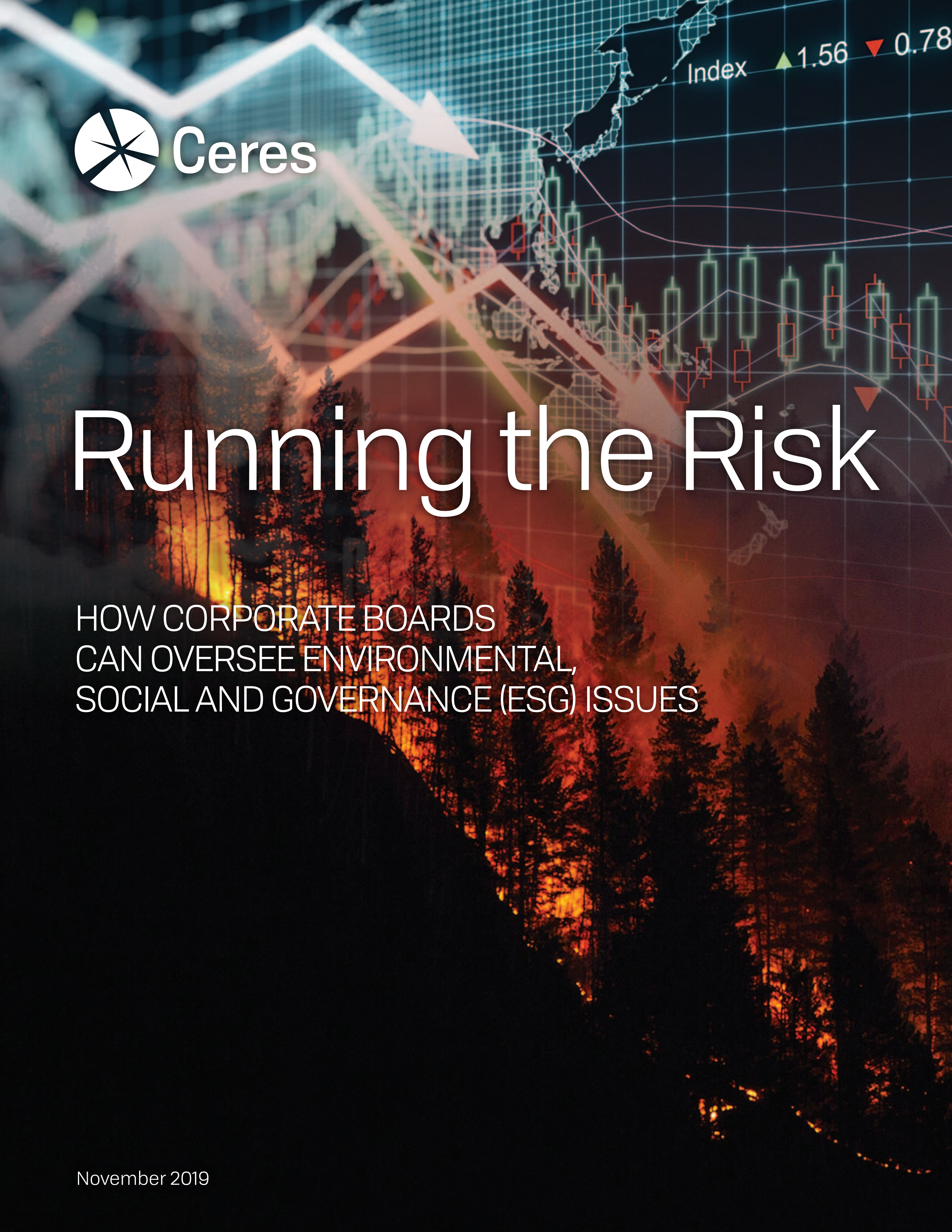

Ceres

Running the Risk

HOW CORPORATE BOARDS CAN OVERSEE ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) ISSUES

November 2019

Acknowledgements

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This project is generously funded by the **Gordon and Betty Moore Foundation**.

We would also like to thank our colleagues at Ceres who provided very useful assistance with this project, including Blair Bateson, Jim Coburn, Margaret Fleming, Barbara Grady, George Grattan, Cynthia McHale, Brian Sant, Sara Sciammacco, Alex Wilson and Elise Van Heuven.

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Ceres would like to thank the following people for contributing their valuable time and thoughtful feedback to this project and informing our recommendations. The views expressed in this paper are Ceres' alone and do not necessarily reflect those of these contributors.

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Introduction

As the risks from environmental, social and governance (ESG) issues such as climate change, water scarcity and human rights become more apparent, and with growing investor attention and action on ESG issues, it is increasingly important for corporate boards to understand how these issues affect business strategy and performance. Impacts from these issues can be financial and material, and can spread across multiple areas of a business. No longer off in the future or merely hypothetical, many of these impacts are being felt *now* across almost every sector of the economy.

In this report, Ceres provides guidance to corporate boards on how they can effectively oversee risks posed by ESG issues, including questions for directors to ask management throughout the risk identification, prioritization and mitigation processes. We also offer concrete recommendations for boards looking to improve their companies' resilience in the face of ESG risks.

Table 1: What do we mean by ESG risks?

ESG issues such as climate change, water scarcity and human rights abuses can affect corporate strategy, business objectives and performance over both the short and long-term. Risks arising from ESG issues could include not only negative impacts on business objectives such as a reduction in revenue targets or reputational damage, but could also include missed opportunities such as emerging markets for new products or cost-savings initiatives.

Physical Risks	In 2017, 73 companies on the S&P 500 publicly disclosed a material effect on earnings from weather events, and over 90% of these companies disclosed the effect on earnings was negative.[1]
Supply Chain Risks	Supply-chain disruptions due to climate risk have increased 29% from 2012 to 2019.[2]
Reputational Risks	Forty-seven percent of consumers walk away from a brand that doesn't align with their beliefs.[3]
Regulatory Risks	The number of climate change regulations has grown to 1,500 globally, up from 72 in 1997.[4]
Litigation Risks	More than 1000 cases have been filed in the U.S. on climate change impacts as of May 2019.[5]
Transition Risks	Electric vehicles (EVs) are on track to account for over half of new car sales by 2040.[6]
Human Capital Risks	Eighty-six percent of millennials would consider taking a pay cut to work at a company whose mission aligns with their values[7] and the cost of replacing one employee is between 10-30% of an employee's annual salary.[8]

ESG issues pose risks to companies, and the impacts are being felt today

The magnitude of risks posed by ESG issues are greater than ever before. The impact of these risks threaten and harm our capital markets, our communities and our planet. Once seen as most relevant to a company's social responsibility or philanthropy efforts, ESG issues now clearly can and do affect corporate financial performance.

The World Economic Forum's annual global risks report regularly identifies issues like climate change, water crises and involuntary migration as among the gravest risks our world faces, in terms of both likelihood and impact. In fact, the 2019 global risk report warned, "Of all the risks, it is in relation to the environment that the world is most clearly sleepwalking into a catastrophe."[9]

Since ESG issues are typically viewed as either long-term risks or not risk factors at all, it is important to keep in mind that many pose business consequences being felt today. Recent examples include:

- The Wall Street Journal called PG&E's[10] 2019 bankruptcy following the devastation of the 2018 Camp Fire in California "the first climate-change bankruptcy," and noted that the uncertain risks posed by climate change will likely cause significant disruptions across industries;
- More than 20,000 employees and contractors staged a walkout at Google, noting the company's culture of sexual harassment, lack of transparency and non-inclusivity;[11]
- The IOI Corporation lost 27 corporate buyers and $14.8 million in earnings in Q2 of 2016 following a Roundtable on Sustainable Palm Oil (RSPO) suspension due to the company's illegal deforestation on 11,750 hectares of land;[12]
- The Federal Reserve imposed a cap on Wells Fargo's[13] assets and forced changes to the company's board, citing "widespread consumer abuses" and poor corporate governance practices;[14] and
- A 2019 judgement called on Johnson & Johnson to pay $572 million in damages to the state of Oklahoma for deceptive marketing practices, including downplaying the dangers and overselling the benefits of prescription painkillers.[15]

ESG Issues Have Financial Impacts

Climate change: A 2019 analysis of 500 of the largest global companies estimated that potential financial implications from climate change-related impacts found just under a trillion dollars at risk- and half of these risks were anticipated to materialize in the next five years.[16]

Water scarcity: By 2050, in order to meet the needs of a growing world population of 9.7 billion, water demands are expected to increase by 55%,[17] straining water-intensive industries such as food and beverage and energy, posing geographic and supply chain risks, increasing commodity price volatility and decreasing supply reliability. The World Bank identified that water scarcity could cost some regions up to 6% of GDP.[18]

Deforestation threats: Up to $941 billion of revenue from publicly listed companies is dependent on commodities linked to deforestation.[19] In 2017, 87% of nearly 300 large global companies identified at least one risk related to the production or consumption of forest-risk commodities including timber, palm oil, cattle and soy. Nearly a third of these companies are already experiencing impacts from these risks, such as a reduction or disruption of supply, increased costs or reputational damage.

The #MeToo movement: Surveys[20] reveal that 55% of professional women are less likely to apply for a job and 49% are less likely to buy products or stock from a company with a public #MeToo allegation. Sexual harassment is now considered a serious investment risk,[21] with increased pressure on boards to oversee the company's sexual harassment policies and enforcement.

