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Factors Affecting Firm-specific Stock Price Crashes: A Review

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Abstract: *After reviewing some ten years of academic research on firm-specific stock price crash risk, using the firm as the subject, and in terms of internal and external sources of influencing factors to classify the factors affecting stock price crashes into internal and external factors. Internal corporate factors include managers, governance, investors, disclosure, culture and strategy. External factors include auditors, analysts, government, society and public events. The external factors will be a key focus on the future firm-specific stock price crash risk studies.*

Keywords: *stock price crash risk, firm-specific, Internal and external factors.*

1. Introduction

The firm-specific stock price crash risk from the inside managers' information hiding (Jin and Myers, 2006) which is based on principal-agent theory. They tend to strategically hide or delay the release of bad news, and release good news immediately. But once the accumulation of bad news is so overwhelming that it can no longer be hidden, the signals of bad news will flow to the market in a very short time. It can lead to large shocks in the stock price, resulting in a crash. Reluctance to spread bad news is a common problem in many companies (Keil et al., 2004). Internal managers also like to mislead investors by reporting the good news (Brockman et al., 2013). The corporation hides the accumulation of bad news or publishes false good news is from the inside managers motivated by personal remuneration and career development (Friedman, 2014; Andreou et al., 2017; Zhou et al., 2018; Chen et al., 2018; An et al., 2020; Fang et al., 2021). The managers have strong incentives to cover up bad news in order to continue collecting additional allowances. But the strategy of hiding bad news cannot last forever, and when there is a cash shortage, the real state will be revealed and the company's stock price will collapse (Xu et al., 2014).

Since the studies of Hutton et al. (2009) and Kim et al. (2011a)A large number of scholars have studied various factors influencing the stock price crash risk, such as the CEO age (Andreou et al., 2017) ; CEO overconfidence (Kim et al., 2016) ; banker director (Kang et al.; 2020) ; IFRS (Defond et al., 2015) ; religion (Callen and Fang, 2015) ; media coverage (An et al., 2020) ; political corruption (Chen et al., 2018) etc.

After reviewing late ten years of academic literature, using the firm as the subject, and in terms of internal and external sources of influencing factors to classify the factors affecting stock price crashes into internal and external factors. Internal corporate factors include managers, governance, investors, disclosure, culture and strategy. External factors include auditors, analysts, government, society and public events. The innovation of our paper starts with the firm itself to sort out the impact of internal and external corporate factors on the stock price crash risk.

2. The Internal Firm-Specific Factors

2.1. Managers

Stock price crashes can have a significant economic impact on a company, and how corporate managers make decisions and their actions can have a significant impact on crashes. According to the existing literature, the characteristics and behavior of managers have been studied in terms of gender (Li and Zeng, 2019); age (Andreou et al., 2017); background (Fu and Zhang, 2019), ability (Bao et al.,

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2018), experience (Cui et al., 2021), power (Chen et al., 2018), connection (Krishnamurti et al. 2021), overconfidence (Kim et al., 2016), etc.

Among corporate manages there are clear differences in personality and behavior between men and women. For example, women are more compliant with financial market regulations, as well as having a lower tolerance for risk (Brooks et al., 2019). Li and Zeng (2019) find a negative relationship between female executives and stock price crash risk in the US, but only significant for female CFOs.

The environment in which an individual grows up can have a profound and lasting effect on the formation of personality traits (Marquis and Tilcsik, 2013). Managers who have experienced periods of famine are more conservative about the risk, and can effectively reduce the stock price crash risk (Cui and Sun, 2021). Whereas managers with different cultural values hold different attitudes towards the concealment of negative information, Fu and Zhang (2019) find that having a cross-cultural background CFO is negatively associated with the stock price crash risk, especially for those with higher information asymmetry and risk.

The key to success in concealing bad news and manipulating performance depends on the power of the company's managers (Friedman, 2014). CEOs with strong power (especially corporate founders) are less likely to be replaced due to poor performance (Graham et al., 2017), and will accelerate the disclosure of bad news to reduce litigation risk, instead creating a higher crash risk.

In modern companies where ownership and control are separated, managing remuneration contracts is a potential mechanism for reconciling the conflicting interests of shareholders and managers. By using payment as an incentive to influence future wealth, there is an incentive to hoard bad news. Kim et al. (2011b) find that the strength of option incentives for CFOs shows a positive relationship with the stock price crash risk compared to CEOs, suggesting that CFOs are more influential in the company's bad news hoarding decisions. In the face of payment incentives, younger CEOs have the incentive to intentionally conceal and accumulate adverse operating results, thereby increasing the likelihood of future stock price crashes (Andreou et al., 2017).

From the behavioral finance perspective, a CEO with overconfidence can overestimate the returns of the investment plan, has a higher stock price crashes than a non-over-confident CEO (Kim et al., 2016).

2.2. Governance

As agents of the company's shareholders, the board has a responsibility to mitigate agency conflicts arising from the manager's information advantage by ensuring more transparent disclosure of information (Armstrong et al., 2010). For example, directors can mitigate the monopoly of information held by managers through information gathered by social networks, stopping the hoarding of bad news and reducing future stock price crashes occurring (Fang et al., 2021).

