Corporate Social Irresponsibility and Portfolio Performance: A Global Perspective

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Abstract

This study links corporate social irresponsibility (CSiR) activities to reputation risk and conducts a large-scale investigation of portfolios holding stocks from CSiR activities. This study analyses risk-adjusted returns of high and low reputation risk portfolios based on a sample of 7,442 companies in 44 countries. The results show that stocks with low reputation risk earn higher returns (annual four-factor alpha of 3.1%) than stocks with high reputation risk after controlling for well-known risk factors. In addition, the gap between high and low reputation risk portfolios are consistent by controlling for countries, sectors, firm characteristics, different weighting methods and the removal of financial sectors. The results also show that there are differences between developed and developing countries, financial and non-financial sectors. Compared to developed countries, the results show wider significant differences in developing countries in terms of abnormal returns between companies exposed to high and low reputation risks. The results also reveal that there are more significant differences in abnormal performances between high and low reputation risk portfolios in non-financial sectors than financial sectors.

1. Introduction

Reputation risk is a growing concern for many companies all over the world. Over the past decade, the power of social media has allowed news to spread around the world within minutes and a piece of negative news can have a direct impact the global perception of a company's image. High-profile incidents, such as BP's oil spill in 2010 and Volkswagen's emissions scandal in 2015, have alerted companies that reputation risk can cause both short-term and long-term damages to public image, incurring the loss of customers' confidence, damaged employee relationships and a reduction in profits and share prices. As corporate social irresponsibility (CSiR) is naturally the opposite of corporate social responsibility (CSR), potential risk issues and events related to CSiR activities are likely to lose trust and support from stakeholders and even impact stakeholder relations in the long term. In this study, we take a different angle by linking CSiR to reputation risk since CSiR can be considered as the intangible asset of companies.

Much of the existing literature focuses its attention on the topic of CSR; however, a more thorough understanding of the CSiR across developed and developing contexts is still lacking. Little comparative work has been undertaken in an effort to understand the different expressions and manifestations of CSiR across developed and developing settings. The general unavailability of suitable international data, coupled with the complex nature of social irresponsibility scandals and firm risks, make a full and satisfying exploration of this issue difficult.

Given that the theoretical foundations of CSiR are still somewhat sparse, we believe that the existing CSR theory can serve as an appropriate reference for CSiR. There is an accumulating body of evidence which shows that developing countries differ from developed countries in

their approaches to CSR since the state of a country's development tends to require different CSR approaches and interventions (e.g., Jamali and Mirshak 2007; Kolk and Lenfant 2010; Moon and Shen 2010). Therefore, it is necessary to provide a more nuanced analysis of how CSiR manifests itself in different contexts. We believe that the unique insights to be gained from comparing CSiR in developed and developing countries would act as a valuable reference point for scholars interested in both contexts. In order to breach this gap, this study examines the impact of high and low reputation risk on shareholder value with particular focuses on the differences between developed and developing countries, and between financial and non-financial sectors.

In this essay, we have used a unique dataset from RepRisk to measure reputation risk. A significant amount of data has been collected covering the firm characteristics, sectors and countries from all over the world. RepRisk provides a unique RepRisk Index (RRI) dataset covering the period between January 2007 and July 2012, keeping daily track of a range of 27 ESG issues in over 20,000 companies all over the world. We use the portfolio approach to examine abnormal returns by accounting various common known risk factors. To compare the differences between high reputation risk and low reputation risk companies, we have considered two main samples for portfolio construction. These samples have been drawn from both developed and developing countries, financial and non-financial sectors.

The findings reveal that stocks with low reputation risk earn higher abnormal returns (annual four-factor alpha of 3.1%) than stocks with high reputation risk after controlling for well-known risk factors. In addition, the gaps between high and low reputation risk portfolios are made consistent by controlling for countries, sectors, firm characteristics, different weighting methods and the removal of financial sectors. The results also show the differences between developed and developing countries, financial and non-financial sectors. The findings show

that there are more significant differences between companies with high and low reputation risk in developing countries than in developed countries. The differences of financial performance between high and low reputation risk portfolios are bigger in non-financial sectors than in financial sectors.

This study sheds new light on the theory and practice of CSiR in at least three areas. Firstly, compared to prior literature, this study addresses the issue of CSiR from new perspectives. Focussing on the most fundamental aspects of irresponsibility, this study examines the variations in CSiR practice in both developed and developing contexts. Also, it devotes extra attention to the differences in CSiR practice in financial and non-financial sectors. Secondly, this study features an investigation of CSiR activities based on a sample of 7,442 companies from 44 countries. Such large-scale samples are rarely seen in the existing literature on CSiR. Thirdly, this study enriches the current literature by robustly comparing portfolios that display diverse characteristics. In order to improve the current literature by robustly comparing portfolios that display diverse characteristics, we address this issue by building characteristic-matched portfolio constructed by the same country, sector, and similar size and value.

The remainder of this paper is structured as follows: Section 2 provides the literature review on the two main types of relationships studied in this paper: the link between CSiR activities and reputation risk, and the difference of CSiR in the developed countries and developing countries. Section 3 introduces the data source that has been used to measure reputation risk and provides details of the sample selection process. Section 4 contains the details of the methodology employed in this study, including both portfolio formation and benchmark measuring. Section 5 presents the results of the descriptive statistics and various comparative

analyses, while Section 6 tests the robustness of the methodology. The last section contains the conclusion, and offers suggestions for future research.

2. Literature review

This section firstly reviews the relationship between CSiR activities and reputation risk, followed by a discussion of CSiR in developed and developing countries. In addition, this section also outlines the differences of CSiR between financial and non-financial sectors.

2.1 The link between CSiR activities and reputation risk

Risk-related CSiR activities – such as environmental pollution, human rights abuses, child labour, and corruption – are directly linked to a company's operational excellence and are likely to impact on the opinions of its stakeholders. Corporate irresponsible activities can potentially lose the trust and support from stakeholders and may subsequently lead to the loss of license, employees and customers. For instance, it is likely that an event involving product recall or product liability will lead to losing the customer's trust that the company will provide high-quality products and service. Equally, discrimination in recruiting and human resource management is likely to damage employee relationships, and the visible presence of corruption is likely to dispel the stakeholder of his or her belief that a company has a good management structure and sustainable growth prospects.

Corporate reputation in the current world economy appears to depend substantially on a firm's performance in terms of social and environmental responsibility. Reputation can be considered as the perception of trust and feeling from stakeholders on company's value. Reputation can produce tangible benefits: 'premium prices for products, lower costs for capital and labour, improved loyalty from employees, greater latitude in decision making, and a cushion of

goodwill when crises hit' (Fombrun 1996: 57). A firm's CSR initiatives play a major role in sculpting its corporate identity (Cornelissen et al. 2007). Indeed, there is a direct relationship between a firm's sense of social responsibility and the strength of its reputation; the more socially irresponsible it is, the worse its reputation will be. This is consistent with Melo and Garrido-Morgado (2012), whose findings regarding the influence of CSR activities on the firm's reputation support this idea. They find that there are five dimensions (employee relations, diversity issues, product issues, community relations, and environmental issues) of CSR that have a significant impact on corporate reputation, and this effect is moderated by the industrial actions of the firm.

The related literature has proved there is a link between reputation and CSR. In fact, it has been argued that reputation is one of the main drivers of corporate social performance (Friedman and Miles 2001). In order to maintain a good reputation, companies tend to spend more capital and energy on CSR. Wenwu and Xiao (2011) state that CSR has an effect on corporations' reputation, insurance, and moral capital, especially on corporations that have experienced adverse events. The results reveal that corporate social performance has no direct effect on economic performance. Williams and Barrett (2000) find that corporate philanthropy and corporate reputation are positively related. Brammer and Pavelin (2006) point out that corporate social performance, financial performance, market risk, the extent of long-term institutional ownership, and the nature of its business activities are the primary factors that determine a firm's reputation. On the other hand, irresponsible behaviour can be deleterious to a company's reputation. Legitimacy theory suggests that irresponsible behaviour in high profile companies is likely to give rise to legitimacy threats (Bebbington et al. 2008). Image restoration literature gives weight to the argument that there are various common initiatives, such as

apologies in response to public criticism, that can be undertaken by companies in an effort order to mitigate potential damage reputation (Benoit 1995).

Since both CSiR and reputation risk are viewed as intangible concepts, the extent of the potential risks depends on the characteristics of the events or contexts in question. A high-profile event that is likely to attract the attention of a much wider audience and to influence both key stakeholders and less relevant stakeholders is also likely to cause significant damage. In the event that they break the law or breach international regulations, companies may face lawsuits, fines and even criminal prosecution, all of which may severally damage the profitability and sustainability of a company's financial situation.

