Calvert Institute for Responsible Investing

Defining the links between corporate ESG performance and credit risk

Witold J. Henisz
Wharton School
Deloitte & Touche Professor
of Management
in Honor of Russell E. Palmer,
former Managing Partner

James McGlinch
Wharton School
Doctoral Student

- A growing body of research has established positive links between better management of environmental, social and governance (ESG) factors and improved credit risk.
- This study advances the discussion with the first large-sample empirical analyses of the mechanisms that link ESG performance to credit risk.
- Our broadest finding showed that companies with strong ESG performance experienced fewer surprises – and lower volatility – in response to both good and bad events.
- As examples, in the transportation sector, firms with high ESG performance endured fewer labor problems, unexpected strikes and layoffs. In the oil & gas sector there were fewer industrial accidents. In technology/media/telecommunications companies, there were fewer terminated business contracts.

This paper draws from work by Witold Henisz and James McGlinch in "ESG, Material Credit Events, and Credit Risk" in the Journal of Applied Corporate Finance, Vol. 31, Number 2, Spring 2019. One of the authors, Witold Henisz, conducts joint research with Calvert aimed at enhancing public education and knowledge related to Responsible Investing and business practices; he receives compensation for this work.

A growing body of research has established positive links between better management of environmental, social and governance (ESG) factors and improved credit risk. Prior studies argue that fixed-income investors are likely to have a longer-term horizon, and that bond pricing should reflect the risk mitigation benefit from higher ESG performance (or a broader enterprise risk management capability enhancing ESG performance and financial outcomes). Companies with higher ratings on ESG criteria were shown to have lower loan spreads, higher credit ratings and lower credit default swap spreads.

There is also abundant qualitative evidence of companies whose shortfalls in ESG performance have translated into material harm, with clearly negative consequences for creditors. Many of these cases include liabilities associated with lawsuits, government regulatory actions and lost revenue.

Despite the growing wealth of research, there has been no large-sample empirical study of the *mechanisms* that link ESG performance to credit risk. Using a novel dataset that provides systematic coding of material events reported in the media across a variety of settings, this study seeks to start filling that gap.

Our research includes two sector-level studies and a broader, large-sample analysis.

Sector-level studies

Our first sector study examined the link between Indigenous land claims and material credit events. Out of a universe of 4,642 infrastructure projects that received $3.2 trillion worth of credit, we were able to geocode – i.e., identify the latitude and longitude – of 1,444 that received $1.4 trillion worth of credit. Of those, we were able to match the parent companies of 255, representing $121.5 billion worth of credit, with material events highlighted in news reports.

The five events we focused on were: halts to operations due to unusual events, inquiries from regulatory agencies, enforcement actions from regulators, lawsuits or legal issues, and labor-related problems like work slowdowns.

We found a strong positive correlation between geographic proximity and event occurrence. For the five events noted above, the likelihood of occurrence increased by as much as 500% for projects within 10 kilometers of an Indigenous land claim, compared with those more than 500 kilometers away.

