CFA Institute

PRI Principles for Responsible Investment

ESG INTEGRATION IN CANADA

CFA Institute is a global community of more than 175,000 investment professionals working to build an investment industry where investors' interests come first, financial markets function at their best, and economies grow.

The United Nations-supported Principles for Responsible Investment (PRI) Initiative is an international network of investors working together to put the six principles for responsible investment into practice. Its goal is to understand the implications of Environmental, Social and Governance issues (ESG) for investors and support signatories to incorporate these issues into their investment decision making and ownership practices. In implementing the principles, signatories contribute to the development of a more sustainable global financial system. There are currently more than 2000 signatories to the PRI who collectively manage approximately US$80 trillion in assets. Visit www.unpri.org.

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EXECUTIVE SUMMARY INTRODUCTION

Portfolio managers and analysts are increasingly incorporating environmental, social, and governance (ESG) factors in their investment analyses and processes. However, ESG integration remains in its relative infancy, with investors and analysts calling for more guidance on exactly "how" they can "do ESG" and integrate ESG data into their analysis.

CFA Institute and Principles for Responsible Investment (PRI) set out to create a best-practice report (*Guidance and Case Studies for ESG Integration: Equities and Fixed Income*) and three regional reports (one for the Americas [AMER]; one for Asia Pacific [APAC]; and one for Europe, the Middle East, and Africa [EMEA]) to help investors understand how they can better integrate ESG factors into their equity, corporate bond, and sovereign debt portfolios. We are able to achieve this goal by

- surveying over 1,100 financial professionals, predominantly CFA members, around the world;
- running 23 workshops in 17 major markets;
- interviewing many practitioners and stakeholders;
- publishing more than 30 case studies written by equity and fixed-income practitioners;
- analyzing Bloomberg's ESG company disclosure scores; and
- reviewing data from the PRI reporting framework, the largest global database of information on investors' ESG practices.

THE 17 MARKETS WHERE THE 23 ESG WORKSHOPS WERE HELD

ESG WORKSHOPS ACROSS THE WORLD

AMER	APAC	EMEA
Brazil	Australia	France
Canada	China	Germany
United States	Hong Kong	Netherlands
	India	Russia
	Japan	South Africa
	Singapore	Switzerland
		United Arab Emirates
		United Kingdom

Abbreviations: AMER, Americas; APAC, Asia Pacific; EMEA, Europe, Middle East, and Africa.

The above-mentioned best-practice report contains guidance on ESG integration in equity and fixed-income investments and contains case studies on how ESG integration is “done” by leading practitioners.

This report focuses on the current state of ESG integration in Canada. We hope that investors find this report and its companion reports useful and that these reports help investors learn how they can better integrate ESG data into their analysis and investment decision making.

TOP FINDINGS FROM CANADA

1. Environmental issues affect share prices and corporate bond yields/spreads more frequently than social issues; for sovereign debt yields, the opposite is true.
2. ESG integration practices in Canada are more prevalent among equity practitioners than among fixed-income practitioners. Like equity practitioners, fixed-income practitioners are predominantly performing ESG-integrated qualitative analysis of issuers.
3. When analyzing ESG company disclosure scores, the social scores of companies are higher than their environmental scores across all sectors.

CONSIDERATIONS FOR THOSE INTEGRATING ESG INTO THE INVESTMENT PROCESS

Based on our survey of global financial professionals, workshops with investors and analysts, and research for this report, CFA Institute and PRI wish to highlight a number of considerations financial professionals and investors should have in mind when integrating ESG factors into the investment process.

- There is no single agreed-upon definition of ESG or best practice for ESG integration. Therefore, integrating ESG analysis into the investment process should be done in a manner that best fits each individual firm, its resources, and its clients. However, a set of common best practices is beginning to emerge as professional investors increasingly integrate ESG factors into their analyses and investment processes.
- ESG integration looks at risks and opportunities revealed by the analysis of environmental (E), social (S), and/or governance (G) issues that are material for a company or market. It is often more complex than negative screening, though a not-insignificant minority of those we spoke to still think of ESG investing as simply a negative screen.
- One of the main reasons firms undertake ESG analysis is to assess risk. However, the results of our survey and workshops show that few investors are looking at ESG analysis as a means of uncovering investing opportunities. Investors who can spot companies that are improving their E, S, or G profiles—before the larger market does—may be rewarded. Numerous examples are available of academic[1] and practitioner research that support the benefit of the inclusion of ESG analysis in traditional financial analysis.
- Investors should focus on ESG *analysis*, not ESG *investing*. ESG investing is often used as a marketing slogan, whereas ESG analysis is a fundamental part of investment analysis and requires a disciplined and tangible approach to be fully integrated into the investment process. In the long term, we expect the term "ESG investing" will fade away as ESG analysis becomes more accepted as simply a part of investment analysis.
- ESG integration is consistent with a manager's fiduciary duty to consider all relevant information and material risks in investment analysis and decision making. Some confusion arises at times when people assume ESG integration is only a negative screen in the investment process that limits one's investment universe. Most practitioners would agree (as do we) that ESG integration includes a more thorough application of traditional financial analysis.

[1] Gunnar Friede, Timo Busch, and Alexander Bassen, ESG and Financial Performance: Aggregated Evidence from More Than 2000 Empirical Studies, *Journal of Sustainable Finance & Investment* 5 (December 15, 2015): 210–233. DOI:10.1080/20430795.2015.1118917

- Buyers should beware of products that claim to be ESG investment products. Many products marketed as ESG compliant or sustainable will define ESG differently and make different assumptions about what investments to include and what not to include. Investors need to do research when investing in anything called "ESG" or "sustainable," to ensure they agree with the methodology behind those designations (see the companion report, *Guidance and Case Studies for ESG Integration: Equities and Fixed Income*).
- To date, one of the main drivers of ESG integration globally has been client demand, largely from institutional investors. Investors who want their asset managers to integrate ESG data into the investment process will have to demand it; when they do, asset managers are likely to respond. Likewise, investors who want better material ESG data from companies should also demand it.
- Asset owners and asset managers should strive to do a better job of educating each other about how and why they integrate ESG data in the investment process. Clear communication by investors to their clients about ESG integration could do much to reduce the confusion and misperceptions surrounding what ESG integration involves.
- Investors justifiably remain concerned with the quality, accuracy, and comparability of the ESG data they are using in their analyses. We are in the early days of ESG integration, and few standards and little verification are available with regard to ESG disclosures and ESG data. Thus, investors need to understand how robust, accurate, and comparable the data they are using are and adjust their analyses accordingly. In addition, investors and companies need to work together to agree on the reporting of material ESG issues only and to promote the standardization of ESG data.

SECTION 2

ESG INTEGRATION OVERVIEW

THE ESG INTEGRATION FRAMEWORK

After extensive analysis of the ESG integration techniques of direct investors across the globe, CFA Institute and PRI collated the many ESG integration techniques used by practitioners and developed the ESG Integration Framework (see **Figure 1**).

FIGURE 1: THE ESG INTEGRATION FRAMEWORK

The ESG Integration Framework is not meant to illustrate the perfect ESG-integrated investment process. Rather, the ESG Integration Framework is meant to be a reference so that practitioners can analyze their peers' ESG integration techniques and identify those techniques that are suitable for their own firm. We believe that this will be a useful resource and reference as you develop your ESG-integrated investment process over time. As every firm is unique, the ESG integration techniques of one firm are not necessarily the right techniques for all firms.

We recommend you refer to the ESG Integration Framework as you read this report as well as the "Investment Practices of Local Practitioners" subsections of each regional report.

RESEARCH: THE INNER CIRCLE

Qualitative Analysis

- **Company questionnaires:** Questionnaires sent to companies to collect more ESG data and information where the company's level of public ESG disclosure is inadequate. These questionnaires are also used in parallel with regular company meetings, where investors and companies will meet to discuss the most material ESG issues.
- **Red-flag indicators:** Securities with high ESG risk are flagged in lists, research notes, dashboards, and databases.
- **Watch lists:** Securities with high ESG risk are added to a watch list for regular monitoring.
- **Internal ESG research:** Based on a variety of data sources, proprietary ESG research/views/scores are created for all securities in the portfolio and investment universe.
- **SWOT analysis:** ESG factors are included in the traditional SWOT (strengths, weaknesses, opportunities, and threats) analysis.
- **Materiality framework:** A materiality/sustainability framework is created that includes all the key ESG risks and opportunities for each sector/country. This framework is referred to when making investment decisions and is regularly updated.
- **ESG-integrated research note:** Research notes/credit notes consist of traditional financial information and analysis and ESG information and analysis.
- **Centralized research dashboard:** Traditional financial data and ESG data are kept on one platform (dashboard/database) so practitioners can analyze concurrently traditional financial factors and ESG factors.
- **ESG agenda at (committee) meetings:** Investment teams (and possibly ESG teams/specialists) have a dedicated ESG item on all agendas of investment team meetings. Committees meet to discuss ESG strategy, ESG performance of portfolios, and/or controversial securities.

Active Ownership

- **Voting:** This structured process captures all voting rights and applies a rigorous analysis to management and shareholder resolutions before casting votes.

In addition to being used for voting, this process can be employed to submit resolutions on which other shareholders may vote.

- **Individual/collaborative/policy engagement:** Corporate engagement captures any interactions between the investor and current or potential investee companies on ESG issues and relevant strategies, with the goal of improving (or identifying the need to influence) ESG practices and/or improving ESG disclosure. Public policy engagement captures interactions between the investor and policymaker, regulator, or stakeholder group (e.g., an industry association or standard setter) on financial policy, regulation, and industry codes, with the goal of clarifying ESG requirements, including ESG integration, stewardship, and disclosure, and on ESG-specific topics, such as government commitments to action on climate change. Both corporate engagements and public policy engagements involve a structured process that includes dialogue and continuous monitoring of progress. These interactions might be conducted individually or jointly with other investors.

SECURITY LEVEL: THE MIDDLE CIRCLE

Security Valuation—Equities

- **Forecasted financials:** Adjustments are made to forecasted financials (e.g., revenue, operating cost, asset book value, capital expenditure) for the expected impact of ESG factors.
- **Valuation-model variables:** Adjustments are made to valuation-model variables (e.g., discount rates, perpetuity growth, terminal value) for the expected impact of ESG factors.
- **Valuation multiples:** Adjustments are made to valuation multiples to calculate "ESG-integrated" valuation multiples. These multiples are then used to calculate the value of securities.
- **Forecasted financial ratios:** Forecasted financials and future cash flow estimates are adjusted for ESG analysis and the effect on financial ratios is assessed.
- **Security sensitivity/scenario analysis:** Adjustments are made to variables (sensitivity analysis) and different ESG scenarios (scenario analysis) are applied to valuation models to compare the difference between the base-case security valuation and the ESG-integrated security valuation.

Security Valuation—Fixed Income

- Credit analysis
  - **Internal credit assessments:** ESG analysis is used to adjust the internal credit assessments of issuers.
  - **Forecasted financials and ratios:** Forecasted financials and future cash flow estimates are adjusted for ESG analysis and the effect on financial ratios is assessed.
  - **Relative ranking:** ESG analysis impacts the ranking of an issuer relative to a chosen peer group.

- **Relative value analysis/spread analysis:** An issuer's ESG bond spreads and its relative value versus those of its sector peers are analyzed to find out if all risk factors are priced in.
- **Duration analysis:** The impact of ESG issues on bonds of an issuer with different durations/maturities is analyzed.
- **Security sensitivity/scenario analysis:** Adjustments to variables (sensitivity analysis) and different ESG scenarios (scenario analysis) are applied to valuation models to compare the difference between the base-case security valuation and the ESG-integrated security valuation.

PORTFOLIO LEVEL: THE OUTER CIRCLE

Risk Management

- **ESG and financial risk exposures and limits:** Companies, sectors, countries, and currency are regularly reviewed and monitored for changes in ESG risks and opportunities and for breaches of risk limits.
- **Value-at-risk analysis:** ESG analysis feeds into value-at-risk models.
- **Portfolio scenario analysis:** Different ESG scenarios are run to assess the impact of ESG factors on portfolio risk and return.

Portfolio Construction

- **ESG profile (versus benchmark):** The ESG profile of portfolios is examined for securities with high ESG risks and assessed relative to the ESG profile of a benchmark.
- **Portfolio weightings:** Adjustments are made to weightings of companies, sectors, countries, and/or currency in a portfolio to mitigate ESG risk exposures and avoid breaching ESG risk limits and other risk limits.
- **Portfolio scenario analysis:** Different ESG scenarios are run to assess the impact of ESG factors on portfolio risk and return.

Asset Allocation

- **Strategic asset allocation:** Strategic asset allocation (SAA) strategies factor in ESG objectives and analysis to progressively mitigate the ESG risks and enhance financial performance.
- **Tactical asset allocation:** Tactical asset allocation (TAA) strategies factor in ESG objectives and analysis to mitigate short-term ESG risks.
- **Portfolio scenario analysis:** Different ESG scenarios are run to assess the impact of ESG factors on SAA strategies and TAA strategies.

WHAT IS ESG INTEGRATION?

ESG practitioners use multiple acronyms, terms, and practices when they talk about ESG integration. This makes it difficult for non-ESG practitioners to know if they are performing ESG integration. Terms such as *sustainable investing*, *ESG investing*, *socially responsible investing (SRI)*, *green investing*, *ethical investing*, and *impact investing* are often used interchangeably.

In this volume, *ESG integration* is defined as "the explicit and systematic inclusion of ESG factors in investment analysis and investment decisions." It is a holistic approach to investment analysis, where material factors—ESG factors and traditional financial factors—are identified and assessed to form an investment decision.