2.2 CSiR in developed and developing countries

Although a considerable number of previous studies have found that social irresponsibility scandals result in decreased financial return, little attention has been paid to whether there are differences in the impact of CSiR on shareholder value between developed and developing countries. An increasing number of studies have investigated the relationship between CSiR and CFP. For instance, after examining 478 environmental violations by publicly traded companies from 1980 through 2000, Karpoff et al. (2005) find that firms that violated environmental regulations suffered statistically significant losses in share values. The public disclosure of a company's environmentally irresponsible behaviour has a negative impact on CFP (e.g., Gupta and Goldar 2005; Karpoff et al. 2005; Khanna et al. 1998). Firms involved in bribery face significant losses that average 5.1% of market capitalization, which includes 3.3% of direct costs and 1.0% of reputation losses (Karpoff et al. 2014). Furthermore, using firm-level data from 44 countries in an investigation of the relationship between corruption and firm value, Lee and Ng (2006) find that there is a markedly negative relationship between the two.

There is a certain level of academic curiosity about the influence of determinism on CSR in the developing world and developed world due to the vastly different economic, social and culture conditions. In the investigation of the impact of national-level institutions on firms' corporate social performance, Ioannou and Serafeim (2012) highlight the importance of the influence of systems of nationhood, politics, labour education and culture system on CSP.

As all companies are different in a variety of ways, reputation risk should not be treated in a universal fit. Companies may involve in various kinds of CSiR incidents, and reputation risk is affected by factors relating to the contextual background of a company, such as company size, industry, financial status, nationality, and culture. For instance, the critical stakeholders who are affected by the public disclosure of the fact that a company is responsible for environmental pollution differs for the banking industry and the chemical industry. Generally speaking, companies in developed countries adhere to more stringent regulations and face more severe punishments when they are discovered to have behaved irresponsibly. Also, it should be noted that companies which repeatedly act in an irresponsible way should be treated as having a higher reputation risk compared to companies that have only been found to be involved in one or two minor incidents.

While conceptions and perceptions of CSR and CSiR should be different, the fact that they can be viewed as two sides of the same coin suggest that the theoretical foundations of both concepts must be similar, given that companies are often found to exhibit both responsible and irresponsible behaviour. The institutional differences that affect CSR suggest that the practice of CSiR in different contexts also requires varying degrees of experience and expertise. Due to the limited availability of CSiR literature, we have taken some inspiration from the comparatively substantial existing body of CSR literature. For instance, recent evidence suggests that the impact of CSR on corporate reputation in developed countries is different

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from developing countries. In the latter, for example, CSR is more exclusively related to philanthropy and charitable donations (e.g., Jamali and Mirshak 2007; Jamali and Neville 2011; Visser 2008). Besides these conceptual differences, Shehadi et al. (2013) find that product safety, environmental protection, and labour rights are more prevalent issues in the developed world, while poverty alleviation, supporting charities and community projects, and addressing pressing social issues are of more pressing concern in the developing world. Therefore, it is necessary to conduct a more nuanced analysis of how the practice of CSiR differs in developed and developing contexts. Given that the stock market in developed countries are more efficient than developing countries, this study attempts to investigate if in fact companies in developed countries that engage in socially irresponsible behaviour will result in higher financial penalties than companies in developing countries.

2.3 CSiR in financial and non-financial sectors

There are three primary reasons for separating financial and non-financial sectors in this study. Firstly, there are differences in CSiR between financial and non-financial sectors. Compared to industrial sectors, financial sectors do not have a particularly negative impact on the environment, and the products provided by financial sectors are relatively non-polluting. A.G.F. Hoepner et al. (2010) find that the healthcare, consumer discretionary and industrial sectors place a greater value on sustainability performance. A recent study by Enikolopov et al. (2014) report that the nature of non-financial assets is different from that of financial assets, especially during the period of the financial crisis. Eccles et al. (2014) exclude financial institutions from their study by suggesting that ESG-related policies are not likely to be applicable or relevant to the financial sectors.

The second reason for separating financial and non-financial sectors in this study is that the financial sectors experienced a dramatic fall in profits during the financial crisis of 2007 to 2009. Lins et al. (2013) demarcate the time period of the financial crisis as August 2008 to March 2009, which lies within the sample period of this study. Also, financial firms received a large amount of governmental support during the financial crisis. The third reason is that it is common practice in academic research to exclude financial firms from certain samples during empirical tests. Foerster and Sapp (2005) provide an in-depth analysis of how the exclusion of financial firms from empirical tests can influence both the betas and the number of risk factors found to be significant. Since companies in financial sectors are less associated with negative impacts from socially irresponsible behaviour, we would expect that the impact of CSiR risk on companies' financial returns will be less pronounced in financial sectors than non-financial sectors.

3. Data and sample selection

3.1 Reputation risk data

To measure companies' reputation risk, we obtained data from RepRisk which provides the most comprehensive and trustworthy source for measuring and analysing CSiR. By daily tracking of 27 ESG issues of companies worldwide, RepRisk provides a unique RepRisk Index (RRI) dataset covering the period between January 2007 and July 2012.[a] Table 1 shows the seven categories that harbour the various issues relating to reputation risk that are considered

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[a]According RepRisk website, the total number of issues considered in the database has increased to 28 types of issues.

in this study. These categories are: the environment, corporate governance, community relations, employee relations, product, violation of codes, and the supply chain.[b]

[Insert Table 1 about here]

The RepRisk Index (RRI) dataset is constructed using data relating to the news. This data is derived from information provided by independent third parties, such as international and local media, government websites, NGOs, newsletters, social media, and blogs. When companies behave irresponsibly and are consequently exposed, RepRisk records in their database the date that the information became public, any information relating to the company itself, the name of the source of the information, the type of issue highlighted by the incident, a rating of the novelty, severity, and source of the incident.[c] It should be noted that there is always bound to be some kind of a delay between the time when issues arise or incidents occur and when they are reported in the news. As such, the incidents in question are entered into the database according to the date shown on the news source, rather than the date on which these incidents occurred.

Based on the news data, RepRisk constructs the rating index using quantitative measurement to gauge a company's overall exposure to reputation risk, or ESG risk as it is termed by RepRisk. Please note that the index does not measure reputation, but is an indicator of

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[b] The issues listed by RepRisk are evaluated based on international standards, such as the Universal Declaration of Human Rights, the Equator Principles and the UN Global Compact Principle, etc. A full list of international standards used in the RepRisk evaluation process can be found on the website: www.reprisk.com/repriskscope/.
[c] Novelty rating describes how new and salient the news presented on a given topic is and whether the company, project, or government has been criticised earlier on this topic.

Severity rating in RepRisk describes the graveness and harshness of an incident or an accusation regarding the violation of international standards. It reflects, firstly, the type of an incident or accusation; secondly, it reflects its extent, and thirdly its consequences for the environment or people.

Source rating is a measure of the influence of the source. A large source rating indicates that the source is read by key stakeholders and decision-makers and/or by a large number of individuals.

reputation risk in relation to ESG issues. It identifies companies whose controversial actions have led to them becoming subject to negative criticism from the media, and in so doing allows one to compare companies with their peers. The RepRisk Index is calculated on a monthly basis, on the basis of the frequency and timing of the media coverage in question, and the influence of the novelty rating, severity rating and source rating on reputation risk. The score ranges from zero to 100, which means that the lower the score, the less the company's reputation is at risk. In cases where the index gives a score of minus one, this signifies that the company has not exposed itself to ESG risks at any point in a given month.[d]

The index value indicates the level of reputation risks posed by ESG issues associated with a company, and is evaluated using a strict rule-based methodology. RepRisk ensures that its ratings remain objective by only entering information relating to the news coverage into the database once, except in the event that the nature of the incident changes. For example, information enters into the database may have needed to be amended if the incident begins to pose new risks through ESG-related issues, or if it receives a much higher degree of media exposure than it has originally. Companies that have already been publicly criticised in relation to a given issue likely to be less sensitive to further criticism about the same issue. If no new issues are recorded, the index value of a company decreases over time.

3.2 Sample selection

As this study uses the index data to measure companies' overall reputation risk, the sample consists entirely of companies listed in the RepRisk Rating index database between January 2007 and July 2012. In selecting the comapnies for the sample, we use the following criteria:

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[d] See a company report sample provided by RepRisk:
https://platform.reprisk.com/downloads/Sample%20Company%20Report%20-%20RepRisk%20website.pdf.

- The company must have an ISIN code available in Datastream, which is necessary for downloading financial data.

- The company must have at least 36 months of return data available in order to address the survivorship bias issue on testing asset pricing models (Brown et al., 1992).

- The company must have market value data available and it must be possible to collect data pertaining to the country and sector to which the company belongs.

- The company's country must be listed in the MSCI All Country World Index.

- As large companies enjoy better media attention, it is important to ensure that the results are not biased by micro-cap stocks' illiquid status and high bid-ask spread, we require that each sample company must has market capitalisation of over 140 million dollars in January 2007.

