THREE ESSAYS ON RISK DISCLOSURES IN AN ANNUAL REPORT: AN EMERGING MARKET PERSPECTIVE

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SURBHI JAIN
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THESIS ADVISORY COMMITTEE

PROF. MEHUL RAITHATHA
[Chairman]

PROF. SAUMYA RANJAN DASH
[Member]

PROF. KARTHIKEYA NARAPARAJU
[Member]

Abstract

Disclosures in the annual report play an important role in determining the value of the firm. Firms are cautious while disclosing risk in their annual report due to its uncertain consequences (Suijs, 2007). On the one hand, the disclosure mechanism helps investors to make an informed decision (Li *et al.*, 2019); while on the other hand, opportunistic managers may try to provide only limited information to meet the regulatory requirements (Glaum, 2020). In India, the Securities Exchange Board of India (SEBI, schedule III), mandates certain disclosures which is material in the view of the board of directors and have price/performance-sensitive information. It mandates the formation of a 'management discussion and analysis section in the annual report, which has to specify opportunities & threats, risks & concerns, and certain significant changes. The companies act, 2013 also emphasises mandatory financial disclosure in annual reports. These regulatory bodies make efforts in encouraging firms to do better risk disclosures. In the present study, we extend three lines of enquiry related to the firm-level risk disclosure in the annual report. First, we examine the firm-level determinants of risk disclosure. Second, the study explores the implication of risk disclosure on firm value. Third, the study explores the potential impact of the market-wide sentiment environment on the managerial action for risk disclosure in the annual report. We also investigate the role of governance in disciplining management. This study has implications for the emerging economy characterized by ownership concentration, weak investor protection, weak governance mechanism, high government interventions, inefficient stock market, and high information asymmetry.

The first essay investigates the impact of the founder's ownership concentration (hereafter, FOC) on the risk disclosure (RDI hereafter). Indian corporate landscape is dominated by the family firm where founders have large shareholdings. Such firms where *FOC* is high have been an interest in the extant literature. The prior studies document that in firms where ownership is concentrated in the hands of founders, there is a possibility of private information abuse, weak internal control, misstatement, fraud, related party transactions, and expropriation of minority shareholders (Chen *et al.*, 2020; Filatotchev *et al.*, 2011; Shyu & Lee, 2009). These challenges call for a suitable governance mechanism. Risk governance (risk management committee and its characteristics) reduces information asymmetry and encourages reliable information about organisational risk, overall strategy, and policies, i.e., improves disclosures (Biswas *et al.*, 2019; Subramaniam *et al.*, 2009; Tao & Hutchinson, 2013). This essay further investigates the moderating role of risk governance on the relationship between *FOC* and *RDI*. The study finds

that the higher the FOC, the lower the *RDI*. Also, a good risk governance nullifies the negative influence of *FOC* on *RDI*, and firms are more motivated to disclose risk-related information.

In the second essay, the study examine the role of *RDI* on firm value. The firms seem to be cautious while disclosing risky information in public. In the recent past, voluntary risk disclosures have gained attention and plenty of arguments are building up to investigate its impact on firm value. Its impact is primarily a trade-off between costs and benefits. One strand of literature argues for its benefits and concludes its positive impact on firm value (Al-Maghzom *et al.*, 2016; Clarkson *et al.*, 2013; Al-Akra and Ali, 2012), whereas others observe it as a costly affair and reported its negative impact (Haj-Salem *et al.*, 2020; Bokpin, 2013; Wang *et al.*, 2013). With this inconclusive result, this essay proposes to investigate the impact of *RDI* on firm value. Moreover, The study proposes the significant role of governance in mitigating the negative impact of *RDI* on firm value. The study finds the negative influence of risk disclosure on firm value. However, good board governance mitigates this negative influence.

The third essay examine how management strategically behaves in disclosing risk-related information with respect to market-wide investor sentiment. It is well known from the literature that managers exercise discretion in the disclosure of good vs bad information or when the impact of disclosure is unknown (Lev & Penman, 1990; Suijs, 2007). Managers disclose bad news when investors are high on their market-wide sentiments (Duong *et al.*, 2018). This motivates me to investigate the impact of investor sentiment on the manager's discretion towards risk disclosure. In addition, this essay also investigates the moderating role of governance between the *RDI* and investor sentiments. The study finds that during high investor sentiment periods firms are less likely to disclose risk-related information. Further, the study concludes the significant role of board governance in diluting the negative effect of investor sentiments on RDI.

The thesis contributes to the literature in several ways. First, it strengthens the literature on risk disclosures, founder ownership concentration, investor sentiments, and governance in an emerging economy. Second, it explores the determinants and plausible effects of risk disclosures on firm value. Third, it highlights the importance of governance. Forth, it is the first study to the best of my knowledge, which finds the moderating role of governance in three different relationships; 1) founder ownership concentration and risk disclosures, 2) risk disclosures and firm value, and 3) investor sentiments and risk disclosures.

The study follows the literature, despite have some limitations and calls for the need of further studies. First, the study draws the results from an emerging economy. There is further scope for a comparative study on the results of emerging and developed economies. Second, the construct of risk disclosures is based on manual textual analysis. This construct includes all types of risk. Further, study could be conducted on types of risk disclosures such as strategic risk, financial risk, business risk, environment risk, foreign risk, credit risk, and default risk. Also, the *RDI* construct can follow some other definition according to the literature. Third, the study takes the top 200 Indian-listed firms as we follow the manual textual analysis of the annual report for the *RDI* construct. Further study may take a wider dataset.

Keywords: Risk disclosures, promoter's ownership concentration, board governance, risk governance, investor sentiment

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Abraham, S., & Cox, P. (2007). Analysing the determinants of narrative risk information in UK FTSE 100 annual reports. *The British Accounting Review*, 39(3), 227-248.

Ahn, M., Bonsall, S. B., & Van Buskirk, A. (2019). Do managers withhold bad news from credit rating agencies?. *Review of Accounting Studies*, *24*(3), 972-1021.

Al-Akra, M., & Ali, M. J. (2012). The value relevance of corporate voluntary disclosure in the Middle-East: The case of Jordan. *Journal of Accounting and Public Policy*, *31*(5), 533-549.

Amrin, A. (2019). An empirical study: characteristics of business entities and corporate governance on risk disclosure practices. Verslas: teorija ir praktika, 20(1), 25-49

Baker, M., & Wurgler, J. (2006). Investor sentiment and the cross-section of stock returns. *The Journal of Finance*, 61(4), 1645-1680.

Baker, H. K., & Nofsinger, J. R. (2002). Psychological biases of investors. *Financial Services Review*, 11(2), 97.

Bergman, N. K., & Roychowdhury, S. (2008). Investor sentiment and corporate disclosure. *Journal of Accounting Research*, 46(5), 1057-1083.

Biswas, P. K., Roberts, H., & Whiting, R. H. (2019). The impact of family vs non-family governance contingencies on CSR reporting in Bangladesh. *Management Decision*. *57*(10), 2758-2781.

Bonsall, S. B., & Miller, B. P. (2017). The impact of narrative disclosure readability on bond ratings and the cost of debt. *Review of Accounting Studies*, *22*(2), 608-643.

Botosan, C. A., and Plumlee, M. A. (2002). A re-examination of disclosure level and the expected cost of equity capital. *Journal of Accounting Research*, 40(1), 21-40.

Campbell, J. L., Chen, H., Dhaliwal, D. S., Lu, H. M., and Steele, L. B. (2014). The information content of mandatory risk factor disclosures in corporate filings. *Review of Accounting Studies*, 19(1), 396-455.

Chen, X., Feng, M., & Li, C. (2020). Family entrenchment and internal control: evidence from S&P 1500 firms. *Review of Accounting Studies, 25*(1), 256-278.

Chen, E., Gavious, I., & Lev, B. (2017). The positive externalities of IFRS R&D capitalization: enhanced voluntary disclosure. *Review of Accounting Studies*, 22(2), 677-714.

Cheng, H., Huang, D., & Luo, Y. (2020). Corporate disclosure quality and institutional investors' holdings during market downturns∗. *Journal of Corporate Finance*, *60*, 101523.

Cheynel, E. (2013). A theory of voluntary disclosure and cost of capital. *Review of Accounting Studies*, *18*(4), 987-1020.

Chung, S. G., Goh, B. W., Ng, J., & Yong, K. O. (2017). Voluntary fair value disclosures beyond SFAS 157’s three-level estimates. *Review of accounting studies*, *22*(1), 430-468.

Chung, J., Kim, H., Kim, W., & Yoo, Y. K. (2012). Effects of disclosure quality on market mispricing: Evidence from derivative-related loss announcements. *Journal of Business Finance & Accounting*, *39*(7-8), 936-959.

Cohen, J. R., Krishnamoorthy, G., & Wright, A. (2004). The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature*, 87-152.

Cutler, J., Davis, A. K., and Peterson, K. (2019). Disclosure and the outcome of securities litigation. *Review of Accounting Studies*, 24 (1), 230-263.

Dobler, M., Lajili, K., & Zéghal, D. (2011). Attributes of corporate risk disclosure: An international investigation in the manufacturing sector. *Journal of International Accounting Research*, *10*(2), 1-22.

Duong, H. K., Schuldt, M., & Gotti, G. (2018). Investor sentiment and timely loss recognition. *Review of Accounting and Finance*, *17*(3), 383-404.

Elgammal, M. M., Hussainey, K., & Ahmed, F. (2018). Corporate governance and voluntary risk and forward-looking disclosures. *Journal of Applied Accounting Research*, 19(4), 592-607.

Elshandidy, T., Fraser, I., & Hussainey, K. (2013). Aggregated, voluntary, and mandatory risk disclosure incentives: evidence from UK FTSE all share. *International Review of Financial Analysis*, 30, 320-333.

