

Sustainability and enterprise risk management:  
**The first step towards integration**

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# Foreword

Risk management – if executed properly – can be an essential management tool in driving innovation and value creation.

As the former CEO of TNT, a multinational logistics company, I fully understand the need for robust risk management. A sound risk management plan is critical to ensuring compliance with governance and disclosure requirements. It is also necessary to identify and plan for unforeseen events that can cause disruptions in even the most resilient operations.

In 2016, the Financial Stability Board's Taskforce on Climate-related Financial Disclosure highlighted the importance of effective risk disclosure for businesses as they transition to the low-carbon economy. At WBCSD, we fully support the notion that accurate disclosure and reporting will pave the way to a society that evaluates businesses according to their true cost, true profits and true value.

I am therefore very pleased that WBCSD, with the support of the Gordon and Betty Moore Foundation, is working to align enterprise risk management and the environmental conservation and sustainable development agenda.

The world's most pressing problems have significant impacts. This, coupled with evidence that many of these problems are occurring more frequently, is a clear signal that businesses need to understand how these risks (and opportunities) affect their businesses so that they can disclose those that are material to the financial markets.

This study clearly shows a disconnect between enterprise risk management and sustainability practices in most of the businesses studied. It provides a critical starting point for WBCSD and COSO to work together over the coming years to help businesses navigate and prioritize sustainability risks.

The result will be new ways for businesses to protect against emerging challenges and new methods to capitalize on opportunities that create value and drive performance. We look forward to what comes next.

**Peter Bakker**  
President and CEO

WBCSD



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# Executive summary

An organization's enterprise risk management function plays a critical role in monitoring and managing the risks and opportunities that stem from the internal and external forces that can impact a company's profitability, success or even survival.

Risk management experts across academic and consulting institutions alike perceive that the impact of economic and legal risks on a business and society are steadily giving way to a raft of existing and emerging social and environmental risks. And yet there is evidence that the effectiveness with which organizations are identifying, managing and disclosing these risks is limited:

- I. Comparing WBCSD member company sustainability and risk disclosures reveals that, on average, only 29% of the areas deemed to be "material" in a sustainability report were disclosed in a company's legal disclosure of risks. Notably, 35% of member companies did not disclose *any* of the sustainability risks identified in their sustainability reports in their legal filings.
- II. Discussions and surveys with risk management and sustainability practitioners show that most practitioners (89%) agree that sustainability risks could lead to a significant impact on business, while more than 70% find that "risk management practices are not adequately addressing sustainability risks".
- III. The number of real-world incidences of companies failing to adapt to, respond to or mitigate social and environmental risks is increasing, from environmental disasters and oil spills to natural disasters, conflict minerals, human trafficking and cyber security.

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The WBCSD believes that understanding the causes of this breakdown is the first step to addressing this situation. Although more work is to be done, initial investigations point to a range of internal organizational forces and innate features of sustainability risks impacting the effective management of sustainability risks:

- Some companies have limited knowledge of sustainability, which inhibits the capture of emerging sustainability risks.
- Sustainability assessments will often reveal sustainability *opportunities* as well as risks; these opportunities are not always being identified and captured in enterprise risk management.
- Sustainability risks are often more challenging to quantify than traditional risks.
- There is often a lack of collaboration between sustainability and enterprise risk management functions.
- The sustainability risk outlook timeline is longer than that of traditional risks.
- Legal filings use different language than sustainability reports.
- Sustainability reports and mainstream corporate risk disclosures have different audiences and purposes.
- Existing risk management frameworks may not provide enough guidance to companies to manage sustainability risks.

These organizational challenges are exacerbated further by a fast-changing global environment, outdated institutional and capital market norms, and a gap or absence in regulation around sustainability risk disclosure.

The WBCSD believes that advancing a framework and building capacity to foster sustainability-conscious enterprise risk management is a critical step toward building the long-term prosperity of companies and the societies on which they depend. The first steps in achieving this include:

- Enhancing the application of existing risk management frameworks, such as COSO, to better identify and manage emerging or strategic sustainability risks.
- Developing interpretive risk management guidance for sustainability risks.
- Leveraging WBCSD capacity building and education workstreams in order to enhance sustainability in risk management.
- Understanding and addressing the disclosure gap.

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# Introduction

No business is managed without access to reliable, accurate and timely information. However, studies by the WBCSD and others confirm that even forward-looking businesses typically capture data on social and natural capital priorities and risks only once or, at best, twice a year, and in some cases not at all.

At the same time, companies experience continued pressure to review and transform their business strategies to remain competitive. New types of risks are constantly emerging, including those inherent in the increased importance of environmental and social sustainability in business.<sup>1</sup>

WBCSD's Redefining Value program was created in 2014. One of its aims is to make material sustainability impacts and dependences part of day-to-day business management. Various Redefining Value workstreams support businesses in scaling up their sustainability initiatives with accurate, timely, reliable and comparable management information.

### Risk or opportunity?

Risk perception is the subjective judgment that people make about the characteristics and severity of risk. Its study bridges many disciplines – cognitive psychology, neuroscience, behavioral economics, sociology and anthropology, etc. – but all seek to understand how people process information and act based on that information. Humans receive and process risk-related information constantly and make decisions accordingly. Humans know instinctively when something is dangerous and mostly try to avoid it. They know through experience that other signals may require protective reactions. Humans know through education, cultural norms and upbringing what constitutes right and wrong and again mostly react accordingly. However, humans all acknowledge risk and react to it in varying ways. The same can be said for a company's relationships with risk.

Risk and its sibling opportunity are also central to business and investment strategies – many successful businesses and investments are the result of risk taking. With the separation of ownership and management in large businesses, the role of corporate governance has expanded to include risk disclosure. Around the globe, regulations have been enacted that require the disclosure of risks in mainstream corporate reports and filings; many jurisdictions, such as European Union member states, require risk disclosures.

The primary objective of such disclosures is to inform the report users of the possible material issues that could impact the organization in order to inform investor decision-making. Management understanding of the risk profile and the taking of corrective action are fundamental to robust and effective enterprise risk management (ERM).<sup>2</sup>

### Enterprise risk management basics

The ERM function of a business is critical to monitoring and managing the risks and opportunities that stem from internal and external forces – whether social, environmental, legal, political, technological and/or economic. An enterprise-wide focus allows the company to filter out the risks that would have the most significant impact on the entire company and aggregate those which might be present across multiple departmental silos.

ERM processes are critical to dealing with business uncertainty, mitigating hazards and complying with regulations. Within an organization, enterprise risk management drives companies to identify and measure risks and balance the company's exposure to risk against reward in the context of the company's risk profile, long-term business objectives and stakeholder expectations. Also critical is a process to communicate to shareholders the most significant risks and opportunities and how the company is responding.

<sup>1</sup> Schroeder, 2014.

<sup>2</sup> Enterprise risk management is the “the culture, capabilities, and practices, integrated with strategy-setting and its execution, that organizations rely on to manage risk in creating, preserving, and realizing value.” COSO, 2016.

There are a variety ways to categorize organizational risks. One way is based on the nature of the risk and how management responds to or manages that risk, as defined in an article published by the *Harvard Business Review* (summarized in Figure 1).<sup>3</sup>

**1: Categories of risk that impact a company**

Preventable risks	
<p><b>Description</b></p> <p>Internal risks, arising from within the organization, that are controllable and ought to be eliminated or avoided.</p> <p>Preventable risks are best managed through active prevention: monitoring operational processes and guiding people’s behaviors and decisions toward desired norms.</p>	<p><b>Examples</b></p> <p>Risks from employees’ and managers’ unauthorized, illegal, unethical, incorrect or inappropriate actions; Risks from breakdowns in routine operational processes.</p>
Strategic risks	
<p><b>Description</b></p> <p>Strategic risks are different from preventable risks because they are not inherently undesirable.</p> <p>Strategic risks cannot be managed through a rules-based control model. Instead, a risk management system designed to reduce the probability that the assumed risks actually materialize and to improve the company’s ability to manage or contain the risk events should they occur is needed.</p>	<p><b>Examples</b></p> <p>May include the risk of not capturing potential organizational gains – such as the tension between the decision to invest in product development and innovation versus the decision not to make this investment, which may impact market share.</p>
External risks	
<p><b>Description</b></p> <p>Some risks arise from events outside the company and are beyond its influence or control.</p> <p>As companies cannot prevent such events from occurring, their management must focus on their identification (they tend to be obvious in hindsight) and the mitigation of their impact.</p>	<p><b>Examples</b></p> <p>Sources of these risks include natural and political disasters and major macroeconomic shifts.</p>

Most enterprise risk management frameworks include a centralized function that performs, at a minimum, the following:

- **Risk identification:** Processes to scan their environments for new and emerging risks and opportunities and to maintain an understanding of existing risks.
- **Risk assessment:** Processes to evaluate, quantify and prioritize enterprise risks.
- **Risk response:** Processes to determine and implement an appropriate response to identified risks based on the company’s appetite for risk.
- **Communication and disclosure:** Disclosure of the company’s “material” risks to investors and to meet regulatory requirements.

To support these activities, the ERM function will typically engage with the other business functions, including finance, supply chain, human resources, legal and sustainability.

<sup>3</sup> Kaplan and Mikes, 2012.



### Role of ERM

The literature shows the importance of enterprise risk management to organizational success. A study by EY found that companies with mature risk management practices outperformed their competitors financially, with companies ranked in the top 20% in terms of risk maturity reporting earnings three times higher than that of companies in the bottom 20%.<sup>4</sup>

In recent years, it has also been identified that ERM practices are pivotal to adapting to the changing complexity of risk, enhancing alignment among strategy, performance and ERM, recognizing the globalization of markets and operations, and expanding reporting to address expectations for greater stakeholder transparency.<sup>5</sup>



98% of respondents reported an increased emphasis on and more strategic role for risk management in their organizations compared with two years earlier.

*Accenture Global Risk Management Study<sup>6</sup>*



### Film company captures and responds to a strategic risk

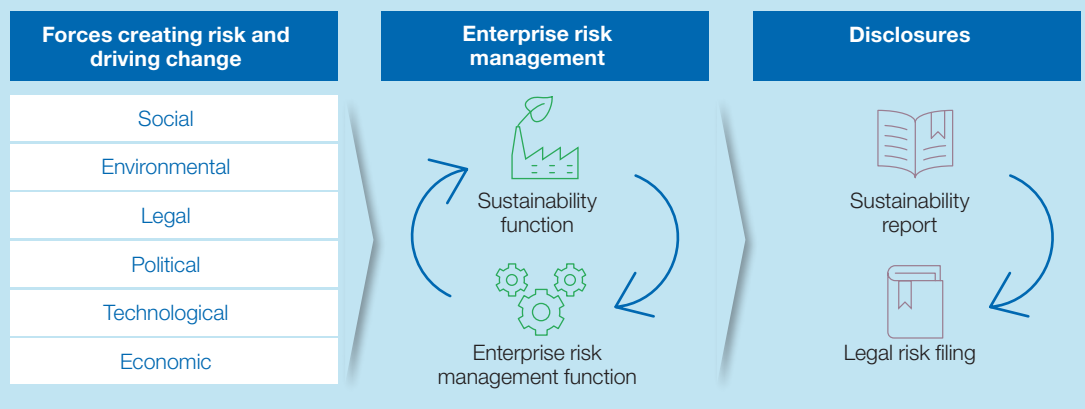
When the managers of a camera film company considered potential risks likely to affect its sustainable revenue growth business objective, they determined that technology was shifting and consumers were looking toward the possibility of digital photos. This change indicated an uncertainty: a likely decline in future demand for the company's current products. In response, management identified ways to develop new products and improve existing ones, which allowed the company to maintain revenue from existing customers (preserving value) and to create additional revenue by appealing to a broader consumer base (creating value).

### What is a sustainability risk?

A sustainability risk is an uncertain social or environmental event or condition that, if it occurs, can cause a significant negative impact on the company. It includes the opportunities that may be available to an organization because of changing social or environmental factors.