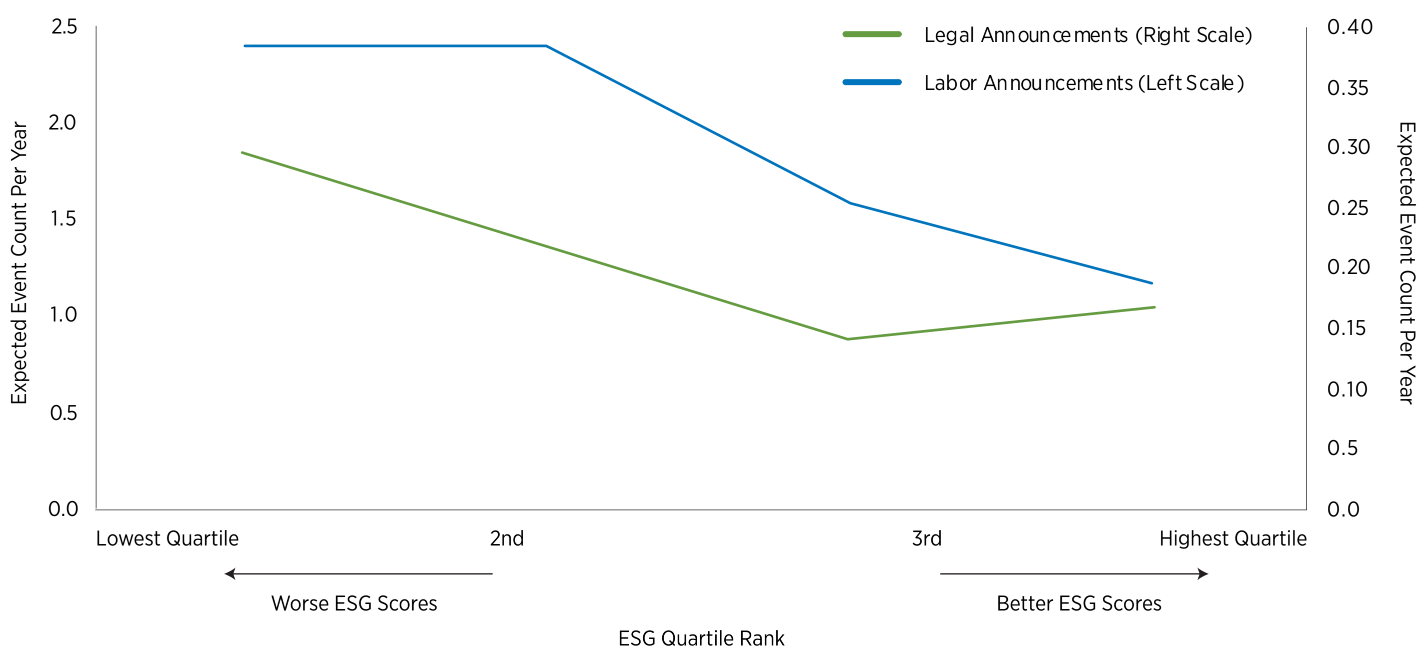
Project sponsors who were rated poorly on Indigenous rights encountered such events anywhere from three to 66 times more frequently, depending on event type and risk measure.

Biodiversity impacts

Our second study was inspired by a growing body of case studies linking environmental stewardship to material outcomes in the commodity value chain.

Exhibit A

Firms with higher ESG scores had fewer legal and labor issues.



Source: Henisz, Witold and James McGlinch, "ESG, Material Credit Events, and Credit Risk," Journal of Applied Corporate Finance, Vol. 31, Number 2, Spring 2019. ESG rankings based on average of scores provided by TruValue, RepRisk, Sustainalytics and KLD.

We began with a universe of 4,352 companies involved in a variety of commodity-based industries, ranging from food and kindred products, eating places and food stores to agricultural production of crops and livestock. Companies in this universe were also identified in the Thomson Reuters Dealscan dataset as issuing fixed income securities between January 31, 1985 and April 5, 2018; by our tally, they collectively raised more than $6 trillion worth of debt over that period.

From this broad universe, we were able to obtain data on some measure of environmental performance for 3,663 of them. For 399 companies in our sample, we also obtained data on the frequency of the five material credit events described above in the Indigenous claims discussion: halts to operations due to unusual events, inquiries from regulatory agencies, enforcement actions from regulators, lawsuits or legal issues, and labor-related problems like work slowdowns.

We found a strong correlation between higher stewardship ratings and lower probability of the noted negative material credit events. The incidence of lawsuits or legal and labor relations issues for companies in the bottom quartile of environmental performance was more than twice that experienced by those in the top quartile (Exhibit A).

Large-sample study

We next extended the same logic to a broader sample of 342 companies from 13 industries, excluding financial services, from 2009 to 2017. The sample was composed of the largest (by revenue and market capitalization) nonfinancial corporations operating in each industry globally during the periods when such companies were covered by ESG ratings. We correlated ESG performance of these companies with 15 kinds of negative events and 15 positive.

We found clear evidence that companies with higher performance on ESG criteria had fewer negative material events. Companies with lower performance relative to their peers in their industry, based on material ESG criteria, experienced a higher incidence of such material events.

When we separated the results by industry, we observed some important variation in the distribution of statistically significant negative correlations (Exhibit B), involving the "pathways" connecting ESG performance and its impact on credit risk.

For example, reduced revenue is the most common pathway connecting a negative event and its impact on credit risk. We found that higher ESG performers had fewer negative events that result in reduced revenue. This occurred in industries such as infrastructure, medical devices, pharmaceuticals, retail, and technology/media/telecommunications. But such events can also affect production, as in the case of pharmaceuticals, retail, and technology/media/telecommunications — and they can disrupt supply in industries like food & beverage and oil & gas.

