Does Corporate Social Responsibility Performance Affect Reputational Risk?

One company takes care of its employees, buys only from responsible suppliers, and encourages its managers to behave ethically. Another company has a history of releasing toxic pollutants, periodically closes facilities and irresponsibly lays off employees, and has been linked to various instances of fraud and price-fixing. Shouldn't the second company be more exposed to reputational risks than the first?

We combined CSRHub data on perceived CSR performance and RepRisk data on the level of ESG-related reputational risk exposure for more than 4,000 companies from around the world. We were able to explain 23% of the variation in risk exposure for the 2,000 companies who have revealed the most sustainability data about themselves. We found almost no correlation between risk exposure and sustainability disclosure for the remaining companies, who have revealed little about themselves.

For the well-studied companies, it appears that those with the most sources of sustainability ratings (i.e., receive the most attention from social responsible investor (SRI) analysts, participate in the most rating programs, are tracked by the most NGOs or news outlets, or who are studied by multiple certification or crowd opinion sites) have the most risk exposure. This relationship does not appear to relate to company revenue or market capitalization. Instead, data indicates that sustainability rating sources play a role in discovering and communicating corporate risk events. In addition, companies that have strong records (as measured by CSRHub) in the Human Rights and Supply Chain, Leadership Ethics, and Resource Management areas seem to have systematically lower risk exposure. Those who have extensive Community Development and Philanthropy, Environment Policy and Reporting efforts or extensive Compensation and Benefits programs seem to have more risk exposure.

Companies who report corporate social responsibility (CSR) through one of three major reporting systems seem to have systematically higher average reputational risk exposure than those who don't. The relationship between CSR reporting and reputational risk seems to be growing over time. Taken together, our finds suggest that corporate risk managers should seek to become involved in their companies corporate responsibility and sustainability programs.

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A Broad Study across Many Industries and Regions

Reputational risk is important to many corporate stakeholders. In fact a 2013 study by Deloitte on behalf of Forbes Insight of 300 corporate executives identified reputation as the highest impact risk area for business strategy. A factory fire, explosion, toxic spill, strike or other negative event can hurt more than a company's profits. Negative events can discredit a company's brand, reduce employee morale, encourage community opposition to a new facility, and distract management's attention. If good CSR performance can "immunize" a company against reputation damaging events, CSR programs can become a type of "reputation insurance" for corporate risk managers. (Interestingly, Allianz now offers an insurance product called Reputation Protect that specifically covers mitigating the effects of a reputational risk crisis.

Our study combined data drawn from the RepRisk and CSRHub databases. RepRisk is a business intelligence provider that specializes in environmental, social and governance (ESG) risk analytics and metrics. It uses a unique methodology that screens tens of thousands of public and third-party sources in 14 languages in order to identify, filter, analyze and quantify environmental, social and governance (ESG) risks for both listed and unlisted companies from all sectors and countries in the world. This process takes place daily, to ensure dynamic and timely information. The data is captured in the RepRisk database that includes data on over 50,000 companies, and serves as a risk screening, monitoring, research and due diligence tool. The RepRisk Index (RRI) is a proprietary quantitative risk metric that measures a company's exposure to ESG risks (but is not a measure of a company's overall reputation). RepRisk's research process is based on 27 ESG issues that roll up to four "footprints"—community, employees, environment and corporate governance. RepRisk has data back to January of 2007. There is more on both CSRHub's schema and ratings process and on RepRisk's methodology and schema on each company's web site.

CSRHub rates the currently perceived corporate social responsibility and sustainability performance of 13,736 companies in more than 100 countries. It uses data from more than 370 sources to track 12 different measures of corporate social responsibility (CSR) and a number of special sustainability issues. CSRHub's 12 subcategory measures roll up to the same four categories that RepRisk uses—community, employees, environment, and corporate governance. CSRHub updates its data sets regularly and has data back to December of 2008.

7,820 of the over 50,000 companies tracked by RepRisk are included in the 13,700 companies tracked by CSRHub. RepRisk has an RRI (its risk metric) for all of the companies linked to the risks it captures in its database. Those companies which have not yet been exposed to ESG risks would have an RRI of zero. CSRHub has ratings on 4,503 of the 7,820 overlapping companies. About 4% of CSRHub's data set are private companies or government entities. The rest are publicly-traded.

The overlapping companies covered 114 industries in 18 industry groups (see Table A) and 58 countries. There is a good balance between European, North American, and Asian-Pacific companies, with another 5% from other regions (see Table B). While the study has a bias towards larger companies and those that are publicly-traded, about 7% of the sample (see Chart 1) a relatively smaller companies.