## 2: Role of enterprise risk manage in an organization

**The ERM function collaborates with other business functions to identify and respond to external forces that may impact the business. Risks are disclosed to investors and other interested stakeholders in a company's legal risk filings, annual report and sustainability reports**



<sup>4</sup> EY, 2013

<sup>5</sup> COSO, 2016, p. iv.

<sup>6</sup> Accenture, 2013.

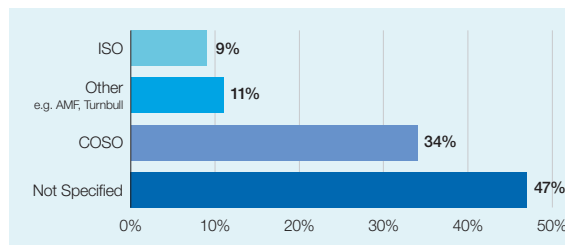
### ERM Frameworks

Companies in many jurisdictions are required to describe their risk management process and governance as part of their legal filing or annual report. Many companies describe their practices as aligned to or in compliance with one or more of the generally accepted ERM frameworks.

There are two dominant risk management frameworks used globally: the COSO Enterprise Risk Management Framework (2002) (Committee of the Sponsoring Organizations of the Treadway Commission)<sup>7</sup> and the International Organization for Standardization (ISO) 31000 Risk Management Standard.

As shown in Figure 3, more than half (53%) of member companies specified in their annual report that they use one of the standard ERM frameworks. The most commonly adopted is the COSO framework (34%) followed by the ISO framework (9%). While some companies did not disclose the adoption of any of the standard frameworks, interviews revealed that many have developed their own, adjusting an existing framework to fit company culture and geography.

**3: Member company disclosure on use of ERM framework**



### Art vs. science

Irrespective of whether or not a framework is used and regardless of the framework adopted, risk management invariably requires a balance of “art and science” inputs to capture and mitigate risk. As explained by one risk management specialist: “you can rely on a scientific approach to a point, but then you need to apply some gut feelings.”



#### Art vs. science in risk management

A 2013 survey conducted by the Ponemon Institutes<sup>8</sup> asked business practitioners whether, in their opinion, the management of “information security risk” is an “art” or “science”.<sup>9</sup> The survey found that:

In the US, 49% of respondents said “art” and 51% said “science”.

In the UK, 58% of respondents said “science” and 42% said “art”.

The “science” will typically include a multitude of tools to support the quantification and monetization of risks, such as decision trees, scenario analysis and financial modeling. The “art” is the analysis and decision-making based on intuition, expertise and a holistic view of the organization.

<sup>7</sup> Issued in 2004 by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), the *Enterprise Risk Management – Integrated Framework* is one of the most widely recognized and applied enterprise risk management frameworks in the world. It provides a principles-based approach to help organizations design and implement enterprise-wide approaches to risk management. This framework is currently under review with an exposure draft entitled *Enterprise Risk Management – Aligning Risk with Strategy and Performance* with a proposed publication date of 2017.

**4: Art and science – general consensus says that both must be leveraged in enterprise risk management**

**Art**

Understanding the risks and their likely impacts on the business requires an astute and often intuitive understanding of risk, strategy and human behavior.



Intuition

People acumen

Business acumen

Industry experience

“Gut feeling”

**Science**

Formal tools and techniques are important in order to systematically identify, evaluate and monitor business risks and the impacts of any risk management strategies or initiatives.



Decision trees

Monte Carlo

Value at Risk (VaR)

Stress testing

Scenario analysis

Forecasting

Modeling uncertainty

Risk quantification

Over-reliance on the tools and techniques on the science side of the equation can result in some important risks being overlooked or understated. In particular, there is growing evidence that many business risks arise from factors that cannot be directly observed or easily quantified.<sup>10</sup>

In sections II and III, this paper explores the extent to which sustainability risks are being captured by the ERM frameworks at a selection of organizations, as well as the manner in which companies are adopting both “art” and “science” inputs to identify and prioritize the risk appropriately.

<sup>8</sup> The survey respondents included 749 US and 571 UK-based professionals in the following areas: IT security, IT operations, IT risk management, business operations, compliance/internal audit, and enterprise risk management. Survey respondents had an average of 10.7 years of experience and represented a wide variety of organization sizes and industries, including financial services, healthcare and pharmaceuticals, technology and communications, retail, and the public sector. Ponemon Institute, 2013.

<sup>9</sup> For the purposes of the survey, “art” is defined as analysis and decision-making based on intuition, expertise and a holistic view of the organization. “Science” refers to risk analysis and decision-making based on objective, quantitative measures.

<sup>10</sup> Schroeder, 2014, pp. 28-30.

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# The evidence base

The research found an evidence base to suggest that sustainability risks are not being managed or disclosed effectively:

1. Sustainability risks disclosed in company sustainability reports and legal filings are not aligned.
2. A survey of sustainability practitioners and risk management professionals revealed challenges in integrating sustainability into mainstream risk management.
3. There are historical examples of consequences from companies failing to integrate sustainability risks.

Yet in spite of this, capital markets, regulators and shareholders are showing greater interest in understanding how companies are managing and responding to sustainability risks.

# 1 Sustainability risks disclosed in company sustainability reports and legal filings are not aligned

A comparison between the material sustainability<sup>11</sup> disclosures of 170 WBCSD member company sustainability reports and their risk factors<sup>12</sup> in mainstream corporate reporting revealed that, on average, only 29% of material issues disclosed in sustainability reporting are also reported as risks in mainstream reporting (“Alignment”). Put another way, 71% of sustainability issues that businesses deemed to be material were not disclosed to investors as risk factors.

Notably, 35% of companies had no sustainability-risk disclosure alignment.

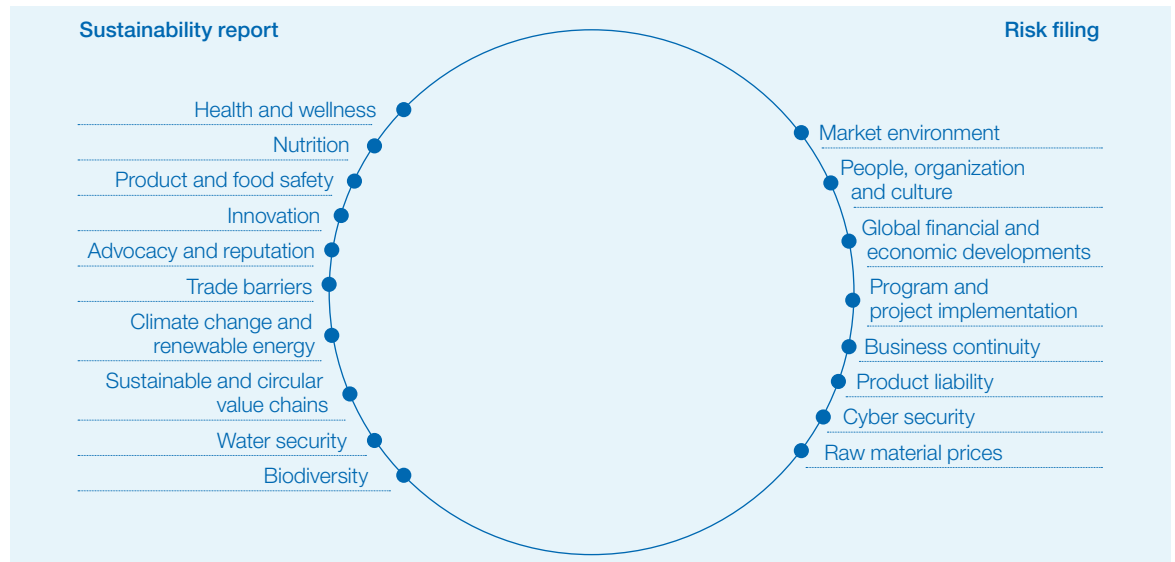


Less than one in three issues identified in sustainability materiality assessments are disclosed as risk factors in legal filings for investors.

## 5: Company sustainability-risk disclosure alignment

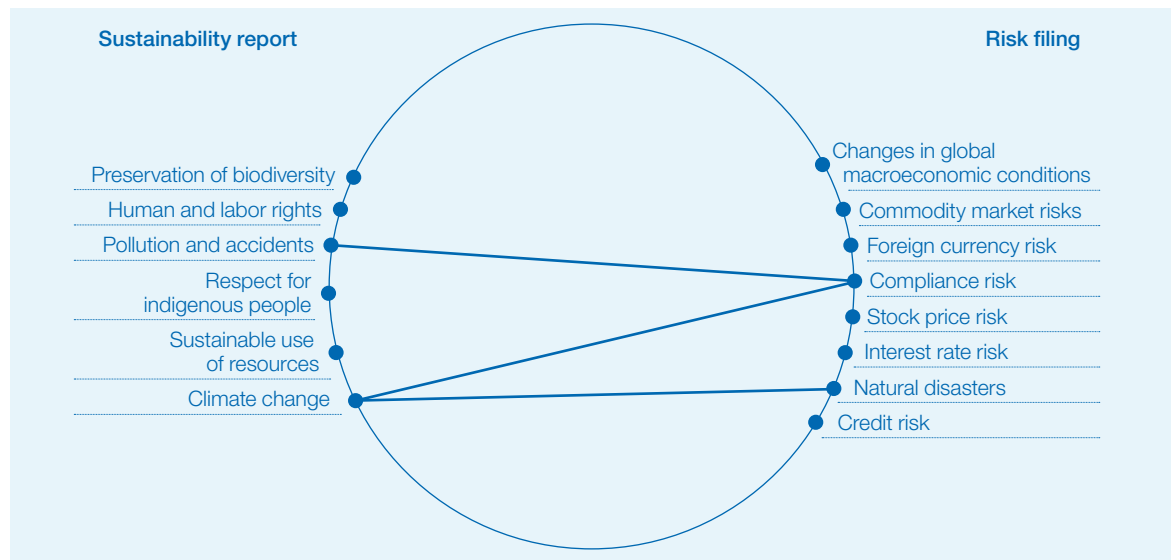
### 35% of companies reviewed had no alignment.

A company in this category typically disclosed 5-20 material sustainability risks, which had no overlap or alignment to the risks detailed in the risk filing.



### 57% of companies were found to have some alignment.

In these instances, although different risk headings are used, both filings discussed the risk of climate change and pollution accidents.



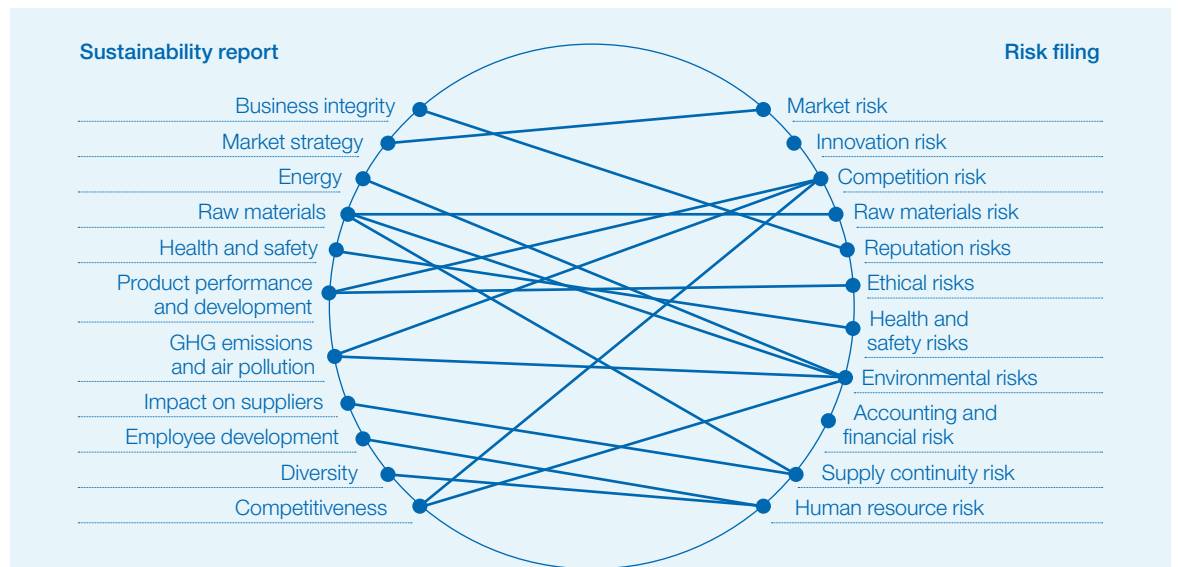
<sup>11</sup> Includes issues or risks that are defined as “material” in a materiality assessment, listed in the upper right quadrant of a materiality matrix or defined as the “focus area”.

