

# Director network influence on stock price cash risks



**ASSIGN  
BUSTER**

## Introduction

A sprouting issue in corporate governance and the business world is the concept of executive network. Recent accounting and finance literature use social network theory to explain various corporate behaviors and practices steaming from information, resources exchange and relationship building. The correlation between executive network and earnings management (Omer et al, 2016; Chui, et al 2012), director network and tax management (Brown & Drake, 2013), and director network and corporate investment decisions (Singh & Schonlau, 2009), among other corporate practices have been capaciously researched but stock price crash risk has been overlooked in the area of social networks.

Firms have congruent behavior patterns as a result of the information exchange among them. The observed herding behavior of firms can be explained by social network theory which predicts firms to imitate others especially those perceived to possess superior information (Lieberman & Asaba, 2006). Corporate executives have incentives to manipulate the financial performance by withholding bad news (with the believe that such bad news can be over turned in the future) and accelerating the disclosure of good news (as this signifies competency). As directors imitate each other, such behavior can easily diffuse among them. The effect of director networks on firms' performance disclosures is multifaced. Prior director network literature document that through information exchange, directors learn from their peers on how to better perform their monitoring and advising roles to maximize shareholder value (Chuluun et al., 2014; Larcker et al., 2013).

Directors can enhance their monitoring expertise by linking up with other  
<https://assignbuster.com/director-network-influence-on-stock-price-cash-risks/>

directors who are more experienced and connected to other experienced directors. Through the positive learning hypothesis, directors become better monitors of managers of their firms. My conjecture here is that directors can improve their individual expertise and efficiency by obtaining more quality information from other directors.

As a two-edged sword, director networks can also be a vehicle for the diffusion of bad corporate practices. Social interactions can act as dais through which information about undesirable corporate practices are exchanged. According to Davis (1991), the diffusion of poison pills adopted among US firms in the late 1980s were engineered through the network directors built. Also, options expending and backdating were documented to relate to networked firms (Reppenhagen 2010, Bizjak et al., 2009). The propensity to replicate bad act when those engaged in the act go scot-free after a long time (Marvin & Shigeru, 2006). By the negative learning hypothesis, directors carry information about such bad corporate practices to their firms. This can mitigate against the monitory role of directors hence adversely affect their performance. I assume that directors take the final responsibility for various corporate practices including financial report transparency and disclosures.

This proposed study seeks to employ social network and business imitation theory to examine stock price crash, which usually result from hoarding bad news from the stock market. Prior literature argue that managers hoard bad news either to achieve personal goals such as higher compensation, job security and empire building or presumptuously to maximize long-term shareholders value (Ball, 2009; Kothari et al., 2009; Graham et al, 2005).  
<https://assignbuster.com/director-network-influence-on-stock-price-cash-risks/>

Whatever the goal, whether to achieve personal agenda or to promote shareholder value, bad news hoarded and accumulated for long result in stock price crash. (Hutton et al., 2009; Jin and Myers, 2006).

Several papers, summarized below, have explored the connection between crash risk and various firm level characteristics. However, studies that directly investigate stock price risk through executive personal characteristics have concentrated mostly on managers' personal attributes such as CEO over confidence but the social structure within which the phenomenon is practiced has largely been ignored. My proposed study seek to examine the empirical link between the relationships directors build and the distribution of stock returns.

My study will contribute to the literature in several ways. First, to my knowledge, this will be the first study to examine the relation between director network and stock crash risk. By focusing on a unique perspective, this study will provide new evidence concerning the economic consequences of social imitations. In particular, the findings will identify significant benefits that social interactions bring to firms and their shareholders. Xing, Zhang, and Zhao (2010) and Yan (2011) suggest that extreme outcomes in the equity market are of extreme concerns to shareholders and will require interpretations. Thus, the empirical evidence will be useful for understanding the role that director network plays in influencing both corporate behavior and investor welfare. Second, this will extend 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. This will provide more explanation on the conventional

<https://assignbuster.com/director-network-influence-on-stock-price-cash-risks/>

governance mechanisms in monitoring the flow of corporate information to the equity market. Third, this study will add to the research on bad news hoarding theory of stock price crash risk. In particular, the implication of social interactions for future crash risk will provide valuable insights into the behavioral-sociological nature of managerial manipulation of information. Recent studies on crash risk suggest that managerial bad news hoarding activities can be explained via religion (Jeffrey L. Callen and Xiaohua Fang, 2015), corporate social responsibility (Yongtae Kim, 2014), CEO's overconfidence (Jeong-Bon Kim, 2014), CFO's equity incentives (Jeong-Bon Kim, 2011) accounting conservatism (Kim et al, 2010), tax avoidance (Kim et al, 2010), and corporate financial opacity (Hutton et al, 2009). However, it is not clear what role executive social connections and/or social norms play in influencing the behavior to conceal bad news. My study will help to fill this gap in the literature by providing evidence on the relation between director network and crash risk and the consequential role that social connections play on managerial bad news hoarding activities. Last, but not the least, this study will provide investors with priceless information on how the social business environment affects firm behavior, which may help them to predict and eschew future stock price crash in their portfolio investment decisions.

