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# Social trust and stock price crash risk: Evidence from China[☆]

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A B S T R A C T

We study the relation between social trust and stock price crash risk using a sample of Chinese publicly traded A-share stocks during 2001–2012. The crash-prone environment and China's culturally and economically diverse society provide a good background for the examination. We document that (1) social trust and stock price crash risk are negatively correlated and (2) this relation is less pronounced for firms with greater analyst coverage or high institutional ownership. Our findings are robust to alternative measures of crash risk and social trust and additional control variables. Our results also indicate that, as an informal institution, social trust and other formal institutional monitoring mechanisms are partial substitutes. Social trust, as a socioeconomic factor, relates to crash risk.

## 1. Introduction

Stock price crash risk (hereafter crash risk) is undesirable. Regulators, policy makers, investors, and corporate executives all have incentives to examine the contributing factors and mitigate crash risk. The literature primarily focuses on the internal factors contributing to crash risk, however. According to these studies, information transparency (Jin & Myers, 2006), opaque financial reports and earnings quality (Hutton, Marcus, & Tehranian, 2009; Kim & Zhang, 2014, 2016), corporate tax avoidance (Kim, Li, & Zhang, 2011a), the value of the chief financial officer's (CFO) option portfolio (Kim, Li, &, Zhang, 2011b), chief executive officer (CEO) overconfidence and excess perks (Kim, Wang, & Zhang, 2016; Xu, Li, Yuan, & Chan, 2014), institutional investor ownership (An & Zhang, 2013; Callen & Fang, 2013), corporate social responsibility and philanthropy (Kim, Li, & Li, 2014; Zhang, Xie, & Xu, 2015), and accounting and internal control (Chen, Chan, Dong, & Zhang, 2016) are related to crash risk. The logic behind crash risk is that some firms have incentives (due to taxes, executive compensation, aggressive accounting treatment, etc.) to hide bad news. When bad news accumulates beyond a threshold level, it floods the market in a short period and the stock price crashes. Few studies examine the impact of external factors, especially socioeconomic ones, on a firm's crash risk.

The objective of this study is to investigate the relation between social trust levels in a region where a firm is located and its crash risk. Social trust is an important socioeconomic element in shaping individual behavior and informal institution in a society. Prior literature has demonstrated that social trust affects corporate financial practices, such as dividends (e.g., Bae, Chang, & Kang, 2012; Javakhadze, Ferris, & Sen, 2014), the cost of equity capital (e.g., Gray, Kang, & Yoo, 2013), cash holdings (e.g., Chen, Dou, Rhee,

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Truong, & Veeraraghavan, 2015), corporate investment (e.g., Shao, Kwok, & Zhang, 2013), and trade credit (e.g., Wu, Firth, & Rui, 2014).

We contend that social trust relates to a firm's crash risk. Our argument is hinged on the view that social norms have a strong influence on human behavior (Cialdini & Goldstein, 2004; Sunstein, 1996). As one of the important social norms, strong social trust shapes informal institutions and can thus positively change corporate executive behavior. Then, executives are more trustworthy—that is, honest in the information they disclose about their firms—if their firms are in a high social trust society than in a low social trust society. Bad news, then, is channeled to the market in a timely manner. Bad news is hidden less and crash risk is lower. In addition, strong social trust regions create a strong, trustworthy business environment. Thus, in a high social trust region, even if the executives themselves are not trustworthy, they are more likely to behave in a trustworthy manner in their business practices due to pressure and/or influence from their trustworthy peers and business partners. Therefore, crash risk is lower for firms in a high social trust environment. From the perspective of both executives and the business environment, we hypothesize that social trust and crash risk are negatively correlated.

