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Strategic posture, financial performance and environmental disclosure

An empirical test of legitimacy theory

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Abstract

Purpose – The objective of this paper is to test Ullmann's hypothesis that strategy posture, modified by financial performance, must be considered in light of stakeholder power in order to understand a company's social responsibility disclosure policy.

Design/methodology/approach – This study in this paper uses regression analysis to examine annual report disclosure of environmental information after a major accident in the mining industry. A multiple-item disclosure score is tailored to the Canadian accounting environment, and used as a dependent variable.

Findings – This paper finds that companies that maintain themselves in the public eye through press release activity disclose more information than other companies. However there is no evidence to suggest that disclosure content is moderated by financial performance. Companies that obtained external financing one year after the accident made more disclosure than other companies. The significance of the external financing variable is evident when disclosure is restricted to discretionary or non-financial items, but disappears if the dependent variable represents mandatory financial items.

Research limitations/implications – The paper shoes that while Ullmann addressed the matter of actual social responsibility performance, in addition to disclosure, this paper does not examine performance. Furthermore, press release activity is only one type of strategic posture. Future work that employs some other measure may yield additional insight into the decision-making process.

Originality/value – Prior study of Ullmann's work has not considered the interactive impact of profit and strategic posture. Furthermore, the actual nature of the disclosure, voluntary versus mandatory, has not been specifically examined. This paper addresses both of these issues.

Keywords Social responsibility, Accounting, Mining industry, Financial performance, Disclosure, Canada

Paper type Research paper

Introduction

Although the users of accounting information were initially considered to be the financial stakeholders, companies now use their annual reports to provide a variety of information on non-financial issues such as relations with employees, customers and the outside community, as well as information on environmental impacts (Owen, 1990). Proponents of legitimacy theory have suggested several ways that companies use discussion of non-financial issues to manage stakeholder impressions. For example, they can use environmental disclosures to try to influence stakeholder reaction to

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accidents that have industry-wide repercussions (Blacconiere and Patten, 1994). There is also evidence that managers use non-financial and financial disclosures in different ways as part of an impressions management strategy (Walden and Schwartz, 1997). However, environmental disclosure policy remains difficult to define, in part because disclosed information is often unrelated to a company's actual performance, and because analyses of the relationships between environmental and financial performance on the one hand, and between environmental disclosure and financial performance on the other, have revealed numerous inconsistencies. Ullmann (1985) said that corporate social responsibility is an under-theorized area of academic enquiry. Furthermore, he suggested that prior studies have omitted a key variable from their analyses, which accounts for the inconsistent findings. This paper applies the Ullmann contingency framework in an attempt to test his ideas, and to lay the groundwork for the resolution of inconsistencies through future research.

Ullmann suggested that strategic posture and financial performance (profit), considered in light of stakeholder power, provide a basis for the determination of a cohesive, systematic response to external demands for environmental information. In Canada, the following inter-related factors suggest that stakeholder power has been growing for several years:

- The growing public concern for the environmental impacts of business activity.
- The predominance of institutional traders in the North American market.
- The growing interest in ethical investing among institutional investors.

Ethical investors apply a social responsibility screen as part of the investment decision-making process. The factors cited above suggest that when institutional investors consider investing in Canada, they apply such a screen because of this country's resource-based economy.

The failure of a tailings dam at the Omai mine in Guyana in 1995 drew attention to the environmental impacts of the mining industry. This mine is partly owned by Cambior, a Canadian public company. Given that many mining companies rely on operations outside their home countries, the potential repercussions of this accident were likely to trigger a response across the industry. If legitimacy theory is correct, this response is likely to be reflected (at least partly) through companies' disclosure of information concerning environmental risk and management, thus providing an opportunity to explore Ullmann's ideas of the relationship of disclosure with strategic posture and financial performance.

Conceptual framework

Legitimacy theory has its roots in the idea of a social contract between the corporation and society. A company's survival and growth depend on its ability to deliver desirable ends, to distribute economic, social, or political benefits to the groups from which it derives its power (Shocker and Sethi, 1974). Early accounting theory identified the users of accounting information as creditors and shareholders – the financial stakeholders. Disclosures in annual reports were directed primarily to those groups alone, and designed to discharge stewardship obligations so as to ensure ongoing access to financial markets (Gray *et al.*, 1995). Over time, the concept of the stakeholder expanded to include insurers, suppliers, consumer associations, regulators, environmental groups, and the media, plus others (Canadian Institute of Chartered

Accountants, 1997). The objective of accounting expanded to include the provision of information to help stakeholders estimate the amount, timing, and uncertainty of future cash flows (Financial Accounting Standards Board, 1978), as well as to satisfy social interests (Gray *et al.*, 1995). This put considerable pressure on company managers to find ways to respond to a diversity of interests. Legitimacy theory was subsequently integrated into the accounting literature as a means of explaining what, why, when, and how certain items are addressed by corporate management in their communication with outside audiences.

Legitimacy theory begins with the assumption that an organization has no inherent right to exist. This right is conferred upon it by society, but only when the company's value system is perceived to be congruent with that of the society in which it operates (Dowling and Pfeffer, 1975; Lindblom, 1994). Furthermore, this right can be revoked if the company is thought to have breached any of the terms of its social contract (Deegan, 2002). This revocation could be accomplished by consumers reducing demand for the company's product or service, by suppliers limiting access to labour or financial capital, or by stakeholders lobbying for legislation that would impact the cash flow of the company (Terreberry, 1968). The social contract itself contains both explicit terms, spelled out in the form of legal requirements, and implicit terms, which include the non-legislated societal expectations (Gray *et al.*, 1996). The implicit terms may eventually be enshrined in clearly defined legislation, but until that occurs managers can vary in their interpretation of these terms, and in their response.

Since legitimacy theory is based on perception, any response by management must be accompanied by disclosure, for actions which are not publicized will not be effective in changing external parties' views of the organization (Cormier and Gordon, 2001). While disclosure within the financial sections of a company's annual report are subject to guidelines established by the accounting profession and other regulators, management has considerable flexibility with regard to the discussion (if any) in the other sections. Lindblom (1994) said that in the process of attaining legitimacy, a company could use corporate social responsibility (CSR) discussion to:

- correct public misunderstanding of its performance (if a "legitimacy gap" has arisen through public misconception);
- alter expectations of performance (if management thinks the public has an unrealistic expectation of its responsibilities);
- show how the company has improved performance (if the organization is thought to have failed in one of its perceived roles); and
- deflect attention away from performance (if the organization has strengths – such as a good record of charitable contributions – that it wishes to emphasize, in order to direct the public's attention away from other aspects of its performance – such as a pollution problem).

While corporations can and do use other media for making social responsibility disclosures (Zéghal and Ahmed, 1990), the use of the annual report for legitimation purposes has been observed in a variety of studies (Salancik and Meindl, 1984; Amernic, 1992; Dyball, 1998; O'Donovan, 2002).

If legitimacy theory correctly describes the disclosure decision process, then an effective disclosure policy requires management to:

- keep track of public interest issues (Guthrie and Parker, 1989; O'Donovan, 2002);
- consider the relative importance of different stakeholder groups (Neu *et al.*, 1998); and
- tailor social disclosures accordingly (Patten, 1992).

A substantial body of evidence supports the allegation that there is a strategic element to the disclosure process. Deegan and Gordon (1996) found higher levels of environmental disclosure when membership in environmental groups is rising. Environmental disclosures increase when environmental problems and penalties are the focus of media attention (Neu *et al.*, 1998; Deegan *et al.*, 2000). This latter research also found that other types of social reporting increased along with environmental disclosure, suggesting that companies use social responsibility discussion to frame outside users' overall view of company performance. In addition to finding a link between level of disclosure and public interest, Neu *et al.* (1998) and Freedman and Jaggi (1988) found that disclosure rises when net income declines, suggesting that management uses social reporting to deflect attention from poor financial performance. There is also evidence that environmental disclosure provides organizations with methods of managing potentially discrediting events such as environmental fines (Warsame *et al.*, 2002). Furthermore, disclosure decisions were found to differ, depending on whether the objective is to gain, maintain, or repair legitimacy (O'Donovan, 2002).

Changes in legislation are often triggered by accidents, and these changes can affect entire industries and extend to other countries. For example, after a train derailment outside Toronto in 1979 forced the evacuation of 250,000 people, British Rail launched new directives banning trains from carrying toxic chemicals and flammables together (*Globe and Mail*, 1979). Trotman (1979) suggested that companies could use social disclosure to reduce the chances of a legislative backlash by convincing the public that they are acting in a socially responsible manner. Empirical evidence to support this view comes from the chemical and textile industries. Chemical company shares declined in price after the Union Carbide accident in Bhopal (Blacconiere and Patten, 1994), and again when superfund regulation was amended to expand the reporting requirements for firms that release hazardous materials into the environment (Blacconiere and Northcut, 1997). In the textile industry, share prices declined after Occupational Safety and Health standards were tightened (Freedman and Stagliano, 1991). In all three of these studies, share response was modified by the extent or nature of prior disclosure. These findings suggest the following:

(1) Shareholders are alert to public perceptions of a company's social impacts.

(2) A stakeholder backlash can trigger new regulation with prospective cash flow repercussions.

(3) Management can in some cases moderate this backlash through the disclosure process.

Walden and Schwartz (1997) suggested that managers use non-financial disclosure in response to demands for CSR discussion, and tend to withhold financial information unless regulation calls for its release. Public interest is faster to change than regulation; therefore financial disclosure is expected to be more constant over time. Analyses of annual reports showed a substantial increase in environmental discussion (both financial and non-financial) in 1989 (the year of the Exxon Valdez accident) in

comparison to earlier years. This increase was observed in the oil industry (Patten, 1992), and by companies in the chemical, forest, and consumer products sectors as well (Walden and Schwartz, 1997). Walden and Schwartz also found that non-financial environmental disclosure declined in 1990.

While the extent of environmental disclosure appears to respond to stakeholder concern, efforts to define a systematic corporate environmental disclosure policy have been fraught with difficulty. This difficulty stems from problems with three potential correlations:

(1) between environmental disclosure and environmental performance;

(2) between environmental performance and financial performance; and

(3) between environmental disclosure and financial performance.

Much of the prior literature finds little agreement between companies' environmental performance and their discussion (if any) of that performance. If disclosures are supposed to provide accurate information about actual performance, then disclosure often fails. In the annual reports of US companies, environmental disclosures are vague, incomplete, or unreliable (Wiseman, 1982; Rockness, 1985; Freedman and Wasley, 1990; Gamble *et al.*, 1995). Similar conclusions were drawn in the UK (Harte and Owen, 1991), across Europe and in Japan (Fekrat *et al.*, 1996), in Australia (Deegan and Gordon, 1996), and in Canada (Blunn, 1992). These findings argue that stakeholders are not provided with the information they need to estimate the amount, timing, or uncertainty of future cash flows, nor do they receive the information required to evaluate management's satisfaction of its stewardship responsibilities with regard to environmental resources. One might conclude that companies use disclosure to deliberately mislead their stakeholders. On the other hand, if the key objective of environmental disclosure is to manage stakeholder expectations, one should not necessarily expect a correlation with performance at all (Neu *et al.*, 1998).