ESG integration typically has three components:

1. **Research:**
   - *Information gathering:* Practitioners gather financial and ESG information from multiple sources (including but not limited to company reports and third-party investment research).
   - *Materiality analysis:* Practitioners analyze relevant financial and ESG information to identify material financial and ESG factors affecting a company, sector, and/or country.
   - *Active ownership assessment:* Practitioners discuss material traditional financial factors and ESG factors with companies/issuers and monitor the outcome of engagement and/or voting activities.
2. **Security and portfolio analysis:** Practitioners assess the impact of material financial and ESG factors on the corporate and investment performance of a company, sector, country, and/or portfolio. This can lead to adjustments to their forecasted financials, valuation-model variables, valuation multiples, forecasted financial ratios, internal credit assessments, and/or portfolio weightings (see "Qualitative Analysis versus Quantitative Analysis" for more information).
3. **Investment decision:** The material traditional financial factors and ESG factors identified and assessed influence a decision to either buy/increase weighting, hold/maintain weighting, sell/decrease weighting, or do nothing/not invest.

WHAT ESG INTEGRATION IS NOT

ESG integration does not mean that:

- investment in certain sectors, countries, and companies is prohibited;
- portfolio returns are sacrificed to perform ESG integration techniques;
- immaterial ESG factors affect investment decisions and traditional financial factors are ignored; or
- major changes to your investment process are necessary.

ESG Integration Does Not Prohibit Investing in Certain Companies, Sectors, or Countries

Some practitioners believe that ESG integration and exclusionary screening are one and the same. However, these practices have two fundamental differences:

- One approach potentially reduces the investment universe; the other does not.
- One approach is a “values” approach; the other is a “value” approach.

Exclusionary screening is implemented through a screening policy that reduces the investment universe. The policy is applied at either the firm or the fund level and includes:

- a list of prohibited practices, products, and/or services; and
- rules that identify countries, sectors, and companies in which investment is prohibited.

Typically, exclusionary screening is implemented *before* any investment analysis takes place. This is contrary to ESG integration, where financial information and ESG information are embedded in the security selection and portfolio construction process and all companies, sectors, and/or countries in the investment universe can be bought and sold.

Portfolio Returns Are Not Being Sacrificed to Perform ESG Integration Techniques

A key component of ESG integration is lowering risk and/or enhancing returns. Practitioners apply ESG integration techniques to uncover hidden risks that might remain undiscovered without the analysis of ESG information and ESG trends.

ESG practitioners also look for investment opportunities to enhance returns. For example, some practitioners analyze automotive companies to see how they are reacting to trends in car electrification and factor this assessment into their revenue forecasts. Another example is practitioners who invest in companies with strong ESG management that are likely to outperform their competitors in the long run.

Immaterial ESG Issues Do Not Affect Investment Decisions

Another key component of ESG integration is materiality. Practitioners assess all material factors—traditional financial factors as well as ESG factors—to identify investment risks and opportunities that are considered highly likely to affect corporate performance and investment performance:

- If traditional financial and ESG factors are analyzed and found to be material, an assessment of their impact is carried out.
- If traditional financial and ESG factors are analyzed and found not to be material, an assessment is not carried out.

Practitioners assess several factors when judging whether ESG issues are material, including the following:

1. **Sector and country considerations:** Material ESG issues are commonly associated with certain sectors and countries. They include regulatory and technological changes associated with the business activity that the companies in a sector are involved in or the markets to which they source or sell.
2. **Company considerations:** Material ESG issues related to a sector may not be valid for all companies in the sector because:
   - material ESG issues of a company's business lines unrelated to the sector could outweigh material ESG issues of business lines related to the sector;
   - a company's products and/or services that benefit from ESG trends could mitigate or outweigh the ESG risk associated with its sector; or
   - a company's strong environmental and social management and good governance could mitigate the ESG risk associated with its sector.
3. **Time-frame considerations:** Practitioners who are long-term investors are likely to integrate ESG factors more regularly than short-term investors, as ESG factors tend to be low-frequency, high-impact factors that drive long-term performance.

No Major Changes Are Needed to Investment Processes and Practices

ESG integration is a useful complement to practitioners' current investment process and practices. The main addition to practitioners' process is the sourcing and analyzing of ESG information, which is necessary to understand the top ESG issues affecting a company, sector, or country.

Some practitioners develop new valuation models to include ESG information. Others feed ESG information into their existing models.

QUALITATIVE ANALYSIS VERSUS QUANTITATIVE ANALYSIS

ESG integration is commonly implemented by using approaches and analysis that are more qualitative than quantitative. Increasingly, however, practitioners are quantifying and integrating ESG issues into their company/issuer valuations.

Some examples of practitioner use of qualitative analysis of ESG issues to inform investment decisions include the following:

- The ESG analysis of a company or country is studied alongside the investment analysis of that company or country to inform a "buy/sell/hold/don't invest" decision. For example, if a company or country is viewed poorly based on its ESG performance and on its valuation assessment, it could lead to a "sell" or "don't invest" signal. If the same company or country is rated poorly on its ESG performance but well on its valuation assessment, it could lead to a deeper analysis of the company or country before a decision is made.

- The ESG analysis can be the deciding factor between otherwise identical companies or countries. If all other factors are equal, the practitioner will choose the company or country that performs better on its ESG analysis.
- Practitioners invest in undervalued securities that have an opportunity to outperform based on improving ESG performance and divest from overvalued securities that could underperform based on deteriorating ESG performance.
- If a company has a low ESG score/assessment on certain ESG factors, engagement with the company can improve those factors, resulting in a buy/hold decision.
- The ESG analysis can influence the maturity of the bond that an investor purchases.

Some examples of practitioner use of quantitative analysis of ESG issues to inform investment decisions include the following:

- ESG analysis of a company or country leads to an adjustment of its internal credit assessment.
- Temporary upward/downward adjustments to forecasted financials, valuation-model variables, valuation multiples, forecasted financial ratios, and/or portfolio weightings are made for ESG analysis/ESG scores through sensitivity analysis.
- Permanent upward/downward adjustments to forecasted financials, valuation-model variables, valuation multiples, forecasted financial ratios, and/or portfolio weightings are made for ESG analysis/ESG scores.
- Adjustments to forecasted financials, valuation-model variables, valuation multiples, forecasted financial ratios, and/or portfolio weightings are made through scenarios.
- ESG data/analysis is used as a factor in quant models/factor investing that impact portfolio construction decisions.
- Statistical techniques are used to identify the relationship between an ESG factor(s) and/or aggregated ESG score, and future asset price movements and/or company fundamentals. This can result in systematic rules that lead to portfolio-weighting recommendations.
- The beta of bonds with lower/higher levels of ESG risk is adjusted downward/upward so that the amount investors are able to hold in their portfolios could be more/less than previously calculated.

EQUITY INVESTING VERSUS FIXED INCOME INVESTING

Investment Practices

Currently, fixed-income practitioners practice ESG integration less than their equity practitioner counterparts. The CFA-PRI survey, which ran from 2017 to 2018,[1] showed that a higher percentage of **all** respondents are often/always integrating governance issues, environmental issues, and social issues into their equity analysis, compared to the percentage of respondents who are often/always integrating governance issues, environmental issues, and social issues into their credit analysis (see **Table 1**).

This result may not come as a surprise. The first application of responsible investment practices—predominantly divestment and voting practices—were to fundamental equity strategies. ESG integration in equities started gaining momentum at the beginning of the 21st century, while ESG integration in fixed income is still in its infancy, although expanding rapidly. As a result, most asset owners and investment managers look to integrate ESG issues into their equity portfolios and funds before turning to their fixed-income portfolios and funds.

The belated development of ESG integration in fixed income reflects a previously widespread view that ESG integration and fixed income are incompatible, based on arguments such as the following:

- The inherent complexity of bond markets—given the greater size of the market, variety of instrument types, maturities, and issuing entities—makes it harder to integrate ESG issues into credit risk assessments, especially when assessing interest rate risk and liquidity risk.
- Corporate bondholders can't vote, and find it harder to effectively engage due to limited access to management (bondholders do not have a formal communication

TABLE 1: RESPONDENTS WHO OFTEN/ALWAYS INTEGRATE MATERIAL ESG ISSUES INTO THEIR INVESTMENT ANALYSIS

	EQUITY ANALYSIS	CREDIT ANALYSIS
Governance Issues	56%	42%
Environmental Issues	37%	27%
Social Issues	35%	27%

[1] CFA Institute and Principles for Responsible Investment (PRI) commissioned the firm YouGov to administer a global survey on ESG integration. The survey asked questions to gauge investor attitudes toward ESG integration as well as to obtain a better understanding of how ESG integration is done in practice.

process such as the annual general meeting), while sovereign debtholders find it harder to effectively engage with sovereign debt issuers such as governments.

- ESG factors impact bond prices less frequently because:
  - low liquidity in the credit market (especially compared to equity markets) makes it hard to buy or sell bonds based on news of ESG controversies; and
  - traditional financial factors (interest rates, inflation, etc.) have the overriding influence on prices and therefore it is not necessary to analyze ESG issues.

These views are gradually changing as an increasing number of practitioners incorporate ESG issues into fixed-income portfolios and funds. Of course, fixed-income practitioners still can't vote, but they do engage[2]. Portfolio managers and credit analysts regularly contact companies and meet management in person, sometimes with their firm's equity portfolio managers and equity analysts, and at roadshows. However, it is still rare for a group of fixed-income practitioners to engage with companies collaboratively and for fixed-income practitioners to engage with sovereign debt issuers.

In fixed income, a key application of ESG data is to inform the analysis of issuer creditworthiness. Some practitioners have integrated ESG factors into their interest rate risk analysis when assessing bonds with varying maturities issued by the same issuer. For some issuers, the material ESG factors associated with a five-year bond will differ from those associated with a ten-year bond.

That practitioners are now integrating ESG factors into their fixed-income analysis suggests they do believe that ESG factors can be material and therefore can affect bond returns. The CFA-PRI survey supports this conclusion. **Table 2** shows that survey respondents believe that ESG issues are impacting share prices, corporate bond prices, and sovereign debt prices and will do so even more frequently in five years' time (2022).

ESG Issues

Table 2 also shows that across governance issues, environmental issues, and social issues, practitioners believe that these issues are impacting share prices more often than bond prices. Some arguments that practitioners have used to back these results include the following:

1. Share prices are more reactive to news flow and market sentiment than bond prices. When an ESG controversy that impacts a company becomes public knowledge, the effect on the company's share price is greater than the effect on the company's bond prices.
2. The equity market is more liquid and has higher volatility than the credit market. Thus, ESG factors have a more immediate impact on share prices than bond prices.
3. Client demand is higher for equity products with ESG mandates. Therefore, asset flows drive share prices more than bond prices.

[2] PRI (2018). *ESG Engagement for Fixed Income Investors—Managing Risks, Enhancing Returns. https://www.unpri.org/fixed-income/esg-engagement-for-fixed-income-investors-managing-risks-enhancing-returns-/2922.article*

TABLE 2: THE IMPACT OF ESG ISSUES IN 2017 AND THE EXPECTED IMPACT IN FIVE YEARS' TIME (2022) ON SHARE PRICES, CORPORATE BOND YIELDS/SPREADS, AND SOVEREIGN DEBT YIELDS

	AFFECTED IN 2017	WILL AFFECT IN 2022
ESG ISSUES IMPACT ON SHARE PRICES		
Governance	58%	65%
Environmental	23%	52%
Social	23%	46%
ESG ISSUES IMPACT ON CORPORATE BOND YIELDS/SPREADS		
Governance	41%	53%
Environmental	15%	40%
Social	15%	35%
ESG ISSUES IMPACT ON SOVEREIGN DEBT YIELDS		
Governance	35%	44%
Environmental	12%	31%
Social	18%	32%

Note: Percentages represent respondents who answered "often" or "always."

4. The upside potential of bonds is limited, which can act as a buffer to bond price movements.
5. Macroeconomic factors, in particular interest rates, are key drivers of bond prices and override the impact of ESG issues.
6. Due to the fixed-income market's size, variety of instrument types, maturities, capital structure positioning, and issuing entities, ESG factors impacting an issuer may manifest themselves differently depending on the bond characteristics.

When comparing the figures for corporate bonds and sovereign debt, the results suggest that environmental, social, and governance issues impact sovereign debt prices less frequently than corporate bond prices, but only slightly.

Interestingly, social issues are considered to be impacting sovereign debt yields more frequently than environmental issues both in 2017 and in 2022. Social and environmental issues are considered to impact share prices and corporate bond yields/spreads at roughly the same frequency now but by 2022, environmental issues will impact more frequently than social issues.

ESG IN EQUITY ANALYSIS

Typically, ESG practitioners apply qualitative ESG analysis to inform investment decisions. They use internal and third-party research to create individual proprietary scores for environmental issues, social issues and governance issues, which are also weighted to create an aggregate ESG score for each company in the portfolio and in the investible universe. Several ESG practitioners hold regular ESG-dedicated meetings to discuss these proprietary scores and their accompanying analysis to assess the potential impact of ESG issues on corporate performance and investment performance of companies and sectors.

Systematic Strategies—Quant Strategies and Smart Beta Strategies

Although ESG integration has historically been associated only with fundamental strategies, quant and smart beta strategies are now integrating ESG factors into their valuation models and investment decisions. As ESG data become more prevalent, statistically accurate, and comparable, more managers are likely to perform statistical techniques to identify correlations between ESG factors and price movements that can generate alpha and/or reduce risk.

The quant managers who perform ESG integration have constructed models that integrate ESG factors alongside other factors, such as value, size, momentum, growth, and volatility. ESG data are included in their investment processes and could result in upward or downward adjustments to the weights of securities, including to zero.

Quant and smart beta strategies use two main approaches when integrating ESG factors into quantitative models. These approaches involve adjusting the weights of:

- securities ranked poorly on ESG to zero, based on research that links ESG factors to investment risk and/or risk-adjusted returns; and
- each security in the investment universe, according to the statistical relationship between an ESG dataset and other factors.

Fundamental Strategies

Buy-side fundamental practitioners and sell-side brokers integrate ESG factors, together with all other material factors, into their absolute and relative valuation models. They indicate their views on the impact of ESG factors and traditional financial factors on company valuations by adjusting future revenue growth rates, future operating costs, future capital expenditures, discount rates, terminal value, and other variables.

