Voluntary Risk Disclosure in Corporate Annual Reports: An Empirical Review

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Abstract
Corporate governance scandals and the global financial crisis have led to calls for better risk disclosure. However, such disclosure may be stifled by the proprietary cost hypothesis that firms limit voluntary disclosure to avoid risk of adverse actions. Against this background, several studies have examined the determinants of risk disclosure in corporate annual reports. The purpose of this paper is to review empirical evidences on risk disclosure determinants in the literature. The researcher uses qualitative-archival research methodology, involving secondary information obtained from journal articles, MSc dissertation and finance texts. It is discovered that most of the findings suffered from discrepancies and inconsistency even though the studies under review are characterized by methodological similarities in the employment of regression analysis and sampled companies namely: listed non-financial firms. The study concludes that no globally accepted risk disclosure determinants exist at present and offer that policy makers put in place a framework for risk disclosure pattern of companies to ensure credible, comparable, consistent and easy to follow but tough to escape material risk reporting around the globe. Besides, extending the frontiers of knowledge on risk disclosure to developing economy, the paper gives the ongoing debate on risk disclosure determinants a global approach towards contributing to search on convergent risk reporting dynamics.

Keywords: Annual reports, Determinants, Risk, Voluntary disclosure, Proprietary cost, Non-financial firms.

1. Introduction
The quality of voluntary disclosure contained in annual reports, the principal source of corporate communication, is in the heart of modern financial reporting. Lack of investors’ confidence trailed corporate failures of major companies around the globe (Ame, 2013). The credibility crisis coupled with threats of terrorists’ attack on firms and the global financial crisis led to calls for better disclosure, to enable informed investment decisions. Consequently, corporate annual reports no longer focus solely on the accounts - quantitative information but volunteer qualitative information about a variety of topics such as the company’s risks. Voluntary risk disclosure can be defined as facultative publication concerning firms’ strategies, characteristics, operations and other external factors that have the potentials to affect expected results (Beretta & Bozzolan, 2004).

Since risk taking is required in creating firm value (Onoja, 2014), voluntary risk disclosure can be beneficial for several reasons. Besides mitigating information asymmetry between management and external shareholders, risk disclosure can have positive effects on the trust and confidence stakeholders have in the firm’s management. It may decrease the firm’s perceived risk because an open disclosure strategy supposedly results in a better assessment of the firm’s future performance. This, in turn, can lead to a decline in the firm’s cost of capital (Healy & Palepu, 2001; Botosan, 2006; Brealy, Myers & Allen, 2006) and to a reduced possibility of financial failure (Solomon, Solomon & Norton, 2000; Beretta & Bozzolan, 2004).

However, Taylor, (2011) states that communicating risk management and performance is inherently problematic, especially for narrative disclosures. The difficulty in risk disclosure arises from “commercial sensitivity” of the information, which means that disclosing risk information can result to strategic exploitation by competitors and also the fact that inexact forward looking risk information can incite investors to sue the firm. For these reasons, Linsley & Shrives (2006) are of the opinion that corporate managers may not want to disclose risk information in annual reports. Their opinion confirms the proprietary costs hypothesis that, a third party whose interests are not aligned with the firm’s interests can use the disclosed information against this firm’s welfare. The impact of proprietary costs on firm value and its competitive position can lead to voluntary risk disclosure dilemma.