Elshandidy, T., & Neri, L. (2015). Corporate governance, risk disclosure practices, and market liquidity: Comparative evidence from the UK and Italy. *Corporate Governance: An International Review*, *23*(4), 331-356.

Elzahar, H., & Hussainey, K. (2012). Determinants of narrative risk disclosures in UK interim reports. *The Journal of Risk Finance*, 13(2), 133-147.

Embong, Z., Mohd-Saleh, N., & Hassan, M. S. (2012). Firm size, disclosure and cost of equity capital. *Asian Review of Accounting*, 20(2), 119-139.

Glaeser, S. (2018). The effects of proprietary information on corporate disclosure and transparency: Evidence from trade secrets. *Journal of Accounting and Economics*, 66(1), 163-193

Glaum, M. (2020). Financial Reporting in Non-listed Family Firms: Insights from Interviews with CFOs. *Schmalenbach Business Review*, 72(2), 225-270.

Gelb, D. S., & Zarowin, P. (2002). Corporate disclosure policy and the informativeness of stock prices. *Review of Accounting Studies*, 7(1), 33-52

Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of accounting and economics*, *40*(1-3), 3-73.

Greco, G. (2012). The management's reaction to new mandatory risk disclosure: A longitudinal study on Italian listed companies. *Corporate Communications: An International Journal*, 17(2), 113-137.

Gul, F. A., & Leung, S. (2004). Board leadership, outside directors' expertise and voluntary corporate disclosures. *Journal of Accounting and Public Policy*, 23(5), 351-379.

Hassan, O. A., Romilly, P., Giorgioni, G., & Power, D. (2009). The value relevance of disclosure: Evidence from the emerging capital market of Egypt. *The International Journal of Accounting*, 44(1), 79-102.

Jain, S., & Raithatha, M. (2021). Risk disclosures and firm value: the role of governance in an emerging market. *International Journal of Productivity and Performance Management*, 71(8), 3205-3227.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.

Jorgensen, J. L., & Mano, R. M. (1985). Financial Statement Disclosure of Uninsured Risks. *The Journal of Risk and Insurance*, *52*(1), 133-143.

Kajuter, P. (2006), "Risk disclosures of listed firms in Germany: a longitudinal study", paper presented at the 10th Financial Reporting & Business Communication Conference, Cardiff Business School, 6-7 July.

Keusch, T., Bollen, L. H., & Hassink, H. F. (2012). Self-serving bias in annual report narratives: An empirical analysis of the impact of economic crises. *European Accounting Review*, 21(3), 623-648.

Khan, A., Muttakin, M.B. and Siddiqui, J. (2013). Corporate governance and corporate social responsibility disclosures: evidence from an emerging economy. *Journal of Business Ethics*, 114, 207-223.

Kravet, T., & Muslu, V. (2013). Textual risk disclosures and investors' risk perceptions. *Review of Accounting Studies*, *18*(4), 1088-1122.

Lev, B., & Penman, S. H. (1990). Voluntary forecast disclosure, nondisclosure, and stock prices. *Journal of Accounting Research, 28*(1), 49-76.

Leuz, C., & Verrecchia, R. E. (2000). The economic consequences of increased disclosure. *Journal of accounting research*, 38, 91-124.

Li, F. (2006). Do stock market investors understand the risk sentiment of corporate annual reports?. *Available at SSRN 898181.*

Li, Y., He, J., & Xiao, M. (2019). Risk disclosure in annual reports and corporate investment efficiency. *International Review of Economics & Finance*, 63, 138-151.

Linsley, P. M., & Shrives, P. J. (2005). Transparency and the disclosure of risk information in the banking sector. *Journal of Financial regulation and Compliance*, 13(3), 205-214.

Mercer, M. (2004). How do investors assess the credibility of management disclosures?. *Accounting Horizons*, 18(3), 185-196.

Miihkinen, A. (2013). The usefulness of firm risk disclosures under different firm riskiness, investor-interest, and market conditions: New evidence from Finland. *Advances in Accounting*, 29(2), 312-331.

Oliveira, J., Rodrigues, L. L., & Craig, R. (2011). Risk-related disclosures by non-finance companies: Portuguese practices and disclosure characteristics. *Managerial Auditing Journal*, 26(9), 817-839.

O'Sullivan, M., Percy, M., & Stewart, J. (2008). Australian evidence on corporate governance attributes and their association with forward-looking information in the annual report. *Journal of Management & Governance*, 12(1), 5-35.

Patell, J. M., & Wolfson, M. A. (1982). Good news, bad news, and the intraday timing of corporate disclosures. *Accounting Review*, 57(3), 509-527.

Peters, G. F., & Romi, A. M. (2014). Does the voluntary adoption of corporate governance mechanisms improve environmental risk disclosures? Evidence from greenhouse gas emission accounting. *Journal of Business Ethics*, 125(4), 637-666.

Freeman, E. (1984). Strategic Management: A Stakeholder Approach (Boston, MA.: Pitman Co.).

Filatotchev, I., Zhang, X., & Piesse, J. (2011). Multiple agency perspective, family control, and private information abuse in an emerging economy. *Asia Pacific Journal of Management,* 28(1), 69-93.

Salem, I. H., Ayadi, S. D., & Hussainey, K. (2019). Corporate governance and risk disclosure quality: Tunisian evidence. *Journal of Accounting in Emerging Economies*, 9(4), 567-602.

Saggar, R., & Singh, B. (2017). Corporate governance and risk reporting: Indian evidence. *Managerial Auditing Journal*, 32(4/5), 378-405.

Shivaani, M. V., Jain, P. K., & Yadav, S. S. (2019). Development of a risk disclosure index and its application in an Indian context. *Managerial Auditing Journal*, 35(1), 1-23.

Shefrin, H. (2002). Beyond greed and fear: Understanding behavioral finance and the psychology of investing. Oxford University Press on Demand.

Shleifer, A., & Summers, L. H. (1990). The noise trader approach to finance. Journal of Economic perspectives, 4(2), 19-33.

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. The journal of finance, 52(2), 737-783.

Shyu, Y. W., & Lee, C. I. (2009). Excess control rights and debt maturity structure in family-controlled firms. *Corporate Governance: An International Review,* 17(5), 611-628.

Subramaniam, N., McManus, L., & Zhang, J. (2009). Corporate governance, firm characteristics and risk management committee formation in Australian companies. *Managerial Auditing Journal*, 24(4), 316-339.

Suijs, J. (2007). Voluntary disclosure of information when firms are uncertain of investor response. *Journal of Accounting and Economics*, 43(2-3), 391-410.

Tao, N. B., & Hutchinson, M. (2013). Corporate governance and risk management: The role of risk management and compensation committees. *Journal of Contemporary Accounting & Economics,* 9(1), 83-99.

Udayasankar, Krishna. (2008). "Corporate social responsibility and firm size." *Journal of business ethics,* 83(2), 167-175.

Varottil, U. (2010). Evolution and effectiveness of independent directors in Indian corporate governance. Hastings Bus. LJ, 6, 281.

Verrecchia, R. E. (1983), Discretionary disclosure. *Journal of Accounting and Economics*, 5, 179-194.

Verrecchia, R. E. (1990). Endogenous proprietary costs through firm interdependence. *Journal of accounting and economics*, *12*(1-3), 245-250.

Verrecchia, R. E. (2001). Essays on disclosure. *Journal of Accounting and Economics*, *32*(1-3), 97-180.

Verrecchia, R. E., & Weber, J. (2006). Redacted disclosure. *Journal of Accounting Research*, 44(4), 791-814.

Wang, M., & Hussainey, K. (2013). Voluntary forward-looking statements driven by corporate governance and their value relevance. *Journal of Accounting and Public Policy*, 32(3), 26-49.

Wang, Z., Ali, M. J., & Al-Akra, M. (2013). Value relevance of voluntary disclosure and the global financial crisis: evidence from China. *Managerial Auditing Journal*. 28(5), 444-468.

Watts, R. L., & Zimmerman, J. L. (1986). Positive accounting theory.

Weisbach, M. S. (1988). Outside directors and CEO turnover. *Journal of financial Economics*, 20, 431-460.

Woodward, D. G., Edwards, P., & Birkin, F. (1996). Organizational legitimacy and stakeholder information provision. *British Journal of Management*, 7(4), 329-347

Yoshikawa, T., Dieleman, M., & Geng, X. (2016). A behavioral view of family firm disclosures. *Academy of Management Proceedings*, 1, 11795

References

Abraham, S., & Cox, P. (2007). Analysing the determinants of narrative risk information in UK FTSE 100 annual reports. *The British Accounting Review*, 39(3), 227-248

Aebi, V., Sabato, G., & Schmid, M. (2012). Risk management, corporate governance, and bank performance in the financial crisis. *Journal of Banking & Finance*, 36(12), 3213-3226.

Al-Hadi, A., Hussain, S. M., Al-Yahyaee, K. H., & Al-Jabri, H. S. (2018). Risk Committees and Implied Cost of Equity Capital. *International Review of Finance*, 18(4), 689-703

Al-Hadi, A., Taylor, G., & Al-Yahyaee, K. H. (2016). Ruling family political connections and risk reporting: evidence from the GCC. *The International Journal of Accounting*, 51(4), 504-524.

Allini, A., Manes Rossi, F., & Hussainey, K. (2016). The board's role in risk disclosure: an exploratory study of Italian listed state-owned enterprises. *Public Money & Management*, 36(2), 113-120

Ames, D. A., Hines, C. S., & Sankara, J. (2018). Board risk committees: Insurer financial strength ratings and performance. *Journal of Accounting and Public Policy*, 37(2), 130-145

Arshad, R., Nor, R. M., & Ahmad Noruddin, N. A. (2011). Ownership Structure and Interaction effects of firm performance on management commentary disclosures. *Journal of Global Management*, 2(2), 124-145.

