HIGH MEADOWS
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Reporting on Systemic Impacts

A Review of Current Progress

Contents

Executive summary

As market interest in climate and sustainability issues continues to grow, the pressure on asset owners and managers to do more to integrate sustainability into investment decision making is increasing. But do they have access to enough information to be able to make effective decisions? Sustainability reporting has rapidly evolved, giving rise to greater transparency and corporate disclosure on ESG issues. However, the rapid expansion and availability of multiple ESG frameworks, standards and data offerings has also been seen by practitioners as confusing.

As investors seek to deepen their integration of ESG information into investment decision making, there is a push for better quality and more investor-friendly information, linked to corporate strategy and enabling an understanding of systemic impacts on society and the environment. What are investors requesting?

1. Material, forward-looking, timely and complete information that shows how ESG issues are affecting the whole organization and systemic risks and opportunities
2. Standardized and comparable metrics to understand ESG performance across an investment portfolio, in a similar way to financial performance
3. Information on the climate resilience of business strategies and how companies are adapting to the climate transition.

Emergent frameworks for communicating around these systemic challenges include the Task Force on Climate-related Financial Disclosures (TCFD), the Sustainable Development Goals (SDGs), the Impact-Weighted Accounts and the International Integrated Reporting Framework (IR):

Task Force on Climate-related Financial Disclosures (TCFD)

Launched: December 2015
Key Parties involved: Financial Stability Board (FSB), Mark Carney (Chair of the FSB), Michael Bloomberg (Chair of TCFD)
Focus: Climate-related disclosure

The 11 recommended disclosures structured around governance, strategy, risk management, and metrics and targets aim to enable companies to assess key material risks and opportunities arising from climate change. Organizations are expected to disclose information about the resilience of their strategy. The disclosures aim to create more transparent, reliable and comparable information that will enable investors and other stakeholders to make better-informed decisions. A review in June 2019 concluded that disclosure of climate-related financial information is still insufficient for investors, since partial TCFD disclosure is the current norm, but progress was made. There have been several challenges and barriers identified to implementing the recommended TCFD disclosures, such as: (1) skill and education gaps, which companies are trying to fill with external advisors or sustainability or climate risks experts; and (2) lack of tools and methodologies to conduct scenario analysis and to integrate climate risks. While the future of TCFD seems promising, disclosure has not been increasing "at a fast-enough pace given the scale of financial risks posed by extreme weather and the low-carbon transition."

Sustainable Development Goals (SDGs)

Launched: September 2015
Key Parties involved: The United Nations General Assembly
Focus: Achieving a sustainable future

The 17 Sustainable Development Goals cover social and economic development issues and have been described as "the closest thing the world has to a strategy." The SDGs are relevant to investors for 5 reasons: (1) They are a globally agreed framework for sustainability; (2) they tackle macro level risks and issues; (3) the SDGs will drive long-term economic growth; (4) they can be adopted as an ESG risk framework; and (5) they can be used as a universal capital allocation guide for investors wanting to achieve positive impact. Investors are using them to identify emerging growth and investment opportunities, targeting impactful companies. In addition, impact investors are increasingly incorporating SDGs throughout the investment cycle and a private equity firm integrated them into an ESG framework. Nevertheless, further adoption of the SDGs as an investment framework is prevented by the following factors: (1) SDG investing has been accused of greenwashing; (2) Challenges in identifying private financing flows serving the SDGs; and (3) Non-availability of consistent, accurate and trustworthy company data to measure progress and fully adopt the SDGs. Investors are expressing resistance due to the complexity of defining reporting metrics and because the goals were not designed to be used as the basis for an investment process.

Impact-Weighted Accounts

Launched: February 2019
Key Parties involved: Harvard Business School, Professor George Serafeim, Global Steering Group (GSG) and the Impact Management Project (IMP)
Focus: Measuring impact

The aim of this project is to create impact-weighted financial accounts. The framework will connect impact to accounting statements by measuring and monetizing a company's positive and negative impacts on the environment and broader society, which will supplement financial information. Monetization is key to understanding the total value of a company and the framework has the potential to provide more alignment with existing financial reporting than any other. Impact-weighted financial accounts will enable investors to intuitively understand, as well as compare, the metrics to assess a company's performance and to easily integrate data that actually measures impact into their investment and decision-making processes. In addition, these accounts could overcome the lack of standardization and thus reduce transaction costs as well as drive a more efficient allocation of ESG assets. Data providers and rating agencies could also use the ESG information in their data products.

International Integrated Reporting Framework (IR)

INTEGRATED REPORTING

Launched: December 2013
Key Parties involved: International Integrated Reporting Committee (IIRC)
Focus: Communicating value creation over time

An integrated report (IR) aims to communicate information on how a company creates value over time with its strategy, governance, performance and prospects. The IIRC developed a framework to guide companies to embrace integrated thinking to improve the quality of information available to investors. It aims to enable capital providers to make more efficient and productive capital allocation decisions by understanding the factors that materially affect the value creation process over short, medium, and long term. Investors recognized the importance of integrating business models and strategy information, as well as the resources on which they rely, and how it creates value in their investment processes.

Are emerging frameworks meeting investor needs?

- The frameworks have different levels of traction in the marketplace. The sustainability reporting landscape continues to rapidly evolve; however, there is no 'perfect solution' meeting investors requests and expectations yet.

- TCFD, IR and IWAI are specifically designed for investors and the financial community and each is useful in its own way. They can complement each other, which might help in reaching a standard.

- The lack of standardized ESG metrics and frameworks, as well as the lack of education and skills at the board level and in the investment community, are critical barriers to further uptake of any framework.

- We expect the following trends going forward:
    - Increasing use of these frameworks by investors in their investment process and more efforts from their side to drive a better implementation of ESG.
    - Improving quality of frameworks as companies and investors give feedback and adopt them.
    - A closer collaboration between the standard-setters and framework developers in order to clarify the key 'asks' and overcome the lack of standardization.