Assessments of the last two correlations – between environmental performance and financial performance, and between environmental disclosure and financial performance – are inconsistent. For example, Freedman and Jaggi (1992) found no long-term association of pollution performance with financial performance in the pulp and paper industry. On the other hand, a reduction in emissions was negatively associated with productivity in the brewing industry (Smith and Sims, 1985), and in the electrical utilities industry (Gollop and Roberts, 1983). However, Russo and Fouts (1997) found a positive association of environmental and financial performance across a variety of industries. With regard to environmental disclosure and profitability, Freedman and Jaggi (1988) and Neu *et al.* (1998) found that large companies with poor financial performance make more disclosure. On the other hand, large companies, and those with good financial performance, were observed to make more disclosure in Cormier and Magnan (1999). These inconsistent findings, coupled with the uncertainty as to management's objective, have cast doubt on the legitimacy of environmental disclosure as an area of accounting research enquiry (Gray *et al.*, 1995).

Research over the past 15 years has identified additional variables associated with the extent and/or nature of disclosure, such as:

- Company size (Lang and Lundholm, 1993; Neu *et al.*, 1998; Bewley and Li, 2000).
- The privacy of management information (Bewley and Li, 2000).

- Enforcement efforts by regulatory bodies such as the Environmental Protection Agency (Barth *et al.*, 1997; Neu *et al.*, 1998).
- Dependence on capital markets (Gibbins *et al.*, 1990; Lang and Lundholm, 1993; Botosan, 1997; Barth *et al.*, 1997; Sengupta, 1998; Cormier and Magnan, 1999).
- Industry (Gray *et al.*, 2001) and related factors such as industry growth rate and degree of concentration (Russo and Fouts, 1997).

Some of these studies looked specifically at environmental disclosures, but none addressed the problem of the inconsistent correlations discussed above. Ullmann suggested that such conflicting findings are the result of empiricists working without an underlying theory that captures the strategic considerations that motivate the decision-making process. He suggested that strategic posture articulates with two other factors – financial performance, and stakeholder power – to explain disclosure, and that the omission of strategic posture from these earlier studies may explain their contradictory results (Ullmann, 1985). This was a descriptive piece of literature however, and no empirical evidence was offered in its support.

Strategic posture refers to the way an organization's decision makers respond to external demands. An active posture involves deliberate efforts to manage the impressions of important stakeholders. With a passive posture, no attempt is made to monitor stakeholder concerns, or to define an optimal stakeholder management strategy. Both active and passive postures are moderated by financial performance, as the ability and desire to attend to social demands are at least partially tied to financial success. This is because the cost of obtaining certain information, such as the cost of environmental remediation, may dissuade financially unsuccessful companies from disclosing this sort of information (Lang and Lundholm, 1993; Neu *et al.*, 1998). Furthermore, the litigation costs of non-disclosure could be higher for successful companies than for unsuccessful ones (Skinner, 1994).

The third item to consider in this framework is stakeholder power. High stakeholder power means stakeholders control resources critical to the company. The growth of socially responsible investing (SRI), considered in light of institutional market power, suggests that stakeholder power plays a vital role in driving management decisions in the mining industry in Canada.

Clusters of socially conscious investors operated at the grassroots level in the 1960s (Papmehl, 2001). In the 1980s, SRI gained the attention of the professional money managers with the establishment of the first ethical fund in the UK, and within four years there were 14 such funds, with assets totalling £144 million and a growth rate of about 50 percent (Ethical Investment Research Service (EIRIS), 1989). In the UK, the Trades Union Congress actively encouraged pension fund trustees to consider the social ramifications of their investments, and this concern spread to several trade unions in the US (Owen, 1990). The SRI movement has influenced legislation in the UK, where pension fund trustees are required to disclose their SRI policies if they have them (Papmehl, 2001). Independent organizations such as the Council on Economic Priorities in the USA, the UK Ethical Investment Research Service, and Ethicscan and Jantzi Research Associates Inc. in Canada offer independent research services to social investors.

The size of the institutional traders relative to the capital market highlights the power of these stakeholders. In Canada, institutional investments now total over

$1.5 trillion (SIO Forum, 2000) (December). This compares to a total investment market in Canada of $2.0 trillion in November 2002 (TSX, 2002). In Canada, even funds that are not specifically identified as social investments are targeted with calls for ethical screening. For example, the Ontario Teachers Federation has called for social screening of one of the largest pension funds in the country, and John McNaughton, CEO of the investment arm of the Canada Pension Plan, has said there are concerns about the ethical issues involved in some of their investment decisions (SIO Forum, 2000) (September). Based on the dominance of the institutional players in the capital market, and their inclusion of CSR matters in their investment decision framework, it will be assumed for the purpose of this analysis that stakeholder power has been high in Canada for several years, and that social responsibility is one of the stakeholders' guiding investment principles.

Ullmann argued that in periods of high stakeholder power, companies with an active strategic posture make deliberate and conscious efforts to satisfy stakeholder demands through both actual performance and disclosure of information about that performance. The predominance of the mining industry in Canada means the Canadian capital market provides an opportunity to subject his hypothesized contingency framework to empirical testing. A modified version of Ullmann's framework is illustrated in Table I. The current paper excludes consideration of actual environmental performance, so all reference to social performance is excluded from the table.

In Ullmann's contingency framework, situation 1 indicates positive correlations between:

- strategic posture and financial performance;
- strategic posture and disclosure; and
- financial performance and disclosure.

For example, when management employs an active strategic posture, and financial performance is good, a high level of environmental disclosure is expected if stakeholder power is high. In this situation, management tries to advertise its success across the entire performance spectrum (Ullmann, 1985). This means going beyond the disclosure specified by professional or regulatory authorities to include extensive discussion of CSR. In light of the company's good financial performance, fear that investors will put

Situation	Stakeholder power	Strategic posture	Financial performance	Disclosure strategy
1	High	Active	Good	Mandatory and voluntary: high
2	High	Active	Poor	Mandatory – high voluntary – low
3	High	Passive	Good	Mandatory – indeterminate voluntary – low
4	High	Passive	Poor	Mandatory – indeterminate voluntary – low
5	Low	Active	Good	Mandatory – high voluntary – low
6	Low	Active	Poor	Mandatory and voluntary: low
7	Low	Passive	Good	Mandatory and voluntary: low
8	Low	Passive	Poor	Mandatory and voluntary: low

Source: Adapted from Ullmann (1985)

Table I.
Ullmann's contingency framework

a negative premium on social disclosure (such as dollars spent on environmental protection) is minimal. When stakeholder power is low, however, as in situation 5, this same company reduces CSR discussion as there is less compelling demand for it. In situation 2, the company is expected to exhibit high levels of mandatory disclosure. The unfavorable economic situation leads to a rationalization strategy of using required disclosures to report the burdensome financial impact of social regulation. Voluntary disclosure, however, is low for fear that investors will react negatively to excessive social expenditures.

In situations 3 and 4, a passive approach toward stakeholder impressions management means the company does not attempt to exploit the strategic potential of disclosure. Managers who use a passive approach are unlikely to monitor stakeholder power or adapt their disclosures in light of that power. Ullmann suggests that in this situation the levels of mandatory disclosure are indeterminate, while voluntary disclosures are expected to be low (situations 5 through 8, where stakeholder power is low, are not relevant to this study.)

Roberts (1992) presented empirical evidence supporting the hypothesis that high stakeholder power, an active strategic posture, and good financial performance contribute to good social disclosure. Roberts made no effort, however, to distinguish mandatory from discretionary disclosure, nor did he explore potential interactions among variables. Both are important, given Ullmann's belief that management will exploit the greater flexibility of voluntary disclosure as a method of shaping stakeholder impressions when financial performance is good. Furthermore, the Roberts paper operationalized stakeholder power using independent variables that are to some extent controlled by management. For example, he used the debt-equity ratio, and the proportion of shares owned by management, as alternative proxies for stakeholder power. Both, however, are subject to company control. This means the analysis showed management response (disclosure) to situations contrived by management itself. The current analysis both distinguishes between the use of discretionary and mandatory disclosure, and focuses on a situation where stakeholder power is beyond company influence, while investigating managers' use of communication to shape stakeholder impressions.

In summary, legitimacy theory argues that managers use disclosure to shape stakeholder impression of the role and responsibility of the corporation, and the degree to which the company is satisfying those responsibilities. Ullmann has said that strategic posture needs to be considered along with financial performance and stakeholder power. Prior efforts to subject his ideas to empirical examination have not considered the interactive impact of profitability and strategic posture; furthermore, the measure of stakeholder power used in earlier work was subject to company control, and the content of disclosure – voluntary versus mandatory – was not specifically examined. The current analysis is structured to address all of these concerns.

Hypothesis, model and data collection

The context for this study is 1995, following the failure of a tailings dam at the Omai gold mine in Guyana in August of that year. Three million cubic meters of wastewater contaminated with cyanide and copper sludge flooded the countryside and the river system. A state of environmental emergency was declared. Environmentalists and scientists compared it to the Exxon Valdez oil spill in terms of potential long-term environmental and health repercussions (Chatterjee, 1995). The Exxon Valdez accident

elevated environmental concerns in the public eye, threatening congressional approval for the development of Florida's offshore areas and the Alaska Arctic National Refuge, in effect turning one company's accident into an industry-wide problem (*Toronto Star*, 1989). In the Canadian mining industry, where offshore operations are common, a mining accident in another country can have a similar impact. A year after the dam failure in Guyana, the President and CEO of Placer Dome – a Canadian mining company – commented on how the Omai mine accident had sensitized emerging countries to the environmental effects of the mining industry (Reuters, 1996).

When the accident occurred, the mine was closed for five months, and Cambior – another Canadian gold mining company and one of the owners of the Omai mine – incurred US$2.2 million in direct costs, plus capital expenditures of $6.8 million to return the mine to operation: furthermore, the company lost US$2.5 million for each month the mine was closed (*Northern Miner*, 1995). A Guyanese Commission of Enquiry recommended the establishment of environmental protection regulation for the country's industries (*Northern Miner*, 1996). A lobby group – Recherches Internationales Quebec – filed a class action lawsuit against Cambior, and lobbied financial institutions in both Canada and the USA to discourage them from providing capital to the owners. The Canadian mining industry formed a task force to design a new policy on tailings pond construction (The Mining Association of Canada, 1998). It can therefore be concluded that this accident not only affected gold mining operations in Guyana, but it raised both management and stakeholder concern for the industry as a whole.

While institutional investors' interests generally include a variety of social matters, an accident such as this one would focus them, at least temporarily, on environmental issues. Furthermore, Mitchell *et al.* (1997) argued that urgency is a critical factor necessary for an issue to warrant management attention. Since one of the tenets of legitimacy theory is that companies use disclosure to convey information as to how they are dealing with matters of interest to stakeholders, this accident provides the setting for an examination of the relationship between strategic posture and environmental disclosure. The hypothesis to be tested is this:

> When there is a demand for information on environmental risk and management, managers' response – measured by items of disclosure in the annual report – depends upon the companies' strategic posture.

