Chapter 43
Social Media Analytics for Maintaining Financial Stability

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ABSTRACT

Risk and uncertainty are disliked but inevitable. The nature of these has changed and new sources of risk have risen. To mitigate risk and maintain financial stability, the firms need to adapt. The world wide web and, within it, social media have had tremendous growth and wide coverage lately, making them determining forces in any economic activity. This has led to generation of large amount of data on myriad concerns. Recent developments in computing technology has thrown open the possibility of mining useful information from the enormous and dynamic data. The chapter outlines the growth of social media and social media analytics and its financial implications to businesses, consumers, and governments. It details how risk management and social media, two domains earlier considered more diverged than chalk and cheese are now inextricably linked and explains using various cases how social media analytics is used to manage risk and uncertainty. The authors also look at the emerging challenges with these developments.

INTRODUCTION

The Chinese curse, "May you live in interesting times," has never been truer than today. With 'Disruptive Innovation' being the new buzzword, there is rapid change all around. This period of Information Revolution has virtually connected people across the globe. An increasingly large amount of time is spent online today. With the increase in mobile devices and improved access to internet, people today consume most of their information online. This has further created many online businesses as well as driven traditional businesses electronically. More recently, social media has gathered considerable forces online. Young

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(2017) finds that one in every three minutes spent online is devoted to social media. Enormous amount of data and content is generated through channels of social media like Twitter, LinkedIn, Facebook and Instagram, to name a few, and this data is continually updating in real time. Evidently social media is a vital medium to reach large online audience in their day to day lives with ease. The increasing economic activities and improved means of information transmission have brought in new kinds of uncertainty and risks too. The gargantuan information available can itself be tapped to mitigate these new risks. With such significance of social media in the current scenario, how important is its role to aid risk mitigation decisions is worth researching.

Financial stability can comprise different things for different economic entities — the firm, the government and the household. But across these divides, financial stability can be understood as the resistance to economic shocks and not losing the ability to fulfil its basic functions. Core risks can be classified into four types, namely: Market Risk, Credit Risk, Liquidity Risk and Operational Risk. In layman terms, market risk arises when loss is associated to the factors that affect the market, such as stock prices, foreign exchange rates, etc. (Arshad, Zafar, Fatima, & Khan, 2015; Hull, 2018). Credit risk arises when an entity fails to fulfill its commitments towards its counter parties. Liquidity risk arises when an investment cannot be traded instantaneously to counter or minimize a loss. Operational risk arises when loss is a product of operational failures, which can be external or internal in nature that can include technical failures, frauds because of failed internal processes, and other such events. With the digital socialism in trend, it is imperative to understand these risks in the context of social media.

Thus, there is a need for firms to adapt to maintain financial stability and counter those risks. The present chapter studies how such adaption is worked upon by firms in the present period and how they would for the changing times ahead. The rest of the chapter is organized as follows. The next section looks at the rise of social media, making it an obligatory part of business, and its implications for business. The third section describes the various aspects of social media analytics — both content and structure-based analytics — and looks at the latest inroads into the realm of big data. This is followed by looking at ways in which social media and social media analytics are used for financial stability as well as solutions and recommendations. Lastly, the authors highlight future concerns and challenges for social media analysis in times to come, indicate directions for future research and conclude.

BACKGROUND

Rise of Social Media

Social media is a broad term encapsulating a wide range of online platforms that let users create and exchange content. These websites are constantly evolving and adding functionalities in an attempt to stay relevant. This makes it hard to distinguish between the different options. Nevertheless, Barbier and Liu (2011) categorize social media as:

1. Social networks, E.g.: Facebook, Orkut, LinkedIn
2. Microblogs, E.g.: Twitter, FriendFeed and Tumblr
3. Blogs, E.g.: Blogger and WordPress
4. Social news, E.g.: Digg, Slashdot and Reddit
5. Social bookmarking, E.g.: Delicious, StumbleUpon, etc.

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