The final sample consists of 7,442 companies, of which 5,484 are from developed countries and 1,957 are from developing countries. As Table 2 illustrates, the sample companies are taken from 44 countries worldwide. The second column shows the number of companies that have been taken from each country. The third and the fourth column show the score calculated by averaging each company's mean reputational score during the sample period for each country. The third column includes a score of minus one for companies that have not exposed themselves to reputation risks in a given period. The fourth column excludes the score of minus one. The largest sample of companies is taken from the US, with an average RepRisk score of 3.6879; the second largest samples taken from Japan, with an average RepRisk score of 0.5606. This is concrete evident that companies in Japan are less exposed themselves to reputation risk than companies in the US. On average, developed countries have a higher RepRisk score during the sample period while developing countries have a lower RepRisk score.

[Insert Table 2 about here]

In this study, we have considered effects of reputation risk on industry to avoid the results becoming biased towards industries. We use the MSCI sector groups to identify companies from different sectors. Table 3 shows sample distributions across 10 MSCI sectors. The average RepRisk score is higher in developed countries than developing countries, which is consistent with the results displayed in Table 2. For sectors in consumer staples, health care and finance, the average RepRisk is much higher in developed countries than in developing countries. The average RepRisk scores across sectors in the developed countries are more evenly distributed than in the developing countries. The standard deviation of the average RepRisk score is calculated using the average RepRisk score. With the exception of the energy sector, in which the reputation risk is much higher in developed countries, we have not found there to be any substantial differences between the standard deviations of the RepRisk scores of developed and developing countries.

[Insert Table 3 about here]

Table 4 paints a more detailed picture of the distribution of companies between sectors for both developed and developing countries. There is a huge disparity between the numbers of companies in each country. The US and Japan contain large portions of the developed countries sample, which have 2,023 and 1,313 companies, respectively. A large portion of the sample companies from developing countries come from China and Taiwan, which have 507 and 346 companies respectively. In both sets of samples, the financial sector contains the largest number of companies. For this reason, we have considered the financial and non-financial sectors separately in the empirical analysis.

[Insert Table 4 about here]

4. Method

4.1 Portfolio formation

Since the purpose of this study is to evaluate the impact of corporate reputation risk on shareholder value, we use the portfolio approach to examine abnormal returns by accounting for various common risk factors. In order to compare the differences between high reputation risk and low reputation risk companies, we have applied three types of portfolio construction strategy in this study. Firstly, in line with the most common portfolio strategies, we have constructed buy and hold portfolios for the companies, and these have been adjusted monthly on the basis of their reputational score in the previous month. Secondly, similar to Kempf and Osthoff (2007) and Fang and Peress (2009), we have constructed long-short portfolios that long companies with low reputation risk and short companies with high reputation risk. Thirdly, the methodology employed in the robustness test section is similar to that proposed by Daniel et al. (1997), in that it uses benchmarks that are based on the characteristics of stocks. We have adopted the characteristic-matched portfolio approach, which pairs companies in high and low reputation risk groups by their shared characteristics: belonging to the same country and sector, and having a similar size and value. The following explains the detailed process of each portfolio construction strategy.

Firstly, in order to compare the differences between high reputation risk and low reputation risk companies, we select the portfolios based on the companies' reputational score. Each month, we group each company into one of the three buy and hold portfolios: high reputation risk, low reputation risk, and neutral risk. We firstly calculate the mean reputational score for each sector in each month, and then assign each company to the high or low reputation risk group depending on whether their reputational score is above or below the mean. If a company's

reputation score is minus one, it is automatically assigned to the neutral risk portfolio. In the robustness test, we also use the median reputational score in separating the three portfolios. We then compute both the equal-weighted and value-weighted returns of the three portfolios for the following month using companies' individual stock returns.

In addition, in examining the effects of reputational risk and in controlling for common risk factors, we also construct long-short portfolios. Taking a similar approach to Kempf and Osthoff (2007) and Fang and Peress (2009), we apply a zero-investment strategy that computes the return in the following month that long the stocks with low reputation risk and short the stocks with high reputation risk. A positive alpha in a long-short portfolio indicates that buying low reputation risk companies and selling high reputation risk companies would earn abnormal returns. We repeat this process for each month and obtain a time series of returns for the zero-investment portfolios.

For the characteristic-matched strategy, we use a more rigorous approach to ensure that the performance of the portfolios is not biased towards particular countries, sectors, company sizes and values. We firstly split the full sample into high and low reputational groups based on the previous month's average reputational score in each sector. We then match companies from the high and low reputational groups that belong to the same country and sector, and which are similar in size and value. We use market capitalization to measure size and book to market ratio to measure value. Only matched pairs of companies from the high and low reputation risk groups have been included in the portfolios that are matched by characteristics. This process significantly reduces the sample size. As the sample is adjusted on a monthly basis, it is not possible to identify the exact number of companies that are included over the whole sample period. For instance, the process of matching portfolios in the first month left less than 2,500 companies in consideration.

As is stated above, the full sample contains 7,442 companies, in which 5,484 companies are from developed countries and 1,957 companies are from developing countries. It should be remembered that the RepRisk Index data only covers the period from January 2007 to July 2012. The portfolios have been constructed on the basis of the reputation risk score from the previous month, and therefore the portfolios are lagged for one month. In compiling the sub-samples of developed and developing countries, we firstly split the sample into companies which belonged to developed and developing countries and apply the same methodology in the portfolio construction. Similarly, for the financial and non-financial sub-portfolios, we consider all of the companies in the sample and separate the ones that belong to financial and non-financial sectors.

4.2 Benchmarks and measures

In the analysis of each type of portfolio, we run time series regressions of portfolio excess returns for each month on contemporaneous risk exposure factors using both the capital asset pricing model (CAPM) and the Carhart (1997) four-factor model, which are relatively common models for estimating risk-adjusted returns. We firstly apply the CAPM model, which implies that portfolio returns can be explained by systematic risk. The equation is specified as follows:

$$R_{it} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + \varepsilon_{it}$$

Where $R_{it} - R_{ft}$ and $R_{mt} - R_{ft}$ represent the excess return of the portfolio and the market over the risk-free asset return, respectively. α_i denotes Jensen (1968) alpha, which can be interpreted as portfolio's systematic return component above or below the return achieved by the equity benchmark for the same level of systematic risk. β_i is the portfolio's systematic exposure to the market portfolio. ε_{it} represents the error term.

We then perform the analysis by estimating the abnormal returns of the constructed portfolios using the Carhart (1997) four-factor model. The equation is specified as follows:

$$R_{it} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + \gamma_i SMB_t + \delta_i HML_t + \lambda_i MOM_t + \varepsilon_{it}$$

Where $R_{it} - R_{ft}$ and $R_{mt} - R_{ft}$ represent the excess return of the portfolio and the market over the risk-free asset return. α_i denotes Jensen (1968) alpha, which can be interpreted as portfolio's systematic return component above or below the return achieved by the equity benchmark for the same level of systematic risk. β_i is the portfolio's systematic exposure to the market portfolio. Where γ_i, δ_i and λ_i measure the exposure of a portfolio to the small cap, value, and momentum investment styles. The size factor SMB_t (small minus big) represents the difference return of small stocks portfolios and big stocks portfolios. The book to market ratio factor HML_t (high minus low) represents difference return of investing high book-to-market ratios portfolios (top 30%) and low book-to-market ratios portfolios (bottom 30%). The momentum factor MOM_t represents the difference return of winner stocks portfolios (top 30%) and looser stocks portfolios (top 30%). ε_{it} represents the error term. The benchmark factors for these investment styles are obtained from Style Research. The risk-free rate is downloaded from Datastream. We use the US 3 months Treasury Bill Rate as the risk-free rate for all the portfolios.

In order to consistently match the performance of selected stocks in the portfolio and effectively evaluate risk-adjusted returns, we select a self-constructed market benchmark for all the portfolios. Specifically, we self-construct market benchmarks according to the characteristics of companies included in the portfolio. More specially, sample portfolios that include companies from both developed and developing countries use a value-weighted market benchmark by including all of the companies in the sample. This market benchmark has also

been used for the portfolios based on characteristic-matched strategy. For a sample that includes only developed countries, we provide a matching market benchmark using companies from all developed countries in the sample. For a sample that includes only developing countries, we provide a matching market benchmark using companies from all developed countries in the sample. All market benchmarks are value-weighted.

This benchmark is appropriate for the sample because it keeps close track of the country and sector weights in the sample and reflects the risk characteristics of matching stocks. The abnormal returns calculated based on normal market index are misspecified; however, the use of matching sample firms as a market index can correct this misspecification (Barber and Lyon 1997). For instance, it would not be appropriate to evaluate the risk-adjusted return of a stocks sample from a developed country in the MSCI All Country Index. Also, it would not be appropriate to evaluate the risk-adjusted returns of a sample that includes all of the 44 countries when the weighting of the countries in the sample is vastly different from that of the MSCI All Country Index. More importantly, standard market benchmarks, such as the S&P 500 and MSCI USA indexes tend to put more weight on financial sector stocks. Such weightings are unsuitable for this study, as there is a marked difference in the ways in which CSiR manifests itself in financial and non-financial sectors.