Consequently, research attention has been directed towards determining the possible drivers of risk disclosure practices of companies across the globe. Strand of literature providing empirical evidences for different countries’ risk reporting behaviors include Italy (Beretta & Bozzolan, 2004), Australia (Carton et al., 2003), Canada (Lajili & Zeghal, 2005), UK (Klaus, 2005; Linsley & Shrives, 2006; Abraham & Cox, 2007, Rajab & Handler-Schachter, 2009; Elzahar & Hussainey, 2012), Japan (Mohobbot, 2005), Netherlands (Deumes & Knechel, 2008), Belgium (Vandamaele, Verguawen & Michiels 2009), China (Li & Qian-Qian, 2010), Malaysia (Nargess & Siti-Zaleha, 2012), United Arab Emirate (Hassan, 2009), Portugal (Oliveira & Rodriguez,
These studies variously explored the determinants of risks disclosure in corporate annual reports. However, majority of the findings suffered from discrepancies and inconsistency in that no globally accepted determinants of risk disclosure still constitute a research issue. This paper reviews extant literature on corporate risk reporting in an endeavor to give the ongoing debate on the determinants of risk disclosure a global approach towards contributing to the search on convergent risk reporting dynamics. It is hoped that the study could deliver hints for future regulation as policy makers world-wide review risk reporting regulations following the recent past corporate scandals, crises and collapses. It would benefit corporate managers in areas of internal control and risk management systems and as well, extend the frontiers of knowledge on the subject matter.

2. Theoretical and empirical review

The concept of risk disclosure and risk categories

The concept of risk stems from the inability to see into the future. Risk is viewed as an “uncertainty as to the amount of benefits” which “include both potential for gain or exposure to loss” (ICAEW, 1999). Linsley & Shrives (2006) define risk disclosure as informing the reader about “any opportunity or prospect, or of any hazard, danger, harm, threat or exposure, that has already impacted upon the company or may impact upon the company in the future or of the management of any such opportunity, prospect, hazard, harm, threat or exposure”. This paper upholds this definition for its simplicity.

A lot of risk categorizations exist in the literature about risk disclosure. However, this paper reviews four comprehensive risk categories namely: business risk, financial risk, operational risk, and compliance (legal, tax and regulatory) risk.

Business risk refers to the typical risks a company faces: uncertainty about the demand for products, the price that can be charged for those products, the cost of producing, stocking and delivering the products (Crouhy, Galai, & Mark, 2006). The risk associated with actions by competitors and potential losses of competitive advantage are other examples of business risk (Cabedo & Tirado, 2004; Servaes & Tufano, 2006). Business risk broadly incorporates strategic risk and reputation risk. Strategic risk refers to the risk associated with significant investments for which high uncertainty exists about success and profitability (Crouhy et al., 2006). A firm investing in research and development (R&D), for example, encounters uncertainty about the relation between its R&D investment and new product or process outputs (Miller, 1992). Reputational risk refers to the risk that a good reputation, which can lead to value creation, turns to a bad reputation and, as a consequence, company value being destroyed (Vandamaele et al., 2009). In sum, business risk can be seen as internal company skill(s) for dealing with the competitive environment in which the company operates.

Financial risk consists of market risk, credit risk and liquidity risk. Market risk relates to price movements in financial markets (Servaes & Tufano, 2006). Crouhy et al. (2006) define market risk as “the risk that changes in financial market prices and rates will reduce the value of a security or portfolio”. Market risk arises because of a number of factors, such as interest rate exposures, foreign exchange exposures, commodity price-sensitive revenues or expenses, stock option plans and pension liabilities. Credit risk is the possibility that the payment of contractual obligations may not be fulfilled by the counterparty (Cabedo & Tirado, 2004). Giesecke (2004) defines credit risk as “the distribution of financial losses due to unexpected changes in the credit quality of a counterparty in a financial agreement”. Liquidity risk occurs when a company is not able to meet the payment of commitments it has made (Cabedo & Tirado, 2004).

Operational risk relates to potential losses due to inadequate or failing internal processes, people and systems or resulting from external events. Crouhy et al. (2006) distinguish three major types of operational risk. The first type is technology risk, principally the risk is associated with computer systems. It implies the risks involved with information access, information availability and infrastructure (Linsley & Shrives, 2006). Alvarez (2001) describes technology risk as the loss events “due to piracy, theft, failure, breakdown, or other disruptions in technology, data or information”. The second type is fraud risk by management or employees. The third type of operational risk is human factor risk; it relates to potential losses resulting from human errors (e.g. accidentally destroying a file). Alvarez (2001) adds as a fourth type of operational risk, external loss events (e.g. following a natural disaster).

