Employee welfare and stock price crash risk

Hamdi Ben-Nasr, Hatem Ghouma

PII: S0929-1199(17)30321-8
DOI: https://doi.org/10.1016/j.jcorpfin.2017.12.007
Reference: CORFIN 1315

To appear in: *Journal of Corporate Finance*

Received date: 18 May 2017
Revised date: 27 November 2017
Accepted date: 8 December 2017

Please cite this article as: Hamdi Ben-Nasr, Hatem Ghouma , Employee welfare and stock price crash risk. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Corfin(2017), https://doi.org/10.1016/j.jcorpfin.2017.12.007

Employee Welfare and Stock Price Crash Risk[1]

Hamdi Ben-Nasr

College of Business Economics
Qatar University
Doha, Qatar
hbennasr@qu.edu.qa

Hatem Ghouma

Gerald Schwartz School of Business
St. Francis Xavier University
Antigonish, Nova Scotia, Canada
hghouma@stfx.ca

Abstract:

We examine whether employee welfare practices are associated with future stock price crash risk. Two competing hypotheses were tested: the stakeholder theory hypothesis & the agency theory hypothesis. According to the stakeholder hypothesis, if strong commitment to employee well-being genuinely aims at strengthening the firm's reputation in the market, enhancing the shareholders' engagement, avoiding costly strikes, and boosting the employees' productivity, higher level of employee welfare would be expected to mitigate stock crash risks. On the contrary, the agency theory predicts that, if managers attempt to use generous employee welfare plans to reduce the likelihood that the employees blow the whistle on the management wrongdoings, better employee welfare would likely be associated with higher crash risk. We find robust evidence supporting the agency theory thesis: high levels of employee welfare standards contribute to stock price crash risk. This finding is consistent with the view that employee welfare plans form a powerful strategy that can help managers in their bad-news-hoarding activities (withholding bad news from investors). Moreover, earnings management and the likelihood of whistleblowing appear to be the channels through which employee welfare impacts stock price crash risk. Our evidence further shows that the positive relation between employee welfare and crash risk is stronger for labor intensive firms and industries, in more regulated labor markets, and in less competitive product markets. Furthermore, this positive relationship is more pronounced in poorly governed firms and in countries with poor investors' protection and lower disclosure requirements.

GEL Classification: G14; G30; J53; J28; M14;

Keywords: Crash risk; Employee Welfare; Whistleblowers; Earnings Management

[1] We are grateful to Kee-Hong Bae and Narjess Boubakri for constructive comments on the early drafts of this paper. We also thank the participants at the 2016 Northern Finance Association Conference in Mont-Tremblant, Quebec Canada, the 2016 ACFAS seminar held at University of Quebec in Montreal, the 2016 Summer Accounting and Finance Conference in Tunisia and the 2017 Southern Finance Association in Key West, Florida, USA for their helpful comments. Hatem Ghouma acknowledges financial support from St. Francis Xavier University. Hamdi Ben-Nasr acknowledges the financial support from Qatar University, QUUG-CBE-DFE-17/18-6.

1. Introduction

Prior researches have yielded conflicting results on how employee satisfaction can benefit firms. Started with Frederick Taylor in early years of the 20th century, the traditional motivational theory assumes that money is the main, if not the only, incentive for better performance. In this context, employees are considered as inputs, just like other raw materials, who are required to perform unskilled tasks. Firms use employees as inputs in their productions and only focus on cost efficiency which can be attained by extracting the maximum possible productivity while minimizing costs. Any attempt to increase the satisfaction of the workers could only be done through higher salaries or lower working hours which, in both cases, was synonym of less efficiency, i.e. less profitability.

In contrast, the modern management theory gives more value to employees. They are considered a strategic asset that can provide additional value to the firm, particularly in knowledge-based industries such as technology and pharmaceuticals. According to these theories, employee welfare is particularly crucial to drive employee engagement which ultimately translates into higher performance and enhanced shareholders' values. Consistent with this view, Levine (1992) and Wadhwani and Wall (1991) find that greater levels of wages lead to enhanced productivity. Moreover, Perry-Smith and Blum (2000) document that family-friendly policies within companies lead to increased market share, and larger corporate profits. More recently, Edmans (2011) uses a value-weighted portfolio of the ''100 Best Companies to Work For in America'' to investigate the relationship between employee satisfaction and long-run stock returns. His results show that this portfolio earned an annual four-factor alpha of 2.1% above industry benchmarks during the period from 1984 to 2009. The author concludes that firms with high levels of employee satisfaction generate superior long-horizon returns. The author attributes this findings to the failure of the stock markets to incorporate intangible assets (such as employee well-being) fully into stock valuations.

However, what makes employees satisfied may not, in some cases, enhance shareholders wealth. Employee welfare is a costly investment which might not yield its expected marginal return. For instance, investments to improve working conditions can be a downer if mediocre employees stay because they are satisfied with such environment. In this case, the marginal return of those investments is offset by the marginal cost due to opportunistic unskilled employees. An Article by Ann Zimmerman in *The Wall Street Journal*, shows how

companies can be accused of paying too much to their workers.[2] Entitled "*Costco's Dilemma: Be Kind To Its Workers, or Wall Street?*", the article presents frustrations of some investors and financial analysts who expressed their disappointments about the overly generous benefits of Costco.

Empirically, Meyer et al. (2001) investigate which work-family programs have significant effect on the profitability of the firm. Using the Working Mother magazine's annual survey of "*The 100 Best Companies for Working Mothers*", the authors show that, though some benefits such as paid sick leaves (if a family member is ill) have a positive impact on firm profitability, some other benefits tend to be less beneficial or even lead to losses to the firm (such as onsite childcare). This led the authors to conclude that some benefits are considered to be overprovided "… *indicating that any productivity gain received through [these] program[s] [are] more than offset by the high cost of providing such benefit[s].*"[3] In the same vein, Filbeck (2001) examines the returns to a portfolio of a sample of publicly held firms selected by the Mother Jones Magazine in 2007 as the "*20 Better Places to Work*". Though these firms are known for their fair labor practices, distinguished benefits, sound environmental practices, and satisfied employees, the author's results fail to find evidence of better performance (higher returns) compared to a matched sample of firms. In the contrary, the study documents a significant negative abnormal return for these firms following the announcement of their inclusion to the magazine's list of "20 Better Places to Work".

The above mentioned findings show that the market may have a different perception of the employee welfare practices. While job benefits increase the utility of the work force, it is not evident that it would create wealth to shareholders. In addition to this unclear impact of job satisfaction on firm's performance, it is also noticeable that prior studies haven't devoted enough attention to other dimensions of corporate financial patterns. Beyond the potential impact of employee welfare on the accounting performance (for instance Meyer et al., 2001) or the market performance (Filbeck, 2001; Gorton and Schmid, 2004; Edmans, 2011 and 2012), we are unaware of any research in finance that tried to analyze the impact of employee welfare plans on dimensions other than firm performance and value.

[2] Ann Zimmerman, "Costco's Dilemma: Be Kind To Its Workers, or Wall Street?", *The Wall Street Journal*, March 26, 2004.
[3] Meyer et al. (2001), page 39.

This study tries to fill this gap in the literature and empirically investigates whether firm's commitment to providing its employees with a quality workplace environment mitigates or contributes to stock price crash risk. Two competing hypotheses are tested in this paper: The stakeholder theory view which predicts a decrease in the stock price crash risk for firms with high investments in employee benefits, and the agency theory view which predicts the opposite.

According to the stakeholder theory, high quality employee welfare may lead to a decrease in the stock price crash risk. Improved working conditions usually result in better firms' ability to build a positive reputation. Such a reputation generally guarantees the continued engagement of the firms' stakeholders, including the stockholders (Brammer and Pavelin, 2006). This is critical for firms to survive and to generate higher future performance (Clarkson, 1995). Furthermore, employee satisfaction tend to reduce the probability of strikes. Neumann (1980), Becker and Olson (1986), Bhana (1997), among other studies suggest that strikes reduce the value of the firm. Thus, according to the stakeholder theory thesis, higher standards of employee treatment would likely to result in more stock prices stability and lower stock crash risks since it tends to improve the firm's reputation in the market, enhance the shareholders' engagement, and avoid costly strikes.

Contrary to the stakeholder thesis, the agency theory's view suggests that higher levels of employee welfare might lead to an increase in the stock price crash risk. In fact, improved working conditions can be seen as a maneuver by the management to cover up corporate misbehavior (Hemingway and Maclagan, 2004; Friedman, 1970; Petrovits, 2006; Prior et al., 2008). This might lead news to accumulate until a certain tipping point when bad news come out to the public and consequently equity prices crash. Additionally, overly generous employee benefit programs can be seen as a tool used by managers to make the employees less likely to act as potential whistleblowers (Dyck et al., 2010). It is reasonably realistic to believe that employees enjoying generous benefits would be more reluctant to blow the whistle on frauds or misconducts in their companies. On the contrary, poor benefits and mediocre work conditions often motivate employees to bring frauds and management misbehavior to light (Rothschild and Miethe, 1999; Bowen et al., 2010; Miceli and Near 1994; Beresford et al. 2003). Hence, and according to this agency theory hypothesis, if managers use job satisfaction to reduce the likelihood that the employees blow the whistle on their wrongdoings, long run of bad news

accumulates to a critical level when all of the negative firm-specific shocks become public at once causing stock price crash risk. This crash takes the form of long left tails in the distribution of stock returns due to a large negative outlier in the distribution of returns.

We empirically test these two competing hypotheses in a multinational sample of firms from 38 countries. Following recent studies (Kim and Zhang, 2016; Li, Wang, and Wang, 2017; Kim et al., 2014; Chen et al., 2001), we define crash risk as the negative conditional skewness of return distribution. We use the negative of the third moment of return distribution (negative conditional skewness) to capture asymmetry in risk, especially downside risk. Contrary to previous studies which used stock return performance (first moment) or company risk (second moment), we use crash risk, which captures asymmetry in risk or the third moment of stock return distribution. Our findings point to a positive relationship between employee welfare and stock price crash risk, hence, supporting the agency theory view.

We further explore whether this positive relation varies with the product and labor markets characteristics. We find that excessively generous employee welfare standards in labor intensive firms and industries, in more regulated labor markets, and in less competitive product markets tend to cause higher stock prices crash risk. Moreover, this positive relationship between employee welfare and equity price crash risk tends to be more pronounced in poorly governed firms and also in countries with poor investors protection and lower disclosure requirements. Our empirical evidences are statistically significant and robust to alternative specifications. More specifically, the results are robust to several controls for additional firm and country-level characteristics, and after tackling potential endogeneity problems.

Finally, we explore channels through which employee welfare may affect crash risk. Prior studies suggest that earnings management and the likelihood of whistleblowing within the firm can be two mechanisms through which generous employee welfare policies might affect stock price crash risk. The earnings management factor stipulates that managers who opportunistically manipulate their earnings to pursue their own agenda have more incentives to be excessively generous with their employees so they can divert their focus. This opacity would encourage bad news accumulation and ultimately result in higher crash risks when the "hidden" bad news come out to the market. As per the second factor through which the employee welfare affects the crash risk (likelihood of whistleblowing within the firm), we argue

that employee welfare policies tend to be more generous in companies where employees are more encouraged to blow the whistle and report corporate misconducts. This is because managers want to reduce the risk of being reported for misconducts. If the managers' strategy turns to be successful, it would then increase the level of information not disclosed to the market and hence increase the crash risk. Our empirical findings support both conjectures (for earnings management and likelihood of whistleblowing) and point to a significant positive relationship between excessively generous employee welfare policies and crash risk for (only) firms where earnings management is more pronounced and whistleblowing is more likely.

This research makes several contributions to the existing literature. First, it adds to the growing literature that examines the employee welfare issues from a financial perspective. Previous researches have mainly focused on how beneficial could firms' commitment to employee well-being be. In our research, we show evidence that excessively generous welfare plans could be a sort of agency cost as it may mirror an intentional information hoarding from the managers. To the best of our knowledge, this is the first study that investigates the link between stock price crash risk and employee welfare policy. Previous studies have mainly analyzed the impact of job satisfaction on firm performance or value. No other dimension has been analyzed. By focusing on crash risk, our findings thus broaden our understanding of the implications of employee welfare levels on firms and investors.

Second, our empirical findings also suggest that employee welfare policy might be a potential strategy that can be used by the managers to hide non-value maximizing behaviors. Prior finance researches have presented accounting accruals, general corporate social responsibility practices, and other corporate policies (such as dividend policy or financing policy) as being used by managers to advance their own personal agendas. This paper adds to this literature and provides evidences that managers might also harness employee welfare policy and use it to serve their own interests. This might be achieved by offering excessive benefits to the employees with the aim to reduce the likelihood that these latter bring forward relevant information to uncover frauds and malfeasances

We also extend the literature on governance by showing that the positive relation between employee welfare and stock price crash risk is less pronounced in firms with high quality governance mechanisms, but also in countries with stronger national governance systems. Reinforcing the firm and national governance mechanisms will (partially) curb

opportunistic uses of employee welfare and ensure higher informational efficiencies in the markets.

Finally, our findings can also be of help to socially responsible funds and investors who are paying more attention to the quality of the employment environment. Excessively generous pay and benefits to employees might be a synonym of lower disclosure quality which in that case raises the red flag about the management intentions. This may result in lower probability to voice an allegation of financial impropriety, and as a consequence increases the risk inherent to the investors.

The rest of the paper proceeds as follows. Section 2 presents the theoretical framework and develops our hypotheses. Section 3 describes the data and the methodology used. Section 4 discusses the empirical findings. Section 5 explores potential channels through which employee welfare impacts stock price crash risk, and section 6 concludes.

2. Literature review & Hypotheses development

Prior researches have focused on the impact of employee welfare on the firm performance or value. Our goal in this study is to extent this literature by exploring the impact of employee welfare on stock price crash risk. Finance literature supports two competing hypotheses. In the first hypothesis, which is based on the stakeholder theory, we conjecture that generous employee welfare mitigates stock price crash risk. However, in the alternative hypothesis, we adopt the agency theory view and posit that generous employee welfare contributes to stock price crash risk. Before further developing these two hypotheses, we will briefly discuss recent trends in the stock price crash risk literature.

2.1. Crash Risk

This study extends prior research by empirically exploring the relationship between employee welfare and future stock price crash. Crash risk is defined as the conditional skewness of return distribution (Chen et al., 2001). It is usually proxied for by using the third moment of return distribution which captures the asymmetry in risk, namely the downside risk. Given the importance of this downside risk for investors and risk managers, many studies have attempted to predict firm-specific stock price crash risk by trying to relate it to a variety of explanatory variables.

Cao et al. (2002) explore the effect of information blockage and the asymmetric release of information in stock markets. The authors find that information in the hands of "sidelined" investors is not immediately reflected in stock prices. Rather, these investors tend to delay their trades until price movements in the markets confirm their information. Their trades will then trigger the arrival of newer information to the markets causing a negative skewness following price run-ups (or positive skewness following price rundowns). Hong and Stein (2003) develop a theory of stock price crash based on heterogeneity in investors' beliefs. Their model suggests that, because of short-sales constraints, bearish investors may not participate in the trades which inhibits the revelation of negative information. However, if other bullish investors exit the market, the initially bearish traders will become more "marginal buyers". This causes previously hidden information to come out to the market leading to a price crash risk.

Bleck and Liu (2007) adopt an accounting perspective and focus on historical cost accounting reporting as a determinant of crash price risk. The authors show that greater opacity caused by historic cost accounting regime (compared to marking to market regime) is responsible for more frequent and more severe crash risks. In another research closer to the agency theory framework, Benmelech et al. (2010) use a dynamic rational expectations model with asymmetric information and show that stock-based compensation induces managers to hide bad news about the future of their firms. They also show that in such context, the managers tend to choose suboptimal investment policies to support their decisions (to conceal bad news). As a result, stocks become overvalued and subsequently leading prices to crash.

Nevertheless, a noticeable recent strand of literature on the determinants of crash risk has been heavily relying on the agency theory framework of Jin and Myers (2006). Jin and Myers (2006) argue that the information asymmetry between the managers and other stakeholders could contribute to crash risk. The authors adopted an agency-based theoretical point of view to link bad news hoarding to stock price crash risk. Their main conjecture is that managers are able to control the disclosure of information about the firm to the public. Because of their informational advantage, managers tend to hide bad news from the market for an extended period in order to pursue their personal agenda (higher compensation, longer employment periods, etc.) (Kothari et al., 2009). However, managers will choose to give up such practice if a sufficiently long run of hidden bad news accumulates to a critical threshold level. At that moment, all negative news find their way into the stock market, causing the distribution

of stock returns to be asymmetric (Hutton et al., 2009; Kothari et al., 2009). This asymmetry in the returns distribution would be characterized by a large negative outlier producing long left tails.

Many studies support this bad-news-hoarding theory conceptualization of crash risk. For instance, Jin and Myers's (2006) find that firms in more opaque countries are more prone to large negative returns. Hutton et al. (2009) show that financial opacity facilitates managerial bad news hoarding and increases stock price crashes. Moreover, Kim et al. (2011a, 2011b) show that tax avoidance and managers' equity incentives cause higher stock price crash risk. Kim and Zhang (2016) find that conditional conservatism reduces firm's future stock price crashes suggesting that conservatism reduces managers' incentive to overstate performance and conceal bad news from the market.

2.2. Why might employee welfare decrease stock crash risk? A stakeholder theory perspective

According to the stakeholder theory, the firm's decisions should take into account the interest of all its stakeholders. The firm's stakeholders include any group or individual who can substantially influence or be influenced by the firm's welfare. In addition to the traditional investor stakeholders in the firm (i.e. the financial claimants such as equity-holders and debt-holders), stakeholder theory also includes non-investor stakeholders such as customers, employees, suppliers, distributors, government, communities, etc. In this context, managers are required to serve "many masters" (Jensen, 2001), including the workforce, and to maximize the utility functions for all stakeholders.

