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The Evolution of Long-term Emerging Qualitative Risks (LTEQR) Analysis

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Préambule

La gestion financière responsable vise la maximisation de la richesse relative au risque dans le respect du bien commun des diverses parties prenantes, actuelles et futures, tant de l'entreprise que de l'économie en général. Bien que ce concept ne soit pas en contradiction avec la définition de la théorie financière moderne, les applications qui en découlent exigent un comportement à la fois financièrement et socialement responsable. La gestion responsable des risques financiers, le cadre réglementaire et les mécanismes de saine gouvernance doivent pallier aux lacunes d'un système parfois trop permissif et naïf à l'égard des actions des intervenants de la libre entreprise.

Or, certaines pratiques de l'industrie de la finance et de dirigeants d'entreprises ont été sévèrement critiquées depuis le début des années 2000. De la bulle technologique (2000) jusqu'à la mise en lumière de crimes financiers [Enron (2001) et Worldcom (2002)], en passant par la mauvaise évaluation des titres toxiques lors de la crise des subprimes (2007), la fragilité du secteur financier américain (2008) et le lourd endettement de certains pays souverains, la dernière décennie a été marquée par plusieurs événements qui font ressortir plusieurs éléments inadéquats de la gestion financière. Une gestion de risque plus responsable, une meilleure compréhension des comportements des gestionnaires, des modèles d'évaluation plus performants et complets intégrant des critères extra-financiers, l'établissement d'un cadre réglementaire axé sur la pérennité du bien commun d'une société constituent autant de pistes de solution auxquels doivent s'intéresser tant les académiciens que les professionnels de l'industrie. C'est en mettant à contribution tant le savoir scientifique et pratique que nous pourrons faire passer la finance responsable d'un positionnement en périphérie de la finance fondamentale à une place plus centrale. Le développement des connaissances en finance responsable est au cœur de la mission et des intérêts de recherche des membres tant du Groupe de Recherche en Finance Appliquée (GReFA) de l'Université de Sherbrooke que de la Chaire Desjardins en finance responsable.

La finance responsable (ou durable) vise donc notamment à développer des modèles, des produits et des services ainsi qu'à orienter les marchés financiers et les décisions en matière de fiscalité dans une perspective durable et responsable. À cet effet, les Professeur(e)s Frank Coggins, Claudia Champagne et Lyne Latulippe ont publié en 2018 aux Éditions *Thompson Reuters* un recueil de textes s'intitulant « Éléments de la finance responsable : une approche multidimensionnelle ». Ce collectif contribue à mieux définir et délimiter la finance responsable en la décloisonnant dans une perspective multidimensionnelle. Il regroupe des textes d'universitaires de différentes disciplines ainsi que de spécialistes de l'industrie financière, propose des pistes pour tendre vers une meilleure finance, vers une finance plus responsable. Le présent cahier de recherche constitue l'un des textes (chapitres) tirés de ce collectif.

The Evolution of Long-term Emerging Qualitative Risks (LTEQR) Analysis

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INTRODUCTION

Investors increasingly realize long-term emerging qualitative risks (LTEQR) have financial consequences on investments, yet these risks are very difficult to assess due to their intangibility. LTEQRs have consequences that create long-term uncertainty and can be caused by unexpected events or unfamiliar conditions, can be new, developing, or quickly evolving and becoming increasingly complex. They are often difficult to quantify. LTEQRs have the potential to materialize into an issue resulting in a negative impact if not well identified, evaluated, and managed. LTEQRs can be generally classified into the following categories: Environmental, Social, or Governance (ESG). Examples of these risks are highlighted annually by the World Economic Forum and include the failure of climate change mitigation and adaptation, water crises, cyberattacks, fiscal crises, and many more.

All enterprises are vulnerable to these risks to varying degrees, depending on their industry, geographical location, position along the value chain, and other factors. An enterprise's resilience (ability to avoid an adverse impact or quickly and completely recover from an impact) to these risks depends on the efficacy of the programs and procedures they put in place to protect themselves from the potential impact. Often, the timing and duration of the impact of a risk is quite uncertain. It is possible the potential negative outcome of one of these risks may get worse over time if not properly addressed.

LTEQR analysis is complementary to traditional fundamental analysis of enterprises. It continues to evolve over time and intersects with many of the concepts introduced by sustainability and ESG analysis. The challenge to the investor is having the appropriate risk analysis tools available to help make a judgement on the investment's vulnerability and resilience to a LTEQR. Development of these tools is still in its infancy and investors continue to search. There are numerous ongoing efforts at universities, think tanks, regulatory agencies, supranational institutions, financial institutions, and other institutions to develop better methodologies

of risk assessment for LTEQRs. The challenge for researchers is that each risk is unique and a variety of approaches and methodologies need to be created for an in-depth analysis.