Section One: Introduction

Background

As market interest in climate and sustainability issues continues to grow, the pressure on asset owners and managers to do more to integrate sustainability into investment decision making is increasing. But do they have access to enough information to be able to make effective decisions? This research brief will first explore the history of sustainability reporting and the changing demands for ESG information. It will then introduce and assess two frameworks that can help investment managers understand how ESG is shaping future corporate strategy of their portfolio companies and their broader impact on society and the environment, namely the Task Force for Climate-related Financial Disclosures and the Sustainable Development Goals. We will also introduce two additional frameworks: the Impact-Weighted Accounts Initiative – an emergent framework that is undergoing development and that aims to provide investors with better quality and more decision-relevant ESG information – and the International Integrated Reporting Framework.

How has sustainability reporting evolved?

Since the 1992 Rio Earth Summit, sustainability reporting has rapidly evolved. ESG reporting requirements went through a rapid period of growth between 2012 and 2017 (see Figure 1), giving rise to greater transparency and corporate disclosure on ESG issues. In 2017, 1,750 sustainability reporting provisions, which include reporting requirements, reporting resources and management resources, across 60 countries were available.[i] The rapid expansion and availability of multiple frameworks has resulted in several challenges in the ESG industry. Firstly, investors and companies often feel overwhelmed by the variety and overlap of different frameworks, and by the vast volume of ESG and impact data. The ACCA summarized the situation as: "Beneath the surface of the waves of activity on sustainability reporting, there is much unity, agreement and synergy in what different initiatives seek to achieve", however, "on the surface…the activity looks fragmented and confusing."[ii] Another challenge for investors is the design of sustainability reporting geared towards other stakeholders, such as NGOs. Several organizations are working together to improve and harmonize impact measurement and reporting in order to overcome these barriers.[iii] For instance, the Better Alignment Project aims to align several standards and frameworks "to deliver greater coherence, consistency and comparability."[iv]

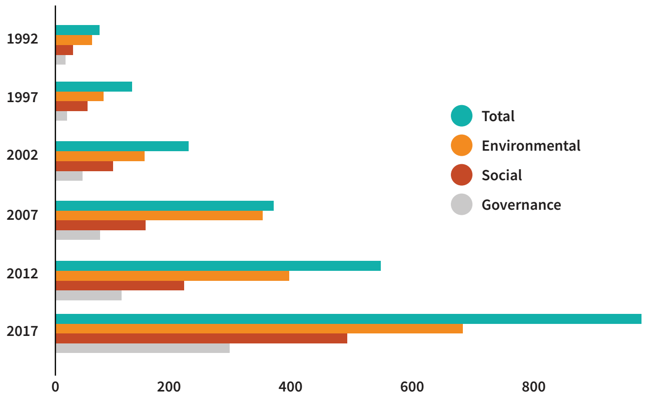


Figure 1. Growth of reporting requirements for ESG topics (1992-2017).[v]

The changing demand for ESG information

While the first phase of ESG integration centered almost exclusively on the reporting of quantitative data against discrete ESG impacts, the next stage of ESG integration is moving investors beyond simply monitoring past performance on discrete factors. Investors are engaging and communicating with firms on how ESG is shaping future corporate strategy and demands to manage their systemic impacts holistically on issues like climate, poverty and human development.

> **"The conversation has started to shift from process to strategy. Investors' asks of companies have become more sophisticated. For example, the asks used to be about pulling together a sustainability report, whereas now, investors are requesting a scenario analysis on climate. The conversation has advanced to think about the impact of ESG risks on corporate strategy."**
>
> ***A Senior Program Director at a leading nonprofit organization.***

Investors have acknowledged the importance of understanding the broader company impacts on society and the environment in their investment decisions. We now observe a growing trend in investors requesting forward-looking and material information[vi] that shows how ESG issues are affecting the whole organization as well as the systemic risk of a company. To this end, Neuberger Berman, an investment management firm, recently hired climate modelers and developed a tool to assess climate-related risk for their portfolios and to quantify the potential value-at-risk.[vii] Investors also want to understand ESG performance in a similar way as financial performance and request new dimensions and metrics, such as carbon intensity, increasing the need for enhanced and robust ESG reporting.[viii] Investors are also demanding more regular ESG data from companies.[ix] Data providers are playing a key role in the provision of this data, by applying machine learning and artificial intelligence (AI) techniques.[x] For instance, a new data provider, TruValue Labs, analyzes and interprets large amounts of unstructured ESG data by using AI to filter through over 75,000 sources, such as newspapers, watchdog organizations, specialist publications and NGOs.[xi] Lastly, as extreme weather events become more frequent and the economic impacts of climate change become more widely understood and accepted, investors will require companies to disclose how they are adapting their business strategies to accommodate the impacts of climate change.[xii] This is particularly true of those investors who are committed to the Task Force on Climate-related Financial Disclosures (TCFD), which we will be exploring in Part 2.

Emergent frameworks: TCFD and SDGs

Emergent frameworks for communicating around these systemic challenges include the Task Force on Climate-related Financial Disclosures (TCFD) and the Sustainable Development Goals (SDGs), which is the second most used framework in the US (see Figure 2). While the former focuses on impacts, risks and opportunities of climate change, both transitional and physical, the SDGs has proven to be useful to measure impact on society. We explore each of these two frameworks, as well as the Impact Weighted Accounts Initiative and the International Integrated Reporting Framework, in parts two, three, four and five of this briefing paper.

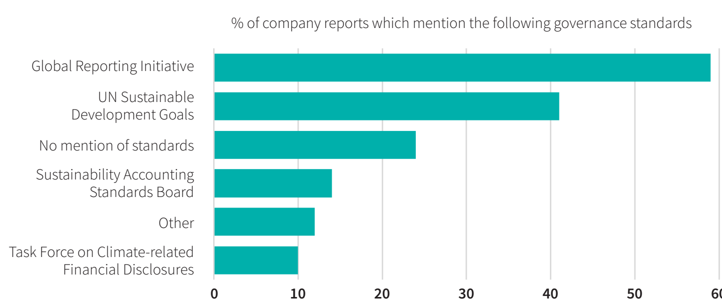


Figure 2. The leading reporting frameworks in the US.

