

# **Understanding the Relationship between Social Media Activity and Earnings Management for Organisations**

## **ABSTRACT**

In 2013, the US Securities and Exchange Commission (SEC) announced that firms may use social media to announce key financial information in compliance with Regulation Fair Disclosure (SEC, 2013)<sup>1</sup>. Social media sites offer firms the opportunity to communicate with investors on a frequent and real-time basis (Blankespoor, Miller, & White, 2014). The SEC acknowledges the importance of social media and the internet as valuable tools for investors that are used to research on particular stocks, look up background information of investment advisors, receive real-time news, and discuss the market with others (SEC, 2015). The circulation of information on social media by firms has several benefits; it results in the reduction of dissemination costs for the organisations, increases the speed and flexibility of dissemination and helps to reduce the information acquisition costs for investors (Jung, Naughton, Tahoun, & Wang, 2017). Thus, it is evident from the above arguments that social media is being increasingly used as an important information channel in the finance domain.

Extant research (Blankespoor et al., 2014; Prokofieva, 2014) has also shown that the use of social media reduces information asymmetry and improves the information environment. Thus, in such a developed information environment the incentive to manage earnings will be less for firms, and it will curb earnings management tendency. Owing to the connectedness of the platform, investors can discuss the market with one another and locate improper actions

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<sup>1</sup> <https://www.sec.gov/news/press-release/2013-2013-51.htm>

of the firms. Prior research states that social media can empower individuals to be effective monitors and the institutional investors and other regulatory government bodies can track social media platforms to raise important issues highlighted by individual investors (Wu, Ang, & Tang, 2016). Furthermore, the connectedness of the platform enables any bad news to spread rapidly like a wildfire that can deter firms from engaging in earnings management practices as it can rapidly tarnish its reputation. The above arguments suggest that social media has the ability to reduce a firm's earnings management tendencies.

Alternatively, social media can also provide firms a platform to self-present themselves and selectively provide information. Firms might engage in opportunistic earnings management in the backend, but on social media they project a different picture.

This thesis examines whether there exists a relationship between a firm's social media activity and their earnings management. We are keen to investigate whether social media engenders firms to be more transparent and thereby provide more reliable financial information to the stakeholders or social media provide firms with a channel to hide their misconduct by putting up a positive image in front. In other words, is there any clandestine interest for firms to engage on social media? Thus, it is upfront difficult to predict the direction of the relationship between social media activity and earnings management, and it warrants an empirical enquiry. We examine the Twitter platform in our research as it is the most preferred platform for corporate communication (Blankespoor et al., 2014; Jung et al., 2017).

We divide the thesis into three major parts. The three segments of the thesis strive to answer this overall question. In the first part, we analyse the impact of the adoption of social media on earnings management. We employ a propensity score matching and difference in difference research design to report our findings. Results show that firms post adoption of the

Twitter platform has reduced earnings management tendencies. We perform this analysis for all the firms listed in the Compustat North America database and collect the social media data from the official Twitter handles of the firms.

In our second study, we conduct a volume based analysis of social media activity and firm's tendencies of earnings management. In this research, we attempt to understand the extent of social media activities and firms earnings management behaviour and find that firms that have elaborate social media footprint in terms of followers and tweets disseminated have reduced tendency to manage earnings. We conduct a large scale analysis of firms listed in the Compustat North America database and create a unique dataset for those firms along with their aggregate Twitter postings and followers for the years 2011-2015. We find that firms with a higher number of Twitter postings and a larger follower base have a lesser tendency to manipulate earnings. We also conduct a number of robustness checks to corroborate our findings.

To dig deeper into the phenomenon, we conduct a content based analysis in our third research study. We make use of advanced topic modelling algorithm to understand the conversations of the manufacturing firms. We use the Twitter-LDA algorithm to find the topics that are present in social media communication. We find that earnings are an important topic in the social media narrative and firms who disclose more earnings related tweets are less likely to manage their earnings. Furthermore, we employ an alternative approach and develop an earnings based dictionary and find that firms who disclose more earnings related communication are more transparent. We report our findings for the manufacturing sector (the sector with the largest social media adoption) with five year data. We also conduct alternate tests and find consistent results.

Extant literature on social media has predominantly focused on the use of social media as a marketing tool or the impact of social media in the capital markets however our multidisciplinary research show that social media can also impact earnings management tendencies. Overall, our research suggests that firms who adopt social media platform, Twitter are less prone to manage their earnings post adoption. From our second study, we find that as the extent of followers or tweets published increases, a firm's tendency to manage earnings may reduce. From our third study, we find that as the firm's increases dissemination of earnings related communication it reduces the firm's tendency to manage earnings. To the best of our knowledge, this is the first research that attempts to understand the relationship between firm's social media activities and earnings management behaviour. Additionally, this is one of the largest studies on the firm's use of social media.

This research also contributes to the practice. Most importantly, we provide insights to the investors and the policy makers. Our findings provide a signal to the investors that firms that are active on social media are less likely to manage their earnings and to be trusted. At a policy level, the SEC can invite more firms to use social media actively to divulge news about their company. Our results signify that the use of social media decreases the likelihood of earnings management, and hence decision makers should encourage firms to use social media. Additionally, SEC is resource constrained and a channel like Twitter that helps in screening and provides information about firm's transparency will help the policy makers to allocate resources in areas to chase extreme cases of earnings management that require urgent attention. Thus, our findings not only contribute to the academic literature and help the industry practitioners, but it provides useful guidelines to policy makers as well.

## References

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