Invesco 2018 Investment Stewardship and Proxy Voting Annual Report
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For the second consecutive year, Invesco earned A+ results in PRI’s assessment for our overall approach to responsible investment."

Dear Investor,

For more than 30 years, Invesco has been associated with responsible investing. In this latest report, we share with you the latest practices and achievements across our global business.

From the strategies we offer, to our company culture and purpose, Invesco has developed a distinctive approach to investing and corporate stewardship. It is rooted in the belief that as an industry-leading asset manager, we are a trusted partner for our clients and relied upon to deliver sustainable performance over the long-term, in a way that helps people get more out of life.

To deliver this, we incorporate sound environmental, social and governance practices into activities across our firm to ensure that we are doing what's right for our clients, as well as our shareholders, employees and the communities we serve.

Over the course of 2018, Invesco has strengthened its industry position in responsible investment stewardship in a number of impactful ways, including industry advocacy, leadership, innovation, and most importantly, authenticity. As a result of our dedication to responsible investment, Invesco was awarded “ESG Innovation Asset Manager of the Year” by CIO/Strategic Insight. In addition, the United Nations Principles of Responsible Investment (PRI) gave Invesco an A+ rating in “Strategy and Governance” for the second consecutive year. We’ve been a proud signatory of the PRI for six years, and have earned high ratings in each of the six Principles for incorporating ESG into our investment practices.

Our Global Corporate Responsibility Committee (CRC), chaired by myself and comprising members of the executive leadership team, ensures comprehensive oversight of our stewardship activities and a focus on innovation to drive sustainability. Working with global workstreams across Invesco, the CRC provides direction to our investment and corporate stewardship leaders on core ESG topics, participation in industry advocacy and policy efforts, and support for charitable and community organizations to enhance the impact of our sustainability efforts globally.

This report highlights our commitment to responsible investing and outlines our ESG practices. We invite you to learn more about Invesco's dedication to meeting client needs through an integrated responsible investment approach.

Sincerely,

Martin L. Flanagan
President and CEO, Invesco
Responsible investment overview

Invesco believes that the ESG practices of company management may impact the long-term performance of a company's stock. As active, long-term investors, our aim is to encourage the companies in which we invest to adopt best-in-class ESG practices.

Invesco has demonstrated leadership and commitment to responsible investing with a variety of capabilities made available across the investment teams.

Invesco is a signatory or member of:
- PRI (Principals for Responsible Investment)
- CDP (Carbon Disclosure Project)
- UK Stewardship Code (Tier 1)
- Japan Stewardship Code
- UKSIF (UK Sustainable Investment & Finance Association)
- Responsible Investment Association, Canada
- Asian Corporate Governance Association, Asia
- Global Real Estate Sustainability Benchmark
- The Quoted Companies Alliance
- Global ISO 14001, North America
- The Carbon Trust Standard (UK)
- UN Clean Seas Campaign

Recognition
- A+ Strategy & Governance: 2017, 2018²
- 45% increase in aggregate PRI assessment score from 2015
- Winner of the CIO Industry Innovation Award for ESG in Institutional Asset Management for 2018³
- Proxy platform - US patented
- Outperformer - ESG rating⁴
- FTSE4 Good Index Series constituent⁵
- ESG-Friendly Asset Manager⁶
- Top 5 Most ESG-Friendly Fund Shop⁶

Distribution of Invesco's ESG labeled funds by region (%)¹
- EMEA 63
- Americas 29
- Asia Pacific 8

¹ Total: US$18bn as of 31 December 2018.
² 2017 & 2018 Assessment Reports for Invesco Ltd., PRI. The investment categories are evaluated using 6 performance bands (A+, A, B, C, D, and E), where A+ distinguishes the top scoring signatories, representing a score of 95% or above and A distinguishes a score of 75% or above.
³ Source: ai-CIO.com, as of 13 December 2018.
⁴ Sustainalytics as of 30 September 2018.
⁵ Index helping investors identify organizations with good track records of corporate social responsibility.
⁶ Source: Ignites as of 28 November 2018.
Distribution of Invesco’s ESG labeled funds by asset class (%)

- Equity: 50
- Fixed Income: 28
- Alternatives: 18
- Balanced: 4

Responsible investment – Invesco in numbers

99.96% of all shareholder meetings voted

12 Industry collaborations

9 Advocacy associations
Differentiated investor-driven approach

Invesco has an authentic approach to responsible investment (RI) that is grassroots, investor-led and investor-driven. Environmental, social and governance (ESG) considerations are rooted in our investment strategies, products, proxy voting, active ownership, engagement and other oversight practices, to ensure the firm is meeting the highest levels of fiduciary and corporate responsibility.

Invesco is committed to investing client assets in a responsible manner with a high degree of integrity while seeking to maximize returns for our clients. Our global ESG principles are implemented locally in a team-by-team approach to integrating ESG into the investment process, conducting ESG risk assessments, analysis, research and decision making. This practice allows Invesco to engage with clients more effectively and deliver a high-quality investment experience - reflected in our A+ rating for Strategy & Governance from PRI for the second year in a row together with recognition as an ESG leader.¹

Within this report, you will learn more about our ESG leading strategies and view our global voting results. Invesco’s best-in-class operating model centers around the six US Sustainable Investment Forum (US SIF) guidelines:
- board and senior level oversight
- sources of ESG data
- research and training
- an ESG incorporation strategy
- measuring and managing impact
- participating in building the field

“Truly active managers view their roles as business owners, not just as shareholders. The very spirit of responsible investment is the opportunity to engage, drive change and deliver strong investment returns for clients in a sustainable manner.”

Bonnie Saynay
Global Head of Responsible Investment

¹ Source: 2017 & 2018 Assessment Reports for Invesco Ltd., PRI, as of 31 December 2018.

Centralized support, decentralized decisions
For illustrative purposes only.

Global Responsible investment team
Centralised support
Global strategy, policy & practice
Thought leadership
Research infrastructure
Building Global ESG Capabilities
Local ESG resources
De-centralised decision making
ESG engagement & voting decisions
Proprietary ESG research
Team by team led ESG proprietary analysis
Tailored ESG solutions

Global Investors Council ESG Forum
Ama Dablam, in the Himalayas of Nepal, represents virtues Invesco embraces: strength, stability and longevity.
Invesco has been implementing ESG strategies for over 30 years, and today delivers these through equities, fixed income, multi-asset, alternatives, real estate, ETFs and bespoke solutions. Each investment center has a unique approach defined in its investment process as well as the respective asset class.

Our democratic approach on ESG integration – where every investment centre defines their own holistic ESG approach – is we believe, key to achieving a robust ESG practice across all investment centres. As a consequence, every analyst, whether credit or equities focused, also understands the ESG risks inherent to a respective investment. ESG risks are generally evaluated and identified at the security level and may impact portfolio performance. Material ESG considerations may adversely impact the fundamentals of the securities the portfolios hold, which in turn may impact shareholder value.

