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Extended Abstract

Fogging the firm performance: An empirical examination of annual report readability in India

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Abstract

Annual reports are the primary source of information for investors. It contains all the details about the activities of the company in the preceding financial year. About 80% of an annual report is text (Cheng et al., 2018); hence proper comprehension and readability enhance the usefulness of the information. Earlier researches give evidence for the positive relationship between firm performance and annual report readability (Li 2008). Studies also find that complexity is a deliberate attempt by the companies to obfuscate earnings management and poor performance (Bloomfield 2008). Under this backdrop, we investigate the relationship between firm value, financial performance and annual report readability in the Indian context. For this purpose, we use Gunning Fog Index to measure the annual report readability of NSE 500 firms for the period 2016 to 2020. We find a positive relationship between firm performance and annual report readability. Further, this paper also finds a positive relationship between the annual report readability and firm value in the next year. The findings will be helpful for the investors as it shows how important is annual report readability in determining future firm value. It shows the readability of the narrative content as an important signal about a firm's current performance and future prospects. This paper recommends that the management be more cautious while preparing financial disclosures because complex disclosures may send negative signals to the investors about the firm's future prospects.

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1. Introduction

Investors always look for the best investment opportunities because they have invested in or are interested in profitable companies. Investors evaluate each investment option in terms of risk and return and choose the one they feel is optimal. Information transparency is important because it may impact the stock price. Hence the investors demand proper communication of financial and non-financial information about the firms, and the companies publish various financial disclosures during an accounting period towards the same. Annual reports are the primary information sources for investors. Generally, an annual report contains; a letter from the Chief Executive Officer (CEO) or president, highlights of the performance from last year, financial statements, current performance and outlook for future years.
The narrative content accounts for about 80% of the annual report (Cheng et al., 2018). Hence proper comprehension is essential for understanding the contents of the report. Moreover, as Cheng et al., (2018) find, "not every user of an annual report is an academician, accountant or lawyer". A significant portion of the investors are people with less business knowledge. Ordinary investors mainly use textual information to understand the firm performance. On the other hand, sophisticated investors like institutional investors and financial analysts also use textual content and accounting information to understand the company's current performance and future prospects. The Security Exchange Commission (SEC) made it compulsory for all companies to publish readable financial disclosures in the US. The readability of a disclosure enhances the understandability and usefulness of the disclosure (Li 2008). Following Klare (1963), "readability is the ease of understanding or comprehension due to the style of writing". Impression management states the opportunistic behaviour which results from the information asymmetry between the management and investors. Hence the management may use the corporate disclosures to document a self-interested view of firm performances (Merkl-Davies et al., 2008). That means the management will be motivated to disclose only favourable information about the firm. More specifically, the Management Obfuscation Hypothesis (MOH) states the obfuscation behaviour of the management. According to MOH "the managers have incentives to obfuscate information when firm performance is poor because the market may react with delayed incorporation of the information contained in complicated disclosures" (Bloomfield 2002, Li 2008). The maintained assumption behind this argument is the "incomplete revelation hypothesis" (IRH). IRH indicates that the more costly information to process is perhaps less completely reflected in market prices; managers may want to strategically hide adverse information through less transparent disclosures (Grossman and Stiglitz 1980; Bloomfield 2002). In particular, Bloomfield (2002) argues that managers make many decisions motivated, at least partly, by a desire to make it more difficult for investors to uncover information that the managers do not want to be uncovered as it would affect the stock prices. Therefore, by increasing the processing cost of adverse information, managers hope it is not reflected in stock prices or prices with a delay. MOH predicts a negative relationship between firm performance and annual report readability (hereafter ARR).

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Literature evidence shows the low readability indicates the issuer (the management) doesn't want the reader (the investors) to understand what is being explained (Li, 2008; Lo. K et al., 2017). Moreover, low readability is seen as a deliberate attempt to veil the earnings management or poor performance or any other adverse information from the stakeholders (Subramanian et al., 1993; Li 2006; Li 2008; Bloomfield 2008; Lo et al., 2017). If the managers deliberately obfuscate the critical information in an annual report by making it less readable, it might alter the investor's perceptions.

Unlike the US, India does not have strict guidelines that insist companies make readable annual reports. Since an annual report is a mandatory disclosure and primary means of information for investors (Jeanjean et al., 2015; Jeanjean, Lesage, & Stolow, 2010; Dawkins & Fraas, 2013), the usefulness of such disclosures should be ensured. This paper deals with ARR from a performance perspective. That is to say; it checks whether the positive relationship between a firm's current year market performance in terms of firm value and financial performance and current year ARR exists in the Indian context. Further, the study also checks whether there is a relationship between the current year ARR and future firm value.