5. Results

We firstly examine the abnormal returns of the portfolios constructed using the full sample, which includes all 44 countries. Having done so, we compare the differences between the samples for developed and developing countries, as well as the differences between the samples for the financial and non-financial sectors. We then split the sample of companies from

developed countries into sub-samples of companies from financial and non-financial sectors, and do the same for the sample of developing countries.

5.1 High and low reputation risk

Table 5 displays the risk-adjusted performance of the sample of all 44 countries over the portfolio formation period of February 2007 to August 2012. Panel A presents the equal-weighted results and Panel B shows the value-weighted results. Both panels present the risk-adjusted performance of the high reputation risk, low reputation risk, neutral risk, and long-short portfolios. The neutral risk portfolio consists of stocks with no reputation risk and the long-short portfolio that buying stocks with low reputation risk and selling stocks with high reputation risk. Portfolios are adjusted monthly and the number of monthly observations varies for different portfolios.

[Insert Table 5 about here]

The table shows that high reputation risk portfolios perform worse than low reputation risk portfolios even after controlling the risks for market, size, value, momentum, and the application of different portfolio weighting methods. The results suggest that not only market risk, but also the factors of size, value, and momentum have a significant influence on the portfolio excess returns, as most of the coefficients are significant. The abnormal returns presented in the CAPM and Carhart models are similar, but those displayed in the latter have a slightly higher adjusted R-squared value, which means that the Carhart model is more fitted.

As the results shown in studies used similar asset pricing models, such as Chan (2003), Derwall et al. (2005), Kempf and Osthoff (2007), Fang and Peress (2009) and Andreas G. F. Hoepner et al. (2011), show high adjusted R-squared values. For instance, the adjusted R-squared values

range between 77% and 96% for all the high-rated portfolios and low-rated portfolios in Table 2 (pp 915) in the Kempf and Osthoff (2007)'s study. Note that the long-short strategy portfolios generally have lower adjusted R-squared values due to the portfolio excess returns having a low correlation with the market benchmark. Similar studies, such as those of Kempf and Osthoff (2007), have reported that low adjusted R-squared values can be seen in long-short portfolios.

For equal-weighted returns, the Carhart results show that the high and low reputation risk portfolios exhibit statistically significant monthly abnormal returns of -0.58% and -0.32%, respectively. When using a value-weighted portfolio construction method, the abnormal returns of all four portfolios are higher, which means that small companies are more prone to underperformance. The Carhart results in the value-weighted panel reveal that the high and low reputation risk portfolios exhibit monthly abnormal returns of -0.12% and 0.14% respectively, at significant levels of 1%. In both panels, the results of low reputation risk portfolios compare similarly to those of neutral risk portfolios. In addition, if investors hold a long-short portfolio, they can generate a monthly positive abnormal return of 0.2%, which is 2.4% annually in both weighted schemes. The results prove that the value-weighted method is more appropriate for this study, due the disparity in size between the various companies included in the portfolio.

The results are consistent with those of Eccles et al. (2014) who employ a similar methodology. Using firms' ESG disclosure ratings as a measurement for sustainability, their study compares a matched sample of 180 high and low sustainability US companies. They also employ the Carhart four-factor model, and both equal-weighted and value-weighted portfolios show that high sustainability companies significantly outperform low sustainability companies in the long term. More specifically, the high sustainability portfolio outperforms the low sustainability portfolio by 4.8% monthly on a value-weighted scheme and by 2.3% on an equal-

weighted scheme. In a study with a different research angle, Fang and Peress (2009) find that firms with no media coverage earn higher returns than stocks with high media coverage by controlling widely accepted risk factors including market, size, book-to-market ratio, momentum and the Pastor and Stambaugh (2003) liquidity factor.

Given that we use a self-matched market benchmark in this study, the differences between the high and low reputational portfolios remain constant even after applying other market benchmarks, such as the MSCI All Country Index. We find that by using the MSCI All Country Index, the abnormal returns for both high and low reputation risk portfolios are higher, but the results for the long-short portfolio remain similar. In fact, we find that the differences between high and low reputation risk portfolios are similar no matter what market benchmarks are used. However, the adjusted R-squared values are lowered by the use of other market benchmarks. The higher adjusted R-squared values generally indicate that the current regressions are considerably more powerful.

5.2 Developed and developing countries

We use the method outlined above to construct portfolios for samples of developed and developing countries. In Table 6 below, Panel A presents the results of companies from developed countries and Panel B shows the results of those from developing countries. Portfolios are adjusted monthly based on the sample period of February 2007 to August 2012. As is stated above, the value-weighted portfolios are more representative, because the self-constructed market benchmark is also value-weighted. Therefore, we only report the value-weighted results in Table 6.

[Insert Table 6 about here]

In the reported Carhart results, the developed countries panel shows that only the neutral risk portfolio achieves a monthly alpha of 0.11% at a significance level of 10%, while all the alphas in the developing countries panel are at significance levels of 1%. The high and low reputation risk portfolios exhibit statistically significant monthly abnormal returns of -0.42% and 0.27%, respectively. Also, the long-short portfolio in developing countries exhibits a statistically significant abnormal monthly return of 0.63%, which is much higher than the sample for developed countries shown in the previous table.

In summary, developing countries portfolios show more significant differences between portfolios in high and low reputation risk. Conversely, less significant results can be found in portfolios in the developed countries. Compared to the previous table, the long-short portfolio's alpha in the developing countries sample is much higher than the sample including all 44 countries. This suggests that stocks invested in the developing countries are more profitable. There are two possible explanations for these results. The first possibility is that the companies in developed countries may generally have a lower reputation risk than those of developing countries, and the companies included in the high and low reputation risk portfolios may be likely to display similar characteristics. Alternatively, it may be the case that companies with low reputation risk do not actually outperform those with a high reputation risk.

5.3 Financial and non-financial sectors

Companies in financial sectors are less likely to involve socially irresponsible behaviour, so we expect that the impact of CSiR risk on financial returns will be less pronounced in financial sectors than non-financial sectors. Table 7 presents the risk-adjusted performances of the high and low reputation risk portfolios in financial and non-financial sectors. All the portfolios have been value-weighted. Panel A shows the results of financial sectors and Panel B shows the

results of non-financial sectors. The portfolios are adjusted monthly based on the sample period from February 2007 to August 2012.

[Insert Table 7 about here]

The high and low reputation risk portfolios show statistically significant differences in the non-financial sectors, while the financial sectors display less significant differences. In the reported Carhart results, only the high reputation risk portfolio in the financial sector panel exhibits a monthly alpha of -0.14% at a 10% significance level. All the alphas in the non-financial sectors panel are at significance levels of 1%. The high and low reputation risk portfolios exhibit statistically significant abnormal returns of -0.13% per month and 0.16% per month, respectively. In addition, the long-short portfolio in the financial sector panel exhibits similar abnormal returns to that in the non-financial sector panel, though only the latter is significant. Since the abnormal returns are more likely to be significant in the non-financial sectors, it appears that either not much attention is paid to reputation risk by investors in the financial sector, or perhaps because they do not expect the potential damage of reputation risk to have much of an impact on the financial sector.

5.4 Subsamples of developed and developing countries

Thus far, most of the results have shown there to be significant differences between high and low reputation risk portfolios. We now analyse the differences between sectors in the samples for developed and developing countries. Table 8 presents the risk-adjusted performance of the high and low reputation risk portfolios in the financial and non-financial sectors in the developed countries. All the portfolios are value-weighted. Panel A shows the results of financial sectors and Panel B shows the results of non-financial sectors. Similar to the results of the country and sector portfolios discussed above, most of the alphas in the Carhart model

results are not significant in either the financial or the non-financial sector panels. In the non-financial sector panel, the low reputation risk portfolios exhibit positive monthly abnormal returns of 0.11% at a significance level of 10%, and the neutral risk portfolios exhibit positive monthly abnormal returns of 0.15% at a significance level of 5%. These results are in line with previous findings that show that developed countries tend to have less significant results while non-financial sectors tend to have more significant results.

[Insert Table 8 about here]

Table 9 presents the risk-adjusted performance of the high and low reputation risk portfolios in the financial and non-financial sectors in the developing countries. Again, all the portfolios are value-weighted. Panel A shows the results of financial sectors and Panel B shows the results of non-financial sectors. We find that all the alphas in the Carhart model results are not significant in the financial sectors panel, and all the alphas show significance at 1% level in the non-financial sectors panel. In the non-financial sectors, the high and low reputation risk portfolios exhibit statistically significant abnormal returns of -0.61% per month and 0.35% per month, respectively. The neutral risk portfolio maintains similar results in comparison with those of the low reputation risk portfolio, while the long-short portfolio generates a monthly alpha of 0.90%, which is the highest performance of long-short portfolios of all the results yet obtained. Again, these results are in line with previous findings which show that companies from developing countries and non-financial sectors both tend to have more significant results.