Whether the investment manager prefers to focus on growth, value, momentum, or quantitative factors, ESG consideration appears to be becoming more prevalent. The financial consequences of ESG risks are undeniable. Impacts of the BP spill in the Gulf of Mexico, the Volkswagen emissions scandal, and the BHP-Vale tailings dam collapse are all examples of the financial consequences of such risks.

Investors continue to strive to design processes for identifying, evaluating, and managing LTEQR risks. Some desire to go beyond mitigation and actively tackle such risks by seeking to identify the neutralizing agent to the risk at hand. These proactive managers seek to build a core dynamic in their investment process to take advantage of opportunities rather than just defend against risks. Over time, the investment landscape will continue to change as governance, strategy, risk management, metrics, and disclosure evolve.

Environmental	Social	Governance
• Carbon emissions, greenhouse gas emissions, disclosure/ measurement and reporting • Climate change; effect on company/risk exposure/ opportunities • Ecosystem change • Facilities citing environmental risks • Hazardous waste disposal/cleanup • License to operate in communities • Pollution • Renewable energy • Resource depletion • Toxic chemical use and disposal	• Tax avoidance • Cybersecurity • Corruption & Fraud • Community relations • Discrimination • Facilities, citing social risks • Genetically modified organisms • Living wage disputes • Predatory lending • Political contributions • Political risk of involvement in troubled markets, countries • Sexual harassment • Child & Slave labor	• Cumulative voting • Dual-class share structure • Executive compensation (pay for performance, pay equity) • Diversity (Board and Employee) • Majority voting • Poison pills • Say on pay • Separation of chairman/CEO position • Shareowner rights • Staggered Boards • Takeover defenses/market for control • Shareowner advisory vote on executive compensation

Figure 1: Examples of LTEQRs¹

Just as investors recognise the materiality of LTEQRs and are evolving their analytical methods to assess them, so are companies realising they must be aware of LTEQRs. For companies, strategies to help identify and manage LTEQRs include improving disclosures, publishing sustainability or corporate social responsibility reports, implementing ESG strategies that encompass not only their direct activities but include their supply chains and life cycle of their products, create stakeholder panels, and establish sustainability boards.

1. Adapted from the CFA Institute Centre for Financial Market Integrity (2008).

1. THE ESG PHASES

The evolution of the consideration and integration of ESG factors in investment analysis is ongoing and accelerating. The progression can be divided into six discrete phases, from ESG 0.0 to ESG 5.0.

ESG 0.0 can be described as an investment approach in which the manager basically ignores ESG issues. A traditional, purely financially-focussed investor may choose to ignore ESG out of fear of being distracted by non-material issues. Perhaps the investment manager prefers a quantitative approach. Since ESG risks require qualitative judgements, this could make the manager less confident in his or her decision-making. There are investors who feel they should not restrict themselves from any investment opportunity, a position supported to some extent by traditional portfolio theory,² which suggests that any reduction in the investment opportunity set is sub-optimal. Such managers feel no compunction about including “sin stocks” in their portfolios and have often not paid a performance penalty for doing so. Traditional finance theory may thus offer some support to those who argue that ESG issues should be ignored, but theory has evolved in the past. For example, up to the 1970s, the benefits of diversification were not widely understood in the investment industry. Only when portfolio theory evolved³ and was able to articulate the risk reduction benefits that diversification offers, did portfolio managers take note and start incorporating it into their investment strategies. A similar paradigm shift could well be underway in the industry now as more investors and researchers acknowledge the reality that many of these ESG factors are material and should not be ignored.

ESG 1.0 has come about mainly through education. There are several ways to take ESG factors into consideration when an investor is formulating an investment thesis. Knowledge of different approaches has been promoted by many organizations such as the United Nations Principles for Responsible Investing (UNPRI) and Ceres. Information has become more available and consultants have built models and processes for clients who wish to profile the company’s ESG issues before investing in it. ESG 1.0 can be defined as the identification stage in which investors start to put in place

2. Harry M. MARKOWITZ, “Foundations of Portfolio Theory”, (1991) 46-2 *The Journal of Finance* 469-477.

3. William F. SHARPE, “Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk”, (1964) 19-3 *The Journal of Finance* 425-442.

responsible investment policies and begin profiling investments in terms related to ESG. Some apply screens or rank their investments based on these factors. Others make ESG part of their fundamental analysis and create dialogue with corporations and stakeholders on ESG issues. For some, this “engagement” has become a preferred strategy to negative screening as investors feel they can be agents of change and be rewarded via investment returns. Undoubtedly, the landscape for fundamental analysis is evolving greatly with the introduction of ESG concepts.