A lot of attention has been devoted to the employee well-being as a key corporate variable. It reflects the company's commitment to provide superior employment benefits and job conditions to its staff. The aim is to enhance the workforce's loyalty and improve their productivities within the firm. Seen in this light, investors tend to appreciate well managed firms and firms with employee-friendly environments. These firms tend to be praised in the media and may enjoy better reputations. Generally, higher reputation is expected to be translated into value addition to stockholders. Kotha et al. (2001) show that Internet firms with better reputations enjoy higher market value and sales growth. In a similar way, Roberts and Dowling (2002) document a positive relationship between firms' reputation and return on assets (ROA), and that the benefits of this relationship persist over time. Also, Fombrun and Shanley

(1990) and Shamsie (2003) support a positive relationship between reputation and financial performance. For instance, layoffs, which assumed to reduce employees' satisfaction and damage firm's reputation (Flanagan and O'Shaughnessy, 2005), have been shown to affect firm performance. Many researches document a poor reception by the stock market and declining financial performance in the years following a layoff (Chen et al., 2001; Pouder et al., 1999; among others). These studies support the conjecture that improved working quality may generally result in better firms' ability to build a positive reputation. This would ensure a continued engagement of the firms' stakeholders (Brammer and Pavelin, 2006). This is critical for firms to survive and to generate higher future performance (Clarkson, 1995).

Improving employees working conditions ensure more stock price stability by positively influencing the perceptions of stakeholders, mainly the shareholders. Indeed, Jones (1995) argues that companies that develop solid reputations enjoy a higher level of trust with their stakeholders. This trust creates the stability in stock markets. Consistent with this view, Edmans (2011) investigates the impact of better employee satisfaction on long-run stock returns. The author's overall results suggest that employee satisfaction is positively correlated with shareholder returns. Indeed, the "100 Best Companies to Work For in America" tend to exhibit significantly higher positive earnings surprises and stock price reactions to earnings announcements. Being a variable of such importance, managers might use employee satisfaction as a bridge to achieve better reputation. By adopting this strategy they aim to enhance investors' engagement and consequently increase stock market stability (i.e. reduces stock price crash risk).

In the same vein and relating to firm's reputation, one could also advance a "risk management" argument in favor of a negative relationship between employee welfare and stock price crash risk. Reputation achieved through a quality employee treatment could easily be associated with a "halo" effect that increases trust between a firm and stakeholders groups (Hong and Likskovich, 2015; Lins et al., 2016) or reduce the litigation risk (El Ghoul et al., 2011; Chava, 2014). These effects should provide the firms with insurance-like protection, thus reducing tail risk.

Strikes may also be a key factor in determining the impact of employee welfare on stock market crash risk. It is widely accepted that employee satisfaction reduces the probability of

strikes. Many studies have focused on the costs of strikes for the firm. Imberman (1979) distinguishes between three types of strike costs; pre-strike costs which include productivity loss due to employees being dissatisfied, during-strike costs including profits loss due to decline in revenues and management time lost during the bargaining process, and long-term costs, which include loss of skilled employees and potential permanent loss of customers and suppliers. Gandz et al. (1980) add some other costs. They argue that, after the strikes, companies would probably incur other costs such as costs to build-up inventories, costs of shutdown and start-ups, and costs of training strike breakers.

Strikes may then be very costly to firms. Some studies suggest that these costs tend to increase with the length of the strike (Chermesh, 1982). Empirical evidences support this view. Neumann (1980), Becker and Olson (1986), Bhana (1997), among other studies empirically support that strikes do have a negative effect on the value of the firm. Avoiding these costly strikes by improving work conditions would likely result in more stock prices stability and lower stock crash risks. For these reasons, managers may want to avoid strikes by improving employees' working conditions. Reducing the strikes' probability results in more stable stock prices and hence lower equity crash risks in the future.

It is also argued that better working conditions tend to achieve higher productivity since satisfied workers would be more willing to perform better in their tasks. Consistent with this view, Levine (1992) and Wadhwani and Wall (1992) document a positive correlation between wages and productivity implying that higher salaries boost employees' productivity. Perry-Smith and Blum (2000) explored the impact of family-friendly policies and productivities. Their findings suggest that greater levels of family related benefits lead to better product quality, higher market share, and larger profits. Jones and Murrell (2001) also explore the same subject and use market data as a proxy of performance. Their results document a positive abnormal return for firms named for the first time to Working Mother Magazine's list of "America's Most Family-Friendly Companies". According to Working Mother Magazine, firms should exhibit fair wages, on-site childcare, advancement opportunities for women in addition to other family friendly benefits in order to be included in the magazine's list.

Based on the above reasons, one can infer that generous investment in employee benefits would likely result in more stock prices stability and lower stock crash risks since it tends to: i)

improve the firm's reputation in the market, ii) enhance the shareholders' engagement, iii) avoid costly strikes, and iv) boost the employees' productivity. Hence our first hypothesis:

H1: Higher levels of employee welfare tend to reduce the stock price crash risk

2.3. Why might employee welfare increase stock crash risk? An agency theory perspective

Within a typical agency theory framework, managers are not the perfect agents of the principal shareholders. They tend to use their information advantage to serve their agenda and increase their utilities at the expense of the principal's interests. Generous working conditions can be seen as a maneuver by the management to cover up corporate misbehavior. This statement would even more evident for excessively generous employee welfare. Indeed, managers can opportunistically use the working environment to divert shareholders and the market focus on important issues. This opportunistic behavior, hidden under a misleading working conditions and probably other CSR engagements, would lead news to accumulate until a certain tipping point when bad news come out to the market and cause equity price to crash. Consisting with this opinion, Hemingway and Maclagan (2004) claim that one reason for firms to adopt CSR is to hide managerial misbehavior. This view supports Friedman (1970)'s opinion that CSR can be considered as a form of agency problem.

Opportunistic managers are likely to engage in doubtful accounting practices resulting in opaque financial reporting and disclosure. Recent studies on CSR suggest that CSR practices are associated with earnings management. For instance, Petrovits (2006) find evidence that companies manipulate their earnings by using corporate philanthropy programs to achieve their earnings targets. Moreover, Prior et al. (2008) test the hypothesis that managers who manipulate the firm's income tend to build a socially-friendly image by increasing their socially responsible investments. The authors' empirical findings support their conjecture suggesting a positive relationship between CSR investments and earnings management. The underlying notion of these studies is that managers might be inclined to use the high quality work environment in order to hide those practices. Financial markets, as myopic as they might be, tend to embrace the idea that firms with apparent solid reputation are better managed and well governed. For instance, Enron, World Com., Arthur Andurson, and more recently VolksWagen had enjoyed for a long time excellent images in the markets, partially due to their good work environments. Nevertheless, they faced issues relating to fraudulent behaviors by their

managements. When companies use CSR (with employment quality being in the top) to hide bad news, one would expect a positive relationship between employment quality and stock price crash risk. Managers may have incentive to withhold bad news from investors and hide misconducts to pursue their personal agenda. Generous employee welfare would help them achieving their goals by diverting the employees focus on important issues. Accumulated undisclosed information over time leads to opaque and less transparent financial reporting. At a certain point of time, hidden bad news would come to light causing stock price to crash (Kim et al., 2011a and b & Kim et al., 2014). Supporting this opinion, many researches argue that opaque financial reporting may cause extreme negative stock returns. Jin and Myers (2006) document a positive relationship between poor country financial reporting quality and stock price crash risk. Hutton et al. (2009) also confirm that opaque firms are more prone to stock price crashes. Using earnings management as a measure of opacity, the authors find that opacity is associated with less revelation of firm-specific information.

Kim et al. (2014) have considered the view that managers might use CSR as a vehicle to serve their own agenda. The authors test for two opposing views of the impact of CSR on stock price crash risk. The first view, suggesting a negative relation between CSR and crash risk, argues that CSR investments might signal higher moral commitments of managers to maintain the same high level of ethical standards in financial reporting. The second view, however, adopts an agency-cost perspective and conjectures that managers may use CSR opportunistically to advance their own career. In that case, they will have less incentives to maintain transparent information environment. In spite of the solid theoretical ground for both points of view, the empirical findings of Kim et al (2014) support the first view, that's the firms' CSR performance is negatively associated with crash risk.

Overly generous benefit programs can be seen as a tool to reduce the likelihood that employees uncover potential managers wrongdoings and blow the whistle on their fraudulent behaviors. More satisfied employees would be more reluctant to reveal wrongdoings of their management. Put differently, being unsatisfied with the working conditions may make the employees more inclined toward bringing the mistakes of their management to light. This behavior is being encouraged in many countries particularly after the recent wave of frauds. Many regulators have proposed legal protections and monetary rewards to employees uncovering frauds and misconducts. The Sarbanes-Oxley Act of 2002 is an example of how the

US regulators dealt with the issue of accounting frauds after the scandal of Enron. To protect "whistle-blowers", SOX made it unlawful for firms to take punitive actions against employees uncovering doubtful accounting or auditing practices in their firms. The act also requires public companies to set up a hotline enabling whistle-blowers to talk anonymously to the board of directors about suspicious practices. The US regulator also financially encourages employees, especially in the public sector, to uncover fraudulent practices. For instance, the Federal Civil False Claims Act (also known as the *qui tam* statute), offers a reward that ranges from 15 to 30% of the covered damage to individuals who bring forward relevant information to uncover a fraud committed against the government. Dyck et al. (2010) try to identify the most effective actors in blowing the whistle on corporate frauds. An analysis of all reported fraud cases in large U.S. companies between 1996 and 2004 shows that the investors, the SEC, and the auditors are not effective in discovering and reporting corporate frauds. Surprisingly, a non-traditional player, namely the employees, has been more effective in fulfilling that monitoring task. Employees are found to be the most important fraud detectors as the authors report that around 17% of studied frauds are brought to light by employees.[4] The percentage reaches 41% in some key industries such as the healthcare sector. This is mainly due to the employees' easy and costless access to information in addition to the monetary rewards following the uncovering of frauds. In a related study, Rothschild and Miethe (1999) analyze the characteristics of firms where whistle-blowing frauds is more frequent. Their findings suggest that in companies with more bureaucratic and undemocratic work environments, employees have more tendency to reveal management wrongdoings. Other studies also argue that higher layoffs and downsizings (Dyck et al., 2010; Bowen et al., 2010) as well as unclear internal communication channels (Miceli and Near 1994; Beresford et al. 2003; Bowen et al., 2010) can contribute to employee whistle blowing. Seen from this angle, it is in the interest of the management to be closer to their employees and provides them with generous employment conditions. Overly generous benefits program can thus be opportunistically used by managers in order to withhold (hoard) more bad news as long as possible. Studies by Graham et al. (2005) and Kothari et al. (2009) who find that managers tend to delay disclosure of bad news more than those of good news support this idea.

[4] According to their results the distribution of the frauds detectors is as follows: 17.1% employees, 14.5% short-sellers, 13.8% analysts, 13.2% industry regulators, 13.2% Media, 10.5% auditors, 6.6% SEC, 4.6% clients or competitors, 3.3% shareholders, and 3.3% law firms.

Building on all these results, we adopt an agency theory perspective and posit the following completing hypothesis:

> ***H2: If managers use employee welfare to further enhance their opportunistic agenda, then excessively generous employee welfare would likely be associated with higher stock price crash risk.***

3. Sample and empirical design

3.1. Sample

To examine the impact of employee welfare on stock price crash risk we collect data on employment quality/welfare sub-indexes from Thomson Reuters (ASSET4) database between 2008 and 2014.[5] These sub-indexes assess "…*the company's management commitment and effectiveness towards providing high-quality employment benefits and job conditions. It reflects a company's capacity to increase its workforce loyalty and productivity by distributing rewarding and fair employment benefits, and by focusing on long-term employment growth and stability by promoting from within, avoiding lay-offs and maintaining relations with trade unions*."[6] The sub-indexes include: Policy, Employment Satisfaction, Salaries, Salaries Distribution, Bonus Plan for Employees, Generous Fringe Benefits, Employment Awards, Trade Union Representation, Employees Leaving and Turnover of Employees.

We also collect, for the same period, the weekly firm and stock market returns needed to estimate our stock price crash risk proxies from *DATASTREAM* and *CRSP*. Additionally we collect financial data from *COMPUSTAT* North America and Global. After merging employee welfare data with our stock price crash risk proxies as well as financial data and winsorizing all the variables at the 1st and the 99th percentiles to mitigate the effect of outliers, we obtain a final sample of 8,032 firm-year observations from 38 countries.

The choice of an international setting to conduct this study was motivated by the scarcity of studies that investigate factors affecting stock price crash risk in an international

[5] The sample starts from 2008 mainly because the coverage of ASSET4 Thomson Reuters was very low before that year with many missing values. ASSET4 database was founded in 2003 and acquired by Thomson Reuters in 2009. During its first years of operations, ASSET4 did cover fewer companies (mainly predominated by US and Canadian firms). Starting from 2008, it was noticed that the coverage increased dramatically (especially for international firms) with more ESG dimensions are rated in a consistent way that allows for comparisons over time.

[6] Thomson Reuters ASSET4 Environment, Social and Corporate Governance Database.

context. Furthermore, a multi-country framework offers a unique opportunity to illustrate the cross-country differences in crash risk. More importantly, this opportunity allows us to assess to which extent the different levels of national institutions and governance qualities impact the relationship between employee welfare and crash risk. We believe that cross-country differences would help enriching the analysis on crash rich and add to our understanding on how different national governance systems would affect the determinants of crash risk.

3.2 Stock price crash risk

Following Kim et al. (2011a and 2011b), Kim and Zhang (2016), and Kim et al. (2014), we use two different firm-specific crash risk proxies based on Jin and Myers's (2006) market model. To be specific, we regress the weekly stock return for each firm on the current week value weighted market return and two weeks forward and backward value weighted market returns using the following model:

$$r_{i,t} = \alpha_i + \beta_{1,i} r_{m,t} + \beta_{2,i} r_{m,t-1} + \beta_{3,i} r_{m,t-2} + \beta_{4,i} r_{m,t+1} + \beta_{5,i} r_{m,t+2} + \varepsilon_{i,t} \quad (1)$$

where $r_{i,t}$ is the stock return on firm i at week t, *and* $r_{m,t}$ is the return on the value-weighted market index of the country to which this firm belongs at week t, and ε_{it} is an error term. Following prior literature, we introduce lead and lag returns to account for non-synchronous trading. We define our proxy for firm-specific weekly return for firm i in week t ($W_{i,t}$) as the natural logarithm of one plus the residual from equation (1), i.e. log (1+ $\varepsilon_{i,t}$).

The negative conditional firm-specific skewness of weekly return (*NCSKEW*) is our first proxy for stock price crash risk. *NCSKEW is* calculated by taking the negative of the third moment of firm-specific weekly returns, $W_{i,t}$, for each sample year divided by the standard deviation of firm-specific weekly returns raised to the third power. More specifically, *NCSKEW* for each firm i at year t *is* calculated as:

$$NCSKEW_{i,t} = -\left[n(n-1)^{3/2}\sum W_{i,t}^3\right] / \left[(n-1)(n-2)\left(\sum W_{i,t}^2\right)^{3/2}\right] \quad (2)$$

where $W_{i,t}$ is as previously defined and n is the number of weekly return observations during year t. A higher value for *NCSKEW* (i.e., a higher negatively skewed return distribution) indicates a higher crash risk.

The down-to-up volatility (*DUVOL*) is our second proxy for stock price crash risk. *DUVOL* is calculated as natural logarithm of the standard deviation of weekly-stock returns $W_{i,t}$, during the "down" weeks (i.e., the weeks in which $W_{i,t}$ is lower than its annual means) over the standard deviation of weekly-stock returns $W_{i,t}$, during the "up" weeks (i.e., weeks in which $W_{i,t}$ is higher than its annual means). Specifically, *DUVOL* for each firm i in year t is calculated as:

$$DUVOL_{i,t} = \log\left\{\left[(n_u - 1)\sum_{DOWN} W_{i,t}^2\right] / \left[(n_d - 1)\sum_{UP} W_{i,t}^2\right]\right\} \quad (3)$$

where n_u is the number of "up" weeks and n_d is the number of "down" weeks. A higher value for *DUVOL* indicates a higher crash risk.

3.3 Employee welfare index

The employee welfare index score (*EMP_WELFARE*) is calculated using the following sub-indexes from Thomson Reuters: Policy (*SOEQD01V*), Employment Satisfaction (*ECPEDP039*), Salaries (*SOEQO01V*), Salaries Distribution (*SOEQO02V*); Bonus Plan for Employees (*SOEQDP0201*); Generous Fringe Benefits (*SOEQDP025*), Employment Awards (*SOEQO05V*), Trade Union Representation (*SOEQDP031*), Employees Leaving (*SOEQDP033*) and Turnover of Employees (*SOEQDP034*). *SOEQO01V*, *SOEQO02V*, *SOEQDP033* and *SOEQDP034* are quantitative. We normalized each one of these sub-indexes to [0, 1]. The normalized value of each sub-index is the ratio of the difference between the value of the original sub-index and the sample minimum value of the original sub-index over the difference between the sample maximum value of the original sub-index and the sample minimum value of the original sub-index. *ECPEDP039* and *SOEQDP031* are percentages so they are between 0 and 1. *SOEQDP0201*, *SOEQDP025*, and *SOEQO05V* are questions with Y/N answers. If the answer is "Y" then the variable is coded 1. If the answer is N then the variable is coded 0. *SOEQD01V* includes 2 questions. If the answer is "NN" then the variable is coded 0. If the answer is "NY" then the variable is coded 0.5. If the answer is "YN" then the variable is coded 0.5. If the answer is "YY" then the variable is coded 1. *EMP_WELFARE* is the sum of the normalized quantitative variables (*SOEQO01V*, *SOEQO02V*, *SOEQDP033* and *SOEQDP034*), the percentages (*ECPEDP039* and *SOEQDP031*), and the qualitative variables (*SOEQD01V*,

SOEQDP0201, *SOEQDP025* and *SOEQO05V*). A higher score indicates a greater commitment of the company to employee well-being.

Our proxy for generous employee welfare policies is excess employee welfare (*EXCESS_EW*). We measured the excess employee welfare of a given firm ***i*** in year ***t*** as the level of its employee welfare for that year (*EMP_WELFARE*) minus its industry average for the same year: $EXCESS\_EW_{i,t} = EMP\_WELFARE_{i,t} - EMP\_WELFARE_{industry\ average,t}$.