Section Two: The Task Force for Climate-related Financial Disclosures (TCFD)

Launched: December 2015
Key Parties involved: Financial Stability Board (FSB), Mark Carney (Chair of the FSB), Michael Bloomberg (Chair of TCFD)
Focus: Climate-related disclosure

What is the Task Force for Climate-related Financial Disclosures?

The Task Force for Climate-related Financial Disclosures (TCFD) is a voluntary, driven initiative that aims to enhance companies' climate-related disclosure information. The recommendations, published in June 2017, aim to enable companies to assess key material risks and opportunities arising from climate change.[xiii] The disclosures aim to create more transparent, reliable and comparable information that will enable investors and other stakeholders to make better-informed decisions when interacting with companies. The recommendations are designed for all financial and non-financial organizations that either have or are issuing public debt or equity.

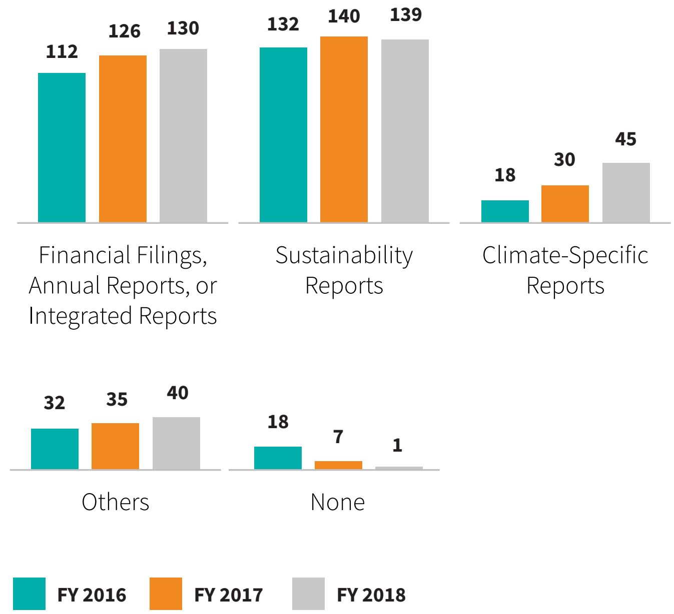
Governance	Strategy	Risk Management	Metrics and Targets
Disclose the organization's governance around climate-related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	Disclose how the organization identifies, assesses, and manages climate-related risks	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
Recommended Disclosures	**Recommended Disclosures**	**Recommended Disclosures**	**Recommended Disclosures**
a) Describe the board's oversight of climate-related risks and opportunities.	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	a) Describe the organization's processes for identifying and assessing climate-related risks.	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
b) Describe management's role in assessing and managing climate-related risks and opportunities.	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	b) Describe the organization's processes for managing climate-related risks.	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Figure 3. Recommendations and Supporting Recommended Disclosures.

There are 11 recommended disclosures, structured around four core elements of an organization's operations (see Figure 3).[xiv] There are seven principles for effective disclosures and additional guidance for several industries. Of relevance to the focus of this enquiry is Disclosure (c) in Strategy (see Figure 3), which requires an organization to describe the resilience of its strategy, taking into consideration different climate-related scenarios (see Box 1, below, for a description of scenario analysis). This information is designed to enable investors to understand the systemic impact of climate change, including "how vulnerable an organization is to the energy transition and how such vulnerabilities would be addressed."

Box 1. What is scenario analysis?

Scenario analysis is a tool to assess and understand how an organization's climate-related risks and opportunities, both physical and transitional, may evolve, and the potential business, strategic and financial implications under different conditions.



Number of Responses (respondents could select multiple options)

Base size (asked of **a subset of Preparers**): 185

Figure 4. Location of Disclosures for Fiscal Years 2016, 2017, 2018.[xix]

TCFD recommended disclosures

Organizations are expected to disclose information in their financial and non-financial filings, such as their CSR, financial and annual reports (see Figure 4). According to the TCFD, recommended disclosures in financial filings or annual reports increased by nearly 50% between 2016 and 2018, whereas disclosures in sustainability reports increased by 30%.[xvii] The audit processes of the TCFD report should be similar to those for financial disclosures, since some recommended disclosures are included in the financial filings.[xviii]

How has the uptake of TCFD changed since its inception?

Since its inception, TCFD has published an annual status report that charts the uptake of aligned disclosures. The latest review in June 2019 concluded that "Disclosure of climate-related financial information has increased since 2016 but is still insufficient for investors."[xx] In 2019, 785 organizations had committed to support TCFD recommendations, which is an increase of more than 50% since the previous annual status report.[xxi] In addition, the percentage of companies disclosing information increased for each recommendation and the average number of recommended disclosures per company increased from 2.8 to 3.6 (out of 11). Nevertheless, only 25% of companies disclosed information aligned with more than 5 recommended disclosures, and 4% with at least 10.[xxii] In addition, "disclosure of resilience of strategy and scenario analysis remains low."[xxiii] Overall, "partial TCFD disclosure is the global norm."[xxiv]

In 2018, the banking industry and European organizations had the highest percentages of disclosure, while other regions had similar percentages (see Figure 5).[xxv] This is expected due to the regulatory environment and advocates, such as the Governor of the Bank of England, Mark Carney, around sustainable finance in Europe. For instance, the High-Level Expert Group on Sustainable Finance was created in 2016 and various directives have been enacted since then.[xxvi] In addition, the standard was designed following a request to consider financial stability associated with the financial sector and climate change,[xxvii] which might explain the position of banks in terms of disclosure.

Recommendation	Recommended Disclosure	<$4B Annual Revenue (620)	$4-10BAnnual Revenue (184)	>$10BAnnual Revenue (322)
Governance	a) Board Oversight	19%	27%	34%
	b) Management's Role	18%	32%	43%
Strategy	a) Risks and Opportunities	31%	45%	56%
	b) Impact on Organization	30%	53%	65%
	b) Resilience of Strategy	3%	7%	14%
Risk Management	a) Risk ID & Assessment Processes	17%	33%	42%
	b) Risk Management Processes	17%	34%	44%
	c) Integration into Overall Risk Management	9%	14%	19%
Metrics and Targets	a) Climate-Related Metrics	28%	47%	63%
	b) Scope 1,2,3 GHG Emissions	19%	38%	51%
	c) Climate-Related Targets	22%	48%	55%

The numbers in parentheses represent the size of the review population

Legend:

Low to high percentage of disclosure

Figure 5. Disclosure by Region in 2018.