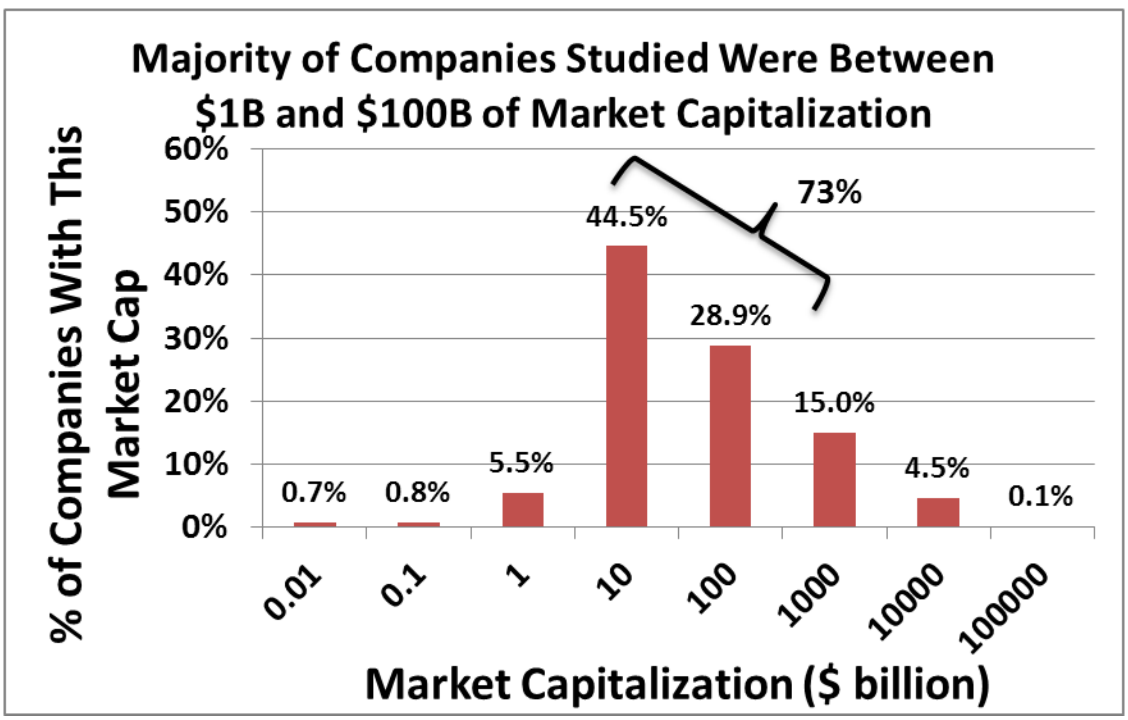
Table A: The Study Covered 19 Industry Groups

Industry Group	Percent of Total	Industry Group	Percent of Total
Agriculture & Mining	12.3%	Media	2.7%
Construction & Engineering	2.8%	Multi-Industry	1.6%
Consumer Goods	11.5%	Retail	4.8%
Distribution	1.8%	Services	4.3%
Durable Goods	10.9%	Sports & Leisure	0.3%
Education & Government	0.3%	Technology	7.7%
Finance & Real Estate	18.3%	Transportation	4.5%
Food, Beverages, & Tobacco	4.6%	Travel	1.9%
Healthcare	2.0%	Utilities & Refining	7.6%

Table B: Good Balance Between Europe, North America, and Asia-Pacific

Region	Percent of Total
Africa & Rest of World	7.9%
Asia-Pacific	24.5%
Europe	23.8%
North America	40.5%
South America	3.4%

Chart 1: Market Capitalization Distribution of the Companies Studied

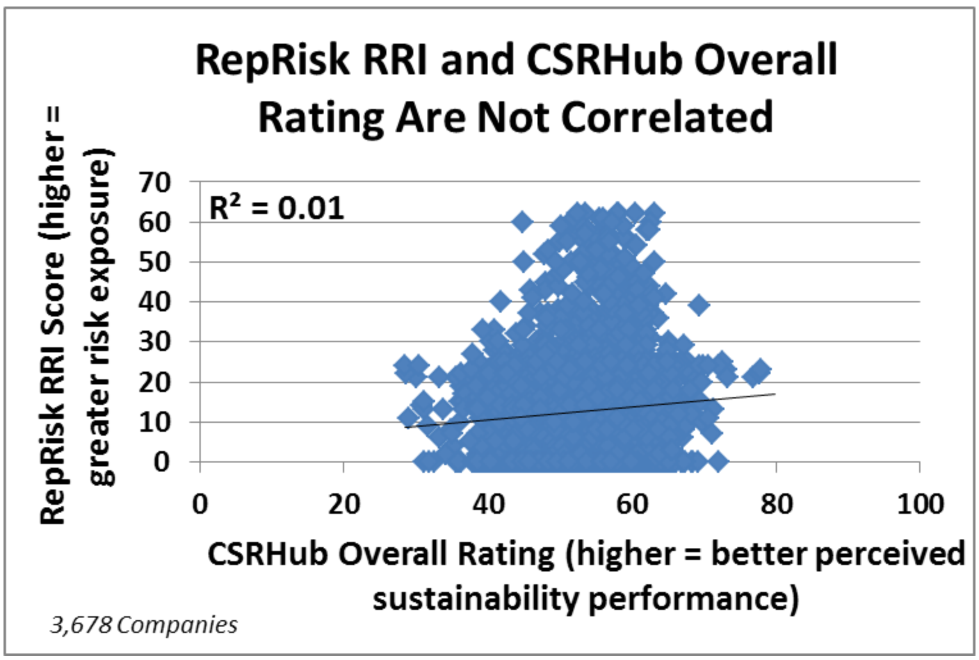


CSRHub maps data into its 12-subcategory schema. It then builds up ratings from the subcategory level, to the category level. It then generates an overall rating by combing each company's category scores using weights that reflect the needs and biases of each CSRHub user. For the purposes of this study, we used the average weights of all 14,000 CSRHub users. This should reflect an aggregate view of those interested in corporate sustainability. CSRHub did not have all 12 subcategory scores for 437 of the 4503 companies for which there were RRI scores. These companies (under 10% of the sample) were excluded from the analysis.