ESG 2.0 is the realization that materiality is important when considering ESG factors. Looking at ESG factors in terms of risks has been a great motivation for investors to take deep dives into evaluating the impact of these risks on the return of their investments. It is here where the LTEQR approach has gained popularity. The vast inventory of ESG factors needed to be assessed in order to determine which risks would be most material for a particular segment of the investment universe either in terms of asset class, industrial sector, or location. This is where the World Economic Forum became of great help by publishing the results of its annual survey of the risks with the greatest likelihood of being realized and their potential impact. Investors are now capable of focussing on fewer but more material risks and have truly come to understand the vulnerabilities and resiliencies of their investments vis-à-vis these risks. Specific tools (or questionnaires) are needed for each material risk in order to effectively evaluate the risk at hand.

ESG 3.0 is the realization that offense is the best defense. Marketing a fund which advertises itself as having a positive impact on the environment and on society appeals to some investing factions. For example, building a portfolio of investments with a subset of highly sustainable investments based on corporate ESG rankings, low carbon emissions, responsible use of water, or inclusion of renewable energy within a traditional portfolio is an evolutive step for mainstream investors towards effectively mitigating some of the material ESG risks. In parallel, totally “green portfolios” and impact investing have become investment styles in their own right.

ESG 4.0 is what may lie in the not-so-distant future as some managers are starting to contemplate full integration strategies which include climate change, social issues, and governance improvements. Fund assets may be managed in a manner which includes ESG considerations as central to the long-term allocation planning.

Already, some funds are planning to implement full integration strategies based on scenario analyses that take into account a range of possible outcomes affected by ESG issues. They will consider various pathways and are preparing for new ESG related regulations and disclosure requirements, as well as geopolitical developments that could impact their portfolios.

ESG 5.0 is further down the road, but it will be the phase in which a reality check will be central. This will be the point at which the tough question about the influence of ESG on fund returns will be asked. In other words, what is the payback for having taken the ESG route from 0.0 to 5.0? Have the impacts from the investments materialized with respect to economic, cultural, and planetary gains or avoidance of certain LTEQR risks? How will the transition scorecard really look like at that point? In a recent publication,⁴ State Street noted that they expect it would take 5-7 years to see the impact of ESG issues that are being assessed today.

The remainder of this article will focus on ESG 1.0 and 2.0, as those two stages currently encompass the activities of the vast majority of institutional investors active in the ESG space.

2. HOW CAN LTEQRS BE INTEGRATED INTO AN INVESTMENT ANALYSIS?

In the past, traditional fundamental analysis of investments in equities was based on a deep dive into the company's financial situation. With an understanding of the operations and often visits to the premises, an analyst would build a spreadsheet model and forecast the earnings and cashflows of the company into the future with guidance from management. The forecast would take into consideration the local economic context over the forecast period.

Today, the analysis has been extended by including a number of additional elements. Many of the newer elements are less tangible and somewhat difficult to put into a spreadsheet model. Nevertheless, these elements need consideration if one is to conduct a complete and meaningful fundamental analysis of the operations of the business. In the newer model, the analyst will not only talk to management for guidance, but will also analyze how the company's strategy is being

4. <http://www.statestreet.com/content/dam/statestreet/documents/Articles/The_Investing_Enlightenment.pdf>.

executed. In addition, Porter analysis⁵ is used to assess the company's operations within an industry perspective. Much emphasis is put on its competitive advantages in the marketplace. The modern-day analyst recognizes the need to study the company's operations not in isolation but within the value chain. The more advanced analyst will not only use the financial data provided in the annual report but will question how the revenues were booked and which accounting methods are appropriate given the type of business. In addition, the analyst will scrutinise the company's corporate social responsibility (CSR) report (more on CSR reports below).

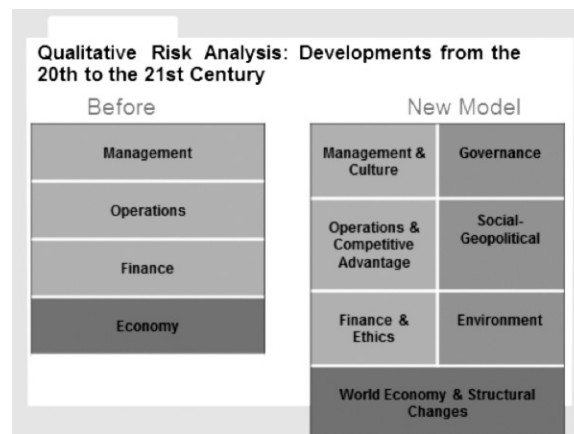


Figure 2: Evolution of qualitative risk analysis

The inclusion of ESG elements adds a much greater context to fundamental analysis. The analysis of the company's corporate governance requires understanding the structure, dynamics, and chemistry of the board of directors. Issues regarding executive compensation and relations with shareholders become central. Also, board composition and diversity, shareholder rights, and disclosure of board attributes are all important factors to consider. More and more companies are becoming international in nature, which means that geopolitics in any given region could have profound impacts on strategy and evaluation.