Our active ownership policies and practices include ongoing engagement with corporates, boards and advisory bodies, on-site due diligence and an internal governance committee as inputs into our investment and proxy voting decisions made at the portfolio level. Our investment teams manage ESG strategies using a diverse range of responsible investment approaches and leverage multiple ESG data providers.

### ESG data providers
- Ethix
- Glass Lewis
- ISS
- ISS Climate Solutions
- IVIS
- MSCI
- Morningstar
- Nikko Research Centre
- Proxy Insight
- Sustainalytics
- Vigeo Eiris

### ESG labeled funds
- Exclusionary/negative screening
- Sector/values based screening
- Norms-based screening
- Positive/best-in-class screening
- Combined ESG strategies\(^1\)

‘ESG labeled funds’ refers to an investment portfolio that, either by client mandate, strategy, or philosophy are marketed, managed and distributed as ESG funds.

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\(^1\) Combined ESG strategies: The combination of positive, best-in-class, norms-based, negative and/or exclusion criteria.
For illustrative purposes only. Strategies are not available in all jurisdictions. Source: Invesco as of 31 December 2018.

- **Broad based ESG integration**
  - IGCE Global Smaller Companies
  - Invesco Asset Management India
  - Invesco Fixed Income
  - Henley Investment Centre

- **Combined ESG strategies**
  - Invesco Quantitative Strategies

- **Thematic investing**
  - Invesco ETFs

- **Sector/values based exclusion**
  - Invesco Quantitative Strategies

- **Positive/best-in-class screening**
  - IFI Global Investment Grade
  - Japanese Equity
  - Invesco Unit Investment Trusts
  - Invesco Quantitative Strategies

- **Exclusionary/negative screening**
  - Global Asset Allocation
  - IFE Growth – Large Cap
  - Henley Asian Equities Ex Japan
  - Henley Multi-Asset
  - Invesco Canada Equity
  - IFI Emerging Markets
  - IFI Global Investment Grade
  - IFI Multi-Sector
  - IFI Senior Secured Bank Loans

- **Asset based ESG integration**
  - IRE Europe Direct Properties
  - IRE US Direct Properties
  - IRE Asia Direct Properties

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2 Broad based ESG integration: The systematic inclusion of ESG factors into the investment process.

3 Asset based ESG integration: The systematic inclusion of ESG factors into the acquisition and management of real assets. IFI = Invesco Fixed Income, IFE = Invesco Fundamental Equities, IGCE = Invesco Global Core Equity, IRE = Invesco Real Estate.
Our leading ESG approaches

London, home to the PRI of which Invesco has been a signatory since 2013.
<table>
<thead>
<tr>
<th>Investment centres</th>
<th>AUM (Source: Invesco, as of 31 December 2018)</th>
<th>ESG capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invesco Fixed Income</td>
<td>US$6.9bn</td>
<td>Emerging Markets, Global Investment Grade, Multi-Sector and Senior Secured Bank Loans</td>
</tr>
<tr>
<td>Henley Investment Centre</td>
<td>US$4.0bn</td>
<td>Asian Equities Ex-Japan and Multi-Asset</td>
</tr>
<tr>
<td>Invesco Quantitative Strategies</td>
<td>US$2.8bn</td>
<td>Global Quantitative, Global Small Company, European Enhanced, Global Passive, European Passive and Balanced Solutions</td>
</tr>
<tr>
<td>Invesco ETFs</td>
<td>US$2.1bn</td>
<td>Clean Technology, Clean Energy, Water, Timber and Solar</td>
</tr>
<tr>
<td>Invesco Fundamental Equities</td>
<td>US$2.0bn</td>
<td>US Growth Large Cap Equity</td>
</tr>
<tr>
<td>Global Asset Allocation</td>
<td>US$256.0m</td>
<td>Active Balanced Solutions</td>
</tr>
<tr>
<td>Invesco Canada Equity</td>
<td>US$26.0m</td>
<td>Global equity</td>
</tr>
<tr>
<td>Invesco Japan</td>
<td>US$18.0m</td>
<td>Japan Growth Equities</td>
</tr>
<tr>
<td>Invesco Unit Investment Trusts</td>
<td>US$7.0m</td>
<td>Equity Trust</td>
</tr>
</tbody>
</table>
"Since our formal ESG integration in 2017, our process has evolved into a more defined framework that focuses on material ESG issues in our fundamental research and investment analysis. These ESG pillars of materiality, momentum, and engagement help guide our focus on stock specific ESG risks that have material financial implications and impact on a company’s long-term performance."

Erik Esselink
Portfolio Manager

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**ESG integration process**

For illustrative purposes only.

<table>
<thead>
<tr>
<th>Watchlist</th>
<th>ESG flags</th>
<th>Provides focal points of material ESG issues for fundamental research</th>
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<tr>
<th>Fundamental research</th>
<th>ESG analysis</th>
<th>Focuses on materiality, momentum and engagement</th>
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<th>Portfolio monitoring</th>
<th>ESG risk management</th>
<th>Quarterly ESG Portfolio Reviews</th>
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**ESG pillars of Global Core Equity strategy**

**Materiality**
- We analyze the magnitude of ESG risks impacting a company’s financial integrity, brand/reputation, long term profitability and value creation
- As part of our ongoing portfolio monitoring and risk management, we look for ESG rating changes to continuously assess changes to a company’s sustainability risk profile
- Material ESG risks are considered alongside other risks and valuation drivers to help identify better managed companies who are well positioned to succeed in the long term

**Momentum**
- Momentum is a key indicator in directional change that we expect from management as well as helps us identify ‘at risk’ companies
- In our fundamental investment research we analyze how a company is addressing its key ESG issues and assess incremental change
- As part of our ongoing portfolio monitoring and risk management, we look to ESG rating changes to assess changes in the outlook of a company’s sustainability risk profile

**Engagement**
- We engage with management of all portfolio companies on material and controversial ESG issues that can impact their long-term performance. This engagement allows us to make a positive impact and contribute to improvements in our portfolio companies
- Active engagement with management is key for us to better understand management’s views and strategy for ESG, and for us accurately assess the company’s sustainability risk profile.
- We engage with companies through multiple touch points to be able to get a complete picture of a company’s sustainable risk profile. (Management, Investor Relations, Fund Manager, internal and external ESG expertise)

This is crucial in our ESG integration evolution as ESG data is still noisy, inconsistent and non-standardized. This filter of unstructured data from external ESG ratings to 2-3 key factors have improved our assessment of a company’s ESG risks and helped us make better, informed investment decisions.