<sup>12</sup> Includes the risks disclosed in the “risk factors” section of a SEC 10-K or an equivalent annual report.

Sustainability risks disclosed in company sustainability reports and legal filings are not aligned

**8% percent of companies were found to have full alignment.**

In these instances, all the material issues identified in their sustainability report were also captured in the risk filing.



Some sectors demonstrated greater alignment than others. Analysis of alignment by sector shows that the strongest performers tended to be in sectors for which sustainability information was more often sought by investors.<sup>13</sup>

**6: Alignment between legal filings and voluntary disclosures by sector**

<b>Sectors with the greatest alignment</b>	- Forest and paper products	- Utilities and power
	- Oil and gas	- Mining and metals
<b>Middle of the pack</b>	- Food and beverage	- Chemicals
	- Logistics	- Tires
	- Cement	- Consumer goods
	- Water services	- Automotive
	- Healthcare	- Engineering
		- Services
<b>Sectors with the least alignment</b>	- Trading	- Banks and insurance
	- IT and telecoms	- Transport
	- Retail	
	- Construction	

Note: Categories above based on percent of alignment between member company sustainability report and legal filing. Strongest: >40% alignment; middle of the pack: 20-40% alignment; weakest performers: <20% alignment.

<sup>13</sup> EY, 2015, p. 18.

## 2 A survey of sustainability practitioners revealed challenges in integrating sustainability into mainstream risk management

In developing this report, a series of interviews, workshops and surveys were conducted with a selection of WBCSD member companies to build an understanding of the current state of ERM, including the perceptions and challenges of managing sustainability risk from the perspective of risk management and sustainability practitioners.

A group of sustainability professionals participated in a survey during the 2016 USBCSD/WBCSD Pathways to Impact Conference (held in partnership with the Center for Business and the Environment at Yale) aimed at understanding to what extent participants felt risk leaders and risk processes appropriately accommodated sustainability risks.

While most sustainability practitioners (89%) agreed that sustainability risks could lead to a significant impact on a company's financial performance and therefore sustainability risks *should* be supported in the mainstream enterprise risk management function, most organizations encountered challenges doing so (see Figure 7 and further discussion in the next section).

### 7: Perceptions on current state of sustainability risk management (survey of USBCSD/WBCSD members)

“ Risk management practices are not adequately addressing sustainability risks” **70%**  
agree

“ Failure to manage sustainability risk could lead to significant impacts on a company's financial performance” **89%**  
agree

“ In general, companies are not adequately disclosing sustainability risks to shareholders” **72%**  
agree

“ Management tends to view sustainability risks as less likely and less impactful on a company's performance than financial risk” **74%**  
agree

# 3 There are historical examples of consequences from companies failing to integrate sustainability risks

The World Economic Forum's *Global Risk Report 2016* reports that in 2016, societal and environmental risks represented 4 out of the top 5 global risks in terms of likelihood and 3 out of the top 5 global risks in terms of impact.<sup>14</sup> This is a significant shift from ten years prior when economic, geopolitical and technological risks comprised the majority of top global risks in terms of impact.<sup>15</sup> The report describes how the world has seen such risks materialize in new and unexpected ways, with people, institutions and indeed entire economies increasingly feeling the consequences of not heeding the risks. For example, the report confirms the effects of climate change and the rising frequency and intensity of water shortages, floods and storms worldwide.<sup>16</sup>

At the same time, capital markets, regulators and shareholders are showing greater interest in sustainability risks. Investors are increasingly expecting companies to voluntarily report on sustainability practices and disclose potential climate change impacts on business.

A 2015 survey of institutional investors conducted by EY<sup>16</sup> revealed that a majority of investors (61.5%) consider nonfinancial data to be relevant to making investments in all industry sectors, up from 34% in 2014. Notably, 70.9% of investors see integrated reports as essential to making investment decisions, ranking them second in usefulness behind only companies' annual reports.



"Rarely a day passes without the media reporting an environmental, social or governance setback inflicting reputational, competitiveness or financial losses on one or more enterprises."

*Allen White (refer to section IV for further information).*

History similarly provides a number of real-world examples where these types of risks have materialized, and companies' failure to adapt and respond appropriately has led to a significant impact on the bottom line as well as societal or environmental impacts on the global community.



Investors – particularly pension and sovereign wealth funds with their long investment horizons – are increasingly aware of the feedback loops between investment decision-making and the sustainability of the environmental, social and financial systems they operate within. That they can impact these systems and that these systems can impact their portfolios in return has been made abundantly clear by the 2008 financial crisis and the ongoing conundrum of prudent investment in the time of climate change.

*Steve Lydenberg (refer to section IV for further information)*

## 1970 > 1980 > 1990 > 2000 > 2010

Numerous companies failed to see the oil shocks caused by an oil embargo, the baby milk scandal.

Major industrial incidents, such as Chernobyl and the Bhopal disaster.

Labor conditions in factories, misselling of financial products.

Companies adapting to the changes brought about by technology, air pollution and use of CFCs, conflict minerals, governance failures, Hurricane Katrina, mortgage lending risks.

Catastrophic oil spills, cyber-security, food safety, droughts and flooding, obesity, more corporate governance failures, modern slavery, Copiapo mining accident, Superstorm Sandy, Fukushima, Rana Plaza, emissions scandal, land grabs.

<sup>14</sup> Societal and environmental risks include: large-scale involuntary migration, extreme weather events, failure of climate change mitigation and adaptation, major natural catastrophes, water crises.

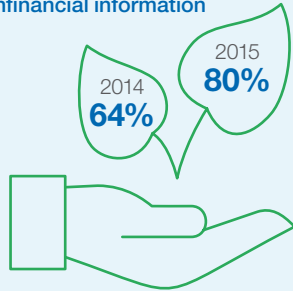
<sup>15</sup> World Economic Forum, 2016, p. 4.

<sup>16</sup> EY, 2015.



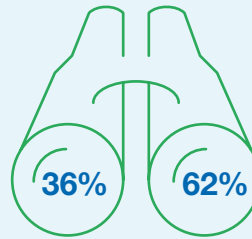
8: Tomorrow's investment rules 2.0

**Toward a new value paradigm – growing reliance on nonfinancial information**



Percentage of respondents who consider mandatory board oversight of nonfinancial performance reporting “essential” or “important”

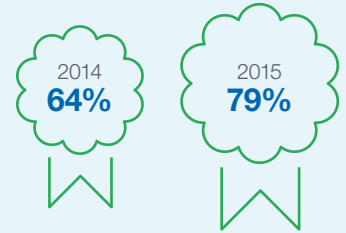
**A sharpened focus on potential for stranded assets due to ESG\* factors**



36% have divested holdings in past 12 months due to stranded asset risk

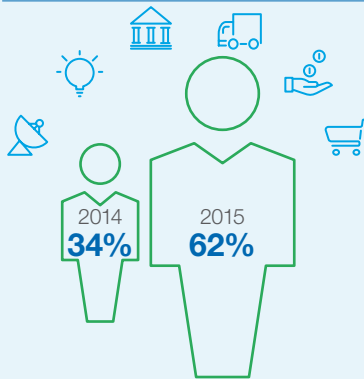
62% weigh concerns over stranded asset risk when considering an investment

**Toward new measures of performance**



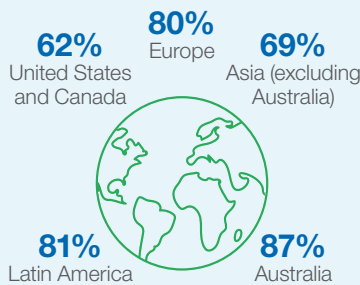
Percentage of respondents who conduct evaluations of environmental and social disclosures

**ESG evaluations now common practice globally**



Percentage of respondents who consider nonfinancial information relevant to all sectors

**ESG evaluations now common practice globally**

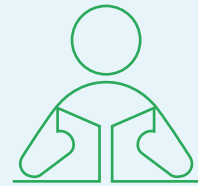


Percentage, by region, that report using some degree of ESG evaluation before making an investment

**New expectations for nonfinancial reporting, disclosures and approaches**

64% believe companies do not adequately disclose ESG risks

72% believe metrics on expected future performance and nonfinancial risk would be beneficial



74% believe sector or industry-specific content would be beneficial

All material derived from EY's 2015 report, Tomorrow's Investment Rules 2.0. \*ESG is “environmental, social and governance.”

During interviews with member companies, one company reported that as many as 40-50% of questions raised at investor meetings were about sustainability. Many of these are risk related, such as seeking to understand how the company is responding to the risk of hazardous chemical substances in the supply chain.

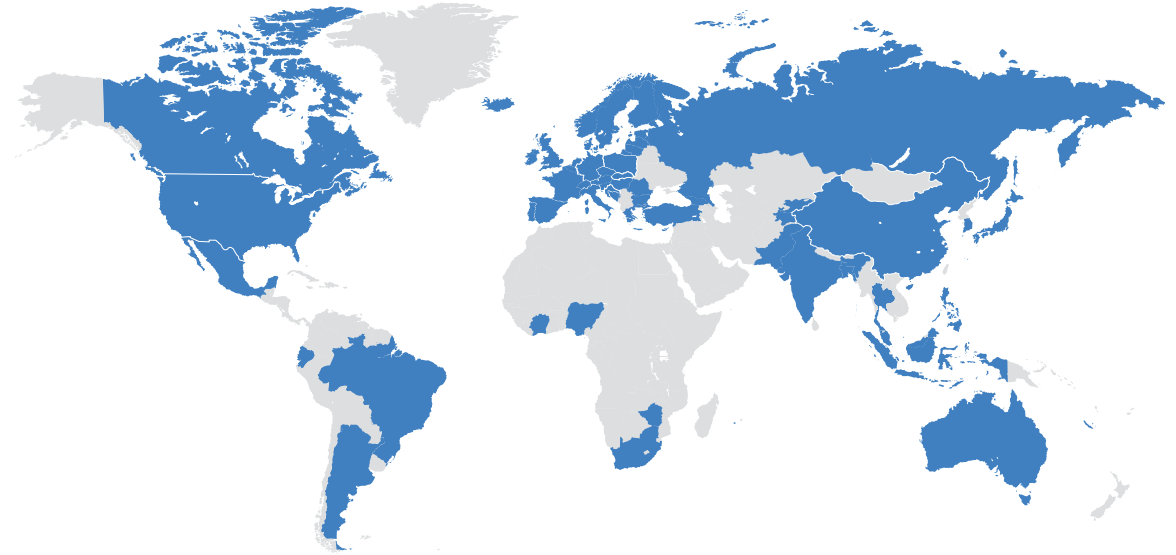
In addition, after a record-breaking year for shareholder proposals in 2015, 41% of the total 2016 shareholder proposals in the US submitted through June were related to environmental and social topics. Furthermore, average support for climate risk proposals jumped from 7% in 2011 to 28% in 2016. Shareholders continue to request transparency from companies about social and environmental management in operations and in supply chains.<sup>17</sup>

Finally, increasing numbers of stock exchanges are driving transparency on how companies are managing sustainability issues. In addition to corporate risk disclosure requirements, stock exchange governance councils in more than 50 countries now require or encourage some level of sustainability reporting or disclosure. Refer to figure 9 for a list of jurisdictions.

<sup>17</sup> EY, 2016.