In other words, the nature of environmental disclosure is modified by a company's strategic posture.

A sample of gold mining companies was selected for this study, subject to two criteria:

(1) The company was a publicly traded Canadian company at the time of the accident.

(2) The company was identified with a primary Compustat SIC of 1,040 (gold and silver ores).

Using these criteria, 44 companies were identified. The model used to explore the relationship is:

$$Score_i = B_{0i} + B_{1i}PR_i + B_{2i}Size_i + B_{3i}XFin_i + B_{4i}ROA_i + \varepsilon_i \quad (1)$$

where:

- $Score_i$ is a multiple item disclosure variable discussed in Table II and below;
- PR_i is the number of press releases from company i over the 12-month period ending December 31, 1995, the year of the accident;
- $Size_i$ is the natural log of the market value of company i, adjusted as discussed in the discussion of control variables below
- $XFin_i$ is a dummy variable equal to 1 if company i obtained external financing in the fiscal year following the year of the accident;
- ROA_i is the return on assets of company i in 1995;
- B_{0i} is the intercept; and
- ε_i is the error term.

Three companies were excluded from part of the analysis due to lack of information for one or more of the variables.

The dependent variable: $Score_i$

For the purpose of measuring environmental disclosure, annual reports were obtained for the fiscal year in which the accident occurred. While CSR disclosure is not limited to the annual report (Zéghal and Ahmed, 1990), this medium is a primary information source for institutional investors (Hutchin, 1994) as well as individual investors (Epstein and Freedman, 1996) and environmental groups (Patten, 1992; Gamble *et al.*, 1995). Furthermore, despite limits to the accuracy of its contents, as noted earlier, CSR discussion is considered to have greater credibility when it is included in the annual report than in other media (Tilt, 1994), possibly because of its proximity to the audited financial statements (Warsame *et al.*, 2002). Finally, Rankin (1996) observed that most stakeholders seeking environmental information look first to the annual report. While the emergence of the standalone environmental report in the 1990s has led to questions about the relative importance of the annual report as a disclosure medium, the Gibson and O'Donovan (2000) found that annual report disclosure of environmental information was still on an upward trend in the latter part of the decade. This finding suggests that management continued to regard the annual report as a key medium for disclosure of this nature.

Several earlier papers used volume of disclosure as the dependent variable (Cowen *et al.*, 1987; Guthrie and Parker, 1989; Patten, 1991; Neu *et al.*, 1998), instead of a scoring system such as the one used here. These earlier studies tried to identify factors driving the decision to disclose information about a host of social issues such as human resource or environmental matters, or company involvement with the community. While volume of discussion may reflect the emphasis management places on a particular topic, it fails to capture the subtle issues inherent in impressions

Table II. Distribution of disclosure scores ($n = 44$)

Score (range 0-7)	0	1	2	3	4	5	6	7
Number of companies	8	4	4	13	10	3	1	1

management strategy (Neu *et al.*, 1998), and for this reason was not suitable for use in this study. Roberts (1992) used a disclosure scoring system derived from the US Council on Economic Priorities (CEP) ratings. As was the case with the other volume of disclosure measures, this rating system: excellent (2), good (1), or poor (0), failed to distinguish mandatory from discretionary disclosure.

In their analyses of the value relevance of environmental disclosure, Blacconiere and Patten (1994) and Blacconiere and Northcut (1997) used a multiple item-scoring factor that addressed specific types of disclosure content. In these two studies disclosure was an independent variable. Again, however, the disclosure factor was used to represent quantity only. The present study uses a similar method to assess disclosure, but attempts also to capture the distinct nature of disclosure items. This score factor is used initially to represent breadth of disclosure, and later modified so as to distinguish the different types of information content.

Environmental disclosures were measured for each of the 44 companies using a seven- point-scoring factor – $Score_i$ – detailed in Table II. Each annual report, was scored independently, by two accounting-professors. Disagreements were resolved through discussion once the reviews were complete. A score of 0 or 1 was assigned for each of the items shown below, regardless of where it was included in the report:

- A – statements on the compliance status or compliance efforts of the company relative to environmental standards.
- B – existence of a board or executive level committee responsible for monitoring environmental regulations and the environmental impact of operations.
- C – presentation of current year cash flows for environmental control or remediation.
- D – disclosure of next year's estimated cash flows for environmental control/remediation.
- E – disclosure of current period estimate of future environmental liability.
- F – disclosure of estimated total future environmental liability.
- G – statements on current/potential environmental actions/lawsuits against the company.

Items A, C, D, and G were included in the score factor used by Blacconiere and Patten (1994). Item B is included as a signal of management commitment to environmental stewardship[1]. Disclosure items E and F were recommended in s3060 (Capital Assets) of the Canadian Institute of Chartered Accountants handbook for the year in question (the handbook has been modified since that time.) This part of the handbook was specifically designed to provide guidance to companies in the natural resource industry. Item F referred to the estimated liability associated with land reclamation activities that would be scheduled for the end of each mine's useful life. The aggregated estimate, totalled across all of the company's sites, corresponds to item F in this disclosure score. It was industry practice to accrue a portion of this liability annually using a units-of-production method. The annual accrual corresponds to item E. These two items will be classified as mandatory financial disclosures for the purpose of the extended analysis to follow. Li and McConomy (1999) present evidence that item F is value relevant in the Canadian capital market. It should be noted, however, that Canadian accounting guidelines grant considerable discretion as to how and what is

disclosed. Despite its handbook status, item F was often omitted from annual reports, and item G, disclosure of current or potential litigation, while also required in s3290 (Contingencies), is also often omitted (Li *et al.*, 1997).

$Score_i$, ranging from 0 to 7, is designed to include a variety of information categories such as monetary items (items C through F), as well as qualitative items such as A, B and G. Items D and F are future-oriented financial items, while C and E pertain to the year just ended. The distribution of scores across the 44 companies, and of the scoring for each individual item are shown in Table II. Eight companies had a score of nil. Only one company was disclosed in each of the seven possible categories. The average score was 2.7 (Table III).

Key independent variable: strategic posture

Managers have the opportunity to devise a company specific strategy to shape stakeholder impressions. For example, they may choose from a variety of media according to their communication objectives (Zéghal and Ahmed, 1990). Alternatively they can utilize a company sponsored philanthropic foundation, or invest heavily in their own public affairs offices (Roberts, 1992). Both approaches, however – investment in a foundation, or in a public relations office – are largely dependent on company size. As a relatively low cost method of investing in stakeholder management strategy, press release activity is a more readily available alternative, and is the method chosen for this study.

Press releases are not necessarily the most efficient medium for communication, for they do not focus on a particular target market as effectively as other media such as brochures or advertising (Zéghal and Ahmed, 1990). However, when this accident occurred, the situation could not be described as normal. In a situation of high stakeholder power, an accident such as this one calls for an immediate response that

Variable	Mean	St. dev	Minimum	Maximum	
$Score_i$	2.66	1.83	0	7.000	
MV_i	1,054	2,340	2	12,430	
PR_i	47.444	69.480	0	294	
$Xfin_i$	0.488	0.506	0	1	
ROA_i	3.821	20.737	−19.080	118.64	
Correlation matrix					
$Score_i$	1.000				
$Size_i$	0.437	1.000			
PR_i	0.332	−0.002	1.000		
$XFin_i$	0.320	0.010	0.090	1.000	
ROA_i	−0.174	−0.137	−0.069	0.097	1.000
	$Score_i$	$Size_i$	PR_i	$XFin_i$	ROA_i

Notes: Description of variables: $Score_i$ – is a seven-point disclosure rating (Table VII); MV_i – is the market value of the company in millions of Canadian dollars on August 18, 1995, one day before the accident; PR_i – is the number of press releases by company i in the calendar year 1995, the year of the Omai mine accident; $XFin_i$ – is a dummy variable equal to 1 if company i obtained new external financing in the fiscal year following the year of the accident; and ROA_i – is the return on assets of company i the year the accident occurred. $Size_i$ is MV_i (see above) transformed into the natural log of the market value, regressed against the inter-listing and geographic variables, and PR_i as described in the discussion of control variables. All other variables are as defined in the Table

Table III.
Summary statistics for untransformed variables ($n = 41$)

must be directed to a diverse stakeholder group. Furthermore in a situation such as this, communication that results in a press release could originate with the press itself. This is more likely to occur, however, if a communication link between the company and the press has already been established. This suggests that companies that use press releases on a regular basis are likely to issue more communications after the accident than companies that do not normally access the press. Given the use of the annual report as the source of the disclosure variable, a press release period covering the 12 months leading up to the end of the year in which the accident occurred is chosen, for disclosure decisions are made at year-end. All but three of the 41 companies used in the analysis had fiscal (reporting) year-ends of December 31. Most of the company managers would therefore be devising their disclosure strategies shortly after that date (regression results using press releases counted over a period of time that precedes the date of the accident are discussed later in this paper.)

Press release activity was measured using Factiva, a database providing access to several media sources, including over 270 presswires. All press releases were examined to ensure that only those with information directly from the company were included. For example:

- Company X announces a new addition to its board of directors.
- Company X announces its quarterly results.

Would each be counted as a press release from Company X? On the other hand, an announcement from Company Y that it has just purchased shares in Company X would not. The number of press releases per company over this time period varied from 0 to 294, with a mean of about 47 (Table III).

Press release activity is used in this analysis as a proxy for media presence. Some companies choose to operate in the public eye, while others operate quietly away from public view. Frequent media presence means the company is often brought into stakeholder view. If Ullmann is correct, then given the strength of stakeholder power in Canada in the mid-1990s, a company with an active strategic posture (strong media presence) will be a high discloser. For this reason, the press release coefficient (B_{1i}) in equation 1 is expected to be statistically significant and positive.

The control variables: external funding, size, and financial performance

The $XFin_i$ variable is included to indicate whether or not company i accessed the external market for new financing in the fiscal year following the year of the accident (of the companies examined in this study 20 increased their reliance on external capital, largely through the expansion of long-term bank debt.) Companies use disclosure to provide information on financial position and operating risk. This is particularly important for companies that access financial markets on a regular basis (Gibbins *et al.*, 1990; Lang and Lundholm, 1993; Frankel *et al.*, 1995). Blacconiere and Patten (1994) suggested that discretionary disclosures reduce investor uncertainties when the company is dealing with operations perceived as high risk. The industry-wide repercussions of the Omai mine accident likely made investors wary of the environmental risk factor. A substantial portion of the $Score_i$ factor (items A through D) is discretionary, therefore, the coefficient for the $XFin_i$ variable is expected to be positive.

The association of size with environmental disclosure is well established in the accounting literature (Patten, 1992; Neu *et al.*, 1998; Bewley and Li, 2000). In keeping with

these earlier findings, the size coefficient is expected to be positive. Several other control factors were considered, but were subsequently discarded. For example, preliminary analyses showed that disclosure is not associated with a company's listing status (1 if the company was inter-listed on a major US exchange; 0 otherwise). Nor was disclosure associated with the major geographic location of company operations: none of the categorical variables used to distinguish companies with major operations in Central or South America from those focused on Africa or Asia, or from those with operations restricted to North America, were statistically significant. As might be expected, however, the geographic and listing variables were all significantly associated with size. Company size, based on market value, was subsequently regressed against these other variables, and the residuals from that regression were used in equation 1.