Our next step, once the Sustainability Accounting Standards Board (SASB) publish their materiality map for companies and investors in October, is to include their standardizing framework in our ESG integration model. This will help translate our ESG concerns in the context of financially material, standardized reported data, which will allow us to compare and differentiate companies better in terms of ESG risks. As data and tools continue to improve, our ultimate goal is to develop an internal ESG rating of companies. However, our current focus is on bridging the gap between data, knowledge and tools in ESG integration.
Case study 1

Board Independence

As shareholders of a Belgian media company, we have long been aware that governance was not optimal. The company has >50% of the capital (56+%) and the board lacked independence. In addition, there was some innovation and technology sharing between the parent company and the issuer. Whilst not a perfect governance structure our view was we understood the issue, "eyes wide open", and that the risk was limited given our interests and the investee company were aligned. We also saw the industrial benefit of the collaboration being more of a benefit and the excellent Belgian shareholder protection laws as some form of safeguard. That being the case, momentum changed for the worse with the release of FY17 numbers in Feb 2018. Firstly, the company which has never had a regular dividend policy changed their balance sheet leverage targets. Their previous targets were based on credit conditions as opposed to total debt; however, they updated their targets to a more conservative approach. In isolation this was not a bad move, especially given it has been run with high leverage historically and interest rates are largely expected to increase from low levels. The new targets (3.5-4.5x ND/EBITDA) still gave room for significant special dividend payments of up to 10% of market cap, but the change did mean less potential shareholder returns and the decision was taken without warning.

In addition, the management failed to announce an anticipated special dividend, delaying the decision pending US tax changes. We engaged with the company to understand the rationale, which was somewhat vague but appeared due to Liberty Media/ John Malone’s tax implications changing as a result of Trump’s US tax changes. Clearly this was an unacceptable rationale and in our view raised the magnitude of the issues with momentum obviously negative. A decision to not pay a dividend purely on the basis of the company’s US tax exposure indicating that the firm’s leadership decisions are not being made in the interest of minority shareholders.

As a result, we upped our engagement. We had a number of direct interactions with the investor team at the company to understand how long the dividend was delayed for and to fully understand the board rationale with minorities interests in mind. We addressed the issue of the hard leverage targets and whether the board was liable under Belgian law for not working in the interests of all shareholders. Our feeling was the board and management realized the seriousness of the issue and that it was temporary.

We also engaged with another minority shareholder that has a history of activism. Our conclusion was whilst we agreed with a number of their grievances, we also thought some of their findings and proposals went beyond the governance issues we held.

Case study 2

Anti-competitive practices allegations

We engaged with an Italian electric equipment company to better understand their strategy in addressing the anti-competitive practices allegations and how that is being governed. We also wanted to learn more about management’s view on sustainability and their approach to mitigating ESG risks. Finally, we touched on their ESG score and tried to get an idea of whether the company is going to improve.

The company was very open to questions and sharing their views on sustainability. The topic is important to them; they are aware of the increase in demand and focus in this space and they don’t want to be behind the industry/best practices. Their focus on ESG performance is on improving their score on the Dow Jones Sustainability Index, which is tied to management compensation.

The company was appreciative of our feedback in guiding them to pay attention to their ratings on ESG data providers such as Sustainalytics and MSCI, as we use these ratings as part of our ESG analysis of companies. We also made them aware that these external ESG rating agencies primarily rely on publicly disclosed data so it’s important that the company disclose their programs, policies and initiatives so they can be accurately rated.

We learned that they do not have a team dedicated to ESG/SRI reporting, the efforts are spread throughout the various departments at the firm - however, having a dedicated ESG/SRI team is currently under discussion with top management.

Since the allegations, which started in 2009, the company has adopted many new policies to prevent bribery and corruption – especially on the commercial side. This is being governed by their compliance department; they hired a new Head of Compliance last year and a number of other people to improve their compliance performance. Regarding the policies - they start with best practices and try to adopt the ones that best serve the interest of the group.

Outcome: We pushed for more disclosure and improvements on their score. It was a positive dialogue as they were not aware of what type of ESG report investors look at and how they are being assessed. They said they will look into improving their ranking on the research part as well as their score on the Dow Jones index. We also feel more comfortable around their ESG risk management strategy as they have adopted best practice policies and hired new people to oversee the implementation and compliance of these programs to prevent bribery, corruption and anti-competitive practices.
Our investment process focuses on identifying ‘quality growth’ companies that display attributes which include sustainability, good corporate governance standards and internal controls, high quality products and services, good supply chain management, efficient local sourcing, and demonstrate good ability to adapt to the changing business environment.

Active engagement with company managements to understand their ESG considerations therefore becomes an integral part of our investment strategy, research, management discussions and investment process.

Our investment strategy integrates the following key attributes:
- A focus on bottom-up stock fundamentals, using top-down analysis only as a macro framework
- Using comprehensive qualitative and quantitative analysis to build our proprietary earning models
- We look for ‘quality growth’ companies with robust business models, industry leadership and competitive advantages that are able to deliver sustainable attractive earnings growth over business cycles (demonstrating good ability to adapt to the changing business environment and technologies).

Active engagement with company management is an integral part of our investment process. These discussions are important to understand management’s views and strategy for ESG, and also help us express our views on corporate strategy, transparency, capital allocation and other ESG aspects.

During the last financial year ending March 2018, we had over 400 engagements with our coverage companies including one-on-one meetings, investor conference calls, site visits and group meetings.

“Sustainability is a vital ingredient for success in any business. It is our fiduciary responsibility to understand those businesses which implement a framework that prudently allocates capital to embed sustainability into their business model.”
Shekhar Sambhshivan
Investment Director

Case study
Governance – Indian automobile company
An Indian automobile manufacturer with high domestic market share in its sector was planning to set up a new manufacturing plant in India and had already acquired land for the said purpose. Despite sufficient cash on its books the Indian company proposed the new manufacturing facility to be owned and funded by a 100% subsidiary of its multinational parent, with an agreement to supply vehicles exclusively to the Indian company.

While this proposal would have led to lower up-front capital expenditure incurred by the Indian company, it raised concerns around the transfer pricing mechanism, future capex funding and uncertainties in case the agreement were to be terminated. Furthermore, as the manufacturing unit would not be under the complete control of the Indian company, the proposal raised concerns related to capital allocation, corporate governance and related party transactions. These issues are of utmost importance in our investment strategy and process.

Consequently, we raised our concerns during one of the interactions with the company management. Later on, the company revised some of the key issues from the initial proposed agreement. The new proposal did alleviate some key concerns but failed to allay all of our concerns related to corporate governance expectations. Hence, we decided to vote against the new proposal. We felt that the Indian company had large cash reserves and should retain complete control of a major manufacturing unit, avoiding the potential conflict of interest and concerns pertaining to related party transactions.
**Detailed fundamental analysis: based on three main criteria**
For illustrative purposes only.

<table>
<thead>
<tr>
<th>Management/Franchise value</th>
<th>Determine fair value</th>
<th>Liquidity and risk</th>
<th>Portfolio construction</th>
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</thead>
<tbody>
<tr>
<td>- Business landscape</td>
<td></td>
<td>Days to get in/out</td>
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<tr>
<td>- Business and earnings model</td>
<td></td>
<td>Total turnover</td>
<td></td>
</tr>
<tr>
<td>- Balance sheet</td>
<td></td>
<td>Risk assessment</td>
<td></td>
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<tr>
<td>- Core competencies</td>
<td></td>
<td>Facilitates asset allocation</td>
<td></td>
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<tr>
<td>- Qualitative analysis</td>
<td></td>
<td></td>
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<tr>
<td>- ESG considerations</td>
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</tr>
</tbody>
</table>

**Earnings growth**

- Earnings growth momentum
- Sustainability and quality of earnings
- Growth in market share
- Growth derived organically, new projects or through asset injection

**Valuation**

- P/E (prospective), P/B, PCF
- Premium or discount NAV
- EV/EBITDA, Yield, ROE
- Relative to historic, sector, market
The Japanese Equities team seek a deep understanding of investee companies and their business environment, and contribute to the enhancement of corporate value and sustainable growth of these companies through constructive dialogue and purposeful engagement, with an aim to enhance the medium- to long-term return on investment for our clients. We believe that responsible proxy voting and constructive dialogue with investee companies are important components of our stewardship activities.

