris has set in, creating further risk for auditors and regulators.

Lessons to be learned

That CEOs and other senior executives are self-confident, and even somewhat arrogant, is often taken for granted. How would they otherwise attain such a high position? However, in his book From Good to Great, Jim Collins (2001) refers to his top achievers as being humble and modest: hence, we should probably revisit our priors as to the profiles of successful CEOs and executives. Moreover, assuming some degree of selfconfidence is needed and useful to lead an organization, our findings suggest that there is a certain boundary which, if crossed, leads executives into hubris territory where their decisions and vision start diverging from common sense and become instead idiosyncratic if not random. The CEO (or other senior executives) is assumed to hold the truth, and it is self-evident. In such a context, directors, auditors or analysts should start questioning the quality and soundness of executive decision-making. Moreover, if a CEO or senior executive attracts and holds all spotlights upon him or her, hubristic tendencies are probably not far behind. These tendencies may reveal themselves in value-destroying M&A deals or new ventures but, also, in financial misreporting and irregularities. Checks and balances are always needed, especially if a firm and its senior management look as if they can do no wrong.

References

- Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Prentice-Hall, Englewood CliffsNJ.
- Armstrong, C.S., Guay, W.R, & Weber, J.P. (2010). The Role of Information and Financial Reporting in Corporate Governance and Debt Contracting. *Journal of Accounting and Economics* 50(2/3), 179-234.
- Beasley, M. S., Carcello, J., Hermanson, D., & Neal, T.L. (2010). Fraudulent Financial Reporting 1998-2007: An Analysis of U.S. Public Companies. COSO: New York, NY.
- Brown, R., & Sarma, N. (2007). CEO Overconfidence, CEO Dominance and Corporate Acquisitions. *Journal of Economics and Business* 59(5), 358-379.
- Carpenter, T.D., & Reimers, J.L. (2005). Unethical and Fraudulent Financial Reporting: Applying the Theory of Planned Behavior. *Journal of Business Ethics* 60(2), 115-129.
- Chen, K.Y., & Zhou, J. (2007). Audit Committee, Board Characteristics and Auditor Switch Decisions by Andersen's Clients. *Contemporary Accounting Research* 24(4), 1085-1117.
- Cohen, J., Ding, Y., Lesage, C., & Stolowy, H. (2008). *The Role of Managers' Behavior in Corporate Fraud.* Working paper, Boston College-HEC Paris (SSRN).
- Collins, J. (2001). From Good to Great. Harper-Collins: New York.
- Committee of Sponsoring Organizations (COSO). (1999). Fraudulent Financial Reporting: 1987-1997 An Analysis of U.S. Public Companies. New York.
- Core, J., Holthausen, R., & Larcker, D. (1999). Corporate governance, chief executive officer compensation and firm performance. *Journal of Financial Economics* 51(3), 371-406.
- Craighead, J., Magnan, M., & Thorne, L. (2004). The Impact of Mandated Disclosure on Performance-Based CEO Compensation. *Contemporary Accounting Research* 21(2), 1-30.

- Efendi, J., Srivastava, A., & Swanson, E. (2007). Why Do Corporate Managers Misstate Financial Statements? The Role of Option Compensation and Other Factors. *Journal of Financial Economics* 85(3), 667-708.
- Feng, M., Weili, G., Luo, S., & Shevlin, T. (2011). Why do CFOs become involved in material accounting manipulations? *Journal of Accounting and Economics* 51(1/2), 21–36.
- Fogarty, T., Magnan, M., Markarian, G., & Bohdjalian, S. (2009). Inside Agency: The Rise and Fall of Nortel Networks. *Journal of Business Ethics* 84(2), 165-187.
- Ford, R. (2006). Why we Fail: How Hubris, Hamartia and Anagnosis Shape Organizational Behavior. *Human Resource Development Quarterly* 17(4), 481-489.
- Gillett, P.R., & Uddin, N. (2005). CFO Intentions of Fraudulent Financial Reporting. Auditing: A Journal of Practice and Theory 24(1), 55-75.
- Grimal, P. (1986). The Dictionary of Classical Mythology. New York: Blackwell.
- Hayward, M., & Hambrick, D.C. (1997). Explaining the premiums paid for large acquisitions: evidence of CEO hubris. *Administrative Science Quarterly* 42(1), 103-127.
- Hayward, M., Rindova, V., & Pollock, T.G. (2004). Believing One's Press: The Causes and Consequences of CEO Celebrity. *Strategic Management Journal* 25(7), 637-653.
- Hayward, M., Shepherd, D.A., & Griffin, D. 2006. A Hubris Theory of Entrepreneurship. *Management Science* 52(2), 160-172.
- Hiller, N.J., & Hambrick, D.C. (2005). Conceptualizing Executive Hubris: The Role of (Hyper) Core Self-Evaluation in Strategic Decision-Making. *Strategic Management Journal* 26(4), 297-319.
- Jensen, M. (2005). Agency Costs of Overvalued Equity. *Financial Management* 34(1), 5-19.
- Kmenta, J. (1986). *Elements of Econometrics*. 2nd Edition, New York: Macmillan.
- Magnan, M., Markarian, G. (2011). Accounting and the Financial Crisis: Is Risk the Missing Link? *European Accounting Review* 20(2), 215-231.