3.4. Empirical specifications

To examine the impact of excess employee welfare on stock price crash risk, we estimate several specifications of the following regression model:

$$CRASH_{i,t} = \delta_0 + \delta_1 EXCESS\_EW_{i,t-1} + \delta_2 CONTROLS_{i,t-1} + \gamma_t + \varepsilon_{it} \quad (4)$$

In line with prior literature (e.g., Kim et al., 2011a and 2011b; Kim and Zhang, 2016, and Kim et al., 2014), we include the following variables that may affect the stock price crash risk in $CONTROLS_{i,t-1}$: First, we include the natural logarithm of a firm's market value in US$ at year $t-1$ ($SIZE_{i,t-1}$) to control firm size. Second, we include the ratio of long-term debt for a firm i at year $t-1$ over total assets for firm i in year $t-1$ ($LEVERAGE_{i,t-1}$) to control for financial risk. Third, we include the market-to-book ratio ($MB_{i,t-1}$) in year $t-1$ to control for growth opportunities. Fourth, we include the ratio of net income in year $t-1$ over total assets in year $t-1$ ($ROA_{i,t-1}$) to control for firm profitability. Fifth, we include the change in turnover ratio ($DTURNOVER_{i,t-1}$) calculated as the difference between the average monthly share turnover in year $t-1$ and the average monthly turnover in year $t-2$ to control for the intensity of the differences of opinion among investors. Sixth, we introduce the average of firm-specific weekly returns over the fiscal year to control for past returns ($RET_{i,t-1}$). The logic behind introducing this variable is that prior literature (e.g., Chen et al., 2001) shows that the firms with high past returns are more likely to experience stock crashes in the future. Seventh, we include the standard deviation of the weekly stock returns in year $t-1$ ($SIGMA_{i,t-1}$) to control for the stock return volatility. Eighth, we include the absolute value of Dechow and Dichev's (2002) measure of abnormal accruals in year $t-1$ ($AQ_{i,t-1}$), as modified by Ball and Shivakumar (2005)

to control for earnings management. Ninth, we include the industry Herfindahl-Hirschman index calculated using two-digit SIC industry sales ($IND\_HERF_{i,t-1}$) as well as the firm Herfindahl-Hirschman index calculated using individual firm sales ($IND\_HERF_{i,t-1}$) to control for product market competition in line with Hu et al. (2013). Tenth, we introduce the natural logarithm of GDP per capita ($LNGDPC_{t-1}$) and the standard deviation of the growth in GDP per capita in a given country-year (STD_GDPG_{t-1}) to control for economic development and macroeconomic risk, which may affect stock price crash risk (see for instance Hu et al., 2013; Povel et al., 2007; and Barro and Ursúa, 2009). Finally, we include firm and year dummies to control for firm and year fixed effects.

4. Results

4.1. Descriptive statistics

Table 1 reports the distribution of our sample firms by industry and country. Overall, the sample consists of 8,032 firm-year observations. We have 2,387 firms from 38 countries with Japan (14.96%), USA (13.24%), and United Kingdom (12.99%) being the most present country in our sample. As we will see later on, our findings remain robust when we drop these over presented countries.

[Please Insert Table 1 about here]

Table 2 reports the descriptive statistics for the Thomson Reuters' sub-indexes used to calculate our excess employee welfare proxy (*EMP_WELFARE*). **Table 3** reports the descriptive statistics for the stock price crash risk proxies as well as the other variables used in this study. The mean (median) of $NCSKEW_{i,t-1}$ and $DUVOL_{i,t-1}$ are equal to 0.049 (-0.013) and 0.007 (-0.011), respectively. These numbers are comparable to those reported in the prior related literatures (e.g., Hu et al., 2013). Table 2 also reports descriptive statistics for the employee welfare index. The mean (median) of $EMP\_WELFARE_{i,t-1}$ is equal to 2.410 (2.293).

[Please Insert Tables 2&3 about here]

Table 4 reports Pearson correlation coefficients between the stock price crash risk proxies, the excess employee welfare index, as well as the control variables. For instance, we find that $EXCESS\_EW_{i,t-1}$ is significantly and positively correlated at the 1% level with

$NCSKEW_{i,t}$, suggesting that a negative skewness in stock returns increases with the level of employee welfare. We also note that $EXCESS\_EW_{i,t-1}$ is significantly and positively correlated at the 1% level with $DUVOL_{i,t,}$ suggesting that the down-to-up volatility increases with the level of employee welfare. As for the control variables, our results are consistent with the correlations shown in the prior literature. In fact, both $NCSKEW_{i,t}$ and $DUVOL_{i,t,}$ are positively correlated at the 1% level with $LEVERAGE_{i,t-1}$, $MB_{i,t-1}$, $ROA_{i,t-1}$, $RET_{i,t-1}$ and $FIRM\_HERF_{t-1}$, indicating that firms with higher financial leverage, higher growth opportunities, higher profitability, higher past returns and firms from countries with strong product market competition have higher probability to experience stock price crashes. Additionally, both $NCSKEW_{i,t}$ and $DUVOL_{i,t,}$ are negatively correlated at the 1% level with $SIGMA_{i,t-1}$, implying that firms with volatile stock returns are less likely to experience stock price crashes. We generally document low correlation coefficients between the employment welfare index and the control variables, thus mitigates multicollinearity concerns that could affect our regression results.

[Please Insert Table 4 about here]

4.2. Main evidence

Table 5 reports the estimation results obtained by regressing our stock price crash risk proxies on the excess employee welfare index. In all models, we control for firm-level determinants as well as country-level determinants of stock price crash risk: (i) the natural logarithm of GDP per capita ($LNGDPC_{t-1}$), (ii) the standard deviation of the growth in GDP per capita in a given country-year (STD_GDPG_{t-1}) to control for economic development and macroeconomic risk, and (iii) the product market competition in line with Hu et al. (2013) by including Herfindahl-Hirschman indexes ($IND\_HERF_{i,t-1}$ and $IND\_HERF_{i,t-1}$). Our basic regressions, Models 1 and 2 which include *EXCESS_EW* and the control variables, support the agency theory-based hypothesis, H2, that the negative skewnesses and the down-to-up volatilities are increasing in employee welfare. More precisely, we find that the coefficient on *EXCESS_EW* is positive and statistically significant at the 1% level, suggesting that excessive levels of employee welfare contribute to stock price crash risk. The coefficient on *EXCESS_EW* is also economically highly significant, indicating that a one-standard-deviation increase in the employee welfare index is associated with a 42.9% (120.2%) increase in stock price crash risk as

measured by *NCSKEW* (*DUVOL*).[7] This finding supports the conjecture that managers might find in a generous employee welfare a good vehicle to eventually camouflage their wrongdoings and offer generous benefits to reduce the likelihood that employees uncover their conducts and bring them forward. As a result, bad news (due to the management wrongdoings and opaque financial reporting) accumulate until a certain tipping point when they come out to the public and consequently equity prices crash.

In Models 3 and 4 we use Fama and MacBeth (1973) approach to ensure that our findings are not affected by potential outlier problems. The results show that the coefficient of *EXCESS_EW* remains positive and significant at the 1% level, corroborating our earlier findings. Overall, these findings imply that our inferences on the relationship between the employee welfare index and stock price crash risk are not affected by a particular empirical specification.

To examine the impact of excess employee welfare on stock price crash risk we use *EXCESS_EW* in all regressions. An alternative approach is to run equation (4), while replacing *EXCESS_EW* with employee welfare index (*EMP_WELFARE*), separately for the sub-sample of firms with an employee welfare index (that is higher than the industry average of *EMP_WELFARE*) and the sub-sample with an employee welfare index (that is higher than the industry average of *EMP_WELFARE*), respectively. The results of these regressions are reported in Models from 5 to 8. As we can see, the coefficient for *EMP_WELFARE* is positive and highly statistically significant only in the sub-sample of firms with a high employee welfare index, suggesting that the positive relationship between the level of employee welfare and crash is concentrated in firms with excessively generous welfare benefits.

We now turn to the other control variables. We report several significant relations between these control variables and stock price crash risk, which are generally consistent with our predictions and prior literature. The coefficients on *LEVERAGE, ROA* and *RET* are generally positive and highly significant, consistent with prior literature (e.g., Kim et al., 2011a and 2011b; Hu et al., 2013; Kim et al., 2014), suggesting that more leveraged and profitable firms, and firms enjoying larger past returns tend to experience stronger stock price crashes. Furthermore, we

[7] The average *NCSKEW* (*DUVOL*) in our full sample period is 0.049 (0.007). The coefficient of *EXCESS_EW* is equal to 0.015 (0.006). The standard deviation of the excess employee welfare index is 1.402. A one-standard-deviation increase in *EXCESS_EW* is associated with a 42.9% (120.2%) increase in *NCSKEW* ((0.015*1.402)/0.049=0.429) (*DUVOL* ((0.006*1.402)/0.007=1.202).

find that the coefficient on *SIGMA* is generally negative and highly significant, suggesting that firms with more volatile stock returns are less likely to experience stock price crashes.

[Please Insert Table 5 about here]

4.3. Additional Controls

In this section, we include additional control variables to further check the robustness of our findings. The results of these tests, reported in **Table 6**, support the main evidence**:** stock price crash risk is positively related to the company's degree of commitment toward employee welfare.

Additional Country-Level Controls. We test the robustness of our findings to the introduction of additional country-level determinants of stock price crash risk. We control for the following variables: First, we include the ratio of the sum of total imports and exports over GDP for each country in each year (*OPEN*) to control for the degree of openness of the product market. The intuition behind introducing this variable is that firms from countries with open trade markets attract foreign investors who play an important corporate governance role and require higher quality of accounting information (e.g., Gillan and Starks, 2003; Ferreira and Matos, 2008; Leuz et al., 2009; Aggarwal et al., 2011), which may affect stock price crash risk via the managers bad news hiding activities (Hutton et al., 2009). Second, we include the ratio of trading volume over market capitalization (*LIQ*) to control for the degree of liquidity in financial markets, in line with Bhattacharya and Daouk (2002) and Hu et al. (2013). Higher liquidity is associated with less information asymmetry (e.g., Diamond and Verrecchia, 1991), hence higher corporate transparency, which reduces stock price crash risk (e.g., Kim et al., 2016). Thus, we expect a negative relation between *LIQ* and both proxies of stock crash risk, *NCSKEW* and *DUVOL*. Third, we include the logarithm of the number of listed firms in each sample country (*N_LISTED*) to control for stock market size, which may affect stock price crash risk (e.g., Hu et al., 2013).

The results reported in Models 1 and 2 of **Table 6** show that the coefficients on *OPEN* is not significant while *N_LISTED* seems to reduce crash risk as predicted. Moreover, we find that *LIQ* is negatively related to crash risk, consistent with our prediction and suggesting that firms in liquid stock markets are less likely to experience stock price crashes. More importantly, we

still report a positive and significant coefficient for *EXCESS_EW* variable, further supporting our core findings.

The quality of the information environment. We also test the robustness of our findings to the introduction of the following information environment proxies: First, we include the natural logarithm of one plus the number of analysts (*ACOV*) from the *I/B/E/S* summary files to control for analyst coverage. Analyst following is negatively associated with information asymmetry (e.g., Frankel and Li, 2004), which enhances corporate transparency and mitigates stock price crash risk. Second, we include a dummy variable that is equal to one in the year for which the country had and insider trading enforcement case for the first time and thereafter, and zero otherwise (*ENFOR*) to control for insider trading enforcement. Hu et al. (2013) argue that the enforcement of insider trading laws renders the trading on insider information risky and costly, which reduces the incentives of managers to withhold bad news, hence reduces stock price crash risk. An alternative point of view suggests that the enforcement of insider trading laws renders the acquisition of private information by outside investors costly (see Hu et al., 2013, page 7), hence reduces liquidity in the market. A lower liquidity is associated with lower corporate transparency, which reduces stock price crash risk (e.g., Kim et al., 2016). Given this discussion, we do not have a directional prediction for *ENFOR*. Third, we include Stock Price Informativeness *(SPI)* to control for the informativeness of stock prices. Using R^2 from equation (1) that regresses the firm's weekly stock returns on the current week, previous week, two weeks back, one week ahead and two weeks ahead value-weighted market return, *SPI* is calculated as the natural logarithm of $[(1-R^2)/R^2]$, in line with Ben-Nasr and Cosset (2014) and Ben-Nasr and Alshwer (2016). Hutton et al. (2009) report evidence that idiosyncratic volatility (i.e., stock price informativeness) is positively related to corporate transparency, which helps to facilitate a better flow of firm-specific information to the market, hence mitigates stock price crash risk.

The results reported in Models 3 and 4 of the same **Table 6** show that the coefficients on *ACOV* are statistically insignificant, failing to support our prediction. The coefficients for *ENFOR* are marginally significant suggesting a weak support to the conjecture that the enforcement of insider trading laws in the country is associated with a higher stock price crash risk. Finally, we find that the coefficients on *SPI* are also statistically not significant. Once again, the coefficients on *EXCESS_EW* remain positive and statistically significant, further supporting

our earlier findings. In Models 5 and 6 of **Table 6** we include the additional country-level controls and the information environment variables simultaneously. As we can see, the coefficient on *EXCESS_EW* remains positive and highly significant, providing and additional support to our core findings.

[Please Insert Table 6 about here]

4.4. Endogeneity concerns

A potential endogenous relationship between the employee welfare variable and the crash risk proxies can also be of concern in our models. Any omitted variables that are correlated with *EXCESS_EW* would result in an endogeneity problem. In all regression models, we have controlled for country, industry and year-fixed effects. Moreover, in the previous section we added a number of variables (based on prior studies) that can potentially affect both employee welfare and stock price crash risk. To further address the omitted variable concern and in line with Callen and Fang (2013) and Bae et al. (2011) among other studies, we implement firm fixed-effect regressions. The inclusion of firm fixed effects remove the omitted time-invariant firm characteristics that could potentially cause a spurious correlations between future stock price crash risk and employee welfare proxies. Models 1 and 2 of **Table 7** report the results of our firm fixed-effects regressions. As we can see, the findings are in line with our main evidence and confirm the robustness of our results.

Reverse causality between *CRASH* and *EMP_WELFARE* might also be a source of concern in our empirical models. In spite that our models include lagged excess employee welfare to predict one-year-ahead price crash risk, possible simultaneity between *CRASH* and *EXCESS_EW* might cause an endogeneity problem. It is reasonable to argue that the likelihood or the magnitude of stock price crashes might impact the firms' investment in employee benefits. For instance, firms with high crash risk might choose to adopt more employee-friendly policies to attract talents. The opposite effect could also be envisaged. For example, following a stock price crash risk, investors (particularly short-term ones) may sell off their holdings, potentially triggering a negative crowd behavior which might affect firm's performance. Since during crises and crash times the management may choose to adjust different policies within their companies, it is reasonable to expect an adjustment of the benefits offered to the employees. This potential reverse causality between employment quality and stock price crash risk may

introduce biases into our analysis of the impact of employee welfare on stock price crash risk. We address this issue using the instrumental variable and the dynamic GMM approaches as well as change regressions.

Models 3 to 6 of **Table 7** report the results of the instrumental variable approach. Following Bae et al., (2011) and Ghaly et al., (2015), we use the industry average of the ratio of total labor and related expenses over total employees (*IND_WAGE*) as an instrument for *EXCESS_EW*.[8] Since firms with higher wages tend to have more productive employees, such firms are likely to be more committed toward employee welfare (Bae et al., 2011). Consequently, we expect a positive association between *EXCESS_EW* and *IND_WAGE*.

In the first stage, we regress *EXCESS_EW* on *IND_WAGE* and the other independent variables used in our basic models. The results, reported in Models 3 and 5 of **Table 7**, show that *IND_WAGE* loads positively and significantly at the 1% level, supporting the argument in Bae et al. (2011) and Ghaly et al. (2015) that firms with higher wages are more likely to treat employees fairly. In the second stage, we use the first-stage fitted values as instruments for *EXCESS_EW*. The results, reported in Models 4 and 6 of the same **Table 7**, show that the coefficients on *EXCESS_EW* remain positive and significant at the 1% level, suggesting that firms with a higher employee welfare score have higher negative skewnesses and higher down-to-up volatilities, further corroborating our core findings. To ensure the validity of *IND_WAGE* as an instrument for employee welfare, we follow Larcker and Rusticus (2010) and perform an over-identifying restriction test, that is, we regress the residuals of the second stages on the exogenous variables (i.e., *IND_WAGE* and the control variables). We find (untabulated results) that the explanatory variables are jointly not significant, confirming that *IND_WAGE* is exogenous.

In addition to the instrumental variable technique, and to further confirm our findings, we use a change regression, in line with Lin, Ma, Malatesta and Xuan (2013). This approach helps us to control for the time-invariant factors that affect both of employment benefits and stock price crash risk. We regress the change in our stock price crash risk proxies ($\Delta NCSKEW_t$ and $\Delta DUVOL_t$) on the change of the lagged excess employment benefit ($\Delta EXCESS\_EW_t$) as well as the change of the lagged control variables. The results reported in Models 7 and 8 show that

[8] The industry average (*IND_WAGE*) was calculated without the firm itself.

the coefficient for $\Delta EXCESS\_EW_t$ is positive and statistically significant at the 1%level, suggesting that our findings are not affected by reverse causality issues. Finally, use the dynamic GMM approach in line with Wintoki et al. (2012) to address reverse causality issues. The unreported results show that the coefficients on *EXCESS_EW* are positive and highly significant, further corroborating our findings that firms that invest more excessively in employee welfare are more likely to experience future stock price crashes as a consequence of managerial bad-news-hoarding activities.

[Please Insert Table 7 about here]

4.5. Do labor and product markets characteristics affect the relationship between employee welfare and stock market crash risk?

The previous results suggest that the level of the firm's investment in employee welfare benefit has a positive effect on its stock market crash risk. In this section, we aim to investigate to which extent this positive relationship is affected by different types of labor and product markets. Particularly, we propose to examine the impact of the following labor and product market characteristics on our core findings: the level of labor intensity (at both the industry's and firm's levels), the level of the competition within the product markets, and the quality of the labor market regulations.