Financial performance is measured as return on assets (ROA). Using the broadly defined disclosure variable in the early part of this analysis, financial performance is included as a control variable with an indeterminate sign. The role of financial performance will be explored in greater detail shortly.

Results and discussion

The results of equation 1 (Tables IV and V) can be summarized as follows:

- environmental disclosure increases with company size;
- companies with plans to access external financial markets disclose more information on environmental issues; and
- companies that pursue an active strategy of stakeholder management through press releases make more extensive environmental disclosures, even when size is taken into consideration.

In other words, with the exception of financial performance (ROA), all signs on coefficients conformed to expectation, and all coefficients were statistically significant. The explanatory power of the model exceeds that obtained in some of the prior analyses that used volume of words as the disclosure factor (Patten, 1991; Neu *et al.*, 1998).

		Expected sign	Coefficient	*t*-value
B_{0i}	*Intercept*	+/−	1.800	5.054^{***}
B_{1i}	PR_i	+	0.008	2.286^{**}
B_{2i}	$Size_i$	+	0.593	3.203^{***}
B_{4i}	$XFin_i$	+	1.087	2.311^{**}
B_{5i}	ROA_i	+/−	−0.011	−0.950

Notes: Significant at: $\alpha = 0.01^{***}; \alpha = 0.05^{**}; \alpha = 0.10^{*}$; $R^2 = 0.33$. Data was incomplete for three of the originally identified companies. For this reason the remainder of the analysis proceeded with 41 companies. $Score_i = B_{0i} + B_{1i}PR_i + B_{2i}Size_i + B_{3i}XFin_i + B_{4i}ROA_i + \varepsilon_i$ (1). Where: $Score_i$ is a seven-point disclosure rating discussed in Table VII; PR_i is the number of press releases by company i in the calendar year 1995, the year of the Omai mine accident; $Size_i$ is the natural log of the market value, regressed against the inter-listing and geographic variables, and PR_i as described in the discussion of control variables; $XFin_i$ equals 1 if company i obtained new external financing (debt or equity) in the fiscal year following the year of the accident; 0 otherwise (source: Financial Post Survey – Mines and Energy, 1995); ROA_i is the return on assets of company i the year the accident occurred (source: Financial Post Survey – Mines and Energy); B_{0i} is the intercept; and ε_i is the error term

Table IV.
Regression analysis. Dependent variable: disclosure rating (A-G) ($n = 41$)

		Expected sign	Coefficient	*t*-value
B_{0i}	*Intercept*	+/−	0.704	4.743***
B_{1i}	PR_i	+	0.003	1.835*
B_{2i}	$Size_i$	+	0.277	3.583***
B_{4i}	$XFin_i$	+	0.100	0.507
B_{5i}	ROA_i	+/−	0.000	0.090

Table V.
Regression analysis. Dependent variable: mandatory disclosures (E and F) ($n = 41$)

Notes: Significant at: $\alpha = 0.01$***; $\alpha = 0.05$**; $\alpha = 0.10$*; $R^2 = 0.24$. $MDisc_i = B_{0i} + B_{1i}PR_i + B_{2i}Size_i + B_{3i}XFin_i + B_{4i}ROA_i + \varepsilon_i$ (2). Where: $MDisc_i$ is a disclosure score ranging from 0 to 2 as follows: 1 if the company discloses current year estimate of future environmental liability (item E); 0 otherwise, plus; 1 if the company discloses estimated total future environmental liability (item F); 0 otherwise. Other variables as in Table IV

Residuals obtained from the ordinary least squares (OLS) application of equation 1 were subjected to diagnostic testing. The runs test results support the assumption that the residuals were randomly distributed; however, the Jarque-Bera and chi-square test results both suggested a non-normal distribution. For this reason, further investigation into the existence of a relationship between $Score_i$ and PR_i was conducted using a Spearman's Rank test as described below:

- Key variable PR_i was regressed against the other independent factors *($Size_i$,$XFin_i$ and ROA_i)* to obtain residuals labelled PR_i*-adjusted*. The absolute values of these residuals were ranked in ascending value, along with $Score_i$.$Score_i$ is a whole number ranging from 0 (rank 1) to 7 (rank 8), while PR_i*-adjusted* consisted of rational numbers. This meant there were eight distinct ranks for $Score_i$, but 41 distinct ranks for PR_i*-adjusted*.
- Observations were grouped according to the rank of $Score_i$. The mean and median value for the corresponding PR_i*-adjusted* values were calculated, and ranked. For example, eight companies had a score of 0, (rank 1). The corresponding PR_i*-adjusted* group mean (14.9) was the second lowest group mean, so it was assigned rank 2. Four companies had a score of 1 (rank 2) and the PR_i*-adjusted* group mean (23.8) was the fifth largest group mean, so it was assigned Rank 5. Four companies had a score of 2 (rank 3) and the corresponding PR_i*-adjusted* group mean was assigned rank 4.
- The data included one outlier. This company was Pegasus Gold Inc., the only company to score a full disclosure score of 7. However, this company's press release volume (adjusted, as described above) was only 46. (The unadjusted press release volume for this company was 63, well below the maximum of 294.) This company was dropped from the analysis, and the Spearman's Rank test was applied to the remaining seven groups.

The resulting *t*-value supports the conclusion that there is a systematic relationship between $Score_i$ and PR_i*-adjusted*, at $\alpha = 0.10$. (Results using the PR_i*-adjusted* median in place of the mean were identical.)

If press release activity is a suitable proxy for strategic posture, the results so far support Ullmann's contention that an active strategic posture is linked to greater CSR disclosure when stakeholder power is high. The lack of explanatory power for financial

performance in Table IV is not surprising, given the definition of disclosure. According to the Ullmann (1985) contingency framework, there is a differential impact of financial performance on mandatory disclosures on the one hand, and on voluntary disclosures on the other (see Table I). In equation 1, however, the disclosure factor was a combination of both. The relationship of mandatory versus discretionary disclosure with both strategic posture and financial performance is considered in the following discussion. This portion of the discussion examines OLS results only (see Table VI).

Separation of score into mandatory and voluntary components

Tables VI and VII show the regression results using reduced score variables, with $MDisc_i$ representing mandatory financial items (E and F), and $DDisc_i$ including discretionary or non-financial items (A, B, C, D, and G) respectively. When disclosure is restricted to mandatory financial items the external financing variable is no longer statistically significant (Table V). On the other hand, when disclosure is restricted to discretionary or non-financial items, the external financing factor is significant at $\alpha = 0.01$ (Table VII). In other words, when companies contemplate accessing the external market for new financing they expand the discretionary environmental disclosures in advance, but not the mandatory ones. This makes intuitive sense, since

		Expected sign	Coefficient	*t*-value
B_{0i}	*Intercept*	+/−	1.100	3.940***
B_{1i}	PR_i	+	0.005	1.950*
B_{2i}	$Size_i$	+	0.317	2.190**
B_{4i}	$XFin_i$	+	0.987	2.690***
B_{5i}	ROA_i	+/−	−0.010	−1.270

Notes: Significant at: $\alpha = 0.01$***; $\alpha = 0.05$**; $\alpha = 0.10$*; $R^2 = 0.28$. $DDisc_i = B_{0i} + B_{1i}PR_i + B_{2i}Size_i + B_{3i}XFin_i + B_{4i}ROA_i + \varepsilon_i$ (3). Where: $DDisc_i$ is a disclosure score ranging from 0 to 5 as follows: 1 if the company discloses compliance status or compliance efforts relative to environmental standards (item A); 0 otherwise, plus; 1 if the annual report discloses the existence of a board or executive level environmental committee (item B); 0 otherwise, plus; 1 if the annual report presents current year cash flows for environmental control or remediation (item C), 0 otherwise, plus; 1 if the annual report discloses next year's estimated cash flows for environmental control/remediation (item D); 0 otherwise, plus; 1 if the annual report includes statements on current/potential environmental actions/lawsuits (item G). Other variables as in Table IV

Table VI.
Regression analysis. Dependent variable: discretionary/ non-financial disclosures ($n = 41$)

Strategic posture (DPR)	Financial performance ROA (dummy)	Discretionary disclosure expected to be
High	Good (1)	High
High	Poor (0)	Low
Low	Good (1)	Low
Low	Poor (0)	Low

Notes: The information below is extracted from Table I and amended to include the dummy variable RM_i which equals 1 if the company ROA exceeds the mean (3.8); 0 otherwise. In equation 4 the interactive variable $PR_i{*}RM_i$ is a quantitative variable with a lower bound of zero, and its coefficient is expected to be positive (see Table VIII)

Table VII.
Analysis of equation 4 interactive term: $PR_i{*}RM_i$

one would expect the annual report to contain the mandatory items regardless of financing plans. Also it provides support for the Walden and Schwartz conjecture that companies will use non-financial disclosure (which dominates the dependent variable used in equation 3 of Table VII) to influence external opinion of its CSR performance (Walden and Schwartz, 1997). Finally, building on a suggestion by Gray *et al.* (1996) that the implicit terms of the social contract embody societal expectations, greater use of discretionary items is expected when management wants to shape external opinion.

The explanatory power (R^2) in each of Tables IV-VI varies directly with the breadth of the disclosure (dependent) variable. For example, Table IV shows regression results using the full 7-point score, and R^2 is 0.33. When disclosure is a five-point item score as in Table VI, the R^2 drops to 0.28. When the disclosure variable takes the narrowest definition of disclosure by including only items E and F, R^2 falls to 0.24. This suggests that the two components of the score factor – $DDisc_i$ and $Mdisc_i$ – are defined so as to measure different types of information.

Introduction of interactive term: strategic posture modified by financial performance

In equation 4 (Table VIII) the variable RM_i is created to distinguish companies with good financial performance from those with poor (see Table VII for analysis of RM_i). The summary statistics (Table III) show ROA ranging from −19.1 to 118.6 percent with a mean of 3.8 percent. RM_i is a dummy variable with a value of 1 for those companies with ROA in excess of the mean, signifying good performance; 0 otherwise (alternative definitions of RM_i are discussed in the Sensitivity Analysis section later in this paper.) Equation 4 is designed to highlight the interactive impact of financial performance on strategic posture. In a situation of high stakeholder power, companies with good financial performance ($RM_i = 1$) and an active posture (high PR_i) are expected to be high disclosers of discretionary items (see Table VII). Companies with an active posture and poor financial performance ($RM_i = 0$) are expected to be low disclosers of discretionary items. The sign for the coefficient of the interactive term is therefore expected to be positive.