We position continuous assessment and understanding of the underlying investee companies' fundamentals from the medium- to long-term perspective - and contribution to sustainable growth of corporate value through constructive dialogue with these companies - as important roles within our Policy of Stewardship Responsibilities. Furthermore, we evaluate that we have steadily implemented each principle as defined in the “Japan’s Stewardship Code”.

We also recognize ESG-related information as one of key factors in making investment decisions. We have constructive dialogue with investee companies on so-called “E” (environment) and “S” (social) issues other than corporate governance issues as necessary. We made 3,135 contacts with companies in FY2017. They included various contacts such as individual interviews, financial results meetings, mid-term management policy announcements and on-site factory and store visits.

“ESG matters because Environmental, Social and Governance issues would impact on long-term corporate value and its sustainability, which naturally affects risk and return of our investment. That’s why we, the Japanese equity team, have integrated ESG analysis – with particular emphasis on corporate governance - into our proprietary fundamental research and analysis process. On top of that, as a long-term investor we have dialogue with corporate management discussing ESG issues whenever we think necessary. We strongly believe our holistic approach to ESG can enhance our added-value to clients in the long-term.”

Kaoru Kobu
Research Analyst/Corporate Governance Officer

Milestones
Source: Invesco.

July 2013
Signed up to UNPRI

August 2014
Published the Policy of Stewardship Responsibilities

October 2014
Reorganized the Proxy Voting Committee into the Corporate Governance Committee

April 2016
Revised the Proxy Voting Guidelines to reflect the Corporate Governance Code and the Japanese Stewardship Code

August 2016
Published the Overview of Stewardship Activities

November 2017
Revised the Policy of Stewardship Responsibilities to reflect the revised Japan’s Stewardship Code

April 2018
Established the Conflict of Interest Committee

May 2018
Disclosed the individual proxy voting results for FY2017

Responsible Investing - Japanese Equities
For illustrative purposes only.

Conflict of interest oversight committee (COI)

Corporate Governance Committee
Members: CIO, Head of Compliance, Corporate Governance Officer, Portfolio Managers and Operations staff

Policy of Stewardship Responsibilities
Proxy Voting Guideline

Provide Invesco’s proxy voting guideline

Japanese Equity Department
Investment professionals

Constructive dialogue
Proxy voting

Investee companies

Sustainable growth of corporate value
Sustainable return enhancement

Institutional shareholder services (ISS)
Case study 1

Business strategy
Based on the long-term strategy announced by the company, we discussed a wide range of topics including new business development strategy, capital efficiency improvement and development strategy in human resources. We pointed out the possibility that cash flow might not be sufficiently generated as a result of excessive capital investment at a low Return on Invested Capital division, and shared our concerns as an investor on consistency between the long-term vision and capital allocation with the management.

Subsequent review: As a result of reviewing capital allocation and business portfolio in line with the long-term vision, we confirmed that the company moved toward improvement in capital efficiency, including withdrawal from the investment that was not expected to generate sufficient return. The management indicated that they would manage their business portfolio using Key Performance Indicators (KPIs) to implement investment necessary for sustainable growth and they would clarify the decision-making process through a separation of management oversight and business execution.

Case study 2

Succession plan of the management
We discussed with the President of the company in which President and Chairman would finish their term and the nomination committee would start succession planning. We also discussed the importance of succession planning for outside directors.

Subsequent review: The President explained actual examples of nomination of candidates and discussions with the nomination committee with respect to election of the president of a group company, and we recognized how the nomination committee works. We also learned about a profile of a successor that the president himself expects, and discussed about competence, insight and background required from a future top executive given the company's challenges. We highlighted that the company would have to consider succession planning of outside directors; as several years have passed since the introduction of outside directors and the company would have to consider their replacements to keep the independence of the board.

Case study 3

Structural business reform
We had a dialogue about business portfolio, in which low-margin segment remains less competitive among peers, while the company maintains competitive advantage of its core business, which brings much higher profitability and generates strong cash flow. We shared our view on the most ideal capital allocation strategy as an investor with the company and discussed the company's long-term view on the optimal capital allocation strategy.

Subsequent review: The company decided to implement certain structural reforms including withdrawal from such less profitable business segment. We will continue discussing with the company about importance of capital allocation and continuously request the company for an opportunity to keep a constructive dialogue with the management.

Our leading strategy with women in focus
Another of the Japanese Equities team's best-in-class strategies aims to invest in companies with business strategies reflecting women's social advancement. By combining Invesco's bottom-up fundamental research capability and Nikko Research Center's "Women's Power Score", the team has built a strategy that invests in companies which achieve high growth by harnessing women's power.

Women's Power scores evaluate three areas
- Workplace: How much do companies emphasise women's participation and promotion?
- Products and services: How much do companies care about women as customers?
- Philosophy: Does a company lay down a code of conduct from honesty, perseverance, harmony and dedication perspectives?

Bottom-up fundamental research scrutinizes
- Management commitment to hiring and promoting women
- Organisational support including child care, mentoring and training
- Actual achievements as well as potential to improve the sustainability and flexibility of a company in the mid to-long term utilising women's power

Stock selection process
For illustrative purposes only.

All listed Japanese stocks with market capitalisation over JPY 10bn

Investment universe (quantitative screening)
- High earnings growth
- High operating margin
- High Return on Equity

Fundamental research with an emphasis on growth

Profitability analysis
- Growth rate
- Competitive advantage period

Risk analysis
- Business risk
- Financial leverage

Women's social advancement analysis

Screening for Women's Power
- "Women's Power Score"
- Workplace
- Products and Services
- Philosophy

Fundamental research on Women Power
- Management commitment
- Organisational support
- Actual achievements and potential

Product supporting women's social advancement
The ASEAN Equities team is focused on achieving long-term capital growth, with corporate governance of each investee company a key consideration. The strategy invests in Association of Southeast Asian Nations countries which includes Singapore, Malaysia, Thailand, Indonesia and the Philippines.

Using a pure bottom-up investment process and proprietary research, the team’s investment philosophy supports responsible investing through:
- Adopting a buy-and-hold strategy with a long-term investment horizon of 5 years and beyond
- A focus on bottom-up stock picking
- Knowing the company as if it were a partnership
- Being benchmark aware, but not benchmark-driven
- Relying on our own proprietary research: The team considers sell-side research as being very momentum-driven, which is different from their investment approach of riding through cycles.