Compliance (legal, tax and regulatory) risk arises for a whole variety of reasons. Examples of legal risk include the involvement in lawsuits or the infringement of legal norms and a change in tax law which may have vast implications for a firm.

The paper reviews the different risk categories to create an understanding of the risks a company has to deal with. Cabedo & Tirado (2004) state that information about different risk categories does not only help companies in understanding, identifying, monitoring and controlling of risks but also improves the investors’ knowledge about the companies’ risks profile. However, against the backdrop of the cost-induced risk disclosure dilemma, what motivates managers to disclose more risk information than it is necessitated by regulation
becomes insightful within the context of theoretical frameworks.

**Theoretical setting of voluntary disclosure**
Voluntary disclosure is a game of contradictory powers (motivating forces and dissuasive forces). The process of voluntary disclosure results thus, from an arbitration between the economy of costs (agency, political, capital costs) that this publication can procure to the company, and the generation of costs (proprietary and non-proprietary costs) as a result of this publication. The theoretical incentives for voluntary disclosure enable managers to manage different levels of risk disclosure for two reasons: To achieve economic objectives and, to respect rules and societal standards. These theories include:

**Agency theory:** This explains how the information asymmetry between shareholders and managers can be reduced by the implementation of risk management systems and incentives to managers, in order to monitor their attitudes towards risk and to assure the disclosure of information beyond the strictly necessary about risk factors and their risk management activities (Jensen & Meckling, 1976).

**Signaling theory:** This theory explains managers’ attitude to voluntarily disclose more information to the market, than that required by regulations, to signal their behavior of best practice, as tactic to promote transparency with the intention of attracting more investment (Spencer, 1973; Ross, 1977; Morris, 1987). Consequently, the companies belonging to the same industry will be interested in disclosing at least the same level of information, because they do not want to be unevaluated by the market, expressing mimetic isomorphism behavior (DiMaggio & Powell, 1983).

**Legitimacy theory:** Legitimacy theory explains that this mimetic isomorphism behavior is a way of reducing transaction costs associated with the information asymmetry, in order to generate conformity with institutional and society pressures (Shocker & Sethi, 1974; Deephouse, 1996) and gain legitimacy towards society by showing that the entity’s action are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions.

**Stakeholder theory:** The theory explains the influence of stakeholders in the firm decisions and consequently, the role of management in order to achieve the exact level of stakeholder demand, because if the level of stakeholder power increases so the importance of meeting stakeholders demand (Freeman, 1984). If risk management activities are viewed as an effective management activity for dealing with stakeholders, a positive relationship between power, management performance and risk management disclosures is expected (Ullman, 1985).

**Political cost theory:** Political cost theory explains that to mitigate potential political costs, politically visible companies increase their disclosures, in order to manipulate their image and distract other’s attention (Watts and Zimmerman, 1986; Deegan and Gordon, 1996). If there is room for managerial discretion in choosing reporting features as disclosure format or precision, managers can report on risk in different ways depending on their perceptions of potential reactions of the users of that information, in order to fulfill their investment or disinvestment policies.

**Attribution theory:** This explains that managers try to “attribute bad things to factors beyond the directors’ control and good things attributed to their personal achievements in controlling risks”. (Linsley and Shrives, 2006). Thus, any risk disclosure is followed by a risk management disclosure in order to demonstrate to the stakeholders their ability to manage the external factors faced by the company.

Despite theoretical incentives, the costs that are likely to be incurred by the firms for voluntarily disclosed information limit their communication. Some arguments in favour of the retention of voluntary disclosure are in respect of costs (proprietary and non-proprietary costs).

**Proprietary costs hypothesis:** Proprietary costs appear when a third party, whose interests are not aligned with the firm’s interests, uses the disclosed information against the firm. According to the proprietary costs hypothesis, the firm can limit its disclosure to avoid its strategic exploitation by competitors. The impact of the proprietary costs on the firm value and its competitive position can lead to retention of the information. Also, the communication of certain information can, in some cases, significantly cause harm to the firm and lead to legal pursuits (litigation costs). For instance, inexact forward looking risk publication can incite investors to sue the firm.