Revenue

To forecast revenue, practitioners typically take a view on how fast the industry is growing and whether the specific company will gain or lose market share. They integrate ESG factors into these forecasts by increasing or decreasing the company's revenue growth rate(s) by an amount that reflects the level of investment opportunities or risks.

Operating Costs, Operating Margin, and EBIT Margin

Practitioners make assumptions about the influence of ESG factors on future operating costs and either adjust them directly or adjust the operating profit margin/earnings before interest and taxes (EBIT) margin. They may forecast some operating costs explicitly but, depending on the level of disclosure by companies, may find it necessary to make adjustments to the operating margin instead. For example, a practitioner may reduce future operating costs of a company due to a variety of initiatives that will reduce the company's energy consumption and reliance on fossil fuels.

Book Value and Impairment Charge

ESG factors can influence assets' anticipated cash flow, such as by forcing long-term or permanent closure, and therefore alter the net present value of the assets. The impact is most likely to be a reduction, resulting in an impairment charge being made to bring the company's book value down accordingly, and therefore reducing not only the asset value but also the company's earnings for the year in which the noncash, one-off impairment charge is recorded on the income statement.

Capital Expenditure

A practitioner may believe that ESG factors will lead a company to decrease or increase its future capital expenditure.

Terminal Value

ESG factors could cause practitioners to believe that a company or its business line will not exist forever. In these cases, the practitioner might reduce the terminal value to a lower value or to zero, respectively.

Beta and Discount Rate Adjustment

Some practitioners adjust the beta or discount rate used in company valuation models to reflect ESG factors. This technique is ideal when there is an apparent ESG risk to the company, but it is difficult to price it into the company's valuation. One approach used by practitioners is to run a peer analysis of companies within the sector and then rank them by an ESG factor(s). The practitioner can then increase/decrease the beta/discount rate for companies considered to possess high/low ESG risk, in turn reducing/increasing the fair value.

ESG IN FIXED-INCOME ANALYSIS

Originally, corporate bond practitioners adapted the materiality/sustainability frameworks and ESG techniques used by the equity practitioners in their firms. This approach still happens and is relevant today.

More recently, ESG integration techniques applied by fixed-income practitioners have become more sophisticated; some practitioners have fully adapted their processes and analysis to integrate ESG factors.

Additional aspects should be considered when analyzing ESG risks and opportunities in fixed-income investing as compared to equity investing. Bonds come in all shapes and sizes, with differing issuer types, credit quality, duration, payment schedules, embedded options, seniority, currencies, and collateral. Bond prices are strongly influenced by fundamentals, macroeconomic factors, interest rates, and liquidity, which require a multilayered analysis of credit risk, interest rate risk, yield curve risk, and liquidity risk.

All these variables require a sound understanding of how ESG issues can affect a bond. For example, due to the long-term nature of ESG risks, short-dated bonds issued by a company could be investible while the company's long-dated bonds may not be, if the practitioner perceives that the ESG risk will not materialize within the next five years.

Corporate Credit Analysis

That the order of the frequency of impact of environmental, social, and governance issues on corporate bond prices and share prices is the same is not surprising. The material ESG issues for a company remain the same regardless of whether the investor is a shareholder or a bondholder. For example, health and safety remains a top ESG issue for mining companies and their owners and lenders (see **Figure 2** for examples of ESG issues analyzed by equity and corporate bond investors).

FIGURE 2: EXAMPLES OF ESG ISSUES ANALYZED BY EQUITY INVESTORS AND CORPORATE BOND INVESTORS

GOVERNANCE ISSUES	SOCIAL ISSUES	ENVIRONMENTAL ISSUES
Business integrity	Human rights	Climate change
Shareholder rights	Employee relations	Biodiversity
Executive pay	Skilled labor	Energy resources and management
Audit practices	Health and safety	Biocapacity and ecosystem quality
Board independence and expertise	Diversity	Air pollution
Fiduciary duty	Customer relations	Natural resources
Transparency/accountability	Product responsibility	Water resources and pollution
Related-party transactions		
Dual-class share structures		
Tax practices		

This is reflected in the approach used by some practitioners. Materiality/sustainability frameworks—a regularly reviewed list of sector-specific and/or country-specific ESG issues—are shared by corporate fixed-income practitioners and equity practitioners to identify material ESG issues. In instances where asset owners and investment managers deploy dedicated ESG teams, fixed-income and equity practitioners share this resource and use the same company ESG research. Other practitioners will adapt the materiality/sustainability frameworks used by equity teams where material issues can be different for corporate bond issuers (e.g., innovation management may be less relevant), especially when considering the duration of bonds.

Practitioners use materiality/sustainability frameworks and company ESG research in their credit risk analysis. Few practitioners have looked at the impact of ESG issues on interest rate risk, yield curve risk, and liquidity risk.

Practitioners assess the impact of ESG issues on a company's ability to pay its debt obligations and liabilities. Their main approach is to use third-party ESG scores or proprietary ESG scores along with traditional credit analysis when making investment decisions. Some practitioners embed their company ESG research and scores into their internal credit assessments. When they do so, the ESG issues can influence credit assessments and investment decisions.

On a lesser scale, the impact of ESG issues is being quantified by practitioners in portfolio construction processes and fundamental credit analysis. Portfolio construction tools would examine how ESG issues are influencing macroeconomic and market factors. The impact on the portfolio is through the weighting of sectors and companies.

Through fundamental credit analysis, key credit ratios are adjusted for ESG issues. Practitioners assess these ratios to understand whether the creditworthiness of the company is deteriorating or improving and ultimately, to see the potential impact on credit ratings and credit spreads.

Sovereign Credit Analysis

As compared to their use with corporate bonds, ESG integration practices in sovereign debt are less widespread.

The current low adoption of ESG integration by sovereign-debt practitioners is due in part to the lack of understanding of how to integrate ESG issues into sovereign debt. Unlike some corporate bond practitioners, sovereign-debt practitioners are not able to simply borrow techniques and materiality/sustainability frameworks from their fellow equity practitioners, which might speed up the integration process. Extensions to existing frameworks or additional frameworks drawn up for country-specific factors are likely needed.

The lack of understanding may be exacerbated by the difficulties expressed by practitioners with sourcing ESG data on countries as compared to sourcing company data, especially environmental data (see **Figure 3** for sources of ESG data used by sovereign debt investors). This makes it more difficult for practitioners to assess the absolute and relative ESG performance of a country and in turn, convert the ESG data/analysis into meaningful indicators to support their ESG integration practices.

Another reason for the lower usage of ESG in sovereign credit analysis relates to the CFA-PRI survey finding that suggests that ESG issues are less material for sovereign debt compared to their impact on shares and corporate bonds (see Table 2). Practitioners may

FIGURE 3: EXAMPLES OF ESG DATA SOURCES FOR SOVEREIGN CREDIT ANALYSIS

Freedom House—Freedom in the World survey
Reporters without Borders—World Press Freedom Index
Forum for a new World Governance—Worldwide Governance Index
Bündnis Entwicklung Hilft—The World Risk Index
Transparency International—Corruption Perceptions Index
World Bank—Ease of Doing Business Index
United Nations Development Program—Human Development Index
Fund for Peace—Fragile State Index
Organisation for Economic Co-operation and Development—Better Life Index
International Labour Organization—labor and health and safety statistics
Access Initiative and World Resources Institute—Environmental Democracy Index
Natural Resource Governance Institute—Resource Governance Index
Yale University—Environmental Performance Index
World Energy Council—Energy Trilemma Index
International Monetary Fund—country reports
EU—country reports
US Central Intelligence Agency—World Factbook
ESG research providers
Credit rating agencies

believe that ESG issues do not impact sovereign debt prices and therefore ESG integration is not applicable. However, the CFA-PRI survey did indicate that governance issues, social issues, and environmental issues are impacting prices (see **Figure 4** for examples of ESG issues analyzed by sovereign debt investors).

As highlighted earlier, the respondents believe that social issues more frequently affect sovereign debt prices than environmental issues (see Table 2). Practitioners are more likely to analyze social information on a country than environmental information, especially as the time scale of social issues is more aligned with the investment horizon for sovereign debt. The more-readily available social data also makes it easier for practitioners to integrate social issues into their sovereign credit analysis.

Despite these challenges, practitioners are integrating ESG issues into their sovereign credit analysis. The majority are making qualitative assessments of ESG issues through the use of third-party research and/or internal research; these assessments then inform their investment decisions. Quantifying ESG issues in sovereign credit analysis is not widespread and is practiced less than when performed with corporate credit analysis. It tends to be performed by feeding ESG research and/or scores into the credit analysis of an issuer, which can cause adjustments to credit ratings or internal credit assessments.

Another common approach to sovereign credit analysis is to analyze ESG issues through portfolio construction tools. ESG issues can then influence allocations to regions and countries, providing underweight, neutral, and overweight signals.

As well as analyzing the impact of ESG on a country's *ability* to pay its debt obligations, practitioners have used ESG information to assess a country's *willingness* to pay its debt obligation. For example, an investment manager who believes a link is present between a

FIGURE 4: EXAMPLES OF ESG ISSUES ANALYZED BY SOVEREIGN DEBT INVESTORS

GOVERNANCE ISSUES	SOCIAL ISSUES	ENVIRONMENTAL ISSUES
Institutional strength	Human rights	Effects of climate change
Corruption	Education and human capital	Water resources and pollution
Regime stability	Health levels	Biodiversity
Rule of law	Political freedoms	Energy resources and management
Security	Demographic change	Biocapacity and ecosystem quality
Regulatory effectiveness and quality	Employment levels	Air pollution
Accounting standards	Life expectancy	Natural disasters
Freedom of the press	Social exclusion and poverty/ income disparity	Natural resources
Political and civil liberties	Trust in society/institutions	
	Crime and safety	
	Food security	

country's level of corruption and its willingness to pay might use that link as justification to adjust country credit ratings and outlooks that they believe do not reflect the level of corruption in those countries.

Municipal Credit Analysis

ESG Integration Practices

The sub-sovereign bond market is composed of any level of government below the national or central government. This includes relevant bodies from regions, provinces, states, or municipalities that issue bonds. The US sub-sovereign market consists of mainly munipical bonds. At approximately $3.85 trillion in size, the US municipal bond market represents most of the global municipal bond market.[1]

ESG factors have long been used to determine a bond's credit quality in the municipal space and to identify financial risks in a municipality's operations or for a particular public project. The quality of the issuer's governance and management practices are typically a constant in credit analysis for any municipal bond issuer. Practitioners look at overall transparency and reporting, corruption levels, sound budgetary practices, and responsible use of debt (e.g., close monitoring of long-term pension liabilities and principal maturities, implementation of affordable capital plans, strong financial controls). They might view a management team that provides robust disclosure in a positive light relative to its peers.

Sound governance can also be assessed for those issuers who think beyond immediate budgetary needs and make investments intended to strengthen the economic success and social inclusiveness of their communities, as inclusive communities should exhibit stronger creditworthiness and lower risk for practitioners. As such, municipal borrowings that provide social benefits may offset the negative impact of temporarily weak finances.

[1] SIFMA US Quarterly Highlights 1Q '18, April 2018. https://www.sifma.org/wp-content/uploads/2018/04/US-Quarterly-Highlights-2018Q1-2018-04-06-SIFMA.pdf

For both general obligation and revenue bonds, chronic social and environmental problems can affect the issuer's ability to raise revenues from taxes or other types of income. For example, low high school graduation rates, high violent crime rates, lack of affordable housing stock in the community, and high unemployment rates could result in long-term credit stress. Environmental factors such as the region's air quality and associated health risks for its constituents, the quality of public infrastructure such as wastewater treatment plants, or the long-term impact of climate change can all pose potential risks to macro factors that may affect an issuer's ability to repay its debt. Overall, some practitioners find that the more a municipality's purpose or public project aligns with the environmental and social needs of its constituents, the more likely it is that it will repay the bond.

For project revenue bonds, practitioners may also integrate additional ESG factors based on the underlying use of the proceeds (e.g., giving more weight to environmental factors for electric and water utilities, to social factors for education, and to healthcare issuers).

Because of the limited coverage of this asset class by third-party research providers, practitioners often use discretion to determine materiality and integrate ESG factors through the fundamental research process. Practitioners in the municipal market may depend more strongly on credit ratings agency research, and may integrate ESG factors by expanding their view to include environmental indicators that capture local and regional resource challenges.

Structured Credit Analysis

ESG Integration Practices

In addition to bonds issued by governments and companies, the fixed-income market includes securities backed, or collateralized, by a pool of financial assets, such as mortgages, accounts receivable, or automobile loans. Practitioners are just starting to consider how to systematically integrate ESG factors into structured credit analysis, largely because ESG data coverage is less readily available for some of the transaction parties, including the special purpose vehicles that issue the securities, and the inherent complexity of assessing underlying asset pools that may run into the thousands.

The integration process typically seeks to capture risks at several levels: at the transaction level, relating to the originator/ servicer/issuer of the securities; at the "collateral" or "cover" pool of underlying assets; and sometimes, informing a view on the overall deal structure. Some practitioners give more weight to the originator, others to the credit quality of the underlying asset pool. The approach varies for different types of securitized investments depending on whether the issue is government backed, and with respect to the overall composition/asset concentration levels of the loan portfolio.

At the *transaction level*, ESG analysis plays an important role in determining the true risk-adjusted credit profile of a securitization through an understanding of the corporate governance strategy of each of the parties associated with the deal. For example, practitioners may review the lending practices of the financial institutions that are originating the securitization, prioritizing those with clearly stated guidelines for underwriting and a positive record of servicing loans, and avoiding those with predatory practices, poor risk management and regulatory compliance track records, and any conduct failings that could lead to litigation risks and other adverse consequences for loan enforceability.

Strong governance practices cover transparency of management (e.g., publicly listed companies with audited, detailed financial statement disclosures, whose management team communicates regularly with investors), executive compensation, and board independence (e.g., a diverse board with appropriate controls). Practitioners may also evaluate whether the parties are using securitization as a method of exit or risk transfer, or as a funding source in which they will continue to participate.