Conscious consumption: Nearly nine out of ten of U.S. consumers say their purchasing decisions will be impacted by a company's stance on an issue they care about, and 78% say they want companies to address important social issues.[22]

Diversity: Companies that have more diverse management teams have 19% higher innovation revenue* and report better overall financial performance.[23]

* The share of revenues that companies generate from enhanced or new products or services over the most recent three years.

Investors are driving action on ESG risks

Research from Bank of America,[24] Morgan Stanley,[25] JP Morgan[26] Deutsche Bank[27] and others overwhelmingly reiterates that companies that incorporate ESG factors are either competitive with their peers or, in some cases, outperform their peers when risk-adjustments are factored in. Acting on this clear connection, investors are driving action on ESG in four key ways:

1) Investors are calling on their portfolio companies to demonstrate progress on relevant ESG topics. Climate change and other sustainability issues were a top focus area of investors in the 2018 and 2019 proxy seasons. For instance, pressure from shareholders led to Royal Dutch Shell's late 2018 announcement that the company would set carbon emissions targets and link a portion of its executive compensation to these goals.[28]

2) Investors are significantly stepping up their engagement with companies exposed to ESG risks. In 2018, over 300 global investors with more than $33 trillion in assets under management (AUM) formed the CA100+ initiative to engage 161 GHG emissions-intensive companies on climate risks, calling on them to "minimize and disclose the risks and maximize the opportunities presented by climate change and climate policy."[29] In 2019, 230 institutional investors representing $16.2 trillion in AUM called on companies to address financially material deforestation risks, including market and reputational risks within their operations and global supply chains.[30]

3) Investors are calling for greater disclosure of ESG risks to better assess impacts to their portfolios. Nearly 400 investors managing a total of $32 trillion[31] in assets have called on companies to provide disclosure on climate risks using the Task Force on Climate-related Financial Disclosure (TCFD) reporting recommendations, a set of voluntary, consistent, climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers and other stakeholders. In 2018, over 65 investors and other partners filed a petition at the U.S. Securities and Exchange Commission (SEC) calling for rulemaking to develop a comprehensive framework requiring issuers to disclose material ESG factors.[32]

4) Investors are specifically calling on boards to oversee business-relevant ESG issues. Major investors such as State Street, the California Public Employees Retirement System (CalPERS) and the California State Teachers Retirement System (CalSTRS) are calling on boards to address climate change and other ESG issues as part of their long-term sustainable value creation strategies. A survey of institutional investors reported that their top three engagement priorities in 2019 included board oversight of ESG issues- particularly climate risk.[33]

Investor Action on ESG Goes Mainstream

- Over the past three years, BlackRock CEO Larry Fink's annual "Letter to CEOs"[34] has stressed the importance of the social purpose of the corporation, identifying and addressing key risks posed by ESG issues (such as climate change) as well as the board's integral role in overseeing these processes. In 2019 Blackrock updated its proxy voting guidelines for U.S. securities to include their expectations that" [in] companies in sectors that are significantly exposed to climate-related risk... the whole board [will] have demonstrable fluency in how climate risk affects the business, and how management approaches assessing, adapting to and mitigating that risk."[35]
- While the socially responsible investing (SRI) community continues to lead the charge on these resolutions, in 2017, for the first time, four of the top-ten largest asset managers, together accounting for $12.8 trillion in AUM, voted against management in favor of a climate proposal.[36]
- There's a marked increase in the support for ESG oriented shareholder proposals[37]: In 2018, the percentage of ESG proposals securing majority support doubled. Nineteen percent of resolutions secured at least 40% support, up from 12% last year, and 41% attained at least 30% support, up from 29% in 2017.
- Eighty-nine percent of global institutional investors say they will request sustainability information directly from portfolio companies, and 50% report they are "very likely" to sponsor or co-sponsor a shareholder proposal related to sustainability issues.[38]

Why should boards consider how their risk oversight responsibilities apply to ESG risks?

As a part of their role as stewards of long-term corporate performance, boards have a critical role to play in ensuring that companies are aware of, and able to navigate, an ever-evolving risk landscape. This risk oversight role is particularly challenging and more important than ever given the rapidly changing political, legal, technological and economic contexts in which companies operate. Recent case law has underlined the importance of the role of the board in providing oversight of key risk areas.[39] Given the growing understanding of the business impacts of climate and other ESG risks, and the ever-increasing attention paid by the public and investors to ESG issues, boards need to proactively consider how their risk oversight function includes consideration of ESG risks.

Where an ESG issue impacts — or has the potential to impact — the business, it is a director's job to exercise risk-related oversight. This oversight should be informed, strategic and closely aligned with the company's business model and operations to create long-term value. Where these impacts could be material, either directly or in confluence with other factors, directors need to consider oversight of these issues as a part of their fiduciary responsibility. A key part of directors' fiduciary responsibility is the duty of care — or the duty to adequately inform themselves on these issues prior to making business decisions. To fulfill this responsibility, directors need to be able to understand and evaluate the risks that arise from ESG factors.

Generally, directors are not prioritizing ESG risks

Despite increasing investor focus on their financial impacts, ESG risks are largely not discussed in the boardroom. Only 6% of U.S. corporate directors surveyed selected climate change as a focus area in the coming 12 months — unchanged from the previous year.[40] Similarly, when it comes to directors' attitudes on shareholder action, 56% of directors think investor attention on sustainability issues is overblown — up from 30% in 2018.[41]

Three main barriers prevent corporate boards from prioritizing ESG risks in the boardroom: i) a misunderstanding of how ESG issues present business risks; ii) a misperception that these risks will only materialize in the long-term; iii) and a lack of clarity on how the board's traditional risk oversight role can evolve to include risks posed by ESG issues. Yet, ESG risks continue to grow and threaten corporate value creation. When these risks materialize for a company where the board has failed to address them systematically, the only option a company will have is a crisis response. While potentially effective in the short term, a crisis response rarely gets to the root of the problem, increasing the likelihood that such an event may happen again. Boards need to be equipped with the right information and tools to evolve their risk oversight function to address ESG risks.

Risk management standards are evolving to include oversight of environmental and social factors

In 2018, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) partnered with the World Business Council for Sustainable Development (WBCSD) to release guidance on how companies could integrate ESG factors within their Enterprise Risk Management systems.[42] The details of the guidance are referred to throughout this report and found in full in Toolkit 4: How to apply enterprise risk management to environmental, social and governance (ESG)- related risks.

METHODOLOGY AND APPROACH

This report provides practical recommendations and tools for corporate directors to understand how ESG issues can pose risks to business and how boards can address these issues as a part of their core risk oversight role. In particular, it provides detailed insight on the board's responsibility to provide oversight on:

- **Risk identification:** Does the company have the right mechanisms to surface ESG risks? Are the right issues being surfaced?
- **Risk assessment:** Which risks does the board assess and prioritize as critical to organizational strategy and long-term value creation?
- **Risk mitigation:** What measures is the board working on with management to position the company to be resilient in the face of ESG risks?

This report can also be used by investors and management who engage with corporate boards on ESG issues. "Running the Risk" is based on an extensive literature review, including the COSO/WBCSD ESG Guidance, as well as interviews conducted with 27 corporate directors and issue experts across technology, mining, retail, financial institutions, real estate, and food and beverage sectors.

Ceres' Reports on Board Governance

Ceres develops the business case and leading practices for corporate board oversight of material ESG issues, and benchmarks large, publicly traded companies on their governance structures.

Ceres Roadmap for Sustainability (2010) identifies our vision for corporate sustainability leadership in the 21st century, including that corporate boards should provide formal oversight over sustainability generally and specifically within board discussions on strategy, risk and revenue. The most recent update of the Roadmap, ***Turning Point: Corporate Progress on the Ceres Roadmap for Sustainability*** (2018) tracks the progress of more than 600 of the largest U.S. publicly traded companies against these expectations. The next edition of the Roadmap is scheduled to be released in March 2020.

View from the Top: How Corporate Boards can Engage on Sustainability Performance (2015) lays out our vision for effective board oversight of sustainability issues through recommendations for board structures and actions to increase corporate sustainability performance.

Lead from the Top: Building Sustainability Competence on Corporate Boards (2017) describes how to build a sustainability-competent board: recruit directors who can serve as translators between ESG and a company's financials; educate the entire board on material sustainability issues to foster thoughtful deliberation and strategic decision-making; and engage with shareholders and other stakeholders on relevant sustainability issues.

Systems Rule: How Board Governance Can Drive Sustainability Performance (2018) analyzed 475 of the world's largest publicly traded companies and found that companies with integrated board oversight systems for sustainability were more likely to realize strong sustainability performance. The governance systems measured included those that had sustainability as part of at least one board committee charter, those that had at least one board member with expertise on sustainability and those that linked executive compensation to sustainability metrics.

Getting Climate Smart: A Primer for Corporate Boards of Directors in a Changing Environment (2018) is a primer for corporate directors seeking to understand when climate change impacts fall within a board's mandate and how boards can effectively oversee climate-related risks and opportunities with existing resources and tools.

The Board's Role in ESG Risk Identification

The board has ultimate responsibility for overseeing a company's risk management process. Directors need to ensure that corporate risk management systems both identify and evaluate salient risks within the context of the company's business strategy. As a part of this oversight role, directors should work closely with management to ensure that all ESG factors that have the potential to affect corporate strategy and value are considered.