- Malmendier, U., & Tate, G. (2005). Does Overconfidence Affect Corporate Investment? CEO Overconfidence Measures Revisited. *European Financial Management* 11(5), 649-659.
- Povel, P., Singh, R., & Winton, A. (2007). Booms, Busts, and Fraud. *Review of Financial Studies* 20(4), 1219-1254.
- Peltier-Rivest, D. (2007). *Detecting Occupational Fraud in Canada: A Study of its*Victims and Perpetrators. Association of Certified Fraud Examiners: Austin, Texas.
- Petit, V., & Bollaert, H. (2012). Flying Too Close to the Sun? Hubris Among CEOs and How to Prevent it. *Journal of Business Ethics* 108(3), 265-283.
- Robillard, J. (2005). Report of the Receiver in the Case of Mount Real. Submitted to the Autorité des marchés financiers, Quebec, Canada.
- Schrand, C.M. & Zechman, S.L.C. (2012). Executive Overconfidence and the Slippery Slope to Financial Misreporting. *Journal of Accounting and Economics* 53(1/2), 311–329
- Tombs, G. (2007). Robber Baron: Lord Black of CrossHarbour. ECW Press: Toronto.
- Zahra, S.A., Priem, R.L., & Rasheed, A.A. (2005). The Antecedents and Consequences of Top Management Fraud. *Journal of Management* 31(6), 803-826.

Table 1 **Overview of Financial Misreporting Cases and Outcomes**

			ting Cases and Outcomes	T		
Case firm (Matched firm)	Nature of Business	Type Of Impropriety Sanctioned by Securities Regulators*	Ultimate Regulatory Sanctions (as of June 30, 2008)	Economic Sanction (Stock Market Value Decline from Peak Until 31/07/2009)	Ultimate Outcome	
Atlas Cold Storage (Versacold)	Freezer operations	Accounting	CFO and controller fined and barred. Charges against CEO dropped for lack of evidence. \$40 million settlement of class action suit approved by Ontario Superior Court of Justice in June 2008.	\$300,000,000	Takeover	
Bre-X (Francisco Gold)	Mining exploration	Disclosure Assets			Bankruptcy and liquidation	
CINAR (Nelvana)	Film and TV producer	Tax evasion Disclosure Assets	Co-CEOs fined and barred. Out-of-court settlements for tax and misappropriation cases.	\$1,900,000,000	Takeover	
Fareport (Canadex)	Taxi and ground transportation	Accounting Assets	Both president and COO resigned. Insider cease trading order.	\$150,000,000	Restructuring and change of control	
Getty Copper (FNX Mining)	Mining exploration	Assets	Chair and CEO resigned. Royal Canadian Mounted Police investigation. Lawsuits still pending.	\$400,000,000		
Hollinger (Torstar)	Newspapers	Disclosure Assets	Owner-CEO and executives convicted in criminal U.S. proceedings. OSC proceedings still pending.	\$1,000,000,000	Bankruptcy	
Knowledge House (Medisolution)	Internet-based learning and education	Insider stock trading and stock price manipulation	Chair of audit committee fined \$50,000 for lack of monitoring.	\$93,000,000	Bankruptcy	
Laidlaw (Mullen)	Ground transportation and waste management	Accounting	Out-of-court settlement with claimants. \$7,000,000,000		Bankruptcy and restructuring	
Livent (Cineplex)	Live theater production	Accounting Assets	Ongoing criminal trial against controlling shareholders.	\$300,000,000	Bankruptcy and liquidation	
Mount Real (Ritchie Bros.)	Accounting services and magazine subscription management	Accounting Assets Illegal sale of securities	Criminal and civil lawsuits still pending.	\$150,000,000	Bankruptcy and liquidation	
Nortel Networks (Celestica)	Telecom equipment	Accounting	CEO, CFO and controller fired. Criminal and civil lawsuits against them still pending.		Bankruptcy and liquidation	
Philip Services (Waste Services)	Waste management and recycling	Accounting Assets	Senior management fined \$500,000 and barred. Criminal proceedings against another executive still pending.	\$3,700,000,000	Bankruptcy and restructuring	
Semi-Tech (Fantom Technologies)	Sewing machines and electronics	Accounting Assets	Former CEO sentenced to 6 years in prison by Hong Kong court on one count of false accounting, other charges dropped. Guilty verdict overturned on appeal.	\$1,300,000,000	Bankruptcy and liquidation	
St. Genevieve (Southwestern M.)	Mining exploration	Assets	Admission of guilt. Owner-CEO removed.	\$120,000,000	Bankruptcy and restructuring	
Tee-Comm Elec. (Leitch Technology)	Direct-to-home entertainment products and services	Disclosure	Class action lawsuits still outstanding.	\$500,000,000	Bankruptcy and liquidation	
YBM Magnex (VELAN)	Industrial magnets	Accounting Assets	\$120 million settlement. Five former directors, brokerage firms for IPO are sanctioned and fined \$1.2 million. 5-year ban for directors.	\$1,000,000,000	Bankruptcy and liquidation	

