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Director Networks and Stock Price Crash Risk

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Director Networks and Stock Price Crash Risk

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摘要

先前的文献显示公司高管有动机适时地隐瞒市场上的不利消息，比如对职业生涯的考虑和声望。Jin 和 Myers 提出的坏消息囤积理论（2006）认为当公司长期隐瞒坏消息时，负面信息很可能会囤积在公司内部。当这种行为的动机崩溃或者达到一个临界点，迄今为止所有未披露负面信息一次性地公布在公众面前，将会导致股票价格直线崩盘。

本文以 1996 到 2013 的标普 1500 作为样本，检验了在董事联系紧密的公司内是否存在知识外溢效应从而降低未来极端负收益出现的可能性。我发现大体上董事联系紧密的高管的公司的股价崩盘风险会下降。这种减震效应在非权益性报酬和 CEO 兼任董事会成员的公司里更加显著。

这一发现可以解释为消息灵通且常参与群体创新的董事会有效地抑制高管隐藏坏消息的动机。具体来说，本文的研究结果表明加强董事之间社交联系可作为降低股价崩盘风险的有效措施。另外，本文从股价崩盘风险的视角展开研究，为企业社交网络的价值创造效应提供了独特的解释与支持。

关键词: 网络中心性; 股价崩盘风险; 坏消息隐藏; 群体创新; 会计报告完整性.

Abstract

Previous literature has shown that corporate executives have incentives to opportunistically withhold adverse information from the market for personal gains such as career concerns, and prestige. The bad news hoarding theory propounded by Jin and Myers (2006) asserts that when firms conceal bad news for an extended period of time, negative information is likely to be stockpiled within the firm. When the motivation for such actions collapses, or reaches a tipping point, all the hitherto undisclosed adverse information come to the public at once leading to stock price crashes.

Using a sample of S&P1500 firms from 1996 to 2013, I examine whether firms with well-connected directors better influence corporate behavior to prevent the occurrences of future extreme negative returns and hence investor welfare. I find strong and reliable evidence that stock price crash risk substantially declines for firms with well-connected directors. This mitigating effect is more pronounced in firms with no equity-based compensation and no joint CEO-Chairman position.

I interpret these findings as supportive evidence that directors who are well-connected benefits from group innovation and becomes well informed to constrain managers' incentives to suppress bad news from the public. In specifics, my findings highlight director network as an important antidote to the occurrence of extremely negative stock prices/returns crashes. Furthermore, this study from the perspective of stock price crash risk provides an alternative explanation and addition to the value creation literature of firm networks.

Keywords: Network centrality; Crash Risk; Bad News Hoarding; Group innovation; Accounting reporting integrity.

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CHAPTER 1 BACKGROUND OF STUDY

1.1 Introduction

Since the 1987 stock market crash, the concept of crash risk or bubbles has become great concerns to investors, researchers, regulators and all who matters in ensuring stability in an economy. The latest stock market crash of 2008/2009 coupled with the numerous accounting scandals (Enron, WorldCom, Xerox, Lucent, Vodaphone, Adelphia, Lernout and Hauspie Speech Product) has compel researchers and stakeholders to do more in the field especially firm-level crash risk.¹ When managers exploit opportunities to enhance their personal wealth or to achieve personal goals by concealing bad news, they would be stockpiled. When the accumulation of negative information collapses or reaches a tipping point, they are released to the market at once leading to large market-adjusted stock return outliers on the individual stocks concerned. This phenomenon is referred to as stock price or firm-specific crash risk (Hutton et al. 2009; Jin and Myers, 2006).²

Board of directors are the primary means employed by investors and corporate governance literature to curb manipulative and opportunistic behaviors of management such as adverse news hoarding. In this paper, I investigate whether firms with well-connected directors' benefits from knowledge spillover and group innovation to prevent the occurrences of future extreme negative returns by improving their internal controls, (thus their financial report integrity and disclosures) which is the main tool for monitoring and advising management. My analysis is composed of three streams of literature, namely bad news hoarding theory, crash risk literature, and social imitation theory, which has recently drawn the attention of researchers in accounting and finance.

¹ Crash risk is a significant consideration for investors. For example, Chang, Christoffersen, and Jacob (2013) document that negative skewness in market returns is associated with a positive risk premium. It also explains the reason for superior returns generated by hedge funds (Jiang and Kelly 2012).

² Crash risk and tail risk are used interchangeably and synonymously. Both concepts relate to unusual price movements associated with the tail of the distribution (Hutton et al. 2009). You and Daigler (2010) define tail risk as “the risk of large downside losses arising from non-normal price movements”. DeFond et. al (2015) define crash risk as “the frequency of extreme negative stock returns”.