RECOMMENDATION 1:

Consider how ESG risks could affect your company

QUESTIONS FOR DIRECTORS TO ASK

- What kind of risks could ESG issues pose to the company?
- How could these risks interrelate?
- When could these risks manifest?

Historically, ESG issues have been viewed as different from other major categories of risk such as enterprise, business-management and emerging/non-traditional risks. This view is based on an incomplete understanding of how ESG issues have affected companies. Some of the biggest issues facing companies today, such as technological disruption, workforce issues and supply chain concerns, are linked with environmental and social factors. The table below illustrates how ESG risks fall squarely within mainstream business risks that companies consider as a matter of course throughout the risk identification process.

Within some companies, the prevailing wisdom is that ESG risks pose primarily reputational impacts. In fact, ESG risks may manifest themselves in a wide variety of ways, including, but not limited to, regulatory penalties, litigation, workforce complications and loss of competitiveness, access to capital and credit. Some ESG risks, once realized, could be systemic and undiversifiable, with the potential to culminate in material financial losses for the company. In addition to considering how specific environmental and social issues pose risks to the company, boards should also consider how these risks interrelate, and whether they could rise to the threshold of materiality, whether individually or collectively. Some ESG issues are categorized as "emerging" or "long-term" as they are thought of as being realized over a multi-decade timeframe, e.g., rising sea levels. Climate change is frequently slotted into this long-term category. However, as described earlier, industries across multiple sectors are seeing impacts from climate and other ESG issues happen *now.*

For example, PG&E declared bankruptcy as a result of billions of dollars in claims incurred as a result of California wildfires in 2017 and 2018. While these fires had multiple causes, their speed and intensity were attributed in large part to conditions driven by climate change. As a regulated utility, PG&E was required to provide service across California, including in forested communities, potentially increasing the company's exposure to forest fire-related liabilities. With PG&E already reeling from the debt incurred by the 2017 wildfires, the 2018 Camp Fire, sparked by PG&E equipment, proved the deadliest and most damaging blaze in California history, resulting in potential liabilities that the company did not have the financial resources to cover. As PG&E moved toward bankruptcy, the company's stock plummeted, its CEO resigned, and Moody's and S&P Global Ratings downgraded the utility's bonds to junk status.[43] PG&E's 2019 bankruptcy has been dubbed the first "climate-change bankruptcy."[44]

RECOMMENDATION 2:

Evaluate whether existing processes allow the discovery of ESG risks

QUESTIONS FOR DIRECTORS TO ASK

- What is the company's process to identify risks from ESG factors?
- Which ESG risk factors is the company already tracking?

Companies have a range of processes to help them identify the array of risks that they face, given their strategy and business model. These processes include internal and external research, engaging employees and customers and consulting experts and insurance brokers/risk managers to identify the broad range of issues the company should examine.

As a first step, the board should assess whether the company's existing risk identification process allows for systematic identification of ESG risks. A part of this assessment involves identifying whether the company already tracks ESG issues as risks. It is important to keep in mind that such risks may not be tracked as "ESG" or "sustainability" risks — but rather as operational, supply chain or regulatory risks.

Where ESG issues are not already identified, boards should work with management to examine how existing risk identification processes could be strengthened. This strengthening may include evaluating business model assumptions. For instance, the automotive industry's business model of manufacturing personal vehicles that use internal combustion engines, which has largely remained intact for much of the past century, is facing massive disruption from the rapid increase in deployment and profitability of electric vehicles,[45] autonomous vehicles and ridesharing services.

Additionally, tools such as SWOT analyses (which identifies strengths, weaknesses, opportunities and threats) and PESTEL analyses (which monitor the macro-environmental impacts from political, economic, social, technological, environmental and legal trends) could be used to identify internal and external risks and opportunities that an organization may face, including from ESG factors. A board may also ask management to research megatrends such as climate change or water scarcity and how they impact a company's operating environment. The World Economic Forum's (WEF) global risk reports, as well as megatrend analyses provided by investors such as Blackrock[46] and Vanguard,[47] may be helpful starting points.

Table 2: How do ESG factors fit within mainstream risks?

Type of risk	Example	ESG Factors
Governance risks	Board decision-making including CEO selection, executive compensation and board composition	• Growing shareholder focus on: - Diversity of the board - Recruiting directors with ESG or climate expertise with the ultimate goal of building "climate competent boards" - Linking executive compensation to ESG factors • ESG risk impact on directors' and officers' insurance
Board approval risks	M&A, divestiture, major capital expenditures, new product lines	• ESG performance as a factor in mergers and acquisitions-related valuations • Access to capital impacted by ESG performance • Growing consumer focus on ESG solutions
Enterprise risks	Reporting risks, operational risks, human resources/ labor risks, compliance risks, reputational risks, litigation risks	• Fines and penalties arising from ESG violations • ESG regulations • ESG-based litigation • Extreme weather events disrupting operations • Workplace injuries or deaths • Sexual harassment • Data privacy and data security breaches • Market devaluation from an ESG liability - Loss of liability insurance coverage - Loss of assets, reduced profits and reputational damage - Diminished likelihood of business receiving services and capital from financial institutions
Emerging risks	New technologies, economic/regulatory policy change	• Impacts from growth of artificial intelligence technology on job creation and local economies • Genetic engineering and nanotechnology impact on product development and human health

RECOMMENDATION 3:

Look to a range of sources in identifying ESG risks

QUESTIONS FOR DIRECTORS TO ASK

- What sources were consulted to determine the company's ESG risks?
- What are our corporate peers doing on ESG risks?
- What ESG issues do our top investors think are most relevant to our sector?

Boards need to evaluate if management has consulted all relevant internal and external sources of information about which ESG risks could pose a material impact to the company.

Ideally, management should collect information on ESG risks from a range of sources. Having a cross-functional corporate sustainability team with representation from functions including operations, supply chain, legal, communications and investor relations can assist in identifying the range of these risks.

In response to increased investor attention on how its business was identifying ESG risks, **Microsoft** enhanced its internal alignment and cross-team collaboration by establishing a new position of ESG Engagement Director within the Office of the Corporate Secretary. The resulting partnership between the company's ESG experts, IR team and Corporate Secretary's office is helping the company provide better insights to investors on its sustainability strategies and performance.[48] In another example, pharmaceutical company **AstraZeneca** merged their safety, health and environment, compliance and sustainability departments into one Global Sustainability team.

Their decision was driven by their executive team, which sought to move from governance of risk to governance of the company's ESG commitments, as well as to pivot from defensive risk management to a more proactive model of corporate responsibility.[49]

Other opportunities to learn what ESG risks are facing a company can also come from employee surveys and customer feedback. A number of companies have systematic processes in place to engage with external stakeholders either as a part of formal external advisory groups or through regular stakeholder dialogues, which can be valuable sources of risk identification.

Boards should review the risks that peer companies are prioritizing and addressing in their strategies and disclosures. Publicly available company benchmarks on a variety of sustainability issues can provide companies' expectations by sector. For instance, Ceres' report "Turning Point: Corporate Progress on the Ceres Roadmap for Sustainability" highlights how more than 600 of the largest U.S. companies are addressing ESG challenges across 20 key expectations.

Boards can also examine collaborations between companies, industry experts, nonprofits and government agencies in their respective sectors to manage industry risk. For example, the Alliance for Bangladesh Worker Safety set up a legally binding five-year commitment among apparel industry companies, the U.S. and Bangladeshi governments, policymakers, NGOs, members of civil society groups and organized labor to improve workforce safety in Bangladeshi garment factories after the 2013 collapse of a garment factory there.[50]

Finally, boards should pay attention to the ESG issues that their top investors consider to be most relevant to their company. For example, the Sustainability Accounting Standards Board (SASB) worked with investors, companies, and others to identify the most relevant ESG risks and opportunities for companies across 77 industry sectors (see below).

RECOMMENDATION 4:

Be aware of assumptions in the risk identification process

QUESTIONS FOR DIRECTORS TO ASK

- Did management assess ESG risks that the company could face in 1, 5, 10 and 20 years?
- What blind spots about ESG risks may exist in the risk identification process?

ESG issues are sometimes wrongly assumed to affect a corporation over such a long time frame that they are impossible to quantify or even evaluate. Boards need to ask management whether and how the risk identification process surfaces ESG risks in the short, medium and long term, and how these risks could impact corporate strategy over each time frame.

Risk identification processes are heavily influenced by an organization's risk culture and the board has an important role to probe for biases or blind spots throughout the process. Boards should ask questions about corporate culture and management's degree of openness in sharing concerns, problems and responses to mistakes. In 2018, the U.S. Federal Reserve intervened to halt business growth at Wells Fargo until the company could demonstrate that its board and senior management had stronger oversight over the risks facing the company. This move was a response to the company's sales incentive program that resulted in the creation of 3.5 million potentially unauthorized accounts.[52] After an internal investigation by independent directors on Wells Fargo's board, the directors issued a report finding that these practices were overlooked in large part due to a culture of inadequate board oversight of the company's risk strategy, sales culture, and executive accountability.[53]

The SASB Materiality Map®[51]

The Sustainability Accounting Standards Board (SASB) worked with investors, companies, and capital markets intermediaries such as accounting and consulting firms to identify the ESG risks and opportunities most likely to be financially material for companies across 77 industry sectors. The results of SASB's six-year process are identified in their materiality map, included below. SASB's Materiality Map® identifies sustainability issues that are likely to affect the financial condition or operating performance of companies within an industry. In the left-hand column, SASB identifies 26 sustainability-related business issues, or General Issue Categories, which encompass a range of industry-specific Disclosure Topics and associated Accounting Metrics. SASB's website provides an interactive map with additional details by industry and sector as well as downloadable Sustainable Accounting Standards for each industry.