Baghai, R. P., & Becker, B. (2018). Non-rating revenue and conflicts of interest. *Journal of Financial Economics*, 127(1), 94-112

Bansal, S., Lopez-Perez, M. V., & Rodriguez-Ariza, L. (2018). Board independence and corporate social responsibility disclosure: The mediating role of the presence of family ownership. *Administrative Sciences*, 8(3), 33.

Barakat, A., & Hussainey, K. (2013). Bank governance, regulation, supervision, and risk reporting: Evidence from operational risk disclosures in European banks. *International Review of Financial Analysis*, 30, 254-273.

Biswas, P. K., Roberts, H., & Whiting, R. H. (2019). The impact of family vs non-family governance contingencies on CSR reporting in Bangladesh. *Management Decision,* 57(10), 2758-2781.

Bokpin, G. A., & Isshaq, Z. (2009). Corporate governance, disclosure and foreign share ownership on the Ghana Stock Exchange. *Managerial Auditing Journal.* 24(7), 688-703.

Boujeben, S., & Boujelben, C. (2020). Socio-emotional wealth preservation and KPI voluntary disclosure quality. *Journal of Financial Reporting and Accounting,* 18(3), 459-482.

Campopiano, G., & De Massis, A. (2015). Corporate social responsibility reporting: A content analysis in family and non-family firms. *Journal of Business Ethics*, 129(3), 511-534

Chari, M. D. (2013). Business groups and foreign direct investments by developing country firms: An empirical test in India. *Journal of World Business*, 48(3), 349-359.

Chau, G. K., & Gray, S. J. (2002). Ownership structure and corporate voluntary disclosure in Hong Kong and Singapore. *The International Journal of Accounting*, 37(2), 247-265

Chau, G., & Gray, S. J. (2010). Family ownership, board independence and voluntary disclosure: Evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation*, 19(2), 93-109

Chauhan, Y., Lakshmi, K. R., & Dey, D. K. (2016). Corporate governance practices, self-dealings, and firm performance: Evidence from India. *Journal of Contemporary Accounting & Economics*, 12(3), 274-289

Chen, C. J., & Jaggi, B. (2000). Association between independent non-executive directors, family control and financial disclosures in Hong Kong. *Journal of Accounting and Public Policy*, 19(4-5), 285-310

Chen, S., Chen, X. I. A., & Cheng, Q. (2008). Do family firms provide more or less voluntary disclosure?. *Journal of Accounting Research*, 46(3), 499-536.

Cheng, H., Huang, D., & Luo, Y. (2020). Corporate disclosure quality and institutional investors' holdings during market downturns∗. *Journal of Corporate Finance*, 60, 101523.

Cheng, M., Lin, B., Lu, R., & Wei, M. (2020). Non-controlling large shareholders in emerging markets: Evidence from China. *Journal of Corporate Finance*, 63, 101259.

Cirillo, A., Ossorio, M., & Pennacchio, L. (2019). Family ownership and R&D investment: the moderating role of banks and private equity. *Management Decision*, 57(7), 1675-1694.

Col, B., & Sen, K. (2019). The role of corporate governance for acquisitions by the emerging market multinationals: Evidence from India. *Journal of Corporate Finance*, 59, 239-254

Daily, C. M., & Dollinger, M. J. (1992). An empirical examination of ownership structure in family and professionally managed firms. *Family Business Review*, 5(2), 117-136.

Dobler, M. (2008). Incentives for risk reporting—A discretionary disclosure and cheap talk approach. *The International Journal of Accounting*, 43(2), 184-206

Dobler, M., Lajili, K., & Zéghal, D. (2011). Attributes of corporate risk disclosure: An international investigation in the manufacturing sector. *Journal of International Accounting Research*, 10(2), 1-22.

Donoher, W. J. (2009). Firm founders, boards, and misleading disclosures: An examination of relative power and control. *Journal of Managerial issues*, 309-326.

Elgammal, M. M., Hussainey, K., & Ahmed, F. (2018). Corporate governance and voluntary risk and forward-looking disclosures. *Journal of Applied Accounting Research,* 19(4), 592-607.

Elshandidy, T., & Neri, L. (2015). Corporate Governance, Risk Disclosure Practices, and Market Liquidity: Comparative Evidence from the UK and Italy. *Corporate Governance: An International Review*, 23(4), 331-356

Elshandidy, T., Fraser, I., & Hussainey, K. (2011). Aggregated, voluntary, and mandatory risk disclosure incentives: evidence from UK FTSE all share. working paper

Elshandidy, T., Fraser, I., & Hussainey, K. (2013). Aggregated, voluntary, and mandatory risk disclosure incentives: Evidence from UK FTSE all-share companies. *International Review of Financial Analysis*, 30, 320-333

Fernando, G. D., Schneible Jr, R. A., & Suh, S. (2014). Family firms and institutional investors. *Family Business Review*, 27(4), 328-345.

Filatotchev, I., Zhang, X., & Piesse, J. (2011). Multiple agency perspective, family control, and private information abuse in an emerging economy. *Asia Pacific Journal of Management*, 28(1), 69-93.

Garcia-Meca, E., & Sanchez-Ballesta, J. P. (2010). The association of board independence and ownership concentration with voluntary disclosure: A meta-analysis. *European Accounting Review*, 19(3), 603-627.

Glaum, M. (2020). Financial Reporting in Non-listed Family Firms: Insights from Interviews with CFOs. *Schmalenbach Business Review*, 72(2), 225-270

Grassa, R., Moumen, N., & Hussainey, K. (2020). Do ownership structures affect risk disclosure in Islamic banks? International evidence. *Journal of Financial Reporting and Accounting*, 19(3), 369-391.

Greco, G. (2012). The management's reaction to new mandatory risk disclosure: A longitudinal study on Italian listed companies. *Corporate Communications: An International Journal*, 17(2), 113-137.

Huang, X., & Kang, F. (2019). Are family firms more optimistic than non-family firms?. *Accounting Research Journal.* 32(3), 399-416.

Jadoon, I. A., Noreen, U., Ayub, U., Tahir, M., & Shahzadi, N. (2021). The impact of family ownership on quality and disclosure of internal control in Pakistan. *Sustainability*, *13*(16), 8755.

Jameson, M., Prevost, A., & Puthenpurackal, J. (2014). Controlling shareholders, board structure, and firm performance: Evidence from India. *Journal of Corporate Finance*, 27, 1-20.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.

Jorgensen, J. L., & Mano, R. M. (1985). Financial Statement Disclosure of Uninsured Risks. *The Journal of Risk and Insurance*, 52(1), 133-143

Kang, F. (2014). Founding family ownership and the selection of industry specialist auditors. *Accounting Horizons*, 28(2), 261-276

Kim, E. H., and Lu, Y. (2011), “CEO ownership, external governance, and risk-taking”, *Journal of Financial Economics*, Vol. 102 No. 2, pp. 272-292.

Kravet, T., and Muslu, V. (2013), “Textual risk disclosures and investors’ risk perceptions”, *Review of Accounting Studies*, Vol. 18 No. 4, pp. 1088-1122

Krishnan, G., & Peytcheva, M. (2019). The risk of fraud in family firms: Assessments of external auditors. *Journal of Business Ethics*, 157(1), 261-278.

Lajili, K., & Zéghal, D. (2005). A content analysis of risk management disclosures in Canadian annual reports. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 22(2), 125-142.

Latham, C. K., & Jacobs, F. A. (2000). Monitoring and incentive factors influencing misleading disclosures. *Journal of Managerial Issues*, 12(2), 169-187.

Li, F. (2006). Do stock market investors understand the risk sentiment of corporate annual reports?. Available at SSRN 898181

Li, Y., He, J., & Xiao, M. (2019). Risk disclosure in annual reports and corporate investment efficiency. *International Review of Economics & Finance*, 63, 138-151

Linsley, P. M., & Shrives, P. J. (2005). Examining risk reporting in UK public companies. The *Journal of Risk Finance,* 6(4), 292-305.

Linsley, P. M., & Shrives, P. J. (2006). Risk reporting: A study of risk disclosures in the annual reports of UK companies. *The British Accounting Review*, 38(4), 387-404.

Maddala, G. S. (1991). A perspective on the use of limited-dependent and qualitative variables models in accounting research. *The Accounting Review, 66*(4), 788-807

Madhani, P. M. (2016). Ownership concentration, corporate governance and disclosure practices: A study of firms listed in Bombay Stock Exchange. *Corporate Governance and Disclosure Practices: A Study of Firms Listed in Bombay Stock Exchange*, 15(4), 7-36.

Meijer, M. (2011). Risk disclosures in annual reports of Dutch listed companies during the years 2005-2008 (Master's thesis, University of Twente)

Mokhtar, E. S., & Mellett, H. (2013). Competition, corporate governance, ownership structure and risk reporting. *Managerial Auditing Journal,* 28(9), 838-865.

Peters, G. F., & Romi, A. M. (2014). Does the voluntary adoption of corporate governance mechanisms improve environmental risk disclosures? Evidence from greenhouse gas emission accounting. *Journal of Business Ethics*, 125(4), 637-666

Saggar, R., & Singh, B. (2017). Corporate governance and risk reporting: Indian evidence. *Managerial Auditing Journal*, 32(4/5), 378-405.

Salancik, G. R., & Pfeffer, J. (1978). The external control of organizations: A resource dependence perspective (pp. 167-199). New York: Harper & Row.

Sarkar, A., Subramanian, K., & Tantri, P. (2019). Effects of CEO turnover in banks: Evidence using exogenous turnovers in Indian banks. *Journal of Financial and Quantitative Analysis*, 54(1), 183-214.