Focus on corporate governance
We will not invest in stocks without having met senior management. Areas of focus include management track record and the integrity and ability of the owner(s) to run the company for minority shareholders – not themselves.

1. Engagement - We meet at least twice a year with our investee companies, which can include Board members to understand Board level discussion. We have a close relationship with C-level executives of our companies and similarly we try replicating that for the Board too. We write to Boards and Management frequently to allay our concerns, if any, and employ a diplomatic behind the scenes discussion rather than out publicly at AGMs. Our investee companies know our approach clearly.

2. Remuneration - We look closely at remuneration structures and how they are linked to executive performance. We like compensation that is deferred and paid in stock, aligning interests with minority shareholders like ourselves.

3. Voting - We actively vote at AGMs by combing every AGM resolution. Where possible we also aim to attend AGMs to observe how it’s being conducted and to meet members of the Board. We always vote against blanket resolutions that give companies power to issue new shares or undertake anything detrimental to minority shareholders’ interests.

4. Independent Directors - We look at the role of independent directors, and if they are exercising their independence? Board attendance too is also analysed to see if members may be stretched from undertaking their fiduciary roles.

"We see investing into stocks as entering into partnership with investee companies. We inform company management of our style, philosophy and investment horizon. We make it clear we are investors, not traders."

Jalil Rasheed
Investment Director, Asia Pacific
**ASEAN strategy - our approach**
For illustrative purposes only.

<table>
<thead>
<tr>
<th>01 Stock screening</th>
<th>02 Company visit</th>
<th>03 Fundamental research</th>
<th>04 Portfolio construction</th>
<th>05 Portfolio monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 3,100 listed stocks in the ASEAN region, market cap and liquidity filters are applied to narrow the investable universe to 450. With their in-depth experience in various local markets, using their proprietary research, the team arrives at a monitored list of 150 stocks.</td>
<td>Instead of relying on sell-side research, we visit the company’s management team. Around 150-300 meetings are conducted each year.</td>
<td>We identify companies that can meet various quantitative criteria (e.g. earnings growth, margins, balance sheet, cash flow generation and valuations) as well as qualitative factors (strong brand, high barriers to entry, pricing power, recurring revenue, earnings visibility, and corporate governance). Detailed research reports are written on all companies visited.</td>
<td>New holdings are introduced at 1%. The weight of the stock is a reflection of the team’s conviction level. Market/sector weightings are generally a by-product of stock selection.</td>
<td>We visit our existing company holdings at least twice a year. Corporate results are monitored regularly. Sell triggers include: change in operating environment/core business, change in management/ownership structure and fraud/dishonesty.</td>
</tr>
</tbody>
</table>
The core aspects to our ESG philosophy include materiality, ESG momentum and engagement:

Materiality refers to consideration of ESG issues on a risk-adjusted basis and in an economic context. We do not view ESG aspects as constraints, aside from our non-investment policy in controversial weapons which is driven by legal obligations.

The concept of ESG momentum, or improving ESG performance over time, is particularly interesting in our view. We find that companies that are improving in terms of their ESG practices may enjoy better financial performance in the longer term.

We take our responsibility as active owners very seriously and see engagement as an opportunity to encourage continual improvement. Dialogue with investment companies is a core part of the investment process. We take large investment stakes and are often one of the major shareholders in a company (particularly in UK and Europe), and in many cases amongst the top minority shareholders in Asian companies. As such, we often participate in board-level dialogue and are instrumental in giving shareholder views on management, corporate strategy, transparency, and capital allocation as well as wider ESG aspects.

The Henley Investment Centre took important strides to further our ESG approach in 2017/2018. We established our ESG Investor Forum which is chaired by the Head of ESG and is made up of champions from each investment team. The ESG champion is a representative of the individual investment teams that has responsibility for feeding into the overall ESG approach and areas of interest for further analysis. The role of this group is to help facilitate dialogue and share insights from across asset classes and regions within the Henley Investment Centre. The group meets quarterly.

We launched our Henley ESG Guiding Framework which highlights the issues we find of key material focus. This framework had input from our ESG Investor Forum, heads of investment desks, our CIO and was presented at our Chief Investment Officer monthly insight meeting. As part of this framework we have established our proprietary ESG rating which is based on sector level material issues. To establish this framework, our Head of ESG facilitated more than ten workshops for all investors to give a perspective and input to our ESG approach.

An illustration of the ESG investment process for equities is highlighted below. We leverage several sources (including an external ESG rating provider) to highlight areas of focus for further engagement. We supplement that with proprietary research and engagement. All investment professionals monitor the extent to which ESG is discussed in company meetings and we have recorded discussing ESG at over 650 company meetings during Q1-Q3 2018. The process includes continual monitoring at portfolio level to ensure we regularly review these issues in a holistic context. To bring our approach to life we have outlined three examples of our ESG research and engagement activity this year.
As long term, valuation led, active investors, our investment process is aligned with ESG integration and active ownership. As investors in global equities, corporate and sovereign fixed income instruments as well as multi-asset strategies, we recognise the differences between asset classes and geographies. In general, ESG issues are considered as one input to the investment process, as part of evaluation of ideas, company dialogue and portfolio monitoring. As such, evaluation of ESG aspects will be incorporated into the wider investment process as part of a holistic consideration of the investment risk and opportunity.”

Cathrine de Coninck-Lopez
Head of ESG, Henley Investment Centre
“I have been managing money in the extractive industries for over 20 years (oil and gas and mining) and ESG has always formed part of my investment thesis and discipline. There are no other industries like oil and gas and mining where the social license to operate is a company’s most valuable asset. In being so valuable the ironic thing is that it appears nowhere on a company’s balance sheet but rather accrues to those operating teams that have a strong culture of putting safety, environment and the local community first and foremost.”

Norman MacDonald
VP, Portfolio Manager

Case study
Environmental - European Equities
We engaged with a Canadian and NYSE listed stock. The company’s sole asset is its substantial working interest in a copper mine in Mongolia. The government of Mongolia is the other significant owner of the mine. Once in full development from the underground deposit in 2023 the mine will be one of the largest copper mines in the world. An Invesco specialist has had the opportunity to visit Mongolia three times to visit the mine site which has served to underline the importance of this mine to the country.

What makes this stock unique is how critical the mine is to the country and the people of Mongolia. It is the biggest tax generator by far in the country and is being constructed by Rio Tinto. The current operations of the mine are focused on the open pit deposit and already the mine is employing a significant amount of local people. The trickle down economic effect of wage growth within the country is truly making life for Mongolians better.

It was always mandated in the investment agreement between the government and the company that a certain percentage of employees be local Mongolians. Initially I viewed this as a potential negative for the investment in the company but after visiting the site I came away with the opposite view. The Mongolian people are proud and hardworking employees. They take an extreme amount of pride in their productivity record and more important their safety record. The level of education within the local work force has improved dramatically the last four years.