There are historical examples of consequences from companies failing to integrate sustainability risks

### 9: Stock exchanges with sustainability reporting or disclosure requirements



Argentina	Canada	Finland	India	Lithuania	Norway	Russia	Switzerland
Australia	China	France	Indonesia	Luxembourg	Pakistan	Singapore	Taiwan
Austria	Croatia	Germany	Ireland	Malaysia	Philippines	Slovakia	Thailand
Bangladesh	Czech Republic	Greece	Italy	Malta	Poland	South Africa	Turkey
Belgium	Denmark	Hong Kong	Ivory Coast	Mexico	Portugal	South Korea	UK
Brazil	Ecuador	Hungary	Japan	Netherlands	Republic of Cyprus	Spain	US
Bulgaria	Estonia	Iceland	Latvia	Nigeria	Romania	Sweden	Zimbabwe

For example, in Australia, the *Corporate Governance Principle* recommends that all listed entities establish a risk management framework and periodically review the effectiveness of that framework. This should include disclosing whether the entity has any material exposure to economic, environmental and social sustainability risks and, if it does, how it manages or intends to manage those risks.<sup>18</sup>

The following section seeks to understand why this breakdown in the inclusion of sustainability risks in enterprise risk management processes exists. It raises the following questions:

- Are the current enterprise risk management frameworks effective at capturing emerging or current sustainability risks?
- What is the suitability of impact measurement tools for determining the relative magnitude of sustainability risk relative to all other risks?

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– How should companies categorize and define sustainability risk and then prioritize? Is the traditional approach of ranking risk as a product of impact and likelihood detrimental to sustainability risk management as such risks are perceived to be of low to remote occurrence relative to the business reporting and management cycles?

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– Over which timescales *should* risk be assessed for internal management purposes and for external disclosure if it is to capture sustainability-related risks effectively?

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– What is the threshold criterion for acting and reporting on risk?

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– Where do companies need additional support in applying the existing frameworks to a new and continually changing risk agenda and landscape?

<sup>18</sup> Listing Rule 4.10.3 Corporate Governance Principle 7.



# Factors driving the breakdown in sustainability risk management

Section II set out the evidence supporting the view that companies are experiencing a breakdown in their enterprise risk management processes for sustainability risks. This section explores some of the potential causes of this, which can be found across the risk management process from company procedures, to allocation of roles and responsibilities, to systemic issues in the ability to manage and disclose sustainability risks. This section discusses eight of the main reasons for the breakdown.

10: Factors causing the sustainability ERM breakdown



\*Bar width refers to level of agreement of interviewees and sustainability professional feedback from the Pathways to Impact Conference.

# 1 Limited knowledge of sustainability risks

Sustainability is a relatively new field and is changing the course of many major business activities, from how a company sources materials, to where they decide to build new facilities, to how they drive product and process innovation, or even the methods they use to attract and develop talent. In managing the risks associated with sustainability, some companies are challenged by a lack of understanding of sustainability risks or the manner with which these risks could impact the business.

Another salient feature of sustainability risks is that they are often also emerging risks. The *Global Risk Report 2016* produced by the World Economic Forum identifies the top 10 risks by likelihood or impact (see Figure 11). Over the last 10 years, this list has transitioned from a focus on economic risks toward more societal, geopolitical and environmental risks<sup>19</sup>.

A report by the Institute of Chartered Accountants in England and Wales (ICAEW) similarly reports “that social, environmental and economic aspects of sustainable development present business opportunities but also potentially catastrophic reputational risks that must be managed”. The report cites Professor Michael Power describing the myriad sources of reputational risk as requiring the “risk management of everything”.<sup>20</sup>

In addition, many sustainability risks, including a number of those listed in Figure 11, can also be considered “emerging” risks. They have come about due to global and regional megatrends that were not as prevalent or well-understood 20 years ago, such as consumer empowerment, climate change and resource constraints. A number of the WBCSD member companies interviewed shared that they only started to incorporate sustainability risks into risk management processes in the past five years.

11: Top 10 risks, ranked by likelihood or impact

Likelihood Top 10 risks	
1.	Large-scale involuntary migration (Societal)
2.	Extreme weather events (Environmental)
3.	Failure of climate change mitigation or adoption (Environmental)
4.	Interstate conflict (Geopolitical)
5.	Natural catastrophes (Environmental)
6.	Failure of national governance (Geopolitical)
7.	Unemployment or underemployment (Economic)
8.	Data fraud or theft (Technological)
9.	Water crisis (Societal)
10.	Illicit trade (Economic)
Impact Top 10 risks	
1.	Failure of climate change mitigation or adoption (Environmental)
2.	Weapons of mass destruction (Geopolitical)
3.	Water crisis (Societal)
4.	Large-scale involuntary migration (Societal)
5.	Energy price shock (Economic)
6.	Biodiversity loss and ecosystem collapse
7.	Fiscal crisis (Economic)
8.	Spread of infection (Societal)
9.	Asset bubble (Economic)
10.	Profound social instability (Societal)

Adapted from *Global Risk Report 2016* (World Economic Forum)

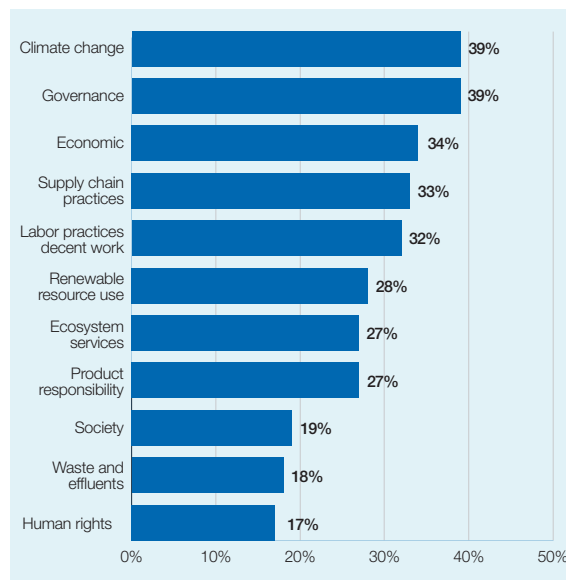
<sup>19</sup> World Economic Forum, 2016.

<sup>20</sup> ICAEW, 2004.

According to COSO's 2016 *Enterprise Risk Management: Aligning Risk and Strategy with Performance* public exposure draft report: "emerging risks may not be understood well enough to identify and assess accurately when they are first identified",<sup>21</sup> Interviews with WBCSD member companies revealed several instances that financial risks are given more weight in risk management discussions than environmental or social risks, potentially for this reason.

The research on risk disclosures examined the alignment between issues identified as material in a sustainability report and subsequently included in the company's risk disclosures. The percentages in the chart below show the frequency with which a category of sustainability risk was found to align between the two reports. Longer standing risks, including governance, economic, supply chain and climate change (which includes natural disasters) risks, tend to have a higher level of alignment. In contrast, some emerging risks, including human rights, waste, product responsibility and ecosystem services risks, were less frequently disclosed across both reports.

12: Sustainability risks with the greatest alignment



Building on this theme, the interviews explored how companies are treating emerging sustainability risks. Interviewees described several challenges they experienced when seeking to capture and include emerging sustainability risks in the ERM process:

**Emerging sustainability risks were omitted until it was understood that sustainability was central to the business.**

“It was more challenging to incorporate sustainability risks when we saw sustainability as an “add-on” and not central to the business. Now that sustainability is well understood and integrated in the business, it is much easier to incorporate sustainability risks.”

“Our CEO was new to our industry, which is more exposed to climate change than their previous industry.”

**Conservatism prevents emerging sustainability risk inclusion:**

“We are a conservative company, so it is challenging to include some of the new social or environmental risks. If we were to order how we incorporate risk categories, it would be first economic, then social, then environmental.”

<sup>21</sup> COSO, 2016, paragraph 240.

### Identifying emerging sustainability risks is resource intensive:



Emerging risks will often require solutions that are more challenging. Sometimes, internal consultation will be necessary; sometimes external consultation.”



Our risk function requires adoption not only at the executive level but throughout the various business units. To effectively engage stakeholders throughout the business units and at all levels, would require a great deal of resources that we haven't had to-date.”

### Emerging sustainability risks have so many unknowns that it is challenging to rely on data:



There is so much unpredictability with many sustainability issues, for example whether or not there will be a carbon tax or climate change regulations. These unknowns would result in serious impacts, but we just don't know what or when yet.”

Based on the literature, research and interview results, identifying emerging issues, and perhaps emerging sustainability issues even more so, is a challenge for companies that can cause a breakdown in ERM. For sustainability risks specifically, there are those that have been forced into the mainstream via regulation (e.g. modern market salaries, conflict minerals) or social media (e.g. cybersecurity, fake news) which drives those issues to be captured and addressed by companies. For other sustainability risks, unless there is reliable, available and convincing data, the risk may be ignored, and attempts to communicate the importance and value of the risk could be eroded.



### Good practice

Using the results of a materiality assessment as an input into the risk identification process.

Explicitly mapping risk impacts across the value chain to identify risks with *indirect* impacts and including these risks in the risk register, along side those with identified direct impacts.

Sustainability managers should play a role in the development of the risk register. Companies that are more successful at integrating sustainability risk management stressed the importance of translating the language to fit into the ERM process.

## 2 Omission of opportunities or strategic risks

While a sustainability materiality assessment or sustainability report will often be used to explore the range of risks and opportunities available to the company, a number of companies suggested that the focus of the ERM process is typically more on managing downside risk than on opportunities.

During interviews, some companies indicated that their ERM function tended to be reactive in considering sustainability opportunities. For one company, the risk management team revealed while they do consider some strategic risks, such as the risk of not acting on an available product strategy; *sustainability-related* strategic risks tend to be overlooked. Similarly, the sustainability materiality assessments for a number of companies point to opportunities around circular economy practices and the associated risk of a competitor investing in these practices to gain a competitive advantage. However, in the absence of a direct and measurable impact of the risk or regulation to drive change, this type of sustainability opportunity tends to be omitted from the ERM process.

As outlined in section I, strategic risks are quite different from other types of risks in that they are not inherently undesirable. For example, the risk of not innovating can spur innovation. A variety of companies have attempted to address this risk with varying degrees of success in the past few decades: a camera film company switching to digital; a cable company adjusting to the trend towards live-streaming. The success of innovating to respond to such risks has significant upside potential; however, the upside potential can be at odds with the negative connotations around risk and consequently omitted.

Another example of a company capturing strategic risks or opportunities involves a beverage company witnessing consumer trends towards lower calorie products. Although a sustainability issue relating to nutrition, strategically this is just as significant to business viability as hedging against currency fluctuations or managing the corporate credit rating.

More recent ERM guidance is encouraging a shift from capital protection and reducing the number of preventable losses toward a more strategic function that can provide management with the risk information it needs to consider alternative strategies. This evolution has been evident in the iterations of the 2016 COSO risk management framework exposure draft, which “recognizes the increasing importance of the connection between strategy and entity performance”.<sup>23</sup>

### Disclosure of opportunities or strategic risk

Even where sustainability issues and their contribution to strategy are being considered, the opportunities and risks related to not pursuing opportunities will not typically be disclosed.

Companies noted that instead of putting these risks in the legal filing (Form 10K or 20F), these types of opportunities tended to be discussed with investors in other forums. In many cases, although opportunities may address material risks, this is considered competitively sensitive and therefore is not readily disclosed.



“A key question of any strategy is whether it is sustainable. Sustainability these days is defined largely in environmental terms. But is that broad enough? What about those industries that are not resource extractors but resource users and enablers, such as banks and financial services? Should they also be concerned about sustainability? Of course they should if they want to survive and thrive over the long term.”

*Rick Funston (refer to section IV for further information).*

<sup>23</sup> COSO, 2016, p. iv.

# 3 Difficulty quantifying sustainability risks

As discussed in the introduction, irrespective of the type or nature of the risk, companies will use a combination of art and science to evaluate, compare and prioritize enterprise risks. A range of tools can be used to translate risks into financial or quantified impacts. Management then uses its own experience and context to determine the risk's impact and likelihood.

One company interviewed described this process as it relates to understanding the impact of pandemics on their business:



We evaluate the risk of pandemics. To do this, we look for data provided by the Centre for Disease Control and the UN and align this to the company's geographical presence. However, to then determine the level of risk and the organizational approach, there will be a significant amount of judgment factored in."