A Relatively Low Correlation at the Highest Level

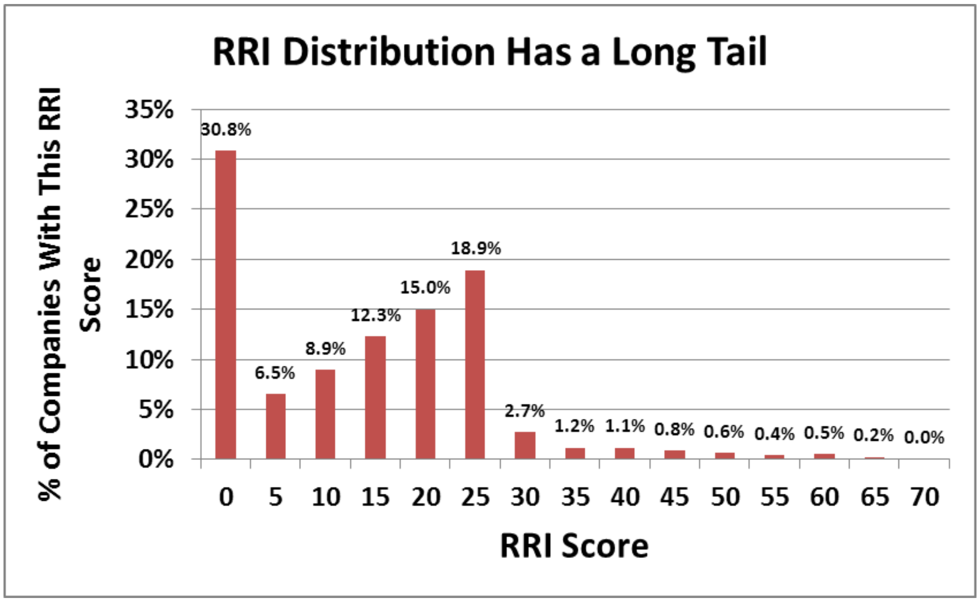
A simple high-level correlation between the RepRisk Index (RRI) and CSRHub's Overall Rating gave a weak result. CSRHub's measure of perceived corporate social performance appeared to explain very little of the variation in corporate reputational risk.

Chart 2: No Correlation at the Highest Level



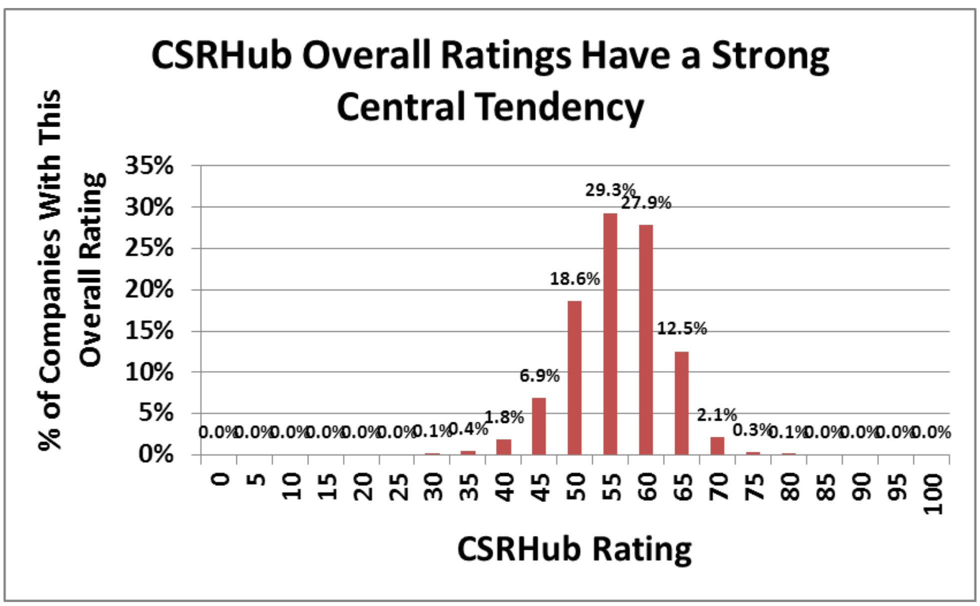
This lack of correlation makes sense for many reasons. In particular, the two measures we are using have different structures. RepRisk seeks to measure risk exposure related to ESG issues. Some companies have a score of zero or close to zero —indicating they have little or no exposure. A second group have moderate risk exposure—up to a score of about 30. The remaining companies have a long "tail" of higher scores.

Chart 3: Distribution of RRI Scores



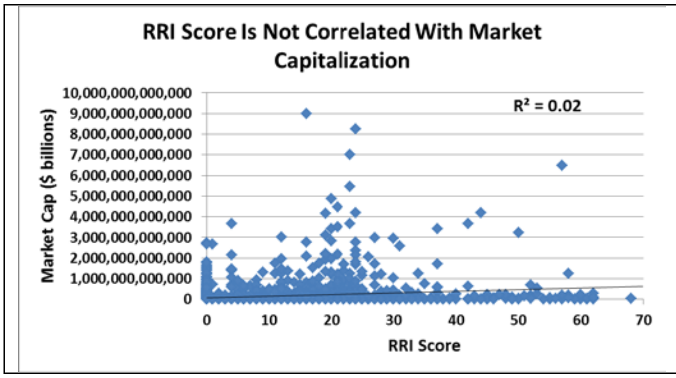
In contrast, CSRHub's ratings have a strong central tendency.