SASB Materiality Map

■ Issue is likely to be material for more than 50% of industries in sector
■ Issue is likely to be material for fewer than 50% of industries in sector
□ Issue is not likely to be material for any of the industries in sector

RECOMMENDATION 5:

Integrate identified ESG risks into the Enterprise Risk Management (ERM) process

QUESTIONS FOR DIRECTORS TO ASK

- Who owns the ERM process internally?
- Does the ERM process consider ESG risks?
- Is the ERM process agile?

The corporate ERM process is the conduit through which all risks — including ESG risks — should be processed. Typically, ERM has largely not included ESG risks, but this is changing as investors and other stakeholders demand that companies identify how ESG risks pose threats.

In 2018, COSO and WBCSD released guidance on how to apply ERM process to ESG risks. As a part of this guidance, they offer concrete recommendations on how to thoughtfully incorporate ESG issues within the corporate risk identification process. Companies applying this guidance benefit by understanding how ESG factors can create value and how to reduce risk exposure by connecting risk, strategy and decision-making while enhancing corporate performance. The details of the guidance are referred to throughout this report and found in full in Toolkit 4: How to apply enterprise risk management to environmental, social and governance (ESG)- related risks.

Building on this guidance, board members should assess whether the company's risk management process is flexible enough to continuously identify emerging issues. Reviewing and revising the ERM process in light of information gathered and integrating continuous improvements is an important part of this flexibility. Given the fast-paced nature of many ESG issues, such agility is crucial.

The Board's Role in ESG Risk Assessment

Once risks are identified, management should assess and prioritize them to direct the board's focus on those topics most relevant to the achievement of key strategic objectives. Risk assessment helps boards assess the level of urgency needed in addressing a risk, the types of action necessary and the level of investment required in risk responses. When ESG issues are not assessed appropriately, companies and their investors may be unprepared when faced with a crisis. Proactive attention to these issues will help companies move away from a crisis mentality and increase their resiliency.

RECOMMENDATION 1:

Evaluate the information the board receives on prioritized risks

QUESTIONS FOR DIRECTORS TO ASK

- Does the heat map appropriately reflect ESG risks?
- Has the company performed a scenario analysis on the most relevant ESG risks and their possible impacts on the company?

Boards should consider heat maps as the beginning of a conversation, and question management further to identify connections between the identified risks and corporate strategy. Corporate heat maps, which commonly use the "likelihood times impact" framework to evaluate risk, are the typical way in which companies prioritize risks. Investors such as PIMCO[54] and credit rating agencies like Moody's[55] are already using the heat map approach to assess the exposure of key industries to ESG risks.

When assessing risk, the systemic and interdependent nature of ESG risks can make evaluating their impact quite challenging. For example, risk assessment tools tend to portray a static snapshot in time, rely on models built on historical data and reflect risk impacts individually. ESG-related impacts (like many other risks) are likely to occur or intensify over a dynamic time frame. Risks such as climate change have very little, if any, precedent for evaluation, and the interrelationships between ESG risks can often multiply their impact. Directors need to frame their conversations with management to reflect these dynamics and ensure that ESG risks are captured accurately within the risk assessment tool.

Boards should also be aware of the contagion effect of various ESG risks and that when one event or risk is realized it may have a domino effect across multiple areas of the economy. For instance, the Federal Reserve Bank of San Francisco has identified several scenarios in which climate change could damage the financial system, such as through elevated credit spreads, and, in the extreme, a financial crisis.[56] Additional direct impacts from extreme weather events could include more frequent and severe shocks from infrastructure damage, agricultural losses and commodity price spikes caused by increasing severity of droughts, floods and hurricanes[57] — all strong examples of how impacts from climate in one area of the financial system can spread to other financial institutions and the companies they underwrite. The 2019 U.S. Worldwide Threat Assessment warned that climate change and other environmental degradation posed serious risks to global stability as they were "likely to fuel competition for resources, economic distress and social discontent through 2019 and beyond."[58]

Increasingly, investors are looking for companies to conduct scenario analysis on the potential impacts of key ESG risks on their corporate strategy. These analyses are particularly useful for board discussions on risk prioritization and the subsequent actions needed to mitigate or adapt to these risks.

In 2018, the **AES Corporation** published its "Climate Scenario Report," which stress-tested its portfolio against several alternative climate change scenarios, including global temperature increases by 2100 of 1.5-2°C; 2-3°C; and 3-6°C. AES evaluated climate risks, including energy transition risk and physical impact risks to its business, using several in-depth analytical approaches that tested the sensitivity of AES' gross margin across the entire business. The report discusses the impacts of its findings on AES' strategy both in terms of business risks and opportunities, as well as how the company is managing physical risk by building its assets for future climate risk exposure and diversification of its portfolio, sourcing power across 15 countries and shifting to smaller, renewable assets. AES developed the process and results of the scenario analysis by forming a steering committee of representatives across the company including from financial planning, corporate risk and strategy, legal, operations and other teams.[59]

Useful information management can provide boards on ESG risks

- Explain how the internal risk identification process surfaces relevant ESG risks
- Map top trends facing the company — and identify how these issues could pose ESG risks
- Present the results of scenario analyses on top ESG risks, including climate change
- Benchmark results on where the company ranks as compared to its peers on ESG issues
- Propose quantifiable, time-bound metrics to address ESG risks — and how achieving these results will impact the profit and loss statement of the company over the short, medium and long-term
- Highlight relevant media on top sector-specific ESG trends with an explanation of how these trends could financially impact the business

RECOMMENDATION 2:

Use a materiality lens

QUESTIONS FOR DIRECTORS TO ASK

- Do the prioritized ESG risks materially affect the company?
- Have we considered stakeholder and shareholder input in making this determination?
- Have we considered how the ESG risks may interrelate?

When ESG risks surface in a company's heat map or risk register, the board needs to consider whether these issues have a material impact. If a company has not yet conducted a materiality assessment that covers ESG issues, the board should ask management to go through the exercise to provide additional context. The materiality process is important for assessing and demonstrating the connection between the ESG factors identified and corporate financial performance. Most organizations have separate processes to determine "financial materiality" and "ESG materiality." However, given the growing findings that relevant ESG topics can be financially material to a corporation, boards need to ask management to run materiality analyses that include both traditional financial factors and financial impacts from ESG-related risks.

Nestle conducted a materiality assessment every two years to identify the economic, social and environmental issues that are of top priority to the company's external stakeholders. In 2018, the company evolved its materiality assessment to include ESG risks with other financial risks and align them better with business operations. This evolution included integrating the identified material issues within the company's ERM process.[60]

Usually, materiality analyses to identify ESG issues do not involve the board's oversight. But a growing number of governance professionals assert that "determining materiality is at the essence of directors' fiduciary duty and it is the basis for establishing the legitimacy of the corporation's role in society," calling on corporate boards to release a "Statement of Significant Audiences and Materiality" to inform investors and other stakeholders of the audiences the board believes are necessary to the survival of the company.[61] Overall, prudent risk management involves considering the perspectives of a range of shareholders and other stakeholders in materiality determination.

The combination of interrelated risks may elevate certain ESG issues to the threshold of materiality. For example, in considering how climate change may impact a company's workforce, a company might identify that their employees care that the company reduces its greenhouse gas (GHG) emissions. While this concern alone may not raise to the materiality threshold, if a board views this as part of a larger human capital issue and identifies the impacts on employee recruitment, retainment and workforce transition as the company makes operational changes, it could become material and a topic that the board needs the right talent and structures to oversee in the boardroom.

RECOMMENDATION 3:

Consider the board's skills to evaluate ESG risks

QUESTIONS FOR DIRECTORS TO ASK

- Do we discuss our ESG risks at regular intervals?
- Is the board regularly briefed on relevant ESG trends and how these trends could pose risks to the company?

Corporate boards cannot make smart decisions on risk without being fluent in the ESG risks facing the company. Ceres' report "Lead from the Top: Building Sustainability Competence on Corporate Boards" recommends three key avenues for boards to build their fluency in ESG issues:

Recruit directors with the experience and exposure to material ESG issues that the company faces.

Prudential Financial, an insurance and financial services company has included expertise in "environmental/ sustainability/corporate responsibility" within its board matrix as a skill set that is needed to be on their board.[62] **Canadian Natural Resources Limited**, an oil and gas company, includes climate change expertise within its mix of experience and knowledge needed by its board to better carry out its fiduciary responsibilities.[63]

Directors need not be technical experts, but they must possess the ability to serve as "translators" between the financial language of the boardroom and the business case for overseeing sustainability.

Educate the entire board on relevant ESG issues.

In **General Motors'** 2019 proxy statement, the company specifically identifies sustainability within their "Director Orientation and Continuing Education" section as a topic that new directors need to understand.[64]

Engage with relevant stakeholders and shareholders on ESG risks. External stakeholders represent a variety of viewpoints and regular, ongoing engagement with them can bring these viewpoints into better focus for boards.