2. Background and Hypothesis

Annual reports are a primary document that disseminates all the relevant information about the firm to the external parties. Over the legal minimum, companies voluntarily publish some additional information hoping such information may enhance the usefulness of the annual reports. Earlier researchers suspected the transparency and usefulness of financial disclosures. Since the financial disclosures are primarily for the use of the investors, it is important to investigate does the financial disclosures satisfy the information needs of the investors. A significant portion of an annual report is narrative content (Cheng et al., 2018). Hence the readability of the narrative content plays an important role in determining the usefulness of the annual report.

Studies show evidence for the management's tendency to publish less readable annual reports when they have poor firm performance or are engaged in earnings management. Rutherford (2003) finds that good performing firms show their superiority by disclosing more readable content with greater clarity. At the same time, the firms with poor performance obfuscate the negative information by giving less readable annual reports. Arora and Chauhan (2021) confirm that firms engaged in earnings management practices prepare less readable financial disclosures in the Indian context. Subramanian et al., (1993), Li (2006), and Li (2008) also give evidence for the positive relationship between firm profitability and readability. Better the performance, higher the readability and vice versa. Therefore, following the existing findings, we hypothesize that,

H1: There is a positive relationship between a firm's financial performance and ARR

Literature evidence also finds that many other factors also affect ARR. Chang et al., (2010) find that the CEO's ability is one factor that determines the obfuscation tendency. The study shows that companies with competent managers are less likely to obscure the actual performance. Some of the adverse information (like employee management issues) about the firms will be publicly available and affect the firm's market performance. Firm value captures

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more information than a firm's financial performance, and it indicates the overall firm performance. The adverse information which is publicly available will already be captured in the firm value. The adverse information can be anything like agency conflicts, wrong business strategies, accounting manipulations, and fraud. Hence, we next hypothesise that,

H2: There is a positive relationship between firm value and ARR

The Management Discussion and Analysis (MD&A) section in an annual report is considered an important section. According to Tavcar (1988), the most frequently used annual report section is the MD&A section because it gives the abstract summary of the firm performance in the preceding financial year. Li (2008) finds that the tone of the MD&A section is related to future earnings. The paper finds that an optimistic tone of the MD&A section has a positive relationship with the firms' future liquidity and earnings. Later Kothari et al., (2009) confirmed that the information of an MD&A section could be categorized into two; unfavourable and favourable content. The firms with a favourable disclosure have lower volatility in the stock return, more accurate analyst forecasts and lower cost of equity.

Similarly, Davis and Tama-Sweet (2012) also report a positive relationship between the tone of the MD&A section and future firm performance (ROA). They found; that a more pessimistic (optimistic) tone leads to the poor (good) subsequent firm performance. According to Gonzalez et al., (2017), companies with good disclosure practices lead to a better valuation of the market (Tobin's Q) and have better financial status (ROE). Similarly, Clarkson et al., (1999) opine that the quality of forward-looking narratives in an MD&A section is a clear indication of the firm's future performance. Moreover, a high-quality MD&A section enhances the quality of earnings forecasts (Barron et al., 1999). The proxy for measuring quality was in terms of the company's compliance with the mandatory disclosure requirements. This study considers the readability of the whole content in the annual report. The readability of specific sections like MD&A and Footnotes is not considered. The above-discussed papers give supporting evidence for the signalling theory.

Signalling theory describes the behaviour when two parties have access to different information. In this study, the two parties are the management and the investors. Every disclosure is a signal to the investors. If the MOH works, we can say that company obfuscates adverse information through complex disclosures, which means negative signals about the firm performance are disseminated through complex annual reports. The sophisticated investors in the market will better understand the complex financial disclosures than the ordinary investors. In the sample that we have taken, the proportion of sophisticated investors is high, and these are the highly monitored and actively traded stocks in the market. The median institutional investors are 33% in the sample. Hence, we hope that the investors will correctly identify the obfuscation behaviour of the companies, and it will be captured in the firm value. Hence, we hypothesise that,

H3: There is a positive relationship between ARR and next year's firm value

Improving the ARR is an essential feature for improving information transparency and thereby reducing information asymmetry. Moreover, ARR is essential to enhance its usefulness. Since

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ARR is an underexplored area in the Indian context, we investigate the relationship between firm performance and ARR using an Indian sample.

3. Data and Methodology

This study considers all the NSE 500 listed companies for the sample period from 2016 to 2020. First annual reports are downloaded from Prime Infobase (2015-16 to 2018-19) and Bloomberg (2019-20) for calculating the readability scores. Other variables used in the study are downloaded from Bloomberg and CMIE Prowess databases. Stata is used for the empirical analysis.