Company and government relations at federal, regional, or local levels must be understood. Social issues such as human rights may be critical to the future of the company, particularly if commercial activities are taking place in vulnerable locations. In many industries,

5. <<http://www.isc.hbs.edu/strategy/business-strategy/pages/the-five-forces.aspx>>.

health, safety, and hiring practices are of paramount importance for a company to keep its social license in good standing. On the social and community front, development of infrastructure needed by the company must be put into context along with the needs of the neighboring communities. The analyst must come to understand the relationship between the company's management and the various stakeholders who are affected or can affect operations. Environmental considerations are more material in some industries than others yet all have impacts directly or indirectly. Water, air, and soil quality management cannot be ignored as these factors can have significant financial and social consequences if not properly managed. Climate change and biodiversity impacts due to industrial activities need to be thoroughly addressed.

It is obvious the fundamental analysis model has changed over time. While all of the ESG elements should be taken into account, it is also important to focus on those elements that present material risks to the investment at hand.

3. EXAMPLES OF THE LTEQRS INCLUDED IN AN ANALYSIS

Appropriate risk management entails identifying, evaluating, and taking action to mitigate and manage risks that can pose a material risk to shareholder value. Traditional risk management for investments and portfolios relies on quantitative information. Value at risk, concentration of value in an issuer, sector, or geographic area, return correlations, betas, and similar measures can all be calculated. LTEQR risks are more qualitative in nature and the assessment of their intensity requires subjective judgement on the part of the analyst.

For example, some LTEQR risks materialize from issues related to climate change, cyberattacks, and aggressive fiscal planning. Two environmental aspects of climate change that require scrutiny are greenhouse gas emissions and water stress. The development of tools is required to be able to evaluate these risks under different climate change scenarios. Specific questions need to be asked by the analyst to judge the materiality and level of risk associated with emissions and water impacts.

Corruption, fraud and cyberattacks can be viewed as social issues. Again, the approach to evaluating the maturity of the

cybersecurity and anti-corruption programs of an enterprise requires new specific tools. The analyst must ask the appropriate questions to understand how a company's management is protected. Governance, process, culture, insurance, legal and regulatory frameworks related to a cybersecurity program need to be understood.

Governance topics are many and varied. Issues related to effective corporate tax rates are important as shareholders need to understand whether the company has sustainable tax advantages or is at risk of being investigated for improper practices. Perhaps today's advantages will be erased under new legislation and policies. Fiscal issues are difficult to understand but appropriate screening tools will help identify suspect companies.

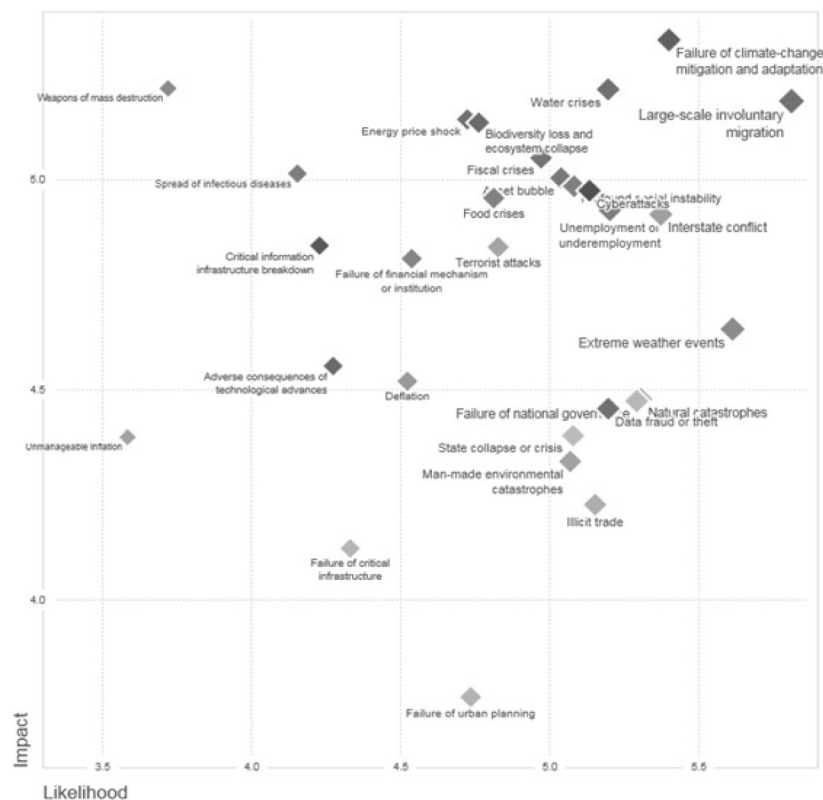


Figure 3: Examples of LTEQRs identified by the World Economic Forum⁶

6. <http://www3.weforum.org/docs/GRR17_Report_web.pdf>.