**Direct costs:** These costs are induced by the publication of voluntary information and include collection, treatment, production, diffusion, printing costs (Depoers, 2000). According to Leuz & Wysocki (2006), it is difficult to quantify direct costs associated to disclosure activity especially if they consist of opportunity costs such as managerial time.

**Prior Studies on risk disclosure**
The cost-induced voluntary disclosure dilemma in the wake of quest for better risk disclosure has engendered research on the determinants of risk disclosure in corporate annual reports. Most of these studies focus on non-financial companies in a particular country and examine among others the relationship between the level of risk...
disclosure and firm size, profitability, financial leverage, board composition, CEO duality, audit quality, cross listing, industry type, risk committee, systematic risk and liquidity. We review some of these studies as follows:

Beretta & Bozzolan (2004) propose a framework for the analysis of firm risk communication for Italian companies listed in the ordinary market of the Italian Stock Exchange. Using regression analysis for a sample of 85 non-financial firms, the study found that the index of disclosure quantity is not influenced by either firm size or industry type. They verified that the framework and synthetic index are not influenced by the two factors recognized in the literature as the most powerful drivers of disclosure behavior for listed firms.

Klaus (2005) conducts a study to investigate the extent and determinants of risk disclosure for UK listed companies. He used a sample of 50 business support and services firms. Using regression analysis, the study found that narrative risk disclosure of UK firms is positively related to firm size, gearing, internal audit, average substantial shareholdings and independent non-executive directors while non-executive director, audit committee size, free float and profitability (ROCE) are negatively associated with risk disclosure.

Similarly, Mohobbot (2005) examines the corporate risk reporting practices of 90 non-financial Japanese companies listed on the Tokyo Stock Exchange. Using Pearson Correlation Coefficient, the study revealed that the company size (total assets) and the number of risk disclosure are significantly positively correlated while no significant relation was found between number of risk disclosure and level of risk, relative profitability (ROA and ROE) and ownership distribution pattern.

Linsley & Shrives (2006) conduct a study on the risk disclosure practices of 79 UK companies. Using regression analysis, the study found a significant association between the number of risk disclosures and company size and level of environmental risk. They however found no association between the number of risk disclosures and other measures of risk namely gearing, asset cover, beta factors, and book to market value of equity used in the study.

Similarly, Abraham & Cox (2007) investigated the relationship between the quantity of narrative risk information in UK FTSE 100 corporate annual reports and ownership, governance and US listing characteristics. The study found, using regression analysis, that number of executive and independent directors have positive relationship with level of corporate risk reporting while institutional ownership and number of dependent non-executive directors have negative relationship with level of corporate risk reporting. Their findings support the recent emphasis in the UK on the independent aspects of non-executive directors for good corporate governance.

Deumes & Knechel (2008) also conduct a study on the economic incentive for voluntary reporting on internal risk management and control systems of Dutch firms for the period (1997-1999). Using ordered probit regression analysis and a sample of 192 Dutch firms listed on the Amsterdam Stock Exchange, the study found that financial leverage has a positive and significant relationship with extent of disclosure while managerial ownership and ownership concentration have negative relationship with extent of internal control disclosure.

Again, Hassan (2009) conducts a study to explore the relationship between the UAE corporations’-specific characteristics – size, level of risk, industry type and reserve, and level of CRD. The study used content analysis to determine the risk disclosure level and multiple regression analysis to examine the impact of the identified characteristics on risk disclosure. The result for a sample of 41 corporations revealed that the corporate level of risk and corporate industry type are significant explanatory variables of CRD. The study further revealed that corporate size is not significantly associated with level of CRD; corporate reserve is insignificant and negatively associated with level of CRD.