At the *asset pool, or collateral, level*, practitioners consider how ESG factors may affect the financial sustainability of the asset pools, such as auto loans and mortgages.[2] Although the analysis can differ between different asset pools, the objective remains the same—to understand if any ESG risks exist that would inhibit the asset pool from performing as expected, and to accurately value those risks.

Depending on the nature of the collateral, ESG analysis may be given more focus. Consider these examples:

- When analyzing securities backed by power assets or power contracts, practitioners may focus on the environmental risk profile of the underlying assets (e.g., the source of power generation).
- When analyzing securities backed by commercial or residential properties, practitioners may consider environmental factors on either a specific property or a corporate level, given the increasing impact of environmental regulation faced by property owners in some markets. As such, practitioners can analyze the energy efficiency of a property portfolio in relation to standards such as the UK's Energy Performance Certificate (EPC) or the US Leadership in Energy & Environmental Design (LEED) certification program.
- When analyzing securities backed by auto loans, environmental and governance failings such as the 2015 automotive sector emissions testing deception are assessed as a material risk to the value of the automobiles in auto loan/lease securitizations.
- When analyzing securities backed by general consumer/credit card loans, practitioners tend to consider societal risks, such as discriminatory and predatory lending and aggressive and deceptive marketing practices, as material factors.

Quantifying ESG issues in structured credit analysis is limited to the extent that it helps identify securities with mispriced prepayment assumptions, which may trade at a discount relative to intrinsic value. For example, servicers that aggressively target borrowers for refinances or servicers that have streamlined procedures for refinances may be avoided, or valued less when bonds are trading at a premium. Qualitative analysis focusing on conducting thorough due diligence of parties to the transaction may ensure no red flags are present among those associated with deals, while looking through the underlying assets may assist with monitoring the performance of the deal for as long as the practitioner is invested in the security.

[2] PRI 2014, Fixed Income Investor Guide. https://www.unpri.org/fixed-income/fixed-income-investor-guide/30.article

SECTION 3

ESG INTEGRATION IN CANADA

THE IMPACT OF ESG FACTORS ON CAPITAL MARKETS AND INVESTMENT PRACTICES: SURVEY DATA

IMPACT ON PRICES AND YIELDS

Through our global ESG integration survey, we wanted to understand how often Canadian-based investors consider that environmental, social, or governance issues affected share prices and bond yields in the Canadian capital markets in 2017, and how often they believe these factors will impact share prices and bond yields in five years' time (2022).

As expected, corporate governance was the factor that survey respondents believed impacted share prices and bond yields the most. And while based on the survey, environmental issues affect share prices and corporate bond yields/spreads more frequently than social issues. For sovereign debt yields, the opposite appears to be true (**Table 3**).

TABLE 3: THE IMPACT OF ESG ISSUES IN 2017 AND THE EXPECTED IMPACT IN FIVE YEARS' TIME (2022) ON SHARE PRICES, CORPORATE BOND YIELDS/SPREADS, AND SOVEREIGN DEBT YIELDS

	AFFECTED IN 2017	WILL AFFECT IN 2022
ESG ISSUES IMPACT ON SHARE PRICES		
Governance	52%	54%
Environmental	30%	48%
Social	26%	41%
ESG ISSUES IMPACT ON CORPORATE BOND YIELDS/SPREADS		
Governance	36%	44%
Environmental	23%	33%
Social	20%	32%
ESG ISSUES IMPACT ON SOVEREIGN DEBT YIELDS		
Governance	36%	38%
Environmental	18%	26%
Social	21%	26%

Note: Percentages represent respondents who answered "often" or "always."

ESG RISKS AND OPPORTUNITIES

Respondents in Canada were asked how often ESG risks and opportunities affect share prices and bond yields in Canadian capital markets. As we saw at the regional level, corporate governance is the factor most often considered (**Table 4**). Survey respondents believe that practitioners are using ESG data to assess risks at about twice the rate as they do to spot opportunity. As we found in most other markets, ESG analysis is used more for mitigating risks than for spotting opportunities.

Responses were similar for both corporate bonds and sovereign debt, with respondents considering that fewer practitioners often or always include ESG issues in their risk analysis and that even fewer are identifying ESG opportunities.

TABLE 4: THE IMPACT OF ESG RISKS AND OPPORTUNITIES ON SHARE PRICES, CORPORATE BOND YIELDS/SPREADS, AND SOVEREIGN DEBT YIELDS

	AFFECT "OFTEN" OR "ALWAYS"
HOW OFTEN DO ESG RISKS AND OPPORTUNITIES AFFECT SHARE PRICES?	
Environmental risks	31%
Environmental opportunities	19%
Social risks	22%
Social opportunities	19%
Governance risks	48%
Governance opportunities	32%
HOW OFTEN DO ESG RISKS AND OPPORTUNITIES AFFECT CORPORATE BOND YIELDS/SPREADS?	
Environmental risks	21%
Environmental opportunities	14%
Social risks	17%
Social opportunities	14%
Governance risks	32%
Governance opportunities	24%
HOW OFTEN DO ESG RISKS AND OPPORTUNITIES AFFECT SOVEREIGN DEBT YIELDS?	
Environmental risks	15%
Environmental opportunities	11%
Social risks	17%
Social opportunities	12%
Governance risks	35%
Governance opportunities	24%

ESG USE BY PORTFOLIO MANAGERS AND FINANCIAL ANALYSTS

To understand the investment practices of Canadian practitioners, the survey asked how often portfolio managers and financial analysts are including material ESG issues into equity and credit analysis. It seems that for the most part the use of ESG research in investment analysis is done on an ad hoc basis in Canada, with few survey respondents saying that they often or always include ESG issues in their analyses (**Figure 5**). It appears that the use of ESG information to adjust valuation models is rare among portfolio managers and analysts, with most respondents answering either "never" or "rarely" (**Figure 6**).

When comparing the level of ESG integration in equities with the level of ESG integration in fixed income, the results suggest that more equity practitioners than fixed-income practitioners are "sometimes," "often," or "always" integrating material ESG issues into their fundamental analysis and valuations tools/models.

FIGURE 5: THE IMPACT OF ESG ANALYSIS ON INVESTMENT ANALYSIS

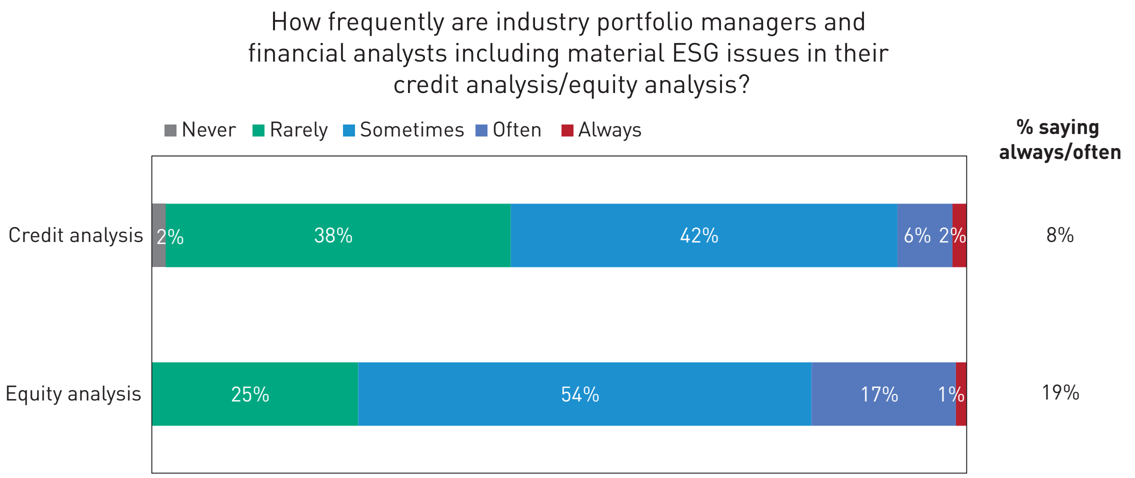
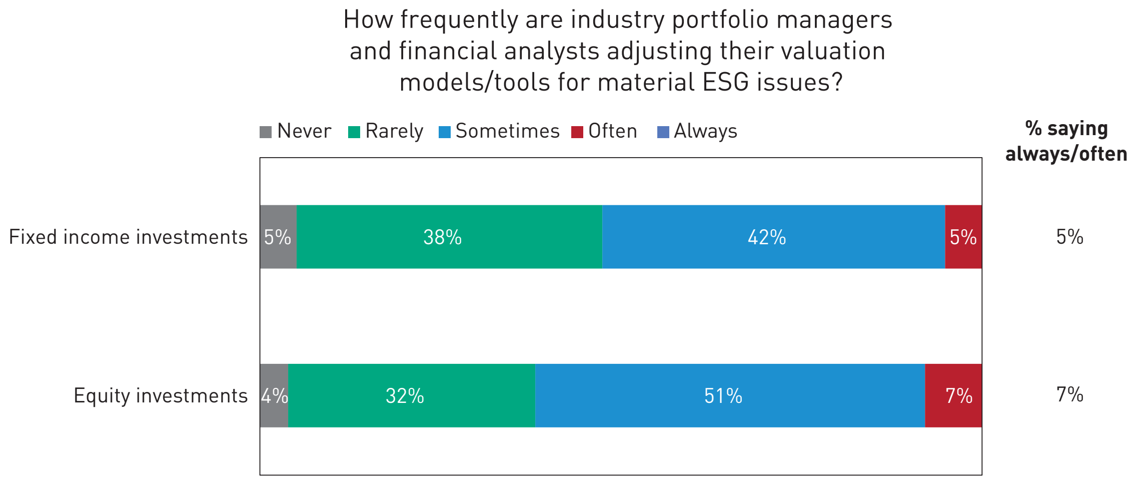


FIGURE 6: THE IMPACT OF ESG ANALYSIS ON VALUATION MODELS/TOOLS



DRIVERS OF AND BARRIERS TO ESG INTEGRATION: SURVEY DATA AND WORKSHOP FEEDBACK

CFA Institute and PRI thank NEO Exchange for its help in organizing our ESG Integration workshop in Toronto.

THE STATE OF ESG INTEGRATION IN CANADA

Workshop participants agreed that they tend to integrate corporate governance into the investment process much more than environmental and social factors, as governance is the easiest aspect of ESG to measure and identify. Many participants noted that ESG data have traditionally been incorporated into the investment processes on a more informal basis and only now is a systematic integration of ESG making its way into the investment process. However, such a systematic approach to ESG integration is in its infancy, although it is more advanced at larger asset managers and investment banks.

A number of workshop participants noted that they believe ESG analyses by Canadian analysts at investment banks is a step behind their counterparts in the United States. Workshop participants noted that investment banks in the United States have made a larger investment in building ESG teams than have their Canadian counterparts.

METHODS OF ESG INTEGRATION

Many agreed that one of the main reasons they incorporate ESG into the investment process is to better assess risk. This incorporation can take many forms as ESG analysis and ESG integration are in their early stages. Some firms are integrating ESG on a systematic basis across the whole investment process, while others are still working on a process for ESG integration—focusing first and foremost on governance, which they find easier to quantify, and then integrating environmental and social factors into the investment process where they can.

The responsibility for ESG integration varies from firm to firm. At some asset managers, analysts are responsible for coverage as are portfolio managers—issues are identified and discussed, and then it is up to portfolio managers to ultimately make investment decisions. Of course, some firms do not have the benefit of an ESG team or ESG analysts, and portfolio managers are responsible for ESG analysis by themselves, but as noted above, much of this is done on an informal basis. The larger firms tend to have a team-based approach, where many ESG inputs from numerous sources are included in the investment process.

In terms of who is responsible for ESG implementation and oversight at their firms, 42% said non-ESG portfolio managers were responsible for implementation, and 46% said senior management was responsible for oversight (respondents could choose more than one answer). Only 29% said that senior management or ESG portfolio managers were responsible for implementation, and 21% said that non-ESG portfolio managers were responsible for oversight. It therefore appears that the main way ESG is integrated at Canadian firms is for portfolio managers who are not ESG specialists to implement an ESG strategy overseen by senior management, although this is not the only model.

The main way ESG is integrated at Canadian firms is for portfolio managers who are not ESG specialists to implement an ESG strategy overseen by senior management.

DEFINITIONS AND TERMINOLOGY STILL A PROBLEM

A main concern of the group was one we anticipated—that there is no clear understanding or agreement on what exactly is meant by "ESG integration." ESG integration suffers from a definitional problem because the concept is relatively new in the investments world.

The analysts and portfolio managers around the table tended to see ESG integration as a more systematic way to qualify and quantify ESG data and incorporate it into the investment process. On the day of our workshop, we found that a minority of those in the room (about 20–25%) see ESG as synonymous with SRI. Our survey data confirm this result, as about 29% of Canadian financial professionals surveyed said that exclusionary screening is used in their investment process.

On the day of our workshop, we found that a minority of those in the room (about 20–25%) see ESG as synonymous with SRI.

Many in the room noted that their clients see ESG as just the most recent acronym for socially responsible investing. This is consistent with what we have seen in some other markets as institutional investors are more likely to focus on the *value* proposition offered by ESG integration, when many of their individual clients and high-net-worth individuals see ESG as a *values* proposition. They see ESG as the latest name for SRI or CSR (corporate social responsibility).

DRIVERS OF AND BARRIERS TO ESG INTEGRATION

The top five drivers of and barriers to ESG integration as identified by the survey are presented in **Tables 5** and **6**.

Many of the participants in the workshop confirmed the two top reasons behind ESG integration that we saw in the survey—evaluating risk and client demand. Our survey results of financial professionals show that 65% of survey participants cited risk management as a main driver of ESG integration in equity investments, with client demand following at 51%. For fixed income, these numbers are 61% and 42%, respectively. One participant noted that they see increased demand from clients to incorporate ESG into the investment process, and that they are hearing from their sales teams that an ESG strategy and ESG expertise are increasingly expected in order to win and retain business.