Sharma, P., Panday, P., & Dangwal, R. C. (2020). Determinants of environmental, social and corporate governance (ESG) disclosure: a study of Indian companies. *International Journal of Disclosure and Governance*, 17, 208-217.

Shivaani, M. V., Jain, P. K., & Yadav, S. S. (2019). Development of a risk disclosure index and its application in an Indian context. *Managerial Auditing Journal*, 35(1), 1-23.

Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *Journal of political economy*, 94(3, Part 1), 461-488.

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The journal of finance*, 52(2), 737-783.

Shyu, Y. W., & Lee, C. I. (2009). Excess control rights and debt maturity structure in family-controlled firms. *Corporate Governance: An International Review*, 17(5), 611-628.

Solomon, J. F., Solomon, A., Norton, S. D., & Joseph, N. L. (2000). A conceptual framework for corporate risk disclosure emerging from the agenda for corporate governance reform. *The British Accounting Review*, 32(4), 447-478.

Subramaniam, N., McManus, L., & Zhang, J. (2009). Corporate governance, firm characteristics and risk management committee formation in Australian companies. *Managerial auditing journal*, 24(4), 316-339.

Tao, N. B., & Hutchinson, M. (2013). Corporate governance and risk management: The role of risk management and compensation committees. *Journal of Contemporary Accounting & Economics*, 9(1), 83-99

Terlaak, A., Kim, S., & Roh, T. (2018). Not good, not bad: The effect of family control on environmental performance disclosure by business group firms. *Journal of Business Ethics*, 153(4), 977-996

Tessema, A., Kim, M. S., & Dandu, J. (2018). The impact of ownership structure on earnings quality: The case of South Korea. *International Journal of Disclosure and Governance*, 15(3), 129-141

Thoemmes, F. (2012). Propensity score matching in SPSS. *arXiv preprint arXiv:1201.6385*.

Varottil, U. (2010). Evolution and effectiveness of independent directors in Indian corporate governance. Hastings Bus. LJ, 6, 281

Verrecchia, R. E. (1983). Discretionary disclosure. Journal of accounting and economics, 5, 179-194.

Vural, D. (2018). Disclosure practices by family firms: Evidence from Swedish publicly listed firms. *Accounting in Europe*, 15(3), 347-373.

Watts, R. L. (1977). Corporate financial statements, a product of the market and political processes. *Australian journal of management*, 2(1), 53-75

Weiss, D. (2014). Internal controls in family-owned firms. European Accounting Review, 23(3), 463-482.

Wu, Y. C., Kweh, Q. L., Lu, W. M., & Azizan, N. A. (2016). The impacts of risk-management committee characteristics and prestige on efficiency. *Journal of the Operational Research Society*, 67(6), 813-829

Yoshikawa, T., Dieleman, M., & Geng, X. (2016). A behavioral view of family firm disclosures. In Academy of Management Proceedings (Vol. 2016, No. 1, p. 11795). Briarcliff Manor, NY 10510: *Academy of Management.*

Zhang, X., Wei, J. T., & Wu, H. H. (2017). Family firm and analyst forecasts in an emerging economy. *Management Decision*, 55(9), 2018-2037.

Zhang, W., & Cao, L. (2016). Family involvement, internal control and agency costs– Evidences from China's listed family firms. *Perspectives in Science*, 7, 45-51

References

Abraham, S., & Cox, P. (2007), "Analysing the determinants of narrative risk information in UK FTSE 100 annual reports", *The British Accounting Review*, Vol. 39 No.3, pp. 227-248.

Ahn, M., Bonsall, S. B., and Van Buskirk, A. (2019), “Do managers withhold bad news from credit rating agencies?”, *Review of Accounting Studies*, Vol 24 No. 3, pp. 972-1021.

Al-Akra, M., and Ali, M. J. (2012), “The value relevance of corporate voluntary disclosure in the Middle-East: the case of Jordan”, *Journal of Accounting and Public Policy*, Vol. 31 No. 5, pp. 533-549.

Alipour, M., Ghanbari, M., Jamshidinavid, B., & Taherabadi, A. (2019), "Does board independence moderate the relationship between environmental disclosure quality and performance? Evidence from static and dynamic panel data", *Corporate Governance: The International Journal of Business in Society*, Vol. 19 No. 3, pp. 580-610.

Allini, A., Manes Rossi, F., & Hussainey, K. (2016), "The board's role in risk disclosure: an exploratory study of Italian listed state-owned enterprises", *Public Money & Management*, Vol. 36 No. 2, pp. 113-120.

Al-Maghzom, A., Hussainey, K., & Aly, D. A. (2016), "Value relevance of voluntary risk disclosure levels: Evidence from Saudi banks", *Accounting & Taxation*, Vol. 8 No. 1, pp. 1-25.

Basoglu, K. A., and Hess, T.J. (2014), “Online business reporting: a signaling theory perspective”, *Journal of Information systems*, Vol. 28 No., 2, pp. 67-101.

Bokpin, G. (2013), “Determinants and value relevance of corporate disclosure: evidence from the emerging capital market of Ghana”, *Journal of Applied Accounting Research*, Vol. 14 No. 2, pp. 127-146.

Chauhan, Y., Lakshmi, K. R., and Dey, D. K. (2016), “Corporate governance practices, self-dealings, and firm performance: evidence from India”, *Journal of Contemporary Accounting and Economics*, Vol. 12 No. 3, pp. 274-289.

Choi, F. D. (1973), “Financial disclosure and entry to the European capital market”, *Journal of Accounting Research*, Vol. 11 No. 2, pp. 159-175.

Clarkson, P. M., Fang, X., Li, Y., and Richardson, G. (2013), “The relevance of environmental disclosures: are such disclosures incrementally informative?”, *Journal of Accounting and Public Policy*, Vol. 32 No.5, pp. 410-431.

Col, B., and Sen, K. (2019), “The role of corporate governance for acquisitions by the emerging market multinationals: evidence from India”, *Journal of Corporate Finance*, Vol. 59, pp. 239-254.

Cormier, D., Magnan, M., and Van Velthoven, B. (2005), “Environmental disclosure quality in large German companies: economic incentives, public pressures or institutional conditions?”, *European accounting review*, Vol. 14 No. 1, pp. 3-39.

Dash, S. R., and Raithatha, M. (2019), “Corporate governance and firm performance relationship: implications for risk-adjusted return behaviour”, *Managerial and Decision Economics*, Vol. 40 No. 8, pp. 923-940.

Dye, R. A. (1986), "Proprietary and non-proprietary disclosures", *Journal of business*, Vol. 59 No. 2, pp. 331-366.

Elamer, A. A., Ntim, C. G., Abdou, H. A., Owusu, A., Elmagrhi, M., & Ibrahim, A. E. A. (2021), "Are bank risk disclosures informative? Evidence from debt markets", *International Journal of Finance & Economics*, Vol. 26 No 1, pp. 1270-1298.

Elamer, A. A., Ntim, C. G., Abdou, H. A., & Pyke, C. (2020a), "Sharia supervisory boards, governance structures and operational risk disclosures: evidence from Islamic banks in MENA countries", *Global Finance Journal*, Vol 46, p. 100488.

Elamer, A. A., Ntim, C. G., and Abdou, H. A (2020b), "Islamic governance, national governance, and bank risk management and disclosure in MENA countries.” *Business & Society*", Vol. 59 No. 5, pp. 914-955

Elamer, A. A., Ntim, C. G., Abdou, H. A., Zalata, A. M., & Elmagrhi, M. (2019). “Impact of multi-layer governance on bank risk disclosure in emerging markets: the case of Middle East and North Africa”, *Accounting Forum*, Vol. 42 No. 2, pp. 244-281.

Elshandidy, T. M. (2011), "Risk reporting incentives: a cross-country study", Unpublished PhD Thesis, Stirling Management School. Stirling University, UK

Elshandidy, T. M., and Neri, L. (2015), "Corporate Governance, Risk Disclosure Practices, and Market Liquidity: comparative Evidence from the U.K. and Italy", *Corporate Governance: an International Review*, Vol. 23 No.4, pp. 331-356.

Fama, E. F., and Jensen, M. C. (1983), “Separation of ownership and control”, *The Journal of Law and Economics*, Vol. 26 No. 2, pp. 301-325.

Freeman, R. E. (1984), "Strategic Management: A Stakeholder Approach", Pitman Publishing Inc., Marshfield, MA.

Glaum, M. (2020), "Financial Reporting in Non-listed Family Firms: insights from interviews with CFOs." *Schmalenbach Business Review*, Vol. 72 No. 2, pp. 225-270.

Greco, G. (2012), "The management's reaction to new mandatory risk disclosure: A longitudinal study on Italian listed companies", *Corporate Communications: An International Journal*, Vol. 17 No. 2, pp. 113-137.

Haj-Salem, I., Ayadi, S. D., & Hussainey, K. (2020), "The joint effect of corporate risk disclosure and corporate governance on firm value", *International Journal of Disclosure and Governance*, Vol. 17 No. 2, pp. 123-140.

Hassan, O. A., & Marston, C. (2019), "Corporate financial disclosure measurement in the empirical accounting literature: a review article", *The International Journal of Accounting*, Vol. 54 No. 2, p. 1950006.

Hope, O. K., Hu, D., and Lu, H. (2016), “The benefits of specific risk-factor disclosures”, *Review of Accounting Studies*, Vol. 21 No. 4, pp. 1005-1045.

Ibrahim, A. E. A., & Hussainey, K. (2019), “Developing the narrative risk disclosure measurement”, *International Review of Financial Analysis*, Vol. 64, pp. 126-144.

Jameson, M., Prevost, A., and Puthenpurackal, J. (2014), “Controlling shareholders, board structure, and firm performance: evidence from India”, *Journal of Corporate Finance*, Vol. 27, pp. 1-20.