[Insert Table 9 about here]

6. Robustness tests

In this section, we perform several robustness tests based on the results shown previously. In particular, we try to alleviate the concern that the gap between high and low reputation risk portfolios could be driven by country weights, sector weights, company sizes, companies' book-to-market values, and the method used to separate high and low reputation risk portfolios.

6.1 Alternative cut-offs

Categorising high and low reputation risk portfolios by the average of their reputational score each month could result in an unbalanced sample, due to the extreme value of the reputational scores. The alternative cut-offs are used in an attempt to divide high and low reputational portfolios by the median of their reputational score, with other portfolio construction strategies kept the same, as is outlined in the methodology section.

Table 10 shows the results using the median as an alternative cut-off. Panel A displays the equal-weighted results and Panel B displays results on a value-weighted method. The only difference between Panel A and the main results in Table 5 is that the long-short portfolio's abnormal returns become insignificant. In Panel B, the Carhart model results show that the abnormal returns of high reputation risk and neutral risk portfolios remain similar to the results shown in the main results in Table 5, which uses the mean as the categorising method. It should be noted that the high reputation risk portfolio generates a significant monthly alpha of -0.24% compared to -0.12% in the main results, which suggests that higher reputation risk portfolios categorised by the median perform even worse than those categorised by the mean. However, both the alphas of the low reputation risk portfolio and long-short portfolio are insignificant in

the value-weighted results. This indicates that investors should choose companies with extreme values in reputation risk in order to increase profits in the long-short strategy.

[Insert Table 10 about here]

6.2 Characteristic-matched sample

In this section, we also try to alleviate the concern that the gap between high and low reputation risk portfolios could be driven by country weights, sector weights, company sizes and companies' book-to-market value. In doing so, we check that the results are not biased in favour of countries and sectors that happen to enjoy high returns for low reputation risk portfolios. In each month, we select characteristic-matched companies in both high and low reputation risk portfolios by the same country, sector, and have similar size and value in the previous month.

As can be seen from Table 11 below, the results show that samples matched by characteristics display results that are consistent with the main results shown in Table 5. Panel A displays the results obtained by using an equal-weighted method and Panel A presents the results acquired by using a value-weighted method. Both the results from the equal-weighted and value-weighted methods are similar to the results shown in Table 5. In Panel B, the Carhart model results show that the alphas in high reputation risk, low reputation risk, and neutral risk portfolios become higher than the results in Table 5, which may be owing to the fact that a significant number of companies are excluded during the matching process. The long-short portfolio presents positive abnormal returns of 0.25% at a significance level of 5%, which remains similar to the main results. The results show that the abnormal returns are less significant when using the method of matching characteristics, which highlights the importance of comparing companies with similar characteristics in the high and low reputation risk portfolios.

[Insert Table 11 about here]

7. Conclusion

In this study, we have investigated the influence of reputation risk on firm financial performance based on an extensive sample of worldwide companies. In compiling the different samples, we constructed portfolios using three portfolio construction strategies: buy and hold portfolios, long-short portfolios and characteristic-matched portfolios. The main results suggest that high reputation risk portfolios perform worse than low reputation risk portfolios after controlling for countries, sectors, firm characteristics, different weighting methods and the removal of financial sectors. These findings imply that the stock market is concerned about corporate performance on ESG issues; however, it has failed to incorporate this information fully into stock prices. The findings provided some practical implications for investors that it is profitable to apply long-short strategy in buying low reputation risk companies and selling high reputation risk companies.

In addition, the results support the idea that there are more significant differences in terms of abnormal returns between high and low reputation risk portfolios in developing countries than in developed countries, and that there are more significant differences in terms of abnormal returns between high and low reputation risk portfolios in non-financial sectors than in financial sectors. This suggests that investors are more likely to act on information pertaining to companies' levels of reputation risk in non-financial sectors and in developing countries. This study contributes towards understanding the variations of CSiR across developed and developing country contexts, financial and non-financial contexts in the long term.

There are a number of suggestions for further investigation. Firstly, many studies report that there are significant differences in the content of CSR reports between different countries (e.g.,

Chen and Bouvain 2008; Maignan and Ralston 2002), as well as marked differences between firms' policies on ethics, human rights, corporate governance and communications (Scholtens and Dam 2007). It is not necessary, however, to indicate that the financial impact of irresponsible behaviour is also vastly different. This raises the question of whether or not there are differences in the economic consequences of CSiR behaviour between individual countries. Therefore, it would be rewarding to consider culture and country-specific factors in the future CSiR studies.

Secondly, it should be noted that this study does not imply that firms' reputation risk profiles remain constant over various time periods. Indeed, although a firm's reputation risk levels can remain reasonably steady over many years, they are also liable to swing in either direction. Therefore, future studies should explore the literature on the consistency of firms' reputation risk profiles, and investigate the factors that motivate firms to change their attitude and behaviour over a long period of time.

Last but not least, although it is primarily the relationship between firms' levels of reputation risk and their financial performance that has been investigated in this paper in relation to portfolios, it is worth examining this relationship from the perspective of the firms themselves. Companies differ vastly in their individual perception and understanding of reputation risk, and in their reactions to it. Some companies tend to keep their levels of reputation risk to a minimum, while other companies may expose themselves to reputation risks at an extreme level. If it is assumed that activities that pose a comparatively small risk to reputation – such as bribery or mild instances of corruption – can bring short-term economic benefits to business operations, it can also be expected that severe exposure to reputation risk will result in a reduction to shareholder value. Therefore, a thorough consideration of the benefits and drawbacks of

reputation risk would make an interesting contribution to the existing corporate finance literature.

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Table 1 CSiR dimensions in the RepRisk database

Dimensions	Issues
Environment	Global pollution and climate change
	Local pollution
	Impacts on ecosystems and landscapes
	Overuse and wasting of resources
	Waste issues
	Animal mistreatment
Corporate governance	Corruption, bribery, extortion, money laundering
	Executive compensation
	Misleading communication
	Fraud
	Tax evasion
	Anti-competitive practices
Community relations	Human rights abuses, corporate complicity
	Impacts on communities
	Local participation issues
	Social discrimination
Employee relations	Forced labour
	Child labour
	Freedom of association and collect bargaining
	Discrimination in employment
	Health and safety issues
	Poor employment conditions
Product	Controversial products and services
	Product-related health and environmental issues
Violation of codes	Violation of international standards
	Violation of national legislation
Supply chain	Supply chain (environmental, social, and legal issues)

Note: The first column shows the categories of issues applied in the portfolio and the second column details the issues in the specific category. Please note we do not combine community relationships dimension and employee relations dimension as the social dimension in this study. All principles of the UN Global Compact are addressed.

Table 2 Descriptive sample statistics across countries

Country	Number of Companies	Average RepRisk Score	
		Including Minus One	Excluding Minus one
Panel A: Developing countries			
United States	2023	3.6879	16.5425
Japan	1313	0.5606	15.3569
United Kingdom	334	5.1907	16.6839
Canada	246	5.5179	14.1478
France	208	4.3434	17.8443
Australia	201	3.9768	15.2815
Germany	183	5.2992	18.2690
Switzerland	118	5.7932	18.6261
Italy	115	2.2166	16.9226
Hong Kong	91	2.8473	14.8326
Singapore	90	2.0896	15.1462
Sweden	84	3.1965	17.6799
Spain	82	5.6423	16.9336
Netherlands	73	3.9990	16.3102
Belgium	51	0.9403	10.0715
Finland	47	3.0410	18.3775
Norway	46	2.8456	17.4706
Israel	41	5.2075	13.7817
Austria	38	3.1394	14.2793
Denmark	35	2.4124	17.2576
Ireland	27	4.3350	14.5473
New Zealand	20	1.0955	14.0160
Portugal	18	2.9793	14.4345
Subtotal	**5484**		
Panel B: Developing countries			
China	507	1.4022	13.9296
Taiwan	346	0.4654	14.1863
Korea	234	3.6949	16.2530
India	170	4.9154	16.3143
Brazil	127	2.8542	15.8250
South Africa	77	4.5877	14.5198
Malaysia	67	3.6209	11.4341
Mexico	62	2.5701	12.0751
Chile	49	1.7478	14.7535
Turkey	47	0.5049	10.7462
Indonesia	44	5.0095	11.2456
Thailand	42	5.4133	11.2668
Greece	36	0.4614	10.8916
Poland	36	-0.3972	12.3469
Egypt	31	0.1637	18.5270
Qatar	24	-0.4782	9.9953
Philippines	21	4.0299	13.7649
Peru	17	3.4802	10.6021
Czech Republic	8	3.4291	10.4096
Hungary	7	1.8294	18.4352
United Arab Emirates	6	1.8060	11.2205
Subtotal	**1958**		
Total	**7742**		

Note: Panel A reports the sample summary statistics for developed countries and Panel B reports for developing countries. We use two different methods to calculate RepRisk average score. The first method includes minus one and the second one exclude minus one score.