**Research objective**The objective of this study is to find out how stock price crash is influenced by the social set up directors build. Specific research questions are;

- Can stock price crash risk be explained through director network?
- Does the level of stock price crash risk increase with the degree of executive connectedness?

<https://assignbuster.com/director-network-influence-on-stock-price-crash-risks/>

- How much dissidence of stock price crash is attributable to director network?

### Research design

The variables for this study-director connectedness and stock price crash risk will be independently estimated using Riskmetrics, CRSP and COMPUSTAT data. The Riskmetrics will be used in computing the measures of director's network. Data on the stock return for the calculating crash risk will be obtained from CRSP while compustat will provide the relevant company financials for my research. My sample size will cover the period of 1990-2014. The result of the first stage estimation will be put into a cross-sectional regression model for further estimation of the relationship between firm networks and stock price crash risk. I will use UCINET/PAJEK to estimate various dimensions of director networks (Omer et al., 2014). Crash risk will be estimated using (Chen et al . 2001), Jin and Myers (2006) and Hutton et al (2009) models which provides three measures of crash risk including i) the negative coefficient of skewness of firms' specific daily returns, ii) the down-to-up volatility of firm-specific daily returns, and iii) the difference between the number of days with negative extreme firm-specific daily returns and the number of days with positive extreme firm-specific daily returns.

The primary model for the regression will be;

$$\text{CrashRisk}_j = \hat{\alpha} + \hat{\beta}_1 \text{DirectorNetwork}_j + \hat{\beta}_2 \text{Controlvariables} + \hat{\mu}_i$$

Where  $\text{CrashRisk}_j$  and  $\text{DirectorNetwork}_j$  refer to the various measurements of crash risks and director networks of firm J respectively.

## Literature review

Former Chairman of the Board of General Motors John G. Smale wrote in 1995: “ The board is responsible for the successful perpetuation of the corporation. That responsibility cannot be relegated to management. A board of directors is expected to play a key role in corporate governance. The board has responsibility for: CEO selection and succession; providing feedback to management on the organization’s strategy; compensating senior executives; monitoring financial health, performance and risk; and ensuring accountability of the organization to its investors and authorities. The board thus play important role in corporate governance hence the need to study the board in broader perspective including their social networks. This is because through network, knowledge, ideas and corporate practices whether good or bad are shared between companies. Director network thus serves vehicle for the spread of behavior between related firms. (Asch 1951; Milgram 1963, Hirshleifer and Teoh (2003, 2009)

Director networksSocial network theory suggests that individuals’ behavior is the product of their social interactions and this connection extends to corporate behavior (Jackson, 2008; Newman, 2010). Individuals and their links form a network across which they share ideas and resources, which influences their decision. Under opacity, observe behaviors of others, can provide useful insights (Marvin & Shigeru, 2006). Social networks serve as channel for the transmission of information about corporate practices climaxing into herding behavior (Bikhchandani, Hirshleifer, & Welch, 1998; Hirshleifer & Hong Teoh, 2003). The link can either be direct such as shared directorates, trade partnership or indirect such as friend of friend of friend.  
<https://assignbuster.com/director-network-influence-on-stock-price-cash-risks/>

Newman (2010) provides evidence on the relevance on the indirect link in the information sharing process. A director with many connections become an *information hub* making him very powerful in the chain of network. This is described as centrality in the network literature (Jackson, 2008). A direct link to an information hub increases access to more complete information. Also, connection to a direct link to the information hub can acquire some information, though the closer the better. This had led to four measurements of director network namely - *degree, eigenvector, betweenness* and *closeness* centralities. Degree centrality is the absolute measure of individual social connections and boast of more information. The indirect connection where ideas exchange is from several other links is known as eigenvector centrality. Betweenness centrality relates to information control within the web. In a network, an individual positioned between two others serving as the medium of information exchange between them is viewed as one controlling information flow. The last dimension of network which relates to the proximity to information access to enhance optimization is the closeness centrality. Closeness centrality measures how quick information from other members of a network gets to an individual. The closer an individual is to a source of information, the more efficient and easier it is to access information (Jackson, 2008; Newman, 2010). The kind of information received will be parallel to the actions of the individual. I therefore, hypothesize that, firms within the same network will have homogeneous behavior.