Companies revealed that when managing more traditional risks – commodity risk, credit risk, market risk – they have developed significant capability over time to quantify the impacts and then apply the professional judgment of business managers and risk managers to make a call. Although this requires some art, business manager experience provides a basis for employing these techniques.

For emerging sustainability risks, however, business managers often do not have the tools or data to establish the science to effectively bring the conversation to the level of understanding required. In many cases, this is because the risks are not "readily conducive to quantification"<sup>24</sup> or the tools have not yet been developed. Compounding this issue is that business managers may not have the art or knowledge to apply professional judgment to the risk or opportunity. Each of these is discussed in further detail as follows:

## Lack of science applied to sustainability risks

Once a sustainability risk has been identified, it can be challenging to credibly quantify the impact or likelihood of the risk during the assessment phase.

Risks are often evaluated and understood on the basis of historical analysis. When a risk is still emerging or poorly understood, it can be difficult to find historical precedence or a tool to support quantification. In addition, the tools familiar to risk professionals, such as those outlined in the diagram below, are not as well understood by sustainability managers.

### 13: Science tools and techniques

#### Science

Formal tools and techniques are important in order to systematically identify, evaluate and monitor business risks and the impacts of any risk management strategies or initiatives.



Decision trees

Monte Carlo

Value at Risk (VaR)

Stress testing

Scenario analysis

Forecasting

Modeling uncertainty

Risk quantification

The interviews provided a mix of responses from companies as to the estimated risk impact needed to reach the threshold for inclusion in the risk register. For some companies, the financial impact needs to be significant and direct for the risk to be treated. This requirement can pose problems for sustainability risks. The interviews showed that the focus on the short-term financial impact tended to be dominant. One company stated that "sustainability risks tend to indirectly impact revenue, and we prioritize risks that directly impact revenue".

<sup>24</sup> Schroeder, 2014.



Other companies also consider reputational risks, but only if there is a direct financial link. As explained by one company:

“It is not enough to highlight to management that there might be a “reputational risk” associated with polluting a river. There needs to be a relationship between the action of the company and the outcome. Having a financial impact was an important step to demonstrate this link and also to prioritize the risk, when there are so many risks to address.”

An article by McKinsey<sup>25</sup> similarly found that “companies have some sort of process to identify and rank risks, often as part of an enterprise risk management program. While such processes can be helpful, experience suggests that they often examine only the most direct risks facing a company and typically neglect indirect ones that can have an equal or greater impact”.

One company found that the indirect impacts of climate change, such as rising water levels, are perhaps not rated as high as they should be as a result of the challenges in identifying and quantifying this issue. For another company, even though the impact may be able to be quantified, the company has a difficult time assessing the probability of whether or not there will be a carbon tax.



#### Good practice example:

Although it is not without its challenges, business managers should try to “bring the science” to leadership to enhance decision-making. As described by one company “if you present the risk well, it will make it onto the matrix. But you can’t be emotional; you need to present the business case in hard numbers.” One company uses social return on investment (SROI) calculations for risk purposes. For example, the social return of a community investment can be reversed to consider the impact of a strike if the investment is not made.

One company did not focus on quantifying impact and likelihood the first time a risk was identified. “While quantification is ideal, it is not a barrier. Creating the perfect scientific process can hamper the ability to just get going on an issue.”

## Lack of art applied to sustainability risks

### 14: Art tools and techniques

#### Art

Understanding the risks and their likely impacts on the business requires an astute and often intuitive understanding of risk, strategy and human behavior.



Intuition

People acumen

Business acumen

Industry experience

“Gut feeling”

As already noted above, sustainability risks are often categorized as emerging risks. Megatrends such as urbanization, resource constraints, climate change and empowered consumers are shaping the way companies do business. Sustainability has impacted functions across organizations: supply chain, operations, product development, finance, reporting and, of course, risk. Consequently, emerging risks affect multiple functions across a business.

For risks or opportunities that are emerging, new or complex, applying the art element of risk management can be challenging since information is not as readily available. Even when high-quality data or quantification of the risk is available, business managers do not have the language or knowledge of the new risks to apply the professional judgment needed to prioritize or respond to the risk. This can lead to an inadvertent bias towards risks with which executives are more familiar.



#### Good practice example:

One manufacturing company decided to prioritize addressing safety risks in their operations. The risk assessment included the science information of the costs of injuries, specifically medical bills, insurance and fines. Executives supplemented this with art information based on their understanding of how injuries affect the workplace – from downtime and retraining to the impact on employee morale. Defining the less quantifiable impacts and rooting them in the experience of the decision-makers helped to elevate safety beyond what the direct expenses were in this situation.

One consumer products company included elements of art in their analysis of the risk related to resource constraints. Management connected megatrends to the risk and layered in known activities by competitors and leaders. When applying art to risk evaluation, they considered qualitative information that provided additional insights outside their day-to-day management activities.

<sup>25</sup> Lamarre and Pergler, 2009.

# 4 Limited cross-functional collaboration

In many cases, ERM may not be effectively capturing sustainability risks simply because the risk and sustainability functions are not communicating. Even when the risk and sustainability functions are communicating, if sustainability is not speaking the risk language, sustainability risks may be ignored.

The manner in which risk and sustainability functions collaborated varied across the companies interviewed. The figure below summarizes these methods of collaboration.

15: Methods of collaboration

Organizational structure		
<p><b>Integrated</b></p> <p>Sustainability and risk management teams work as part of the same team, or include structures to allow flow of processes and information</p>	<p><b>Collaborative</b></p> <p>Sustainability and risk management functions may be separate, but interact and collaborate to share processes, tools and information</p>	<p><b>Distinct</b></p> <p>Sustainability and risk management functions do not interact or collaborate</p>
ERM process		
<p><b>Integrated</b></p> <p>No distinction between how sustainability and other risks are managed</p>	<p><b>Collaborative</b></p> <p>The sustainability materiality assessment is an input to the risk identification and assessment process (and vice versa)</p>	<p><b>Distinct</b></p> <p>Risk management and sustainability issue or risk assessments are completely separate processes</p>
In practice		
<p><b>Integrated</b></p> <p>For two of the 20 companies interviewed, the person responsible for ERM was also responsible for sustainability. In these conversations, the interviewees shared in-depth discussions about how sustainability issues are incorporated in the ERM process from start to finish. These two interviewees were also able to articulate how each of their material issues mapped to publicly disclosed risks.</p>	<p><b>Collaborative</b></p> <p>One company's sustainability group recently moved into the strategic planning group. The interviewee noticed an important organizational shift that also led to a shift in the perception of sustainability within the company, which extended to engaging with the risk team.</p>	<p><b>Distinct</b></p> <p>The same interviewee from the collaborative method noted that preceding their move into the strategic planning group, they were in the public relations group. At that time, the risk group was less willing to collaborate, seeing sustainability as a public relations topic rather than a strategic topic.</p>

To address this, sustainability professionals must ensure that risks, quantitative analyses and business solutions are central to the risk management agenda. Equally, risk professionals should be trained to understand the sustainability impacts

and dependencies their company has and to listen, solicit information about systemic risks, analyze the information within the context of the company, and empower response actions.



### Good practice

Many WBCSD sustainability executives are experienced in monitoring and evaluating global megatrends relating to environmental and social risks. Approximately half of the companies interviewed stated that the sustainability function plays an active role in the review of the risk register. Successful sustainability managers discussed the importance of translating sustainability language to fit the ERM process.

### Collaboration and risk evaluation in practice

The interviews also revealed that management-control activities related to sustainability risks are not owned by any one function. Instead, sustainability risks are owned in the group most closely related to their exposure. For example, sustainability risks relating to suppliers are owned by procurement; product chemical use is owned by quality; non-governmental organization actions are owned by sustainability.

Challenges with this decentralized approach can surface for new or emerging sustainability risks. To illustrate, a supply chain vice-president is responsible for all risks related to supply chain, and human rights is simply one component. If the supply chain vice-president does not understand the potential impacts of human rights issues in the supply chain, this can impact how human rights issues are assessed in the risk evaluation phase. The supply chain vice-president may dismiss the impact or likelihood of human rights risks due to lack of knowledge of the emerging risk. Since sustainability subject matter professionals are familiar with emerging sustainability risks, collaboration and communication can improve the integration of sustainability in ERM.

### Interviews indicated that strong collaboration improved ERM practices

The interviews revealed that collaboration across risk decision-makers and sustainability professionals resulted in successful ERM practices and greater alignment of risk disclosures and material sustainability issues.

At organizations where these relationships were not in place, ERM often omitted sustainability issues. The omissions were frequently attributed to a lack of connection between sustainability risks and the bottom line or due to challenges estimating the time horizon with which the risk is expected to materialize. These specific issues are addressed further in factors 3 (difficulty in quantifying risk) and 5 (longer time horizons for sustainability risks).



### Good practice

A leading practice identified was to have a sustainability professional sit on the ERM committee. This risk-sustainability collaboration gives a formal setting for sustainability risk discussions.

### Sustainability professionals can improve their own understanding of ERM to improve integration

Multiple interviews noted that while a lack of understanding of sustainability issues by risk professionals can reduce the effectiveness of integration, similarly a lack of understanding of ERM by sustainability professionals can be the cause of a breakdown. Some sustainability professionals revealed that the reason they struggle to collaborate with the risk management function is because they do not have a strong understanding of the ERM processes at their companies.



### Good practice

Sustainability documentation coupled with traditional risk identification and analysis tools can provide risk managers with information to support integrated risk assessments. At a minimum, sharing the materiality assessment results and associated quantitative data with the risk function is critical to achieving this.

# 5 Longer time horizons for sustainability risks

The research also revealed that differences in time horizons is another reason sustainability risks are often overlooked or prioritized lower than other risks. The timelines considered during a risk assessment for most companies interviewed were typically 2-5 years. Some companies used a time horizon of 5-10 years, particularly in sectors that have longer investment time horizons. In contrast, sustainability materiality assessments typically look at a time horizon of 10, 20 or even 30 years. A number of companies explained that it is for this reason that issues discussed in the sustainability report are not found on the risk register or disclosed in mainstream corporate risk disclosures.

Although a company's management and board are expected to manage the company for success on a 10-50 year time horizon,<sup>29</sup> a variety of factors can reduce that timeline:

- Perceived or real pressure to report good earnings to shareholders quarterly.
- Market volatility.
- Time-bound nature of company officer and employee careers.
- Short tenures of chief executive, the average being 4.6 years.<sup>30</sup>

Sustainability issues such as climate change tend to manifest over a longer and often uncertain timeframe, which compounds this timing misalignment. Many sustainability issues have significant longer term impacts; however, companies will often discount these back to the current period, thereby assigning the issue as low risk and reducing the likelihood that the risk will be addressed with a long-term action plan. If, for example, a company's risk function uses a 5% discount factor, any risk that is likely to materialize more than 20 years from now, will simply not rate on today's risk register for monitoring and appropriate corrective action.



## Good practice

COSO's *Enterprise Risk Management: Aligning Risk and Strategy with Performance* public exposure draft report states that "when assessing risks of the mission, vision, or strategy, some aspects may be longer term. As a result, management needs to be cognizant of the longer time frames and not ignore risks that might emerge or occur further out".<sup>31</sup>

## Prioritization of risk

This difference in timescale impacts the priority applied to the management and mitigation of a risk. One chemicals company cited the case where different companies in the same sector prioritize the issue of greenhouse gas emissions as high, medium or low. The difference is likely explained by the assumptions used to evaluate timing of the impacts and likelihood of the risk occurring. While one company may consider the impact in the next five years, another may consider the longer term impacts of the issue.

Another company noted that management might acknowledge the risk but decide to delay implementing strategies to address it.



## Good practice

One company indicated that longer term risks such as "replacement of glass with plastic" will tend to be discounted significantly due to the time horizon. For this business, it is important that the company is at least defining the risk or opportunity and considering a response that can be deployed in the coming years.

<sup>29</sup> Funston and Wagner, 2010.

<sup>30</sup> <http://chiefexecutive.net/increase-your-chances-of-survival-as-ceo>.

<sup>31</sup> COSO, 2016, p. 71.