Jensen, M. C., and Meckling, W. H. (1976), “Theory of the firm: managerial behavior, agency costs and ownership structure”, *Journal of financial economics*, Vol. 3 No. 4, pp. 305-360.

Kajuter, P. (2006), “Risk disclosures of listed firms in Germany: a longitudinal study”, paper presented at the 10th Financial Reporting & Business Communication Conference, 6-7 July, Cardiff Business School

Kravet, T., and Muslu, V. (2013), “Textual risk disclosures and investors’ risk perceptions”, *Review of Accounting Studies*, Vol. 18 No. 4, pp. 1088-1122.

Li, F. (2006), “Do stock market investors understand the risk sentiment of corporate annual reports?”, working paper SSRN 898181, School of Business, University of Michigan, April 2006.

Li, Y., He, J., and Xiao, M. (2019), “Risk disclosure in annual reports and corporate investment efficiency”, *International Review of Economics and Finance*, Vol 63, pp. 138-151.

Meijer, M. (2011), "Risk disclosures in annual reports of Dutch listed companies during the years 2005-2008" Master's thesis, University of Twente.

Moumen, N., Othman, H. B., & Hussainey, K. (2015), "The value relevance of risk disclosure in annual reports: evidence from MENA emerging markets", *Research in International Business and Finance*, Vol. 34, pp. 177-204.

Moumen, N., Othman, H. B., & Hussainey, K. (2016), "Board structure and the informativeness of risk disclosure: Evidence from MENA emerging markets." *Advances in accounting*, Vol. 35, pp. 82-97.

Okongwu, U., Morimoto, R., and Lauras, M. (2013), “The maturity of supply chain sustainability disclosure from a continuous improvement perspective” *International Journal of Productivity and Performance Management*, Vol 62 No. 8, pp. 827-855.

Pfeffer, J., Salancik, G. R., (1978), “The External Control of Organizations: a resource dependence perspective”, Harper & Row, New York.

Raithatha, M., and Bapat, V. (2014), “Impact of corporate governance on financial disclosures: evidence from India”, *Corporate Ownership and Control*, Vol. 12 No. 1, pp. 874-889.

Roy, A. (2016), “Corporate governance and firm performance: a study of Indian listed firms, Metamorphosis, Vol. 15 No. 1, pp. 31-46.

Shawtari, F. A., Mohamad, M. H. S., Rashid, H. M. A., and Moh’d Ayedh, A. (2017), “Board characteristics and real performance in Malaysian state-owned enterprises (SOEs)”, *International Journal of Productivity and Performance Management*, Vol 66 No. 8, pp. 1064-1086.

Shivaani, M.V., Jain, P., & Yadav, S. (2019), "Development of a risk disclosure index and its application in an Indian context", *Managerial Auditing Journal*, Vol 35 No.1, pp.1-23.

Tan, Y., Zhu, Z., Zeng, C., and Gao, M. (2014), “Does external finance pressure affect corporate disclosure of Chinese non-state-owned enterprises?”, *International Review of Financial Analysis*, Vol. 36, pp. 212-222.

Terjesen, S., Couto, E., and Francisco, P. (2016), “Does the presence of independent and female directors impact firm performance? A multi-country study of board diversity”, *Journal of Management and Governance*, Vol. 20 No. 3, pp. 447-483.

Verrecchia, R. E. (1983), “Discretionary disclosure”, *Journal of Accounting and Economics*, Vol. 5, pp. 179-194.

Wang, M., & Hussainey, K. (2013), “Voluntary forward-looking statements driven by corporate governance and their value relevance”, *Journal of Accounting and Public Policy*, Vol. 32 No. 3, pp. 26-49.

Wang, Z., Jahangir Ali, M., and Al-Akra, M. (2013), “Value relevance of voluntary disclosure and the global financial crisis: evidence from China”, *Managerial Auditing Journal*, Vol. 28 No. 5, pp. 444-468.

Watts, R. L., & Zimmerman, J. L. (1990), "Positive accounting theory: a ten year perspective." *Accounting Review*, Vol. 65 No. 1, pp. 131-156.

Weisbach, M. (1988), “Outside directors and CEO turnover”, *Journal of Financial Economics*, Vol. 20, pp. 431-460.

Woodward, D., Edwards, P., & Birkin, F. (1996), "Organizational legitimacy and stakeholder information provision 1", *British Journal of Management*, Vol. 7 No. 4, pp. 329-347.

References

Abraham, S., & Cox, P. (2007). Analysing the determinants of narrative risk information in UK FTSE 100 annual reports. *The British Accounting Review*, 39(3), 227-248.

Akerlof, G. A. (1970). Quality uncertainty and the market mechanism. *Quarterly Journal of Economics*, 84(3), 488-500.

Aksu, M., & Kosedag, A. (2006). Transparency and disclosure scores and their determinants in the Istanbul Stock Exchange. *Corporate Governance: An International Review*, 14(4), 277-296.

Albitar, K. (2015). Firm characteristics, governance attributes and corporate voluntary disclosure: A study of Jordanian listed companies. *International Business Research*, 8(3), 1-10.

Al-Hadi, A., Hasan, M. M., & Habib, A. (2015). Risk Committee, Firm Life Cycle, and Market Risk Disclosures. *Corporate Governance: An International Review*, 24(2), 145–170.

Ali, A., & Gurun, U. G. (2009). Investor sentiment, accruals anomaly, and accruals management. *Journal of Accounting, Auditing & Finance*, 24(3), 415-431.

Alpert, M., & Raiffa, H. (1982). A progress report on the training of probability assessors.

Baker, H. K., & Nofsinger, J. R. (2002). Psychological biases of investors. *Financial Services Review*, 11(2), 97.

Baker, M., & Stein, J. C. (2004). Market liquidity as a sentiment indicator. *Journal of financial Markets*, 7(3), 271-299.

Baker, M., & Wurgler, J. (2006). Investor sentiment and the cross-section of stock returns. *The Journal of Finance*, 61(4), 1645-1680.

Baker, M., & Wurgler, J. (2007). Investor sentiment in the stock market. *Journal of Economic Perspectives*, 21(2), 129-152.

Baldini, M., Dal Maso, L., Liberatore, G., Mazzi, F., & Terzani, S. (2018). Role of country- and firm-level determinants in environmental, social, and governance disclosure. *Journal of Business Ethics*, 150(1), 79-98.

Bergman, N. K., & Roychowdhury, S. (2008). Investor sentiment and corporate disclosure. *Journal of Accounting Research*, 46(5), 1057-1083.

Bokpin, G. A., & Isshaq, Z. (2009). Corporate governance, disclosure and foreign share ownership on the Ghana Stock Exchange. *Managerial Auditing Journal*, 24(7), 688-703.

Brown, G. W., & Cliff, M. T. (2004). Investor sentiment and the near-term stock market. *Journal of Empirical Finance*, 11(1), 1-27.

Brown, N. C., Christensen, T. E., Elliott, W. B., & Mergenthaler, R. D. (2012). Investor sentiment and pro forma earnings disclosures. *Journal of Accounting Research*, 50(1), 1-40.

Campbell, J. L., Cecchini, M., Cianci, A. M., Ehinger, A. C., & Werner, E. M. (2019). Tax-related mandatory risk factor disclosures, future profitability, and stock returns. *Review of Accounting Studies*, 24(1), 264-308.

Chiu, H. H., & Kini, O. (2014). Equity issuances, equity mutual fund flows, and noise trader sentiment. *Review of Finance*, 18(2), 749-802.

Correa-Garcia, J. A., Garcia-Benau, M. A., & Garcia-Meca, E. (2020). Corporate governance and its implications for sustainability reporting quality in Latin American business groups. *Journal of Cleaner Production*, 260, 121142.

Dash, S. R., & Maitra, D. (2018). Does sentiment matter for stock returns? Evidence from Indian stock market using wavelet approach. *Finance Research Letters*, 26, 32-39.

Dash, S. R., & Raithatha, M. (2019). Corporate governance and firm performance relationship: Implications for risk-adjusted return behavior. *Managerial and Decision Economics*, 40(8), 923-940.

Debata, B., Dash, S. R., & Mahakud, J. (2021). Monetary policy and liquidity: Does investor sentiment matter?. *IIMB Management Review*, *33*(3), 257-277.

Dobler, M., Lajili, K., & Zéghal, D. (2011). Attributes of corporate risk disclosure: An international investigation in the manufacturing sector. *Journal of International Accounting Research*, 10(2), 1-22.

Doyle, J. T., & Magilke, M. J. (2015). The strategic timing of management forecasts. Available at SSRN 1479867.

Duong, H. K., Schuldt, M., & Gotti, G. (2018). Investor sentiment and timely loss recognition. *Review of Accounting and Finance*, 17(3), 383-404.

Elamer *et al.* (2019) Impact of multi-layer governance on bank risk disclosure in emerging markets: the case of Middle East and North Africa. *Accounting Forum*, 42(2), 244-281.

Elamer, A. A., Ntim, C. G., Abdou, H. A., Zalata, A. M., & Elmagrhi, M. (2019, April). The impact of multi-layer governance on bank risk disclosure in emerging markets: The case of Middle East and North Africa. *Accounting Forum*, 43(2), 246-281.

Elamer, A.A., Ntim, C.G., Abdou, H.A., Zalata, A.M. and Elmagrhi, M. (2019), "Impact of multi-layer governance on bank risk disclosure in emerging markets: the case of Middle East and North Africa", *Accounting Forum*, 42(2), 244-281.

Elshandidy, T., & Neri, L. (2015). Corporate governance, risk disclosure practices, and market liquidity: Comparative evidence from the UK and Italy. *Corporate Governance: An International Review*, 23(4), 331-356.