Barriers to further uptake of TCFD

There have been several challenges identified in implementing the recommended TCFD disclosures (see Table 1):

Governance	Strategy	Risk Management	Metrics and Targets
Climate is embedded in their processes, so it is challenging to discuss separately in the governance disclosures	Disclosing assumptions is difficult because they include confidential business information	Climate is integrated into the risk management processes and, therefore, does not require separate disclosure	They are just beginning to use climate-related metrics and targets and are not ready to disclose them
The board and/ or management does not consider climate-related issues	Climate-related risks are not material, so it is challenging to include them in financial filings	They do not have processes for identifying, assessing or managing climate-related risks	There is a lack of standardized metrics for the industry Emissions-related metrics are not reflective of the climate-related risks
Other Challenges			
Lack of skills, motivation, time and education at the board and management level[a, b]	Lack of tools and methodologies to integrate climate risk into existing processes and to quantify risks relating to financial impacts[a]	Investors are not always familiar with climate risks and opportunities and the TCFD[a]	Lack of internal coordination and engagement[a]

Table 1. Key Implementation Issues Identified (adapted from TCFD survey 2019).

Source: a) https://www.cdsb.net/task-force/811/implementing-tcfd-recommendations-identifying-challenges-part-i b) https://www.cdsb.net/task-force/886/overcoming-4-most-common-issues-when-implementing-tcfd-recommendations

In addition to the above challenges, several barriers have also been identified, specifically linked to organizations conducting scenario analysis. These include a "lack of appropriately granular, business-relevant data and tools supporting scenario analysis, a difficulty determining scenarios, particularly business-oriented scenarios, and connecting climate-related scenarios to business requirements, difficulties quantifying climate-related risks and opportunities on business operations and finances, and challenges around how to characterize resiliency."[xxviii]

What does the future hold for TCFD?

While the future of TCFD seems promising, disclosure has not been increasing "at a fast-enough pace given the scale of financial risks posed by extreme weather and the low-carbon transition." There is a real skill gap, which companies are trying to fill with external advisory firms or by hiring sustainability or climate risk experts. In addition, several groups are trying to make TCFD recommendations mandatory. Continuous efforts are needed to achieve a comparable and uniform approach to integrating climate change into disclosure.[xxix]

TCFD Case Studies

The following extracts illustrate good company practices in the implementation of the TCFD recommended disclosures.

Case study 1

Eni Annual Report 2018 – Governance

Eni: Multinational oil and gas company based in Italy.

GOVERNANCE. Eni's decarbonization strategy is part of a structured system of Corporate Governance; within this, the Board of Directors (BoD) and the Chief Executive Officer (CEO) play a central role in managing the main aspects linked to climate change. The BoD examines and approves, based on the CEO's proposal, the Strategic Plan, which sets out strategies and includes objectives also on climate change and energy transition. Eni's economic and financial exposure to the risk that may derive from new carbon pricing mechanisms is examined by the BoD both in the phase leading up the authorization of every investment and in the following half-year monitoring of the entire project portfolio. The BoD is also informed annually on the result of the impairment test [...]. Finally, the BoD is informed on a quarterly basis of the results of the risk assessment and monitoring activities of Eni's top risks, including climate change [...]. *Source: Eni. (2019). Eni Annual report 2018 (p.108).*

Eni provides information on the organization's governance around climate-related risks and opportunities. In this extract, Eni specifies the processes and frequency by which the board are informed about climate-related risks. They also provide information on how the board is involved and how it exercises its oversight function. This is aligned with the recommended disclosure a) in Governance (see Figure 1).

Case study 2

Unilever Annual Report and Accounts 2018 – Strategy

Unilever: British-Dutch transnational consumer goods company

UNDERSTANDING IMPACT. [...] To further understand the impact that climate change could have on Unilever's business we performed a high-level assessment of the impact of 2°C and 4°C global warming scenarios. [...] The main impacts of the 2°C scenario were as follows: - Carbon pricing is introduced in key countries and hence there are increases in both manufacturing costs and the costs of raw materials such as dairy ingredients and the metals used in packaging. - Zero net deforestation requirements are introduced and a shift to sustainable agriculture puts pressure on agricultural production, raising the price of certain raw materials. The main impacts of the 4°C scenario were as follows: - Chronic and acute water stress reduces agricultural productivity in some regions,

raising prices of raw materials. - Increased frequency of extreme weather (storms and floods) causes increased incidence of disruption to our manufacturing and distribution networks. - Temperature increase and extreme weather events reduce economic activity, GDP growth and hence sales levels fall. Our analysis shows that, without action, both scenarios present financial risks to Unilever by 2030, predominantly due to increased costs. However, while there are financial risks which would need to be managed, we would not have to materially change our business model. The most significant impacts of both scenarios are on our supply chain where costs of raw materials and packaging rise, due to carbon pricing and rapid shift to sustainable agriculture in a 2°C scenario and due to chronic water stress and extreme weather in a 4°C scenario. The impacts on sales and our own manufacturing operations are relatively small […]. *Source: Unilever. (2019). Annual Report and Accounts (pp.33-34).*

Unilever conducted two scenario analyses to identify the risks and describe the impacts of climate-related risks on their business and strategy, how resilient their strategies are to climate-related risks and the climate-related scenarios and associated time horizons considered. This is aligned with recommended disclosures a), b), and c) in Strategy.

Case study 3

LLOYDS BANK

Lloyds Bank Annual Report and Accounts 2018 – Risk Management

Lloyds Bank: British retail and commercial bank.