Table 8 reports the results of the sub-sample analysis based on labor intensity as well as labor regulation. We re-run our basic models of **Table 5** for the sub-sample of firms from labor intensive industries (*LABOR_INTENSIVE_IND*=1) and non-labor intensive industries (i.e., *LABOR_INTENSIVE_IND*=0). Following Ertugrul (2013) and Ghaly et al. (2015), we define the following industries as labor-intensive: (i) high-tech, (ii) telecommunications, and (iii) healthcare. The results reported in Models 1 to 4 of **Table 8** show that the coefficient on *EXCESS_EW* is strongly significant and higher in the sub-sample of firms belonging to labor-intensive industries, suggesting that the effect of the employee benefits on stock price crash risk is more pronounced in labor-intensive industries that tend to be more committed toward employee welfare (e.g., Ghaly et al., 2015). An F-test shows that the difference in coefficients between the labor-intensive industries sub-sample and the non-labor-intensive industries sub-sample is highly statistically significant.

We also examine the effect of labor intensity on the relationship between excess employee welfare and stock price crash risk based on alternative proxy of labor intensity. Specifically, we use the ratio of R&D expenses over total sales. We classify firms having an R&D expenses ratio that is higher than the median of this ratio in our sample as labor-intensive firms (i.e., *LABOR_INTENSIVE_FIRMS*=1). The logic behind this classification is that firms with higher R&D intensity are more likely to hire high-skilled labor and tend to be more committed to employee well-being (e.g., Ghaly et al., 2015). In Models 5 to 8 of **Table 8**, we separately report the results of our basic regression for the sub-sample of labor-intensive firms (i.e., *LABOR_INTENSIVE_FIRMS*=1) and non-labor-intensive firms (i.e., *LABOR_INTENSIVE_FIRMS*=0). The results indicate that only the coefficient of *EXCESS_EW* in the sub-sample of labor-intensive firms is positive and significant, again suggesting that the positive impact of generous employee welfare policies on stock price crash risk is more pronounced in firms with a high degree of labor-intensity.[9]

Furthermore, we re-run our basic regressions depending on the level of development of the country's labor market. Following Botero et al. (2004), we use the Employment Law Index (*EMPLOY*) as a proxy of the extent to which the labor is protected in the country. It is a time invariant Index which is made up of four main dimensions relating to the alternative employment contracts, the cost of increasing the work load, the cost of layoffs, and the firing procedures. The index ranges from 0 (weakest employment protection) to 1 (strongest employment protection). We use the median of *EMPLOY* to divide our sample into high and low labor regulations sub-samples. The results reported in Models 9 to 12 of **Table 8** show that the coefficients for *EXCESS_EW* are positive and highly significant only for the sub-sample of firms from countries with strong labor regulation, suggesting that the positive impact of employee welfare on stock price crash risk is concentrated in countries that strongly protect employees. This adds evidence to our second hypothesis. Indeed, this result supports the conjuncture that managers are more inclined to offer more generous benefits to their employees if the rights of the workers are more protected (regulated). In such strong labor market environment, the employees would feel more protected, and hence it would be easier/safer for them to uncover and blow whistle on fraudulent management activities. As a consequence, the

[9] We also run an F-test and find that the difference in coefficients between the sub-sample of labor-intensive firms and the sub-sample of non-labor-intensive industries is significant at the 1% level.

managers would need more generous benefits to prevent this from happening. An F-test shows that the difference in coefficients between the sub-sample of firms from countries with strong labor protection and the sub-sample of firms from countries with weak labor protection is statistically significant.

Finally, we repeat our sub-sample analysis using the median of for the firm-level product market competition (*IND_HERF*). Prior literature has yielded conflicting evidences on the impact of product market competition on the firm's corporate governance, in particular corporate disclosure (e.g., Giroud and Mueller, 2011; Cosset, Somé, and Valery, 2014). For instance, Darrough and Stoughton (1990) argue that greater product market competition encourages more disclosures. However, Verrecchia (1983) and Clinch and Verrecchia (1997), and Li (2010), find that greater competition inhibits more disclosures. Since high voluntary disclosure inhibits, to some extent, bad news hoarding, it is expected that competition might have an impact on employee welfare which in turn may affect the price crash risk. The direction of this impact remains unclear and beyond the reach of this paper. Models 1 to 4 in **Table 9** report our findings. As we can see, the coefficients of *EXCESS_EW* are positive and significant only in the sub-sample of firms from countries with strong product market competition (i.e. high *IND_HERF*). This partially brings some support to one side of the above mentioned debate suggesting that competition might not be synonym of higher disclosure quality.

4.6. Do governance monitoring mechanisms affect the relationship between employee welfare and stock market crash risk?

It seems to be a legitimate question to check whether the quality of the governance mechanisms has any impact on the positive relationship we have documented between excess employee welfare and crash risk. It has been widely documented that firms with high quality of the internal governance mechanisms (board of directors, ownership structure, executive compensations, etc.) and in countries where investors are well protected, have their managers less inclined to adopt opportunistic behaviors (Leuz, Nanda, and Wysocki, 2003; Shena and Chih, 2005; Boubakri and Ghouma, 2010). In this section, we analyze the impact of the quality of the internal and national governance mechanisms on the relationship between employee benefits and stock market equity crash risk.

To proxy for the quality of the internal governance systems, we use the Corporate Governance Performance Score (*CG_SCORE*) from Thomson Reuters. The index assesses the quality of the overall governance within a firm by rating different dimensions of the governance such as the board structure and function[10], compensation policy[11], shareholder rights[12], etc. In models 5 to 8 of **Table 9**, we split our main sample into two subsamples based on the median number of (*CG_SCORE*) and estimate each subsample separately. The results show that the coefficients of *EXCESS_EW* are positive and significant only for firms with poor internal governance score (low CG_SCORE). This confirms that the positive relation between employee welfare and stock crash risk is more pronounced for firms with poor governance systems, i.e. where managers are more inclined to behave opportunistically.

In a similar fashion, we investigate the impact of the national (country) governance system on our main finding. Our first proxy for the national governance system is the anti-self-dealing index from Djankov et al. (2008). The index uses country legal rules and focuses on enforcement mechanisms that govern self-dealing transactions. We also use a proxy of the quality of the disclosure requirement from LaPorta et al (2006) as a second measure of national governance system.

In **Table 10**, we report the results of the sub-sample analysis based on legal investor protection and disclosure requirements. First, we run our sub-sample analysis using the median of the anti-self index (*ANTISELF*) of Djankov et al. (2008) to split our sample into a sub-samples of firms from countries with strong legal investor protection Vs. weak legal investor protection. Fernandes and Ferreira (2008) show that strong legal investor protection is associated with higher stock price informativeness, which reduces the likelihood to experience stock price crash risk (e.g., Hutton et al., 2009). Therefore, we expect the effect of employee welfare on stock price crash risk to be less pronounced in firms from countries with strong legal investor protection. The results reported in Models 1 to 4 show that the coefficient for *EXCESS_EW* is positive and significant only in the sub-sample of firms with low investor protection, consistent with our

[10] It includes for instance: the percentage of independent board members, CEO-Chairman separation, size of board, background and skills of the board members, experience and average years serving on board members, number of board meetings, audit committee independence, etc.

[11] It includes for instance: the existence of a compensation policy, stock option program, total board member compensation, senior executive long-term compensation incentives, etc.

[12] It includes for instance: the existence of shareholder rights/ policy, provisions such as classified board structure, staggered board structure, existence of different voting power shares, ownership concentration, etc.

prediction.[13] Second, we replace *ANTISELF* by another proxy, the disclosure requirements index (*DISCREQ*) from La Porta et al. (2006), and re-run our sub-sample analysis. Hutton et al. (2009) report evidence suggesting that corporate transparency, which enhances the flow of firm specific information to capital markets (i.e., increases stock price informativeness), is associated with lower stock price crash risk. Given that, we except that the positive relation between excess employee welfare and stock price crash risk is less pronounced in countries with higher disclosure requirements. The results reported in Models 5 to 8 in **Table 10** are consistent with this prediction. In fact, we find that the coefficient for *EXCESS_EW* is significant only in the sub-sample of firms from countries with poor disclosure requirements. The results of the F-test show that the difference in coefficients between the sub-sample of firms from countries with high disclosure requirements and the sub-sample of firms from countries with weak disclosure requirements is statistically significant.

The results from these variables (*CG_SCORE*, *ANTISELF* and *DISCREQ*) suggest that both the internal and the country governance systems can play a role in reducing the asymmetric information and makes the impact of the employee benefits on stock crash risk less pronounced. This again highlights the disincentive effect that a quality governance mechanisms may have on the managerial bad-news-hoarding activities.

[Please Insert Tables 8, 9, and 10 about here]

4.7. Additional Tests

In this section, we describe additional tests conducted to ensure the robustness of our findings. The results of these tests, reported in **Table 11**, generally confirm the core findings presented in **Table 5**: stock price crash risk is increasing in excess employee welfare.

First, we examine whether our results are driven by large countries in the sample. Specifically, we exclude observations belonging to countries that represent a large fraction of our initial sample i.e., Japan, USA, and UK. The results reported in Models 1 and 2 of **Table 11** show that the coefficients for *EXCESS_EW* continue to load positive and statistically highly significant, suggesting that our findings are not affected by the overrepresentation of firms from

[13] The results of the F-test show that the difference in coefficients between the sub-sample of firms from countries with strong legal investor protection and the sub-sample of firms from countries with weak legal investor protection is statistically significant.

these three countries. Second, we exclude countries with firm-year observations less than 30 because our inferences may be not valid for these small countries. The results reported in Models 3 and 4 of **Table 11** show that the coefficients for *EXCESS_EW* remain positive and significant, further corroborating our earlier findings. Third, we re-run our basic regression after excluding financial firms from our sample. The results reported in Models 5 and 6 of **Table 11** show that the coefficient for *EXCESS_EW* is positive and significant at the 1% level, implying that our earlier findings are not driven by financial firms. Fourth, we re-run our basic regression after excluding firms with a zero excess employee welfare index to ensure that our findings are not driven by the inclusion of firms with neutral *EXCESS_EW* scores. The results (untabulated) show that the coefficients for *EXCESS_EW* continue to load positive and significant, again supporting our earlier findings. Finally, we exclude observations during 2008 and 2009 to avoid any bias due to the financial crisis. Regression results reported in models 7 and 8 of the same **Table 11** again confirm our main evidence.

[Please Insert Table 11 about here]

5. Channels through which employee welfare may affect crash risk

Finally, we discuss in this section the channels thought which excess employee welfare might affect stock price crash risk. Prior researches suggest two main mechanisms: earnings management activities and the likelihood that the employees blow the whistle on the management's fraudulent behaviors.

5.1. Earnings management

It can be argued that managers who opportunistically manipulate their earnings to pursue their own agenda are more motivated to adopt excessively generous welfare policies to cover up their misbehaviors. This would ultimately result in higher crash risks when the "hidden" bad news come to the market.

On the one hand, prior literature (such as Friedman, 1970; Jensen and Meckling, 1976; Carroll, 1979; McWilliams et al., 2006) suggests that managers can opportunistically use employee welfare investments (and CSR activities in general) to extract rents and pursue their own agenda. Those managers would likely seek to maintain opaque and less reliable

information environment. For instance, Petrovits (2006) finds that companies manipulate their earnings by strategically using corporate philanthropy programs. This allows them to achieve their earnings targets. Moreover, Prior et al. (2008) conjecture that managers who manipulate earnings have an incentive to establish a socially-friendly image by increasing their socially responsible activities. Their results point to a positive relationship between CSR investments and earnings management.

On the other hand, this opportunistically intended financial reporting opacity has been shown to be a prominent determinant of crash risk (Jin and Myers, 2006; Hutton et al., 2009 among other studies). Managers pursuing their personal agenda have more incentives to hide information and adopt opaque financial reporting policies. Stocks would then stockpile bad news until a certain point when all accumulated negative information comes out to the market and cause a price crash risk.

To test the effectiveness of this factor, we run our model for two-subsamples: firms with high earnings management (abnormal accruals higher than median) versus firms with low earnings management (abnormal accruals lower than median). We expect that only for the subsample of high earnings management firms that the excessive employee welfare conditions would have a positive impact on crash risk. Our results reported in **Table 12** confirm this conjecture. As we can see in models (1) to (4), only for the subsamples of high earnings management firms that excessive employee welfare (*EXCESS_EW*) significantly increases stock price crash risk and this is using the two proxies of crash risk, i.e. *NCSKEW* and *DUVOL*.

5.2. Likelihood of whistleblowing

The likelihood of whistleblowing within the firm can also be a channel through which excess employee welfare affects crash risk. In companies where employees are more encouraged to blow the whistle and report corporate misconducts, managers are likely to adopt excessively generous employee welfare policies with the hope to reduce the risk of being reported by their staff. If their strategy turns to be successful, it would then increase the level of information not disclosed to the market and hence increase the stock price crash risk. In such context, excessively generous employee welfare policies (ultimately leading to higher employee satisfactions) is likely to play a prominent role in "*curbing*" the risk of the managers being

reported. Because of their easy access to information, employees are the most effective and important fraud detectors (Dyck et al, 2010). These employees would more likely be motivated to report managers' misconduct if they have poor work conditions (Rothschild and Miethe, 1999; Bowen et al., 2010; Miceli and Near 1994; Beresford et al. 2003). More importantly, this likelihood of whistleblowing becomes even higher in the presence of laws that protect whistleblowers from being mistreated for reporting corporate misconduct. In this context, the likelihood of being reported represents a serious risk that managers would try to attenuate using overly generous work conditions. The managers would hence be more inclined to show even more generosity to their employees if the legal framework is more protective for the whistleblowers.

We used The 2014 Whistleblower Protection Laws reports issued by Transparency International to proxy for the whistleblowing risk. The report ranks countries (mainly G20) based on the level of the protection each country provides to employees who bring forwards corporate frauds (whistleblowers protection).[14]

We split our sample into two subsamples: firms in countries with high likelihood of whistleblowing (whistleblowers protection score higher than median) versus firms in countries where the likelihood of whistleblowing is low (whistleblowers protection score lower than median). We conjecture that employees in countries that better protect and encourage whistleblowers will find less difficulties to uncover managers' misconduct. This would, in turn, induce managers in those countries (where protection is very high) to be excessively generous with their employees, hence leading to more hidden information and then crash risk. We run our models for the two-subsamples. Our results, reported in **Table 12** models (5) to (8), support the idea that only in the sub-sample of firms with high likelihood of whistleblowing that the excessive employee welfare has a positive significant impact on stock price crash risk. This confirms that the likelihood of whistleblowing is (at least in part) what makes crash risk positively impacted by an excessively generous welfare policy.

[14] The score is constructed by assessing 14 items such as the existence of a clear definition of whistleblowers, existence of internal/external reporting channels, anonymity, confidentiality, transparency, etc. Each item is assigned a rating that ranges from 1 (best protection) to 3 (poorest or absence of protection). The overall score is the sum of all ratings across the 14 items. For easy interpretation, we transformed the overall score (new score = maximum possible score – current score) so that higher new scores reflect better whistleblowers protections.

6. Conclusion

This research aims to shed more lights on the role that the employee welfare investments can play in the financial markets. We conjuncture two hypotheses on the relationship between the quality of employment and the stock price crash risk. On one hand, the stakeholder thesis hypothesizes that higher level of employee welfare may improve the firm's reputation in the market, enhance the shareholders' engagement, avoid costly strikes, and boost the employees' productivity. This would ensure equity prices stability resulting in a decrease in stock price crash risks. Our second competing hypothesis finds its roots in the agency theory and predicts a positive relationship between employee welfare and equity prices crash risk. Managers might choose to generously invest in employee benefits in order to hide their bad-news-hoarding activities.

The empirical evidence supports the bad-news-hoarding thesis of the agency theory. Our results are consistent with the idea that the negative skewness and the down-to-up volatilities (our two proxies for stock price crash risk) are increasing in employee welfare, suggesting that high excessively generous employee welfare tends to contribute to stock price crash risk. Managers might offer excessively generous employee benefits to divert employees focus on important issues. Such behavior would lead news to accumulate until a certain tipping point when bad news come out to the market and cause equity prices to crash. We also explore the channels through which employee welfare impacts stock price crash risk. Our findings point to two mechanisms: the level of earnings management within the firm as well as the level of protection of whistleblowers in a given country that affects the likelihood that the employees blow the whistle on corporate misconducts.

We also document that the positive relation between employee welfare and stock price crash risk depends on the product and labor markets characteristics as well as the quality of the firm and country governance mechanisms. In particular, our results point to a more pronounced impact of employee welfare on stock price crash risk in labor intensive firms and industries, in more regulated labor markets, and in less competitive product markets. Additionally, this positive relationship between employee welfare and equity price crash risk tends to be more pronounced in poorly governed firms and in countries where investors are poorly protected and with lower disclosure requirements. This confirms the deterrent effect that good governance monitoring mechanisms have on managerial bad-news-hoarding activities.

The paper adds to the growing literature that examines the employee welfare issues from a financial perspective. By focusing on crash risk, our results broaden our understanding of the implications that employee welfare investments have on firms and investors. Our findings also suggest that managers might use employee welfare policy to serve their own interests. This might be achieved by offering excessive benefits to the employees with the aim to reduce the likelihood that these latter bring forward relevant information to uncover potential frauds. Overall, this study opens new venues for future researches in order to further investigate this question in different contexts or using different proxies.