Morgan Stanley's Sustainable Investing Advisory Board includes Morgan Stanley's CEO and Board Chairman, James Gorman, who facilitates connections between the deliberations of the advisory board and the company's board.[65]

Board Resources on Climate Change and Sustainability

There are a number of resources available for boards looking for leading practices on how to oversee sustainability issues.

- "Getting Climate Smart: A Primer for Corporate Directors" (Ceres, 2018) is a tool for corporate directors looking to educate themselves on climate change, addressing why it is a director's job to oversee business impacts from climate change and how directors can oversee these impacts with leading practices and tools.
- "Lead from the Top: Building Sustainability on Corporate Boards" (Ceres, 2017) details how boards can build competence on material sustainability issues through recruitment, education and engagement.
- The National Association of Corporate Directors' (NACD) Sustainability Resource Center contains a number of resources for boards on understanding and overseeing sustainability.
- The Equality and Human Rights Commission produced "Business and Human Rights: A five-step guide for company boards," a primer for corporate directors on how to oversee human rights in a way that meets the expectations of the U.N. Guiding Principles.
- Governance associations such as the National Association of Corporate Directors (NACD), CEO Group and Directors and Boards are beginning to organize trainings for their director networks on oversight of sustainability.

RECOMMENDATION 4:

Ensure that prioritized ESG risks are surfaced appropriately in board discussions about corporate strategy, whether at the committee or full-board level

QUESTIONS FOR DIRECTORS TO ASK

- Do we discuss our ESG risks at regular intervals?
- Are ESG issues addressed systematically?
- How are ESG issues integrated into our strategic planning and execution?

Without systematic board evaluation of ESG risks, companies will be forced to react with a crisis response when these impacts materialize. For example, in the face of the rising awareness around workplace sexual harassment and misconduct brought on by the #MeToo movement, companies are now evaluating workplace culture as an issue that requires stronger board oversight.

In another sphere, in 2019, **Boeing's** board created a new board committee focused on airline safety and amended its Governance Principles to include safety-related experience as one of the criteria it will consider in choosing future directors,[66] after the company was forced to ground all 737 Max airplanes worldwide due to concerns from two fatal crashes.[67]

While merely reacting to crises such as these presents opportunities to jumpstart discussions of ESG issues, it should not be the only time these risks are considered, especially as a crisis response does little to address the root of the problem.

In addition, directors need to move beyond considering ESG risks as primarily reputational risks. The year 2018 broke records as CEO turnover reached its highest percentage ever recorded and, for the first time ever, the primary cause of CEO dismissal was ethical lapses and misconduct rather than financial performance. These failings included a myriad of ESG issues such as fraud, insider trading, and poor responses to environmental disasters and sexual harassment.[68]

Integrating ESG considerations into boardroom decision-making on strategy needs to happen both within committees and the full board.

Nike's Corporate Responsibility, Sustainability and Governance Committee receives regular presentations from senior executives to discuss how sustainability and business strategies are aligned and reports to the board at large on how the company's sustainability strategy can be integrated within major business decisions.[69] When the **EILEEN FISHER** board was formed in 2018, the choice was made to name the traditional Audit Committee the "QBL" or "Quadruple Bottom Line" Committee, reflecting the company's commitment to sustainability. The committee evaluates connections between the company's business and its impact on people, planet, purpose and profit with a view to aligning the company's sustainability strategy and day-to-day operations.

The Board's Role in ESG Risk-Related Decision-Making

Ultimately, board deliberations on ESG risks are inextricably linked with discussions about company strategy and performance. Once the board and management are satisfied that the right ESG risks have been identified and prioritized, the next steps are to evaluate how the top ESG risks affect the business — particularly in terms of strategic planning, capital budgeting and corporate finance — and then make decisions that help the company navigate the risks in question. A strong strategic planning process is grounded in a solid understanding of risks the company faces and maintains consistency with previously determined risk appetites.

RECOMMENDATION 1:

Consider how prioritized ESG risks affect organizational strategy

QUESTIONS FOR DIRECTORS TO ASK

- What is our risk tolerance for ESG-related factors?
- Is the company prepared to respond in case ESG risks manifest?
- Who has responsibility for managing identified and/or prioritized ESG risks?
- Could the ESG risks we face disrupt our business model?
- What business opportunities do these ESG risks present?

As a first step, companies need to determine their tolerance for ESG risks. They should assess the likelihood of the risks manifesting, whether these risks can be avoided and, if not, how they can be managed. Disciplined risk-taking is fundamental to a corporation's ability to innovate and thrive, and these conversations are integral to strategic planning.

Boards and management need to work together in determining the company's risk tolerance for ESG risks. Senior executives in the company, including the CEO, CFO and CRO need to be involved to provide a full understanding of the financial resources needed to tolerate ESG risks. Boards and management should be clear on who within the organizational structure owns each risk and understand who is responsible for driving the conversation about risk mitigation and adaptation. While each company will approach the task of assigning risk owners differently, companies need to ensure that ESG risks do not remain siloed within the sustainability team and are evaluated within the ERM process.

Jones Lang LaSalle (JLL) integrates material ESG risks into its ERM program. These risks are overseen by JLL's Global Executive Board (GEB), which includes both the company's CEO and CFO, and are coordinated through the ERM team, which sits within the company's legal department. The top risks are then communicated to JLL's GEB, the board's Audit Committee and the full Board of Directors on a semi-annual basis.[70]

Some ESG risks pose *disruptive* risks to a business, meaning risks that have a significant, severe and often sudden effect on a company's revenue, profitability, competitive position and/or reputation.[71] Many ESG issues, most significantly climate change, have the potential to be systemic, meaning that they may manifest on such a large scale they could impact entire industries and even entire economies.

On the upside, because of their potential scope and scale, ESG issues also present vast business opportunities that boards should understand and integrate into conversations on business strategy (see box).

In 2019, **Duke Energy** announced a shift in their business strategy to achieve net-zero carbon emissions from electric generation by 2050 by collaborating with states and stakeholders, doubling their portfolio of solar, wind and other renewables by 2050, operating carbon-free technologies (including nuclear and renewables), modernizing their electric grid and advocating for public policy that advances technology and innovation.[72]

Business opportunities from ESG issues

Business opportunities stemming from ESG risks are on the rise. Annual global investment in climate solutions is over $1 trillion and growing.[73] In emerging markets, the investment opportunities created by the transition to a low-carbon economy are estimated at over $29 trillion between now and 2030.[74]

In the transportation sector, zero-emission and plug-in hybrid markets alone are estimated to be worth $1 trillion by 2030.[75] In the larger energy sector, forecasters see $13 trillion being invested globally in new power-generation capacity between 2018 and 2050, with over $9 trillion of that going to wind and solar.[76] In the United States energy market, $1 trillion in investment from 2018 to 2030 is projected, roughly split between direct private investment in renewable energy and investment in grid technologies such as energy storage.[77]

Opportunities also exist outside the "green sector" and businesses traditionally associated with climate change mitigation. For example, the "greening of infrastructure" offers enormous opportunities. Around $6 trillion per year of investment in buildings and other infrastructure is required, on average, between 2016 and 2030 to meet global development needs. Making those investments "climate compatible" would raise the cost to $7 trillion annually, but would be offset by fuel savings of up to $2 trillion per year through 2030.[78] Developing a sustainable global food and land use system could be worth up to $2 trillion to the global economy by 2030.[79] Achieving the goal of universal and equitable access to safe and affordable drinking water for all is estimated to require infrastructure investment ranging from $7 trillion by 2030 to $23 trillion by 2050.[80]

RECOMMENDATION 2:

Understand what strategies are available to mitigate or adapt to ESG risks

QUESTIONS FOR DIRECTORS TO ASK

- Can the company avoid the risk?
- Does the company have a plan for managing the risk?
- If the company can neither avoid nor manage the risk, what adaptation measures might lessen the impact?

Once boards understand the impacts of top ESG risks on their business strategy, they need to decide how their company mitigates or adapts to those risks. Key decisions points that boards should consider include:

Capital allocation: Boards should subject capital allocation decisions to a review of how they will be impacted by priority ESG issues.

In 2019, **British Petroleum (BP)** announced its plan to sell some of its oil projects and slow the development of others to align its business with the Paris agreement, underlining how concerns about climate change are impacting its investment decisions as an oil and gas company.[81] **PepsiCo** incorporates environmental sustainability criteria into its Capital Expenditure Filter, which is applied to all capital expenditure requests over $5 million. Each request is reviewed not only against business financial metrics and value to advancing the business strategy but also for the positive or negative impact that it will have on the company's contribution to their efforts to achieve their climate goals, including energy use and GHG emissions.[82]

M&A: Boards could evaluate how proposed partnerships or acquisition targets can help or hurt the achievement of the company's sustainability goals. ESG considerations are a growing trend in corporate M&A deals, especially as companies consider their impact on long-term value creation.[83]

Policy advocacy and lobbying: Boards should oversee the company's public policy positions on ESG issues, and ensure that there is consistency between the factors identified as key risks, the company's disclosures on these issues and the company's lobbying, both directly as well as through trade associations. By overseeing policy engagement efforts, boards can protect against the potential reputational risks of having a publicly stated corporate position inconsistent with the company's lobbying efforts. Boards could also ensure that all the company's resources are oriented towards achieving policy outcomes that mitigate the risks it faces from ESG factors. There is an increased focus on corporate trade association memberships and how these associations lobby government on a variety of ESG topics.[84] In 2019, 200 institutional investors with a combined $6.5 trillion in AUM announced they are calling on 47 of the largest U.S. publicly traded corporations to align their climate lobbying with the goals of the Paris Agreement, warning that lobbying activities that are inconsistent with meeting climate goals are an investment risk.[85]

As a result of investor pressure, oil major **Royal Dutch Shell** recently conducted an audit of its trade associations' positions on climate change, and consequently decided to terminate its membership with the American Fuel and Petrochemical Manufacturers.[86] **BHP Billiton** conducted a similar review and left the World Coal Association (WCA) in 2018 over differences in climate change policy.[87]

Insurance: Boards should oversee the Chief Risk Officer's purchase of adequate insurance to mitigate ESG risks, including property insurance and business interruption insurance, and prepare for the reality that not every risk can be mitigated by purchasing an insurance policy. Additionally, boards need to understand whether their Directors & Officers' (D&O) liability insurance covers risks related to ESG factors.