Table VIII includes the results of analysis using the interactive RM_i term. The strategic posture, size, and external financing variables remain statistically significant at $\alpha = 0.05$. The interactive term $PR_i{*}RM_i$ is not significant, nor is the financial performance variable. The coefficient of the interactive term is negative, contrary to expectation. Using the factors as defined in this paper, the regression results do not

		Expected sign	Coefficient	*t*-value
B_{0i}	*Intercept*	+/−	1.280	4.440***
B_{1i}	PR_i	+	0.010	2.590**
B_{2i}	RM_i	+	0.270	0.660
B_{3i}	$PR_i{*}RM_i$	+	−0.010	−1.240
B_{4i}	$Size_i$	+	0.350	2.560**
B_{5i}	$XFin_i$	+	0.790	2.460**

Table VIII.
Regression analysis with interactive term. Dependent variable: discretionary/ non-financial disclosures ($n = 41$)

Notes: Significant at: $\alpha = 0.01$***; $\alpha = 0.05$**; $\alpha = 0.10$*; $R^2 = 0.28$. $DDisc_i = B_{0i} + B_iPR_i + B_{2i}RM_i + B_{3i}PR_i{*}RM_i + B_{4i}Size_i + B_{5i}XFin_i + \varepsilon_i$ (4). Where: $DDisc_i$ is a disclosure score ranging from 0 to 5 as in Table VI; RM_i equals 1 if the return on investment for company i is above the mean ROA of 3.8; 0 otherwise. Other variables as in Table IV

support Ullmann's contention that financial performance will influence the disclosure of discretionary information in the presence of high stakeholder power.

Sensitivity analysis

(i) Alternative measures of financial performance

Table VIII shows the analysis using the interactive term $PR_i{*}RM_i$, where RM_i is 1 if the company's return on assets exceeds the mean ROA of 3.8 percent. The median ROA for the sample of companies was only 1.63 percent, suggesting that the mean was affected by one or more extreme values. For this reason, alternative versions of the dichotomous RM_i factor were employed in reiterative applications of model 4. For example, the regression was run using RM_i equal to 1 if the company's return on assets exceeded the median value. The only major change was the loss of statistical significance for the size factor at $\alpha = 0.05$. (The new p-value was 0.078.) In another iteration, the data were ranked in quartiles according to market value. For each company, RM_i was set equal to 1 if its return on assets exceeded its quartile's median. In this iteration, each of the PR_i, $Size_i$, and XF_i factors was statistically significant at $\alpha = 0.05$. Finally, RM_i was set equal to 1 if the company's return on assets was greater than zero as in Neu *et al.* (1998). In this application, the external financing and size variables remained significant at $\alpha = 0.05$, but the press release factor was not. (None of these results are shown in this paper.) In all of these iterations the performance measure and the interactive term $PR_i{*}RM_i$ remained statistically insignificant. Possibly RM_i needs to be redefined so as to make a sharper distinction between good and poor performance. For example, if good (or poor) financial performance were defined to be the upper (or lower) quartile of the financial performance range, the data might reflect Ullmann's hypothesized relationship of financial performance with strategic posture and disclosure. An analysis of this sort, however, would best be performed with a larger sample of companies.

(ii) Exclusion of item G from the disclosure score

Item G (statements on current or potential environmental actions or lawsuits against the company), while a mandatory disclosure according to Canadian accounting standards, was initially counted in with *DDisc* (Discretionary or Non-Financial disclosure). Disclosure of item G is particularly difficult to score since the absence of a clear statement could mean one of two things: either there were no such actions, or there were, but management decided to withhold the information. Given the equivocal interpretation, all statistical work was repeated with $Score-_i$ and $DDisc-_i$ redefined to exclude item G, with no appreciable change in the results.

(iii) Alternative press release period

The accident may have caused some managers to alter the company's strategic posture. Volume of press releases in the months before the accident might therefore be a better indication of management choice of active versus passive posture just before the accident. For this reason, a twelve-month period leading up to August 18, 1995 – the day before the accident occurred – was used to reassess the press release factor. The results of the new OLS regression are shown in Table IX. There is no appreciable difference between the results here and those obtained when press release activity was measured over the calendar year. However, the non-parametric Spearman's Rank test

failed to support the finding of a systematic relationship between strategic posture and disclosure. This suggests that the determination of any such relationship is sensitive to the measurement period used to evaluate strategic posture. It makes sense, in that annual report disclosure decisions are made at year-end, which corresponds to the measurement period used in the original regression (Table IV).

Given the gravity of the accident, and the perceived threat to the industry, it is possible that press release activity would increase immediately after the accident, at least for some companies. It is also possible that managers who previously made little effort to maintain a media presence could alter that strategy after the accident. In other words, the accident may have prompted a change in strategy. This paper does not test directly for a change in strategic posture, and this may be an interesting question for future work.

Summary, conclusion and suggestions for future research

The disclosure scores of a sample of Canadian gold mining companies are regressed against the number of company press releases, while controlling for size, financial performance, and plans to access the capital markets. The objective is to test Ullmann's hypothesis that the power of external stakeholders to control required resources, and a company's strategic posture combined with financial performance, should be viewed simultaneously when attempting to predict the company's social responsibility disclosure policy (Ullmann, 1985). A broadly defined disclosure score is used to assess environmental disclosure at the end of 1995, a year in which there was a major environmental accident in the mining industry. At such a time, stakeholder demands for information on environmental risk and management are likely to be high for companies in the industry. Press release activity is used as a measure of strategic posture – active versus passive – and the measurement period corresponds to calendar 1995. By interacting the financial performance factor with strategic posture, the statistical model used in this paper elicits insights not considered in earlier explorations of legitimacy theory.

Ullmann argues that when stakeholder power is high, companies with an active strategic posture make greater social responsibility disclosure (Ullmann, 1985). The findings in this paper support this view. Companies that maintain a media presence through press releases make more disclosures in their annual reports for the year of the accident than companies that operate quietly out of public view. There is no evidence, however, to support Ullmann's claim that good financial performance combined with an active strategic posture promotes the disclosure of discretionary or non-financial

		Expected sign	Coefficient	*t*-value
B_{0i}	*Intercept*	+/–	1.433	3.330***
B_{1i}	PR_i	+	0.033	2.449**
B_{2i}	$Size_i$	+	0.537	3.281***
B_{4i}	$XFin_i$	+	1.040	2.227**
B_{5i}	ROA_i	+/–	–0.010	–0.870

Table IX.
Regression analysis. Dependent variable: disclosure rating (A-G) ($n = 41$)

Notes: Significant at: $\alpha = 0.01$***; $\alpha = 0.05$**; $\alpha = 0.10$*; $R^2 = 0.35$. $Score_i = B_{0i} + B_{1i}PR_i + B_{2i}Size_i + B_{3i}XFin_i + B_{4i}ROA_i + \varepsilon_i$ (1). Where: PR_i is the number of press releases by company i in the 12 months leading up to August 18, 1995, the day before the Omai accident occurred; all other variables are as defined in Table IV

information. More data is needed to fully explore the role of financial performance, as there may have been an insufficient number of observations to effectively distinguish good from poor performance. One way to expand the data would be to allow companies that mine for base metals into the sample. Base metal mining companies are equally affected by a legislative backlash that follows an accident at a gold mine, so by limiting the sample to gold and silver mining companies, this analysis may have imposed an unnecessary restriction.

The disclosure score used in this paper includes measures of financial versus qualitative, forward-looking versus historic, and mandatory versus discretionary items. This type of score provides greater insight into the subtle nature of impressions management than is permitted by the measure of volume used in several earlier studies. When score components consisting of mandatory financial items on the one hand, and non-financial or discretionary items on the other, were individually regressed against the independent variables, the financing factor was statistically significant for the latter regression only. Given the latitude that managers have over the extent and form of disclosure outside professional and regulatory requirements, this finding makes intuitive sense, and supports the suggestion by Walden and Schwartz (1997) that companies rely on non-financial disclosure when they need to shape stakeholder impressions.

In this paper, the disclosure factor was designed to assess the presence or absence of different types of information, but not the extensiveness of that information. Many of the items in the scoring factor used in this paper correspond to specific CICA disclosure items. These items were either disclosed, or they were not, suggesting that a dichotomous scale is appropriate. However one of the non-financial items, item A, relates to compliance with environmental regulation. Disclosure here could consist of a lengthy, detailed narrative. Alternatively, the discussion could be vague, or altogether missing. A more refined measuring system that acknowledges the extensiveness of information disclosure could possibly have produced different results from those observed in this study.

Future research might use some alternative measure for strategic posture. In this paper, no effort was made to distinguish companies that use the press to establish their strategic posture from companies that rely on some other form of media. Furthermore, the content of the press communication was not taken into consideration. The question of whether the repercussions of the Omai accident prompted a change in strategic posture is also an interesting one to explore. However, given that Ullmann's contingency framework tried to explain corporate decisions regarding actual social performance, as well as disclosure about that performance, the next logical step is for future research to incorporate a measure of environmental performance. The Canadian economy offers a good platform for this sort of work. Canada's resource-dependent economy, along with its flexible accounting disclosure regime, offers considerable opportunity for further exploration in corporate impressions management strategy.

Note

1. This seven-point rating system was developed and applied in Magness, 2001. In that paper, item B – existence of a high level environmental committee – was found to modify share price response in the wake of a similar mining accident in the Philippines in 1996. Klassen and McLaughlin also present evidence that high-level commitment to environmental management is value relevant (Klassen and McLaughlin, 1996).

References

Amernic, J. (1992), "A case study in corporate financial reporting: Massey-Ferguson's visible accounting decisions 1970-1987", *Critical Perspectives on Accounting*, Vol. 3, pp. 1-43.

Barth, M., McNichols, M. and Wilson, G. (1997), "Factors influencing firms' disclosures about environmental liabilities", *Review of Accounting Studies*, pp. 35-64.

Bewley, K. and Li, Y. (2000), "Disclosure of environmental information by Canadian manufacturing companies: a voluntary disclosure perspective", *Advances in Environmental Accounting and Management*, Vol. 1, pp. 206-26.

Blacconiere, W. and Northcut, D. (1997), "Environmental information and market reaction to environmental legislation", *Journal of Accounting, Auditing and Finance*, Vol. 12, pp. 149-78.

Blacconiere, W. and Patten, D. (1994), "Environmental disclosures, regulatory costs, and changes in firm value", *Journal of Accounting and Economics*, Vol. 18, pp. 357-77.

Blunn, R. (1992), "Content of reports growing", *Financial Post*, Vol. S31, Toronto, October 19.

Botosan, C. (1997), "Disclosure level and the cost of equity capital", *The Accounting Review*, Vol. 72, pp. 323-49.

Canadian Institute of Chartered Accountants (CICA) (1997), *Full Cost Accounting from an Environmental Perspective*, CICA, Toronto.

Chatterjee, P. (1995), "GUYANA-ENVIRONMENT: cyanide spill could be long-term disaster", *Interpress Service*, August 30.

Cormier, D. and Gordon, I. (2001), "An examination of social and environmental reporting strategies", *Accounting, Auditing & Accountability Journal*, Vol. 14, pp. 587-616.

Cormier, D. and Magnan, M. (1999), "Corporate environmental disclosure strategies: determinants, costs and benefits", *Journal of Accounting, Auditing and Finance*, pp. 429-51.