4. WHY IS IT IMPORTANT TO ADDRESS THESE RISKS AS AN INVESTOR?

Using climate change as an example, the risks are numerous. Along with climate change comes policy risk which can include either carbon taxation or regulated emissions reductions requiring capital or production loss. Direct financial, operational, and/or reputational risks could emanate as a result. Consequently, the value attributed to an investment may be at risk if the company is not prepared to take action to mitigate and address this risk.

Furthermore, climate change, as outlined by Cambridge Associates,⁷ is important because the associated risks:

- 1) Can lead to an issue which causes physical impairment of an asset,
- 2) Result of this impairment can cause significant disruption along the supply chain,
- 3) Potentially persuade policymakers and regulators to respond to the issue with actions that may have financial and operational consequences,
- 4) Develop long-term indirect effects to be felt on human health, productivity, geopolitics and fiscal stability,
- 5) Potential systemic re-pricing of broader risky assets driven by increased societal risk aversion to the issue.

5. HOW DOES AN INVESTOR/ANALYST ANALYZE LTEQR?

In order to conduct an appropriate analysis and deep dives into an LTEQR, particular frameworks need to be developed. The concept of vulnerability and resilience must be at the core of the structure of the analytical tool. The vulnerability of an enterprise vis-à-vis a LTEQR will depend on its industry, type of operations, location and physical attributes, the regulatory environment, and reputation of the firm. How the firm manages their vulnerabilities will determine its

7. Liqian MA, *Risks and Opportunities from the Changing Climate Playbook for the Truly Long-term Investor*, Cambridge Associates, 2015.

resilience. For an enterprise to be resilient, it requires the application of best management practices and governance, a sustainability strategy, and a corporate consciousness towards stewardship. The result of how vulnerable a firm is versus how resilient will determine the probability of the LTEQR materializing and becoming a significant issue for the firm and potentially having a negative financial impact.

ANALYTIC TOOL CONCEPT

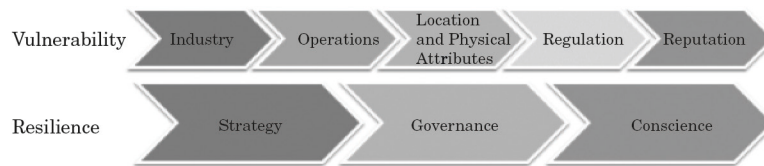


Figure 4: Factors used to assess a company's vulnerability and resilience to a LTEQR

Once the level of a company's vulnerability and resilience towards a LTEQR, such as carbon emissions, water issues, cybersecurity, corruption, or fraud is assessed and scaled from low to high the results for each LTEQR should be mapped out. A whole portfolio of enterprises can be mapped. Priority issues can then be selected and the analyst and investor may commence engagement with the firm based on the results of the analysis which have highlighted risks for which the company is highly vulnerable and shows low resilience, and therefore have the greatest potential probabilities or occurrence and highest negative impact.

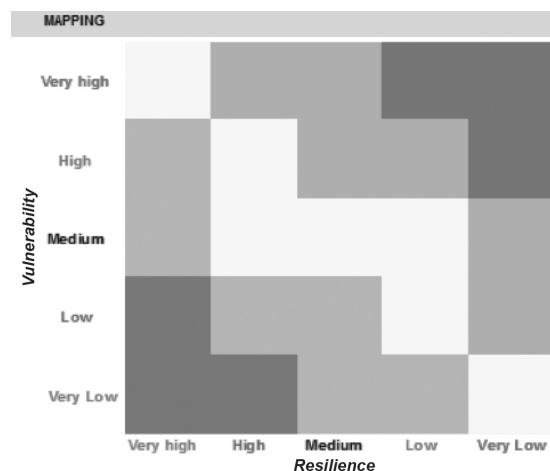


Figure 5: Mapping of a company's scaled vulnerability and resilience to a LTEQR

Engagement can take different forms, but in general it is the process of sitting down and discussing the risks with members of a company's management team or members of its board of directors in person. However, there are challenges to engagement. First, engagement depends on the openness of the firm to discussing these risks. Then, the preparedness and ability of the firm to answer the related questions may be an obstacle. In some cases, the firms may not have collected the information or data to answer the relevant questions.

6. THE DISCLOSURE ISSUE

Despite the abundance of conduits of enterprise-to-investor communication such as annual reports, 10-k's, proxy circulars, Bloomberg and Reuters services, broker analyst reports, rankings from MSCI and Sustainalytics, quarterly conference calls and annual meetings, CSR (Corporate Social Responsibility) reports, investor conferences, and others, there continues to be a disconnect between the ESG information which corporations provide and that which investors seek to understand material issues with the utmost transparency. Corporations feel they provide plenty of information and yet investors continue to demand more analysis and forward looking information along with better integration of financial and ESG factors. We continue to see the evolution of integrated reporting yet there is no widespread adoption of the concept.