Rajab (2009) empirically examines the influence of firm size, leverage, industry and US dual listing on the level of risk disclosure in annual reports of 52 UK non-financial companies drawn from the FTSE-100 index for three different periods (1998, 2001 and 2004). The study used content analysis to measure risk disclosure sentences, panel data and regression model to examine the impact of the identified variables on risk disclosure. The study found that US dual listing and industry have significant relationship with risk disclosures but firm size and leverage have insignificant association with the level of risk disclosures of sampled companies. Concerning impact of risk disclosures on companies’ cost of equity capital, the study found no relationship between risk disclosure level and companies’ cost of equity capital (measured by four-stage dividend growth model). It however, found a negative and significant relationship between risk information and the proxies of information asymmetry namely stock volatility and bid-ask spread.

Rajab & Handley-Schachler (2009) also conduct a study to investigate the trends and determinants of corporate risk disclosure by UK firms for the periods (1998, 2001, and 2004). Using panel data analysis and a sample of 52 UK listed companies, the study revealed that US dual listing and involvement in heavy industry have positive and significant effect on the level of risk disclosure. Company size (turnover) and leverage (debt/equity) are found to have negative association with the level of risk information disclosed by sampled companies.

Similarly, Vandamaele, Verguawen & Michiels (2009) empirically examine the determinants of management risk reporting practices of Belgian companies listed on Euronext. The study used content analysis to determine the risk disclosure level and Ordinary Least Square (OLS) regression model to examine the impact
of firm and governance characteristics on risk disclosures. The result for a sample of 46 non-financial firms revealed that both size (sales) and systematic risk (beta) have positive and significant relationship with level of risk disclosure. Profitability (ROA) has negative and significant relationship while other variables – board composition, risk committee, CEO duality and audit quality have statistically insignificant relationship with risk disclosure level.

Li & Qian-Qian (2010) also investigate the determinants of narrative risk disclosure of 75 Chinese companies listed on the Shanghai Stock Exchange. Using regression analysis the study found that company size (total assets) and director independency had significant and positive relationship with the number of risk disclosure while institutional ownership had statistically significant but negative association with risk disclosure. The study also found no association between the number of risk disclosure and other measures namely counterbalance of big stockholders, earnings power (ROA) and leverage (assets-liability ratio).

Similarly, Dobler, Lajili & Zeghal (2011) carry out multi-country investigation of the attributes of corporate risk disclosure and its association with level of firm risks. The study based on detailed content analysis of the annual reports of 160 manufacturing companies in the US, Germany, UK and Canada. The result revealed that risk disclosure in management reports concentrates mostly on financial risk categories and comprises little quantitative and forward looking disclosures across sample countries. In terms of disclosure quantity, the study found that US firms dominated followed by German firms and that cross country variation in risk disclosure attributes are linked to domestic disclosure regulations. While risk disclosure quantity has positive association with firm risk in North America, the study found a negative association with leverage for German firms. This is the first multi-country study within the reach of the researcher and it suggests that domestic disclosure regulations to some extent determine the quantity of risk disclosures amongst countries.

In another study, Kravet & Muslu (2011) examine textual risk disclosures in US-quoted companies’ 10-K reports between 1994 and 2007. Using content analysis for a sample of 28,110 firms year observations, they quantified firm risk disclosures by counting the number of sentences that contain key words (such as ‘risk’, ‘uncertain’, ‘may’, ‘might’ etc.) and compared year-on-year changes in the level of disclosures. The study found increased stock return volatility and trading volume around and after the (10-K) filings; that increases in risk disclosure are associated with more dispersed earnings forecast and forecast revisions after the filings. These findings suggest that risk disclosures reveal unknown unknowns and increase the market perception of risks and uncertainties.

Elzahar & Hussainey (2012) examine the determinants of narrative risk information in the interim reports for a sample of 72 UK non-financial companies. They use content analysis to measure the level of risk information and the Ordinary Least Squares regression analysis to examine the impact of the potential drivers on narrative risk disclosures. The study found that firm size and industry type have positive association with level of narrative risk disclosure in interim reports while liquidity, gearing, profitability and cross listing have statistically insignificant impact on narrative risk disclosures.