Appendix: Descriptions and Sources of Variables

Variable	Description	Source
NCSKEW	The negative coefficient of skewness calculated by taking the negative of the third moment of firm firm-specific weekly returns for each sample year divided by the standard deviation of firm-specific weekly returns raised to the third power. See equation (2) for details.	Authors' calculation
DUVOL	The down-to-up volatility calculated as the natural logarithm of the standard deviation of weekly-stock returns during the weeks in which they are lower than their annual mean ("down" weeks) over the standard deviation of weekly-stock returns during the weeks in which they are higher than their annual mean ("up" weeks).	Authors' calculation
EMP_WELFARE	The employee welfare score is calculated using the following sub-indexes from Thomson Reuters: Policy (SOEQD01V), Employment Satisfaction (ECPEDP039), Salaries (SOEQO01V), Salaries Distribution (SOEQO02V); Bonus Plan for Employees (SOEQDP0201); Generous Fringe Benefits (SOEQDP025), Employment Awards (SOEQO05V), Trade Union Representation (SOEQDP031), Employees Leaving (SOEQDP033) and Turnover of Employees (SOEQDP034). SOEQO01V, SOEQO02V, SOEQDP033 and SOEQDP034 are quantitative. We normalized each one of these sub-indexes to 0, 1. The normalized value of each sub-index is the ratio of the difference between the value of the original sub-index and the sample minimum value of the original sub-index over the difference between the sample maximum value of the original sub-index and the sample minimum value of the original sub-index. ECPEDP039 and SOEQDP031 are percentages so they are between 0 and 1. SOEQDP0201, SOEQDP025, and SOEQO05V are questions with Y/N answers. If the answer is Y then the variable is coded 1. If the answer is N then the variable is coded 0. SOEQD01V includes 2 questions. If the answer is NN then the variable is coded 0. If the answer is NY then the variable is coded 0.5. If the answer is YN then the variable is coded 0.5. If the answer is YY then the variable is coded 1. *EMP_WELFARE* is the sum of the normalized quantitative variables (SOEQO01V, SOEQO02V, SOEQDP033 and SOEQDP034), the percentages (ECPEDP039 and SOEQDP031), and the qualitative variables (SOEQD01V, SOEQDP0201, SOEQDP025 and SOEQO05V). A higher score indicates a greater commitment of the company to employee well-being.	Thomson Reuters
EXCESS_EW	The difference between the firm's *EMP_WELFARE* index and the average of *EMP_WELFARE* of its industry in a given year.	Authors' calculation
SIZE	The natural logarithm of the firm's market value.	Authors' calculation
LEVERAGE	The ratio of the long-term debt over the total assets.	Authors' calculation
MB	The market-to-book ratio.	Authors' calculation

ROA	The ratio of the net income over the total assets.	Authors' calculation
DTURNOVER	The difference between the average monthly turnover at the end of the year and the average monthly turnover at the beginning of the year.	Authors' estimation
RET	The average of firm-specific weekly returns over a fiscal year.	Authors' calculation
SIGMA	The standard deviation of the weekly stock returns over a fiscal year.	Authors' calculation
AQ	The absolute value of Dechow and Dichev's (2002) measure of abnormal accruals, as modified by Ball and Shivakumar (2005).	Authors' calculation
IND_HERF	The industry Herfindahl-Hirschman index calculated using two-digit SIC industry sales.	Authors' calculation
FIRM_HERF	The firm Herfindahl-Hirschman index calculated using individual firm sales.	Authors' calculation
LNGDPC	The natural logarithm of GDP per capita.	World Development Indicators
STD_GDPG	The standard deviation of the growth in GDP per capita in a given country-year.	World Development Indicators
IND_WAGE	The average of the ratio of total labor and related expenses over total employees in each year for the industry to which the firm into consideration belongs except this firm.	Authors' calculation
OPEN	The ratio of the sum of total imports and exports over GDP for each country in each year.	
LIQ	Trading volume divided by market capitalization for each country in each year.	World Development Indicators
N_LISTED	The logarithm of the number of listed companies in a given country-year.	World Development Indicators
ACOV	The natural logarithm of one plus the number of analysts following a firm.	I/B/E/S
ENFOR	A dummy variable that is equal to one in the year for which the country had and insider trading enforcement case for the first time and thereafter, and zero otherwise.	Hu, Kim, and Zhang (2013)
SPI	Annual firm-specific return variation proxy (log(1−R2/R2) estimated by regressing the firm's weekly returns on current and lagged market returns as well as current and lagged industry returns.	Authors' calculation
LIK_WHISTLE	The likelihood of whistleblowing. The whistleblowers protection score constructed by assessing 14 items such as the existence of a clear definition of whistleblowers, existence of internal/external reporting channels, anonymity, confidentiality, transparency, etc. Each item is assigned a rating that ranges from 1 (best protection) to 3 (poorest or absence of protection). The overall score is the sum	The 2014 Whistleblower Protection Laws reports issued by Transparency International

	of all ratings across the 14 items. For easy interpretation, we transformed the overall score (new score = maximum possible score – current score) so that higher new scores reflect better whistleblowers protections.	
ANTISELF	Anti-self-dealing index from Djankov et al. (2008). The index uses country legal rules and focuses on enforcement mechanisms that govern self-dealing transactions.	Djankov et al. (2008)
DISCREQ	A proxy of the quality of the disclosure requirement from LaPorta et al (2006). It is the constructed by taking the arithmetic mean of six sub-indices (prospectus, compensation, shareholders, inside ownership, contracts irregular, and transactions)	LaPorta et al (2006)
EMPLOY	Measure of the level of development of the countries' labor markets. It is an Employment Law Index that captures the extent to which the labor is protected in the country. It is a time invariant Index is made up of four main dimensions relating to the alternative employment contracts, the cost of increasing the work load, the cost of layoffs, and the firing procedures. The index ranges from 0 (weakest employment protection) to 1 (strongest employment protection).	Botero et al. (2004)
CG_SCORE	Corporate Governance Performance Score (CG_SCORE) from Thomson Reuters. The index assesses the quality of the overall governance within a firm by rating different dimensions of the governance such as the board structure, the board function, the compensation policy, shareholder rights, etc.	Thomson Reuters

Appendix: Employment Welfare (*EMP_WELFARE*) Sub-Indexes

Variable	Data Code	Description
Employment Quality *(EMP_WELFARE)*		The workforce/employment quality category measures a company's management commitment and effectiveness towards providing high-quality employment benefits and job conditions. It reflects a company's capacity to increase its workforce loyalty and productivity by distributing rewarding and fair employment benefits, and by focusing on long-term employment growth and stability by promoting from within, avoiding lay-offs and maintaining relations with trade unions.
Policy	SOEQD01V	Does the company have a competitive employee benefits policy or ensuring good employee relations within its supply chain? and Does the company have a policy for maintaining long term employment growth and stability?
Employment Satisfaction	ECPEDP039	The percentage of employee satisfaction as reported by the company.
Salaries	SOEQO01V	Average salaries and benefit in US dollars (Salaries and Benefits (US dollars) /Total Number of Employees).
Salaries Distribution	SOEQO02V	Total salaries and benefits divided by net sales or revenue.
Bonus Plan for Employees	SOEQDP0201	Does the company claim to provide a bonus plan to most employees?
Generous Fringe Benefits	SOEQDP025	Does the company claim to provide its employees with a pension fund, health care or other insurances?
Employment Awards	SOEQO05V	Has the company won an award or any prize related to general employment quality or "Best Company to Work For"?
Trade Union Representation	SOEQDP031	Percentage of employees represented by independent trade union organizations or covered by collective bargaining agreements.
Employees Leaving	SOEQDP033	Number of employees who left the company during the year.
Turnover of Employees	SOEQDP034	Percentage of employee turnover.

(*Source: Thomson Reuters ASSET4 Environmental, Social and Corporate Governance Database*)

References:

Aggarwal R., Erel I., Ferreira M., & Matos, P., 2011. Does governance travel around the world? Evidence from institutional investors. Journal of Financial Economics, 100, 154–181.

Bae K., Kang J., Wang J., 2011. Employee treatment and firm leverage: a test of the stakeholder theory of capital structure. Journal of Financial Economics, 100, 130–153.

Ball R. and Shivakumar L., 2005. Earnings quality in UK private firms: Comparative loss recognition. Journal of Accounting and Economics, 38, 83–128.

Barro R.J. and Ursúa J.F., 2009. Stock-Market Crashes and Depressions. NBER working paper.

Becker B.E. and Olson C.A., 1986. The impact of strikes on shareholder equity. Industrial and Labor Relations Review, 39, 425-438.

Benmelech E., Kandel E., & Veronesi P., 2010. Stock-based compensation and CEO (dis) incentives. The Quarterly Journal of Economics, 125, 4, 1769–1820.

Ben-Nasr H. and Cosset J.C., 2014. State Ownership, Institutional Environment, and Stock Price Informativeness: International Evidence from Privatized Firms. Journal of Corporate Finance, 29, 179-199.

Ben-Nasr H. and Alshwer A., 2016. Does Stock Price Informativeness affect Labor Investment Efficiency? Journal of Corporate Finance, 38, 249-271.

Beresford D.R., Katzenbach N.B., and Rogers C.B., 2003. Report of investigation by the special investigative committee of the board of directors of WorldCom, Inc. Athens, GA.

Bhana N., 1997. The effect of industrial strikes on the value of shares listed on the Johannesburg Stock Exchange. Investment Analysts Journal, 26, 43-49

Bhattacharya U. and Daouk H., 2002. The World Price of Insider Trading. Journal of Finance, 57, 75-108.

Bleck A. and Liu X., 2007. Market Transparency and the Accounting Regime. Journal of Accounting Research, 45, 229–256.

Botero J., Djankov S., La Porta R., Lopez-De-Silanes F., & Shleifer A., 2004. The Regulation of labor. Quarterly Journal of Economics, 119, 1339-1382.

Bowen R., Call A., and Rajgopal S., 2010. Whistle-Blowing: Target Firm Characteristics and Economic Consequences. The Accounting Review, 85, 1239–1271.

Boubakri N. and Ghouma H., 2010. Control/ownership structure, creditor rights protection, and the cost of debt financing: International evidence. Journal of Banking and Finance, 34, 10, 2481–2499.

Brammer S. J. and Pavelin S., 2006. Corporate Reputation and Social Performance: The Importance of Fit. Journal of Management Studies, 43, 3, 435–455.

Clarkson M., 1995. A stakeholder framework for analyzing and evaluating corporate social performance. Academy of Management Review, 20, 92–117.

Callen J. L. and Fang X., 2013. Institutional investor stability and crash risk: Monitoring versus short-termism? Journal of Banking and Finance, 37, 3047–3063.

Callen J. L. and Fang X., 2016. Short interest and stock price crash risk. Journal of Banking and Finance, 60, 181-194.

Cao H., Coval D., and Hirshleifer D., 2002. Sidelined investors, trading-generated news, and security returns. Review of Financial Studies, 15, 2, 615–648.

Chava S., 2014. Environmental Externalities and Cost of Capital. Management Science, 60, 2223-2247.

Chen J., Hong H., & Stein J.C., 2001. Forecasting crashes: trading volume, past returns, and conditional skewness in stock prices. Journal of Financial Economics, 61, 345–381.

Chen P., Mehrotra V., Sivakumar R., & Yu W.W., 2001. Layoffs, shareholders' wealth, and corporate performance. Journal of Empirical Finance, 8, 171-199.

Chermesh R., 1982. Strike proneness and characteristics of industrial relations systems at the organizational level: A discriminant analysis. Journal of Management Studies, 19, 413-435.

Clinch G., and Verrecchia R. E., 1997. Competitive disadvantage and discretionary disclosure in industries. Australian Journal of Management, 22, 125–137.

Cosset J.C., Somé H.Y., & Valery P., 2016. Does competition matter for corporate governance? The role of county characteristics. Journal of Financial and Quantitative Analysis, 51, 1231-1267.

Darrough M.N. and Stoughton N.M., 1990. Financial disclosure policy in an entry game. Journal of Accounting and Economics, 12, 219–243.

Diamond D. and Verrecchia R., 1991. Disclosure, liquidity, and the cost of capital. Journal of Finance, 46, 1325-1359.

Dechow P.M. and Dichev I.D., 2002. The quality of accruals and earnings: the role of accruals estimation errors. Accounting Review, 77, 35-59.

Djankov S., La Porta R., Lopez-de-Silanes F., & Shleifer A., 2008, The law and economics of self-dealing. Journal of Financial Economics, 88, 430–465.

Dyck A., Morse A., and Zingales L., 2010. Who blows the whistle on corporate fraud? The Journal of Finance, 65, 2213–2253.

Filbeck G., 2001. Mother Jones: Do better places to work imply better places to invest? Review of Financial Economics, 10, 57-70.

Edmans A., 2011. Does the stock market fully value intangibles? Employee satisfaction and equity prices, Journal of Financial Economics, 101, 621-640.

Edmans A., 2012. The link between job satisfaction and firm value, with implications for corporate social responsibility. Academy of Management Perspectives, 26, 4, 1-19.

El Ghoul S., Guedhami O., Kwok C.C.Y., & Mishra D.R., 2011. Does corporate social responsibility affect the cost of capital? Journal of Banking and Finance, 35, 2388–2406.

Ertugrul M., 2013. Employee-friendly acquirers and acquisition performance. Journal of Financial Research, 36, 347–370

Fama E.F. and MacBeth J.D., 1973. Risk, return, and equilibrium: Empirical tests. Journal of Political Economy, 81, 607-636.

Fernandes N. and Ferreira M.A., 2008. Does international cross-listing improve the information environment? Journal of Financial Economics, 88, 216–244.

Ferreira M. and Matos P., 2008. The colors of Investor's Money: The role of institutional investors around the World. Journal of Financial Economics, 88, 499-533.

Flanagan D. J. and O'Shaughnessy K. C., 2005. The Effect of Layoffs on Firm Reputation. Journal of Management, 31, 3, 445–463

Fombrun C. and Shanley M., 1990. What's in a name? Reputation building and corporate strategy. Academy of Management Journal, 33, 2, 233–258.

Frankel R.M. and Li X., 2004. Characteristics of a firm's information environment and the information asymmetry between insiders and outsiders. Journal of Accounting and Economics, 37, 229-259.

Friedman M., 1970. The social responsibility of business is to increase its profits. New York Times Magazine, 13, 217–23.

Gandz J., DuMont S., & Lord R.J., 1980. Counting the costs of strikes: Who pays when management and labour can't play ball? CA Magazine, 21, 32- 29.

Ghaly M., Dang A.H., & Stathopoulos K., 2015. Cash holdings and employee welfare. Journal of Corporate Finance, 33, 53-70.

Gillan S.L. and Starks L.T., 2003. Corporate governance, corporate ownership, and the role of institutional investors: A global perspective. Journal of Applied Finance, 13, 4–22.

Giroud X. and Mueller H.M., 2011. Corporate Governance, Product Market Competition, and Equity Prices. Journal of Finance, 66, 563-600.

Gorton G. and Schmid F., 2004. Capital, labor, and the firm: A study of German codetermination. Journal of the European Economic Association, 2, 863–905.

Graham J.R., Harvey C.R., & Rajgopal S., 2005. The Economic Implications of Corporate Financial Reporting. Journal of Accounting and Economics, 40, 3–73.

Hemingway C.A. and Maclagan P.W., 2004, Managers' personal values as drivers of corporate social responsibility. Journal of Business Ethics, 50, 33-44.

Hong H.G. and Liskovich I., 2015. Crime, Punishment and the Value of Corporate Social Responsibility. NBER Working Paper No. 21215.

Hong H. and Stein J., 2003. Differences of opinion, short-sales constraints, and market crashes. Review of Financial Studies, 16, 487–525.

Hu J., Kim J.B., & Zhang W., 2013. Insider Trading and Stock Price Crash Risk: International Evidence from a Natural Experiment. Working Paper, City University of Hong Kong.

Hutton A.P., Marcus A.J., & Tehranian H., 2009. Opaque financial reports, R2, and crash risk. Journal of Financial Economics, 94, 67–86.

Imberman W., 1979. Strikes cost more than you think. Harvard Business Review, 57, 133-138.

Jensen M.C., 2001. Value Maximization, Stakeholder Theory, and the Corporate Objective Function, Journal of Applied Corporate Finance, 14, 8-21.

Jin L. and Myers S.C., 2006. R2 around the world: new theory and new tests. Journal of Financial Economics, 79, 257–292.

Jones T. M., 1995. Instrumental stakeholder theory: A synthesis of ethics and economics. Academy of Management Review, 20, 404-437.

Jones R. and Murrell A.J, 2001. Signaling positive corporate social performance. Academy of Management Journal, 42, 564–576.

Kim J.B., Li Y., & Zhang L., 2011a. Corporate tax avoidance and stock price crash risk: firm-level analysis. Journal of Financial Economics, 100, 639-662.

Kim J.B., Li Y., & Zhang L., 2011b. CFOs Versus CEOs: equity incentives and crashes. Journal of Financial Economics, 101, 713-730.

Kim Y., Li H., & Li S., 2014. Corporate social responsibility and stock price crash risk. Journal of banking and Finance, 43, 1-13

Kim J. B. and Zhang L., 2016. Accounting conservatism and stock price crash risk: firm-level Evidence. Contemporary Accounting Research, 33, 412-441.

Kotha S., Rajgopal S., & Rindov V., 2001. Reputation Building and Performance: An Empirical Analysis of the Top-50 Pure Internet Firms. European Management Journal, 19, 6, 571–586.

Kothari S.P., Shu S., & Wysocki P.D., 2009. Do Managers Withhold Bad News? Journal of Accounting Research, 47, 241–276.

La Porta R., Lopez-De-Silanes F., & Shleifer A., 2006. What Works in Securities Laws? The Journal of Finance, 61, 1–32.

Larcker D. and Rusticus T.O., 2010. On the use of instrumental variables in accounting research. Journal of Accounting and Economics, 49, 186-205.

Leuz C., Lins K.V., & Warnock F.E., 2009. Do foreigners invest less in poorly governed firms? Review of Financial Studies, 23, 3245–3285.

Leuz C., Nanda D., & Wysocki P., 2003. Earnings management and investor protection: An international comparison. Journal of Financial Economics, 69, 505-527.

Levine D., 1992. Can wage increases pay for themselves? Tests with a production function. Economic Journal, 102, 1102-1115.

Li X., Wang S-S., & Wang X., 2017. Trust and stock price crash risk: Evidence from China. Journal of Banking and Finance, 76, 74-91.

Lin C., Ma Y., & Xuan Y., 2013. Corporate ownership structure and the choice between bank debt and public debt. Journal of Financial Economics, 109, 517–534.

Lins K.V., Servaes H., & Tamayo A., 2016. Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis. Journal of Finance, Forthcoming.

Newman G.R., 1980. The predictability of strikes: Evidence from the stock market. Industrial and Labor Relations Review, 33, 525-535.

Meyer C.S., Mukerjee S., & Sestero A., 2001. Work-family benefits: Which ones maximize profits? Journal of Managerial Issues, 13, 28-44.

Miceli M.P. and Near J.P., 1994. Whistle blowing: Reaping the benefits. The Academy of Management Executive, 8, 65-73.

Perry-Smith J. E. and Blum T. C., 2000. Work–family human resource bundles and perceived organizational performance. Academy of Management Journal, 43, 1107–1117.