Value creation: In a company's evaluation of ESG risks to the business, material ESG risks may surface that are not compatible with the current business strategy projections for long-term growth. In such instances, a company needs to evaluate how much longer its business model is viable and take steps to transition to a profitable long-term solution over a specific time frame.

In addition, the COSO/WBCSD guidance recommends five strategies for management to limit their exposure to ESG risks: accept (take no action to change the severity of the risk), avoid (remove the risk), pursue (convert risks into opportunities), share (transfer a portion of the risk), and reduce (take action to reduce the severity of the risk).[88]

RECOMMENDATION 3:

Hold executives accountable for addressing ESG risks

QUESTIONS FOR DIRECTORS TO ASK

- To what extent are prioritized ESG factors linked with executive goals and performance?
- How are ESG factors incorporated in executive compensation plan design in both the short and long-term?

Boards should hold executives accountable for ESG risk management by asking for regular progress updates and assessing new issues. Additionally, boards should tie a portion of executive compensation to performance on prioritized ESG metrics. Having financial metrics tied to ESG risk mitigation underscores the strategic importance of these issues to the company and should be a prime area of focus for the board. Measuring, rewarding or penalizing management's performance gives useful insight to stakeholders. Companies should disclose the ESG issues that are linked to executive compensation, inform them of the proportion of pay at risk as it pertains to ESG issues, and state whether bonuses are linked to any short or long-term incentive structures.

Xcel Energy's board links a portion of its long-term incentive plan for corporate executives to performance targeted to deliver a 26% average reduction in CO_2 emissions over a three-year period.[89] **Barclays'** board links a portion of its executive compensation plan to facilitating greater social and environmental financing, expanding their green product portfolio and reducing operational emissions by 38% by 2018 against the company's 2015 baseline levels.[90]

Structuring Board Oversight of ESG Risks

Given the impacts of ESG factors on corporate risk and strategy, such factors need to be systematically incorporated in board deliberations at the relevant committee level and also elevated to the full board when appropriate. While different companies can structure ESG oversight in different ways, developing formal structures for such deliberation allows ESG issues to be addressed proactively.

RECOMMENDATION 1:

Formalize oversight of ESG risks at the board level

QUESTIONS FOR DIRECTORS TO ASK

- How is the board currently structured to oversee ESG risks?
- Would explicit reference to ESG in a committee charter enhance the board's approach?
- How should the audit committee address ESG risks?
- When should ESG factors be elevated for consideration by the entire board?

While the entire board should have an opportunity to engage on the ESG risks that impact corporate strategy, formalizing oversight in a specific committee allows for key issues to be raised systematically and in depth. The audit committee can play an important role in assigning ESG risks to specific board committees and in clarifying when the responsibility extends to the whole board.

Depending on the specific issue in question, ESG risks will likely align with various board committees. This alignment could depend on a range of factors, including where in the business the risk arises, as well as whether specific director possesses expertise on the issue raised. As every corporate board is uniquely structured, there are different ways to assign oversight of ESG issues. The table below lays out typical board committees, what their oversight commonly includes and the roles they could play in ESG risk oversight.

Table 3: How can board committees oversee ESG Risks?

Board Committee	Oversight responsibility	ESG Risk Oversight Examples	Company Examples
Audit/Risk **Risk** (when applicable) ***Typically risk committees are established on the boards of financial institutions***	• Oversee financial reporting risks, internal controls, risk assessment, risk management policies, internal and external audit functions • Establish direct oversight of ERM process	• Oversee organizational risk management process to ensure that ESG risks are adequately identified, prioritized and addressed • Assign ESG risks to different board committees • Disclose ESG risks in financial filings • Monitor R&D on ESG • Ensure compliance with new ESG regulations • Ensure ESG issues are identified and prioritized as part of the ERM process • Ensure material ESG risks are brought to the attention of the full board	• **Alphabet:** Audit Committee • **ESG issue mentioned:** data privacy
Nominating & Governance	• Identify and measure board composition and board skills needed • Determine board training	• Include ESG in board skills matrix • Require board training on ESG • Integrate ESG within board performance evaluations	• **Intel:** Corporate Governance and Nominating Committee • **ESG issue mentioned:** corporate responsibility and sustainability performance
Compensation/ Human Resources	• Set proper incentives for executives	• Incentivize executives to take action on mitigating risks from ESG issues • Engage with investors on ESG and compensation • Oversee the impact on HR's recruiting and retaining talent by having a public corporate strategy on ESG issues • Oversee policies and procedures on workforce development including safety and diversity	• **T. Rowe Price Group, Inc:** Executive Compensation and Management Development Committee • **ESG issues mentioned:** diversity and inclusion
Sustainability/ CSR	• Oversee ESG materiality assessment process • Identify and monitor ESG related risks	• Work with management, audit, nominating and governance and risk committees (if applicable) to determine how key ESG risks are surfaced across committees and with the full board	• **PepsiCo:** Public Policy and Sustainability Committee • **ESG issue mentioned:** Sustainability
Environmental Health & Safety	• Oversee safety, health, and environmental policies, systems, and monitoring processes • Oversee management of system implementation	• Oversee acute and chronic impacts of environmental hazards posed by the company to employees, contractors, visitors and the general public • Oversee management of corporate environmental impacts • Oversee company response to developing EHS regulations and development of policies to comply	• **Consolidated Edison:** Safety, Environment, Operations, and Sustainability • **ESG issue mentioned:** Sustainability, environment
Technology/ Innovation	• Oversee company strategy around emerging technologies and new technology developments	• Oversee how the company manages privacy of its consumer baseOversee societal implications from new technologies/products	• **Ford:** Sustainability and Innovation Committee • **ESG issue mentioned:** Sustainability
Full Board	• Oversee strategic planning	• Oversee the impact of ESG risks on the business strategy	• Could include in Corporate Governance Guidelines or Proxy Statement

The audit committee is typically thought of as the home for risk oversight, and as such, its mandate has expanded in the last decade due to laws requiring greater board oversight of financial reporting after the 2008 financial crisis. While there is a sense that audit committees may be overburdened, they still have a core responsibility to oversee material ESG risks disclosure in financial filings. ESG risks cover a wide variety of topics that need to be addressed by several specific committees as well as by the full board. The audit committee can play an important role in assigning ESG risks to specific board committees and clarifying when the responsibility extends to the whole board.

The full board can typically be engaged on ESG risks as a part of the strategic planning process. Additionally, the entire board could be involved to review the landscape as new and complex risks escalate across an increasingly interconnected and global landscape.

RECOMMENDATION 2:

Ensure coordinated deliberations on ESG risks across committees

QUESTIONS FOR DIRECTORS TO ASK

- How could ESG fit into deliberations taking place across the board committees?
- How could these deliberations be better coordinated?

The board committee(s) tasked with ESG risk oversight should coordinate with other committees charged with general risk oversight using the structure laid out in Table 3. The board should establish systems for committees to work with each other on ESG risk oversight in addition to fostering conversations that may happen at the full board level.

One interesting approach to allow this coordination to happen organically has been implemented at **Gap Inc.**, where the company embeds sustainability into the mandate of the Governance and Sustainability Committee.[91] The committee includes the board chair and the chairs of the compensation, audit and finance committees, allowing for greater integration and dialogue on ESG risks.[92]

Disclosing ESG Risk Oversight

Adequate disclosure of material ESG risks that a company faces and of the processes used to identify and address those risks helps investors and other stakeholders understand how the company thinks about these issues and to what degree it will be resilient to the manifestation of these risks. A 2018 survey found 48% of investors believe "enhanced" reporting on ESG needs to be a significant priority for companies as it signals meaningful transparency and accountability.[93] Companies should identify their priority audiences and customize disclosures appropriately.

RECOMMENDATION 1:

Disclose the board's role in overseeing ESG risks

QUESTIONS FOR DIRECTORS TO ASK

- What should the company disclose about the role of the board for ESG risk oversight?

As investor attention on ESG risks continues to intensify, particularly in the face of escalating climate risk, investors and other stakeholders want to ensure that a company has robust processes in place to address them. The SEC requires that companies disclose how their board administers its risk oversight function and the effect this has on the board's leadership structure.[94] This requirement could be enhanced to cover ESG risks.