Cowen, S., Ferreri, L. and Parker, L. (1987), "The impact of corporate characteristics on social responsibility disclosure: a typology and frequency-based analysis", *Accounting Organizations and Society*, Vol. 12, pp. 111-22.

Deegan, C. (2002), *Australian Financial Accounting*, McGraw Hill Book Company, Sydney.

Deegan, C. and Gordon, B. (1996), "A study of the environmental disclosure practices of Australian corporations", *Accounting and Business Research*, Vol. 26, pp. 187-99.

Deegan, C., Rankin, M. and Voght, P. (2000), "Firms' disclosure reactions to major social incidents: Australian evidence", *Accounting Forum*, Vol. 24, pp. 101-30.

Dowling, J. and Pfeffer, J. (1975), "Organisational legitimacy: social values and organisational behaviour", *Pacific Sociological Review*, pp. 122-36.

Dyball, M. (1998), "Corporate annual reports as promotional tools: the case of Australian National Industries Limited", *Asian Review of Accounting*, Vol. 6, pp. 25-53.

Epstein, M. and Freedman, M. (1996), "Social disclosures and the individual investor", *Accounting, Auditing and Accountability Journal*, pp. 94-104.

Ethical Investment Research Service (1989), *Choosing an Ethical Fund: The EIRIS Guide*, 2nd ed., EIRIS, London.

Fekrat, M., Inclan, C. and Petroni, D. (1996), "Corporate environmental disclosures: competitive disclosure hypothesis using 1991 annual report data", *The International Journal of Accounting*, Vol. 31, pp. 175-95.

Financial Accounting Standards Board (1978), *Statement of Financial Accounting Concepts No. 1: Objectives of Financial Reporting by Business Enterprises*, FASB, Norwalk, CT.

Financial Post (1995), "Survey – mines and energy", *Financial Post*.

Frankel, R., McNichols, M. and Wilson, G. (1995), "Discretionary disclosure and external financing", *The Accounting Review*, Vol. 70, pp. 135-50.

Freedman, M. and Jaggi, B. (1988), "An analysis of the association between pollution disclosures and economic performance", *Accounting, Auditing & Accountability Journal*, Vol. 1, pp. 43-58.

Freedman, M. and Jaggi, B. (1992), "An investigation of the long-run relationship between pollution performance and economic performance: the case of pulp and paper firms", *Critical Perspectives on Accounting*, Vol. 3, pp. 315-36.

Freedman, M. and Stagliano, A. (1991), "Differences in social cost disclosures: a market test of investor reaction", *Accounting, Auditing & Accountability Journal*, Vol. 4, pp. 68-83.

Freedman, M. and Wasley, C. (1990), "The association between environmental performance and environmental disclosures in annual reports and 10Ks", *Advances in Public Interest Accounting*, Vol. 3, pp. 183-93.

Gamble, G., Hsu, K., Kite, D. and Radtke, R. (1995), "Environmental disclosures in annual reports and 10Ks, an examination", *Accounting Horizons*, Vol. 9, pp. 34-54.

Gibbins, M., Richardson, A. and Waterhouse, J. (1990), "The management of corporate financial disclosure: opportunism, ritualism, policies and processes", *Journal of Accounting Research*, Vol. 28, pp. 121-43.

Gibson, K. and O'Donovan, G. (2000), "Environmental disclosures in Australia: a longitudinal study", paper presented at the 6th Interdisciplinary Environmental Association Conference, Montreal.

Globe and Mail (1979), "British rail changes policy", *Globe and Mail*, November 14, p. A5.

Gollop, F. and Roberts, M. (1983), "Environmental regulations and productivity growth: the case of fossil-fuelled electric power generation", *Journal of Political Economy*, Vol. 91, pp. 645-74.

Gray, R., Kouhy, R. and Lavers, S. (1995), "Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure", *Accounting, Auditing & Accountability Journal*, Vol. 8, pp. 47-77.

Gray, R., Owen, D. and Adams, D. (1996), *Accounting & Accountability: Changes and Challenges in Corporate and Social Reporting*, Prentice Hall, London.

Gray, R., Javad, M., Power, D. and Sinclair, C. (2001), "Social and environmental disclosure and corporate characteristics: a research note and extension", *Journal of Business, Finance and Accounting*, Vol. 28, pp. 327-56.

Guthrie, J. and Parker, L. (1989), "Corporate social reporting: a rebuttal of legitimacy theory", *Accounting and Business Research*, Vol. 19, pp. 343-52.

Harte, G. and Owen, D. (1991), "Environmental disclosures in the annual reports of British companies: a research note", *Accounting, Auditing & Accountability Journal*, Vol. 4, pp. 51-61.

Hutchin, H. (1994), "Annual reports. who reads them?", *Communication World*, pp. 18-21.

Klassen, R. and McLaughlin, C. (1996), "The impact of environmental management on firm performance", *Management Science*, Vol. 42, pp. 1199-214.

Lang, M. and Lundholm, R. (1993), "Cross-sectional determinants of analyst ratings of corporate disclosure", *Journal of Accounting Research*, Vol. 31, pp. 246-71.

Li, Y. and McConomy, B. (1999), "An empirical examination of factors affecting the timing of environmental accounting standard adoption and the impact on corporate valuation", *Journal of Accounting, Auditing and Finance*, Vol. 14, pp. 279-313.

Li, Y., Richardson, G. and Thornton, D. (1997), "Corporate disclosure of environmental liability information: theory and evidence", *Contemporary Accounting Research*, Vol. 14, pp. 435-74.

Lindblom, C.K. (1994), "The implications of organizational legitimacy for corporate social performance and disclosure", paper presented at the Critical Perspectives on Accounting Conference, New York, NY.

Magness, V. (2001), "The value relevance of environmental disclosures – an event study in the Canadian mining industry", working paper, Ryerson University, Toronto.

(The) Mining Association of Canada (1998), *A Guide to the Management of Tailings Facilities, Mining Association of Canada Web Site*, available at: www.mining.ca (accessed October 13, 2002).

Mitchell, R., Agle, B. and Wood, D. (1997), "Toward a theory of stakeholder indentification and salience: defining the principle of who and what really counts", *The Academy of Management Review*, Vol. 22 No. 4, pp. 853-86.

Neu, D., Warsame, H. and Pedwell, K. (1998), "Managing public impressions: environmental disclosure in annual reports", *Accounting, Organizations and Society*, Vol. 23, pp. 265-88.

Northern Miner (1995), Vol. 81, December 4.

Northern Miner (1996), No. 81, January 22.

O'Donovan, G. (2002), "Environmental disclosures in the annual report: extending the applicability and predictive power of legitimacy theory", *Accounting, Auditing & Accountability Journal*, Vol. 15, pp. 344-71.

Owen, D. (1990), "Towards a theory of social investment: a review essay", *Accounting, Organizations and Society*, Vol. 15, pp. 249-65.

Papmehl, A. (2001), "Do good and prosper", *CMA Management*, June, pp. 44-5.

Patten, D. (1991), "Exposure, legitimacy and social disclosurE", *Journal of Accounting and Public Policy*, Vol. 10, pp. 297-308.

Patten, D. (1992), "Intra-industry environmental disclosures in response to the Alaskan oil spill: a note on legitimacy theory", *Accounting, Organizations and Society*, Vol. 17, pp. 471-5.

Rankin, M. (1996), *Corporate Reporting – The Green Gap*, Institute of Chartered Accountants in Australia, Sydney.

Reuters (1996), "Philippine mine leak won't hit earnings", March 26.

Roberts, R. (1992), "Determinants of corporate social responsibility disclosure: an application of stakeholder theory", *Accounting, Organizations and Society*, Vol. 17, pp. 595-612.

Rockness, J. (1985), "An assessment of the relationship between US corporate environmental performance and disclosure", *Journal of Business Finance and Accounting*, Vol. 12, pp. 339-54.

Russo, M. and Fouts, R. (1997), "A resource based perspective on corporate environmental performance and profitability", *Academy of Management Journal*, Vol. 40, pp. 534-59.

Salancik, G. and Meindl, J. (1984), "Corporate attributions as strategic allusions of management control", *Administrative Science Quarterly*, Vol. 29, pp. 238-54.

Sengupta, P. (1998), "Corporate disclosure quality and the cost of debt", *Accounting Review*, Vol. 73, pp. 459-74.

Shocker, A. and Sethi, S. (1974), "An approach to incorporating social preferences in developing corporate action strategies", in Sethi, S. (Ed.), *The Unstable Ground: Corporate Social Policy in a Dynamic Society*, Wiley, New York, NY.

SIO Forum (2000), Social Investment Organization Toronto, September.

SIO Forum (2000), Social Investment Organization, Toronto, December.

Skinner, D. (1994), "Why firms voluntarily disclose bad news", *Journal of Accounting Research*, Spring, pp. 38-60.

Smith, H. and Sims, W. (1985), "The impact of pollution charges on productivity growth in Canadian brewing", *Rand Journal of Economics*, Vol. 16, pp. 410-23.

Terreberry, S. (1968), "The evolution of organizational environments", *Administrative Science Quarterly*, Vol. 12, pp. 590-613.

Tilt, C. (1994), "The influence of external pressure groups on corporate social disclosure", *Accounting, Auditing & Accountability Journal*, Vol. 7, pp. 47-72.

Toronto Star (1989), "Fallout from disastrous oil spill is long way from over, experts say", *Toronto Star*, June 24, p. C4.

Trotman, K. (1979), "Social responsibility disclosures by australian companies", *Chartered Accountant in Australia*, March, pp. 24-8.

TSX (2002), *TSX Monthly Review*, Toronto Stock Exchange web site, available at: www.TSX.com (accessed December 22, 2002).

Ullmann, A. (1985), "Data in Search of a theory: a critical examination of the relationships among social performance, social disclosure and economic performance of US firms", *Academy of Management Review*, Vol. 10, pp. 540-57.

Walden, W. and Schwartz, B. (1997), "Environmental disclosures and public policy pressure", *Journal of Accounting and Public Policy*, Vol. 16, pp. 125-54.

Warsame, H., Neu, D. and Simmons, C. (2002), "Responding to 'discrediting' events: annual report disclosure responses to environmental fines", *Accounting and the Public Interest*, available at: http://aaahq.org/ic/browse.htm (online journal) (accessed April 26, 2002).

Wiseman, J. (1982), "An evaluation of environmental disclosures made in corporate annual reports", *Accounting, Organizations and Society*, Vol. 7, pp. 53-63.

Zéghal, D. and Ahmed, S. (1990), "Comparison of social responsibility information disclosure media used by Canadian firms", *Accounting, Auditing & Accountability Journal*, Vol. 3, pp. 38-53.