Elshandidy, T., Neri, L., & Guo, Y. (2018). Determinants and impacts of risk disclosure quality: evidence from China. *Journal of Applied Accounting Research*, 19(4), 518-536.

Frazzini, A., & Lamont, O. A. (2008). Dumb money: Mutual fund flows and the cross-section of stock returns. *Journal of Financial Economics*, 88(2), 299-322.

Gao, B., & Yang, C. (2017). Forecasting stock index futures returns with mixed-frequency sentiment. *International Review of Economics & Finance*, 49, 69-83.

Ge, R., Seybert, N., & Zhang, F. (2019). Investor sentiment and accounting conservatism. *Accounting Horizons*, 33(1), 83-102.

Greco, G. (2012). The management's reaction to new mandatory risk disclosure: A longitudinal study on Italian listed companies. *Corporate Communications: An International Journal*, 17(2), 113-137.

Grundy, B. D., & Li, H. (2010). Investor sentiment, executive compensation, and corporate investment. *Journal of Banking & Finance*, 34(10), 2439-2449.

Heinle, M. S., & Smith, K. C. (2017). A theory of risk disclosure. *Review of Accounting Studies*, 22(4), 1459-1491.

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

Hurwitz, H. (2018). Investor sentiment and management earnings forecast bias. *Journal of Business Finance & Accounting*, 45(1-2), 166-183.

Ibrahim, A. E. A., & Hussainey, K. (2019). Developing the narrative risk disclosure measurement. *International Review of Financial Analysis*, 64, 126-144.

Ibrahim, A., Habbash, M., & Hussainey, K. (2019). Corporate governance and risk disclosure: evidence from Saudi Arabia. *International Journal of Accounting, Auditing and Performance Evaluation*, 15(1), 89-111.

Jain, S., & Raithatha, M. (2021). Risk disclosures and firm value: the role of governance in an emerging market. *International Journal of Productivity and Performance Management*, 71(8), 3205-3227.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.

Jones, D. (2007). Voluntary Disclosure in R&D-Intensive Industries. *Contemporary Accounting Research*, 24(2), 489–522.

Kajuter, P. (2006, July). Risk disclosures of listed firms in Germany: a longitudinal study. In 10th Financial Reporting & Business Communication Conference Cardiff Business school.

Kanagaretnam, K., Lobo, G. J., & Whalen, D. J. (2007). Does good corporate governance reduce information asymmetry around quarterly earnings announcements? *Journal of Accounting and Public Policy*, 26(4), 497-522.

Keusch, T., Bollen, L. H., & Hassink, H. F. (2012). Self-serving bias in annual report narratives: An empirical analysis of the impact of economic crises. *European Accounting Review*, 21(3), 623-648.

Khlif, H., & Hussainey, K. (2016). The association between risk disclosure and firm characteristics: a meta-analysis, *Journal of Risk Research*, 19(2), 181-211.

Kim, K., Ryu, D., & Yang, H. (2021). Information uncertainty, investor sentiment, and analyst reports. *International Review of Financial Analysis*, 77, 101835.

Kothari, S. P., Shu, S., & Wysocki, P. D. (2009). Do managers withhold bad news? *Journal of Accounting Research*, 47(1), 241-276.

Kravet, T., & Muslu, V. (2013). Textual risk disclosures and investors' risk perceptions. *Review of Accounting Studies*, 18(4), 1088-1122.

Lajili, K., & Zéghal, D. (2005). A content analysis of risk management disclosures in Canadian annual reports. Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration, 22(2), 125-142.

Lamont, O. A., & Stein, J. C. (2006). Investor sentiment and corporate finance: Micro and macro. *American Economic Review*, 96(2), 147-151.

Lang, M. H., & Lundholm, R. J. (2000). Voluntary disclosure and equity offerings: reducing information asymmetry or hyping the stock? *Contemporary Accounting Research*, 17(4), 623-662.

Lee, J. S., Lai, K. L., & Huang, Y. K. (2015). Information transparency and idiosyncratic risk. *Applied Economics Letters*, 22(12), 934-937.

Lev, B., & Penman, S. H. (1990). Voluntary forecast disclosure, nondisclosure, and stock prices. *Journal of Accounting Research*, 28(1), 49-76.

Li, F. (2006). Do stock market investors understand the risk sentiment of corporate annual reports?. Available at SSRN 898181.

Li, Y., He, J., & Xiao, M. (2019). Risk disclosure in annual reports and corporate investment efficiency. *International Review of Economics & Finance*, 63, 138-151.

Li, Z., Tian, M., Ouyang, G., & Wen, F. (2021). Relationship between investor sentiment and earnings news in high-and low-sentiment periods. *International Journal of Finance & Economics*, 26(2), 2748-2765.

Lim, S., Matolcsy, Z., & Chow, D. (2007). The association between board composition and different types of voluntary disclosure. *European Accounting Review*, 16(3), 555-583.

Lueg, K., Krastev, B., & Lueg, R. (2019). Bidirectional effects between organizational sustainability disclosure and risk. *Journal of Cleaner Production*, 229, 268-277

Manchiraju, H., & Rajgopal, S. (2017). Does corporate social responsibility (CSR) create shareholder value? Evidence from the Indian Companies Act 2013. *Journal of Accounting Research*, 55(5), 1257-1300.

Martin, P. R., & Moser, D. V. (2016). Managers' green investment disclosures and investors' reaction. *Journal of Accounting and Economics*, 61(1), 239-254.

McLean, R. D., & Zhao, M. (2014). The business cycle, investor sentiment, and costly external finance. *The Journal of Finance*, 69(3), 1377-1409.

Moumen, N., Othman, H. B., & Hussainey, K. (2016). Board structure and the informativeness of risk disclosure: Evidence from MENA emerging markets. *Advances in Accounting*, 35, 82-97.

Nahar, S., Azim, M., & Jubb, C. (2016). The determinants of risk disclosure by banking institutions. *Asian Review of Accounting*, 24(4), 426-444.

Ntim, C. G., Lindop, S., & Thomas, D. A. (2013). Corporate governance and risk reporting in South Africa: A study of corporate risk disclosures in the pre-and post-2007/2008 global financial crisis periods. *International Review of Financial Analysis*, 30, 363-383.

Patell, J. M., & Wolfson, M. A. (1982). Good news, bad news, and the intraday timing of corporate disclosures. *Accounting Review*, 509-527.

Pfeffer, J. and Salancik, G.R. (1978), The External Control of Organizations: A Resource Dependence Perspective, Harper & Row, New York, NY.

Probohudono, A. N., Tower, G., & Rusmin, R. (2013). Risk disclosure during the global financial crisis. *Social Responsibility Journal*, 9(1), 124-136.

Raithatha, M., & Bapat, V. (2014). Impact of corporate governance on financial disclosures: Evidence from India. *Corporate Ownership and Control*, 12(1), 874-889.

Seybert, N., & Yang, H. I. (2012). The party's over: The role of earnings guidance in resolving sentiment-driven overvaluation. *Management Science*, 58(2), 308-319.

Shahid, M. S., & Abbas, M. (2019). Does corporate governance play any role in investor confidence, corporate investment decisions relationship? Evidence from Pakistan and India. *Journal of Economics and Business*, 105, 105839.

Shefrin, H. (2002). Behavioral decision making, forecasting, game theory, and role-play. *International Journal of Forecasting*, 18(3), 375-382.

Shleifer, A., & Summers, L. H. (1990). The noise trader approach to finance. *Journal of Economic Perspectives*, 4(2), 19-33.

Simpson, A. (2013). Does investor sentiment affect earnings management? *Journal of Business Finance & Accounting*, 40(7-8), 869-900.

Stambaugh, R. F., Yu, J., & Yuan, Y. (2012). The short of it: Investor sentiment and anomalies. *Journal of Financial Economics*, 104(2), 288-302.

Suijs, J. (2007). Voluntary disclosure of information when firms are uncertain of investor response. *Journal of Accounting and Economics*, 43(2-3), 391-410

Sun, W., Zhao, C., Wang, Y., & Cho, C. H. (2018). Corporate social responsibility disclosure and catering to investor sentiment in China. *Management Decision*, 56(9), 1917-1935.

Tauringana, V., & Chithambo, L. (2016). Determinants of risk disclosure compliance in Malawi: a mixed-method approach. *Journal of Accounting in Emerging Economies*, 6(2), 111-137

Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive psychology*, 5(2), 207-232.

Tzouvanas, P., Kizys, R., Chatziantoniou, I., & Sagitova, R. (2020). Environmental disclosure and idiosyncratic risk in the European manufacturing sector. *Energy Economics*, 87, 104715.

Verrecchia, R. E. (1983). Discretionary disclosure. *Journal of Accounting and Economics*, 5, 179-194.

Wang, M., & Hussainey, K. (2013). Voluntary forward-looking statements driven by corporate governance and their value relevance. *Journal of Accounting and Public Policy*, 32(3), 26-49.

Watts, R.L. and Zimmerman, J.L. (1983) 'Agency problems, auditing and the theory of the firm: some evidence', *Journal of Law and Economics*, 26(3), 613–633.

Weisbach, M. S. (1988). Outside directors and CEO turnover. *Journal of Financial Economics*, 20, 431-460.

Yang, R., Yu, Y., Liu, M., & Wu, K. (2018). Corporate risk disclosure and audit fee: A text mining approach. *European Accounting Review*, 27(3), 583-594.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, 40(2), 185-211.

Chapter 5: Conclusion

All the empirical investigations of the thesis are based on positivist research (Luft and Shields, 2014). Therefore, the results of the thesis are reliable and replicable given that the conditions are the same. Since it is positivist research, the study also validates the *RDI* construct by industry experts. The objective of this thesis is to investigate the three aspects of risk disclosures. These three aspects are investigated in three respective chapters (2,3, and 4).