TABLE 5: DRIVERS OF ESG INTEGRATION IN CANADIAN CAPITAL MARKETS

EQUITY INVESTMENTS		FIXED-INCOME INVESTMENTS	
Risk management	65%	Risk management	61%
Client demand	51%	Client demand	42%
Fiduciary responsibility	32%	Fiduciary responsibility	33%
Alpha	22%	Alpha	18%
Regulation	15%	Regulation	11%

Note: Percentages represent those who thought each item was a main driver. Survey respondents could choose more than one answer.

TABLE 6: BARRIERS TO ESG INTEGRATION IN CANADIAN CAPITAL MARKETS

EQUITY INVESTMENTS		FIXED-INCOME INVESTMENTS	
Limited understanding of ESG issues and ESG integration	54%	Lack of comparable and historical data	32%
Lack of comparable and historical data	36%	Limited understanding of ESG issues and ESG integration	30%
Concerns about negative returns and underperformance	31%	Limited amount of ESG research	27%
No evidence of investment benefit	25%	No evidence of investment benefit	26%

Note: Percentages represent those who thought each item was a main barrier. Survey respondents could choose more than one answer.

However, some participants noted that they are looking to integrate ESG data into the investment process to create alpha, with their reasoning being that incorporating material ESG information into the investment process will give them a more complete picture of the investment landscape, which will lead to better investment decision making. According to our survey results, this is still a minority opinion in the Canadian market, as about 22% of those investing in equities and 18% of those investing in fixed income see "generating alpha" as a main driver of ESG integration in Canada. Similarly, some saw ESG integration as a way for their firms to differentiate themselves from their competitors if their competitors were not integrating ESG factors into the investment process.

One workshop participant noted that they are hearing from their sales teams that an ESG strategy and ESG expertise are increasingly expected in order to win and retain business.

ESG data and its unavailability and inconsistency in quality were major barriers to ESG integration according to those who participated in our workshop. This is especially the case at smaller companies and emerging market companies that do not have the resources of larger international firms that have adopted some level of sustainability reporting. Our survey results support these findings. For equity investments, 54% of those surveyed in Canada cited a lack of comparable and historical ESG data as a main barrier of ESG integration (32% for fixed income) (see Table 6).

Even at these larger firms there was frustration among some workshop participants at the inconsistency with which data are provided. For example, data on one metric may be provided one year, but not the next. Data by competitors in the same industry are not always comparable or presented in a way that makes comparisons easy. The quality of data is also a concern. There was a consensus view that data quality, consistency, and transparency need to improve. There was sympathy with the understanding that we are in the early stages of ESG integration and that data transparency and consistency will improve, but there was a desire for standards or an agreement on what data are material.

Even at these larger firms there was frustration among some workshop participants at the inconsistency with which data are provided. For example, data on one metric may be provided one year, but not the next. Data by competitors in the same industry are not always comparable or presented in a way that makes comparisons easy.

Although data quality was seen as a significant barrier to integration, a limited understanding of ESG issues and ESG integration was seen as the main barrier in the equities space supported by 54% of respondents (30% for fixed income). This result supports the idea of several workshop participants who believed that more training and resources needed to be devoted to ESG analysis.

Some workshop participants voiced the concern that ESG investing may limit the investment universe through negative screening and therefore lead to underperformance. This misperception of ESG integration as only negative screening is a view we see more in the retail community and it tends to be a concern of fewer in the institutional space, but it was still voiced as a concern by some participants.

NEED FOR BEST PRACTICES

A number of Canadian workshop participants voiced a desire to see a best practice emerge as to how exactly a firm can best integrate ESG into the investment process. Many see large banks such as Morgan Stanley, Barclays, and UBS creating their own proprietary methods for ESG investing, but these are largely inaccessible to smaller firms or the investing public. Workshop participants were hungry for a set of best practices or a gold standard that they could follow to better integrate ESG analysis into the investment process, but at the same time were wary of a simple checklist that would not allow for a broader understanding of the ESG issues impacting companies.

Workshop participants were hungry for a set of best practices or a gold standard that they could follow to better integrate ESG analysis into the investment process.

TRENDS IN ESG COMPANY DATA

We partnered with Bloomberg to analyze the transparency of ESG disclosure in each market. The information in these figures comes from the analysis of Bloomberg's ESG disclosure scores, which are based on publicly available data; they are a score of how companies report on ESG, not necessarily how they perform. The score is based on company disclosures on different environmental, social, or governance disclosure points. Each type of disclosure is scored from 0 to 100, and then aggregated to one environmental, social, and governance score. These are again aggregated to a combined ESG score. (For more information, see "Appendix: Methodology.")

The Canadian market is very concentrated around specific sectors (see **Figure 7**). Apart from financials, the major sectors are energy and materials, especially on the listed equity side, but to a certain degree also in fixed income. With only one Canadian healthcare company in fixed income, this sector does not feature much in the section.

Figure 8 shows that for the most part, ESG disclosure scores increased from 2011 to 2016. The largest increases happened in sectors with relatively low median disclosure scores in 2011—the consumer discretionary (2011: 17.43, 2016: 25.62), industrials (2011: 17.36, 2016: 23.97), and utilities (2011: 13.64, 2016: 23.14) sectors. The exception is technology (2011: 21.07, 2016: 20.45), which is the only sector that has seen a decrease.

FIGURE 7: SECTORAL BREAKDOWN OF DATASET: CANADIAN COMPANIES WITH LISTED EQUITY AND PUBLIC FIXED INCOME

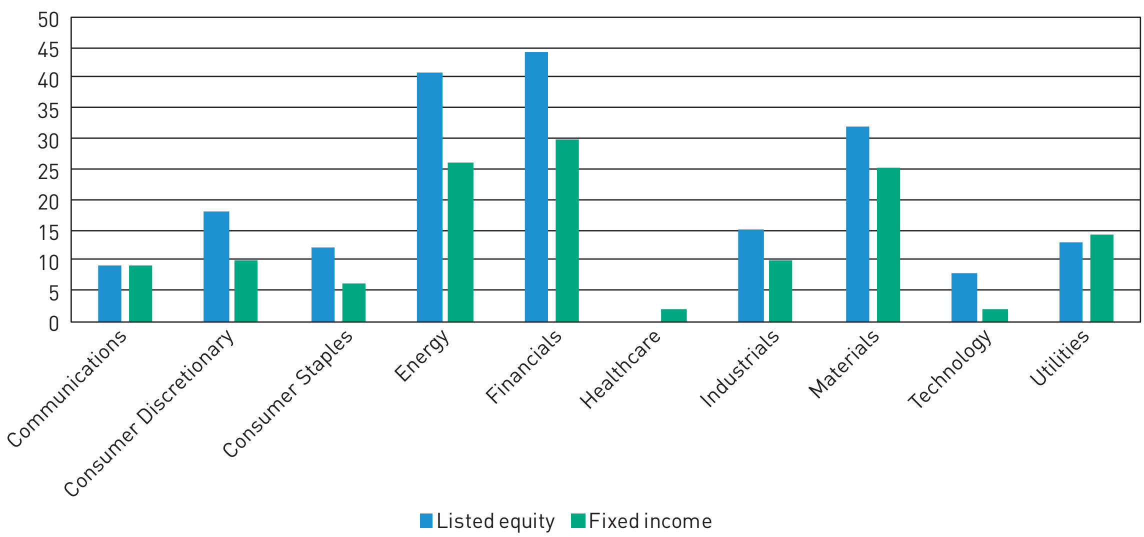


FIGURE 8: MEDIAN COMBINED ESG SCORES FOR CANADIAN COMPANIES WITH LISTED EQUITY PER SECTOR

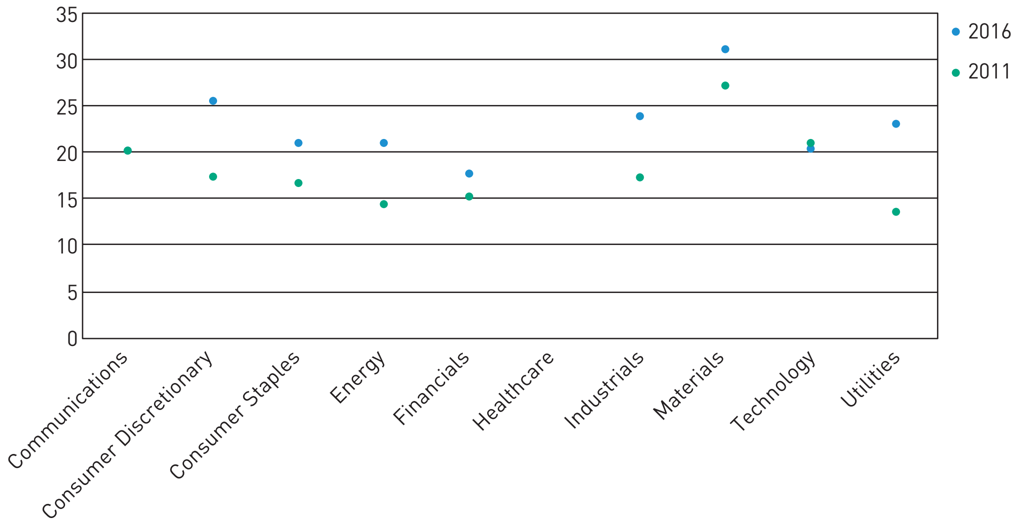
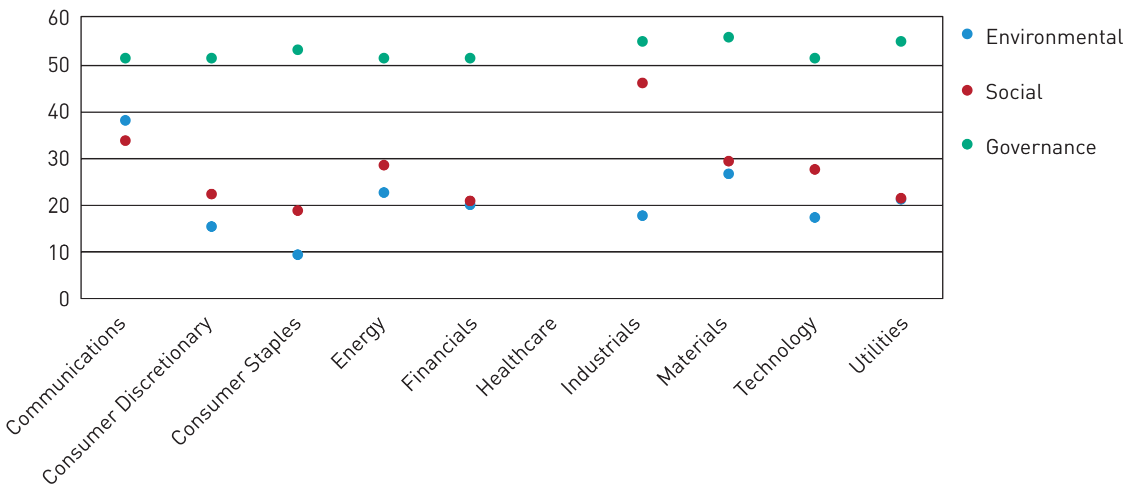


Figure 9 shows the breakdown of environmental, social, and governance scores by sector. Governance disclosures are in general much higher than environmental and social scores, with social being second in all sectors except communications. The only sectors where the governance score is less than 20 points higher are the communications

FIGURE 9: MEDIAN ENVIRONMENTAL, SOCIAL, AND GOVERNANCE SCORES FOR CANADIAN COMPANIES WITH LISTED EQUITY PER SECTOR[6]

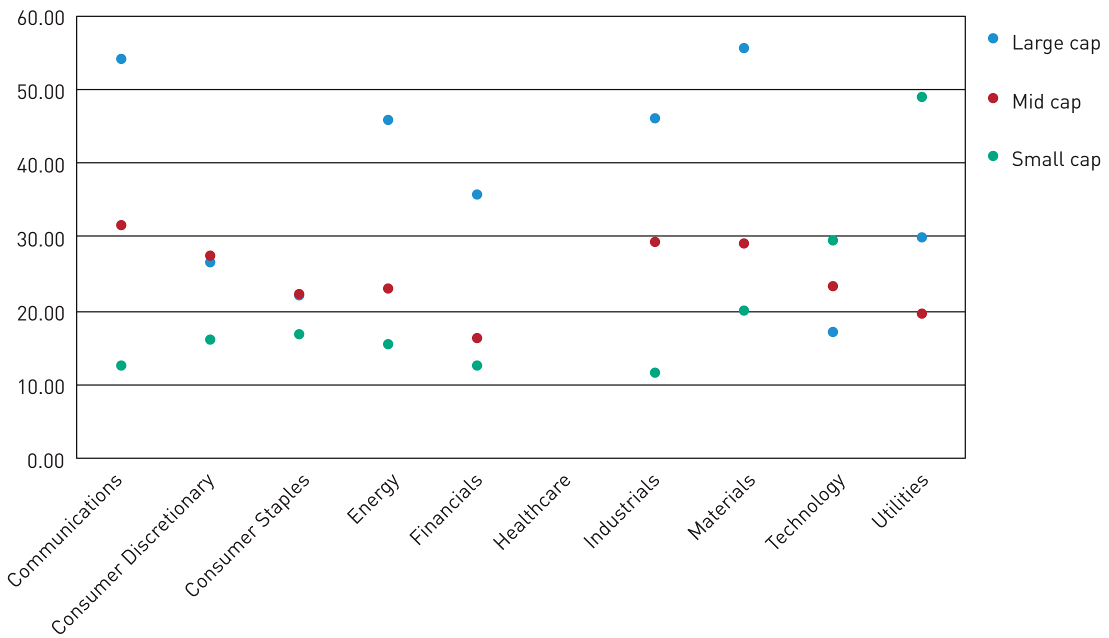


[6] Not all companies have an environmental or social score, which means that the sample size differs between scores

and industrial sectors (S: 34.21, G: 51.79 and S: 46.49, G: 55.36, respectively), and communications is the only sector where the environmental score is less than 20 points under the governance score (E: 38.52, G: 51.79). Several industries have the same governance score, indicating standardization across sectors. Overall, a significantly higher governance score skews the combined ESG score, which then becomes less representative of environmental and social disclosure scores.