Table 3 Descriptive sample statistics across sectors

MSCI Sectors	Developed Countries			Developing Countries		
	Number of Companies	Average RepRisk Score	StdDev of RepRisk Score	Number of Companies	Average RepRisk Score	StdDev of RepRisk Score
10 Energy	316	17.9166	10.3200	70	16.9493	7.8680
15 Materials	693	15.7001	8.3649	410	15.0080	7.8843
20 Industrials	947	15.3782	7.5059	287	14.7127	8.3620
25 Consumer Discretionary	939	15.6722	7.4949	246	14.5069	7.5901
30 Consumer Staples	409	16.0365	7.9980	192	12.8146	6.6064
35 Health Care	364	16.4422	8.3009	72	13.5504	9.1725
40 Financials	1070	17.0207	8.5096	364	12.7104	6.4580
45 IT	469	16.8384	8.1548	150	15.0550	7.8046
50 Teleco- Services	75	16.2015	6.8008	55	16.1860	5.8158
55 Utilities	202	16.6446	7.3824	112	14.9595	6.5601
Total	**5484**			**1958**		

Note: This table shows the descriptive sample statistics for sectors. We compare the differences between developed countries and developing countries. The method of calculating average RepRisk score is excluding minus one in the database. The second, third and fourth column show the number of companies, average RepRisk score and standard deviation of Average RepRisk score across all the companies in a specific country in the developed countries. The rest three columns show the statistics for developing countries.

Table 4 Country and sector distribution

Country	10 Energy	15 Materials	20 Industrials	25 Consumer Discretionary	30 Consumer Staples	35 Health Care	40 Financials	45 IT	50 Teleco-Services	55 Utilities	Total
Panel A: Developed Countries											
Australia	14	62	19	28	15	9	43	4	2	5	**201**
Austria	3	6	9	1	1		14		1	3	**38**
Belgium	1	8	8	3	5	5	15	1	2	3	**51**
Canada	46	83	18	21	17	4	36	10	4	7	**246**
Denmark	1	3	7	1	3	6	13			1	**35**
Finland	1	11	14	7	2	1	4	4	1	2	**47**
France	8	16	34	40	23	14	45	16	3	9	**208**
Germany	5	22	41	25	12	11	45	13	2	7	**183**
Hong Kong	1	6	14	17	5	1	34	3	4	6	**91**
Ireland	1	3	7	1	5	5	4	1			**27**
Israel	2	6	2	4	3	2	12	5	3	2	**41**
Italy	4	13	19	18	9	4	31	2	3	12	**115**
Japan	14	219	280	285	128	62	186	111	6	22	**1313**
Netherlands	4	7	20	8	8	4	13	7	2		**73**
New Zealand	1	3	5	6			1		1	3	**20**
Norway	18	3	6	1	7	1	5	1	1	3	**46**
Portugal	1	5	1	3	2		3		1	2	**18**
Singapore	8	5	16	10	10	2	29	5	3	2	**90**
Spain	5	16	8	7	8	2	22	2	1	11	**82**
Sweden	2	13	16	14	7	4	22	4	1	1	**84**
Switzerland	2	16	21	7	8	14	36	6	1	7	**118**
United Kingdom	19	22	68	72	24	8	86	18	5	12	**334**
United States	155	145	314	360	107	204	372	256	28	82	**2023**
Total	**316**	**693**	**947**	**939**	**409**	**364**	**1070**	**469**	**75**	**202**	**5484**

Table 4 Country and sector distribution continued

Country	10 Energy	15 Materials	20 Industrials	25 Consumer Discretionary	30 Consumer Staples	35 Health Care	40 Financials	45 IT	50 Teleco-Services	55 Utilities	Total
Panel B: Developing Countries											
Brazil	2	18	9	15	15	4	32	1	6	25	**127**
Chile	2	9	3	3	5	1	12	1	1	12	**49**
China	8	141	99	65	49	35	62	20	2	26	**507**
Czech Republic	1				1		1		1	4	**8**
Egypt	1	9	2	3	1		12		3		**31**
Greece	2	8	4	7	5		6		1	3	**36**
Hungary	1	1				2	1		1	1	**7**
India	15	35	15	14	14	10	34	11	7	15	**170**
Indonesia	3	12	3	2	8		13		2	1	**44**
Korea	7	42	42	44	22	14	38	13	6	6	**234**
Malaysia	7	7	7	12	11		13		4	6	**67**
Mexico	1	16	6	12	12	1	9		5		**62**
Peru		6			2		5		1	3	**17**
Philippines	1	3	3	3	1		5		2	3	**21**
Poland	3	8	1	5	2		15	1	1		**36**
Qatar	1	2	4	1			14		1	1	**24**
South Africa		26	7	9	12	2	15	2	4		**77**
Taiwan	5	56	73	33	23	2	49	100	3	2	**346**
Thailand	6	6	7	5	3	1	8	1	2	3	**42**
Turkey	3	5	1	11	6		18		2	1	**47**
United Arab Emirates	1		1	2			2				**6**
Total	**70**	**410**	**287**	**246**	**192**	**72**	**364**	**150**	**55**	**112**	**1958**

Note: This table presents the sample distribution on countries and sectors. Panel A shows the statistics for developed countries and Panel B show the statistics for developing countries.

Table 5 Risk-adjusted returns of all countries

	CAPM			Carhart					
	Alpha	Market	Adj. R^2	Alpha	Market	SMB	HML	MOM	Adj. R^2
Panel A: Equal weighted									
High Reputation Risk	-0.0058	1.2061	0.973	-0.0058	1.1192	0.4422	-0.0328	-0.1354	0.990
	(-3.527)***	(25.253)***		(-6.731)***	(59.321)***	(7.690)***	(-0.926)	(-5.954)***	
Low Reputation Risk	-0.0029	1.0846	0.955	-0.0032	0.9909	0.5467	-0.0929	-0.1517	0.985
	(-1.515)	(21.374)***		(-3.449)***	(45.843)***	(9.239)***	(-1.746)*	(-5.492)***	
Neutral Risk	-0.0030	1.0781	0.953	-0.0033	0.9830	0.5524	-0.0885	-0.1514	0.983
	(-1.524)	(20.371)***		(-3.274)***	(40.170)***	(8.823)***	(-1.572)	(-5.362)***	
Long Low Short High	0.0022	-0.1214	0.413	0.0020	-0.1273	0.0996	-0.0680	-0.0206	0.441
	(2.045)**	(-5.874)***		(2.132)**	(-4.996)***	(1.58)	(-1.781)*	(-1.056)	
Panel B: Value weighted									
High Reputation Risk	-0.0018	1.0059	0.993	-0.0012	1.0236	-0.2179	0.0743	0.0144	0.998
	(-2.732)***	(70.817)***		(-3.746)***	(174.451)***	(-14.575)***	(4.644)***	(2.919)***	
Low Reputation Risk	0.0022	0.9876	0.986	0.0014	0.9635	0.3028	-0.1147	-0.0255	0.997
	(2.301)**	(46.251)***		(3.442)***	(125.668)***	(14.660)***	(-7.038)***	(-4.634)***	
Neutral Risk	0.0023	0.9831	0.984	0.0015	0.9551	0.3308	-0.1178	-0.0294	0.996
	(2.277)**	(39.074)***		(3.608)***	(80.292)***	(12.471)***	(-6.085)***	(-4.683)***	
Long Low Short High	0.0033	-0.0181	-0.007	0.0020	-0.0590	0.5159	-0.1969	-0.0442	0.739
	(2.068)**	(-0.510)		(2.849)***	(-4.426)***	(15.894)***	(-6.450)***	(-4.257)***	

Note: The table presents the risk-adjusted performance of the high reputation risk, low reputation risk, neutral risk and long-short portfolios. High and low reputation risk portfolio consists of stocks with reputational score is above and below the mean, respectively. The neutral risk portfolio consists of stocks with no reputation risk and the long-short portfolio that buying stocks with low reputation risk and selling stocks with high reputation risk. Panel A shows the results of equal-weighted portfolios and Panel B shows the results of value-weighted portfolios. Portfolios are monthly adjusted based on sample period from February 2007 to August 2012. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. T-statistics are in parentheses. Coefficient covariance and standard errors are made heteroskedasticity and autocorrelation consistent based on the method.