More impressive than the local work force however is the importance of the mine with respect to the royalties and taxation that will be collected by the government in the 65 year life of mine plan. When the underground is in full production it will generate 20% of the country’s GDP. This mine alone will repay a lot of IMF borrowing and allow Mongolia to develop as a country at an unbelievable rate and propel itself into the next century with a vastly improved quality of life.

Due to the importance of copper in the electricity grid it has also brought a change in attitude of their neighbours Russia and China. Once regarded as a second class citizen this quality deposit has forced both countries into proactive trade talks with Mongolia due to the need for copper in the conductivity of electricity.
Equities - Growth (Summit Team U.S.)

With average 25 years of industry experience, the Invesco Summit Team applies an active research and ownership process recognising that responsible social investing goes beyond screening out companies that have questionable social impacts.

The team combines exclusive screening (social, fundamental and valuation based) with a research-intense bottom-up process to surround potential investment companies, understanding their opportunities and risks from as many angles as possible. And once they invest - they invest for the long term, engaging with company management and actively voting proxies to encourage shareholder value creation.

"As active owners rigorously focused on adding value for our investors, and with a fiduciary responsibility on their behalf, we believe it’s vital to engage with our companies across all aspects of their business, to protect and create shareholder value."

Erik Voss
CIO Growth Equities

Authentic Responsible Investing

We seek to achieve positive outcomes for our clients by combining social screening, active bottom-up research, and active engagement with company management teams. We believe it is vital to engage with our companies across all aspects of their business, to protect and create shareholder value. Managers are personally invested alongside our clients.

Screening
- Social screens exclude Tobacco, Alcohol and Gambling stocks
- Fundamental and valuation screens avoid bad actors who destroy value

Active research
- Experienced sector-experts surround companies, to understand all the risks and opportunities
- Go deeper than company policies... evaluate company behaviour

Active ownership and engagement
- Beyond exclusionary approach - we work hard to uncover any potential risks to our investors' valued capital
- Active dialogues with company management and proxy voting

Our four step investment process
For illustrative purposes only.

Screen for ESG removing
- Alcohol
- Tobacco
- Gaming

A holistic process of evaluating
- Fundamentals
- Valuation
- Timeliness

Build a mosaic
- Review company 10Ks, 10Qs, transcripts
- Company meetings
- Discussions with competition, distributors, suppliers, customers, etc.
- Forecast revenues, margins, earnings
- Valuation

Disciplined, company-level conclusions including
- Outlook for company and stock
- Risk/reward assessment
- Drivers of growth
- Price target

Securities with potential for earnings or revenue growth

Result
Identifies attractive candidates

Result
Confirms attractiveness and captures deeper understanding

Result
Articulates the basis for investing
Invesco Quantitative Strategies

In the past decade, sustainability demands on financial assets—e.g., CO2 footprint, corporate governance, regulatory and demographic changes—have risen in the market and Invesco Quantitative Strategies (IQS) has accommodated this and employs a fully integrated ESG investment process. This is built on long standing experience in customized ESG solutions, active engagement with companies and the Invesco Proxy Voting approach.

**Holistic ESG approach**

IQS offers a holistic ESG approach taking ESG criteria into consideration at various levels of our portfolio management process. Besides offering customized ESG solutions (pink circle), we explicitly integrate ESG aspects into our portfolio construction process (blue circles) via the measures ESG Exposure Control, Adverse ESG Momentum and our long standing Quality-Governance Linkage which focuses on high quality management. Our active ownership practices include engagement and proxy voting which are integral parts of our investment process as well.

**Key aspects of the framework are:**

- **ESG Exposure Control:** We ensure that portfolios are not heavily exposed to the risk of scoring much worse from an ESG perspective relative to their respective universes.
- **Adverse ESG Momentum:** As we are using proprietary risk models we were always interested in the question whether integrating ESG scores in the risk models could be expected to improve risk forecasts.
- **Customized ESG Solutions:** For over twenty years the IQS team has managed accounts for clients that required inclusion or exclusion of companies based on certain ESG criteria by using the Eiris Portfolio Manager (EPM) where companies are analyzed on the basis of 250 different criteria for all relevant ESG fields.

We also help responsible investors to apply sustainability criteria to investments in sovereign bonds. This is done with the so-called Country Sustainability Rating. To assess a country in terms of sustainability criteria, a large number of indicators are used from the areas of politics, social issues and the environment which are then combined into an overall rating. Three broad aspects of sustainability are questioned when assessing countries:

- **Environmental:** Countries which limit their use of finite resources, minimize their negative impacts on the global environment, and exercise stewardship over their natural environment are more likely to be sustainable.
- **Social:** Countries which cater for the education, health, welfare and social needs of their inhabitants, which develop the skills of all citizens, and which have low levels of inequality are more likely to be sustainable.
- **Governance:** Well-governed, non-corrupt countries, which are responsive to their inhabitants, treat them equally, and respect their civil liberties, are more likely to be sustainable.

**Enhanced Management:** IQS’s engagement strategy has typically focused upon five key Environmental, Social and Governance themes including: Bribery Reporting; Climate Change; Human Rights Management Systems; Supply Chain Labour Policy and Water Scarcity.

**Holistic ESG Approach**

For illustrative purposes only.

“Having incorporated proprietary aspects of governance for many years, we have enhanced risk management by introducing a dedicated ESG Exposure Control for all portfolios as well as an Adverse ESG Momentum measure to restrict certain companies. We are confident that these steps, combined with a continuous dialogue with clients and companies, will make us well prepared for future challenges with regard to ESG investing.”

Manuela von Ditfurth
Senior Portfolio Manager
To develop these themes, Vigeo Eiris provides IQS baseline assessments for each company in the theme selected. This is based upon a long established and rigorous methodology and involves assessing the level of risk that a company is exposed to in any one area and then analyzing how the company mitigates these risks. This is done via an examination of a variety of indicators across three key areas:

1. The extent of a company’s policy;
2. The strength of the management systems put in place to enforce this policy;
3. The level of public reporting on corporate performance

If a company is exposed to a high level of risk and has demonstrated no evidence or only limited evidence of incorporating policies, management systems and reporting, then it may be identified as a ‘laggard’ with regards to its sector peers and recommended for engagement. The objective for each company is to improve their performance across all three areas sufficiently.

Case study 1
Engagement on bribery and corruption - Swiss biotech company
Engagement with the company was launched in June 2017 and sought to encourage the company to achieve an overall grade of ‘intermediate’ or above in its management of bribery and corruption. Specific objectives were set for this target to be met and included requesting the company to report details of assurance, audits, monitoring and/or board reports regarding its compliance with bribery and corruption policies. The company proved to be very reactive to engagement requests and several letters were exchanged throughout the year, culminating in a conference call conducted with the company on behalf of IQS. During this call and following a subsequent exchange of emails, the company provided evidence of its board reports relating to this matter as well as training programmes that it undertakes and its raft of internal policies on the issue. As a result, this engagement was bought to a successful conclusion. This engagement lasted for a total of seven months and is an example of a responsive company being willing to engage directly with its stakeholders and quickly come to a solution that is acceptable to both parties.