Decision-useful disclosure of how a board oversees ESG risks should include a description of the following:

- The full board's role in ESG risk oversight
- How the board oversees ESG key risks, including board structure and board expertise where appropriate
- How the board receives training on key ESG risks, including the topic and leaders of the training
- The board's approach to allocating ESG risk oversight
- The nature and frequency of reporting to the board on ESG risks, e.g., who from management presents, which committees receive reports and whether the entire board receives reports
- How ESG risk discussions are integrated within other management discussions on strategy, business unit performance or other strategic and tactical functions

In 2018, **Coca-Cola** aligned its sustainability and annual reports to demonstrate the company's commitment to long-term value creation that included its sustainability goals. Each of these reports included a letter authored by the company's board and signed by its board chair, explaining how the board provides oversight of the company's sustainability progress as a part of their fiduciary duty: "At Coca-Cola, the Board of Directors is elected by our shareowners to oversee their interests in the long-term health and the overall success of the business and its financial strength... Our sustainability efforts, therefore, are not separate from our business but actually foundational to the way we do business."[95]

RECOMMENDATION 2:

Disclose material ESG risks in financial filings

QUESTIONS FOR DIRECTORS TO ASK

- Which ESG risks should be disclosed in financial filings?
- What information are investors looking for on ESG risks?

Companies are obliged to report material issues, including material ESG issues, in their financial filings. The most effective type of ESG disclosure goes beyond boilerplate language on operations and offers a true discussion on ESG risks facing the company and actions that the company has taken or plans to take to mitigate them.

Ceres' report "Change the Conversation" provides the following additional recommendations on how companies could provide disclosures that meet investor expectations on material ESG issues:

- Focus investor-directed disclosures on what is material, but don't ignore emerging trends. Focusing on materiality should not cloud a company's ability to examine how emerging ESG issues may become material over a short and long-term time frame.
- Disclose decision-useful information, both quantitatively and qualitatively. Boilerplate language in a company's financial filings, while common, does not paint a complete picture for investors on company-specific ESG risks. By committing to rigorously use a sustainability reporting standard and quantifying these impacts within the context of risk and revenue, companies can enable investors to integrate this information into financial modeling and valuations.
- Disclose sustainability information consistently and where investors are already looking. Key sustainability information should be integrated within a company's sustainability reports and websites, proxy statements, 10-Ks and annual reports. In addition, the biggest missed opportunity (as identified by investors) is failing to include this information on the company's investor relations websites. Investors are increasingly examining discrepancies in how a company describes risks facing the business across their financial filings and sustainability reports and will often do additional research if they are not satisfied with a company's publicly available disclosures.

The Task Force on Climate-related Financial Disclosures (TCFD) was created in 2015 by the Financial Stability Board (FSB) to develop a set of disclosure recommendations to communicate climate-related financial risks to investors, lenders and underwriters. The guidance covers all sectors and recommends that companies disclose these climate risks and opportunities across four topics: governance, strategy, risk management and metrics and targets. As of the 2018 reporting cycle, 785 global companies and other organizations have committed to supporting the TCFD and 340 investors with nearly $34 trillion in AUM are asking companies to report under TCFD.[96]

JetBlue uses the TCFD framework to disclose its board committee involvement in oversight of the company's financial exposure to ESG risks. The top environmental issues reviewed by JetBlue's board include the cost of carbon-offsetting compliance, the strategy to mitigate those costs, market opportunities to use bio-jet fuel to hedge fuel costs and the integration of environmental and social risk factors within the company's ERM process. JetBlue's Audit Committee oversees relevant ESG issues, questions and trends.[97]

Conclusion

ESG issues pose a variety of risks being felt by companies today. These risks manifest across industry sectors, and can pose systemic risks that require thoughtful attention by companies. Boards need to be able to understand how to oversee ESG risks through their overall oversight of the risk identification, prioritization and mitigation processes. Boards also need to understand how to adequately structure and disclose their ESG oversight to investors and other stakeholders. As ESG risks will only continue to disrupt the market, boards that examine and oversee these risks will lead their companies to long-term success.

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Running the Risk Toolkits

1. How Boards Can Oversee Disruptive ESG Risks
2. How Boards Can Oversee the Results of Scenario Analyses
3. How Investors Think about ESG Issues, Why Directors Should Care, and What To Do Next
4. How to Apply Enterprise Risk Management to Environmental, Social and Governance (ESG)-Related Risks

How Boards Can Oversee Disruptive ESG Risks

Leah Rozin, senior research manager, National Association of Corporate Directors (NACD)

Companies are increasingly facing ESG risks that affect, and disrupt, every aspect of business from the supply chain to talent that powers business. Recent shifts in the competitive environment, combined with corresponding changes in business operations, have increased the challenges of risk oversight. The current pace of change calls for boards' composition, skill sets, and processes to be aligned to increase situational awareness in the boardroom — especially when it comes to environmental, social and governance (ESG) matters.

NACD's 2018-2019 Public Company Survey found that 54% of directors want to improve their understanding of the company's current levels of ESG-related performance, yet only 6% view climate change as a "top-five" risk.[1] The same survey found that 40% of boards have not assessed emerging risks, and 36% say that lack of knowledge about disruptive risks hinders their oversight. With investor demands pushing ESG risks higher on the board agenda, boards need to ensure they provide effective oversight of these risks and their financial implications.

NACD's Blue Ribbon Commission report, "Adaptive Governance: Board Oversight of Disruptive Risks," provides practical guidance on how boards can improve their oversight of disruptive risks and strengthen stewardship of long-term value creation.[2] The report focuses on the following areas that can be applied to boards' oversight of ESG risks:

- **Define what disruptive risks look like for your organization:** Assess the ESG risks that might have the greatest impact on your organization's ability to function and thrive. Set goals for strengthening governance based on what you would need to have in place either to respond to a negative incident or to bounce back with resilience. Task the nominating and governance committees with allocating oversight responsibilities among the full board and key committees.
- **Establish requirements for ongoing learning:** ESG matters are constantly evolving, so it is important for directors to remain up to date with the latest information affecting their companies and industries. To do so, boards should look for information outside of what management provides. Sources can include industry analysts, existing advisors, industry publications and government data.
- **Develop awareness of cognitive biases that could be acting as blinders:** Directors play an important role in providing effective risk oversight by helping the management team think outside of their strategic and operational biases. But directors are not immune to biases, themselves. They can suffer from false causality, groupthink, anchoring and other blind spots that impede their ability to identify and understand disruptive risks. To expand their vision, boards can designate a devil's advocate to represent the opposing view, insist that management provide the full range of options and associated risks being considered and access unfiltered perspectives from outside advisors.
- **Stop looking backward:** Ensure that board-level risk reports provide forward-looking information[3] about changing business conditions and potential risks in a format that enables productive dialogue and decision-making. Reports should include qualitative analysis of risk impacts to value and insights about emerging risks. Directors should learn from past mistakes and triumphs, but also recognize that the current operating environment is significantly different from the one where they may have cut their teeth as executives.
- **Participate in a robust discussion of the company's vulnerability to disruptive risks at least annually:** Traditional board agendas may not be structured in ways that enable substantial dialogue about disruptive risks. Findings from scenario planning, simulation exercises and stress testing provide valuable insights for these discussions and allow directors to pressure test management's assumptions.

Seven Steps of Scenario Analysis for Disruptive Risks

Source: James Lam & Associates

ESG risks are likely to continue being a prominent focus for investors and the public at large, cementing the need for substantial discussion of these risks in the boardroom. We encourage boards to use the recommendations in NACD's Blue Ribbon Commission report to improve their oversight of these disruptive risks and strengthen their long-term value creation.

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3 **Note:** Any public statements that include forward-looking information should include a disclaimer identifying the information as forward-looking, in order to qualify for a safe harbor against litigation, per the Private Securities Litigation Reform Act of 1995 ("PSLRA" or "Reform Act").

How Boards Can Oversee the Results of Scenario Analyses

Robert Bailey, director, climate resilience, Marsh & McLennan Insights

Boards should be prepared to oversee scenario analysis exercises and interrogate the results. Scenario analysis is used to understand complex risks which may evolve over long durations and also be complicated by interdependencies and possible cascading effects. Rather than seeking to simply forecast the future, these analyses give shape to critical uncertainties so that responses can be developed and tested for a range of possible outcomes.

For environmental, social and governance (ESG) risks, the Taskforce on Climate-Related Financial Disclosures (TCFD)'s emphasis on scenario analysis means companies have begun to use climate change scenarios to understand risks from physical impacts and from the low-carbon transition. **It is important that boards understand who is responsible for the scenario process.** Unclear ownership results in a tendency to under explore scenarios and potential responses, so the information provided to the board will be inadequate.

Although we consider the specific example of climate change here, scenario analyses can be applied to the full range of ESG risks, such as those relating to biodiversity, water or changes in social values — all of which may be interrelated and affected by climate change.