<u>Legend – Type of Impropriety Sanctioned by Regulators</u>

Accounting: GAAP violations

Assets: Improper use of assets and asset misappropriation Disclosure: Non-disclosure of material facts

Table 2 **Overvaluation of Case Firms**

Case	Year	Approximate Stock Market Capitalization at Peak	Reported GAAP Sales Immediately Before Fraud Discovery or Concurrent to It	Reported GAAP Earnings (Loss) Immediately Before Fraud Discovery or Concurrent to It	Price-to- Sales (based upon peak market value)	Price-to- earnings (based upon peak market value)
Atlas Cold Storage	2002	\$600,000,000	\$295,733,000	\$19,045,000	2.0	31.6
Bre-X	1996	\$6,000,000,000	Negligible	Negligible	+infinity	+infinity
CINAR	1998	\$1,900,000,000	\$150,978,000	\$21,832,000	12.6	87.2
Fareport	2004	\$150,000,000	Not available	(\$1,656,000)	N.A.	-90.6
Getty Copper	2002	\$400,000,000	Negligible	(\$251,000)	+infinity	-1,594.0
Hollinger	1999	\$1,000,000,000	\$3,860,000,000	*(\$259,000,000)	0.3	-3.9
Knowledge House	2000	\$93,000,000	\$39,182,000	(\$6,911,000)	2.4	-13.5
Laidlaw	1998	\$7,000,000,000	\$2,056,000,000	*\$245,000,000	3.4	28.6
Livent	1997	\$300,000,000	\$331,732,000	\$11,053,000	0.9	27.3
Mount Real Nortel Networks	2002	\$100,000,000	\$38,257,000	\$9,722,000	2.6	10.3
Philips Services	1997	\$3,700,000,000	\$1,125,510,000	\$52,742,000	3.3	70.2
Semi-Tech	1997	\$1,300,000,000	\$1,799,400,000	(\$110,100,000)	0.7	-11.8
St. Genevieve	1997	\$120,000,000	Negligible	Loss	+inifinity	
TeeCom	1996	\$500,000,000	Not available	Not available	N.A.	N.A.
YBM Magnex	1997	\$1,000,000,000	\$90,326,000	\$17,072,000	11.1	58.8
Median for case		\$800,000,000	\$151,000,000	\$3,600,000	3.4	Negative
Median for o	control group	\$215,000,000	\$126,000,000	\$9,700,000	2.1	24

^{*} Excluding certain dilution gains and gains on disposal of long term assets **Difference in medians between the two groups (p \leq 0.05)

Table 3
Governance

Case	Blockholder (> 10%)	Majority of Independent Directors	Existence of Audit Committee	Presence of Star Directors ¹	Prestige Auditor ²	Prestige Investment Banker ³
Atlas Cold Storage		X	X		X	X
Bre-X			X		X	X
CINAR	X	X	X	X	X	X
Fareport		X	X			
Getty Copper	X	X	X			
Hollinger	X		X	X	X	X
Knowledge House	X	X	X	X	X	
Laidlaw		X	X	X	X	X
Livent	X	X	X	X	X	X
Mount Real		X	X		X	
Nortel Networks		X	X	X	X	
Philips Services		X	X		X	X
Semi-Tech	X		X		X	
St. Genevieve	X	X	X	X	X	X
TeeCom			X		X	
YBM Magnex		X	X	X		X
Median – Case firms	0	1	1	0.5	1	1
Median – Control group	1*	1	1	0	1	.5

¹Presence of a director who sits on more than one board of a publicly traded firm. ²Auditor is one of the large world-wide accounting firms (Big 4, 5, 6 or 8). ³Equity or debt issue managed or co-managed by a subsidiary of one of Canada's banks or New York-based old-line investment bank. ⁴Firm was part of the Toronto Stock Exchange composite Index at some point. ⁵Evidence of analyst following from analysts' reports or recommendations.