When categorizing the dataset by size as shown in **Figure 10**, little consistency is seen. Only 5 of the 10 sectors have the highest scores for large cap companies, whereas utilities (small cap: 49.17, mid cap: 19.83, large cap: 30.17) and technology (small cap: 29.75, mid cap: 23.55, large cap: 17.36) saw small cap companies beat the large cap companies with higher median scores. The large gap between the highest scoring size group and the lower scorers shows which companies drive up the score (e.g., in utilities, small cap companies drive up the overall score).

FIGURE 10: MEDIAN COMBINED ESG SCORES FOR SMALL CAP, MID CAP, AND LARGE CAP CANADIAN COMPANIES PER SECTOR



INVESTMENT PRACTICES OF LOCAL PRACTITIONERS: EQUITIES AND FIXED INCOME

ESG integration practices in Canada are more prevalent among equity practitioners compared to fixed-income practitioners. More equity practitioners are also quantifying ESG factors into their security valuations. **Figure 11** highlights the practices from the ESG Integration Framework that are applied in Canada.

When analyzing the ESG integration techniques of ESG practitioners, we found that equity practitioners favor integrating ESG issues into fundamental analysis and rarely into portfolio construction. Fixed-income practitioners equally like to integrate ESG factors into credit analysis and portfolio construction techniques.

Investors in Canadian companies are more likely to concern themselves with environmental and social issues than are their neighbors to the south, due to the predominance of extractive industries (oil, gas, and mining) that populate the Canadian market. The number of environmental and social factor–related shareholder proposals at Canadian companies is steadily on the rise, albeit from a relatively low base. According to a report by the Shareholder Association for Research & Education (SHARE), 33 such shareholder proposals were filed in 2017 in Canada, up from 27 in 2016 and 20 in 2015.[1]

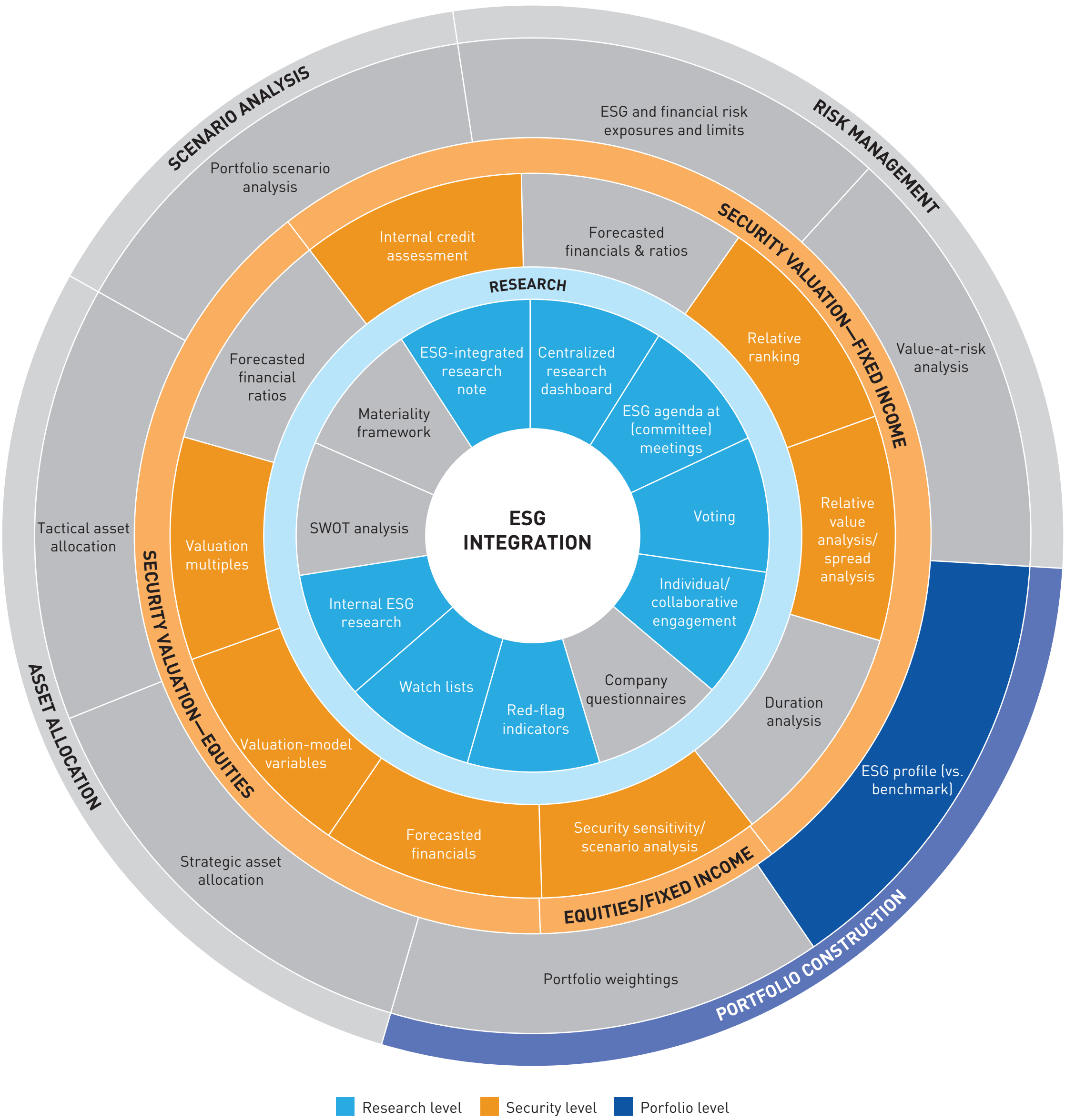
As is the case with their counterparts in the United States, Canadian investors are beginning to incorporate ESG into the investment process first as a risk mitigation exercise and secondarily as a potential driver of value. Equity practitioners are adjusting their valuation models/tools for material ESG issues more frequently than fixed-income practitioners do (**Table 7**).

EQUITIES

Many equity practitioners who engage in ESG integration practices are using qualitative techniques to integrate ESG issues into their buy/sell/hold decisions or overweight/underweight/neutral decisions. A number of these practitioners will collate ESG data and research from multiple sources to create aggregate ESG scores as well as individual scores for environmental, social, and governance factors. The portfolio managers and analysts will review these scores while assessing the company's financials and their valuation models before making an investment decision.

[1] https://share.ca/documents/annual_reports/annual_activity_report_2017.pdf

FIGURE 11: THE ESG INTEGRATION FRAMEWORK: APPLICATION BY CANADA-BASED INVESTORS



Access to proprietary ESG scores and third-party ESG scores can be through:

- a centralized database;
- research notes;
- ESG scorecards; and
- watch lists.

TABLE 7: HOW FREQUENTLY DO YOU [THE SURVEY RESPONDENT] FACTOR IN MATERIAL ESG ISSUES WHEN ADJUSTING YOUR VALUATION MODELS/TOOLS?

	EQUITY INVESTMENTS	FIXED-INCOME INVESTMENTS
Governance	42%	22%
Environmental	34%	16%
Social	26%	16%

Note: Percentages represent respondents who answered "often" or "always."

Some practitioners also access and review these ESG scores through regular sector meetings or daily risk reports that highlight companies with poor ESG scores. ESG scores can impact investment decisions through regular monitoring of ESG risks at the portfolio level.

As is the case in most markets, the number of practitioners who adjust their security valuations is much lower than the number of practitioners who are integrating ESG factors directly into their buy/sell/hold decisions.

ESG factors are implicitly and explicitly impacting security valuations. Some practitioners are assessing the implications of ESG factors with conventional risk factors in their overall growth rate assumptions of revenue forecasts and/or operating cost forecasts. Others are making explicit adjustments to forecasted financials, including:

- reducing revenue growth rates of chemicals companies for products that are likely to be banned on health and safety grounds;
- decreasing operating costs of utilities and materials companies that deploy new clean technologies to reduce emissions;
- adjusting operating costs of oil and gas companies based on the type of oil being produced; and
- adjusting future operating costs for changes in labor costs and tax rates.

Practitioners who are using ESG scores to adjust security valuations may feed ESG scores into the calculation of the discount rates that compute the target price of a company. Under such a method, companies with above-average ESG scores relative to their sector peers will have their discount rates adjusted down, whereas companies with below-average ESG scores will have their discount rates adjusted up. Discount rates of companies that receive sector-average ESG scores will remain the same.

In addition to using ESG scores to adjust discount rates for ESG risk, practitioners are using ESG scores to adjust price multiples. This technique involves calculating a company's target price by multiplying a figure on a company's financial statement (or another measure of a company's value) by an ESG-integrated price multiple. When practitioners calculate the ESG-integrated price multiple, companies with below-average ESG scores will have their base-case price multiple adjusted down, and companies with above-average ESG scores will have their base-case price multiple adjusted up.

Scenario analysis is also being used to inform investment decisions. Practitioners will build a base-case valuation for a company and then apply different scenarios based on ESG trends. These scenarios are also being weighted for the probability of impact. For example, practitioners are applying scenarios that provide insights into the impact on companies' earnings per share caused by different carbon tax prices and regulation.

FIXED INCOME

Like equity practitioners, fixed-income practitioners are predominantly performing ESG-integrated qualitative analysis of bond issuers. Also, in line with the trends identified with equity practitioners, fewer fixed-income practitioners are quantifying ESG factors compared to those who are applying qualitative ESG integration techniques. Where fixed-income practitioners differ from equity practitioners is that they also integrate ESG factors into their portfolio construction techniques.

When firms have a mixture of equity and fixed-income investments and funds, they tend to apply the same practices for both asset classes. For example, fixed-income practitioners will create and use proprietary ESG scores and commentary and add them to credit research reports/monitoring lists/daily risk reports. Corporate bond investors can also borrow the same ESG research and scores of an issuer that is in the investment universe as their equity colleagues. Although practices of equity practitioners are often copied by corporate bond investors, there are additional considerations for fixed-income investments. For example, practitioners will analyze whether the same ESG factors are material for all bond issuances by a company (i.e., ESG factors that are material for a bond maturing in three years' time may be different from the ESG factors that are material for a bond maturing in twenty years' time). For sovereign debt investors, a country analysis and framework typically needs to be created and applied for their processes.

Other methods used by fixed-income practitioners are to create "indicators" that are used to flag a high-risk issuer. These ESG scores and indicators provide portfolio managers and analysts with instant access to information on ESG risks and opportunities when analyzing companies, countries, and portfolios. They are also used in:

- monitoring meetings;
- as a standard agenda item of credit meetings; and
- by risk teams and credit committees to monitor the risk and return of portfolios and the implementation of ESG investing within teams.

Those who are integrating ESG factors into credit analysis use a variety of approaches. The most popular method is to feed the ESG analysis and/or scores into the internal credit assessments or adjusted credit ratings. This can have an instant impact on the inclusion or exclusion of a bond in a portfolio, especially if the mandate states that bonds cannot be incorporated if their ratings are below a certain level.

Some practitioners quantify ESG factors into their spread analysis. Along with examining other determinants of a corporate bond's credit spread, they would look to see if the credit spread of bonds has priced in the ESG performance of a company. If the credit spread of a corporate bond has not priced in the ESG performance of a company, this mispricing may offer an attractive investment or a poor investment. For example, a practitioner may believe that a company that performs well from an ESG perspective may see its bond spreads tighten over time if ESG risk is not priced in. On the other hand, a practitioner may believe that a company that performs badly from an ESG perspective may see its bond spreads widen over time if ESG risk is not priced in.

Corporate bond and sovereign debt practitioners are also integrating ESG factors into their relative ranking tools. As an additional component to an assessment, ESG information and analysis can have an impact on the relative ranking of an issuer. A good ESG performer could improve on its relative ranking to reflect a stronger valuation relative to some of its peers.

Our analysis also shows that while equity practitioners favor fundamental analysis, corporate and sovereign bond practitioners like to incorporate ESG factors into their portfolio construction tools and processes. These practitioners will tend to make qualitative assessments of ESG risks at the portfolio level as opposed to adjusting holding/sector/geographic weightings.

INTERVIEW WITH A CANADIAN MAJOR MARKET PLAYER: ONTARIO TEACHERS' PENSION PLAN

Interview with Barbara Zvan, chief risk and strategy officer, Ontario Teachers' Pension Plan (OTPP), on the subject of how asset owners see ESG integration. OTPP is one of Canada's largest asset owners and its largest single-profession pension plan.

How do you define ESG investing?

ESG investing is the integration of environmental, social, and governance issues into the investment process.

How does your firm integrate ESG into the investment process?

We identify ESG risks that could impact the investment and work to understand how the company is managing these risks. The integration process may lead to engagement if more information/clarity is needed and/or to encourage the adoption of best practices.

What do you see as the main barriers to and drivers of ESG integration?

Barriers to ESG integration include:

- lack of confidence in ESG data due to availability, consistency, and access of information; and
- sometimes the ESG risk identified is not material.

Drivers of ESG integration include:

- increased appreciation of the materiality of ESG risks;
- increased stakeholder interest in ESG risks;
- proliferation of stewardship codes and the resulting stewardship obligations;
- peer pressure; and
- organizations providing frameworks for ESG integration and opportunities for shareholders to discuss ESG integration issues.

Are other asset owners—pension funds, insurance companies, sovereign funds, corporate funds—committed to ESG investing?

Yes.

How do you assess your managers on ESG investing?

We conduct ongoing due diligence of our managers, during which ESG integration is a topic of discussion.

Do you believe that ESG issues are impacting share prices more than corporate bond prices? Are ESG issues impacting corporate bond prices more than sovereign debt prices?

This depends on the issue. However, generally we would say ESG issues are more impactful on share prices because the time period associated with debt maturity is usually three to five years while equity has an infinite time horizon. ESG issues impact over the longer term.