First, in chapter 2, this thesis explores the determinants of risk disclosures. This chapter discusses several determinants including firm-level characteristics, risk governance, and shareholding variables. The study takes data from emerging economies and has implications for the same. In the emerging economy, founders are likely to have high ownership concentration, which makes them controlling shareholders (Phani *et al.,* 2004; Khanna and Palepu 2005; Chakrabarti *et al.,* 2008). Founders as controlling shareholders forces manager to act in their interest and create agency costs. This chapter investigates the plausible impacts of founder ownership concentration (*FOC*) on risk disclosures. It concludes that founder ownership concentration has significant and negative effects on risk disclosures. This finding is consistent with the literature (Grassa *et al*., 2020; Garcia-Meca and Sanchez-Ballesta, 2010) and supports proprietary cost theory (Verrecchia, 1983). Further, this study investigates the moderating effects of risk governance in the relationship between risk disclosures and founder ownership concentration. This suggests that a good risk-governed firm nullifies the negative influence of founders on risk disclosures and brings transparency. For a better understanding of the role of risk governance, the study split the sample based on the median of *FOC* and group as high *FOC* firms and low *FOC* firms. It finds that in high *FOC* firms the role of risk governance is significant in disciplining founders toward risk disclosures. These findings are consistent with agency theory and signalling theory. The study tests for endogeneity issues and sample biases. It uses propensity score matching, instrument variable estimation and the Heckman test for robustness. The results are robust.

Second, in chapter 3, the thesis progress to explore the effects of risk disclosures in the annual report of the firms. Managers exercise discretion over disclosures (Glaum, 2020). They hide or withhold the information when the consequence of disclosure is unknown (Lev & Penman, 1990) or bad (Suijs, 2007). In contrast, investors rely on public disclosures to make an informed decisions (Li *et al*., 2019). Here, the role of governance becomes important, to discipline managers and promotes transparency among the stakeholders of the firm. This chapter,

therefore, throws light on the effects of risk disclosure on the performance of the firm (firm value). Using the GMM model the study finds that risk disclosures in annual report negatively affects the firm value. In addition, it finds that good board governance mitigates the negative influence of risk disclosures on firm value and improves the value relevance of the risk disclosures. The presence of good governance reduces managerial discretion over disclosure and brings transparency. This finding supports the argument that information is costly and so is its disbursement (Verrecchia, 1983). The results also support the agency theory and are consistent with prior literature Haj-Salem *et al.*, (2020), and Elshandidy & Neri (2015). For robustness check, the study undertakes several tests, including propensity score matching, instrument variable estimation, and Heckman sample bias tests. The results are consistent and robust.

Third, the objective of chapter 4 is to investigate the effect of market-level investor sentiment on discretionary risk disclosures. This chapter studies the managerial discretion on risk disclosure from a behavioural finance view. Behavioural finance theory suggests that not all investors are rational. There are investors (irrational), who drive irrational deviation of the stock prices based on their biases. Investor sentiment is the study of that irrational deviation. Literature suggests that during high (low) sentiment periods, investors are optimistic (pessimistic) and neglects (seek) public disclosures. Managers take advantage of investors' optimism (pessimism) and exercise discretion on disclosures (Bergman and Roychowdhary, 2008; Hurwitz, 2018; Ge, Seybert, and Zhang, 2019). Here, the study explores how the sentiments affect managerial discretion on risk disclosures and questions the role of governance in disciplining managerial action for the improvement of risk disclosures. The study uses fixed effect regression to find the effect of sentiments on risk disclosure along with firm-level financial controls and macroeconomic controls. It finds that during high values of the sentiment index, managers reduce risk disclosures. The results are consistent on year-fixed effect, industry-fixed effect, and firm-fixed effects. Further, it explores on moderating role of governance in between RDI and sentiments. Using OLS regression, the study finds that, firms having comparatively large board sizes and more independent directors on the board mitigate the negative influence of sentiments on risk disclosures. Additionally, the study divides the sample into two parts based on several firm-level variables, such as; size (high-low), idiosyncratic risk (high-low), foreign institutional investor (high-low), promoter shareholdings (high-low), firm's total risk (high-low), firm's age (high-low), retained earnings (high-low), and market to book value ratio (high-low). This sub-division of the sample is to check the

impact of sentiment on risk disclosures in these firm-level settings. The finding suggests that the effect of sentiments is more pronounced in firms which are larger in size, higher at firm risk, lower at foreign institutional shareholdings, higher at promoter shareholdings, higher at total firm risk, matured firms, and lower at the market to book ratio. Similarly, the study investigates the moderating impact of board size and independent directors in between *RDI*-sentiment on these sub-samples. It finds that the role of governance is more evident in firms which are larger in size, risky, lower at FIIs, higher at promoter shareholdings, younger, and lower at the market-to-book ratio.

This thesis contributes to the literature in various ways. First, it contributes to the literature on risk disclosures, founder ownership concentration, firm performance, governance, and investor sentiments. Second, it brings attention towards the significant association between risk disclosures and founder ownership concentration, firm value, and investor sentiments in an emerging economy. Third, it highlights the importance of governance for better transparency and disciplining the managerial discretions over risk disclosures. A well-governed firm mitigates the negative influence of the ownership concentration of founders and the managerial discretion of managers on risk disclosures. In addition to that, governance enhances firm value via improving value-relevant risk disclosures.

The study has implications for the Indian listed firms, regulatory bodies, investors, and other stakeholders of the firm. The Indian listed firms can understand the determinants of risk disclosures, its impact on the value of the firm, and how the investor's perception affects the risk disclosures. The regulatory bodies of India, SEBI with its core objective to safeguard the investor's rights and protect their exploitation can work more on regular monitoring of governance and risk governance to monitor the discretionary power of founders and managers. Investors and other stakeholders of the firm can evaluate the firm and take an informed decision based on risk disclosures.

There are certain limitations of this study which invite future scope of studies. First, the results are based on the top 200 Indian-listed firms on NSE. Further study could be conducted on the bigger data set. Second, though the construct of risk disclosures is taken from the literature, still there are several other risk keywords and other methods to measure risk disclosures. Based on different types of risk keywords, future studies could be conducted on other measures of risk disclosures and segregate them into specific types of risk like strategic risk, operational risk, financial risk, environmental risk, and business risk. Third, due to the limited ability biases

of the investor to understand the annual, they may skip the important information of risk disclosures while making informed investment decisions. Future studies can be conducted to eliminate these biases.

References

Bergman, N. K., & Roychowdhury, S. (2008). Investor sentiment and corporate disclosure. *Journal of Accounting Research*, 46(5), 1057-1083.

Chakrabarti, R., Megginson, W., & Yadav, P. K. (2008). Corporate governance in India. *Journal of Applied Corporate Finance*, 20(1), 59-72.

Elshandidy, T., & Neri, L. (2015). Corporate Governance, Risk Disclosure Practices, and Market Liquidity: Comparative Evidence from the UK and Italy. *Corporate Governance: An International Review*, 23(4), 331-356.

Garcia-Meca, E., & Sanchez-Ballesta, J. P. (2010). The association of board independence and ownership concentration with voluntary disclosure: A meta-analysis. *European Accounting Review*, 19(3), 603-627.

Ge, R., Seybert, N., & Zhang, F. (2019). Investor sentiment and accounting conservatism. *Accounting Horizons*, 33(1), 83-102.

Glaum, M. (2020). Financial Reporting in Non-listed Family Firms: Insights from Interviews with CFOs. *Schmalenbach Business Review*, 72(2), 225-270.

Grassa, R., Moumen, N., & Hussainey, K. (2020). Do ownership structures affect risk disclosure in Islamic banks? International evidence. *Journal of Financial Reporting and Accounting*.

Haj-Salem, I., Damak Ayadi, S., & Hussainey, K. (2020). The joint effect of corporate risk disclosure and corporate governance on firm value. *International Journal of Disclosure and Governance*, 17(2), 123-140.

Hurwitz, H. (2018). Investor sentiment and management earnings forecast bias. *Journal of Business Finance & Accounting*, 45(1-2), 166-183.

Khanna, T., & Palepu, K. (2005). The evolution of concentrated ownership in India: broad patterns and a history of the Indian software industry. In A history of corporate governance around the world: Family business groups to professional managers (pp. 283-324). University of Chicago press.

Lev, B., & Penman, S. H. (1990). Voluntary forecast disclosure, nondisclosure, and stock prices. *Journal of Accounting Research*, 28(1), 49-76.

Li, Y., He, J., & Xiao, M. (2019). Risk disclosure in annual reports and corporate investment efficiency. *International Review of Economics & Finance*, 63, 138-151.

Luft, J., & Shields, M. D. (2014). Subjectivity in developing and validating causal explanations in positivist accounting research. *Accounting, Organizations and Society, 39*(7), 550-558.

Phani, B. V., Reddy, V. N., Ramachandran, N., & Bhattacharyya, A. K. (2004). Insider ownership, corporate governance and corporate performance. NSE Research Project, July.

Suijs, J. (2007). Voluntary disclosure of information when firms are uncertain of investor response. *Journal of Accounting and Economics*, 43(2-3), 391-410.

Verrecchia, R. E. (1983). Discretionary disclosure. *Journal of Accounting and Economics*, 5, 179-194.

Appendix 1: Examples of risk-information captured from MD&A report of Reliance Industries Ltd., 2018

II) Safety and Operational Risks a) Health, Safety and Environmental (HSE) risks in Operations

Reliance is exposed to a wide spectrum of HSE risks, given the diversity and complexity of the industry, it operates in. The exploration & production of oil and gas and their further refining and processing is regulated by various

HSE related regulations across the geographies where Reliance operates. A major HSE incident, such as fire, oil spill, security breach can result in loss of life, environmental degradation and overall disruption in business activities.