Table 6 Risk-adjusted returns of developed and developing countries

	CAPM			Carhart					
	Alpha	Market	Adj. R^2	Alpha	Market	SMB	HML	MOM	Adj. R^2
Panel A: Developed countries									
High Reputation Risk	-0.0009	1.0199	0.994	-0.0005	1.0380	-0.1867	0.0607	0.0248	0.997
	(-1.549)	(86.502)***		(-1.211)	(139.735)***	(-11.983)***	(4.294)***	(3.857)***	
Low Reputation Risk	0.0015	0.9634	0.984	0.0008	0.9370	0.2998	-0.1040	-0.0375	0.993
	(1.777)*	(46.375)***		(1.61)	(73.889)***	(12.084)***	(-4.616)***	(-4.141)***	
Neutral Risk	0.0018	0.9588	0.981	0.0011	0.9279	0.3173	-0.1026	-0.0422	0.991
	(1.876)*	(37.910)***		(1.760)*	(51.512)***	(11.575)***	(-3.600)***	(-4.163)***	
Long Low Short High	0.0018	-0.0558	0.059	0.0007	-0.0996	0.4875	-0.1731	-0.0661	0.585
	(1.182)	(-1.723)*		(0.715)	(-4.927)***	(12.621)***	(-4.788)***	(-4.237)***	
Panel B: Developing countries									
High Reputation Risk	-0.0050	1.0024	0.974	-0.0042	1.0028	-0.3514	-0.0164	-0.0219	0.988
	(-3.041)***	(54.682)***		(-3.667)***	(78.386)***	(-7.970)***	(-0.631)	(-0.800)	
Low Reputation Risk	0.0030	0.9902	0.991	0.0027	0.9912	0.1654	-0.0341	-0.0024	0.995
	(3.194)***	(104.944)***		(3.921)***	(116.444)***	(6.148)***	(-1.695)*	(-0.133)	
Neutral Risk	0.0028	0.9870	0.986	0.0024	0.9881	0.2036	-0.0481	-0.0138	0.993
	(2.530)**	(89.327)***		(2.943)***	(96.520)***	(5.591)***	(-1.857)*	(-0.615)	
Long Low Short High	0.0074	-0.0135	-0.012	0.0063	-0.0129	0.5142	-0.0227	0.0155	0.540
	(3.014)***	(-0.523)		(3.713)***	(-0.658)	(9.758)***	(-0.552)	(0.355)	

Note: The table presents the risk-adjusted performance of the high reputation risk, low reputation risk, neutral risk and long-short portfolios in developed and developing countries. High and low reputation risk portfolio consists of stocks with reputational score is above and below the mean, respectively. The neutral risk portfolio consists of stocks with no reputation risk and the long-short portfolio that buying stocks with low reputation risk and selling stocks with high reputation risk. All the portfolios are value-weighted. Panel A and B shows the results of developed countries and developing countries, respectively. Portfolios are monthly adjusted based on sample period from February 2007 to August 2012. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. T-statistics are in parentheses. Coefficient covariance and standard errors are made heteroskedasticity and autocorrelation consistent based on the Newey and West (1987) method.

Table 7 Risk-adjusted returns of financial and non-financial sectors

	CAPM			Carhart					
	Alpha	Market	Adj. R^2	Alpha	Market	SMB	HML	MOM	Adj. R^2
Panel A: Financial sectors									
High Reputation Risk	-0.0023	1.0828	0.988	-0.0014	1.0750	-0.2118	0.1238	-0.0127	0.992
	(-2.333)**	(91.514)***		(-1.869)*	(91.898)***	(-5.287)***	(4.649)***	(-0.701)	
Low Reputation Risk	0.0024	0.8881	0.973	0.0011	0.9058	0.2586	-0.1700	0.0315	0.982
	(1.825)*	(55.295)***		(1.170)	(64.682)***	(4.923)***	(-5.355)***	(1.400)	
Neutral Risk	0.0021	0.8860	0.971	0.0008	0.8992	0.2815	-0.1586	0.0298	0.981
	(1.523)	(43.732)***		(0.810)	(56.484)***	(4.304)***	(-4.368)***	(1.227)	
Long Low Short High	0.0040	-0.1941	0.341	0.0020	-0.1679	0.4652	-0.3023	0.0402	0.559
	(1.742)*	(-7.098)***		(1.119)	(-6.539)***	(5.083)***	(-5.331)***	(0.988)	
Panel B: Non-financial sectors									
High Reputation Risk	-0.0018	0.9890	0.992	-0.0013	1.0163	-0.2271	0.0562	0.0248	0.997
	(-2.665)***	(67.468)***		(-3.614)***	(166.301)***	(-14.380)***	(3.730)***	(5.504)***	
Low Reputation Risk	0.0022	1.0113	0.985	0.0016	0.9722	0.3235	-0.0938	-0.0456	0.996
	(2.177)**	(43.918)***		(3.668)***	(113.252)***	(14.159)***	(-6.193)***	(-8.606)***	
Neutral Risk	0.0024	1.0050	0.982	0.0018	0.9621	0.3529	-0.1005	-0.0498	0.995
	(2.267)**	(37.624)***		(4.051)***	(74.489)***	(12.681)***	(-5.681)***	(-7.020)***	
Long Low Short High	0.0033	0.0221	-0.004	0.0024	-0.0434	0.5460	-0.1577	-0.0749	0.724
	(1.996)*	(0.589)		(3.071)***	(-3.049)***	(15.535)***	(-5.498)***	(-7.885)***	

Note: The table presents the risk-adjusted performance of the high reputation risk, low reputation risk, neutral risk and long-short portfolios in financial sectors and non-financial sectors. High and low reputation risk portfolio consists of stocks with reputational score is above and below the mean, respectively. The neutral risk portfolio consists of stocks with no reputation risk and the long-short portfolio that buying stocks with low reputation risk and selling stocks with high reputation risk. All the portfolios are value-weighted. Panel A shows the results of financial sectors and Panel B shows the results of non-financial sectors. Portfolios are monthly adjusted based on sample period from February 2007 to August 2012. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. T-statistics are in parentheses. Coefficient covariance and standard errors are made heteroskedasticity and autocorrelation consistent based on the Newey and West (1987) method.

Table 8 Risk-adjusted returns of developed countries' sub sample

	CAPM			Carhart					
	Alpha	Market	Adj. R^2	Alpha	Market	SMB	HML	MOM	Adj. R^2
Panel A: Developed countries - financial sectors									
High Reputation Risk	-0.0018	1.1136	0.989	-0.0008	1.0952	-0.2424	0.1326	-0.0097	0.991
	(-1.765)*	(112.390)***		(-0.832)	(73.550)***	(-5.207)***	(4.584)***	(-0.553)	
Low Reputation Risk	0.0021	0.8299	0.962	0.0004	0.8683	0.3364	-0.2083	0.0306	0.973
	(1.400)	(48.294)***		(0.330)	(42.334)***	(5.063)***	(-4.976)***	(1.270)	
Neutral Risk	0.0020	0.8222	0.957	0.0002	0.8604	0.3725	-0.2207	0.0291	0.970
	(1.240)	(38.097)***		(0.140)	(37.308)***	(4.674)***	(-4.538)***	(1.180)	
Long Low Short High	0.0033	-0.2827	0.496	0.0006	-0.2245	0.5802	-0.3510	0.0375	0.628
	(1.270)	(-10.675)***		(0.250)	(-6.328)***	(5.200)***	(-5.000)***	(0.900)	
Panel B: Developed countries - non-financial sectors									
High Reputation Risk	-0.0007	1.0022	0.994	-0.0006	1.0308	-0.1740	0.0403	0.0361	0.997
	(-1.293)	(83.880)***		(-1.447)	(136.288)***	(-10.043)***	(2.724)***	(6.225)***	
Low Reputation Risk	0.0014	0.9944	0.982	0.0011	0.9478	0.2928	-0.0721	-0.0599	0.992
	(1.540)	(45.280)***		(1.965)*	(67.922)***	(10.279)***	(-3.006)***	(-6.786)***	
Neutral Risk	0.0018	0.9888	0.979	0.0015	0.9375	0.3094	-0.0704	-0.0646	0.990
	(1.810)*	(37.923)***		(2.307)**	(49.759)***	(11.024)***	(-2.498)**	(-6.506)***	
Long Low Short High	0.0015	-0.0074	-0.014	0.0012	-0.0822	0.4680	-0.1203	-0.1001	0.530
	(0.980)	(-0.219)		(1.090)	(-3.802)***	(10.638)***	(-3.135)***	(-6.786)***	

Note: The table presents the risk-adjusted performance of the high reputation risk, low reputation risk, neutral risk and long-short portfolios in financial and non-financial sectors in developed countries. High and low reputation risk portfolio consists of stocks with reputational score is above and below the mean, respectively. The neutral risk portfolio consists of stocks with no reputation risk and the long-short portfolio that buying stocks with low reputation risk and selling stocks with high reputation risk. All the portfolios are value-weighted. Panel A and B shows the results of financial sectors and non-financial sectors, respectively. Portfolios are monthly adjusted based on sample period from February 2007 to August 2012. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. T-statistics are in parentheses. Coefficient covariance and standard errors are made heteroskedasticity and autocorrelation consistent based on the Newey and West (1987) method.