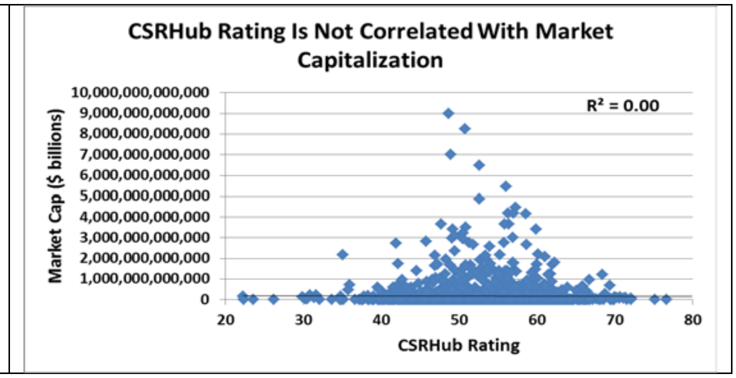
Chart 4: Distribution of CSRHub Ratings



Note that RepRisk's scores have only a small correlation with company size. CSRHub's ratings have almost no correlation with size. (Charts 5a and 5b below use market capitalization as a proxy for company size. We observed similar results using company revenue.)

Charts 5a and 5b: Correlations with Market Capitalization

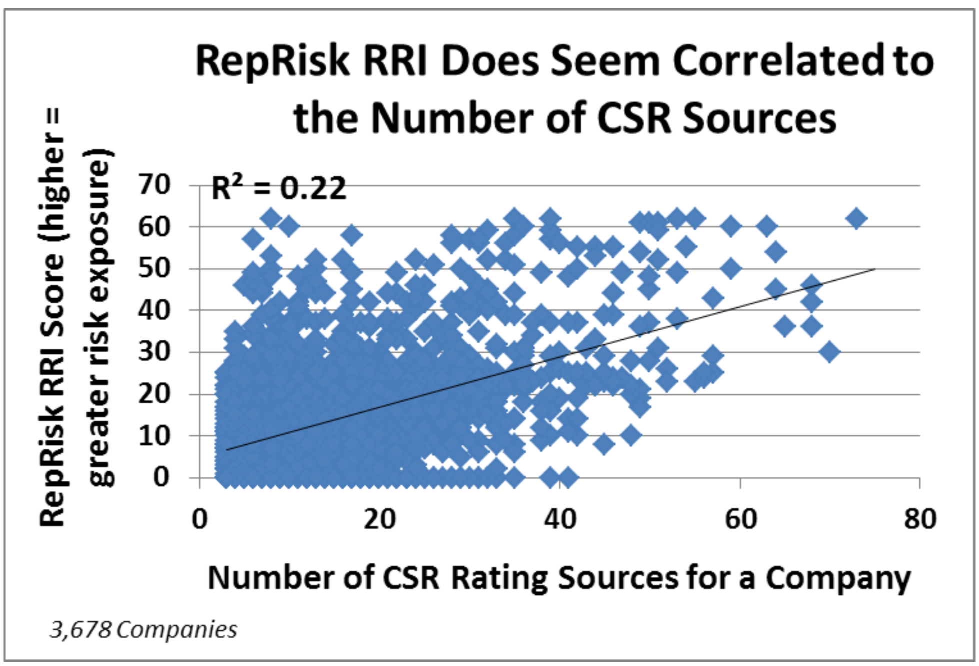




Strong Correlation with the Number of CSR Data Sources

We next compared each company's risk exposure (as measured by the RRI) against the number of corporate social responsibility data sources that had reported information about that company. We found a strong 22% correlation here.

Chart 6: RRI and Number of Sources Correlation



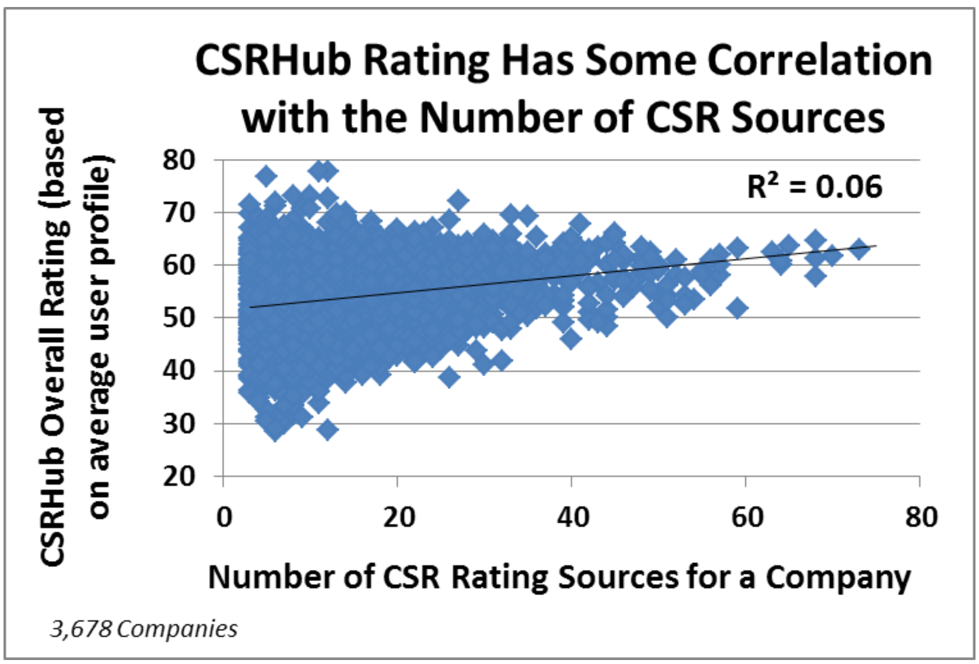
Almost all of this correlation seems to come from those companies that have 10 or more sources. Table C shows that the under-10 source companies showed only a 1% correlation between the number of sources and the RRI risk exposure measure, while those with 10 or more sources had a 21% correlation.