RISK MANAGEMENT. Each division within the Group is responsible for identifying and prioritising relevant climate related risks and opportunities and integrating them into their risk management processes, which determine materiality and classify risks into traditional risk categories. This includes identifying potential risks through horizon scanning of changes in regulation, technology and consumer demand. Risks are classified in terms of whether they impact the Group in the short, medium or long term. Examples include possible changes in the sustainability of homes, how vehicles are powered, changes in UK energy mix, through to changes in the frequency and severity of extreme weather events. The Group sustainability team facilitates collaboration across divisions to increase understanding of consistent issues, as well as our risk, opportunities and financial impact on an aggregated basis. […] During 2018, Commercial Banking undertook forward looking scenario analyses including business as usual and low carbon transition scenarios, identifying sectors with a higher level of climate related risk and opportunity […]. *Source: Lloyds Bank. (2019). Annual Report and Account 2018 (p.25).*

Lloyds Bank describes how it identifies and assesses climate related risks: “through horizon scanning of changes in regulation, technology, and consumer demand, […] forward looking scenario-analysis.” In addition, the bank provides definitions of risk terminology. The information disclosed is aligned with the recommended disclosure a) in Risk Management.

Section Three: The Sustainable Development Goals

Launched: September 2015
Key Parties involved: The United Nations General Assembly
Focus: Achieving a sustainable future

What are the Sustainable Development Goals?

There are 17 Sustainable Development Goals (see Figure 6) for the year 2030, with a total of 169 targets and 230 indicators. The 17 global goals are interconnected and cover social and economic development issues. Their aim is to protect both people and the planet. They have been described as "the closest thing the world has to a strategy."[xxx]

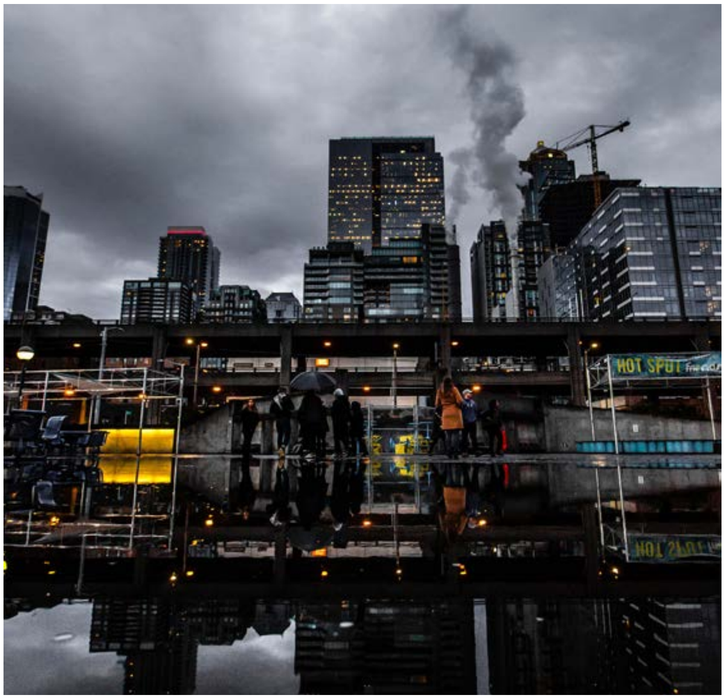
Figure 6. Sustainable Development Goals

Why are the SDGs relevant to investors and how are they using them?

The Principles for Responsible Investment (PRI) states that the SDGs are relevant to investors for 5 reasons :

1. They are a globally agreed framework for sustainability.
2. The SDGs tackle macro level risks and issues and are therefore important to 'Universal owners', e.g. large institutional investors with diverse long-term portfolios.
3. The SDGs will drive long-term economic growth.
4. They can be adopted as an ESG risk framework. Many of the SDGs cover ESG issues that are financially material to industries, companies, regions and countries.
5. They can be used as a universal capital allocation guide for investors wanting to achieve positive impact.

According to Hermes Investment Management, the SDGs are helpful to identify emerging growth and investment opportunities.[xxxi] They developed an SDG taxonomy "to identify investment opportunities directly connected to the goals [...], enabling us to target today's impactful companies, and those of tomorrow"[xxxii] (see Case Study 1). Impact investors are increasingly incorporating SDGs throughout



the investment cycle (see Figure 7). Summa Equity, a private equity firm, integrated them in as ESG framework, as shown in Case Study 2.

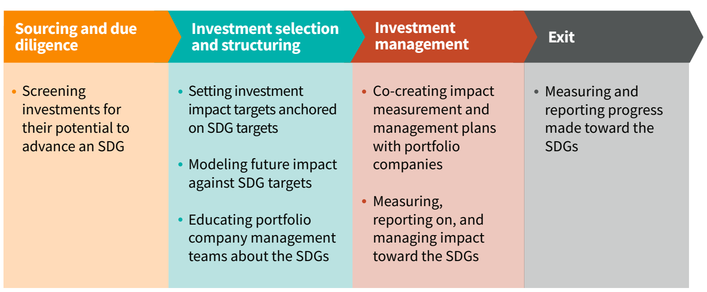


Figure 7. SDG integration throughout the investment cycle[xxxiv]

On the research and materiality side, three leading academics (Betti, Consolandi and Eccles, 2018)[xxxv] conducted research into how ESG outcomes can be linked to impact on the SDGs. They mapped SASB's material issues to the SDGs and created sector impact scores that demonstrate how companies with strong performance on material issues for their sector are contributing to the SDGs. They found that certain SDGs are more impacted by some sectors and overall it will be the success of the Health Care, Consumption and Resource Transformation sectors that will play the biggest role in achieving the SDGs. Through this research, investors can now identify which sectors will contribute to the SDGs the most and resultantly, where to direct capital.