Table 9 Risk-adjusted returns of developing countries' sub sample

	CAPM			Carhart					
	Alpha	Market	Adj. R^2	Alpha	Market	SMB	HML	MOM	Adj. R^2
Panel A: Developing countries - financial sectors									
High Reputation Risk	-0.0031	1.0105	0.963	-0.0018	1.0034	-0.3823	-0.148	-0.0087	0.975
	(-1.494)	(35.613)***		(-1.350)	(63.044)***	(-4.854)***	(-3.474)***	(-0.246)	
Low Reputation Risk	0.0013	0.9967	0.976	0.0004	1.0008	0.2508	0.0960	-0.0063	0.981
	(0.910)	(44.037)***		(0.390)	(67.578)***	(3.516)***	(2.351)**	(-0.189)	
Neutral Risk	0.0008	1.0017	0.970	-0.0003	1.0063	0.3043	0.1101	-0.0167	0.977
	(0.510)	(39.552)***		(-0.274)	(57.356)***	(3.956)***	(2.350)**	(-0.479)	
Long Low Short High	0.0039	-0.0148	-0.014	0.0017	-0.0038	0.6301	0.2388	-0.0016	0.268
	(1.130)	(-0.290)		(0.700)	(-0.124)	(4.271)***	(2.948)***	(-0.023)	
Panel B: Developing countries - non-financial sectors									
High Reputation Risk	-0.0065	0.9982	0.966	-0.0061	0.9970	-0.2777	0.0792	-0.0326	0.981
	(-3.970)***	(47.406)***		(-4.026)***	(58.413)***	(-4.524)***	(2.225)**	(-0.948)	
Low Reputation Risk	0.0037	0.9860	0.989	0.0035	0.9887	0.1259	-0.0892	-0.0029	0.994
	(3.802)***	(101.929)***		(4.189)***	(107.586)***	(4.889)***	(-4.720)***	(-0.173)	
Neutral Risk	0.0034	0.9813	0.984	0.0032	0.9841	0.1510	-0.1070	-0.0158	0.991
	(2.932)***	(90.141)***		(3.163)***	(92.445)***	(3.847)***	(-4.698)***	(-0.769)	
Long Low Short High	0.0096	-0.0136	-0.013	0.0090	-0.0096	0.4011	-0.1732	0.0258	0.461
	(3.889)***	(-0.497)		(4.122)***	(-0.406)	(5.891)***	(-3.590)***	(0.560)	

Note: The table presents the risk-adjusted performance of the high reputation risk, low reputation risk, neutral risk and long-short portfolios in financial sectors and non-financial sectors in developing countries. High and low reputation risk portfolio consists of stocks with reputational score is above and below the mean, respectively. The neutral risk portfolio consists of stocks with no reputation risk and the long-short portfolio that buying stocks with low reputation risk and selling stocks with high reputation risk. All the portfolios are value-weighted. Panel A shows the results of financial sectors and Panel B shows the results of non-financial sectors. Portfolios are monthly adjusted based on sample period from February 2007 to August 2012. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. T-statistics are in parentheses. Coefficient covariance and standard errors are made heteroskedasticity and autocorrelation consistent based on the Newey and West (1987) method.

Table 10 Alternative categorizing strategy

	CAPM			Carhart					
	Alpha	Market	Adj. R^2	Alpha	Market	SMB	HML	MOM	Adj. R^2
Panel A: Equal weighted									
High Reputation Risk	-0.0061	1.1897	0.973	-0.0059	1.1249	0.2923	-0.0181	-0.1134	0.983
	(-4.185)***	(35.897)***		(-6.002)***	(54.416)***	(4.997)***	(-0.390)	(-3.691)***	
Low Reputation Risk	-0.0042	1.1888	0.962	-0.0047	1.0873	0.6011	-0.0785	-0.1463	0.990
	(-2.045)**	(18.965)***		(-4.681)***	(52.865)***	(9.657)***	(-2.649)**	(-6.536)***	
Neutral Risk	-0.0030	1.0781	0.953	-0.0033	0.9830	0.5524	-0.0885	-0.1514	0.983
	(-1.524)	(20.371)***		(-3.274)***	(40.170)***	(8.823)***	(-1.572)	(-5.362)***	
Long Low Short High	0.0013	-0.0007	-0.015	0.0007	-0.0366	0.3040	-0.0684	-0.0372	0.264
	(0.950)	(-0.020)		(0.630)	(-1.668)	(4.512)***	(-2.245)**	(-1.654)	
Panel B: Value weighted									
High Reputation Risk	-0.0031	1.0075	0.982	-0.0024	1.0316	-0.2796	0.0883	0.0188	0.989
	(-3.364)***	(71.359)***		(-2.783)***	(66.009)***	(-7.792)***	(3.334)***	(1.610)	
Low Reputation Risk	0.0009	0.9896	0.983	0.0009	0.9872	0.0208	-0.0096	-0.0057	0.983
	(0.940)	(55.722)***		(0.830)	(51.852)***	(0.320)	(-0.218)	(-0.323)	
Neutral Risk	0.0023	0.9831	0.984	0.0015	0.9551	0.3308	-0.1178	-0.0294	0.996
	(2.277)**	(39.074)***		(3.608)***	(80.292)***	(12.471)***	(-6.085)***	(-4.683)***	
Long Low Short High	0.0034	-0.0177	-0.009	0.0027	-0.0434	0.2957	-0.1059	-0.0288	0.129
	(2.058)**	(-0.835)		(1.500)	(-1.321)	(3.136)***	(-1.745)*	(-1.055)	

Note: The table presents the risk-adjusted performance of the high reputation risk, low reputation risk, neutral risk and long-short portfolios using alternative categorizing strategy. High and low reputation risk portfolio consists of stocks with reputational score is above and below the median, respectively. The neutral risk portfolio consists of stocks with no reputation risk and the long-short portfolio that buying stocks with low reputation risk and selling stocks with high reputation risk. This table includes the sample of all countries. Panel A shows the results of equal-weighted portfolios and Panel B shows the results of value-weighted portfolios. Portfolios are monthly adjusted based on sample period from February 2007 to August 2012. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. T-statistics are in parentheses. Coefficient covariance and standard errors are made heteroskedasticity and autocorrelation consistent based on the Newey and West (1987) method.

Table 11 Characteristic-matched sample

	CAPM			Carhart					
	Alpha	Market	Adj. R^2	Alpha	Market	SMB	HML	MOM	Adj. R^2
Panel A: Equal weighted									
High Reputation Risk	-0.0050	1.2110	0.969	-0.0052	1.1130	0.5165	-0.0526	-0.1543	0.992
	(-2.898)***	(24.420)***		(-6.590)***	(72.001)***	(10.782)***	(-1.327)	(-6.940)***	
Low Reputation Risk	-0.0026	1.0458	0.930	-0.0028	0.9555	0.53	-0.0996	-0.1511	0.980
	(-1.288)	(20.802)***		(-2.669)***	(39.318)***	(8.441)***	(-1.732)*	(-4.976)***	
Neutral Risk	-0.0027	1.0389	0.932	-0.0029	0.9433	0.541	-0.0866	-0.1507	0.977
	(-1.298)	(20.612)***		(-2.478)***	(38.441)***	(8.11)***	(-1.732)*	(-4.743)***	
Long Low Short High	0.0019	-0.1651	0.599	0.0018	-0.1566	0.0086	-0.0549	-0.0011	0.597
	(1.880)*	(-9.671)***		(1.880)*	(-6.834)***	(0.186)	(-1.631)	(-0.063)	
Panel B: Value weighted									
High Reputation Risk	-0.0005	1.0004	0.978	-0.0006	1.0022	-0.0188	0.0036	-0.0346	0.978
	(-1.778)*	(61.884)***		(-1.894)*	(56.099)***	(-1.745)*	(0.155)	(-2.003)**	
Low Reputation Risk	0.0045	0.9103	0.963	0.0038	0.8933	0.2895	-0.1768	-0.0458	0.978
	(3.762)***	(36.798)***		(4.650)***	(56.961)***	(6.187)***	(-4.472)***	(-2.960)***	
Neutral Risk	0.0043	0.9079	0.961	0.0039	0.8878	0.2955	-0.179	-0.0477	0.976
	(3.541)***	(32.956)***		(4.790)***	(49.286)***	(6.112)***	(-4.343)***	(-3.060)***	
Long Low Short High	0.0033	-0.0845	0.136	0.0025	-0.0879	0.2659	-0.1883	-0.0156	0.378
	(2.242)**	(-3.908)***		(2.043)**	(-4.008)***	(5.507)***	(-5.248)***	(-0.743)	

Note: The table presents the risk-adjusted performance of the high reputation risk, low reputation risk, neutral risk and long-short portfolios using characteristic-matched sample. High and low reputation risk portfolio consists of stocks with reputational score is above and below the mean, respectively. The neutral risk portfolio consists of stocks with no reputation risk and the long-short portfolio that buying stocks with low reputation risk and selling stocks with high reputation risk. Panel A shows the results of equal-weighted portfolios and Panel B shows the results of value-weighted portfolios. Portfolios are monthly adjusted based on sample period from February 2007 to August 2012. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. T-statistics are in parentheses. Coefficient covariance and standard errors are made heteroskedasticity and autocorrelation consistent based on the method.