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2. Yu He, Qingliang Tang, Kaitian Wang. 2017. Carbon performance versus financial performance. *China Journal of Accounting Studies* 1-22. [CrossRef]
3. Salvatore Ruggiero, Heikki Lehkonen. 2017. Renewable energy growth and the financial performance of electric utilities: A panel data study. *Journal of Cleaner Production* **142**, 3676-3688. [CrossRef]
4. Alessandro Mechelli, Riccardo Cimini, Francesca Mazzocchetti. 2017. The usefulness of the business model disclosure for investors' judgements in financial entities. A European study. *Revista de Contabilidad* **20**:1, 1-12. [CrossRef]
5. TangQingliang Qingliang Tang q.tang@uws.edu.au LuoLe Le Luo laura.luo@newcastle.edu.au School of Business, Western Sydney University, Sydney, Australia Newcastle Business School, University of Newcastle, Sydney, Australia . 2016. Corporate ecological transparency: theories and empirical evidence. *Asian Review of Accounting* **24**:4, 498-524. [Abstract] [Full Text] [PDF]
6. Hank C. Alewine Timothy C. Miller How Balanced Scorecard Format and Reputation Related to Environmental Objectives Influence Performance Evaluations 123-165. [Abstract] [Full Text] [PDF] [PDF]
7. Larissa Degenhart, Mara Vogt, Nelson Hein, Fabrícia Silva da Rosa. 2016. Ranking setorial do grau de evidenciação ambiental das empresas brasileiras listadas no IBrX-100. *REGE - Revista de Gestão* **23**:4, 326-337. [CrossRef]
8. David Mutua Mathuva, Josephat Mboya Kiweu. 2016. Cooperative social and environmental disclosure and financial performance of savings and credit cooperatives in Kenya. *Advances in Accounting* . [CrossRef]
9. Petra Dilling. 2016. Reporting on Long-Term Value Creation—The Example of Public Canadian Energy and Mining Companies. *Sustainability* **8**:9, 938. [CrossRef]
10. Dinithi Dissanayake, Carol Tilt, Maria Xydias-Lobo. 2016. Sustainability reporting by publicly listed companies in Sri Lanka. *Journal of Cleaner Production* **129**, 169-182. [CrossRef]
11. Jędrzej George Frynas, Camila Yamahaki. 2016. Corporate social responsibility: review and roadmap of theoretical perspectives. *Business Ethics: A European Review* **25**:3, 258-285. [CrossRef]
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13. Alonso Moreno, Macario Cámara. 2016. Stakeholders in annual reports under ownership concentration: a historical case of a Spanish brewery company. *Accounting History Review* **26**:2, 57-81. [CrossRef]
14. Odera Odhiambo Odhiambo Odera Odhiambo Odera is based at Masinde Muliro University of Science and Technology, Kakamega, Kenya. Scott Albert Albert Scott Albert Scott is based at the School of Commerce, University of Southern Queensland, Toowoomba, Australia. Gow Jeff Jeff Gow Jeff Gow is based at the School of Commerce, University of Southern Queensland, Toowoomba, Australia, and Department of Agricultural Economics, Stellenbosch University, Stellenbosch, South Africa. Masinde Muliro University of Science and Technology, Kakamega, Kenya School of Commerce, University of Southern Queensland, Toowoomba, Australia School of Commerce, University of Southern Queensland, Toowoomba, Australia, and Department of Agricultural Economics, Stellenbosch University, Stellenbosch, South Africa . 2016. An examination of the quality of social and environmental disclosures by Nigerian oil companies. *Corporate Governance: The international journal of business in society* **16**:2, 400-419. [Abstract] [Full Text] [PDF]
15. Constancio Zamora-Ramírez, Jose María González-González, Ana María Sabater-Marcos. 2016. Carbon Reporting : análisis de la respuesta del mercado español. *Spanish Journal of Finance and Accounting / Revista Española de Financiación y Contabilidad* **45**:2, 231-265. [CrossRef]
16. Eugenio D'Amico, Daniela Coluccia, Stefano Fontana, Silvia Solimene. 2016. Factors Influencing Corporate Environmental Disclosure. *Business Strategy and the Environment* **25**:3, 178-192. [CrossRef]
17. Jose Maria Gonzalez-Gonzalez Accounting and Finance, University of Seville, Seville, Spain Constancio Zamora Ramírez Accounting and Finance, University of Seville, Seville, Spain . 2016. Voluntary carbon disclosure by Spanish companies: an empirical analysis. *International Journal of Climate Change Strategies and Management* **8**:1, 57-79. [Abstract] [Full Text] [PDF]
18. Thomas Thijssens, Laury Bollen, Harold Hassink. 2015. Secondary Stakeholder Influence on CSR Disclosure: An Application of Stakeholder Salience Theory. *Journal of Business Ethics* **132**:4, 873-891. [CrossRef]
19. Hichem khlif Faculty of Economic and management of Mahdia, University of Monastir, Tunisia Khaled Hussainey Accounting & Finance Department, University of Plymouth, Plymouth, UK Imen Achek High School of Commerce of Tunis, University of Manouba, Tunisia . 2015. The effect of national culture on the association between profitability and corporate social and environmental disclosure. *Meditari Accountancy Research* **23**:3, 296-321. [Abstract] [Full Text] [PDF]
20. A.H. Fatima Department of Accounting, Kulliyyah of Economics and Management Science, International Islamic University Malaysia, Kuala Lumpur, Malaysia Norhayati Abdullah Faculty of Business Management and Accounting, University Sultan Zainal Abidin, Kuala Terengganu, Malaysia Maliah Sulaiman Department of Accounting, Kulliyyah of Economics and Management Science, International Islamic University Malaysia, Kuala Lumpur, Malaysia . 2015. Environmental disclosure quality: examining the impact of the stock exchange of Malaysia's listing requirements. *Social Responsibility Journal* **11**:4, 904-922. [Abstract] [Full Text] [PDF]

21. Aliyu Baba Usman Department of Accounting, Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia, Sintok, Malaysia Noor Afza Binti Amran Department of Accounting, Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia, Sintok, Malaysia . 2015. Corporate social responsibility practice and corporate financial performance: evidence from Nigeria companies. *Social Responsibility Journal* **11**:4, 749-763. [Abstract] [Full Text] [PDF]
22. Prabanga Thoradeniya Monash Business School, Monash University, Clayton, Australia Janet Lee Research School of Accounting, The Australian National University, Canberra, Australia, Rebecca Tan Research School of Accounting, The Australian National University, Canberra, Australia, Aldónio Ferreira Monash Business School, Monash University, Clayton, Australia, . 2015. Sustainability reporting and the theory of planned behaviour. *Accounting, Auditing & Accountability Journal* **28**:7, 1099-1137. [Abstract] [Full Text] [PDF]
23. Prof. John Sands ,Prof. Ki-Hoon Lee Michael Dobler Faculty of Business and Economics, Technische Universität Dresden, Dresden, Germany Kaouthar Lajili Telfer School of Management, University of Ottawa, Ottawa, Canada Daniel Zéghal Telfer School of Management, University of Ottawa, Ottawa, Canada . 2015. Corporate environmental sustainability disclosures and environmental risk. *Journal of Accounting & Organizational Change* **11**:3, 301-332. [Abstract] [Full Text] [PDF]
24. Prof Harri Laihonen Stefano Fontana University of Rome Saoienza, Rome, Italy Eugenio D'Amico Department of Political Science, University Rome 3, Rome, Italy Daniela Coluccia Department of Business and Law, University of Rome Sapienza, Rome, Italy Silvia Solimene Department of Business and Law, University of Rome Sapienza, Rome, Italy . 2015. Does environmental performance affect companies' environmental disclosure?. *Measuring Business Excellence* **19**:3, 42-57. [Abstract] [Full Text] [PDF]
25. Martin Samy School of Accounting, Finance And Economics, Leeds Beckett University, Leeds, UK Henry Itotenaan Ogiri School of Accounting, Finance And Economics, Leeds Beckett University, Leeds, UK Roberta Bampton School of Accounting, Finance And Economics, Leeds Beckett University, Leeds, UK . 2015. Examining the public policy perspective of CSR implementation in Sub-Saharan Africa. *Social Responsibility Journal* **11**:3, 553-572. [Abstract] [Full Text] [PDF]
26. María del Mar Miras-Rodríguez, Amalia Carrasco-Gallego, Bernabé Escobar-Pérez. 2015. Are Socially Responsible Behaviors Paid Off Equally? A Cross-cultural Analysis. *Corporate Social Responsibility and Environmental Management* **22**:4, 237-256. [CrossRef]
27. Tzu-Kuan Chiu, Yi-Hsin Wang. 2015. Determinants of Social Disclosure Quality in Taiwan: An Application of Stakeholder Theory. *Journal of Business Ethics* **129**:2, 379-398. [CrossRef]
28. Alexandra Middleton. 2015. Value relevance of firms' integral environmental performance: Evidence from Russia. *Journal of Accounting and Public Policy* **34**:2, 204-211. [CrossRef]
29. Ryan J. Casey, Jonathan H. Grenier. 2015. Understanding and Contributing to the Enigma of Corporate Social Responsibility (CSR) Assurance in the United States. *AUDITING: A Journal of Practice & Theory* **34**:1, 97-130. [CrossRef]
30. Nikolaos Demertzidis, Thomas A. Tsalis, Glykeria Loupa, Ioannis E. Nikolaou. 2015. A benchmarking framework to evaluate business climate change risks: A practical tool suitable for investors decision-making process. *Climate Risk Management* **10**, 95-105. [CrossRef]
31. Kathleen Herbohn, Julie Walker, Huay Yien Monica Loo. 2014. Corporate Social Responsibility: The Link Between Sustainability Disclosure and Sustainability Performance. *Abacus* **50**:4, 422-459. [CrossRef]
32. X.H. Meng, S.X. Zeng, Jonathan J. Shi, G.Y. Qi, Z.B. Zhang. 2014. The relationship between corporate environmental performance and environmental disclosure: An empirical study in China. *Journal of Environmental Management* **145**, 357-367. [CrossRef]