Mitigation: The Reliance HSE policy requires that 'Safety of persons overrides all production targets'. This ensures that all employees strive for excellence in their own personal safety and the safety of others including employees, contractors, customers and the communities within which Reliance operates. Furthermore, Reliance believes that all injuries, occupational illnesses as well as safety and environmental incidents are preventable. Reliance focusses on process safety management as a key area to manage its risks. A separate Safety and

b) Safety and environmental risks during Transportation

Technical integrity failure, natural disasters, extreme weather, human error and other adverse events or conditions could lead to loss of containment of hydrocarbons or other hazardous materials, as well as fires, explosions or other personal and process safety incidents during transportation by road, sea or pipeline.

Reliance is exposed to a complex and diverse range of marine risk including: exploration vessels, oil tankers, chemical tankers, gas tankers, dry cargo vessels, operating ethane vessels, operating chemical tankers, operating a large fleet of tugs and port service vessels as well as owning and operating a significant amount of port and terminal infrastructure. With 96% of all crude being supplied to Reliance by vessel and the overwhelming majority of refined products being exported by vessel it is essential that these activities are actively managed to avoid HSE incidents, oil spills or disruption to business activities and processes.

Mitigation: An augmented ship vetting programme has been introduced to ensure that all vessels contracted to carry Reliance cargoes undergo an enhanced risk assessment screening using state-of-the-art predictive risk software. For incident response in shipping formal documentation and cascading has been completed.

c) Physical Security and Natural Calamity risks

Hostile acts such as terrorism or piracy could harm the Company's people and disrupt its operations. Some of Reliance's sites are also subject to natural calamities such as floods, cyclones, lighting and earthquakes. If the Company does not respond, or is perceived to not respond, in an appropriate manner to either an external or internal crisis, its business and operations could be severely disrupted.

Inability to restore or replace critical capacity to the required level within an agreed timeframe would prolong the impact of any disruption and could severely affect Reliance's business and operations.

• Interest Rate risk

Reliance borrows funds from domestic and international markets to meet its long-term and short-term funding requirements. It is subject to risks arising from fluctuations in interest rates.

Mitigation: The interest rate risk is managed through financial instruments available to convert floating rate liabilities into fixed rate liabilities or vice versa, and is aimed at reducing the cost of borrowings.

• Foreign Exchange risk

Reliance prepares its financial statements in Indian Rupee (INR), but most of the payables and receivables of hydrocarbon business are in US Dollars, minimising the cash flow risk on account of fluctuations in foreign exchange rates. Reliance avails long-term foreign currency liabilities (primarily in USD, Euro and JPY) to fund its capital investments. Reliance also avails short-term foreign currency liabilities to fund its working capital.

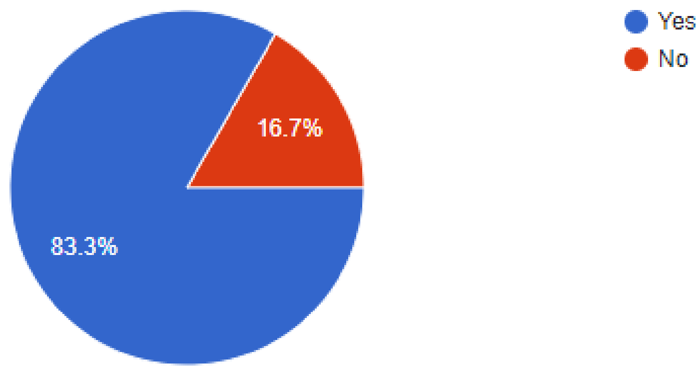
Mitigation: Foreign exchange risk arising from mismatch of Foreign Currency Assets, Liabilities and Earnings is tracked and managed within the risk management framework.

Appendix 2: Validity check of the *RDI* construct.

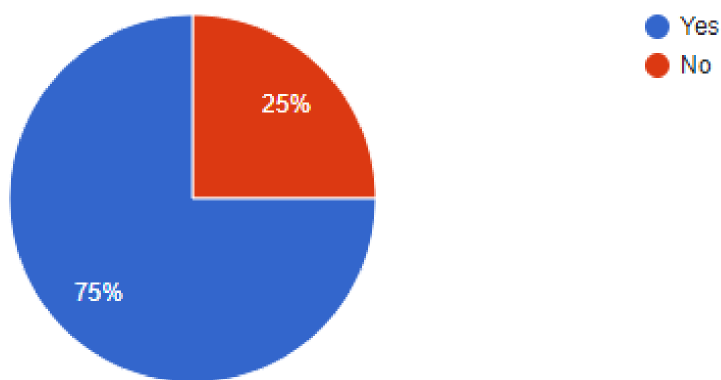
I have circulated a questionnaire to few industry experts, who are financially qualified in the Indian setting to validate the *RDI* construct. The questions in the questionnaire along with responses are represented below:

Ques 1: Do you think that annual report of the firm contains information about risk of the firm?

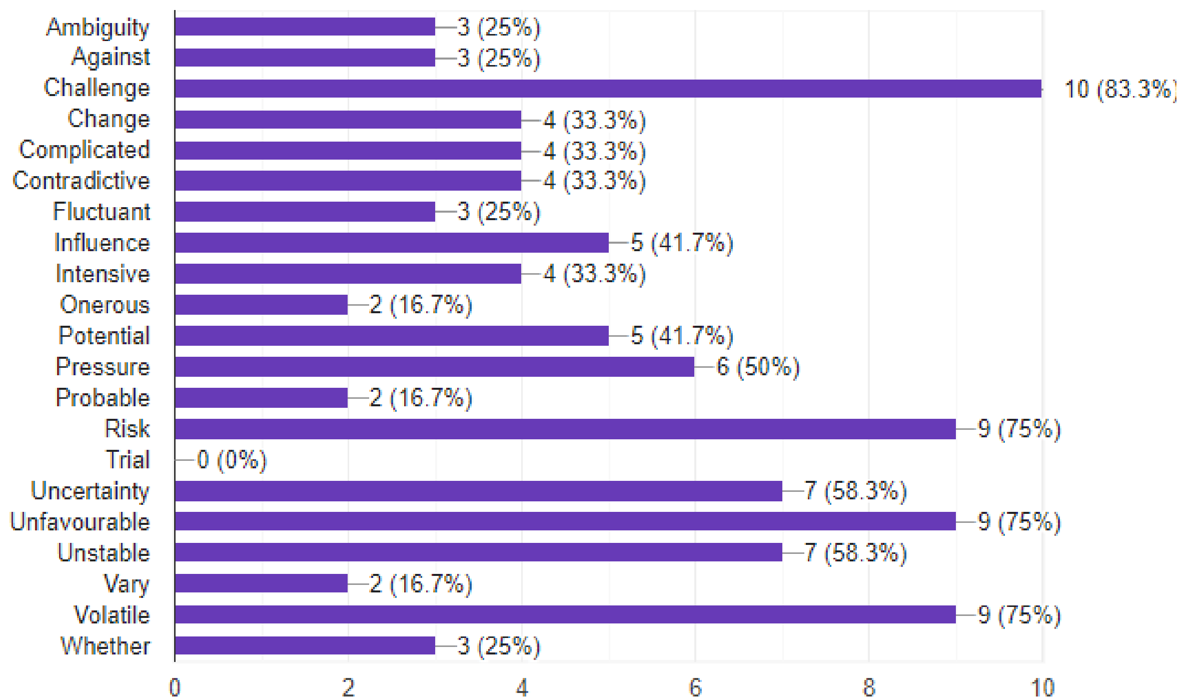
Response:



Ques 2: Do you think that “Management discussion and Analysis” section of the annual report contains significant information about risk of the firm?

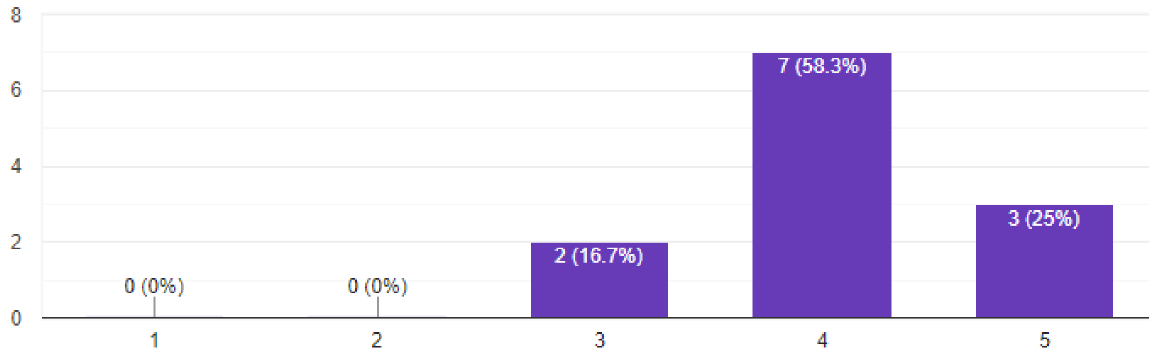


Ques 3: Do you consider following list of words appropriate for disclosing risk of the firm in an annual report (Please tick as many as you think can describe risk of the firm):



Ques 4: How do you rate the Index created from above listed 21 words in describing risk of the firm, on the scale of 5. Here 1 means bad, and 5 means good.

Response:



Overall interpretation:

Based on the responses from industrial experts, the RDI construct seems to be valid in Indian context. Here, 83.3% of respondents agree that annual report of the firm contains risk of the firm. 75% of respondents agree that MD&A section of annual report contains significant risk information of the firm. The *RDI* construct has got 4 scale rating from 58.3 % respondents while 25% of respondents have given 5 scale ratings in measuring risk disclosures by firm.