Table C: High and Low Number of Source Comparison

Company Group	# of Companies	Correlation Between RRI and # of Sources	Avg RRI	Std Dev in Avg RRI	Avg No of Sources	Average CSRHub Rating	Std Dev in CSRHub Rating
<10 Sources	1,652	1%	8.7	9.8	6.5	5.9	6.5
>=10 Sources	2,018	21%	15.9	12.4	18.4	6.5	5.9

Although the companies with more sources have a higher average RRI score than those with fewer sources, because there is a great deal of variation in the RRI, one cannot conclude that this difference is significant. The companies with more sources have a slightly higher overall CSRHub rating. As we've shown in the past, there may be some correlation between the number of sources and perceived sustainability performance, with companies that have more sources getting generally higher CSRHub ratings.

Chart 7: CSRHub Correlation with Number of Sources



Focusing On Specific CSR Factors Uncovered a Strong Correlation

It seems that the information generated by sustainability data sources is affecting corporate risk exposure. This information is the base for CSRHub's sustainability ratings. Why weren't overall CSRHub ratings correlating with the RRI?

We believe this can be explained by digging down into the details behind CSRHub's overall rating. CSRHub flows the data from its 370 sustainability data sources into 12 ratings subcategories. When we looked at companies that had 10 or more sources we found a 9% correlation between CSRHub's subcategories and RRI's risk exposure measure. Six of CSRHub's 12 subcategories had no statistically significant relationship with risk exposure. Three had a positive coefficient that suggests activity in the area could increase risk exposure and three had a negative coefficient that suggested they could reduce risk exposure.

Table D: Regression of RRI Against 12 CSRHub Subcategories

Regression Statistics	
Multiple R	0.314
R Square	0.098
Adjusted R Square	0.093
Standard Error	11.8
Observations	2,018

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	12	30,517	2,543	18.2	7.0372E-38
Residual	2,005	279,806	140		
Total	2,017	310,322			

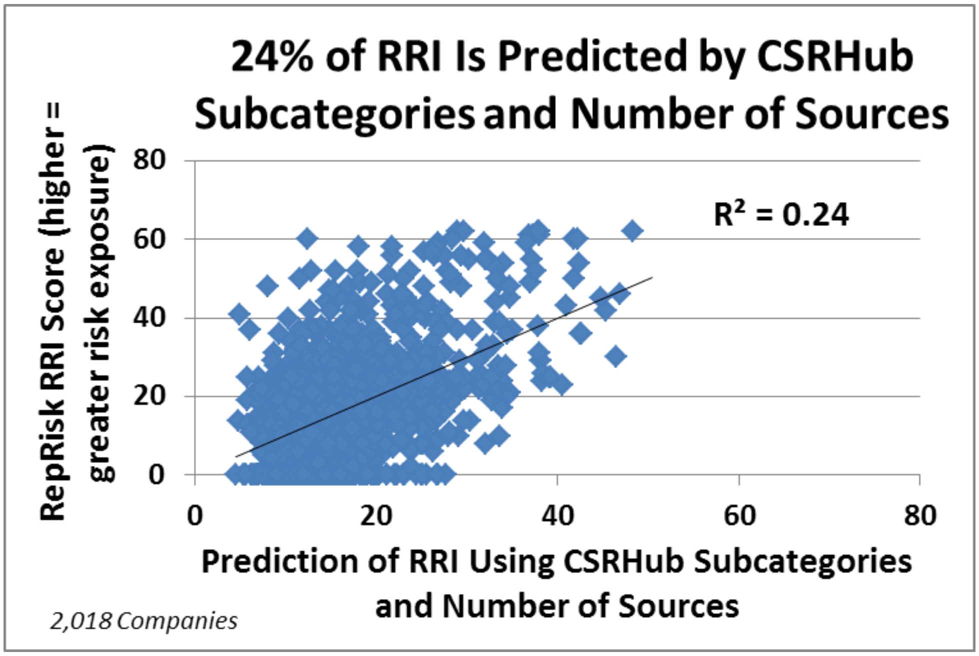
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	9.1	2.7	3.3	0.0	3.7	14.5
Board	0.0	0.0	0.2	0.8	-0.1	0.1
Community Dev & Philanthropy	0.2	0.0	3.6	0.0	0.1	0.3
Compensation & Benefits	0.2	0.0	5.2	0.0	0.1	0.3
Diversity & Labor Rights	0.0	0.1	-0.6	0.6	-0.1	0.1
Energy & Climate Change	0.1	0.1	0.9	0.4	-0.1	0.2
Environment Policy & Reporting	0.5	0.1	6.9	0.0	0.3	0.6
Human Rights & Supply Chain	-0.2	0.1	-4.0	0.0	-0.3	-0.1
Leadership Ethics	-0.5	0.1	-8.4	0.0	-0.7	-0.4
Product	0.0	0.0	0.1	0.9	-0.1	0.1
Resource Management	-0.1	0.1	-2.0	0.0	-0.2	0.0
Training, Health & Safety	0.0	0.0	-0.4	0.7	-0.1	0.1
Transparency & Reporting	0.1	0.1	1.5	0.1	0.0	0.2

Related to decreased risk exposure

Related to increased risk exposure

When we added the number of data sources as a thirteenth variable, and used only companies that had at least ten sources of sustainability information, the correlation with RRI jumped to 24%.