Case study 2
Engagement on human rights - Japanese automobile company
Engagement with the company began in May 2017 and focussed on encouraging them to improve their overall approach to managing human rights in their global operations. Specifically, the company was asked to demonstrate two of the following:
- Training all employees on the human rights policy
- Consulting independent local stakeholders on human rights issues
- Monitoring and procedures to remedy non-compliance
- Identified major human rights challenges and integrated human rights into risk assessment procedures

The company was sent a total of five letters and responded with four formal communications. Within this same period, a number of emails were also exchanged in order to clarify certain issues and reassure the company about the process. After a nine-month period of engagement, the company was able to demonstrate that it had met all of its outstanding objectives and engagement was bought to a successful conclusion.
Invesco’s proprietary ESG ratings process is rooted in data collection, historical and peer analysis, issuer engagement and awareness of external resources, providing meaningful insights into ESG factor risks.

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<td></td>
<td>- Engagement prioritization</td>
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</tbody>
</table>

**ESG scorecards**

- E, S & G factor scores: 1-2-3-4-5
- Overall ESG score: A-B-C-D-E

At Invesco Fixed Income (IFI), we believe that ESG-oriented investments can lead to better long-term risk-adjusted returns. We have fully integrated ESG risk factors into our fundamental credit research process - helping to guide portfolio investment decisions and issuer engagement practices. We believe, over time, investments in companies with stronger financial and ESG policies are likely to be rewarded in the marketplace with better risk-adjusted returns driven by improved profitability and lower asset price volatility.

The key elements of IFI’s ESG integration framework are data collection, analysis and engagement. ESG integration continues to influence our fundamental credit opinions. As such, after years of integrating ESG into our fundamental credit research process, we have recently established a proprietary ESG rating process. This process brings together both quantitative and qualitative factors, ensuring alignment with our existing fundamental credit research process. This also highlights how issuer-level ESG risk factors and fundamental credit views are often interwoven.

IFI continues to promote the integration of ESG capabilities across multiple asset classes to help clients meet these objectives and as we seek to deliver on our dual goals - maximizing risk-adjusted returns and contributing to a more sustainable future.

Engagement
IFI utilizes peer analysis and key issue relevance to prioritize engagement opportunities. In other words, our engagement strategy is directed by the relevance and level of ESG risk factors. Lower-risk items can be handled via written communication with investor relations. Higher risk factors provide opportunities for direct contact with senior management. IFI uses its technology to record issuer-level ESG commentary and engagement history, as client interest in engagement reporting is increasing. We recognize that industry engagement practices are in the early stages and we are committed to finding practical ways to promote ESG awareness with management teams.

“Invesco Fixed Income believes the analysis of environmental, social and governance risks are critical components to fundamental credit analysis. As such, we have integrated ESG analysis into our credit research process using a proprietary framework that is consistent across all asset classes. We believe that ESG-oriented investments can lead to better long-term risk adjusted returns.”

Paul J English
Senior Analyst – Head
US IG Research

IFI continues to promote the integration of ESG capabilities across multiple asset classes to help clients meet these objectives and as we seek to deliver on our dual goals - maximizing risk-adjusted returns and contributing to a more sustainable future.
Case study 1  
**Consideration of ESG**
The company we engaged with has an entire sustainability section on their website laying out their commitments, policies, sustainability performance, etc. along with current and historical sustainability reports (going all the way back to 2001); a climate change report that will be published for the 1st time this summer (so the company remains keenly aware of their environmental impact and making this information public to all stakeholders); and a report on the indigenous rights and relationships in the North American Energy infrastructure, etc.

Compare this highly visible awareness and commitment to sustainability with the company’s website section on “safety” which includes four different phone numbers to report suspicious activities at their pipelines, and some talking points around pipeline leaks / emergency preparedness etc. However, you have to dig to find anything sustainability / ESG related. There is one page titled “responsible energy” simply stating that the business is part of the Council for Responsible Energy, and that’s about it.

Case study 2  
**Direct engagement**
At a credit update meeting with the investee company’s Head of Corporate Finance in November 2018, we asked if the company would consider issuing a green bond to finance its “more than €7bn” investments in ‘green’ technologies. The CFO questioned if there would be appetite from investors in a green bond from an Automotive OEM. Given the growth in the green bond market across industry sectors, we outlined our view that there would be demand, a view supported by other European buy side institutions in attendance. We continue to support development of ESG practices at issuers while encouraging the utilization of green financing mechanisms.

Case study 3  
**Vendor due diligence**
We raised concerns over poor MSCI ESG ratings at a US consumer products company in 2015. It was evident that management had no awareness of the ratings. In addition, management was unaware of the growing pools of ESG investment mandates that could not buy their securities in best-in-class portfolios. Since, we have witnessed improving labor practices, rising ESG scores and management awareness of ESG risk factors in investor’s minds.
“ESG continues to play a critical role in Invesco Senior Secured Management’s (ISSM) credit underwriting process and is a key discussion factor in our credit evaluation of potential investment opportunities. ISSM not only has had active dialog with clients regarding our approach, but more specifically particular credits in our portfolios and/or broad sector concerns. ISSM provides regular commentary on issuers clients have flagged for discussion.”

Kevin T Egan
Senior Portfolio Manager, ISSM

Access to issuer management teams (private side election)
Prior to investing in a company and throughout the ownership of the company’s debt, ISSM will engage with company management on a number of issues – including ESG. These discussions are designed to enhance ISSM’s understanding of the long-term economic value of the company which includes a thoughtful process and approach to determining whether to invest in a company. Each credit analyst spends a great deal of time getting to know borrowers, borrowers’ management teams, sponsors, key suppliers and customers etc. These company meetings give investment teams a better understanding of the long-term nature of the business, its key drivers, competitive position and the achievability of management goals.

Proactive approach
ISSM’s (private side) insight, communication and exposure, provides the team with an intimate look at the company’s underlying activities which allows for an opportunity to incorporate elements of ESG into ISSM’s investment process. Additionally, given our presence and influence in the global loan market, ISSM employs a proactive approach as a debt investor. ISSM has the ability to address concerns about a particular issuer up-front with company management, the private equity sponsor and arranger before a new transaction is brought to market.

In addition to the discussion on ESG issues, ISSM currently utilizes MSCI watch list with links to research for CCC-rated assets as well as the full access to the broader MSCI ESG research universe. This resource helps facilitate Credit Analyst and Investment Committee discussion around ESG concerns.

ISSM is currently managing two unique ESG segregated accounts. As part of the Investment Management Agreement (IMA), both ESG mandates are managed using exclusionary lists. For these two ESG portfolios, ISSM regularly identifies credits outside of the exclusion lists for proactive dialogue.

Integrating ESG in ISSM’s credit evaluation process
For illustrative purposes only.