Petrovits C., 2006. Corporate-sponsored foundations and earnings management. Journal of Accounting and Economics, 41, 335 – 362.

Pouder R., Cantrell R.S., & Kulkarni S.P., 1999. The influence of corporate governance on investor reactions to layoff announcements. Journal of Managerial Issues, 11, 475-492.

Povel P., Singh R., & Winton A., 2007. Booms, Busts, and Fraud. Review of Financial Studies, 20, 1219-1254.

Prior D., Surroca J., & Tribo J. A., 2008. Are socially responsible managers really ethical? Exploring the relationship between earnings management and corporate social responsibility. Corporate Governance: An International Review, 16, 3, 160–177.

Roberts P. W. and Dowling G. R., 2002. Corporate reputation and sustained superior financial performance. Strategic Management Journal, 23, 1077–1093.

Rothschild J. and Miethe T.D., 1999. Whistle-blower disclosures and management retaliation: The battle to control information about organization corruption. Work and Occupations, 26, 107–128.

Shamsie J., 2003. The context of dominance: An industry-driven framework for exploiting reputation. Strategic Management Journal, 24, 199-215.

Shena C.H. and Chih H-L., 2005. Investor protection, prospect theory, and earnings management: An international comparison of the banking industry. Journal of Banking and Finance, 29, 2675–2697.

Verrecchia R.E., 1983. Discretionary disclosure. Journal of Accounting and Economics, 5, 179–194.

Wadhwani S.B. and Wall M., 1991. A direct test of the efficiency wage model using U. K. micro-data. Oxford Economic Papers, 43, 529-548.

Wintoki M.B., Linck J.S., & Netter J.M., 2012. Endogeneity and the dynamics of internal corporate governance. Journal of Financial Economics, 105, 581–606.

Table 1: Sample Distribution

This table presents the distribution of our sample of 2,387 firms used in our multivariate regression analysis to examine the impact of employee welfare on stock price crash risk by industry, country, and year.

By industry			*By country*		
Industry	Nbr of firms	%	Country	Nbr of firms	%
Agriculture	3	0.13%	Australia	197	8.25%
Food Products	63	2.64%	Austria	18	0.75%
Candy Soda	11	0.46%	Belgium	27	1.13%
Beer Liquor	23	0.96%	Brazil	56	2.35%
Tobacco Products	8	0.34%	China	42	1.76%
Recreation	8	0.34%	Colombia	9	0.38%
Entertainment	23	0.96%	Czech Rep.	3	0.13%
Printing and Publishing	18	0.75%	Denmark	22	0.92%
Consumer Goods	41	1.72%	Finland	25	1.05%
Apparel	22	0.92%	France	85	3.56%
Healthcare	22	0.92%	Germany	77	3.23%
Medical Equipment	28	1.17%	Greece	16	0.67%
Pharmaceutical Products	54	2.26%	Hong Kong	124	5.19%
Chemicals	78	3.27%	Hungary	3	0.13%
Rubber & Plastic Products	12	0.50%	India	72	3.02%
Textiles	2	0.08%	Indonesia	19	0.80%
Construction Materials	50	2.09%	Ireland	9	0.38%
Construction	70	2.93%	Israel	13	0.54%
Steel Works Etc	58	2.43%	Italy	45	1.89%
Fabricated Products	2	0.08%	Japan	357	14.96%
Machinery	63	2.64%	Korea, South	97	4.06%
Electrical Equipment	30	1.26%	Mexico	16	0.67%
Automobiles and Trucks	56	2.35%	Netherlands	32	1.34%
Aircraft	15	0.63%	New Zealand	6	0.25%
Shipbuilding, Railroad Equip.	16	0.67%	Norway	18	0.75%
Defense	1	0.04%	Philippines	20	0.84%
Precious Metals	19	0.80%	Poland	22	0.92%
Mines	55	2.30%	Portugal	12	0.50%
Coal	19	0.80%	Russia	1	0.04%
Petroleum and Natural Gas	84	3.52%	Singapore	41	1.72%
Utilities	111	4.65%	South Africa	103	4.32%
Communication	104	4.36%	Spain	45	1.89%
Personal Services	18	0.75%	Sweden	34	1.42%
Business Services	173	7.25%	Switzerland	56	2.35%
Computers	22	0.92%	Thailand	19	0.80%
Electronic Equipment	76	3.18%	Turkey	20	0.84%

Measuring and Control Equipment	11	0.46%
Business Supplies	18	0.75%
Shipping Containers	8	0.34%
Transportation	98	4.11%
Wholesale	57	2.39%
Retail	121	5.07%
Meals	31	1.30%
Banking	205	8.59%
Insurance	86	3.60%
Real Estate	87	3.64%
Trading	157	6.58%
Other	50	2.09%
Total	**2,387**	**100**

United Kingdom	310	12.99%
United States	316	13.24%
Total	**2,387**	**100**

Table 2: Descriptive Statistics for the Employee Welfare sub-indexes

This table presents descriptive statistics for the *transformed* Thomson Reuters' sub-indexes used to calculate our employee welfare proxy (*EMP_WELFARE*). The sub-indexes are: Policy (*SOEQD01V*), Employment Satisfaction (*ECPEDP039*), Salaries (*SOEQO01V*), Salaries Distribution (*SOEQO02V*); Bonus Plan for Employees (*SOEQDP0201*); Generous Fringe Benefits (*SOEQDP025*), Employment Awards (*SOEQO05V*), Trade Union Representation (*SOEQDP031*), Employees Leaving (*SOEQDP033*) and Turnover of Employees (*SOEQDP034*). *SOEQO01V*, *SOEQO02V*, *SOEQDP033* and *SOEQDP034* are quantitative. We normalized each one of these sub-indexes to [0, 1]. The normalized value of each sub-index is the ratio of the difference between the value of the original sub-index and the sample minimum value of the original sub-index over the difference between the sample maximum value of the original sub-index and the sample minimum value of the original sub-index. *ECPEDP039* and *SOEQDP031* are percentages so they are between 0 and 1. *SOEQDP0201*, *SOEQDP025*, and *SOEQO05V* are questions with Y/N answers. If the answer is "Y" then the variable is coded 1. If the answer is N then the variable is coded 0. *SOEQD01V* includes 2 questions. If the answer is "NN" then the variable is coded 0. If the answer is "NY" then the variable is coded 0.5. If the answer is "YN" then the variable is coded 0.5. If the answer is "YY" then the variable is coded 1.

Variable	N	Mean	Median	Standard Deviation	Q1	Q3
Policy	8,032	0.4377	0.5000	0.3912	0.0000	1.0000
Employment Satisfaction	8,032	0.0836	0.0000	0.2370	0.0000	0.0000
Salaries	8,032	0.0005	0.0002	0.0036	0.0001	0.0004
Salaries Distribution	8,032	0.0007	0.0002	0.0159	0.0001	0.0004
Bonus Plan for Employees	8,032	0.5595	1.0000	0.4965	0.0000	1.0000
Generous Fringe Benefits	8,032	0.5595	1.0000	0.4965	0.0000	1.0000
Employment Awards	8,032	0.1504	0.0000	0.3575	0.0000	0.0000
Trade Union Representation	8,032	0.0092	0.0000	0.0488	0.0000	0.0000
Employees Leaving	8,032	0.1452	0.0000	0.2964	0.0000	0.0000
Turnover of Employees	8,032	0.0264	0.0000	0.0525	0.0000	0.0386

Table 3: Descriptive Statistics

This table presents the descriptive statistics for the variables used in our multivariate regression analysis to examine the impact of employee welfare on stock price crash risk for a sample of 8,032 firm-year observations for the 2008-2013 period from 38 countries. Descriptions and sources of these variables are provided in the Appendix.

Variable	N	Mean	Median	Standard Deviation	Q1	Q3
$NCSKEW_t$	8,032	0.049	-0.013	0.685	-0.323	0.315
$DUVOL_t$	8,032	0.007	-0.011	0.320	-0.201	0.192
$EMP\_WELFARE_{t-1}$	8,032	2.410	2.293	1.725	1.000	3.890
$EXCESS\_EW_{t-1}$	8,032	0.000	0.143	1.402	-1.272	1.076
$NCSKEW_{t-1}$	8,032	0.096	-0.012	0.929	-0.324	0.331
$DUVOL_{t-1}$	8,032	0.024	-0.010	0.403	-0.203	0.200
$SIZE_{t-1}$	8,032	20.877	21.787	3.922	20.881	22.710
$LEVERAGE_{t-1}$	8,032	0.180	0.156	0.150	0.056	0.266
MB_{t-1}	8,032	2.312	1.538	2.572	0.977	2.673
ROA_{t-1}	8,032	0.106	0.096	0.079	0.053	0.146
$DTURNOVER_{t-1}$	8,032	0.000	-0.001	0.024	-0.004	0.002
RET_{t-1}	8,032	0.001	0.001	0.008	-0.003	0.005
$SIGMA_{t-1}$	8,032	0.053	0.048	0.025	0.035	0.066
AQ_{t-1}	8,032	0.066	0.038	0.143	0.006	0.075
IND_HERF_{t-1}	8,032	0.162	0.099	0.186	0.043	0.206
$FIRM\_HERF_{t-1}$	8,032	0.042	0.026	0.061	0.006	0.052
$LNGDPC_{t-1}$	8,032	10.356	10.623	0.833	10.391	10.758
STD_GDPG_{t-1}	8,032	2.114	2.081	1.222	0.974	3.036

Table 4: Pearson Correlations

This table presents Pearson pairwise correlation coefficients between the regression variables. The full sample includes 8,032 firm-year observations for the 2008-2013 period from 38 countries. Bold face indicates statistical significance at the 1% level. Descriptions and data sources for these variables are provided in the Appendix.

Variable	$NCSKEW_t$	$DUVOL_t$	$EXCESS\_EW_{t-1}$	$NCSKEW_{t-1}$	$DUVOL_{t-1}$	$SIZE_{t-1}$	$LEVERAGE_{t-1}$	MB_{t-1}	ROA_{t-1}	$DTURNOVER_{t-1}$	RET_{t-1}	$SIGMA_{t-1}$	AQ_{t-1}	IND_HERF_{t-1}	$FIRM\_HERF_{t-1}$	$LNGDPC_{t-1}$
$DUVOL_t$	**0.942**															
$EXCESS\_EW_{t-1}$	**0.038**	**0.043**														
$NCSKEW_{t-1}$	0.023	0.025	0.014													
$DUVOL_{t-1}$	0.022	0.026	0.018	**0.957**												
$SIZE_{t-1}$	0.018	0.022	**0.157**	0.010	0.008											
$LEVERAGE_{t-1}$	**0.033**	**0.037**	**0.049**	0.023	0.027	**-0.088**										
MB_{t-1}	**0.042**	**0.044**	**0.071**	0.005	-0.008	-0.026	0.017									
ROA_{t-1}	**0.045**	**0.049**	**0.065**	**0.044**	**0.050**	**0.221**	**-0.124**	**0.384**								
$DTURNOVER_{t-1}$	0.002	0.008	-0.012	**0.056**	**0.064**	**-0.144**	**0.061**	0.001	-0.026							
RET_{t-1}	**0.067**	**0.075**	-0.006	**-0.244**	**-0.268**	**0.056**	**-0.050**	**0.202**	**0.058**	**-0.043**						
$SIGMA_{t-1}$	**-0.065**	**-0.087**	-0.007	**0.190**	**0.151**	**0.189**	-0.019	**-0.106**	**-0.077**	**0.038**	**-0.131**					
AQ_{t-1}	-0.002	-0.011	0.000	-0.004	-0.015	-0.013	**-0.066**	**0.089**	**0.118**	0.000	**0.054**	**0.055**				
IND_HERF_{t-1}	0.024	0.029	**0.158**	0.019	0.024	**0.249**	**0.055**	**0.063**	**0.089**	-0.029	0.005	**0.079**	0.023			
$FIRM\_HERF_{t-1}$	**0.032**	**0.039**	**0.142**	0.016	0.022	**0.192**	0.028	**0.052**	**0.045**	**-0.031**	0.021	**0.047**	0.020	**0.421**		
$LNGDPC_{t-1}$	-0.005	0.013	-0.021	-0.012	0.013	**-0.184**	0.017	**-0.090**	**-0.126**	0.016	**-0.126**	**-0.044**	-0.016	**0.071**	**0.087**	
STD_GDPG_{t-1}	0.004	0.009	0.023	0.000	-0.002	**0.158**	-0.006	-0.026	-0.017	**-0.120**	**0.098**	**-0.258**	-0.014	**0.098**	**0.184**	**-0.042**

Table 5: Multivariate Results

This table presents regression results of the impact of excess employee welfare on stock price crash risk. The full sample includes a sample of 8,032 firm-year observations for the 2008-2013 period from 38 countries. All regressions include country, industry, and year dummies to control for country and year fixed-effects. Descriptions and data sources for the regression variables are provided in the Appendix. Z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate – in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.

Variable	*Basic Model*		*Fama and MacBeth (1973)*		*High vs. Low employee welfare*			
	NCSKEW	*DUVOL*	*NCSKEW*	*DUVOL*	*NCSKEW*	*DUVOL*	*NCSKEW*	*DUVOL*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EXCESS_EW$_{t-1}$	0.015***	0.006***	0.012***	0.006***				
	(2.662)	(2.489)	(3.753)	(4.147)				
EMP_WELFARE $_{t-1}$					0.017**	0.007**	0.102	0.039
					(2.170)	(2.026)	(1.410)	(1.098)
NCSKEW $_{t-1}$	0.038***		0.040***		0.028***		0.053***	
	(4.051)		(6.114)		(2.665)		(2.601)	
DUVOL $_{t-1}$		0.038***		0.047***		0.037***		0.053**
		(3.868)		(6.527)		(3.216)		(2.571)
SIZE $_{t-1}$	0.012	0.002**	0.004	0.002	0.004	0.003**	0.002	0.002
	(1.262)	(1.977)	(1.045)	(1.236)	(1.490)	(2.086)	(0.257)	(0.705)
LEVERAGE $_{t-1}$	0.177***	0.101***	0.145	0.077	0.218***	0.102***	0.021	0.034
	(3.069)	(3.494)	(1.548)	(1.979)	(3.249)	(3.245)	(0.165)	(0.639)
MB $_{t-1}$	-0.000	0.000	-0.001	-0.001	-0.004	-0.002	0.014*	0.005
	(-0.039)	(0.044)	(-0.169)	(-0.377)	(-1.001)	(-1.078)	(1.874)	(1.291)
ROA $_{t-1}$	0.239*	0.156**	0.262	0.137	0.358**	0.166**	-0.076	0.022
	(1.866)	(2.464)	(1.313)	(1.449)	(2.435)	(2.539)	(-0.270)	(0.188)
DTURNOVER $_{t-1}$	0.032	0.077	0.430*	0.273**	0.063	0.096	-0.037	0.159
	(0.084)	(0.474)	(2.106)	(2.702)	(0.143)	(0.498)	(-0.050)	(0.505)

RET $_{t-1}$	7.572***	4.012***	7.230***	3.960***	6.789***	3.737***	8.241***	4.192***
	(5.272)	(6.269)	(5.877)	(8.144)	(3.988)	(4.992)	(3.470)	(3.696)
SIGMA $_{t-1}$	-1.770***	-0.937***	-1.866*	-1.035*	-1.797***	-1.158***	-1.824**	-0.738**
	(-4.320)	(-4.606)	(-2.085)	(-2.324)	(-3.736)	(-5.291)	(-2.340)	(-1.983)
AQ $_{t-1}$	-0.016	-0.023	0.031	-0.008	0.003	-0.014	-0.132	-0.074
	(-0.232)	(-0.728)	(0.375)	(-0.244)	(0.043)	(-0.384)	(-0.983)	(-1.173)
IND_HERF$_{t-1}$	0.026	0.019	0.052	0.023	0.005	0.001	-0.101	-0.049
	(0.567)	(0.762)	(1.157)	(1.483)	(0.099)	(0.044)	(-0.805)	(-0.859)
FIRM_HERF$_{t-1}$	0.282*	0.143*	0.265	0.162	0.144	0.088	0.707	0.357
	(1.695)	(1.785)	(1.233)	(1.672)	(0.861)	(1.086)	(1.061)	(1.368)
LNGDPC $_{t-1}$	0.002	0.011**	-0.012	0.002	0.009	0.010*	0.007	0.006
	(0.165)	(2.246)	(-0.580)	(0.178)	(0.635)	(1.719)	(0.315)	(0.614)
STD_GDPG$_{t-1}$	-0.011	-0.005	-0.026	-0.015	0.004	0.002	-0.030	-0.022*
	(-0.948)	(-1.089)	(-1.570)	(-1.636)	(0.295)	(0.363)	(-1.109)	(-1.759)
Country fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Constant	0.132	-0.003	0.158	-0.02	-0.098	-0.113	0.100	-0.009
	(1.027)	(-0.036)	-0.787	(-0.211)	(-0.585)	(-1.550)	(0.325)	(-0.070)
Observations	8,032	8,032	8,032	8,032	6,024	6,024	2,008	2,008
R-squared	0.019	0.038	0.034	0.038	0.019	0.028	0.048	0.052

Table 6: Additional Controls

This table presents results of the impact of excess employee welfare on stock price crash risk while controlling for additional variables that may affect both the employee welfare and stock price measures. The full sample includes a sample of 8,032 firm-year observations for the 2008-2013 period from 38 countries. All regressions include country, industry, and year dummies to control for country and year fixed-effects. Descriptions and data sources for the regression variables are provided in the Appendix. Z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate – in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.