This paper uses Gunning (1969) Fog Index, one of the most commonly used readability measures in the finance and accounting literature to measure the ARR. Fog index and readability are negatively related. Higher the index, lower the readability and vice versa. To see the robustness of the main model, we have also used the Flesch Kincaid Grade Level index, another index that indicates the years of education that a reader should have for reading the text (Laksmana et al., 2012, Xu et al., 2020). It also functions similar to the Fog Index; a higher index indicates lower readability and vice versa.

This study measures a firm's performance in terms of firm value and financial performance. We use Return on Capital Employed (ROCE) as a firm's financial performance proxy and Tobin's Q to measure firm value. ROCE is the ratio between Earnings Before Interest and Tax (EBIT) and Capital employed (Tariq and Abbas., 2013). Total assets minus current liabilities is the amount of capital employed. Tobin's Q is calculated as the market value of equity plus book value of total assets minus book value of equity divided by total assets (Jameson et al., 2014). ROCE and Tobin's Q are the respective proxies for a firm's accounting and market-based measures of firm performance.

For our control variables, we use firm age, which indicates the number of years since incorporation, and the number of business segments, which is the proxy for measuring the complexity of business operations and measured as the logarithm of one plus the number of business segments, firm size which is the logarithm of the market value of equity, auditor quality is a dummy variable, where value 1 if the disclosures are audited by BIG 4 auditors and 0 otherwise, Market to Book (MTB) ratio is defined as the market value of equity plus book value of liability divided by book value of total assets at the end of the fiscal year, volatility of returns is the proxy for measuring the volatility of business. Stock return volatility is calculated as the standard deviation of the monthly stock returns in the prior year, institutional ownership is the institutional investor-owned shares by total shares outstanding, sales growth is the compounded average growth rate in sales over 3-5 financial years, leverage is the ratio between total liabilities and total assets, and tangibility is the ratio between property, plant and equipment to total assets. Hausman test between the random and fixed effects suggested the use of the Fixed Effects (FE) model for the dataset. Used year fixed effects and standard errors are clustered at the industry level.

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4. Findings

The regression results indicate that firms with good financial performance have a higher Fog index; a higher Fog index indicates low readability. Hence, the result indicates a positive relationship between firm value and ARR; the better the firm performance higher the readability and vice versa. This result confirms the MOH in the Indian context, supporting *Hypothesis 2*. Further, this paper also finds a positive relationship between a firm's financial performance and ARR, supporting *Hypothesis 1*.

Next, the results indicate a positive relationship between ARR (proxied by Fog and Flesch Kincaid index) and next year firm value; it supports *Hypothesis 3.* The results indicate that to a great extent, the majority of investors correctly identify the obfuscated information or the obfuscation tendency of the management, and the investors' behaviour in the capital market is the main reason for the reduced firm value for opaque firms. The negative signals given through complex disclosures are captured in the firm value.

5. Conclusions

First, this paper investigates the relationship between firm performance (in terms of firm value and financial performance) and ARR. We find a positive relationship between firm performance and ARR, which supports *Hypotheses* 1 and 2. We measure readability using the Fog and Flesch Kincaid Index. The results imply MOH that the management intentionally obfuscates poor performance and adverse information by making financial disclosures less readable. Since the information processing cost of the complex annual report is high, such complex disclosures may not be useful for uninformed investors. Thereby, the management can delay incorporating negative information into the stock prices by reducing the readability of the annual reports.

The management cannot obfuscate the negative information for an extended period. Some adverse information like the management employee issue will become publicly known. Moreover, a significant portion of the sophisticated investors in the market may have the expertise to understand the negative signals disseminated through less readable annual reports. All the responses will be captured in the firm value. Next, we investigate the relationship between ARR and firm value in the next year in *Hypothesis 3,* and the results show a positive relationship.

Signalling theory indicates each corporate communication is a signal to the investor. Hence the complex disclosures are negative signals to the investors. If the investors correctly understand the MOH, then their responses will be in terms of the investment decisions. Since the majority of investors are sophisticated investors, they closely monitor the opaque companies and explore information from other sources. Hence, sophisticated investors identify the obfuscating

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behaviour of the management, and other uninformed investors follow the decisions of the sophisticated investors, further the impact of which can be identified on firm value. Our results indicate obfuscation behaviour of the company results in a reduced firm value in the next year.

We believe that the findings will be helpful for investors and other relevant stakeholders in understanding the obfuscation behaviour of the management. The positive relationship between ARR and firm value in the next year indicates that the negative signals disseminated through the financial disclosures are correctly captured in the firm value. We also propose that the management should be cautious while publishing the financial disclosures because complex disclosures may give negative signals about the company.

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