Chart 8: Correlation Between RRI and 12 CSRHub Subcategories



The seven sustainability elements we identified as related to risk exposure each make sense. We also understand why some elements may not relate to risk:

- **Risk-reducing factors.** Good **Human Rights & Supply Chain** programs should help a company identify supply chain hot spots and either replace a poor performing supplier or help it improve its internal processes. A tradition that values **Leadership Ethics** should keep a company from engaging in risk-creating practices. And **Resource Management** programs that recycle and reuse resources will tend to minimize a company's ecological footprint and reduce opportunities for environmental problems.
- **Risk-increasing factors.** Strong **Community Development and Philanthropy** programs may be connected with increased risk, because companies that have them may be trying to avoid or offset risky activities. Some giving programs may also fail to integrate with a company's overall CSR strategy or the needs of key stakeholders. Both giving programs and extensive **Environment Policy and Reporting** programs may be seen as "greenwashing"–only needed when a company has community- or environment-related risk. The positive correlation with **Compensation and Benefits** may support the theory that higher risk companies may need more aggressive employee incentive programs. These programs may lead to employees pushing to meet unrealistic financial or operating objectives.
- **Un-related factors.** Six factors did not seem correlated with risk. It seems that company **Boards** are too removed from operating decisions to have much connection with risk exposure. **Diversity and Labor Rights** and **Energy and Climate Change** issues should introduce risk, but perhaps in too abstract a manner to show up in our study. The CSRHub **Product** category

measures whether or not a company's products have impact on society—a different issue perhaps from whether they generate corporate risk. We expected **Training, Health, and Safety** issues to be important for risk. However, many companies may have shifted their risk focus in this area into their supply chain. Finally, the lack of connection with **Transparency and Reporting** may be due to the timing lag between corporate sustainability reporting and risk-related events.

Is There a Causal Relationship between CSRHub's Ratings and Data Source Count and Risk Exposure?

A 24% correlation between a set of sustainability factors and an estimate if risk exposure seems high and strongly suggests there is a connection between these factors. However, as Edward Tufte has put it, "Correlation is not causation but it sure is a hint." We do not know which of the following is true:

- **Perceived CSR performance could be unrelated to reputational risk.** Despite the statistics cited above, it is possible that our result is due to random variation and there is no tie between CSR performance and reputational risk. We hope others will test our conclusions using these data sets or ideally, using other similar measures of social performance and corporate risk exposure.
- **Reputational risk and CSR performance could both be correlated with some other factor.** For instance, although we accounted for market capitalization, we did not adjust for revenue, number of employees, industry group, or geographic region. As a result, our data sets could appear to be correlated with each other, when they in fact just share a common driver. We have tested our results across industry groups and geography, and have not found any major difference in our result. (This is why we have not included these factors in our analysis.) Market capitalization tends to be closely correlated with revenue and number of employees—and we have already shown there is no correlation between market capitalization and either of our two data sets.
- **Reputational risk and sustainability are related.** One easy additional test is to estimate the probability that an observed correlation is actually zero (no correlation). This probability is expressed via an "F value." An F value equal to one would indicate that the chance that the observed correlation is zero is the same as the chance that it is non-zero. With 2,000 data points, an F value above 4 would indicate less than a 5% chance that the observed correlation is zero. The F value for our correlation of all CSR factors and the number of data sources against reputational risk is 18. This suggests there is a vanishingly small chance that there is no correlation between these data sets.

We will present two more arguments to support the contention that the third option is the best explanation for our results.

Participation in Major Reporting Systems Appears to Increase Risk Exposure

About two thirds of the approximately 4,500 companies we examined in this study report their behavior to CDP (the Carbon Disclosure Project), make a declaration to the United Nations Global Compact, or disclose their sustainability performance using the Global Reporting Initiative framework. A simple further test of the relationship between disclosure and risk exposure is to see if there is a correlation between participation (at any time over the past five years) in these programs and an increased RRI score. The results of this analysis show a correlation of 9% and strong positive coefficients between these reporting systems and the RRI risk exposure score.

Table E: Effect on RRI from Participation In Three Ratings Program

Regression Statistics	
Multiple R	0.30
R Square	0.09
Adjusted R Square	0.09
Standard Error	11.13
Observations	4507

ANOVA

	df	*SS*	*MS*	*F*
Regression	3	53402.85725	17800.95	143.667
Residual	4503	557940.8716	123.9043	
Total	4506	611343.7289		

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	8.21	0.26	31.75	0.00
Global Reporting Initiative	4.37	0.39	11.19	0.00
CDP Project	3.19	0.36	8.98	0.00
UN Global Compact	1.86	0.43	4.28	0.00

Related to decreased risk exposure

Related to increased risk exposure

The Historical Relationship Between CSR and Reputational Risk Contributes Support

A second test of the connection between sustainability metrics and risk exposure is to look at their relationship over time. The quality and depth of sustainability reporting has improved dramatically since