Variable	NCSKEW	DUVOL	NCSKEW	DUVOL	NCSKEW	DUVOL
	(1)	(2)	(3)	(4)	(5)	(6)
EXCESS_EW$_{t-1}$	0.012**	0.006**	0.014**8	0.007***	0.011*	0.006**
	(2.060)	(2.372)	(2.505)	(2.614)	(1.852)	(2.166)
NCSKEW $_{t-1}$	0.037***		0.029***		0.027***	
	(3.970)		(3.025)		(2.826)	
DUVOL $_{t-1}$		0.038***		0.029***		0.031***
		(3.845)		(3.025)		(2.928)
SIZE $_{t-1}$	0.001	0.001	0.002	0.002	0.001	0.001
	(0.427)	(0.672)	(0.637)	(0.986)	(0.358)	(0.369)
LEVERAGE $_{t-1}$	0.175***	0.101***	0.196***	0.106***	0.188***	0.105***
	(3.038)	(3.500)	(3.245)	(3.545)	(3.121)	(3.493)
MB $_{t-1}$	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-0.037)	(-0.016)	(-0.012)	(-0.055)	(-0.004)	(-0.048)
ROA $_{t-1}$	0.229*	0.151**	0.272**	0.163**	0.253*	0.151**
	(1.780)	(2.375)	(2.052)	(2.464)	(1.906)	(2.274)
DTURNOVER $_{t-1}$	0.093	0.125	0.032	0.074	0.098	0.126
	(0.244)	(0.758)	(0.086)	(0.460)	(0.256)	(0.763)
RET $_{t-1}$	7.653***	4.085***	6.797***	3.709***	6.702***	3.724***
	(5.291)	(6.349)	(4.598)	(5.549)	(4.476)	(5.523)
SIGMA $_{t-1}$	-1.827***	-0.965***	-1.748***	-0.915***	-1.824***	-0.962***

	(-4.436)	(-4.720)	(-4.044)	(-4.209)	(-4.212)	(-4.420)
AQ_{t-1}	-0.011	-0.021	-0.015	-0.022	-0.008	-0.020
	(-0.154)	(-0.666)	(-0.213)	(-0.665)	(-0.115)	(-0.595)
IND_HERF_{t-1}	-0.031	-0.003	0.008	0.015	-0.055	-0.012
	(-0.650)	(-0.127)	(0.170)	(0.575)	(-1.157)	(-0.442)
$FIRM\_HERF_{t-1}$	0.141	0.088	0.337*	0.179**	0.107	0.091
	(0.782)	(1.026)	(1.950)	(2.176)	(0.556)	(1.016)
$LNGDPC_{t-1}$	0.006	0.014***	0.009	0.012**	0.002	0.011*
	(0.479)	(2.641)	(0.661)	(2.100)	(0.151)	(1.817)
STD_GDPG_{t-1}	-0.010	-0.004	-0.017	-0.007	-0.015	-0.007
	(-0.813)	(-0.862)	(-1.365)	(-1.414)	(-1.146)	(-1.264)
$OPEN_{t-1}$	0.000	0.000			0.000	0.000
	(0.105)	(0.143)			(0.365)	(0.197)
LIQ_{t-1}	-0.015	-0.013*			-0.017	-0.013*
	(-0.972)	(-1.832)			(-1.116)	(-1.780)
N_LISTED_{t-1}	-0.021**	-0.007*			-0.035***	-0.013***
	(-2.561)	(-1.659)			(-3.467)	(-2.765)
$ACOV_{t-1}$			0.007	0.005	0.011	0.006**
			(1.132)	(1.598)	(1.640)	(1.974)
$ENFOR_{t-1}$			0.000	0.000	-0.001	-0.000
			(0.354)	(0.366)	(-0.662)	(-0.423)
SPI_{t-1}			0.002	-0.001	0.001	-0.002
			(0.157)	(-0.226)	(0.116)	(-0.321)
Country fixed effects	YES	YES	YES	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES
Constant	0.261	0.070	-0.972	-0.475	2.298	0.647
	(1.629)	(0.883)	(-0.355)	(-0.397)	(0.796)	(0.516)

Observations	8,032	8,032	7,378	7,378	7,378	7,378
R-squared	0.020	0.039	0.020	0.040	0.022	0.042

Table 7: Regression Analysis to Address Endogeneity Issues

This table presents the results of approaches to addressing potential endogeneity problems. The full sample includes a sample of 8,032 firm-year observations for the 2008-2013 period from 38 countries. All regressions include country, industry, and year dummies to control for country and year fixed-effects. Descriptions and data sources for the regression variables are provided in the Appendix. Z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate – in parentheses.***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.

Variable	Firm fixed effects		Instrumental variable				Variable	Change regression	
	NCSKEW	DUVOL	NCSKEW		DUVOL			ΔNCSKEW	ΔDUVOL
			First stage	Second stage	First stage	Second stage			
	(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)
$EXCESS\_EW_{t-1}$	0.025**	0.011**		0.036***		0.025***	$\Delta EXCESS\_EW_{t-1}$	0.030***	0.014***
	(2.309)	(2.237)		(3.189)		(3.147)		(2.564)	(2.669)
$NCSKEW_{t-1}$	-0.109***		-0.060***	0.033***			$\Delta NCSKEW_{t-1}$	0.442***	
	(-8.104)		(-3.511)	(3.538)				(27.257)	
$DUVOL_{t-1}$		-0.137***			-0.125***	0.036***	$\Delta DUVOL_{t-1}$		0.541***
		(-10.338)			(-3.259)	(3.653)			(36.779)
$SIZE_{t-1}$	0.185***	0.121***	0.387***	0.001	0.387***	0.001	$\Delta SIZE_{t-1}$	-0.573***	0.098***
	(4.553)	(6.618)	(19.362)	(0.177)	(19.367)	(0.560)		(-6.500)	(3.751)
$LEVERAGE_{t-1}$	0.276	0.184**	0.258	0.183***	0.260	0.088***	$\Delta LEVERAGE_{t-1}$	-0.109	0.155
	(1.374)	(2.082)	(1.521)	(2.851)	(1.532)	(3.017)		(-0.481)	(1.597)
MB_{t-1}	0.018**	0.009**	-0.013	-0.001	-0.014	-0.000	ΔMB_{t-1}	-0.000	0.011**
	(2.130)	(2.285)	(-1.432)	(-0.219)	(-1.463)	(-0.127)		(-0.033)	(2.260)
ROA_{t-1}	-0.276	-0.109	-0.393	0.279*	-0.391	0.158**	ΔROA_{t-1}	0.480***	-0.017
	(-1.189)	(-0.977)	(-1.253)	(1.913)	(-1.245)	(2.492)		(3.133)	(-0.210)
$DTURNOVER_{t-1}$	0.326	0.195	-0.218	-0.035	-0.208	0.075	$\Delta DTURNOVER_{t-1}$	-1.772***	0.243
	(0.717)	(0.993)	(-0.389)	(-0.095)	(-0.372)	(0.463)		(-2.970)	(1.158)
RET_{t-1}	-0.738	-0.912	-11.839***	7.643***	-11.849***	4.085***	ΔRET_{t-1}	35.949***	-1.749**

	(-0.417)	(-1.102)	(-6.677)	(5.310)	(-6.617)	(6.323)		(12.728)	(-1.984)
$SIGMA_{t-1}$	0.481	0.355	2.798***	-1.489***	2.632***	-0.853***	$\Delta SIGMA_{t-1}$	-15.211***	-0.061
	(0.645)	(1.055)	(3.153)	(-3.302)	(3.002)	(-4.042)		(-11.557)	(-0.163)
AQ_{t-1}	-0.082	-0.037	0.068	-0.017	0.066	-0.023	ΔAQ_{t-1}	-0.113	-0.008
	(-0.942)	(-0.942)	(0.755)	(-0.269)	(0.728)	(-0.723)		(-1.123)	(-0.193)
IND_HERF_{t-1}	-0.180*	-0.105**	0.040	0.019	0.042	0.000	ΔIND_HERF_{t-1}	0.764*	0.070
	(-1.855)	(-2.027)	(0.286)	(0.348)	(0.297)	(0.014)		(1.752)	(0.256)
$FIRM\_HERF_{t-1}$	0.843	0.260	0.454	0.242	0.468	0.104	$\Delta FIRM\_HERF_{t-1}$	-0.000	-0.000
	(0.948)	(0.675)	(0.454)	(1.381)	(0.468)	(1.198)		(-0.931)	(-1.343)
$LNGDPC_{t-1}$	-0.273**	-0.139**	0.222	0.007	0.219	0.008	$\Delta LNGDPC_{t-1}$	-0.022	-0.001
	(-2.262)	(-2.531)	(1.420)	(0.572)	(1.402)	(1.348)		(-0.743)	(-0.042)
STD_GDPG_{t-1}	-0.007	-0.004	0.133***	-0.010	0.132***	-0.005	ΔSTD_GDPG_{t-1}	-0.226	-0.300***
	(-0.379)	(-0.439)	(8.492)	(-0.856)	(8.455)	(-0.765)		(-1.213)	(-3.505)
IND_WAGE_{t-1}			0.023***		0.023***		Country fixed effects	YES	YES
			(3.921)		(3.928)		Industry fixed effects	YES	YES
Country fixed effects			YES	YES	YES	YES	Year fixed effects	YES	YES
Industry fixed effects			YES	YES	YES	YES	Constant	0.378	0.089
Year fixed effects	YES	YES	YES	YES	YES	YES		(1.257)	(0.933)
Firm fixed effects	YES	YES					Observations	5,645	5,645
Constant	-1.702	-1.512**	-8.789***	0.268	-8.742***	0.057	R-squared	0.285	0.361
	(-1.145)	(-2.314)	(-4.709)	(1.260)	(-4.685)	(0.683)			
Observations	8,032	8,032	8,032	8,032	8,032	8,032			
R-squared	0.399	0.386	0.326	0.029	0.326	0.041			

Table 8: Sub-sample Analysis – Set 1

This table presents results of sub-sample analysis of the impact of excess employee welfare on stock price crash risk. Models from 1 to 4 report results of *NCSKEW (DUVOL)* regressed on employee welfare for labor intensive industries (i.e., *LABOR_INTENSIVE_IND*=1) and non-labor intensive industries (i.e., *LABOR_INTENSIVE_IND*=0). Models from 5 to 8 report results of *NCSKEW (DUVOL)* regressed on employee welfare for labor intensive (i.e., *LABOR_INTENSIVE_FIRMS*=1) and non-labor intensive firms (i.e., *LABOR_INTENSIVE_FIRMS*=0). Models from 9 to 12 report results of *NCSKEW (DUVOL)* regressed on employee welfare for high and low sub-samples based on *EMPLOY*. The full sample includes a sample of 8,032 firm-year observations for the 2008-2013 period from 38 countries. All regressions include country, industry, and year dummies to control for country and year fixed-effects. Z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate – in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.

Variable	*LABOR_INTENSIVE_IND*				*LABOR_INTENSIVE_FIRMS*				*EMPLOY*			
	1	***0***	***1***	***0***	***1***	***0***	***1***	***0***	**HIGH**	**LOW**	**HIGH**	**LOW**
	NCSKEW		*DUVOL*		*NCSKEW*		*DUVOL*		*NCSKEW*		*DUVOL*	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
EXCESS_EW$_{t-1}$	0.047***	0.011*	0.024***	0.004	0.020**	-0.004	0.009**	-0.002	0.017**	0.004	0.009**	0.002
	(2.523)	(1.685)	(3.318)	(1.444)	(2.343)	(-0.464)	(2.358)	(-0.376)	(1.930)	(0.547)	(2.247)	(0.621)
NCSKEW$_{t-1}$	0.045	0.036***			0.044***	0.016			0.043***	0.020		
	(1.209)	(3.517)			(2.923)	(1.335)			(2.789)	(1.626)		
DUVOL$_{t-1}$			0.042	0.038***			0.047***	0.017			0.042***	0.026*
			(1.406)	(3.565)			(3.234)	(1.240)			(2.747)	(1.913)
SIZE$_{t-1}$	0.031	0.018**	0.002	0.002*	0.026**	0.003	0.019***	0.002	0.019*	0.002	0.013***	0.001
	(1.326)	(2.275)	(0.527)	(1.831)	(2.251)	(0.841)	(3.752)	(1.063)	(1.828)	(0.725)	(2.659)	(0.914)
LEVERAGE$_{t-1}$	-0.029	0.173***	0.136	0.092***	0.151	0.269***	0.063	0.137***	0.135	0.234***	0.066	0.107***
	(-0.172)	(2.729)	(1.637)	(2.996)	(1.598)	(3.047)	(1.430)	(3.431)	(1.279)	(2.961)	(1.320)	(3.002)
MB$_{t-1}$	0.001	0.003	-0.001	0.001	0.001	-0.001	0.002	-0.001	0.004	-0.001	0.002	-0.000
	(0.111)	(0.705)	(-0.354)	(0.413)	(0.221)	(-0.202)	(0.604)	(-0.363)	(0.802)	(-0.281)	(0.621)	(-0.168)
ROA$_{t-1}$	1.480***	0.062	0.511***	0.091	0.439**	0.220	0.236***	0.114	0.159	0.265	0.075	0.164**

	(3.508)	(0.441)	(2.981)	(1.324)	(2.311)	(1.077)	(2.752)	(1.306)	(0.578)	(1.535)	(0.679)	(2.060)
DTURNOVER $_{t-1}$	3.959**	0.832	0.039	0.087	1.256	-0.067	0.632	0.064	-0.183	-0.065	-0.026	0.082
	(1.986)	(0.895)	(0.090)	(0.497)	(1.119)	(-0.169)	(1.228)	(0.373)	(-0.168)	(-0.166)	(-0.045)	(0.484)
RET $_{t-1}$	7.049*	7.590***	4.685**	3.938***	8.061***	6.782***	4.065***	3.575***	9.873***	5.965***	5.408***	3.024***
	(1.659)	(4.661)	(2.497)	(5.774)	(4.172)	(3.118)	(4.612)	(3.702)	(4.173)	(3.201)	(5.070)	(3.699)
SIGMA $_{t-1}$	-1.963	-1.174**	-1.071*	-0.888***	-1.925***	-1.328**	-0.879***	-0.880***	-0.665	-1.865***	-0.339	-1.104***
	(-1.638)	(-2.403)	(-1.882)	(-4.029)	(-2.867)	(-2.019)	(-2.756)	(-3.001)	(-0.786)	(-3.304)	(-0.883)	(-4.289)
AQ $_{t-1}$	-0.168	0.067	-0.068	-0.016	-0.029	-0.023	-0.039	-0.021	-0.067	0.025	-0.032	-0.011
	(-0.856)	(1.002)	(-0.750)	(-0.497)	(-0.271)	(-0.301)	(-0.847)	(-0.546)	(-0.519)	(0.369)	(-0.532)	(-0.314)
IND_HERF$_{t-1}$	0.055	0.003	0.028	0.015	0.038	0.007	-0.004	0.019	-0.007	0.038	0.015	0.004
	(0.271)	(0.068)	(0.295)	(0.575)	(0.467)	(0.089)	(-0.114)	(0.494)	(-0.081)	(0.509)	(0.339)	(0.133)
FIRM_HERF$_{t-1}$	0.162	0.281	0.025	0.154*	0.437	0.061	0.276**	0.040	0.601	0.120	0.197	0.153*
	(0.294)	(1.579)	(0.096)	(1.832)	(1.481)	(0.253)	(1.988)	(0.363)	(1.490)	(0.554)	(1.023)	(1.658)
LNGDPC $_{t-1}$	0.024	0.006	0.023	0.011**	0.025	0.117***	0.011	0.061***	0.030	0.037*	0.022	0.014
	(0.628)	(0.551)	(1.375)	(2.005)	(1.190)	(3.445)	(1.102)	(3.418)	(0.822)	(1.782)	(1.186)	(1.493)
STD_GDPG$_{t-1}$	-0.021	-0.011	-0.008	-0.004	-0.004	0.030	-0.004	0.015	-0.025	0.019	-0.010	0.004
	(-0.483)	(-0.885)	(-0.447)	(-0.878)	(-0.228)	(1.403)	(-0.460)	(1.574)	(-1.363)	(1.072)	(-1.232)	(0.527)
Country fixed effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Diff in coeff test	6.78***		8.42**		4.70***		6.72***		5.36***		5.59***	
Intercept	-0.974	-0.316	-0.324*	0.019	-0.307	-0.992***	-0.286**	-0.526***	-0.293	-0.631***	-0.303	-0.285***
	(-1.420)	(-1.343)	(-1.652)	(0.236)	(-1.010)	(-2.854)	(-2.111)	(-2.977)	(-0.645)	(-2.721)	(-1.359)	(-2.827)
Observations	964	7,068	964	7,068	4,035	3,997	4,035	3,997	3,400	4,632	3,400	4,632
R-squared	0.082	0.020	0.078	0.035	0.052	0.037	0.061	0.049	0.061	0.040	0.069	0.041

Table 9: Sub-sample Analysis – Set 2

This table presents results of sub-sample analysis of the impact of excess employee welfare on stock price crash risk. Models from 1 to 4 report results of *NCSKEW (DUVOL)* regressed on employee welfare for high and low sub-samples based on *IND_HERF*. Models from 5 to 8 report results of *NCSKEW (DUVOL)* regressed on employee welfare for high and low sub-samples based on the corporate governance score (*CG_SCORE*). The full sample includes a sample of 8,032 firm-year observations for the 2008-2013 period from 38 countries. All regressions include country, industry, and year dummies to control for country and year fixed-effects. Z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate – in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.