Here are some other common pathways "less traveled" by strong ESG performers:

- Fewer lawsuits in food & beverage, industrials, oil & gas, retail, and technology/media/telecommunications
- Fewer labor problems in the transportation sector, with fewer unexpected strikes and layoffs
- Fewer terminated business contracts in technology/media/telecommunications companies
- Fewer closed facilities in the retail industries
- Fewer negative patent and regulatory events in pharmaceuticals
- Fewer industrial accidents in the oil & gas sector

The pathways between strong ESG performers and positive events were more tenuous, with more ambiguous results. Aerospace & defense and automotive companies with higher ESG performance had more new business contracts than expected, while automotive firms also received a boost to their government contracts and revenue. Apart from a greater propensity to enter into joint ventures by industrials and companies in technology, media, and telecommunications, the only other positive correlation is for positive demand in retail.

Future ESG credit risk studies

Our research is the first to use a large-scale dataset to establish the link between ESG performance, material credit events, and credit risk. In future work, we will seek to better identify the mechanisms underlying this correlation and the specific corporate practices driving the results — preliminarily, it appears that a longer-term orientation on the part of management plays an important role. We hope that this initial research will spur others to probe these relationships and uncover ways of strengthening corporate ESG performance, reducing negative credit events, and limiting credit risk so as to improve both social and economic outcomes.

Exhibit B

Strong ESG performers showed less volatility on downside and upside

The red numbers that dominate the top half indicate negative correlations: As ESG performance increased, the number of negative events, specified in the left column, decreased. Only one industry — medical devices — showed a positive correlation with a negative event (M&A problems). The numerous negative correlations in the lower half mean that as ESG performance increased, incidences of positive events declined. The takeaway is that on balance, firms with strong ESG performance experienced fewer surprises, both good and bad. (Blank cells indicate results that were not statistically significant.)

Red = Negative Correlation
Black = Positive Correlation

Negative Events	Aerospace & Defense	Autos	Chemicals	Food & Bev.	Industrials	Infra-structure Service	Medical Devices	Metals & Mining	Oil & Gas	Pharma	Retail	Tech, Media & Telecom	Transport
Facility closure/sale											-0.2428		
Industrial accidents									-0.1273				
Strikes													-0.2007
Layoffs										-0.1915			-0.156
Adverse legal actions				-0.1587	-0.1889				-0.1817		-0.3619	-0.2508	
M&A problems					-0.1354		0.3451						
Patent issues										-0.1437			
Regulatory problems										-0.1206			
Business contract terminated												-0.1159	
Product-related recalls or damage										-0.1996	-0.2123	-0.1314	
Supply interruptions or shortages				-0.1786					-0.1421				
Revenue shortfalls						-0.3657	-0.3649			-0.1424	-0.2222	-0.1337	
Total correlation for negative events				-0.1631		-0.2346			-0.1313	-0.1913	-0.3619	-0.2346	-0.1835

Positive Events	Aerospace & Defense	Autos	Chemicals	Food & Bev.	Industrials	Infra-structure Service	Medical Devices	Metals & Mining	Oil & Gas	Pharma	Retail	Tech, Media & Telecom	Transport
New facility or upgrade											-0.3016		-0.1753
Joint venture agreement					0.1309							0.1083	
Increased hirings													-0.1626
Union pact					-0.1376								-0.156
Favorable legal actions											-0.2087	-0.1235	
M&A										-0.1397			
Increasing demand									-0.1275				
Supply growth				-0.2247				-0.309		-0.1857			
New contracts	0.2509	0.1648		-0.1683							-0.3366		
Clinical trial progress			-0.1485										
Increased demand					-0.1306								
Government contract		0.1654											
Regulatory approval			-0.1604										
Increased revenue		0.3342				-0.3252						-0.1064	
Total correlation for positive events		0.1942		-0.22				-0.2067			-0.2841		-0.2105

Source: Henisz, Witold and James McGlinch, "ESG, Material Credit Events, and Credit Risk," Journal of Applied Corporate Finance, Vol. 31, Number 2, Spring 2019.

How the Dakota Access Pipeline inspired Calvert ESG research

John Streur
President and CEO
Calvert Research and Management

In April 2016, opponents of the Dakota Access Pipeline first set up protest camps in North Dakota — camps that would later swell to thousands. The $3.8 billion project — proposed by Dallas-based Energy Transfer Partners (ETP) in December 2014 – was designed to carry half a million barrels of oil a day over 1,200 miles across four states.

The protests and subsequent publicity shone a bright light on the intersection of corporate interests and the rights of Indigenous people. It sparked broad debate about corporate social responsibility, especially for extractive industries like oil and gas, and pipelines, and the impact on affected communities.