# 6 Differing language used for ERM versus disclosures

The need to meet perceived language norms results in material issues disclosed in a sustainability report being adjusted for inclusion in a mainstream corporate risk disclosure.<sup>32</sup>

## Language selection

The desktop research indicated a 29% alignment in “material” sustainability issues in sustainability reports also being disclosed in corporate risk disclosures in mainstream corporate filings. The percentage of alignment is based on an exact language match. To objectively analyze alignment, the desktop research methodology used a word search seeking exact language matches. To illustrate, if “human rights” represented a material sustainability issue but the risk factor section instead described the risk as “child labor”, this issue would have been considered to be “not aligned”. For some companies, this subtle language difference could suggest there is a lack of alignment when in fact sustainability is effectively integrated into the ERM process. However, the difference begs the question: Why did the language change?

## Reporting gatekeepers make changes

For most companies, the risk disclosures in the mainstream corporate filing are subject to a more rigorous review process than the material sustainability issues disclosed in sustainability reports.

About one-third of companies interviewed indicated that their legal counsel would omit or materially modify the sustainability risks reported in the legal filings, while all companies indicated that legal or corporate affairs did change the language in some way.

## Why are there language changes?

Interviewees identified the following reasons for legal or other functions to amend the language in the risk disclosures:

- The legal department strongly encouraged disclosure of the minimum set of issues to maintain compliance with regulations.
- Legal counsel sought to maintain a broad-based language that would not need to change annually given the rigor associated with stating each word in the risk disclosure section.
- The financial controller advocated that financial audiences were not ready to read about a broad group of risks.
- The risk management function viewed the material sustainability risks as too numerous and requested a reduction so that only the highest risks, as they saw them, would be included.

This topic of language around disclosure is highly specialized and complex given varied global regulations. As discussed in section V, the WBCSD plans to focus on this topic going forward to understand and synthesize global requirements around sustainability and risk reporting and identify the root causes behind language differences.

<sup>32</sup> Note: The research identified the two factors in the risk communication phase, but communication is not the focus of this report. As noted in section V, the WBCSD plans to understand and convey more about communication differences in its next report on risk management.

# 7 Differing purposes for sustainability versus risk disclosures

Sustainability issues noted in the materiality section of a sustainability report may also not appear in risk disclosures because the audience and purpose of those reports are inherently different.<sup>33</sup>

## Audience: annual report vs. sustainability report

Companies tailor communications to the target audience, which can result in significant differences in communication for common topics. For mainstream corporate reports containing legal risk disclosures, target audiences are primarily shareholders and regulators. For sustainability information, the target audience widens to include a broad range of stakeholders, including employees, customers, communities and suppliers, among others. It is not surprising that differing audiences can lead to differing disclosures. In the next year, the WBCSD plans to further explore why these differences are in place and to what extent the communication differences could or should be rectified.

## Definition of materiality

Over the last decade, the concept of materiality has been consistently referenced as both a problem and a panacea in the development of so-called non-financial, environmental, social and governance (ESG) or corporate sustainability reporting. As a concept, materiality holds out much hope of being the silver bullet that results in the perfect amount of information appearing in corporate reports – not too much and not too little, but just right. However, the application of materiality as currently understood and used has not achieved this yet. Hundreds of articles have been written on the use of materiality in corporate reporting, ranging from the comparison with packing a backpack for a hike (you can only take supplies that are crucial, otherwise the weight will slow you down) to a study on the genealogy of accounting materiality, which traces its roots in philosophy, theology and social anthropology, and everything in between.<sup>34</sup>

It is therefore not surprising that most companies interviewed indicated that the list of material sustainability issues was longer than what could reasonably fit into the top risks for company risk disclosures. If the definition of “material” was consistent within the organization, then this issue would not occur and all material issues identified from a sustainability perspective would be material issues to the company.



## Good practice

Some companies cross-checked that the risks identified in the risk disclosures were reflected in the material topics outlined in sustainability communications and vice-versa. For one company, this practice was suggested by their independent financial statement auditor.

<sup>33</sup> Note: The research identified the two factors in the risk communication phase but communication is not the focus of this report. As noted in section V, the WBCSD plans to understand and convey more about communication differences in its next report on risk management.

<sup>34</sup> Unpublished research on materiality by the Climate Disclosure Standards Board

<sup>35</sup> WBCSD, 2016, p. 1.

<sup>36</sup> U.S. Securities and Exchange Commission, 2011.

### What is material?

As demonstrated in the table below, several different definitions of “materiality” are used by the various regulatory and standard setting bodies. As 80% of WBCSD companies use the Global Reporting Initiative’s (GRI) G4,<sup>35</sup> this definition largely drives the identification and reporting of material sustainability issues. For risk disclosures in mainstream corporate filings, materiality is considered but disclosure depends on legal obligations. For the US, the Securities and Exchange Commission (SEC) states: “‘Risk factors’ includes information about the most significant risks that apply to the company or to its securities.”<sup>36</sup> In the case of a US-based company, there still may be many material risks, but the company only discloses the most significant of those material risks, thereby causing a disconnect in reporting.

#### SEC SAB 99

A matter is material if there is a substantial likelihood that a reasonable person... relying upon the report would have been changed or influenced by the inclusion or correction of the item... Financial management and the auditor must consider both ‘qualitative’ and ‘quantitative’ factors in assessing an item’s materiality.

#### GRI Standards Definition

The Materiality principle identifies material topics based on the following two dimensions:

- The significance of the organization’s economic, environmental, and social impacts;
- Their substantive influence on the assessments and decisions of stakeholders.

#### Sustainability Accounting Standards Board (SASB)

According to the US Supreme Court, information is material if there is “a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available” (TSC Indus. v. Northway, Inc., 426 U.S. 438, 449 (1976)) Integrated Reporting (IR).

A matter is material if it is of such relevance and importance that it could substantively influence the assessments of providers of financial capital with regard to the organization’s ability to create value over the short, medium and long term. In determining whether or not a matter is material, senior management and those charged with governance should consider whether the matter substantively affects, or has the potential to substantively affect, the organization’s strategy, its business model, or one or more of the capitals it uses or affects.

#### The International Accounting Standards Board (IASB)

Information is material if omitting or misstating it could influence decisions that the primary users of general purpose financial reports make on the basis of financial information about a specific reporting entity. In other words, materiality is an entity-specific aspect of relevance based on the nature and magnitude or both of the items to which the information relates in the context of an individual entity’s financial report. Consequently, the IASB cannot specify a uniform quantitative threshold for materiality or predetermine what could be material in a particular situation.

#### International Integrated Reporting Council

A matter is material if it could substantively affect the organization’s ability to create value in the short, medium or long term.

#### Human Rights Reporting and Assurance Frameworks Initiative (RAFI)

The RAFI framework states that materiality processes do not adequately reflect human rights issues. By contrast, RAFI uses the concept of “salient human rights”. A company’s salient human rights issues are those that stand out because they are at risk of the most severe negative impact through the company’s activities or business relationships. The emphasis of salience lies on those impacts that are:

- **Most severe:** based on how grave and how widespread the impact would be and how hard it would be to put right the resulting harm.
- **Potential:** meaning those impacts that have some likelihood of occurring in the future, recognizing that these are often, though not limited to, those impacts that have occurred in the past.
- **Negative:** placing the focus on the avoidance of harm to human rights rather than unrelated initiatives to support or promote human rights.
- **Impacts on human rights:** placing the focus on risk to people, rather than on risk to the business

## 8 Limited guidance for implementing risk management framework

Finally, although linked to a number of the other factors discussed in this section, a key question raised by companies was whether the current risk management frameworks are effective in addressing sustainability risk.

A survey of USBCSD and WBCSD member companies attending a risk management workshop showed that 70% agreed that their current practices do not address sustainability risk and 44% agreed that the frameworks need to provide more guidance to companies on how to embed sustainability into ERM.

In recent years, risk frameworks have evolved to capture more strategic risks. The most recent proposed update to the Risk Management Framework, as set out in COSO's *Enterprise Risk Management: Aligning Risk and Strategy with Performance exposure draft report*<sup>37</sup> has endeavored to address many of the challenges companies are facing when it comes to emerging, complex risk. Despite this, it has been shown that risk management frameworks, or the manner in which they are implemented, is limiting the extent to which sustainability related risks are being assessed and managed.

In this study, many of the companies with the highest alignment of sustainability risks to legal disclosures used a modified ERM frameworks. Some stated that "off the shelf" frameworks were inadequate for the effective management of environmental and social risks.



### Good practice

Companies customized ERM frameworks with the follow to improve the suitability to their organization:

Extended the timeline for considering impacts and likelihood of risks.

Added examples of environmental and social risks to the ERM manual to support the notion that these risks should be considered in the ERM process.

Enacted governance for cross-functional collaboration to achieve a more integrated view of the enterprise rather than a function-by-function specialization.

This suggests that ERM frameworks may be more applicable for managing compliance and financial risk and that additional guidance is required to companies to incorporate sustainability risk into the ERM process.

<sup>37</sup> COSO, 2016.



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# IV Expert opinions on risk management

# A Risk Intelligent View of the Competitive Ecosystem

Rick Funston<sup>39</sup>



American actress Carrie Fisher once said: “Instant gratification takes too long”. In today’s short-term world of high-frequency trading and quarterly reporting, it is hard for investors to be patient, invest for the long term and be concerned about sustainability.

But what are the risks of being a patient, long-term investor? Are they any different from those of a short-term investor?

Fifty years ago, the average life expectancy of an S&P 500 company was about 70 years. Today it is about 18 years and declining. What is causing this decline and how are the survival risks being assessed? What makes a business model sustainable?

A sustainable business model must create, deliver and capture value. It must do this both short and long term. It must compete in the highly interactive, complex and non-linear global ecosystem which includes manifold and chaotic social, economic, technical, political, legal and environmental factors.

A business model is comprised of the organization’s vision and value proposition, its product and service system, its profit system, and the inter-relationships between them. A successful business model ought to be risk intelligent and alert to the risks of action and inaction and to the risks not only to the successful execution of its strategy but also to the risks inherent in the strategy itself.

Most strategies take a continuous, incremental improvement approach. But killer risks are typically discontinuous, asymmetrical changes in business models that occur with surprising velocity. A key question of any strategy is whether it is sustainable. Sustainability these days is defined largely in environmental terms. But is that broad enough? What about those industries that are not resource extractors but resource users and enablers, such as banks and financial services? Should they also be concerned about sustainability? Of course they should if they want to survive and thrive over the long term.

So why is it that sustainability risks are often seen as separate and apart from the way conventional risks such as strategy and operations are reported and managed? Perhaps it is for the same reasons that enterprise risk management (ERM) was slow to be adopted by management. It is understandable that any new discipline will try to differentiate itself – to draw attention to the need for such discipline with specialist language, frameworks and methods.

As with elections where it is important to emphasize the differences in platforms, in governing it is important to minimize those differences. So too with sustainability and ERM. To be truly embraced by management, they need to become part of the way the business is designed and managed. Perhaps it is time for “risk intelligent enterprise management” that includes a continuing assessment and response to business model sustainability and addresses the killer risks and gigantic opportunities that await the enterprises of the 21st century.

<sup>39</sup> Rick Funston is the Managing Partner of Funston Advisory Services LLC, which specializes in governance, operations and risk intelligence. In 2001, Rick created the concept of “risk intelligence”. He is the principal author of *Surviving and Thriving in Uncertainty: Creating the Risk Intelligent Enterprise* (Wiley, 2010). He is a former National Practice Leader for Deloitte’s Governance and Risk Oversight Services. Rick is the editor of the *Handbook for Public Pension Trustees in the 21st Century* (forthcoming, 2017).

# Contribution to Risk Management and Sustainability

*Steve Lydenberg<sup>40</sup>*

Over the past 100 years, the management of risk in investment has evolved through two stages and now appears to be entering a third.

Through most of the 20th century, best practice in investment simply meant avoiding risky securities. Risk was managed at a single-security level and fiduciaries were limited to investing in so-called “legal lists” of high-quality bonds and stocks.