Variable	*IND_HERF*				*CG_SCORE*			
	HIGH	**LOW**	**HIGH**	**LOW**	**HIGH**	**LOW**	**HIGH**	**LOW**
	NCSKEW		*DUVOL*		*NCSKEW*		*DUVOL*	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
EXCESS_EW$_{t-1}$	0.022***	-0.010	0.011***	-0.001	-0.003	0.020***	0.000	0.010***
	(3.399)	(-0.747)	(3.750)	(-0.132)	(-0.302)	(2.527)	(0.014)	(2.738)
NCSKEW $_{t-1}$	0.028***	0.037			0.017	0.052***		
	(2.785)	(1.521)			(1.291)	(3.893)		
DUVOL $_{t-1}$			0.039***	0.020			0.015	0.058***
			(3.568)	(0.845)			(1.070)	(4.247)
SIZE $_{t-1}$	0.107***	-0.023	0.064***	-0.006	0.003	0.009	0.002	0.007*
	(3.375)	(-1.207)	(4.703)	(-0.672)	(0.873)	(1.004)	(1.094)	(1.759)
LEVERAGE $_{t-1}$	0.195***	0.072	0.091***	0.050	0.223***	0.126	0.150***	0.071*
	(3.110)	(0.537)	(3.137)	(0.803)	(2.847)	(1.480)	(3.729)	(1.706)
MB $_{t-1}$	0.000	-0.000	-0.000	-0.001	-0.002	0.006	-0.002	0.001
	(0.078)	(-0.030)	(-0.150)	(-0.327)	(-0.573)	(1.135)	(-0.752)	(0.496)
ROA $_{t-1}$	0.208	0.270	0.125*	0.108	0.263	0.118	0.142	0.143
	(1.377)	(0.934)	(1.910)	(0.830)	(1.448)	(0.596)	(1.612)	(1.544)
DTURNOVER $_{t-1}$	1.241	-0.121	0.410	0.034	0.017	1.098	0.094	0.252
	(1.182)	(-0.290)	(0.832)	(0.182)	(0.039)	(1.047)	(0.516)	(0.620)
RET $_{t-1}$	7.064***	6.986**	3.624***	4.062***	5.296**	9.518***	3.366***	4.755***
	(4.234)	(2.028)	(4.865)	(2.797)	(2.488)	(4.984)	(3.511)	(5.664)
SIGMA $_{t-1}$	-1.526***	-0.343	-0.903***	-0.065	-1.742***	-2.205***	-1.039***	-1.013***
	(-3.073)	(-0.316)	(-3.986)	(-0.131)	(-2.779)	(-3.886)	(-3.470)	(-3.466)
AQ $_{t-1}$	-0.062	0.091	-0.042	0.025	-0.120	0.040	-0.059	-0.001
	(-0.901)	(0.899)	(-1.374)	(0.487)	(-1.155)	(0.542)	(-1.239)	(-0.029)
IND_HERF$_{t-1}$	0.000	-3.470	-0.002	-2.243**	0.060	-0.034	0.030	0.002
	(0.007)	(-1.634)	(-0.069)	(-2.204)	(0.926)	(-0.494)	(0.842)	(0.044)
FIRM_HERF$_{t-1}$	0.174	2.315**	0.138*	1.014**	0.086	0.137	0.059	0.133
	(0.944)	(2.388)	(1.698)	(2.394)	(0.367)	(0.542)	(0.509)	(1.267)

LNGDPC $_{t-1}$	0.039**	-0.180**	0.016**	-0.086**	0.069***	-0.000	0.022***	0.007
	(2.277)	(-2.550)	(2.065)	(-2.515)	(3.186)	(-0.008)	(2.750)	(1.048)
STD_GDPG$_{t-1}$	0.003	0.023	-0.001	0.004	0.021	-0.007	0.006	-0.008
	(0.226)	(0.634)	(-0.144)	(0.263)	(1.036)	(-0.418)	(0.800)	(-1.132)
Country fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Diff in coeff test	3.71**		4.13**		2.34**		2.45**	
Intercept	-0.296	2.054***	-0.124	1.001***	-0.721***	0.058	-0.166*	0.131
	(-1.539)	(2.838)	(-1.409)	(2.809)	(-2.824)	(0.151)	(-1.753)	(1.083)
Observations	6,027	2,005	6,027	2,005	4,019	4,013	4,019	4,013
R-squared	0.026	0.035	0.037	0.033	0.022	0.037	0.045	0.057

Table 10: Sub-sample Analysis – Set 3

This table presents results of sub-sample analysis of the impact of excess employee welfare on stock price crash risk. Models from 1 to 4 report results of *NCSKEW (DUVOL)* regressed on employee welfare for high and low sub-samples based on *ANTISELF*. Models from 5 to 8 report results of *NCSKEW (DUVOL)* regressed on employee welfare for high and low sub-samples based on *DISCREQ*. The full sample includes a sample of 8,032 firm-year observations for the 2008-2013 period from 38 countries. All regressions include country, industry, and year dummies to control for country and year fixed-effects. Z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate – in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.

Variable	*ANTISELF*				*DISCREQ*			
	NCSKEW		*DUVOL*		*NCSKEW*		*DUVOL*	
	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
EXCESS_EW$_{t-1}$	-0.006	0.014**	-0.003	0.006**	-0.007	0.014**	-0.002	0.006**
	(-0.600)	(1.916)	(-0.638)	(1.862)	(-0.583)	(1.934)	(-0.408)	(1.790)
NCSKEW $_{t-1}$	0.040**	0.019*			0.036**	0.031***		
	(2.336)	(1.649)			(1.990)	(2.786)		
DUVOL $_{t-1}$			0.034*	0.028**			0.018	0.037***
			(1.935)	(2.268)			(1.016)	(2.949)
SIZE $_{t-1}$	0.003	0.028***	0.002	0.019***	0.001	0.028***	0.001	0.016***
	(0.872)	(2.739)	(1.409)	(4.053)	(0.427)	(3.156)	(0.427)	(3.668)
LEVERAGE $_{t-1}$	0.231**	0.198**	0.103**	0.101***	0.145	0.171**	0.145	0.095**
	(2.301)	(2.477)	(2.278)	(2.676)	(1.613)	(2.318)	(1.613)	(2.501)
MB $_{t-1}$	0.000	-0.002	0.000	-0.001	-0.002	-0.001	-0.002	0.000
	(0.095)	(-0.468)	(0.059)	(-0.554)	(-0.315)	(-0.209)	(-0.315)	(0.040)
ROA $_{t-1}$	0.211	0.370*	0.105	0.200**	0.163	0.334*	0.163	0.179**
	(1.051)	(1.723)	(1.165)	(2.237)	(0.847)	(1.936)	(0.847)	(2.095)
DTURNOVER $_{t-1}$	-0.021	-0.029	0.105	0.075	0.081	0.646	0.081	0.386
	(-0.052)	(-0.034)	(0.600)	(0.173)	(0.198)	(0.640)	(0.198)	(0.802)
RET $_{t-1}$	6.706***	8.066***	3.389***	4.232***	6.522**	7.754***	6.522**	4.100***
	(2.855)	(4.179)	(3.272)	(4.967)	(2.478)	(4.320)	(2.478)	(5.070)
SIGMA $_{t-1}$	-1.795***	-0.892	-0.949***	-0.576*	-1.668**	-1.259**	-1.668**	-0.679**
	(-2.723)	(-1.311)	(-3.082)	(-1.887)	(-2.467)	(-2.225)	(-2.467)	(-2.372)
AQ $_{t-1}$	-0.032	0.007	-0.034	-0.004	0.032	-0.039	0.032	-0.048
	(-0.386)	(0.073)	(-0.867)	(-0.080)	(0.305)	(-0.571)	(0.305)	(-1.374)
IND_HERF$_{t-1}$	-0.103	0.037	-0.027	0.018	-0.107	-0.010	-0.107	0.007
	(-0.926)	(0.522)	(-0.537)	(0.558)	(-0.961)	(-0.189)	(-0.961)	(0.242)
FIRM_HERF$_{t-1}$	-0.070	0.746**	0.019	0.348***	0.062	0.840**	0.062	0.361**
	(-0.284)	(2.235)	(0.158)	(2.634)	(0.280)	(2.366)	(0.280)	(2.126)
LNGDPC $_{t-1}$	0.037	0.057**	0.016	0.023**	-0.006	0.025	-0.006	0.022*

	(1.481)	(2.196)	(1.409)	(2.160)	(-0.357)	(1.095)	(-0.357)	(1.886)
STD_GDPG_{t-1}	0.050**	-0.009	0.009	-0.009	0.037	-0.024**	0.037	-0.009*
	(2.029)	(-0.545)	(1.048)	(-1.279)	(1.330)	(-2.111)	(1.330)	(-1.686)
Country fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Diff in coeff test	3.20**		3.36**		5.24***		7.19***	
Constant	-0.164	-1.111***	-0.067	-0.599***	-0.063	-0.730**	0.113	-0.523***
	(-0.560)	(-3.007)	(-0.514)	(-3.744)	(-0.181)	(-2.120)	(0.554)	(-3.030)
Observations	3,241	4,791	3,241	4,791	2,969	5,063	2,969	5,063
R-squared	0.045	0.045	0.043	0.055	0.015	0.03	0.015	0.057

Table 11: Robustness Tests

This table presents the results of the robustness tests of our analysis of the impact of employee welfare on stock price crash. The full sample includes a sample of 8,032 firm-year observations for the 2008-2013 period from 38 countries. All regressions include country, industry, and year dummies to control for country and year fixed-effects. Descriptions and data sources for the regression variables are provided in the Appendix. Z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate – in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.

Variable	Excluding large countries		Excluding countries with less than 30 observations		Excluding financial firms		Excluding 2008 & 2009	
	NCSKEW	*DUVOL*	*NCSKEW*	*DUVOL*	*NCSKEW*	*DUVOL*	*NCSKEW*	*DUVOL*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$EXCESS\_EW_{t-1}$	0.018***	0.009***	0.014***	0.007***	0.014**	0.007***	0.014**	0.008***
	(2.521)	(2.723)	(2.485)	(2.577)	(2.327)	(2.618)	(2.189)	(2.553)
$NCSKEW_{t-1}$	0.040***		0.037***		0.048***		0.046***	
	(3.304)		(3.970)		(4.666)		(3.954)	
$DUVOL_{t-1}$		0.040***		0.038***		0.050***		0.045***
		(3.304)		(3.778)		(4.629)		(3.682)
$SIZE_{t-1}$	0.021*	0.014**	0.004	0.002**	0.008**	0.005***	0.000	0.001
	(1.745)	(2.373)	(1.443)	(1.985)	(2.294)	(3.122)	(0.005)	(0.417)
$LEVERAGE_{t-1}$	0.177**	0.114***	0.173***	0.097***	0.159**	0.058*	0.173***	0.100***
	(2.435)	(3.060)	(2.982)	(3.332)	(2.356)	(1.708)	(2.606)	(2.936)
MB_{t-1}	-0.005	-0.002	0.001	0.000	0.001	0.001	-0.003	-0.001
	(-1.291)	(-1.176)	(0.213)	(0.183)	(0.154)	(0.378)	(-0.862)	(-0.716)
ROA_{t-1}	0.336*	0.202**	0.215*	0.154**	0.270*	0.104	0.445***	0.265***
	(1.941)	(2.345)	(1.658)	(2.402)	(1.711)	(1.467)	(2.858)	(3.433)
$DTURNOVER_{t-1}$	1.320	0.442	0.031	0.072	-0.090	-0.039	0.433	0.272
	(1.108)	(0.824)	(0.082)	(0.446)	(-0.169)	(-0.169)	(0.849)	(1.164)
RET_{t-1}	9.486***	4.649***	7.466***	3.948***	8.992***	4.809***	7.519***	3.899***
	(4.751)	(5.388)	(5.122)	(6.085)	(5.564)	(6.704)	(4.170)	(4.854)
$SIGMA_{t-1}$	-1.740***	-0.945***	-1.756***	-0.926***	-1.641***	-0.819***	-1.822***	-0.999***
	(-2.902)	(-3.301)	(-4.248)	(-4.502)	(-3.482)	(-3.517)	(-3.382)	(-3.794)
AQ_{t-1}	0.016	-0.016	-0.019	-0.024	0.006	-0.022	-0.053	-0.037
	(0.224)	(-0.420)	(-0.264)	(-0.752)	(0.085)	(-0.700)	(-0.773)	(-1.004)
IND_HERF_{t-1}	-0.024	-0.002	0.020	0.018	0.040	0.039	0.034	0.021
	(-0.465)	(-0.058)	(0.430)	(0.687)	(0.709)	(1.318)	(0.640)	(0.730)

$FIRM\_HERF_{t-1}$	0.175	0.112	0.249	0.133	0.412**	0.188**	0.405**	0.174*
	(0.981)	(1.317)	(1.395)	(1.515)	(2.089)	(1.975)	(2.083)	(1.941)
$LNGDPC_{t-1}$	0.017	0.017***	0.004	0.012**	0.009	0.015**	0.018	0.018***
	(1.367)	(3.009)	(0.324)	(2.343)	(0.686)	(2.525)	(1.478)	(3.141)
STD_GDPG_{t-1}	-0.004	-0.002	-0.011	-0.005	-0.015	-0.006	-0.012	-0.002
	(-0.298)	(-0.388)	(-0.892)	(-1.036)	(-1.144)	(-1.152)	(-0.912)	(-0.319)
Country fixed effects	YES	YES	YES	YES	(0.448)	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Constant	-0.026	-0.026	0.039	-0.008	-0.122	-0.087	-0.152	-0.104
	(-0.179)	(-0.317)	(0.265)	(-0.111)	(-0.714)	(-1.054)	(-0.954)	(-1.313)
Observations	4,699	4,699	7,902	7,902	6,401	6,401	5,816	5,816
R-squared	0.023	0.048	0.018	0.037	0.024	0.045	0.018	0.035

Table 12: The role of earnings management and the likelihood of whistleblowing

This table presents results for the impact of earnings management and the likelihood of whistleblowing on the relationship between excess employee welfare on stock price crash risk. Models from 1 to 4 report results of *NCSKEW (DUVOL)* regressed on employee welfare for high and low sub-samples based our earnings management proxy (*AQ*). Models from 5 to 8 report results of *NCSKEW (DUVOL)* regressed on employee welfare for high and low sub-samples based on the likelihood of whistleblowing within the firm (*LIK_WHISTLE*). The full sample includes a sample of 8,032 firm-year observations for the 2008-2013 period from 38 countries. All regressions include country, industry, and year dummies to control for country and year fixed-effects. Z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate – in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.

	Earnings Management				***Likelihood of Whistleblowing***			
Variable	**HIGH**	**LOW**	**HIGH**	**LOW**	**HIGH**	**LOW**	**HIGH**	**LOW**
	AQ	***AQ***	***AQ***	***AQ***	***LIK_WHISTLE***	***LIK_WHISTLE***	***LIK_WHISTLE***	***LIK_WHISTLE***

	Dep. Variable NCSKEW		*Dep. Variable DUVOL*		*Dep. Variable NCSKEW*		*Dep. Variable DUVOL*	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
$EXCESS\_EW_{t-1}$	0.028**	0.009	0.014***	0.004	0.025***	-0.005	0.014***	-0.000
	(2.510)	(1.347)	(2.688)	(1.398)	(2.638)	(-0.507)	(3.212)	(-0.079)
$NCSKEW_{t-1}$	0.017	0.045***			0.033**	0.035*		
	(0.888)	(4.178)			(2.195)	(1.911)		
$DUVOL_{t-1}$			0.012	0.046***			0.028*	0.025
			(0.610)	(3.943)			(1.733)	(1.379)
$SIZE_{t-1}$	0.013**	0.002	0.008***	0.001	0.165***	0.020	0.096***	0.019
	(2.468)	(0.615)	(2.973)	(0.903)	(3.187)	(0.711)	(3.723)	(1.496)
$LEVERAGE_{t-1}$	0.240*	0.154**	0.024	0.114***	0.027	0.177*	0.055	0.123**
	(1.804)	(2.417)	(0.370)	(3.562)	(0.299)	(1.809)	(1.156)	(2.487)
MB_{t-1}	0.003	-0.001	0.003	-0.001	0.000	0.001	-0.001	0.001
	(0.503)	(-0.269)	(1.157)	(-0.630)	(0.038)	(0.138)	(-0.407)	(0.382)
ROA_{t-1}	0.301	0.223	0.072	0.177**	0.377	-0.019	0.191*	0.041
	(1.162)	(1.446)	(0.638)	(2.308)	(1.625)	(-0.096)	(1.667)	(0.421)
$DTURNOVER_{t-1}$	-0.662	0.157	-0.210	0.138	1.311	0.106	0.543	0.099
	(-0.905)	(0.375)	(-0.641)	-0.765	(1.232)	(0.254)	(1.077)	(0.561)
RET_{t-1}	5.497*	8.311***	3.324**	4.310***	10.893***	4.665*	5.068***	2.885**
	(1.725)	(5.385)	(2.451)	(6.073)	(4.542)	(1.873)	(4.926)	(2.563)
$SIGMA_{t-1}$	-0.690	-2.121***	-0.461	-1.104***	-1.713**	-1.442**	-0.643*	-0.864**
	(-0.683)	(-5.036)	(-1.006)	(-5.004)	(-2.429)	(-2.242)	(-1.681)	(-2.512)
AQ_{t-1}	-0.002	-0.404	-0.028	0.082	-0.035	-0.019	-0.058	-0.023

	(-0.021)	(-1.050)	(-0.733)	(0.368)	(-0.242)	(-0.191)	(-0.779)	(-0.617)
IND_HERF_{t-1}	0.015	0.031	-0.021	0.027	-0.016	-0.063	0.071	0.065
	(0.125)	(0.693)	(-0.355)	(0.993)	(-0.136)	(-0.442)	(0.891)	(0.846)
$FIRM\_HERF_{t-1}$	0.524	0.122	0.261*	0.095	1.616*	-0.791	0.569	-0.727
	(1.467)	(0.798)	(1.771)	(1.131)	(1.802)	(-0.506)	(1.169)	(-0.946)
$LNGDPC_{t-1}$	0.012	0.001	0.017*	0.009	-0.011	0.029	0.003	0.037*
	(0.498)	(0.058)	(1.843)	(1.540)	(-0.753)	(0.636)	(0.422)	(1.788)
STD_GDPG_{t-1}	0.010	-0.020	-0.001	-0.008	-0.007	0.097**	-0.009	0.033*
	(0.378)	(-1.628)	(-0.120)	(-1.475)	(-0.360)	(2.259)	(-0.903)	(1.770)
Country fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Diff in coeff test	1.66**		1.48**		3.05**		4.39**	
Intercept	-0.366	0.160	-0.137	0.021	0.243	-0.238	0.024	-0.173
	(-1.227)	(0.995)	(-0.793)	(0.274)	(1.336)	(-0.515)	(0.269)	(-0.866)
Observations	2,008	6,024	2,008	6,024	3,192	2,785	3,192	2,785
R-squared	0.026	0.021	0.057	0.042	0.041	0.016	0.066	0.052

Employee Welfare and Stock Price Crash Risk

Highlights:

- High levels of employee welfare standards contribute to stock price crash risk.
- This positive relation is stronger for labor intensive firms and industries, in more regulated labor markets, and in less competitive product markets.
- This positive relationship is more pronounced in poorly governed firms and in countries with poor investors' protection and lower disclosure requirements.
- Earnings management and the likelihood of whistleblowing appear to be the channels through which employee welfare impacts stock crash risk.