The literature on bad news hoarding posits that management opportunistically withhold or delay the disclosure of bad news with the reason that current poor performance can be overturned with subsequent good performance. According to a survey conducted by Graham et al. (2005), CFOs delay bad news disclosures with the expectation that, the firm's performance will improve and thus there will be no need to worry about such bad news and hence market reactions. The literature documents various reasons for information hoarding by corporate executives. Some posit that career concerns can motivate managers to withhold bad news and speculate that future corporate events will improve to overturn the bad news (Kothari et al. 2009). Others argue that nonfinancial motives, such as empire building and reputation building provide incentives for managers to conceal bad news (Ball 2001, 2009). It is however unusual for bad news to be hidden from the market forever. When the accumulation of bad news reaches a tipping point, they are released to the market at once leading to an abrupt extreme negative decline in stock price (Jin and Myers, 2006).

The crash risk literature is closely linked to the bad news hoarding theory. It is the result of concealing bad news for long within a firm. Jin and Myers (2006) and Hutton et al. (2009) provide evidence that opaque firms are more prone to stock price crashes. They argue that opaque firms have higher information asymmetry and are inclined to conceal unwanted information hence face more idiosyncratic risk. Adding, Kim et al. (2011a, 2011b), Francis et al. (2011) among others show that undisclosed information leads to firms' stock price crashes.

The final motivation for this work is social network and business imitation theory. Social network theory suggests that an individual behavior is the product of his/her interactions and involvements in the society. The acquire behavior is evident in all aspects of life including the board room (Jackson, 2008; Newman, 2010).³ Individuals and their links form a network where they exchange information, ideas and resources, which shape their decisions. Firm networks serve as a channel for the transmission of information about corporate practices consolidating into herding behavior (Bikhchandani et al. 1998; Hirshleifer & Hong Teoh, 2003). Directors provide knowledge and resources to their firm through their monitoring and advising roles. Prior experience, and

³ Social network has influence on firm's investment decisions (El-Khatib, Fogel, & Jandik, 2015; Renneboog & Zhao, 2014; Singh & Schonlau, 2009), tax planning (Brown & Drake, 2013), firm performance and firm value (Chuluun, Prevost, & Puthenpurackal, 2014; Larcker, So, & Wang, 2013), and executive compensation (Renneboog & Zhao, 2011).

connections of directors can be leveraged by a firm to create value (Coles et al. 2012; Larcker et al. 2013, Chuluun et al. 2014). Through their links with other directors on other boards, directors gain access to information that would otherwise be inaccessible and this help to complement their advising and monitoring roles. On the flip side, the network directors build could be the route for the transfer of undesirable business practices. Literature documents evidence of activities such as diffusion of poison pills (Davis, 1991), options backdating (Bizjak et al. 2009) among networked firms. Another concern is “trade-off” where directors become too busy with their connectedness at the expense of their fiduciary duties. They become so busy that it reduces the quality of their monitoring and advising responsibilities. (Core et al. 1999; Fich and White, 2003; Loderer and Peyer, 2002; Fich and Shivdasani, 2006).

Following Larcker et al. (2013) and Omer et al. (2014) the collective prediction is that the benefits of firm connectivity outweigh the cost. I posit that well-connected firms benefit from information spillovers and group innovation to improve their information environment and the quality of their financial report. As firms explore their networks for best practices and pool together resources to design innovative control systems (Bouwman, 2011; Shue, 2013) the occurrence of future stock prices will be minimized if not eliminated.

I conduct empirical analysis to test my hypothesis whether board connectedness constrains the occurrences of asset crashes. My results indicate that firm network centrality has a reducing effect on the occurrence of future stock price crashes for firms with less equity-based compensation and CEO duality leadership. The findings are in congruence to my forecasts that through their networks, directors benefit from knowledge spillovers, group innovation and are better informed to improve and control their information environment thus hedging against managerial opportunistic and manipulative activities such as bad news hoarding. Thus, well-connected directors create value for their firm by hedging against future stock price crashes.