Barriers and investor resistance to the SDGs

The following barriers and resistance from investors are preventing further adoption of the SDGs as an investment framework (see Table 2):

Barriers	Investor resistance
SDG investing has been accused of greenwashing. Writers for the Stanford Social Innovation Review argue that many SDG investments only have a tangential link to the goals and while there are investments in companies or activities that do address SDGs, many organizations were already having an impact before the investment was made.[c]	Although the SDGs are relevant to investors, the PRI should not seek to measure signatory impact on the SDGs due to the complexity of defining standardized and appropriate reporting metrics, as stated by Norges Bank Investment Management in its response to PRI's strategic plan.[f]
It is difficult to identify private financing flows serving the SDGs as they are not consistently monitored and there are significant data gaps.[d]	SDGs as an investment framework are counterproductive as the goals were not designed to be used as the basis for an investment process, as stated by Schroders.[g]
The availability of consistent, accurate and trustworthy company data is required for investors to measure progress and fully adopt the SDGs.[e]	

Table 2. Barriers and investor resistance to SDGs as an investment framework *Source: Adapted from Sustainability in Capital markets, and*

c) https://ssir.org/articles/entry/a_more_enlightened_approach_to_sdg_investing
d) https://www.unepfi.org/wordpress/wp-content/uploads/2018/11/Rethinking-Impact-to-Finance-the-SDGs.pdf
e) https://www.globalreporting.org/resourcelibrary/addressing-investor-needs-SDGs-reporting.pdf
f) https://www. schroders.com/en/sysglobalassets/digital/insights/2018/pdf/sustainable-investment-report/english-original/sustainable-investmentreport-annual-2017.pdf
g) https://www.nbim.no/contentassets/cdbb1857c1d344a683a6cdb050717511/nbim-consultation-letter-pristrategy-2018-2021.pdf

SDG Case Studies

Despite the barriers and concerns identified in Table 2, there are some good examples of how investors have used the SDGs to create tools to support their capital allocation process.

Case study 1

Hermes Investment Management

Hermes Investment Management developed an SDG Taxonomy "to demonstrate clear connections between the underlying targets of the SDGs and investment opportunities."[xxxvi] They focused on the 169 targets, "analyzing them through the theory of change – the sequence of events from inputs, outputs and outcomes that lead to impact – and the risks to the case for impact – the potential reasons why the theory of change may fail – as they relate to public companies. These are essential concepts in understanding impact potential." The aim was to identify investable areas and themes that are directly investable and that can address the SDGs.[xxxvii]

SDG	SDG target	Directly investable	Investable areas	Theory of change: Issue	Theory of change: Contribution	Impact risks
14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development. 14 LIFE BELOW WATER	**14.1** By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.	Yes.	Waste collection and recycling	As much as 40% of the world oceans are heavily affected by human activities, including pollution, depleted fisheries, and loss of coastal habitats, while over 3bn people depend on marine and coastal biodiversity for their livelihoods. Marine pollution such as plastic packaging in oceans, fertiliser leaching into rivers etc. has a negative impact on marine ecosystems, potentially reducing biodiversity	Recycling allows for a closed-loop system where less resources are required from the environment, thus limiting environmental degradation. If managed sustainably scarce natural resources can benefit current and future generations. While the OECD recycling average is only 25%, countries such as Germany or Taiwan are able to achieve the highest recycling rates of above 55%.	Working conditions of staff and contractors. Environmental impact of the recycling process. Disposal of non-recyclable materials.

Figure 8. Example of how the taxonomy works[xxxviii]

Case study 2

Summa Equity

Summa Equity invests in global challenges because it believes that the "biggest challenges are also our biggest investment opportunities."[xxxix] It was one of the first private equity firms to commit to the SDGs. It aligns its "investment and value creation strategy with the SDG framework" (see Figure 9).[xl] Summa Equity believes that the SDGs are a useful framework to assess how a company is adding positively or negatively to their externalities, i.e. the external rate of return. Summa Equity mapped the SDGs with their thematic investments. Their approach is to focus on companies that will excel in a challenging world and that align with the ESG lens, using the SDGs to screen and develop their companies.[xli]

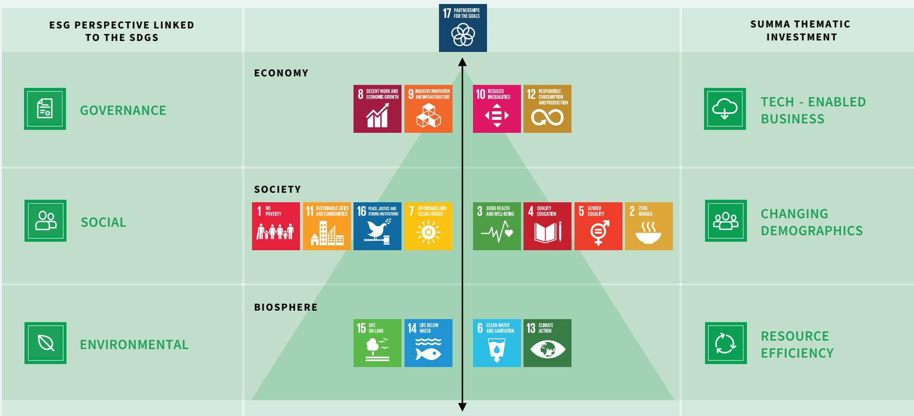


Figure 9. Integrating the SDGs in an ESG framework (Source: Summa Equity presentation as part of a KKS Webinar)[xlii]

Sortera Skandinavien AB provides waste management services.

Summa Equity acquired Sortera three years ago. They have managed to grow the company from SEK 200m to SEK 1bn through organic growth and synergies. Sortera is now able to turn waste into valuable resources. Its contribution to CO2 reduction and to recycling materials both benefits the environment and increases its revenues and margins. This strategy also enhances the long-term attractiveness of the company. Summa Equity measures the company impact through SDGs 11, 12, and 13. How many tons of waste are they collecting each year? What percent of the materials is recovered? How much CO2 emissions are saved each year? When they exit, the new owner will have a five- to seven-year perspective of their impact. A company's contribution to externalities and challenges will materially impact exit valuation.