We have no information that will allow us to comment as to the extent to which ESG issues are impacting corporate bond prices vis-à-vis sovereign debt prices.

What are the differences between integrating ESG issues into equity analysis and credit analysis?

Two differences between integrating ESG issues into equity analysis and credit analysis would be the time horizon for risk (as mentioned above) and the nature of the risk.

Can you give an example of how ESG issues have impacted your investment decisions?

ESG considerations are part of every investment decision. We do not make an investment decision on ESG alone.

What's next for ESG investing? Where do you see ESG investing in five years?

There is a growing onus on investors to play a stronger stewardship role in their investments. This will result in a move from purely managing ESG to how they impact externalities (e.g., exacerbating climate change impact on society and the environment). In addition, there will be more tracking of investment practices against the UN Sustainable Development Goals.

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SECTION 4
CANADA CASE STUDIES

AGF INVESTMENTS INC.

EVALUATING ESG IMPACT ON REVENUE AND MARGINS

Hyewon Kong, CFA

Environmental, social, and governance (ESG) factors are incorporated on a top-down basis by looking at macro trends to identify investment risks or opportunities. Our process seeks to identify companies aligned with ESG macro themes: energy and power technologies, waste management and pollution control, water and wastewater solutions, and health and well-being. As the world transitions to a more sustainable economy, investing in these themes positions the portfolio to benefit from these long-term trends, which provide long-term secular growth.

BOTTOM-UP INTEGRATION

Our bottom-up fundamental analysis incorporates ESG factors in our security selection process that are material to long-term financial performance. ESG analysis is not conducted by segregated ESG analysts but performed by our investment team members (including portfolio managers and analysts), who examine ESG considerations for the companies they cover. We adjust the most relevant financial forecasts (revenue, profits/returns on capital, capital and operational expenditures, and cash flows) based on material ESG factors. We also consider the potential ESG impact on the overall security valuation by adjusting the target multiples (discount/premium, discount rate).

PORTFOLIO COMPANY: COMPANY A

Company A is one of the world's leading suppliers of specialty chemicals based on renewable raw materials that are used in personal care, life sciences, performance technologies, and industrial chemicals. Company A enjoys an industry-leading position in sustainability, having differentiated itself from its petrochemical-based specialty chemical peers. Two-thirds of Company A's raw materials come from natural sources, and 94% of the company's sustainable products—those expected to be top-50 sellers over the next five years—offer a known sustainability benefit in use.

Company A is well positioned to participate in this transition, as its growth drivers are directly influenced by global megatrends, including:

- aging populations that will require more health and well-being products;
- regulations that influence a move toward biodegradable/bio-derived plastics;

- evolving consumer sensitivity to "green" issues, including sustainability—having "100% renewable" energy and product sources is likely to become an increasingly important differentiator; and
- disposable income growth in emerging economies that will increase the demand for greater crop protection and yield enhancements (crop care was 15% of Company A's 2017 earnings before interest and taxes [EBIT]).

INNOVATION-DRIVEN BUSINESS MODEL

Company A develops innovative ingredients with intrinsic and extrinsic sustainability benefits. The company monetizes on its innovation-driven and protected product portfolio (see **Figure 12**).

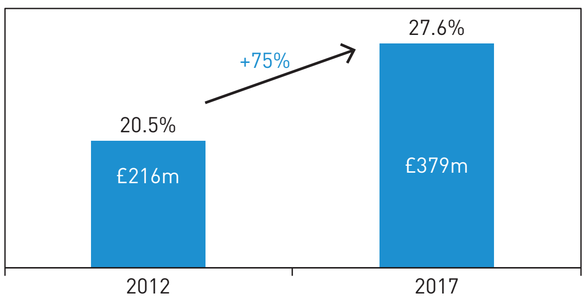
Through continuous innovation and products heavily protected via a network of patents, Company A has established itself in a leading position in terms of both relative margins and returns. Technology and innovation provide a strong moat in the form of high barriers to entry and close customer relationships, enabling strong pricing power and superior EBIT margins for Company A compared with its chemical-sector peers (see **Figure 13**).

In line with its history of innovation, Company A opened an in-house bio-based ethylene oxide (EO) plant in 2017. Surfactants are traditionally produced from the fossil fuel–based petrochemical ethylene. The feedstock for the new plant is bioethanol, and Company A will produce first-of-its-kind bio-based surfactants, replacing 21 kilotons of synthetic EO capacity.

FINANCIAL IMPACTS

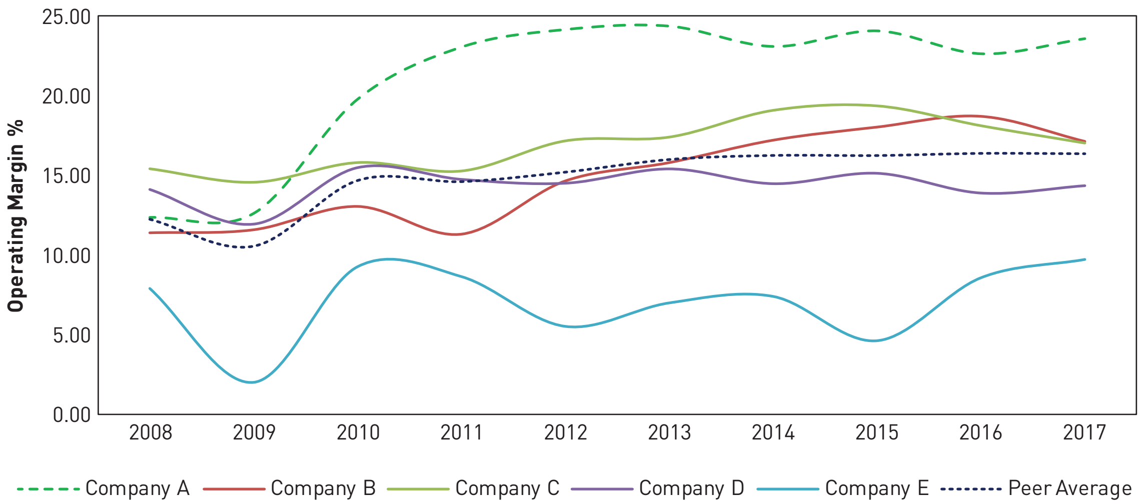
- Revenues: The plant will allow Company A to capture more of the value chain in surfactants (replacing bought-in petrochemical-derived EO) and enable Company A to charge a premium as consumers are willing to pay more for sustainable products. This will improve revenue growth through increased share and pricing

FIGURE 12: SALES GROWTH AS A PERCENT OF GROUP SALES IN NEW AND PROTECTED PRODUCTS



Source: Company A Presentation, April 2018.

FIGURE 13: COMPANY A'S OPERATING MARGIN VERSUS CHEMICAL-SECTOR PEERS



Source: Bloomberg, as of 31 December 2017.

growth by converting existing product sales to 100% renewable, 100% bio-based new product line, which will be tested and certified to the BioPreferred® Program by the US Department of Agriculture.

- Operational costs: Company A will be able to reduce its operating costs through improved management and a decrease in the need to manage the logistics of hazardous materials such as petrochemical ethylene.

Our valuation assumes that Company A's latest innovation in biosurfactants can positively contribute to both revenue and profit growth. Our base-case scenario assumes no volume benefit but a 2% price increase (a "premium" for sustainable surfactants by upgrading the existing product sales to the new product line certified to the USDA BioPreferred® Program). This can contribute 30 basis points (bps) to the group's top-line for the next five years and a 100-bps benefit to EBIT from cost savings (including transport logistics, because the need for costly shipping of EO materials is eliminated due to the shift to in-house bio-based EO) (**Figure 14**).

Company A trades at a discount to the average multiple for consumer chemical stocks given its recent muted organic growth. Following its innovation and new products developments, we believe Company A can return to a long-term 4%-plus organic growth rate (with the contribution from bio-based EO) and pricing growth, which will help Company A's target multiples to be re-rated. Our discounted cash flow model implies an upside of 14% with a value of £56.34 per share, based on a weighted average cost of capital of 6.2%.

FIGURE 14: EBIT UPLIFT FROM THE INTRODUCTION OF SUSTAINABLY SOURCED ETHYLENE OXIDE

US PERSONAL CARE SALES	**15%**
Volumes	+0%
Price	+200 bps
INCREMENTAL ORGANIC GROWTH	**+200 bps**
CONTRIBUTION TO GROUP ORGANIC GROWTH	**+30 bps**
Cost of goods sold savings	£4 m
EBIT	**+100 bps**

Source: AGF Investments Inc., as of 30 June 2018.

MANULIFE ASSET MANAGEMENT

HOW THE "G" FACTOR AFFECTS THE EQUITY VALUATION MODEL: A NORTH AMERICAN SOFTWARE COMPANY CASE STUDY

Patrick Blais, CFA; Christopher Mann, CFA; and the Canadian Core Team

Manulife Asset Management's Canadian Core investment team's approach to environmental, social, and governance (ESG) analysis, incorporated within individual stock fundamental analysis, hones in on quantifiable and material ESG factors that may impact future free cash flow generation and cash flow return on investment. Good corporate governance and incentive compensation are viewed as critical to help drive effective capital allocation decisions. The investment team's approach to effective stewardship of capital includes an engagement practice that fosters a constructive dialogue with company management to address relevant ESG issues.

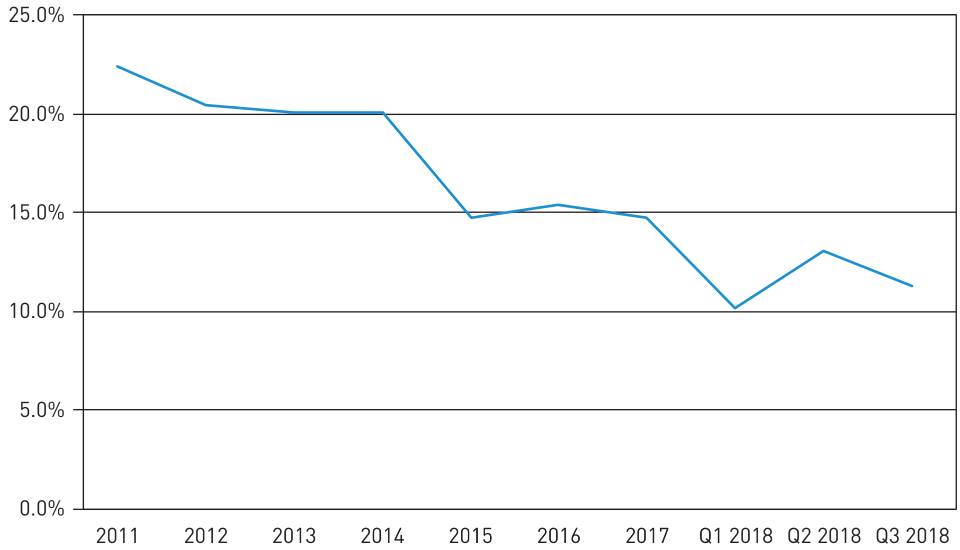
This practice is in line with Manulife Asset Management's global ESG policy, which states our belief that successful companies in the long term will have a strong and effective board, good internal controls, effective remuneration structures in line with long-term performance, high-quality and meaningful reporting to shareholders and other stakeholders, and good management of the environmental and social aspects of their business.

BACKGROUND TO THE INVESTMENT CASE

An acquisitive technology holding in the investment team's portfolio experienced material share price underperformance relative to its peers, with the shares trading at a significant discount to the peer group. The investment team initiated a formal review process, which incorporated an ESG analysis.

The review determined that the share price underperformance was linked to declining return on investment capital (ROIC). Although the company had historically generated a relatively stable ROIC of 20%, its returns have declined to the low teens (see **Figure 15**), levels that are currently at least 2% lower than that of its peers. Based on the investment team's analysis, it was determined that the lower ROIC was the result of the relatively high price paid for recent acquisitions, a departure from the more disciplined approach previously taken by the company. This led the investment team to more closely consider certain governance issues, specifically incentive compensation structures and the impact on valuation multiples paid for acquisitions.

FIGURE 15: COMPANY'S RETURN ON INVESTED CAPITAL (BASED ON HISTORICAL CALCULATIONS PERFORMED BY MANULIFE'S INVESTMENT TEAM)



Note: "Any one-time deferred tax gains" are removed to prevent distortion of the recurring financial metrics of the company.
Source: Manulife, May 2018.

POTENTIAL CORPORATE GOVERNANCE ISSUES RELATED TO INCENTIVE COMPENSATION

A review of management's compensation structure concluded that the company's incentive programs were potentially failing to incentivize the necessary discipline surrounding acquisitions.

- **Short-term incentive compensation** was based on revenue targets and adjusted operating income targets. In the investment team's opinion, these absolute-dollar metrics were considered poor drivers of shareholder value creation. In addition, the adjusted metrics ignored the majority of amortization costs associated with acquisitions. The investment team was concerned that this short-term incentive plan could induce management to pursue acquisitions while overlooking their price and valuation.
- **Long-term incentive compensation** was linked to absolute and relative stock performance over a three-year period. This, and the fact that the long-term incentive was more than three times the size of the short-term incentives, could align management with shareholder value creation. However, the investment team was concerned that without a clear link to critical operational metrics and given the subjective nature of the overall amount initially granted, this long-term incentive could encourage management to take on excessive risk, as demonstrated by the increase in leverage to fund recent acquisitions.

The investment team took the view that the company should improve the link between management incentive compensation and clear drivers of shareholder value creation. In the investment team's experience, companies sometimes overemphasize absolute dollar and growth targets and underemphasize free cash flow generation and returns. Given the material impact of acquisitions on company returns, the investment team determined that it would be beneficial to have some portion of incentive compensation linked to ROIC (see Figure 15).

RESPONSE TO GOVERNANCE CONCERNS

The investment team engaged with company management in 2018 to encourage linking executive compensation to ROIC, which would in turn demonstrate to shareholders that company management had a long-term focus, and its actions and capital allocation decisions were in alignment with shareholder interests.