My study contributes to the literature in several ways. First, to the best of my knowledge, this is the first study to examine the relation between director network and stock price crash risk. By focusing on a unique perspective, this study provides new evidence concerning the economic consequences of social imitations. In particular, the findings highlight significant benefits that social interactions bring to firms and their shareholders. Yan (2011) and Xing, Zhang, and Zhao (2010) suggest that extreme outcomes in the equity market are of extreme concerns to shareholders

and requires interpretations. I believe this paper helps to fill in that gap through the empirical evidence and aids in understanding the role that director network plays in influencing both corporate behavior and investor welfare.⁴ Second, this work extends the literature on corporate governance by showing the relation between social connectivity and stock price crash risk relative to the strength of corporate governance mechanisms in place in a firm. It provides more explanation on the conventional governance mechanisms in monitoring the flow of information to the equity market. Third, this study adds to the research on bad news hoarding theory and stock price crash risk. In particular, the implication of social interactions on future crash risk offers valuable insights into the behavioral and sociological nature of managerial manipulation of information. Last, but not the least, this study provides investors with priceless information on how the social business environment affects firm behavior, which may help them maximize their investment by preventing firm idiosyncratic risk.

The remainder of the thesis is organized as follows. Chapter 2 presents literature review and hypothesis development, Chapter 3 presents the research methodology in this thesis, Chapter 4 shows the empirical results and finally Chapter 5 summarizes the major findings and concludes the entire thesis.

⁴ Recent studies show that extreme outcomes in the capital market significantly affect investor welfare and that investors are greatly concerned about the probability of these extreme outcomes and require a higher equity premium (Santa-Clara and Yan, 2010).

CHAPTER 2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Introduction

This section reviews literature on social networks as related to corporate directors and the economic consequences of their connections for the firm.

2.2 Related literature

2.2.1 Why do managers conceal bad news?

The stock price crash risk literature originates from the bad news hoarding theory. The concept of separation of power and asymmetry of information between managers and shareholders (Jensen and Meckling, 1973) induces managers to indulge in activities (e.g. concealing bad news) that will maximize their self-interest at the expense of their employer (shareholders). Aside the work of Jin and Myers (2006), researches have uncovered the motivation behind managerial bad news hoarding from the capital market.

Career and compensation concerns, empire building, prestige and reputation concerns are some of the reasons behind managerial adverse news hoarding behavior (Ball, 2001; Hermalin and Weisbach, 2012).⁵ Basu (1997) states that when managers compensation is linked to performance or earnings, they are more likely to hide any information that will adversely affect them.⁶ Fischer and Verrecchia (2000) argue that limitation of the market to expose any bias in management reports encourage bias reporting. A survey conducted on CFOs choice of financial reporting and disclosures revealed that CFOs are more inclined to delay the disclosure of bad news relative to good news. The survey further reveals managers' suboptimal actions to meet or to beat earnings forecast (Graham et al. 2005). In the work of Kothari et al. (2009), they document that on average

⁵ Ball (2009) argues that empire building and maintaining the esteem of one's peers incentivize managers to conceal bad news

⁶ Basu (1997) reveals that managers often possess valuable inside information about firm performances, and will hide negative information that will affect earnings and, hence, their compensation.

managers delay the disclosure of bad news to investors asserting that improved corporate events will allow them to “bury” the bad news.

2.2.2 How do bad news hoarding activities leads to stock price crashes?

Recent studies have examined how stock price crashes could be explained from bad news hoarding behavior. When the accumulation of bad news reaches a tipping point or collapses as bad news cannot be concealed forever, it comes out at once to the market. This results in firm-specific crashes (Jin and Myers, 2006; Kim, Li, and Zhang, 2011a, 2011b; Kim and Zhang, 2012 etc.).

I summarize all related literature into two stances. The first stance of literature been those who present evidence of managers employing strategies to disguise bad news and cause stock price crashes. The second stance of literature are those who argue that through effective monitoring and quality financial reporting system, managers’ self-seeking activities are constrained. This prevents stock price crashes.

2.2.3 Firm characteristics that have positive associations with crash risk

Extreme stock price declines accompanying the numerous accounting scandals (e.g. WorldCom, Enron) and the recent financial crisis of 2008/2009, gave birth to the bad news hoarding theory. Beginning with Jin and Myers (2006) and Bleck and Liu (2007), researchers have express concern about the agency cost of managers’ inside information and how it is related to stock price crash risk. A firm is said to have stock price crash risk if it has a high sudden fall in its stock price. Some of the related work on the causes of idiosyncratic risk are listed below.

Opacity of a firm’s financial report leads to stock price crashes. Hutton et al. (2009) document that opaque firms are more prone to crashes than firms with more transparent reporting system because such firms engage in earnings management to ease the precision of any bad news. As stated above, such acts are not sustainable in the long period and when the bad news are finally release into the market, they lead to stock price crashes. Their preposition that opaque firms have a tandem movement with stock price crashes is consistent with the prediction of Jin and Myers (2006), the pioneers of firm-specific crash risk literature.

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