INVESTMENT STRATEGY	GEOGRAPHIC FOCUS	SECTOR
Resource efficiency	Sweden	Recycling
REVENUE	**RENEWABLE ELECTRICITY [a]**	**CARBON FOOTPRINT**
SEK 1bn	100%	29 207 tonnes
NO. OF EMPLOYEES	**% FEMALE**	**STAFF TURNOVER**
303	18%	8%

SDG ALIGNMENT

11 Sustainable cities and communities; 12 Responsible consumption and production; 13 Climate action

KPIs

1.8m	97%	37k
Tons of waste handled	material recovery (backfilling energy and recovery	tons net CO_2 avoided

Figure 10. Portfolio report of Sortera (Source: Summa Equity presentation as part of a KKS Webinar)

Section Four: Impact-Weighted Accounts

Launched: February 2019
Key Parties involved: Harvard Business School, Professor George Serafeim, Global Steering Group (GSG) and the Impact Management Project (IMP)
Focus: Measuring impact

What are the Impact-Weighted Accounts?

The aim of this project is to create impact-weighted financial accounts, defined as “line items on a financial statement, such as an income statement or a balance sheet, which are added to supplement the statement of financial health and performance by reflecting a company’s positive and negative impacts on employees, customers, the environment and the broader society.”[xliii] The framework will connect impact to accounting statements by measuring and monetarizing companies’ impact with the same units. More precisely, the aim is to “both link outputs and outcomes to impact through tested theories of change” (see Figure 11). Monetization is key to understanding the total value of a company and the framework has the potential to provide more alignment with existing financial reporting than any other.[xliv] Ultimately, investors will be able to reliably measure and compare companies that publish impact-weighted and financial accounts,[xlv] as stated by Ronald Cohen, chairman of the Global Steering Group for Impact Investment: “where companies are the target investment, then we have to apply impact weighted financial accounts to compare the strictly financial performance of the business with an impact weighted performance.”[xlvi]

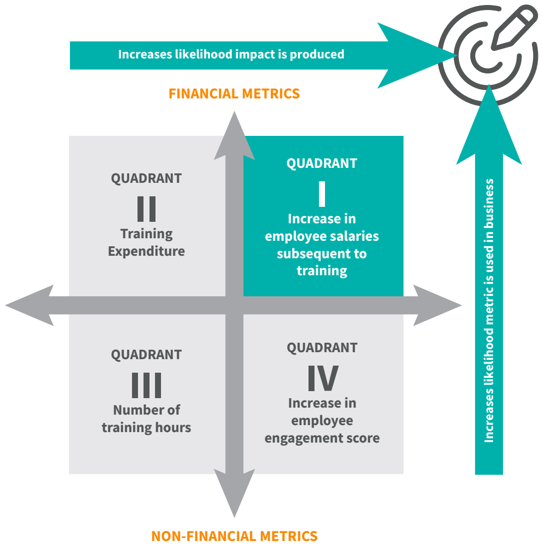
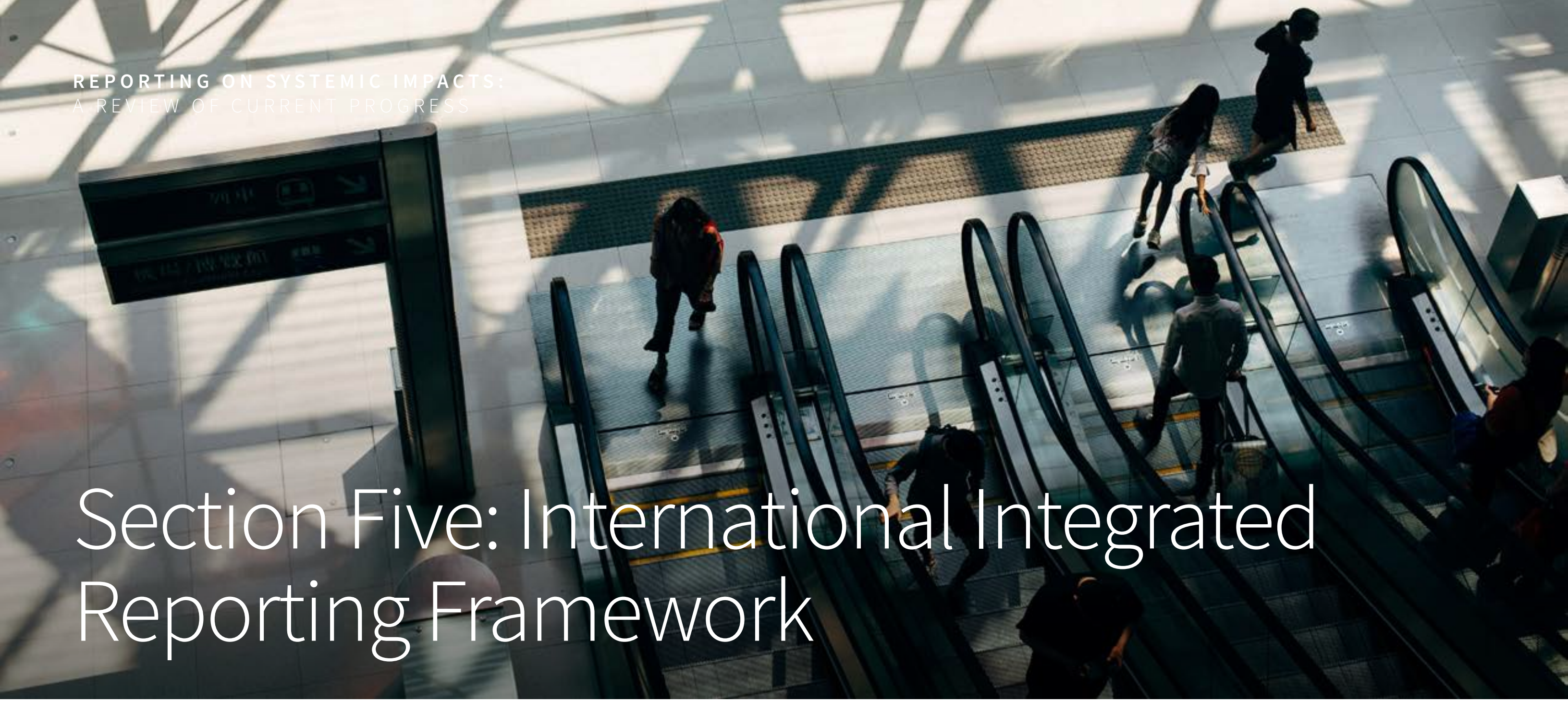


Figure 11. The metrics landscape classified by two characteristics: the causal value chain and extent to which metrics are financial in nature.[xlvii]

How can investors benefit from the IWAI?