Is it possible that the disconnect is actually a result of investors not asking the right questions in order to get the material and transparent answers? If so, then it is with the construction of specific ESG tools that investors will be able to clearly signal what they need. If corporations are shown the tools and work along with investors to find the answers, then they should be able to narrow the disclosure gap. In our opinion, investors must continue to take a disciplined approach to asking corporations relevant questions related to the corporation's vulnerabilities and offsetting resilience to the relevant LTEQRs.

As an example of current challenges, climate change and in particular carbon emissions management is very topical. Current disclosure of carbon emissions by listed companies is far from sufficient. Due to the voluntary nature of reporting there is no obligation to report emissions. In various markets around the world the percentage of companies reporting emissions can vary dramatically with

only 42% of companies in high-impact sectors reporting according to a report by CDP and the 2 Degrees Investing Initiative.⁸ In order to complete a portfolio's carbon profile, special models and expertise are required to estimate any non-reporting companies in the portfolio. Investors turn to suppliers for estimates on individual non-reporting companies. Such estimates can vary dramatically from one supplier to the next as each supplier has its own proprietary model. Both cost and comparability become issues.

To date, reporting on carbon emissions has for the most part been done by publicly listed companies, leaving asset-class diversified portfolios with an incomplete picture of the portfolio's carbon exposure. Real estate may be treated via a totally different approach. Fixed Income instruments such as sovereign and municipal bonds do not have a reporting framework as listed equities do. Depending on a portfolio's asset mix, a significant portion of investments may not be taken into account.

Although corporations who choose to report typically do so with the best of intentions, disclosures don't always cover all sources of emissions at a company thus frequently carry a level of uncertainty. There is no standardized approach to measuring emissions at the corporate level. There is also often a lack of granularity regarding the various producing divisions of each enterprise. The data also carries a time lag. Analysis in any given year is usually based on data representing two years prior. For example, 2015 fiscal year emissions were mostly available by calendar year end 2016 and were then used on portfolios in 2017.

It is questionable how meaningful carbon emissions, intensity metrics, or reduction targets are if they cannot be compared to regulatory thresholds or carbon budgets generated by decarbonisation scenarios and matched with national reduction targets pledged at COP21 for example. Furthermore, the lack of widespread carbon pricing leaves the analyst without the context in which the companies could be financially impacted under scenarios such as the two-degree limit. Also, sector- or industry-defined metrics are needed as "one size does not fit all". There are particular sectors or industries which are high emitters, so metrics must be developed to benchmark these emitters using operational factors specific to that industry.

8. <<https://www.cdp.net/en/research/global-reports/tracking-climate-progress-2016>>.

The use of universal metrics can be misleading. For example, at the corporate level, two very similar companies may be compared on an emissions-per-revenue basis. One enterprise may decide to not hedge the price of its product for sale while another does. Should the market price rise over the course of a determined period for the product, then the unhedged company will have a much-improved metric compared to the hedged without having made any effort to reduce its carbon emissions. This issue may be amplified when calculating the metric for the complete portfolio. Portfolios having mostly hedged companies cannot be compared to those which have mostly unhedged companies or companies that do not produce a product that can be hedged. Using a single metric such as emissions per revenue on a diversified portfolio may be misleading. A much better approach is to ask corporations to give investors scenario analyses on different climate change possibilities.

There is a need for effective communication between the investor and the corporation with the aim of developing pertinent, material and transparent metrics. Investors are not alone. Organizations such as Ceres and UNPRI are at the forefront. For example, changes in corporate income taxation is an LTEQR which lacks transparency despite the disclosures found in annual reports. The UNPRI brought together a group of global investors and outlined their needs. Investors would benefit from an enhanced level of corporate income tax related disclosure by companies. Companies are encouraged to disclose information related to three categories through multiple channels such as a stand-alone tax policy, the proxy circular, the annual report or sustainability report and/or the company website. These categories are:

- 1) A tax policy outlining the company's approach to taxation and general alignment with its business and sustainability strategy,
- 2) Evidence of board level oversight and management of the tax policy and related risks, and
- 3) Transparency on tax strategies, tax-related risks and country-by-country activities.

These categories of needs are further broken down to guide corporations on what constitutes a comprehensive tax policy and what good disclosure and detailed reporting would provide to the investor.

7. CORPORATE SOCIAL RESPONSIBILITY (CSR) REPORTS

Publicly listed companies are increasingly expected to issue corporate social responsibility (CSR) reports. These reports allow companies to disclose economic, environmental and social impacts caused by their regular activities. According to a Governance & Accountability Institute report,⁹ 81% of companies listed on the S&P 500 in the United States published a corporate responsibility or sustainability report in 2015, up from a mere 20% in 2011. Canadian companies are still playing catch-up, with just over 25% of S&P/TSX companies issuing a CSR report in 2015, according to an analysis conducted by the Finance and Sustainability Initiative,¹⁰ a Montréal-based non-profit organization. That Canadian companies' lag relative to their American counterparts could be explained by the resources required to put together a CSR report. According to the same analysis, 85% of the TSX 60 index of large-cap Canadian companies issued a CSR report in 2015.