In the latter half of the century, a new stage emerged as the theory of finance evolved. Tools were developed to measure and manage risk at the portfolio level. Fiduciaries could now include risky securities so long as, through diversification, the overall risk of their portfolios was not increased. Risk management was conducted at both the security and portfolio levels.

As we enter the heart of the 21st century, investment is on the verge of a further evolution. Investors – particularly pension and sovereign wealth funds with their long investment horizons – are increasingly aware of the feedback loops between investment decision-making and the sustainability of the environmental, social and financial systems they operate within. That they can impact these systems and that these systems can impact their portfolios in return has been made abundantly clear by the 2008 financial crisis and the ongoing conundrum of prudent investment in the time of climate change.

Through their investment belief statements, security selection, engagement with issuers of securities, and targeted investment programs, these long-term investors have begun to adapt traditional investment practices to this new era. Moreover, they are taking up non-traditional tools – such as additionality, standards setting, collaborative action, and public policy advocacy. This combination of traditional and non-traditional techniques enables initial steps toward addressing risks and rewards at systems levels – that is, toward managing these systems’ sustainability – while simultaneously continuing to monitor their security-level and portfolio-level risks.

It is fitting that this evolution is taking place in the context of an ever-more interconnected, powerful and resource-constrained world – and that the tools to manage all three levels of investment risks and rewards simultaneously should be emerging at this time.

<sup>40</sup> Steve Lydenberg is Founder and CEO at The Investment Integration Project.

# Perspective on Sustainability and Enterprise Risk Management

*Allen L. White<sup>41</sup>*



For transnational enterprises, globalization simultaneously creates unprecedented opportunities for wealth creation and unprecedented risks to realizing such an outcome.

Interdependency spurred by escalating cross-border flows of information, technology and capital create a complex dynamic of vibrancy, innovation and risk. Uncertainty is the norm, predictability is increasingly scarce. Rolling geopolitical and economic crises, e.g. mass migration owing to wars and climate disruption, income inequality, failed and failing states, further complicate the task of enterprise risk management. Rarely a day passes without the media reporting an environmental, social or governance setback inflicting reputational, competitiveness or financial losses on one or more enterprises.

Embedding sustainability into enterprises risk management is not simply a matter of best practice – it is an insurance policy against debilitating surprises and disruption affecting employees, suppliers, communities and shareholders alike. WBCSD's effort to advance a framework, capacity, and disclosure practices that foster a new generation of sustainability-conscious enterprise risk management is a major step toward building the long-term prosperity of companies and the societies on which they depend.

<sup>41</sup> Allen White, PhD, is Vice-President and Senior Fellow at the Tellus Institute in Boston, MA. He is Co-Founder and former CEO of the Global Reporting Initiative ([www.globalreporting.org](http://www.globalreporting.org)), Co-Founder of Corporation 20/20 ([www.corporation2020.org](http://www.corporation2020.org)), and Founder and Board Member Emeritus of the Global Initiative for Sustainability Ratings ([www.ratesustainability.org](http://www.ratesustainability.org)).

# Sustainability Risk Management

## – an actuarial approach

Nico Aspinall<sup>42</sup>



The Institute and Faculty of Actuaries has a long pedigree in risk management based on working in the insurance and pensions sector for more than a century.

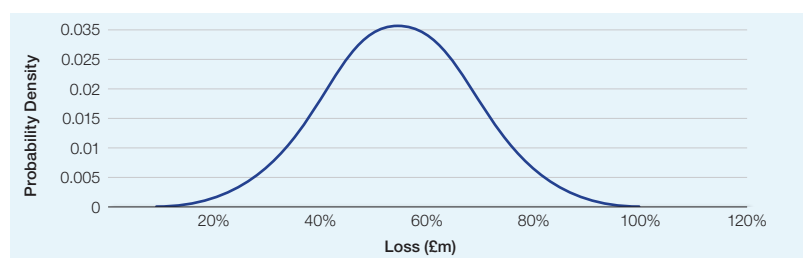
Our perspective on risk differs from existing enterprise risk management approaches:

- Actuaries focus on risks that have a large range of potential outcomes and limited data to analyze.
- Actuaries deal with the impact of risk over different time horizons, considering those emerging both over quarters and decades into the future.
- Actuaries help businesses understand what they should prepare for and what might cause their failure.
- Actuaries employ their professional judgment to quantify and compare the impact of the actions institutions could take to manage financial risks.

One of the major challenges to date in the management of sustainability risks is that they can be seen as sitting outside of the risk process. Sustainability risks can often relate to: issues where the blame will be hard to apportion to individual firms; issues where the existence of a financial impact is uncertain; or issues where the damage is caused sufficiently far into the future that management takes no account of it. The actuarial approach aims to be more holistic and include all risks that are relevant to the continuity of the institution we are advising over the long term.

To do this, actuaries create loss distribution relating to a risk, highlighting our uncertainty over the financial impact of the risk by presenting scenarios, ranked by likelihood, of how damaging a risk could be.

**16: Example loss distribution (loss (x axis) vs likelihood of loss (y axis))**



This approach is an evolution of the commonly used approach to measure risk as being the product of loss and probability. Instead, actuaries want to know what loss occurs at each level of probability – the full range of potential losses. For instance, this means assessing the damage to property at each level of a climate risk event. Measuring risk as a single number makes companies focus on the most likely outcome. Actuaries understand that the worst outcomes could be much more severe, or indeed less severe, than this for an organization and our approach highlights the chances that an institution will be forced into insolvency by a risk.

Actuaries are not experts in climate science or engineering or any of the disciplines required to implement a more sustainable policy. However, we are skilled in digesting views from a range of experts to build risk models that can highlight where business strategy needs to focus. Our role is between the risk and strategy functions, advising on and communicating the complex trade-offs any practical sustainable business faces.

<sup>42</sup> Nico Aspinall, FIA, is Chair of the Institute and Faculty of Actuaries (IFoA) Resource and Environment Board. The Board is dedicated to making sustainability issues mainstream in actuarial work. Nico has co-authored papers for the IFoA considering the impact of climate change, resource depletion, sustainability and the financial system on the actuarial profession and its clients. He co-authored the IFoA's policy briefing on managing the risk and uncertainty around climate change.

# Managing Sustainability Risks of Enterprises beyond Techniques

*Stefan Schaltegger and Roger Burritt<sup>43</sup>*



To support managers in dealing with sustainability risks of their enterprises, various organizations have introduced technical standards (e.g. ISO 31000, OHSAS 18000).

These standards assist in the design of operational enterprise risk management systems and the choice of benchmarks for continuous improvement towards corporate sustainability with different environmental (e.g. carbon emissions reduction targets) and social measures (e.g. diversity in the workforce, safety issues). They provide tools for the management of high-probability risks each with small individual consequences, but which might be significant in total.

Nonetheless, while guidelines and standards are helpful for the management of technical sustainability risks, many other sustainability risks, including market, social and political, have a different character. Whereas statistical assessment represents a technocratic view of what a risk is, society's varied actors, values, traditions, perceptions, attitudes and beliefs play a crucial role in assessing social or environmental issues and in determining any contribution to market, media or political risk for the enterprise. For some, sustainability issues are seen as uncertain opportunities to be grasped, while others view them as calculable risks to be minimized. For example, while genetically modified crops are perceived as an opportunity in the US and some developing countries, in many European countries they are assessed as a risk. In this setting, statistical calculations lose their relevance as there is neither a sufficiently long time period nor agreement on what the value of biological, crop and wildlife diversity might be. This is a common situation for many sustainability issues, including some with large (potential) economic consequences.

Sustainability risk management therefore needs to be based on a broad understanding of technical, social, market and political business environments. There is a need to change from being a sustainability risk taker, who accepts that risks can be externalized or passed on to society, to a risk manager who understands different stakeholder risk and opportunity perceptions about each technology, product or service. The manager organizes agreements on goals and the management procedures required to shift from ignorance of externalization or defensive management trying to keep risks low relative to returns, to moderation of stakeholder participation with the goal of developing and implementing innovative solutions to sustainability issues.

In summary, managing sustainability risks is first and foremost a stakeholder engagement process that instigates and facilitates communication, negotiation and participation to develop strategically relevant agreements. Then, based on these agreements risks can be operationalized based on guidelines and standards to ensure excellence in implementation.

<sup>43</sup> Stefan Schaltegger is Professor of Sustainability Management and Head of the Centre for Sustainability Management (CSM) and the MBA in Sustainability Management at Leuphana University Lüneburg in Germany. Roger Burritt is Honorary Professor at the Fenner School of Environment and Society, College of Medicine, Biology & Environment at The Australian National University in Canberra, Australia.

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# V The way forward

With a foundational understanding of the factors causing the breakdown in sustainability risk management, the WBCSD proposes a set of solutions that can be pursued both by individual companies and through WBCSD activities:

1. Enhance application of existing risk management framework.
2. Develop risk management interpretive guidance for sustainability risks.
3. Leverage capacity building and educational work streams.
4. Understand and address disclosure gap.

# 1 Enhance use of risk management frameworks to address these issues

This solution seeks to address the following breakdown factors in sustainability risk management:

	Limited knowledge of sustainability risks
	Omission of opportunities or strategic risks
	Difficulty quantifying sustainability risks
	Limited cross-functional collaboration
	Longer time horizons for sustainability risks

Companies can at least partially address some of the factors discussed by enhancing the use of risk management frameworks. While companies may have implemented a framework in years past, there may be need to update and refine these processes to enhance risk management processes generally, or in particular the management of sustainability risks.

COSO's recent public exposure draft report on *Enterprise Risk Management: Aligning Risk with Strategy and Performance*<sup>44</sup> provides guidance on a number of issues that can address breakdown factors. Examples include:

- Better alignment of risk objectives with strategic objectives and opportunities.
- A governance model that considers strategy and business objectives.
- Risk strategy considers business context.
- Identifying opportunities as well as identifying downside risk.

- Establishing well-defined roles and responsibilities.
- Integrating risk management in normal business processes.
- More structured and frequent risk communications to key stakeholders and decision-makers.
- Improved ability to provide a comprehensive view of risk.
- Use of scenario planning and stress testing to analyze potential impacts on complex, emerging or global challenges.

<sup>44</sup> COSO, 2016.



## 2 Develop supplementary guidance for the management of sustainability risks

This solution seeks to address the following breakdown factors in sustainability risk management:

	Limited knowledge of sustainability risks
	Difficulty quantifying sustainability risks
	Limited cross-functional collaboration
	Longer time horizons for sustainability risks
	Limited guidance for implementing risk management framework

The WBCSD will work with WBCSD member companies, COSO, consultancies and academics to produce a supplementary guidance document to support companies as they identify, quantify and evaluate sustainability risks as part of ERM.

### Proposed activities include:

- Teaming with COSO, the organization that produced the ERM framework most widely used by WBCSD member companies.
- Establishing a working group to provide input, including existing leading practices and challenge areas, and to provide feedback on drafts.
- Pilot testing features of the supplemental guide with select member companies.
- Producing a supplement to the COSO ERM framework.<sup>45</sup>

### Proposed inclusions for the supplementary guidance:

- Application of sustainability risks across the risk management framework.
- Examples of how companies are incorporating sustainability risk.
- Guidance for companies on how to identify emerging risks.
- Uniform risk management processes and a common language between sustainability and risk professionals.
- Guidance and tools to quantify sustainability risks.
- Guidance on comparing sustainability risks to traditional risks, including considerations for timeline implications.
- Guidance for mitigating sustainability risks.
- Links to other related tools (e.g. International Integrated Reporting Framework, Social and Natural Capital Protocols).

The aim is to align the guidance with COSO's 2016 *Enterprise Risk Management: Aligning Risk with Strategy and Performance* public exposure draft report.<sup>46</sup>

<sup>45</sup> The supplement will support the COSO ERM update "Enterprise Risk Management: Aligning Risk and Strategy with Performance"

<sup>46</sup> COSO, 2016.