Using climate change as the example, the two checklists below give examples of questions boards can ask management when reviewing scenario analyses. The first list summarizes the core components of a scenario analysis; the second summarizes some practical ways to apply a scenario analysis to ensure it is used to its full potential.[1]

Core Components Checklist for Climate Scenarios

Component	What Directors Can Look For	Example Questions
Risk Drivers	• The principal climate-related risks and the channels through which they affect financial performance and strategic positioning • Examples include technological change, shifts in consumer preferences, policy and regulatory changes, physical impacts, reputational issues	• What are the greatest climate risks the company faces? • Have key business stakeholders identified any risks?
Scenarios	• Should cover the plausible range of futures: an orderly transition scenario based on a 2ºC least-cost pathway; a 2ºC disorderly transition scenario: a 3ºC NDC2 scenario; and a 4ºC "business as usual" scenario to provide a full range of physical and transition risks • These four should be complemented by bespoke scenarios that focus on the most important risks, exposures and vulnerabilities • Should include risk driver pathways • Should be distinct to minimize redundancy	• Who has been consulted in the development of these scenarios? Any external experts? • What are the key underlying parameters and assumptions? • Have interdependencies and cascading effects been considered?
Business Impacts	• Impacts on key metrics e.g., earnings, income, costs and asset values • Strategic positioning in each scenario	• What are the brand implications? • What are the implications for competitive positioning?
Responses	• Opportunities to refocus investment • Building new capabilities • M&A • Strategic alliances	• What might investor perceptions be? • What are the timing considerations for any key moves?

Application Checklist for Climate Scenarios

Application	What Directors Can Look for	Example Questions
Strategic Planning and ERM	Management has adapted strategic plans and risk management to maximize resilience to possible futures	• How have strategies and risk management processes been adapted? • How often will these be updated?
Indicator Dashboard	Management has identified indicators to track risk drivers and seewhich scenarios are becoming more dominant	• What function is responsible for monitoring indicators and tracking pathways?
Stress Tests	Management has tested financial resilience to shocks such as policy interventions or climate change impacts	• What are the key shocks to which we are exposed? • What is the sensitivity of key financial metrics?
Operational Preparedness	Management has developed plans to mitigate and react to disruptions — e.g., "fire drills" or business interruption plans for extreme weather events	• How has the scenario exercise informed preparedness?

In a rapidly evolving ESG risk landscape, boards need to be able to ask the right questions of management to ensure that their scenario analyses results are leveraged appropriately within the risk management process. The more the board can effectively oversee this process, the greater the likelihood that the organization will be prepared for its most relevant ESG risks.

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1 See *Material Improbabilities: Getting Practical with Emerging Risks*, Marsh & McLennan Companies, 2018 for further details on practical applications of scenario exercises.

2 Nationally Determined Contributions (NDCs) are national emissions reduction targets submitted to the UNFCCC. They currently imply warming of around 3C by the end of the century.

How Investors Think about ESG Issues, Why Directors Should Care, and What to do Next

Julie Gorte, senior vice president for sustainable investing, Impax Asset Management LLC and Pax World Funds

Investor interest in environmental, social and governance (ESG) issues is on the rise. A decade ago, sustainable investing and ESG integration were niche interests, with most investment professionals viewing sustainable investing as suited only to investors with strong opinions regarding sustainability and a willingness to accept lower returns. No more.

Respondents to the CFA Institute's 2017 survey on analysts' use of ESG data identified board accountability as the highest-ranking "most impactful" issue.[1] This response is noteworthy because most of the other issues identified as impactful — human capital, environment, resource scarcity, climate change and supply chain — have different implications for different sectors, industries and sub-industries. But for investors, board accountability is an indicator that encompasses *all* ESG issues by accounting for the impact of any or all of those issues on financial performance and risks. Board oversight of ESG risks thus addresses shareholders' desire that these issues be brought to the attention of management and that boards will hold management accountable for both ESG performance and resilience to ESG risks.

Investors expect more than the occasional report from a sustainability officer to demonstrate effective board oversight of ESG. So what *are* they looking for? Let's take climate change as an example.

What Investors Are Looking for from Boards on Climate Change

1. **Relevant ESG Expertise:** Boards need the right expertise to manage climate risks. While it may not be possible for every board to have a critical mass of directors informed about the many facets of climate change, there are some companies for which climate may represent material risks. Boards of those companies should have a director (or directors) with expertise in climate risk, regular access to experts with such credentials, or both.
2. **Systematic Discussion of Relevant ESG Issues:** Boards need to show investors that climate risks are a regular item on meeting agendas, not appearing solely in response to a specific crisis.
3. **ESG Materiality Assessment:** Boards need to recognize and assess the importance (materiality) of all climate risks. In the past, it was common for big greenhouse gas (GHG) emitters to recognize the importance of regulatory risk, and sometimes even litigation and reputational risks. But all companies may be vulnerable to physical risks such as more severe storms, extreme precipitation, more frequent flooding, droughts, fires and sea level rise regardless of their emissions profile. The Task Force on Climate-Related Financial Disclosures (TCFD) is one tool that recommends companies carry out scenario analyses to assess vulnerabilities to physical risks across several different levels of global temperature rise. As climate modeling becomes more widely understood and used, more tools are becoming available to help conduct these analyses.

4. **Effective ESG disclosure:** Boards should report on risks publicly and engage with investors who wish to know more about them. Even if companies do not assess the risks themselves, their investors are increasingly doing so, as are other key influencers. Boards should be aware that credit-risk ratings agencies are moving swiftly to incorporate these risks into their ratings, and that insurance companies are pricing policies to account for rising risk profiles. It's easy to imagine that such pricing may extend beyond property and casualty insurance to include D&O insurance as well.
5. **Match ESG goals with corporate accountability:** Boards should establish goals regarding management of climate risks and match the goals with accountability. Companies should move to set science-based emissions reduction targets for reducing their GHG emissions enough to achieve the main goal of the Paris Climate Agreement by keeping average global temperature rise to well below 2^{0}C , or to achieve the 1.5^{0}C goal now recommended by the Intergovernmental Panel on Climate Change. Company goals could also include accounting for physical risks and other vulnerabilities to climate change-related impacts. Setting these goals may involve adjusting the product mix for companies whose products depend on resources that will be made increasingly scarce (like fresh water in many areas of the world) due to climate change.

Tools Available:

- Task Force on Climate-Related Financial Disclosures' Knowledge Hub.
- Climate Disclosure Standards Board's "Defining 'material' climate risks," 2017.
- World Economic Forum's "How to Set Up Effective Climate Governance on Corporate Boards: Guiding principles and questions," 2019.
- Science Based Targets: Approaches and methods for setting SBTs.

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How to Apply Enterprise Risk Management to Environmental, Social and Governance (ESG)-Related Risks

Mario Abela, director, Redefining Value, World Business Council for Sustainable Development (WBCSD)

The global risk landscape is changing. The 2019 *World Economic Forum Global Risk Report* identified that environmental, social and governance (ESG) risks are now the most globally significant threats — with profound financial consequences.[1]

In a 2016 study, the World Business Council for Sustainable Development (WBCSD) found that only 29% of the 170 WBCSD member companies assessed had some alignment between the material issues disclosed in their sustainability reports and the risks disclosed in their legal filings; only 8% had full alignment.[2] This material disconnect suggested that companies struggle to integrate ESG-related risks into existing risk management frameworks.

To address this gap, WBCSD and the Committee of Sponsoring Organizations of the Treadway Commission (COSO) released guidance on 22 October 2018: "Applying Enterprise Risk Management (ERM) to Environmental, Social and Governance (ESG)-Related Risks." The guidance provides a common language to overcome ESG-related challenges throughout the ERM process. It helps organizations consider their broader impacts and dependencies and how these might translate into future risks. In alignment with the recently updated COSO "ERM — Integrating strategy and performance" (2017), this guidance suggests framing risks in terms of the impact on company strategy and business objectives, which may also support the assessment and prioritization criteria for a company. While such guidance is typically written for large, publicly listed companies, the concepts and processes are relevant for all organizations, including small and medium-sized enterprises (SMEs), public organizations and NGOs.

3 WBCSD and COSO

The guidance itself is aligned to the five components and 20 principles of the COSO ERM Framework and, where possible, leverages existing frameworks, guidance and tools for both risk management and sustainability. The five chapters of the guidance each address how ESG-related risks can be captured at each stage throughout the ERM process.

The first chapter, "Governance and Culture," discusses the importance of establishing how decisions are made and executed. It emphasizes the importance of raising ESG-related risks to the board and how a culture of collaboration can support embedding ESG-related risks and opportunities into decision-making.

Chapter Two explores the relationship between risk management and the identification of risks within the broader business context, and between the strategies and objectives that support the value creation process. Understanding these relationships helps organizations recognize their impacts and their dependencies on them over the short, medium and long-term.

The third chapter addresses how ESG-related risks can be identified, assessed and prioritized to ensure appropriate resource allocation. This chapter also promotes greater understanding of the appropriate responses so that organizations can successfully preserve or create value over the long-term.

Chapters Four and Five focus on evaluating the efficacy of ESG-related risk integration within the ERM process. Organizations should develop indicators to measure and monitor progress on integrating these risks within the existing ERM process. Once ESG-related risks have been identified, assessed and prioritized, it is necessary to communicate and report information both internally and externally to support risk-informed decision making. To support, WBCSD has developed the ***ESG Disclosure Handbook*** and Indicator Library to help companies manage multiple disclosure demands and increasing stakeholder pressure to report ESG information.[4] Both are practical resources for addressing key disclosure questions, dilemmas and decisions to support efficient and effective reporting practices. The Handbook provides a process to identify issues that are material for decision-making purposes.

A robust risk management framework includes ESG-related risks. Such a framework preserves value, reduces downside risk exposure and captures potential opportunities. Connecting ESG-related risks, strategy and decision making is essential for strong organizational performance.

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This publication is funded by the Gordon and Betty Moore Foundation as part of a conservation and financial markets collaboration. For more information, please see http://www.moore.org/Financial Markets.

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