Nargess & Siti-Zaleha (2012) conduct a study to investigate the impact of firm size (total assets), firm complexity, industries, financial leverage (debt/assets ratio), auditor type, board independency, assets opacity (intangible assets to total assets ratio), stock price volatility, institutional ownership and country of domicile, on risk management adoption of 90 Malaysian public listed companies. Using logistic regression analysis, the result revealed that only financial leverage and audit type had a positive and significant influence on Enterprise Risk Management (ERM) adoption in Malaysia.

Musa, (2013) also assesses the effect of company leverage on corporate risk disclosure. Using regressions analysis for data relating to 2010 annual reports of 12 companies, the study concludes that corporate risk disclosure is not significantly related to company leverage.

Onoja, (2014) examines the influence of firm size, profitability, financial leverage, board composition and audit quality on the extent of risk disclosure for 88 listed non-financial firms in Nigeria. Using content analysis and multiple regressions analysis, the study found significant positive and negative relations for firm size and profitability respectively with level of risk disclosure. Financial leverage, board composition and audit quality have statistically insignificant impact on risk disclosures.

3. Methodology
The study seeks to review empirical literature on voluntary risk disclosure in corporate annual reports. The study adopts qualitative-archival research methodology involving secondary information obtained from journal articles, corporate finance texts and MSc. dissertation for the review. This approach is informed by the nature of the topic under study. Works of authors from 2004 to 2014 are used for the review.

4. Summary of findings
The review of prior studies presented above highlights twin research problems. First, results of the studies are inconclusive as to what are the actual determinants of risk disclosure practices of firms across the globe. For
instance, the studies of Mohobbot (2005); Klaus (2005); Linsley & Shrives (2006); Li & Qian-Qian (2010) and Onoja (2014) found a positive and significant relationship between company size and the extent of risk disclosure. Conversely, a negative relationship is found between company size and risk disclosure in the studies of Beretta & Bozzolan (2004); Rajab & Handler-Schachler (2009); Nargess & Siti-Zaleha (2012). While Linsley & Shrives (2006); Rajab & Handler-Schachler (2009); Li & Qian-Qian (2010) and Onoja (2014) documented a negative association between financial leverage and risk disclosure, Klaus (2005); Duemes & Knechel (2008); and Nargess & Siti-zaleha (2010) documented a positive leverage-risk disclosure relationship. Rajab & Handler-Schachler (2009) found a positive industry type-risk disclosure relationship but Beretta & Bozzolan(2004); Nargess & Siti-zaleha (2012) reported a negative relationship. Also, Klaus (2005); Abraham & Cox (2008) and Li & Qian-Qian (2010) confirmed positive as against negative risk-board composition effect documented by Nargess & Siti-zaleha (2012) and Onoja (2014). Furthermore, Klaus (2005) and Nargess & Siti-zaleha (2012) found positive risk-audit quality relation in contrast to negative relation documented by Vandamele et al., (2009) and Onoja (2014). The discrepancies notwithstanding the fact that most of the studies are characterized by methodological similarities in employment of content analysis, regression analysis and sampled companies namely: listed non-financial firms.

Secondly, most of the studies are from developed economies. There are relatively few studies from developing economies, indicating paucity of empirical evidence.

Conclusion
The study reviews extant literature on risk disclosure determinants of companies across the globe. The findings of the study show that there are no globally accepted determinants of risk disclosure. Reasons adduced for this phenomenon include regulatory frameworks, institutional settings and constraints and other peculiarities of countries of study. Also, the study reveals a research gap in the literature in respect of developing economies. The findings imply that the search for empirical determinants of risk disclosure in companies’ annual reports still constitute a research issue. Besides suggesting further studies especially in developing economies, the policy implication of this result is that hence risk reporting is voluntary and no globally accepted determinant in sight to influence the content of the disclosure, policy makers should put in place a framework for risk disclosure pattern of companies that would ensure credible, comparable, consistent and easy to follow but tough to escape material risk reporting. This paper contributes to extant literature by not only extending the frontiers of knowledge on corporate risk disclosure to a developing economy but also give the ongoing debate on the determinants of risk disclosure a global approach towards contributing to the search on convergent risk reporting dynamics.

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