The specific governance mechanisms of the directors mainly have two aspects. On the one hand, the directors supervise the business decisions. On the other hand, directors provide advice on the operation of the company. Directors with foreign experience have highly specialized skills and advanced management experience, helping to reduce the crash risk (Cao et al., 2019). Banker directors, with their own financial expertise in risk management, can also mitigate conflicts of interest between shareholders and creditors and can reduce stock price crash risk (Kang et al., 2020).

2.3. Investors

Investors have an impact on the stock price crash risk. By using China's superstitious behavior towards unfortunate numbers as a research point, investors' overreaction to negative news about companies with unfortunate listing codes is one mechanism by which superstition influences stock price crashes (Bai et al., 2020). Foreign investors are positively associated with the future stock price crash risk (Vo, 2020), because foreign investors face information asymmetries in emerging markets, and corporate managers may fear that foreign managers are sensitive to bad news and tend to hide bad news.

In China, institutional investors are acting as crash accelerators rather than market stabilizers. Both herding behavior of institutional investors (Xu et al., 2013) and institutional investor information seeking (Wang et al., 2020) can enhance the stock price crash risk.

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2.4. Disclosure

Decreased transparency of company information raises future stock price crashes (Kim et al., 2011a). Kim et al. (2014) find that opaque financial reporting allows inside managers to hide and accumulate bad news for a long time, and that the less transparent the financial reporting information, the higher the future crashes. Defond et al. (2015) find that mandatory implementation of IFRS standards can increase disclosure of information by companies in non-financial industries and improve the transparency of financial reporting, which reduces the stock price crash risk. Using data from 43 markets around the world, He et al. (2019) find that companies with larger goodwill disclosed in financial reports are at higher crashes in the future. Kong et al. (2020) find that causal language in financial reports facilitates the hiding and blending of adverse information, which leads to a higher crash risk.

The quality of accounting information can also affect the stock price crash risk. Corporate earning management can lead to more severe crashes (Francis et al., 2016). Accounting conservatism (Kim and Zhang, 2016) and accounting comparability (Kim et al., 2016) are effective in reducing managers' incentives to hide bad news and thus reduce the stock price crash risk.

2.5. Culture and Strategy

The corporate culture helps to improve the quality and ethics of the employees. Callen and Fang (2015) find that companies headquartered in counties with stronger religious beliefs exhibited a lower risk of future stock price crash due to religion as a set of social norms that help curb the accumulation of bad news from managers. Jebran et al. (2019) find that Confucianism as a moral system can mitigate the risk of crashes of Chinese companies.

Different corporate strategies lead to different business policies. Jia (2018) finds that companies oriented towards an exploratory innovation strategy are at more risk of stock price crash, due to exploratory-oriented companies have a higher failure rate and are less likely to disclose negative news about their innovation projects.

3. The External Firm-Specific Factors

3.1. Auditors

Highly qualified auditors are effective in reducing the stock price crash risk of the audited companies (Robin and Zhang, 2015). Hackenbrack et al. (2014) find that changes in audit fees show an economically meaningful positive relationship with the future stock price crash risk.

3.2. Analysts

Xu et al. (2013) find that an increase in the amount of analyst coverage leads to an increased stock price crash risk, and that this effect is stronger when analysts are over-optimistic and when investment banks and brokerage firms affiliated with the analysts are in mutual fund relationships. Xu et al. (2017) find that analyst herd behavior slows the spread of bad news in the market and exacerbates the risk of a corporate stock price crash.

3.3. Government

Kubick and Lockhart (2016) find that companies closer to the US Securities and Exchange Commission (SEC) were subject to SEC regulation resulting disclosure practice, which reduced the stock price crashes, while companies further away from the SEC became less regulated due to SEC funding constraints, enhancing the stock price crash risk. Using a study of corruption prosecutions of top municipal officials, Chen et al. (2018) find that the firm-specific stock price crash in prosecuted jurisdictions was significantly reduced after being subjected to a tough crackdown on political corruption. Abedifar et al. (2019) find that when governments conduct stricter accounting standards and enforcement standards, they can effectively enhance disclosure and improve the effectiveness of direct regulation and external audits, significantly reducing the stock price crashes.

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3.4. Society

Social media can reduce information asymmetry and enhance the role of regulation. Positive media coverage decreases the probability of a stock price crash, and there is a positive relationship between negative media coverage and stock price crashes, which is more pronounced for state-owned enterprises and large firms (Zhu et al., 2017). A higher rate of media coverage leads to a lower likelihood of firms concealing bad news and will reduce the stock price crash risk (An et al., 2020).

For corporate social responsibility, the risk of crashes will be reduced when socially responsible companies commit to high standards of transparency and reduce the accumulation of bad news (Kim et al., 2014).

3.5. Public Events

The US Securities and Exchange Commission (SEC) mandated the adoption of Extensible Business Reporting Language (XBRL) in 2009, Zhang et al. (2019) find that XBRL reduced information processing costs and enhanced the transparency of information, reducing investor expectations of future crash risk.

4. Conclusion

In terms of the internal and external factors affecting the firm-specific stock price crash risk. internal factors include managers, governance, investors, disclosure, culture and strategy. External factors include auditors, analysts, government, society and public events. Our contribution lies in the division of influencing factors into internal and external to the company. There is much more research studying the internal factors affecting the firm-specific stock price crash risk than the external factors. External factors will be the focus of future research into firm-specific crash risk, particularly government, society and public events.

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