Today, large companies are expected to issue a GRI-compliant CSR report. GRI, formerly the Global Reporting Initiative, is an organization that sets standards for corporate sustainability reporting. According to the GRI, "sustainability reporting enables organizations to consider their impacts of a wide range of sustainability issues, enabling them to be more transparent about the risks and opportunities they face".¹¹ In order for companies to claim GRI compliance, they must meet the reporting standards set forth by GRI. Another organization, the Sustainability Accounting Standards Board (SASB),¹² focuses on identifying material ESG issues facing each industry and classifying them by their degree of importance.

For investors, a GRI-compliant report provides a certain level of reliability, but there are pitfalls to look out for. Some companies are tempted to use CSR reports as marketing tools, engaging in what is known as "greenwashing"; highlighting the positives while burying or failing to mention the sustainability challenges facing the firm. Although greenwashing is increasingly harder to pull off as investors become more adept at separating the wheat from the chaff

9. <<http://www.ga-institute.com/press-releases/article/flash-report-eighty-one-percent-81-of-the-sp-500-index-companies-published-corporate-sustainabi.html>>.

10. <<http://ifd-fsi.org/>>.

11. <<https://www.globalreporting.org/Pages/default.aspx>>.

12. <<https://www.sasb.org/>>.

in CSR reports, there are a number of important issues that investors should look for when examining such reports.

Most importantly, a CSR report should disclose material ESG risks facing the company. It should outline a credible plan for managing those risks, preferably with quantifiable targets and identifiable milestones. CSR reports should contain updates on previously set objectives and disclose the company's track record in achieving them. If there are setbacks or delays, the report should point them out and explain why they occurred. It is the responsibility of the organization to understand the material ESG issues it faces. One of the best ways for companies to do so is through a materiality assessment. SASB standards can be a guide for how to meet investors' needs relating to materiality as well. Materiality should be defined by industry standards, preferably following SASB materiality maps¹³ or something similar. A good CSR report should also identify ESG opportunities, not just risks. A credible report should be audited by an independent third party. It should also be comprehensive, in the sense that no material issues should be omitted just because some have been disclosed. In other words, it should not be piecemeal.

As companies build a track record of CSR reports over time, it will become harder and harder to greenwash, to set targets and ignore them, or to omit LTEQRs.

Furthermore, it is important to understand that companies also need to communicate their material ESG related issues to their investors. It is not only through the CSR report that they need to consider how they will disclose these issues. If these issues are considered material to the overall strategy and potential financial viability of the organization, then that organization has a regulatory obligation to disclose such information. According to SASB, many companies are disclosing some level of information, but much of that reporting is considered boilerplate information. This is where it's important for investor relations, corporate and legal professionals and the boards of directors to be involved.

8. SUPPLY CHAINS

Investors should also consider upstream and downstream LTEQRs throughout a company's entire supply chain and product

13. <<http://materiality.sasb.org/>>.

life cycle. If a LTEQR materializes within the supply chain or life cycle – from raw material to the end-of-life phase of a product – it can threaten to disrupt production or negatively impact the company's reputation. Supply chain and life cycle LTEQRs include risks involving other entities such as raw material producers, suppliers, retailers/distributors, and final customers. Companies that rely on suppliers at high risk of LTEQRs or produce products with high risk of LTEQRs may thus face high risk themselves even if it is not immediately obvious from the company's direct activities.

An example of this could be carbon emissions and the automotive sector. While the car production process itself may produce carbon emissions, this is dwarfed by the emissions produced by vehicles after they are sold to customers. Emissions that occur when the product is in the customer's hands are an example of a LTEQR that extends beyond the company's direct operations. Regulation on carbon emissions in the transportation sector is highly material for car makers.

Another example is financial services and water risks. Many financial institutions, when discussing water usage in sustainability reports, will only discuss water usage in their own facilities. This water usage alone is not likely to be a material LTEQR; the measured water usage in this case would be restricted to the company's office buildings (some of which may be leased and thus out of the company's control). However, a bank may have investments in companies that face a high water risk, which then puts the bank at risk, albeit a much less material one than the company itself.

Measuring and assessing risks that stem from outside the direct control of the company can be challenging, and requires proper assessment and reporting. This is sometimes seen in greenhouse gas emissions reporting. Greenhouse gas emissions reporting typically distinguishes between 3 types of emissions: Scope 1, Scope 2, and Scope 3. Scope 1 encompasses only those emissions produced directly by the company's activities. Scope 2 includes the emissions produced by the energy used to power the company's activities. Both categories of emissions are relatively straight forward to define and estimate. Scope 3, however, is much more complex. It includes emissions throughout the supply chain, the life cycle of a product, the emissions generated by employees in their commutes to work, and all other upstream and downstream emissions from sources related to the company.