We examine our hypothesis using a sample of Chinese A-share stocks. The Chinese environment is suitable for our investigation for three reasons. First, given China's relatively weak formal institution and many capital impediments, crash risk is a legitimate concern (Xu et al., 2014). Allen, Qian, and Qian (2005) and Ayyagari, Demirgüç-Kunt, and Maksimovic (2010) suggest that, in an emerging market such as China, laws are enforced less effectively and business ethics are questionable. Thus, informal institutions (such as social trust) in China are expected to play an important role in moderating business activities in a crash risk-prone environment. It is natural for social trust to be a critical element in shaping China's informal institutions. Hence, we contend that social trust is likely to be an important determinant in explaining crash risk in China. Second, China is a culturally and economically diverse country. Ethnicities, histories, languages, and philosophies differ greatly across Chinese provinces (Wu et al. 2014). Ang, Cheng, and Wu (2015) show that cultural differences between Chinese provinces are greater than between European countries. Hence, we argue that socioeconomic and business environments across Chinese provinces are very heterogeneous so that firms in different provinces face very different atmospheres of social trust. Thus, China is a fertile ground to examine the impact of social trust on corporate financial behavior. Third, a single-country study using Chinese data can capture variations in social trust and crash risk. Unlike cross-country studies, our single-country analysis controls for the impact of other variables, such as government regulations and national culture. Overall, China is a good laboratory for examining the relation between social trust and crash risk.

Using a sample of Chinese A-share stocks over 2001–2012, we find that crash risk is lower for firms in a high social trust province. In addition, we document that firms in provinces with higher social trust scores are less likely to hide bad news. Both findings are consistent with our conjecture that social trust shapes individual behavior and improves the information environment to lower a manager's motivation to hide bad news, which, in turn, decreases crash risk. The negative correlation between social trust and crash risk is robust to a battery of alternative measures for social trust and crash risk and additional control variables. Moreover, the relation is incrementally significant, even after controlling for tax avoidance (Kim et al., 2011b), accounting conservatism (Kim & Zhang, 2016), and many other determinants known to influence crash risk. Moreover, we further examine whether the relation between social trust and crash risk varies with analyst coverage and institutional ownership. These additional empirical exercises are motivated by recent findings on the substitution between informal and formal institutions in the context of corporate financial behavior (Pevzner, Xie, & Xin, 2015; Wu et al., 2014; Shen, Lin & Wang, 2015). Using the level of institutional ownership and analyst coverage as proxies for internal and external firm monitoring that strengthen formal institutions, we find that the negative relation between social trust and crash risk is less pronounced for firms with more analyst coverage or high institutional ownership.

We contribute to the literature in several ways. First, to the best of our knowledge, we are the first to document the impact of social trust on capital market performance in terms of crash risk in an emerging economy. Our results complement the literature on social trust and corporate financial practices (Bae et al., 2012; Chen et al., 2015; Gray et al., 2013; Javakhadze et al., 2014; Shao et al., 2013; Wu et al., 2014) and the findings of Chance, Cicon, and Ferris (2015) on executive honesty and corporate turnaround. Second, we extend the literature that seeks to mitigate firm-level crash risk from a socioeconomic perspective. Most studies examine how corporate internal factors contribute to crash risk. Instead, we show that social trust, as a socioeconomic factor, can significantly mitigate firm-level crash risk in Chinese listed firms. Our findings also corroborate those of Xu, Jiang, Chan, and Yi (2013), that there are indeed external factors beyond corporate internal factors contributing to crash risk. For Xu et al. (2013), the external factor is analyst optimism, a factor that is more finance related. Hence, we demonstrate that socioeconomic as well as finance-related external factors contribute to firm crash risk. Third, we document that, as formal institution monitoring mechanisms, analyst coverage and institutional ownership can moderate the relation between social trust and crash risk. Our results enrich the literature on the substitution between informal and formal institution monitoring in the context of corporate financial behavior (e.g., El Ghoul, Guedhami, Ni, Pittman, & Saadi, 2012; Pevzner et al., 2015).

## 2. Literature review and hypothesis development

### 2.1. Literature review

Two strands of literature are related to our study. The first strand involves the determinants of crash risk. The literature primarily examines the internal factors that contribute to crash risk at national and firm levels. At the national level, the 40-country study of Jin and Myers (2006) documents that stock market opaqueness in a country is positively correlated with national stock market crash risk. With respect to firm-level evidence, Hutton et al. (2009) show that a firm's crash risk is positively related to the opaqueness of its financial reporting. Using earnings management, financial statement restatements, and the presence of auditor-attested material