Director networks and stock price crash risk  
Financial reports provide information about a firm's economic performance. Accounting numbers are



crucial for economic decisions of a firm's stakeholders but their relevance can only be harness when provided at the right time. Corporate executives naturally exhibit some resistance in disclosing bad performances of their firms and this behavior catalyst to stock price crashes (Hutton et al., 2009; Jin and Myers, 2006). Managers have been reported to have hoard information to opportunistically influence contractual outcomes (Cheng, Man, & Yi, 2013, Healy & Wahlen, 1999; Verrecchia, 1983). Extant literature documents the motives for information hoarding such as personal gain and career concern. (Kothari et al. 2009). In addition, Ball (2001, 2009) argues that nonfinancial motives, such as empire building and maintaining the esteem of one's peers, also provide powerful incentives for managers to conceal bad performance. Empirically, Kothari et al. (2009) find evidence consistent with the tendency of managers to hoard bad news. The managerial tendency to withhold bad news leads to bad news being stockpiled within the firm. However, there is a certain point at which it becomes too costly or impossible for managers to withhold the bad news (Kothari et al., 2009). When such a tipping point arrives, all the hitherto hidden bad news will come out at once, resulting in a large negative price adjustment, that is, a crash (Hutton et al., 2009; Jin and Myers, 2006). Moreover, Bleck and Liu (2007) argue that the withholding of bad news prevents investors from discerning bad projects from good ones and, therefore, from liquidating bad projects promptly. Thus, bad projects are kept alive and the resulting negative cash flows eventually materialize, triggering asset price crashes. Employing country- and firm-level designs, respectively, Jin and Myers (2006) and Hutton et al. (2009) provide empirical evidence consistent with the above mechanisms of stock price crashes.

<https://assignbuster.com/director-network-influence-on-stock-price-cash-risks/>

Several papers support the linkage of director network to various corporate behaviors such as expensing stock option, (Reppenhagen 2010), private equity incentives (Stuart and Yim 2010) stock option backdating (Bizjak et al. 2009) and poison-pill adoption (Davis 1991). Others include director network and mutual fund performance (Cohen, Frazzini, and Malloy, 2008; Kuhnen, 2008), venture capital investments (Hochberg, Ljungqvist, and Lu, 2007), executive compensation (Barnea and Guedj, 2009), and firm governance (Fracassi and Tate, 2008; Hwang and Kim, 2008). They provide empirical evidence on the transfer of behavior between related firms.

Building on the literature on social network and the literature on crash risk, I propose that director network can affect firm-level stock price crash risk. Since director network can pass good or bad business practices, it can mitigate or contribute to crash risk, however, the quantum ultimately is an empirical question. The empirical analysis will shed light on this important issue.

## References

*Ashbaugh, Hollis, Joachim Gassen, and Ryan Lafond, 2005, Does Stock Price Synchronicity Reflect Information or Noise? The International Evidence, mimeo*

*Barnea, A., Guedj, I., 2009. Director networks. Unpublished working paper. University of Texas, Austin.*

*Brown, J. L., & Drake, K. D. (2013). Network ties among low-tax firms. The Accounting Review*

<https://assignbuster.com/director-network-influence-on-stock-price-crash-risks/>

*Chen, J., Hong, H., Stein, J., 2001. Forecasting crashes: Trading volume, past returns, and conditional skewness in stock prices. Journal of Financial Economics*

*Chiu, P.-C., Teoh, S. H., & Tian, F. (2012). Board interlocks and earnings management contagion. The Accounting Review*

*Hutton, A. P., Marcus, A. J., Tehranian, H., 2009. Opaque financial reports, R2, and crash risk. Journal of Financial Economics*

*Kim, J. B., Li, Y., Zhang, L., 2011b. CFO vs. CEO: equity incentives and crashes. Journal of Financial Economics*

*Kim, J. B., Zhang, L., 2013. Accounting conservatism and stock price crash risk: firmlevel evidence. Contemporary Accounting Research, forthcoming*

*Kim, J. B., Li, Y., Zhang, L., 2011a. Corporate tax avoidance and stock price crash risk: firm-level analysis. Journal of Financial Economics*

*Kim J-B, Li Y, Zhang L. 2011b. Corporate tax avoidance and stock price crash risk: Firm-level analysis. Journal of Financial Economics*

*Kothari SP, Shu S, Wysocki PD. 2009. Do Managers Withhold Bad News? Journal of Accounting Research*

*Lieberman, M. B., & Asaba, S. (2006). Why Do Firms Imitate Each Other? The Academy of Management Review*

*Malmendier U, Tate G. 2005. CEO Overconfidence and Corporate Investment. The Journal of Finance*

<https://assignbuster.com/director-network-influence-on-stock-price-cash-risks/>

*Newman, M. (2010). Networks: an introduction : Oxford University Press*

*Omer, T. C., Shelley, M. K., & Tice, F. M. (2014). Do director networks matter for financial reporting quality? Evidence from restatements.*

*Singh, P. V., & Schonlau, R. J. (2009). Board Networks and Merger Performance.*