The issues raised underscored Calvert's long-held belief that sustainability principles are key elements for long-term corporate growth and profitability. At the most obvious level, the protests stopped the project several times and created costs for the company and the communities.

From a broader perspective, the Dakota Access Pipeline episode also helped advance our thoughts about how environmental, social and governance (ESG) factors can guide investor choice. We concluded that academic research could be a valuable complement to our own initiatives to elucidate how corporate performance on material ESG factors may be linked to financial results.

The main body of this paper comprises research sponsored by Calvert, summarizing the work by Witold J. Henisz and James McGlinch of the University of Pennsylvania's Wharton School, as published in the Journal of Applied Corporate Finance. It expands on some of the main issues raised by the Dakota Access Pipeline protests and how companies relate to their community of stakeholders — in this case the local Indigenous population. We believe it is an important contribution to the body of ESG research, especially as it pertains to fixed income, which has received less attention than equities.

ETP was well known for doing a poor job of engaging Indigenous people. In contrast, Calvert has been aware that many companies abide by a set of policies known as "free and informed prior consent." Such policies involve more up-front work, but our experience is that projects generally go more smoothly when there is initial buy-in from the communities.

The ETP episode prompted a number of related questions, such as:

- How readily available is information about the consent policies employed by companies?
- Do fixed-income investors distinguish between companies with good consent policies and those lacking them?
- Does fixed-income pricing reflect such discrepancies between borrowers?
- How broadly applicable is the experience of consent policies to a wider range of environmental, social and governance factors?
- Could a company's performance on ESG factors be predictive of its susceptibility to negative credit events in general, like revenue shortfalls, lawsuits, strikes and layoffs?

Our initial observations of the Dakota Access Pipeline event indicated that relevant ESG data was readily available for investors, but it wasn't accurately priced into fixed-income models. This was an important starting point for tackling the questions noted above, through the research of Calvert, Henisz and McGlinch, and a range of other academic studies we have sponsored.

Since the days of the Dakota Access Pipeline, Calvert has significantly enhanced our capabilities for tying social impact to financial materiality. For example, we employ a proprietary framework that generates quantitative key performance indicators (KPIs) derived from public information reported by companies, focusing on ESG factors. KPIs allow analysts to measure qualitative information, and rate and rank company performance relative to its peer group. Analysts are able to identify companies that are improving, leading or lagging compared to the industry standard.

For Calvert, the lessons inspired by the Dakota Access Pipeline continue to strengthen the case that social responsibility is a key factor in financial performance, to the potential benefit of both investors and communities.

Witold J. Henisz is the Deloitte & Touche Professor of Management in Honor of Russell E. Palmer, former Managing Director at The Wharton School, The University of Pennsylvania. He is also Director of the Wharton Political Risk Lab and the founder of the Wharton ESG Analytics Lab. His research examines the impact of political hazards as well as environmental, social and governance factors more broadly on the strategy and valuation of global corporations. This work analyzes best practices in corporate diplomacy to win the hearts and minds of external stakeholders as well as the measurement thereof. It has been published in top-ranked journals in international business, management, international studies and sociology and he is the author of the book "Corporate Diplomacy: Building Reputations and Relationships with External Stakeholders." Witold has won multiple teaching awards at the graduate and undergraduate levels and also teaches extensively on the topic of Corporate Diplomacy as well as ESG integration in open enrollment and custom executive education programs. He is currently a principal in the consultancy PRIMA LLC whose clients span multinational firms, asset managers, intergovernmental organizations and non-governmental organizations.

James McGlinch is a doctoral student at the Wharton School of the University of Pennsylvania. His research focuses on the integration of environmental, social, and governance issues into corporate strategy and the ways through which such integration impacts firm performance.

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The Calvert Institute for Responsible Investing is a division of Calvert Research and Management created for the purpose of driving positive change through research, education and action on behalf of investors, corporations and policymakers.

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For further information, please contact:

Eaton Vance Management
Two International Place, Boston, MA 02110
800.836.2414 or 617.482.8260
eatonvance.com

Eaton Vance Management
(International) Limited
125 Old Broad Street, London,
EC2N 1AR, United Kingdom
+44 (0)203.207.1900
global.eatonvance.com

Calvert Research and Management
1825 Connecticut Avenue NW, Suite 400
Washington, DC 20009
877.341.9247 or 617.482.8260
calvert.com

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