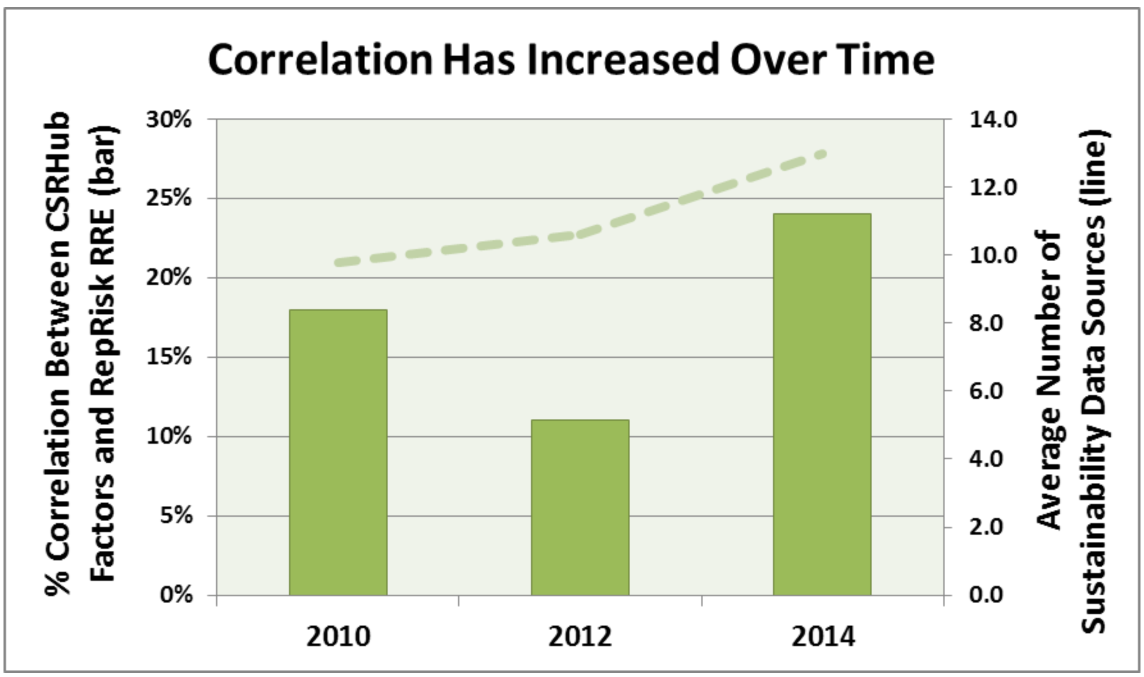
2010. As a result, we would hope that the correlation between CSRHub's sustainability metrics and risk exposure has increased over this time period.

Both RepRisk and CSRHub have used consistent methods to evaluate companies over time. We compared results using our 2014 approach with data from 2010 and 2012 to see how the sustainability—reputational risk relationship has changed over time.

In April of 2012, there were 2,228 companies with both RepRisk ratings and full CSRHub ratings. Of these, 1,279 had both 10 or more data sources and ratings for all 12 CSRHub subcategories (the same criteria we used to choose the sample analyzed above). For April of 2010, we had 1,363 companies with both ratings and 590 that had more than 9 sources.

As you can see in Chart 9 below, there is evidence that the relationship between our sustainability metrics and RepRisk's risk measure has been growing over time. The fact that the 2010 number is higher than that for 2012 may be due to using more than 9 data sources to split the data. The average number of sources for our data sets grew to 13 from 9.8 between 2010 and 2014. As a result, it was much harder to be a company with 10 different sources of sustainability data in 2010 than in 2014.

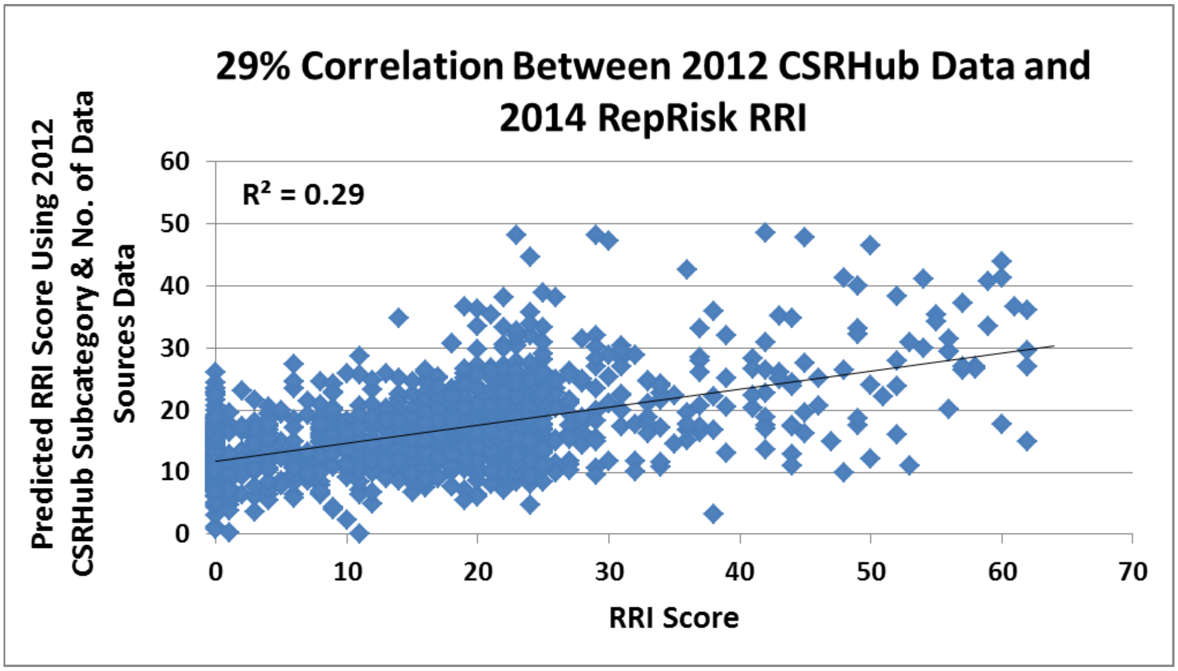
Chart 9: Correlation Over Time Between RRI and 12 CSRHub Subcategories