Much like investors are assessing LTERQs among companies, companies must assess LTEQRs among their suppliers. Companies must demand that their suppliers manage these risks and their exposure to them. Ultimately, a company must ensure that it is adequately assessing LTEQRs not only within their own operations, but throughout their supply chains and life cycle of their products. The company's strategy regarding its suppliers must be aligned with its larger ESG strategy.

9. STAKEHOLDER PANELS

One way for companies to pre-empt LTEQRs is to form stakeholder panels. As companies strive to communicate on material ESG issues, there are two important transparency and governance drivers that are at their disposal. The first is an external driver, namely the trade-industry association. Typically, enterprises in a specific industry become members of a trade association which can set a level playing field for industry players worldwide. The association can set guidelines and protocols so that the industry player can better manage ESG issues. It can also serve as a platform for dialogue between peers and other stakeholders. A prime example would be the Mining Association of Canada which provides best ESG management practices protocols to its members and has third party verification of the assessment of these management practices. It also takes advice from a Community of Interest Panel composed of various stakeholders representing aboriginal communities, environmental and social organizations, the investment-finance sector, corporate representatives, academia and labour, science/technology, and communications segments.

The second is an internal driver which is a corporation's own stakeholder panel resembling the industry's community of interest, but whose composition is specific to the corporation's footprint. Unlike a board of directors, this stakeholder panel has no voting power but is a very independent source of ideas and solutions for ESG issues. It creates a forum for discussion and exchange on ESG and is a great source of input and feedback for the CEO, management group, board of directors and the CSR/ESG professionals at the corporation. Many corporations are starting to use this type of panel in the preparation of their annual CSR report as well.

10. BOARD SUSTAINABILITY

Another area of concern for investors is the degree of knowledge and understanding of ESG related issues (like climate change, water, cybersecurity, etc.) on the board of directors of companies. Given that the median tenure of the CEO in the S&P 500 is six years,¹⁴ investors expect boards to be looking beyond this time period for the longevity and viability of the company. The board is responsible for risk oversight and yet, many boards do not have ample representation of skills and talents within their ranks to understand the implications of these issues.

Some companies are taking the first step of adding one person to their boards who has a climate-related experience or background. Others are taking the step of putting into place a separate board Sustainability Committee. Is one better than the other? It will depend on the business and industry that the company works in. Climate change and carbon-related disclosure are not the most material issue for all companies. For some it may be employee retention, it may be access to water or one's social license to operate. Ultimately, it is the board's responsibility to understand the material ESG issues for that organization and to ensure that these risks are being managed.

However, sustainability-related issues are often considered "nice-to-have" with the expectation that boards members simply need to read up on these issues, but they are not viewed as strategically important for the longevity of the organization. There tends to be a lack of education provided to boards around these issues, including in director training. With the Task Force for Climate-Related Disclosure's (TCFD)¹⁵ recommendations suggesting that corporations consider providing scenario planning around climate and other issues, it becomes apparent that investors want to see increased diversity, skill and talent among board members in order for the board to be able to navigate these important issues over time. In fact, the Canadian Securities Administrators (CSA), the umbrella organization of Canada's provincial and territorial securities regulators, has announced a comprehensive review of corporate climate change disclosure rules following the release of the TCFD's recommendations. Depending on how this review process plays out and how the TCFD's recommendations are received by other G20 regulators, it is likely that Canadian

14. <<http://www.equilar.com/blogs/59-ceo-tenure.html>>.

15. <<https://www.fsb-tcfd.org/>>.

listed corporations will at the very least be required to disclose more than they currently do on their exposure to and plans for dealing with climate change and its potential impacts on their businesses.

CONCLUSION

As the science of ESG analysis progresses, ESG related elements and the risks associated with sustainability will inevitably become key components of a full fundamental analysis. Analysts will become more adept at integrating LTEQRs into their models. Development of analytical tools will help in this regard and will be critical elements in the continued evolution and acceleration of ESG integration. Investors will learn to ask the right questions. Companies will learn to provide the relevant answers. Those that don't are likely to see their competitive positions erode and their share prices lag behind their more enlightened competitors. Boards will develop the expertise needed to identify the relevant LTEQRs and will increasingly seek to hire executives with the strategic vision to lead their companies towards a more sustainable future. Regardless of the phase of ESG integration in which an investor or analyst is positioned, the concepts of materiality, vulnerability, and resilience will be essential in the framework of tools to be used to judge the level of risk and prioritization of engagement with companies. The future increasingly looks like a place where companies and investors ignore LTEQRs at their own peril.

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