# 3 Leverage capacity building and educational workstreams

This solution seeks to address the following breakdown factors in sustainability risk management:

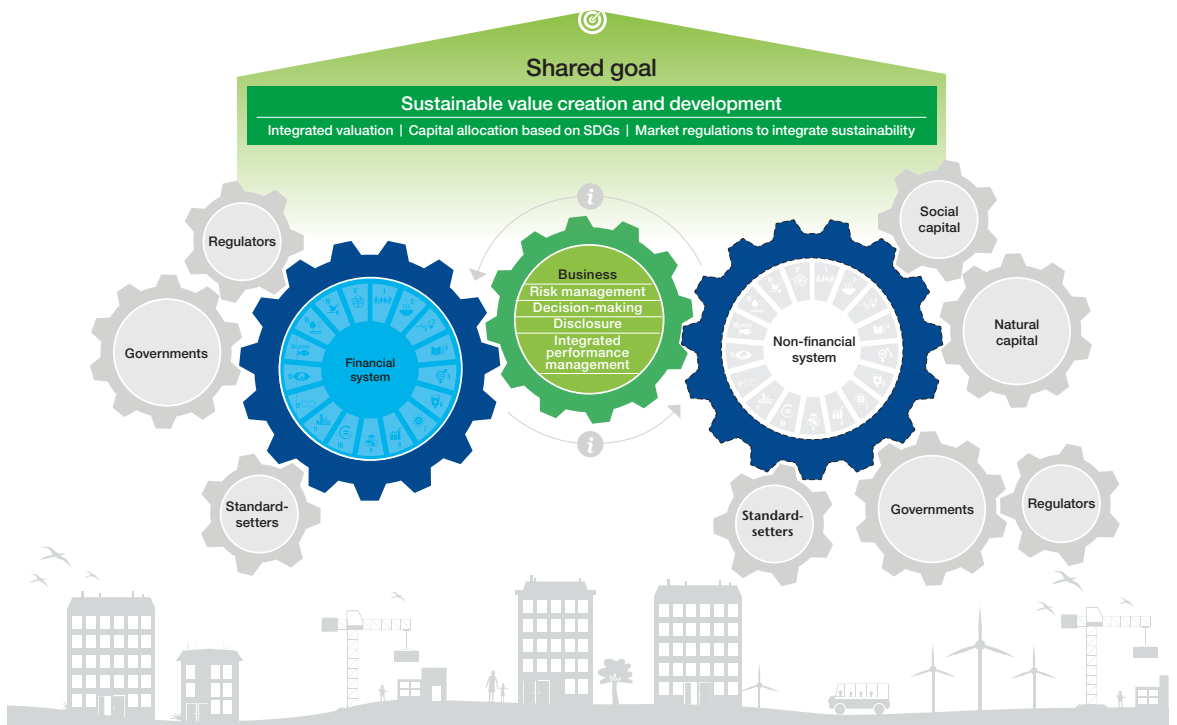
-  Limited knowledge of sustainability risks
-  Limited cross-functional collaboration

As noted in the factor 1 discussion, the emerging nature of sustainable development has caused and will continue to cause challenges in moving the sustainable development agenda forward at large companies. Risk management is no exception. Collaboration between sustainability professionals and risk professionals can help close these gaps.

The WBCSD's goal is to develop and share business solutions for a sustainable world. As outlined in Figure 18, business is the inner cog linking financial systems with non-financial systems. Risk management, decision-making, disclosure and integrated performance management sit at the core of business solutions that are important to delivering the shared goal of sustainable value creation and development.

To address the lack of collaboration across sustainability and risk management professionals, the WBCSD encourages member companies to leverage existing and future WBCSD capacity building and educational programs and materials. Examples include:

- WBCSD Leadership Program – an annual education offering for business leaders to provide insight into and context to sustainability challenges for those leaders to engage in the development of business solutions back in their respective organizations.
- Emerging professional education efforts with relevant professional bodies.
- Risk management seminars and conferences.
- Sustainability events.



# 4 Understand and address the disclosure gap

This solution seeks to address the following breakdown factors in sustainability risk management:



Differing language used for ERM versus disclosures



Differing purposes for sustainability versus risk disclosures

This paper discusses some preliminary research relating to company disclosures, identifying a misalignment between what is being disclosed in a company's sustainability report versus their legal filings. Interviews revealed this breakdown may be attributable to communication processes, including the language and audience differences between legal disclosure of risk and sustainability reporting on material issues. It may also relate to limitations in the disclosure requirements themselves as to what can and should be disclosed to investors.

The WBCSD proposes to take the following steps towards addressing the disclosure gap:

- Better understand the disclosure gap, including benchmarking the global requirements for disclosure of risk and sustainability in legal filings.
- Identify governments and stock exchanges requiring or contemplating updating requirements for disclosures regarding sustainability risk.

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# VI Conclusions and next steps

This preliminary research suggests that the intersection of risk management and sustainability is indeed fertile ground to improve both corporate disciplines.

Valuable information for risk management can be obtained when an organization takes the time to:

- Identify its stakeholders;
- Solicit input on what is most important for their well-being; and
- Prioritize that feedback against what the organization believes in can impact.

The fact that over one-third of WBCSD member companies determined that none of the most important sustainability topics were material risks to investors highlights the finding of this work to date: there is much to be done to bridge this gap.

The interviews with select WBCSD member companies underline valid hypotheses which should be explored in the next phase of this effort. Specifically, the language and tools needed for risk managers, sustainability professionals and other functional departments to evaluate, measure, manage and disclose sustainability-related risks need to be developed, refined, pilot tested and implemented.

Finally, the findings around how existing risk management frameworks are used suggest that there is not a need to develop a new risk management framework but rather to more fully use and leverage the existing COSO framework. The WBCSD also recommends the development of interpretative guidance designed for both the risk manager and sustainability professional to better integrate sustainability into ERM.

Two external documents, sustainability reports and financial filings primarily framed this preliminary research, using the risk disclosures as a proxy for the ERM risk register. This assumed connection should be explored in future research.



# VII Appendices

# A Appendix A: Bibliography

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# B Appendix B: Methodology

The WBCSD conducted research, surveys and interviews to:

- Understand the evidence base for a need for improvements in sustainability risk management.
- Understand the factors causing the breakdown in sustainability risk management.

The results informed the contents of this paper. Specifically, the work performed included:

- Desktop research of all 170 WBCSD member company reports; comparison of the issues noted as “material” in sustainability reports with the issues included in the risk factors section of the legal filing.
- Facilitation of a workshop at the USBCSD/WBCSD Yale Pathways to Impact Conference to understand the perspectives of sustainability professionals on sustainability risk management.
- Interviews of risk and sustainability representatives at 20 WBCSD member companies to better understand the inner-workings of an organization’s risk management processes that may not be evident from external disclosures. Interview questions included gaining an understanding of:
  - The current levels of alignment between sustainability risks disclosed in sustainability reports and traditional risks disclosed in legal risk filings.
  - How risk management is typically structured in an organization.
  - How sustainability risks are typically managed in an organization.
  - The reasons (if any) for a breakdown in managing or disclosing sustainability risks.
  - Practices companies are adopting to manage sustainability risks.

The WBCSD analyzed the outcomes of the research, surveys and interviews, compiled the evidence base and then distilled challenges at member companies by theme, resulting in factors driving the breakdown in sustainability risk management. As needed, the WBCSD conducted additional desktop research and references relevant third-party studies to provide further insights into the learnings.

This report concludes with suggestions for a way forward that includes two paths for action:

- 1. Actions that WBCSD member companies can act on today to improve sustainability risk management** – enhancing the use of risk management frameworks and leveraging capacity building and educational workstreams.
- 2. Actions to take with the WBCSD in concert with other members over the next two years** – contributing to the development of a supplemental guide to ERM frameworks aimed at providing needed guidance and tools and conducting further research into risk disclosures for investors.



# C Appendix C: Glossary of terms

**Alignment:** In this study's comparison of the material sustainability disclosures (issues that are defined as "material" in a materiality assessment or a "focus area" of 170 WBCSD member company sustainability reports and their risk factors (listed in the "risk factors" section of a US SEC 10-K or an equivalent annual report) revealed that, on average, only 29% of material issues disclosed in sustainability reporting are also reported as risks in mainstream reporting. The 29% of sustainability issues that were disclosed to investors refers to "Alignment" in reporting.

**Communication and disclosure:** Disclosure of the company's "material" risks to investors and to meet regulatory requirements.

**Disclosure gap:** In this study's comparison of the material sustainability disclosures (issues that are defined as "material" in a materiality assessment or a "focus area" of 170 WBCSD member company sustainability reports and their risk factors (listed in the "risk factors" section of a US SEC 10-K or an equivalent annual report) revealed that, on average, only 29% of material issues disclosed in sustainability reporting are also reported as risks in mainstream reporting. The 71% of sustainability issues that were not disclosed to investors as risk factors is the disclosure gap.

**Emerging risk:** Risks that have not yet been recognized or if they have been recognized, they are not well defined or understood.

**Enterprise risk management (ERM)** is the culture, capabilities, and practices, integrated with strategy-setting and its execution, that organizations rely on to manage risk in creating, preserving, and realizing value.

**External risks:** Risks that arise from events outside the company and are beyond its influence or control.

**Monte carlo:** Analysis that involves the use of random sampling and associated computer simulations to identify a range of possibilities of outcomes.

**Preventable risks:** Internal risks, arising from within an organization, that are controllable and ought to be eliminated or avoided

**Risk assessment:** Processes to evaluate, quantify and prioritize enterprise risks.

**Risk identification:** Processes to scan environments for new and emerging risks and opportunities and to maintain an understanding of existing risks.

**Risk response:** Processes to determine and implement an appropriate response to identified risk, based on the company's appetite for risk.

**Scenario analysis:** Conducting a series of estimations for a given period of time assuming specific changes that will affect the business environment.

**Strategic risks:** Risks that will impact business strategy execution, including impact on a company's financial statements

**Stress testing:** Using analysis to gauge how hypothetical stress factors will affect a company's performance, industry or specific portfolio.

**Sustainability risk** is any risk or opportunity that could be categorized into the following areas: economic, product responsibility, supply chain practices, society, human rights, labor practices and decent work, ecosystem services, renewable resource use, non-renewable resource use, climate change, waste and effluents, and governance.

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# D Appendix D: Acronyms

<b>AICPA</b>	American Institute of Certified Public Accountants
<b>CFMI</b>	Conservation and Financial Markets Initiative
<b>COSO</b>	Committee of Sponsoring Organizations of the Treadway Commission
<b>ERM</b>	enterprise risk management
<b>ESG</b>	environmental, social and governance
<b>GRI</b>	Global Reporting Initiative
<b>IASB</b>	International Accounting Standards Board
<b>ICAEW</b>	Institute of Chartered Accountants in England and Wales
<b>IIRC</b>	International Integrated Reporting Council
<b>IR</b>	integrated reporting
<b>ISO</b>	International Organization for Standardization
<b>RAFI</b>	Reporting and Assurance Frameworks Initiative
<b>SASB</b>	Sustainability Accounting Standards Board
<b>SEC</b>	United States Securities and Exchange Commission
<b>SROI</b>	social return on investment
<b>USBCSD</b>	United States Business Council for Sustainable Development
<b>WBCSD</b>	World Business Council for Sustainable Development

<sup>47</sup> The listing of participative companies is omitted so as to provide descriptive examples of information discussed.

<sup>48</sup> COSO, 2016.

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About the World Business Council for Sustainable Development (WBCSD)

- The World Business Council for Sustainable Development (WBCSD), a CEO-led organization of some 200 forward-thinking global companies, is committed to galvanizing the global business community to create a sustainable future for business, society and the environment. Together with its members, the Council applies its respected thought leadership and effective advocacy to generate constructive solutions and take shared action. Leveraging its strong relationships with stakeholders as the leading advocate for business, the Council helps drive debate and policy change in favor of sustainable development solutions. The WBCSD provides a forum for its member companies – who represent all business sectors, all continents and combined revenue of more than \$8.5 trillion and 19 million employees – to share best practices on sustainable development issues and to develop innovative tools that change the status quo. The Council also benefits from a network of 70 national and regional business councils and partner organizations, a majority of which are based in developing countries. Follow us on Twitter and LinkedIn [www.wbcسد.org](http://www.wbcسد.org)

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