33. Isabel Gallego-Álvarez, Isabel M. García-Sánchez, Cléber da Silva Vieira. 2014. Climate Change and Financial Performance in Times of Crisis. *Business Strategy and the Environment* **23**:6, 361-374. [CrossRef]
34. Mohamed A. Omran Department of Accounting & MIS, College of Business, Gulf University of Science & Technology, Meshrif, Kuwait Ahmed M. El-Galfy College of Business, Gulf University of Science & Technology, Meshrif, Kuwait . 2014. Theoretical perspectives on corporate disclosure: a critical evaluation and literature survey. *Asian Review of Accounting* **22**:3, 257-286. [Abstract] [Full Text] [PDF]
35. R.J. Hall, G.D. Moura, F.F.R.R. Macêdo, P.R. Cunha. 2014. Compras Públicas Sustentáveis: Um Estudo nas Universidades Federais Brasileiras. *Amazônia, Organizações e Sustentabilidade* **3**:1, 27-44. [CrossRef]
36. Renfred Wong Accounting, Finance and Economics, Oxford Brookes University, Oxford, UK Andrew Millington School of Management, University of Bath, Bath, UK . 2014. Corporate social disclosures: a user perspective on assurance. *Accounting, Auditing & Accountability Journal* **27**:5, 863-887. [Abstract] [Full Text] [PDF]
37. Antonis Skouloudis, Nikoleta Jones, Chrisovaladis Malesios, Konstantinos Evangelinos. 2014. Trends and determinants of corporate non-financial disclosure in Greece. *Journal of Cleaner Production* **68**, 174-188. [CrossRef]
38. Chika Saka School of Business Administration, Kwansei Gakuin University, Nishinomiya, Japan Tomoki Oshika School of Commerce, Waseda University, Tokyo, Japan . 2014. Disclosure effects, carbon emissions and corporate value. *Sustainability Accounting, Management and Policy Journal* **5**:1, 22-45. [Abstract] [Full Text] [PDF]
39. Mostafa Kamal Hassan. 2014. Risk narrative disclosure strategies to enhance organizational legitimacy: Evidence from UAE financial institutions. *International Journal of Disclosure and Governance* **11**:1, 1-17. [CrossRef]
40. Yu He, Qingliang Tang, Kaitian Wang. 2013. Carbon disclosure, carbon performance, and cost of capital. *China Journal of Accounting Studies* **1**:3-4, 190-220. [CrossRef]
41. Pamela Kent Bond Business School, Bond University, Gold Coast, Australia Tamara Zunker Bond Business School, Bond University, Gold Coast, Australia . 2013. Attaining legitimacy by employee information in annual reports. *Accounting, Auditing & Accountability Journal* **26**:7, 1072-1106. [Abstract] [Full Text] [PDF]
42. Jason Chen Vicky Arnold Steve G. Sutton Does Web Disclosure of Environmental Information Affect Litigation Awards? 1-22. [Abstract] [Full Text] [PDF] [PDF]
43. X. H. Meng, S. X. Zeng, C. M. Tam. 2013. From Voluntarism to Regulation: A Study on Ownership, Economic Performance and Corporate Environmental Information Disclosure in China. *Journal of Business Ethics* **116**:1, 217-232. [CrossRef]
44. Abdifatah Ahmed HajiScicom (MSC) Berhad, Kuala Lumpur, Malaysia. 2013. Corporate social responsibility disclosures over time: evidence from Malaysia. *Managerial Auditing Journal* **28**:7, 647-676. [Abstract] [Full Text] [PDF]
45. Michael Jones and Jill SolomonBristol University and Henley Business SchoolJaved SiddiquiManchester Business School, University of Manchester, Manchester, UK. 2013. Mainstreaming biodiversity accounting: potential implications for a developing economy. *Accounting, Auditing & Accountability Journal* **26**:5, 779-805. [Abstract] [Full Text] [PDF]
46. Stacie Buccina, Douglas Chene, Jeffrey Gramlich. 2013. Accounting for the environmental impacts of Texaco's operations in Ecuador: Chevron's contingent environmental liability disclosures. *Accounting Forum* **37**:2, 110-123. [CrossRef]

47. Ans KolkUniversity of Amsterdam Business School, The Netherlands Fabienne FortanierUniversity of Amsterdam Business School, The Netherlands. 2013. Internationalization and environmental disclosure: the role of home and host institutions. *Multinational Business Review* **21**:1, 87-114. [Abstract] [Full Text] [PDF]
48. Elizabeth Stanny. 2013. Voluntary Disclosures of Emissions by US Firms. *Business Strategy and the Environment* **22**:3, 145-158. [CrossRef]
49. Heather R. Dixon-Fowler, Daniel J. Slater, Jonathan L. Johnson, Alan E. Ellstrand, Andrea M. Romi. 2013. Beyond "Does it Pay to be Green?" A Meta-Analysis of Moderators of the CEP–CFP Relationship. *Journal of Business Ethics* **112**:2, 353-366. [CrossRef]
50. Roman LanisUniversity of Technology, Sydney, Australia Grant RichardsonUniversity of Adelaide, Adelaide, Australia. 2012. Corporate social responsibility and tax aggressiveness: a test of legitimacy theory. *Accounting, Auditing & Accountability Journal* **26**:1, 75-100. [Abstract] [Full Text] [PDF]
51. Azlan Amran, Say Keat Ooi, Mehran Nejati, Abdul Hadi Zulkafli, Boey Ann Lim. 2012. Relationship of firm attributes, ownership structure and business network on climate change efforts: evidence from Malaysia. *International Journal of Sustainable Development & World Ecology* **19**:5, 406-414. [CrossRef]
52. Ronald P. Guidry, Dennis M. Patten. 2012. Voluntary disclosure theory and financial control variables: An assessment of recent environmental disclosure research. *Accounting Forum* **36**:2, 81-90. [CrossRef]
53. Le Luo, Yi-Chen Lan, Qingliang Tang. 2012. Corporate Incentives to Disclose Carbon Information: Evidence from the CDP Global 500 Report. *Journal of International Financial Management & Accounting* **23**:2, 93-120. [CrossRef]
54. Abdifatah Ahmed Haji, Nazli Anum Mohd Ghazali. 2012. The influence of the financial crisis on corporate voluntary disclosure: Some Malaysian evidence. *International Journal of Disclosure and Governance* **9**:2, 101-125. [CrossRef]
55. Indrarini Laksmana, Wendy Tietz, Ya-Wen Yang. 2012. Compensation discussion and analysis (CD&A): Readability and management obfuscation. *Journal of Accounting and Public Policy* **31**:2, 185-203. [CrossRef]
56. Nousheen Tariq Bhutta, Muhammed Mohtsham Saeed. 2011. Accounting scandals in the context of corporate social reporting. *Journal of Database Marketing & Customer Strategy Management* **18**:3, 171-184. [CrossRef]
57. José Antonio Plaza Úbeda, Jerónimo de Burgos Jiménez, Luis Jesús Belmonte Ureña. 2011. Grupos de interés, gestión ambiental y resultado empresarial: una propuesta integradora. *Cuadernos de Economía y Dirección de la Empresa* **14**:3, 151-161. [CrossRef]
58. Isabel-María García SánchezFacultad de Economía y Empresa, Campus Miguel de Unamuno, Edificio FES, Salamanca, Spain Luis Rodríguez DomínguezFacultad de Economía y Empresa, Campus Miguel de Unamuno, Edificio FES, Salamanca, Spain Isabel Gallego ÁlvarezFacultad de Economía y Empresa, Campus Miguel de Unamuno, Edificio FES, Salamanca, Spain. 2011. Corporate governance and strategic information on the internet. *Accounting, Auditing & Accountability Journal* **24**:4, 471-501. [Abstract] [Full Text] [PDF]
59. Javier Husillos, Carlos Larrinaga González, María José Álvarez Gil. 2011. The emergence of triple bottom line reporting in Spain. *Spanish Journal of Finance and Accounting / Revista Española de Financiación y Contabilidad* **40**:150, 195-219. [CrossRef]

60. Jennifer C. Chen, Robin W. Roberts. 2010. Toward a More Coherent Understanding of the Organization–Society Relationship: A Theoretical Consideration for Social and Environmental Accounting Research. *Journal of Business Ethics* **97**:4, 651-665. [CrossRef]
61. Jesse Dillard and Madeleine E. PullmanHank C. AlewineGatton College of Business and Economics, University of Kentucky, Lexington, Kentucky, USA. 2010. A model for conducting experimental environmental accounting research. *Sustainability Accounting, Management and Policy Journal* **1**:2, 256-291. [Abstract] [Full Text] [PDF]
62. Roger L. Burritt and Stefan SchalteggerRené OrijLeiden University, Leiden, The Netherlands. 2010. Corporate social disclosures in the context of national cultures and stakeholder theory. *Accounting, Auditing & Accountability Journal* **23**:7, 868-889. [Abstract] [Full Text] [PDF]
63. Suresh Cuganesan, James Guthrie, Leanne Ward. 2010. Examining CSR disclosure strategies within the Australian food and beverage industry. *Accounting Forum* **34**:3-4, 169-183. [CrossRef]
64. Charles H. Cho, Robin W. Roberts, Dennis M. Patten. 2010. The language of US corporate environmental disclosure. *Accounting, Organizations and Society* **35**:4, 431-443. [CrossRef]
65. Shidi Dong, Roger Burritt. 2010. Cross-sectional benchmarking of social and environmental reporting practice in the australian oil and gas industry. *Sustainable Development* **18**:2, 108-118. [CrossRef]
66. Nardia Haigh, Andrew Griffiths. 2009. The natural environment as a primary stakeholder: the case of climate change. *Business Strategy and the Environment* **18**:6, 347-359. [CrossRef]
67. Niamh O'SullivanUniversity of Amsterdam Business School, University of Amsterdam, Amsterdam, The Netherlands Brendan O'DwyerUniversity of Amsterdam Business School, University of Amsterdam, Amsterdam, The Netherlands. 2009. Stakeholder perspectives on a financial sector legitimation process. *Accounting, Auditing & Accountability Journal* **22**:4, 553-587. [Abstract] [Full Text] [PDF]
68. Carlos Serrano-Cinca, Mar Rueda-Tomás, Pilar Portillo-Tarragona. 2009. Factors Influencing E-Disclosure in Local Public Administrations. *Environment and Planning C: Government and Policy* **27**:2, 355-378. [CrossRef]
69. Marie-Andrée CaronÉcole des Sciences de la Gestion, Université du Québec à Montréal, Montréal, Canada Marie-France B. TurcotteÉcole des Sciences de la Gestion, Université du Québec à Montréal, Montréal, Canada. 2009. Path dependence and path creation. *Accounting, Auditing & Accountability Journal* **22**:2, 272-297. [Abstract] [Full Text] [PDF]
70. Vanessa Magness Environmental disclosure in the mining industry: A signaling paradox? 55-81. [Abstract] [Full Text] [PDF] [PDF]
71. Aapo LänsiluotoFaculty of Business Studies, University of Vaasa, Vaasa, Finland Marko JärvenpääSchool of Business and Economics, University of Jyväskylä, Jyväskylä, Finland. 2008. Environmental and performance management forces. *Qualitative Research in Accounting & Management* **5**:3, 184-206. [Abstract] [Full Text] [PDF]
72. Isabel Gallego ÁlvarezFacultad de Economía y Empresa, University of Salamanca, Salamanca, Spain Isabel María García SánchezFacultad de Economía y Empresa, University of Salamanca, Salamanca, Spain Luis Rodríguez DomínguezFacultad de Economía y Empresa, University of Salamanca, Salamanca, Spain. 2008. Voluntary and compulsory information disclosed online. *Online Information Review* **32**:5, 596-622. [Abstract] [Full Text] [PDF]
73. Begoña Gutiérrez-NietoDepartment of Accounting and Finance, University of Zaragoza, Saragossa, Spain Yolanda Fuertes-CallénDepartment of Accounting and Finance, University of Zaragoza, Saragossa, Spain Carlos Serrano-CincaDepartment of Accounting and Finance, University of Zaragoza, Saragossa, Spain.

2008. Internet reporting in microfinance institutions. *Online Information Review* **32**:3, 415-436. [Abstract] [Full Text] [PDF]

74. Lee Parker, James Guthrie and Markus MilneDavid OwenInternational Centre for Corporate Social Responsibility, Nottingham University Business School, Nottingham, UK. 2008. Chronicles of wasted time?. *Accounting, Auditing & Accountability Journal* **21**:2, 240-267. [Abstract] [Full Text] [PDF]