Interestingly, the sustainability factors that appear to drive risk exposure were somewhat different for 2010 and 2012. Human Rights and Supply Chain and Resource Management performance were consistently tied to reduced risk, while Community Development was consistently tied to increased risk. Other factors were more or less significant—a "rotation" of emphasis that we have also seen in our studies on the connection between sustainability and brand value. A strong positive relationship remained between risk and the number of data sources, for both 2010 and 2012.

Regardless of the relative importance of different factors, our 2012 sustainability data seemed to have good predictive value for 2014 risk exposure. We found a 29% correlation (F factor of 39.7) between the 2012 CSRHub subcategory ratings and number of data sources and RepRisk's 2014 RRI.

Chart 10: Correlation Between Past Values for 12 CSRHub Subcategories and Current RRI



Conclusion and Next Steps

We believe we have shown that an increase in the number of data sources who report on a company may be associated with higher risk exposure. We believe we have also shown that several types of sustainability programs can help mitigate this increase. Other types of sustainability programs seem to be unrelated to risk or may increase risk exposure.

If these connections are real, a company that seeks to lower its reputational risk could choose to take one or more of the following actions:

- If a company is not followed by multiple sustainability sources, it may not see a direct connection between investments in sustainability programs and changes in its reputational risk. However, as the number of sustainability sources and their coverage continues to grow, the social performance of most companies will eventually be "noticed." It may make sense to start building a strong foundation of sustainability practices, early.

- If a company is followed by multiple sustainability data sources, we believe our study shows there will be a connection between its perceived sustainability performance and its reputational risk. To reduce risk, companies should invest in Human Rights & Supply Chain, Leadership Ethics, and Resource Management programs, as these areas are correlated with lower risk.
- When a well-followed company has strong programs in Community Development and Philanthropy, Environment Policy and Reporting, or Compensation and Benefits programs, our study predicts it will also have higher reputational risk. However, we suspect that the strong sustainability programs may be a reaction to past risk events or concern about possible future events. If this is true, it suggests that corporate risk managers and sustainability managers need to collaborate on these programs to ensure that they meet both a company's sustainability and risk-reduction goals.

Regulatory and societal pressures are likely to force companies to increase their reporting disclosures. See our recent articles on the effect of the Sustainability Accounting Standards Board (SASB) for a discussion of these trends. As a result, "stealth" behavior aimed at avoiding attention will become more difficult than it has been in the past. This means companies who seek to reduce their reputational risk will need to look for help from the two options we describe, above.

We have compared CSRHub category scores against the equivalent RepRisk lower level scores. We did not find any new results. However, it may be possible to find specific "best practices" for the six sustainability areas that seem to affect reputational risk by examining either the millions of data element details that flow into CSRHub's 12 subcategory scores or the detailed data elements that are linked to the 27 ESG issues that RepRisk tracks. The details underlying CSRHub's ratings and the top level and second level RepRisk factors are available via the CSRHub web site or its Excel-based Dashboard. We hope CSR professionals and researchers will help us continue our research and further support the idea that sustainability programs can help cut corporate risk.

We have found evidence that the effect of different areas of CSR activity on risk exposure may change over time. We need to investigate this further and see if we can tie these changes to previously studied trends. We need to compare CSRHub's ratings with other measures of corporate risk. We suspect that other major providers in this area may have captured or focused on different aspects of corporate risk.

As mentioned above, we have shown previously that there is a connection between brand value and perceived sustainability performance. We expect to find more connections between sustainability and operating results and to eventually prove that corporate social responsibility and corporate long-term financial and operation performance are inextricably linked.

About CSRHub and RepRisk

About the Authors

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Bahar Gidwani is CEO and Co-founder of CSRHub. He has built and run large technology-based businesses for many years. Bahar holds a CFA, worked on Wall Street with Kidder, Peabody, and with McKinsey & Co. Bahar has consulted to a number of major companies and currently serves on the board of several software and Web companies. He has an MBA from Harvard Business School and an undergraduate degree in physics and astronomy. Bahar is a member of the SASB Advisory Board. He plays bridge, races sailboats, and is based in New York City.

About CSRHub

CSRHub provides access to the world's largest corporate social responsibility and sustainability ratings and information, covering over 13,000 companies from 135 industries in 127 countries. By aggregating and normalizing the information from 370 data sources, CSRHub has created a broad, consistent rating system and a searchable database that links millions of rating elements back to their source. Managers, researchers and activists use CSRHub to benchmark company performance, learn how stakeholders evaluate company CSR practices, and seek ways to improve corporate sustainability performance.

About RepRisk

RepRisk is a leading business intelligence provider specializing in dynamic environmental, social and governance (ESG) risk analytics and metrics. On a daily basis, RepRisk systematically screens big data from a broad range of open intelligence sources in 14 languages in order to identify, filter, analyze and quantify ESG risks (such as environmental degradation, human rights abuses and corruption) related to companies, projects, sectors and countries.

This external perspective provides valuable insight on whether a company's policies, processes and commitments are consistently translating into performance.