Table 4 Managerial Influence and Hubris Indicators

Case	Owner- CEO Control	Complex Corporate Structure ²	Active M&A Strategy ³	Unique or Uncommon Business Model ⁴	Founder CEO ⁵	Top Rated CEO or Senior Executive ⁶	Stock Market Darling ⁷	Media Coverage Corporate Success ⁸	TSX Index	Analyst Coverage ¹⁰
Atlas Cold Storage	X	X	X	X	X			X		X
Bre-X	X		X	X	X	X	X	X	X	X
CINAR	X		X	X	X	X	X	X	X	X
Fareport	X		X	X	X			X		
Getty Copper	X			X	X					
Hollinger	X	X	X		X	X		X	X	X
Knowledge House	X		X	X	X	X	X	X		X
Laidlaw		X	X			X		X	X	X
Livent	X		X	X	X	X		X	X	X
Mount Real	X	X	X	X				X		
Nortel Networks		X	X	X		X	X	X	X	X
Philips Services	X	X	X	X	X	X	X	X	X	X
Semi-Tech	X	X	X	X	X			X	X	X
St. Genevieve	X	X	X	X	X	X	X			X
TeeCom	X		X	X	X		X	X	X	X
YBM Magnex	X	X	X	X	X		X	X	X	X
Median – Case firms	1	1	*1	*1	1	*1	*0.5	*1	*1	*1
Median – Matched group	1	0	1	0	1	0	0	0	0	0

¹CEO and/or CEO Family own at least 5% of shares. ²Numerous subsidiaries, affiliates; foreign affiliates ³Recent acquisitions ⁴Complex or unclear business model. ⁵ The CEO is the either the firm's founder or the key initiator of its current status. ⁶ The CEO and/or other members of the top management team have received prizes, awards or accolades in the period preceding or coinciding with the fraudulent activities. ⁷Evidence of favorable analyst coverage. ⁸Favorable or flattering media coverage about the firm. ⁹ Firm is part of TSX Index. ¹⁰ Firm is covered by at least 2 analysts. * p-value < 0.05.

Table 5a
Firm-specific factors
Principal components factor analysis
Varimax rotated component matrix
(correlations > 0.40) - Governance variables

Variable	Component 1 Board and audit	Component 2 Prestige
	control	
Blockholders	0.68	
Board independence	-0.71	
Big 4	0.71	
Star directors		0.88
Prestige Investment Banker		0.50
Eigenvalue	1.56	1.40
Variance explained (%)	25.90	22.26
Cumulative variance explained	25.90	48.16

Table 5b
Firm-specific factors
Principal components factor analysis
Varimax rotated component matrix
(correlations > 0.40) - Hubris variables

	Component 1	Component 2
Variable	Complexity and	CEO influence
	pressures	
Active M&A strategy	0.66	
Complexity	0.44	
Top rated CEO	0.78	
Star market darling	0.77	
Favorable media coverage	0.78	
Founder CEO		0.89
Owner CEO control		0.90
Eigenvalue	2.40	1.99
Variance explained (%)	34.14	28.66
Cumulative variance explained	34.14	62.80

Table 6 Logit regression on Factors Explaining Financial Misreporting

	Coefficient	Wald	Sig.	For a change of 0.10 in the variable (∂X_i)
Factor 1 – Hubris - Complexity and pressures	6.824	4.450	0.035	0.17
Factor 2 – Hubris - CEO influence	1.967	0.811	0.368	
Factor 3 – Governance - Board and audit monitoring	-2.401	3.583	0.058	-0.06
Factor 4 – Governance – Prestige of the investment	-1.509	0.661	0.416	
banker				
Cox and Snell R-Square	67.8%			
Nagelkerke R-Square	90.4%			
Chi square	25.97			
-	(0.000)			
Overall classification rate $N = 32$	93.3%			

*** $\frac{\partial P}{\partial X_i}$ = P(1 – P) β , then, ∂P = P(1 – P) β * ∂X_i (Kmenta, 1986, p. 551).

P= 0.50, i.e. the cut-off probability to be involved in financial misreporting ∂X_i = Percentage change in the independent variable

APPENDIX – Control Firms

Case
VersaCold
Francisco Gold
Nelvana
Canadex
FNX Mining
Torstar
Medisolution
Mullen Transportation
Cineplex
Ritchie Bros.
Celestica
Waste Services
Fantom Technologies
Southwestern Resources
Leitch Technology
VELAN