There is growing interest from the investment community to commit to and integrate ESG data into their investment processes; nevertheless, ESG metrics currently measure inputs and outputs rather than impact.[xlviii] By translating a company’s social and environmental impacts into comparable units and incorporating the monetary valuation into accounting statements, it ensures that investors can intuitively understand the metrics as well as compare them. Monetization is key to displaying financial and impact performance in the same accounts. Ultimately, investors can use existing financial and business analysis tools to assess a company's performance and can easily integrate data actually measuring impact into their investment and decision-making processes.[xlix] More specifically, investors can use these data in their due diligence, underwriting, engagement and reporting efforts when using the ESG label for their products.[l]

In addition to allowing better informed decisions, Serafeim, Zochowski, and Downing postulate that these accounts could overcome the lack of standardization, which currently "makes investment due diligence more difficult [...] and prohibits benchmarking funds against one another and makes it nearly impossible to hold advisors accountable to their impact promises."[li] Therefore, impact-weighted accounts could reduce transaction costs and drive a more efficient allocation of ESG assets by providing more accurate information.[lii] Lastly, it could benefit investors if data providers and rating agencies integrate them into their data products.[liii]



Section Five: International Integrated Reporting Framework

Launched: December 2013
Key Parties involved: International Integrated Reporting Committee (IIRC)
Focus: Communicating value creation over time

What is the International Integrated Reporting Framework?

According to the IIRC, an integrated report (IR) is "a concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term."[liv] The IIRC developed a framework to guide companies to embrace integrated thinking, enabling capital providers to make more efficient and productive capital allocation decisions by understanding the factors that materially affect the value creation process over short, medium, and long term. The framework combines quantitative and qualitative information and considers six forms of capital affected or transformed by the activities and outputs of a company when creating value (see Figure 12).

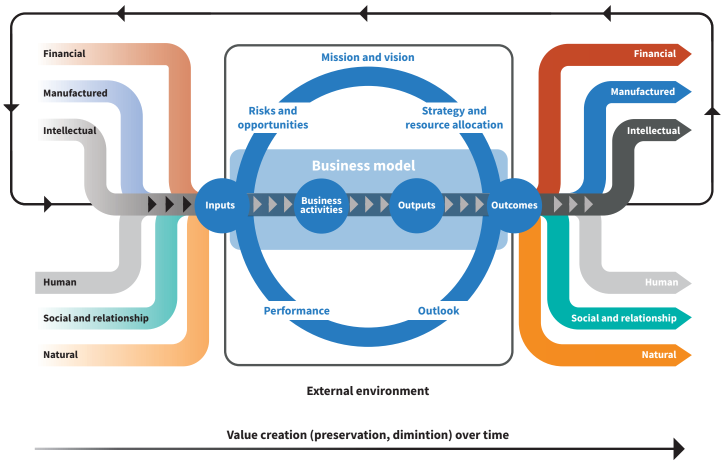


Figure 12. The value creation process[lv]

> **"The primary purpose of an integrated report is to improve the quality of information available to providers of financial capital by communicating broader and more relevant information that can assist in effective capital allocation decisions."[lvi]**

How is IR relevant to investors?

In 2017, leading investors signed a statement in support of IR and its usefulness in their investment processes and capital allocation.[lvii] In particular, they recognized the importance of integrating business models and strategy information of companies as well as the resources on which they rely, which are delivered by IR. In addition, the IIRC published a report on the benefits of IR based on investor surveys.[lviii] It mentioned that IR helps provide investors with a more comprehensive and coherent view of the business by gathering key financial and non-financial information in one place and linking it to value creation and current and future financial results.[lix] More specifically, Dr. Jeanne Ng Chi-yun, Director, Group Sustainability, CLP, states that investors have a better understanding of how the company creates value for customers, shareholders and society. The IIRC believes that an increasing use of the IR framework by companies would enable investors to better manage investment risks, validate decisions and assess a company's forward looking information.[lx]

Although the framework has the potential to meet some of the new expectations of investors, the lack of knowledge and adoption in this community represents a significant barrier to further uptake.[lxi] Promoting the framework and building awareness among investors can encourage companies to disclose ESG and material information according to IR guidelines. The current uptake statistics show that adoption is low and differs from the current global trends (see Box 2[lxii]), such as EU companies leading sustainability reporting. It is possible that the Impact-Weighted Account Initiative could reignite interest in Integrated Reporting due to their similar aims.

Box 2. The uptake of Integrated Reporting (2017)

- Top two countries: Japan and South Africa (43%of total Integrated Reports)
- Higher concentration of integrated reporters in Asia: 53 reports
- Developed countries are lagging: 25 reports in the US and 20 in Canada
- Companies do not necessarily use the word "integrated" in the title of the IR
- 61% do not mention the IR framework in their report
- Buy-side analysts are more aware than the sell-side of financial implications under different conditions.

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The **High Meadows Institute** is focused on the role of business leadership in society. Our mission is to contribute to sustainable economic and social progress in a global economy and society. The High Meadows Institute was founded in 2013 by a small group of senior business and finance leaders with deep experience in the private and non-profit sectors. The Institute works in close partnership with other leading think tanks and academic and business organizations to advance its mission.

KKS Advisors is a leading consultancy firm providing innovative solutions that enable organizations to capture the enduring benefits of a sustainability approach. Applying our unique, research-backed approach, we work with corporations, foundations, NGOs and investors on sustainable strategies that deliver lasting impact. Our vision is to reshape markets, creating a world where business and investment decisions are made for the long term, taking environmental, social and governance factors into account. With offices in London, Boston and Athens, and associates around the world, our reach is global, and our focus is on efforts which foster systemic change.

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Reporting on Systemic Impacts:
A Review of Current Progress

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