The company was responsive to the concerns raised—including the comments on tying compensation to ROIC—and noted that a review was underway to determine compensation items for fiscal year 2019. Part of this review also included whether to provide additional disclosure (such as an organic growth figure), which should help alleviate the fear that the underlying business may be deteriorating faster and contributing to the declining ROIC.

KEY TAKEAWAYS

We believe that a constructive, open dialogue with a company, demonstrating how strong governance measures around executive compensation are considered by investors, can help provide solutions for both the investee and the investor.

Although this case analysis is ongoing, we are encouraged by the open dialogue and hope that the company will take active measures to improve disclosure and executive compensation measures to demonstrate that it believes it can restore ROIC closer to the historical level of about 20%. The Manulife Asset Management investment team feels confident that if such a plan can be executed, it could be a major driver for improving capital allocation decisions and, in turn, shareholder results, versus other proposals (such as deploying more capital into even more acquisitions).

RBC GLOBAL ASSET MANAGEMENT

CASE STUDY: FUNDAMENTAL MATERIAL ESG SCENARIO ANALYSIS

Ben Yeoh

Rather than having separate environmental, social, and governance (ESG) analysts, our Global Equities team's portfolio managers perform and integrate ESG analysis to allow us to better fundamentally value and assess stocks, completely integrate ESG information into our investment process, and meaningfully engage with the companies in which we are invested. We also use multiple sources of ESG information as it represents a plethora of ESG-related opinions that require interpreting, and portfolio managers are best placed to filter this advice and ascertain how it relates to a company's business model and valuation. (In our experience, the ratings of two major ESG research providers only correlate just over half of the time and proxy voting agencies occasionally take opposing views on proxy votes.)

We start with a fundamental analysis to identify any material positive or negative ESG factors. We embed that assessment into an analysis of the competitive position and the sustainability of the business, which we then put into our valuation models. We invest only in companies that perform strongly in all four areas of our model: business model; market share opportunity; end-market growth; and management and ESG.

Our Global Equities team identified several ESG risks (contingent liabilities) and opportunities (contingent assets) for UnitedHealth (UNH), a leading healthcare insurer and healthcare cost management and IT provider managing 5% of US healthcare spending.

RISKS

As custodians of the personal and medical details of millions of people, UNH needs to keep these data secure: false savings here can have long-term consequences, including regulatory risks, political risks, and the potential impairment of the company's social contract with customers and wider society.

We challenged management on the risk of privacy data breaches, asking how that risk is being managed and what policies are in place to mitigate that risk. Management acknowledged that information about their data security was not available on their website, but several management members reassured us about the quality of the policies, training, and general operation management of data handling and security that are in place. Nevertheless, we still modeled a discounted cash flow (DCF) valuation scenario looking at the possible impact of privacy data breaches.

We learned that UNH had a historic stock option accounting problem (backdated without disclosure to lower the strike prices for its CEO at the time), which came to light in 2006. However, we noted that many other companies, such as Apple, had similar stock option accounting problems in the late 1990s to mid-2000s. We also discovered that in UNH's case it led to the start of a complete turnaround in the company's corporate governance policies and practices, and determined that the current compensation structure was fair and, importantly for us, included a return on capital/equity component.

Our conversations with UNH gave credence to the recent positive reports from two proxy voting agencies regarding the company's governance practices; there do not appear to be remaining accounting or management problems that had been indicated in earlier analysis.

OPPORTUNITIES

We viewed UNH's Optum data analytics business, which allows it to create cheaper, better healthcare options for businesses, governments, and patients, as a strong competitive advantage and an ESG contingent asset. For instance, it identified 150 diabetic patients not taking their medication properly, 123 of whom were in Texas, which enabled its client to implement location-specific measures utilizing preventive healthcare techniques. Using Optum's data analytics, the state of Maryland discovered clusters of patients with asthma in certain streets and buildings, and found that those buildings correlated with cockroach infestations, allowing it to successfully prosecute deficient landlords and ultimately raise living standards for tenants.

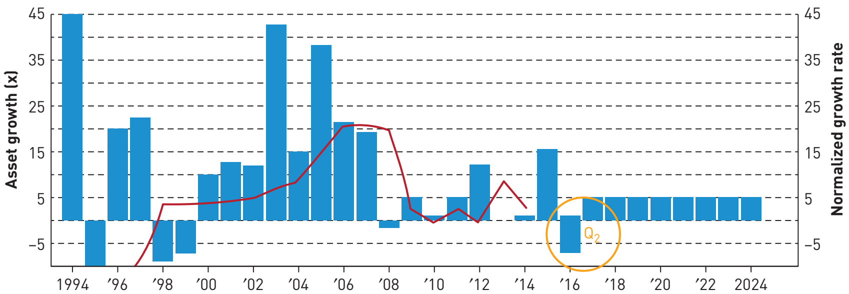
IMPACT ON ANALYSIS

We assessed the materiality of all of this information and assigned a rating for the four components of the company's strengths (business model; market share opportunity; end-market growth; and management and ESG). We then performed a DCF scenario analysis embedding the material ESG risks and opportunities (**Figure 16**). We prefer DCF and explicit model scenarios for sales, margins, and asset turns because we see them as a more accurate method of modeling than an adjustment to a discount rate or terminal value. We also perform sum-of-the-parts and standard financial ratio assessments.

The analysis was peer reviewed within our team, and the assumptions were stress-tested, challenged, and refined before the rating and valuation were confirmed. In our peer review, assumptions are flexed in real time to see how further valuation scenarios change. These include increasing EBIT margins and sales growth for the upside scenario, and for the downside scenario normalizing sales to a lower growth rate (3%) and looking at the sales impact over more than one year.

FIGURE 16: DCF SCENARIO ANALYSIS

Base-case DCF scenario (a cash flow return on investment framework)	44% target company **share price** upside
ESG asset scenario (upside scenario): value generated from contingent assets through the use of big data analytics. Assumptions: Sales increased by 1–2% in years 5–10, but with similar EBIT margins and asset turns to the base case. Cost of capital remains the same.	+12 percentage point
ESG liability scenario (downside scenario): assuming a data breach occurs that impacts the business (sales, margins, asset growth) for a year before recovery.	–17 percentage point



Assumptions: Approximate 7% impact to sales in the year of data breach, with a 3% impact to EBIT margins, recovering in future years back to 5% sales growth, but on EBIT margins 1-2% lower than the base-case forecast. Cost of capital remains the same.

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APPENDIX
METHODOLOGY

METHODOLOGY

In preparing these reports, we collected data from several sources, including:

- an ESG integration survey of 1,100 financial professionals, predominantly CFA Institute members. The survey ran from September 2017 to July 2018;
- workshops organized by CFA Institute, PRI, and 23 CFA® Societies that ran from October 2017 to April 2018;
- Bloomberg, which contributed two datasets—equity and fixed income—of its ESG disclosure scores for 17 markets; and
- PRI's 2017 reporting framework, which collates the ESG practices of practitioners around the world.

ESG INTEGRATION SURVEY

To better understand how ESG factors impact the capital markets (share prices, corporate bond spreads, and sovereign debt yields) and how frequently investors do and do not integrate ESG data in their investment analysis and process, the firm YouGov was commissioned to administer a global survey on ESG integration.[1] The survey asked questions to gauge investor attitudes toward ESG integration as well as to obtain a better understanding of how ESG integration is done in practice.

Research was carried out among stakeholders in 17 different countries.

The findings for respondents in the Americas region is based upon 329 completed surveys from respondents based in:

- Brazil (n=28);
- Canada (n=84); and
- the United States (n=217).

Figure A.1 provides the demographics of the survey respondents from the Americas.

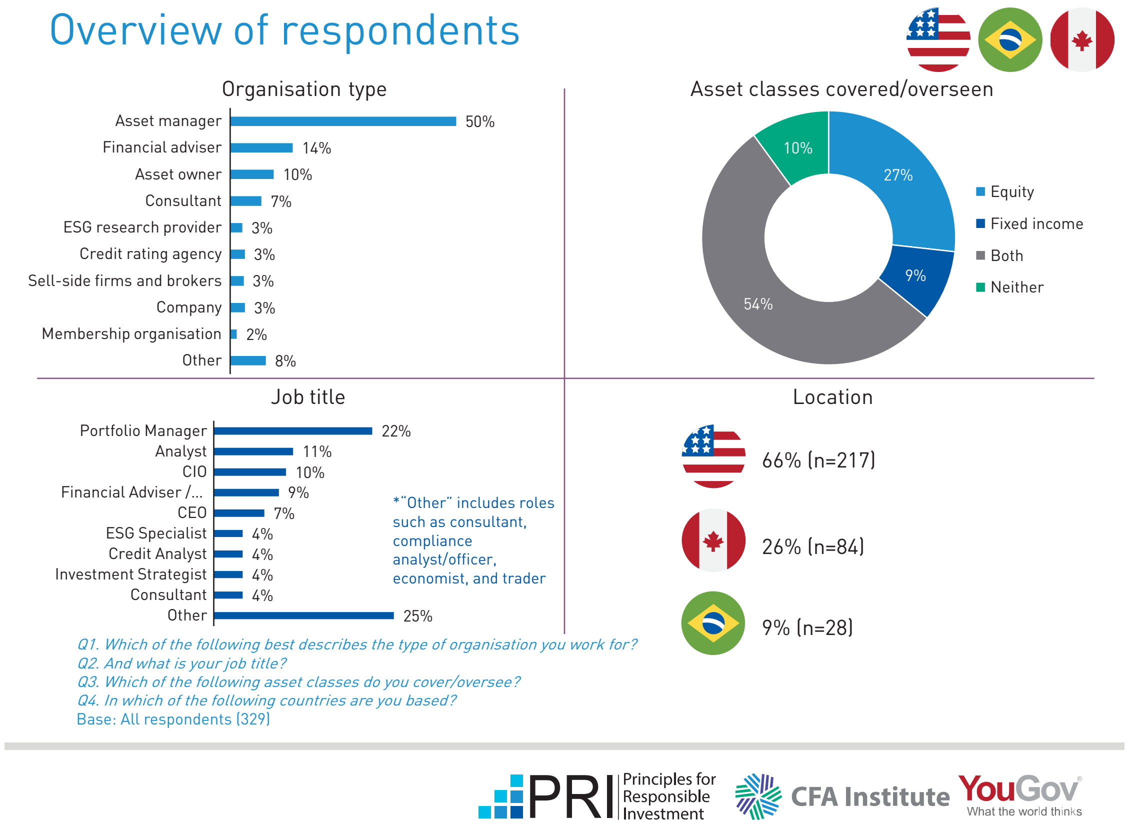
WORKSHOPS

We held 23 workshops to accompany the survey. Four workshops were held in the Americas region, including workshops in Boston, New York, Toronto, and São Paulo.

The purpose of these workshops was to provide color to the results of the survey. Workshop participants were split into groups of six to eight and discussed and contributed

[1] PRI commissioned YouGov to set up and host the online survey on YouGov's bespoke, secure survey platform. The survey was available to complete in a variety of languages. PRI and CFA Institute promoted the survey via invitations to the workshops discussed later in this report.

FIGURE A.1: DEMOGRAPHICS OF THE SURVEY RESPONDENTS FROM THE AMERICAS



their views on the preliminary results of the survey. From the workshops, we were able to collect insights from local practitioners who are predominantly non-ESG investment professionals.

BLOOMBERG'S ESG DISCLOSURE SCORES

CFA Institute and PRI asked Bloomberg if the firm would like to partake in this ESG integration project by contributing a dataset of its ESG disclosure scores. We considered that the analysis of ESG company data, found in the subsections "Trends in ESG Company Data: Equities and Fixed Income," would further help investors when they integrate ESG data into their investment analysis and process.

Bloomberg's ESG disclosure scores are based on publicly available data and are a score of how companies report on ESG, not necessarily how they perform. The score is based on company disclosures on over 100 environmental, social, or governance disclosure points. Each type of disclosure is scored from 0 to 100, and then aggregated to one environmental, social, and governance score. These are again aggregated to a combined ESG score. Some factors are

FIGURE A.2: ESG WORKSHOP LOCATIONS

ESG WORKSHOPS ACROSS THE WORLD		
AMER	**APAC**	**EMEA**
Boston	Beijing	Amsterdam
New York	Hangzhou	Cape Town
Toronto	Hong Kong	Dubai
	Melbourne	Frankfurt
	Mumbai	Johannesburg
	Shanghai	London
	Shenzhen	Moscow
	Singapore	Paris
	Sydney	Zurich
	Tokyo	

Abbreviations: AMER, Americas; APAC, Asia Pacific; EMEA, Europe, Middle East, and Africa.

given a higher weight depending on their importance, and the scores are also tailored to each industry. Bloomberg accounts for industry-specific disclosures by normalizing the final score based only on a selected set of fields applicable to the industry type; for example, "Total Power Generated" is counted into the disclosure score of utility companies only.

The dataset has combined ESG scores for 2011 and 2016 and environmental, social, and governance scores for the 10 different Bloomberg Industry Classifications (BICS): Communications, Consumer Discretionary, Consumer Staples, Energy, Financials, Healthcare, Industrials, Materials, Technology, and Utilities. It also contains environmental, social, and governance scores per sector for 2016.

The dataset includes companies with a market capitalization of more than $1bn. It was broken down further into small (market capitalization between $1bn and $2bn), mid (market capitalization between $2bn and $10bn), and large cap (market capitalization more than $10bn).

The scores shown in the regional reports are median scores to avoid skewing of the data with extreme values. Due to the scores being medians, they cannot be aggregated across sectors. The representativeness of the data varies among countries, as some countries have more listed companies.

THE PRI REPORTING FRAMEWORK

We analyzed data from the PRI reporting framework, alongside the survey and the feedback of the workshops, when writing the subsections entitled, "Investment Practices of Local Practitioners: Equities and Fixed Income." PRI signatories submit reports that detail their ESG approach/commitments and ESG practices on an annual basis. The analysis for this report is based on the PRI signatories' ESG practices reported during 2017.

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