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<th>Key credit considerations</th>
<th>Risk ratings</th>
<th>Returns</th>
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<td>- Management</td>
<td>Internal default rating</td>
<td>Spread to average life (STAL)</td>
</tr>
<tr>
<td>- Cash flow analysis</td>
<td>- The default rating is on a scale of 1 to 10, with 1 being the lowest and 10 being the highest probability of default.</td>
<td></td>
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<tr>
<td>- ESG considerations</td>
<td>- Two quantitative models are used to support the basis of the internal default rating, with a qualitative overlay.</td>
<td></td>
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<tr>
<td>- Industry position and dynamics</td>
<td></td>
<td>Rock bottom spread (RBS)</td>
</tr>
<tr>
<td>- Sponsors and arrangers</td>
<td></td>
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<tr>
<td>- Capital structure</td>
<td></td>
<td>RBS premium</td>
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<tr>
<td>- Asset coverage</td>
<td>Internal recovery rating in the event of default</td>
<td></td>
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<tr>
<td>- enterprise value</td>
<td>- The recovery rating is on a scale of A to E, with ‘A’ being the highest and ‘E’ being the lowest level of recovery in the event default.</td>
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<tr>
<td>- Insolvency, restructuring regime</td>
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<td></td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Case study 1
ESG into investment decision
Engaged with a large manufacturer and distributor of sodium cyanide exclusively for use in gold and silver mining through a process known as leaching, gold mining companies place mined ore in contact with a dilute solution of sodium cyanide which causes gold to slowly separate from the mined ore. In use since the 1880’s, and the dominant extraction technology for several decades, cyanide leaching is considered much safer than liquid mercury, which at one time was the primary gold extraction technique. Because cyanide is toxic in large doses, its use is regulated in most jurisdictions, including Nevada where the majority of the company’s customers are operating. Despite its high toxicity, there have been no documented human deaths in North American mining from cyanide poisoning in the last 100 years. The more salient environment concern is cyanide leakage from mining sites into surface waters, as it is toxic to wildlife. For this reason, the industry is regulated by numerous state and federal agencies in the US including DOT and EPA, and has adopted the International Cyanide Management Code as a set of standards designed to ensure safe manufacturing, transportation, and use of sodium cyanide. Note that the company has a strong health and safety record.

Outcome: ISSM ultimately approved investing in the company due to the company’s strong market share, high barriers to entry, and contracts that provide good visibility to future revenues. Mindful of ESG concerns, ISSM determined that cyanide leaching is an accepted and regulated practice, and also that the company is committed to upholding its health and safety responsibilities.

Case study 2
ESG into investment decision
Interacted with a large scale gun manufacturer and seller with $330MM in Term Loans (TLB) and $250mm in Secured Notes. The company manufactures guns and ammunition sold to the public. Gun related violence in America has been growing concern for many years. A proliferation of mass shootings in recent years has further heightened this concern. The company’s leading product (generating >50% of revenues) was a drug used as a treatment for narcolepsy. At the time this drug was the only US Food & Drug Administration (FDA) product approved to treat the two major indications associated with narcolepsy: excessive daytime sleepiness and cataplexy (sudden loss of muscle tone).

The company’s leading drug was derived from sodium oxybate and was essentially a medical form of GHB, better known as the date-rape drug. The manufacturing and distribution of this drug was heavily regulated due to the potential threat for illicit use in social settings, and Invesco was concerned about risks associated with a breakdown in the pharmaceutical company’s supply chain controls.

Outcome: ISSM ultimately declined investing in the pharmaceutical company’s loans due to the headline risk associated with its leading product (as discussed above), the risk of generic competition for the leading product (with three generic competitors challenging the company’s IP at the time of the deal), and the significant revenue concentration in two products (accounting for >85% of total revenues on a combined basis).

Case study 3
ESG into investment decision
We engaged with a specialty pharmaceutical company focusing on developing and commercializing products in niche therapeutic areas; $575m of Incremental Senior Secured Credit Facilities was the deal size.

The company’s leading product (generating >50% of revenues) was a drug used as a treatment for narcolepsy. At the time this drug was the only US Food & Drug Administration (FDA) product approved to treat the two major indications associated with narcolepsy: excessive daytime sleepiness and cataplexy (sudden loss of muscle tone).

Outcome: ISSM ultimately declined investing in the pharmaceutical company’s loans due to the headline risk associated with its leading product (as discussed above), the risk of generic competition for the leading product (with three generic competitors challenging the company’s IP at the time of the deal), and the significant revenue concentration in two products (accounting for >85% of total revenues on a combined basis).
The Belt and Road portfolio management (part of Invesco Fixed Income), has fully integrated ESG risk factors into their fundamental credit research process. In addition, when the team makes country allocation decisions, they also take into consideration sovereign Environmental, Social and Governance (ESG) factors qualitatively and quantitatively in the portfolio construction process. The team endeavour to avoid the worst-in-class ESG sovereign and corporate bond issuers for the portfolio.

The team looks into the ESG factors of a country with a time horizon of 3 to 5 years to be in sync with its domestic cycle of elections/senior government officer appointments. Against the backdrop of a country’s domestic politics and geopolitical relationships, its ESG risks are weighed against its sovereign credit risk premiums that are being priced in by the market. The team underweights those countries whose ESG risks are underestimated by the market.

Opposite are the typical quantitative and qualitative variables that are used to gauge ESG factors of a country.

“The Belt and Road portfolio management team believes that incorporating sound environmental, social and governance (ESG) responsibilities into fund investment process can positively impact the value it provides to clients and mitigate risks faced by investing into China’s Belt and Road region.”

Ken Hu
CIO, Fixed Income, Asia Pacific

Case study
Investment decision – Indian natural resource company
This company had an improving fundamental outlook and attractive relative valuation based on our credit analysis. At the time when the investment team was considering this bond, it still provided +100bps excess value and thus was a good buying opportunity. However, the ESG MSCI rating of this issuer is at “CCC”, as governance concerns and numerous controversial incidents may attest. IFI’s internal ESG view was even more negative than MSCI’s, underlined by the recent 13 deaths and more than 50 injured by riot police during an environmental protest last May at one of the company’s facilities. One of its subsidiaries had begun construction of a new smelter on the edge of a residential town, almost doubling their capacity, but residents argued the existing smelter had continuously polluted their water and air since it was established. Residents claimed it had led to respiratory and skin problems, fainting and other illness, especially among children, and that its waste was being released into an area of coral reefs and mangrove forests. As the investment team endeavour to avoid the worst-in-class ESG sovereign and corporate bond issuers, the team decided to pass on the bond despite the attractive short-term relative value. The team truly believes that ESG consideration will achieve better long-term risk adjusted returns.
Domestic and geopolitical analysis
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<td>• Notre Dame Global Adaptability Index</td>
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<td>• Pollution</td>
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<td>• Climate change</td>
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<tr>
<td>• Energy reliance</td>
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<tr>
<td>• Ecosystem quality</td>
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<td>• United Nations' Human Development Index</td>
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<td>• Notre Dame Social Readiness Index</td>
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<td>• IT infrastructure and innovation</td>
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<td>• Social safety nets</td>
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<td>• Health and safety</td>
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<td>• Gender inequality</td>
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<td>• Income inequality</td>
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<td>• Corruption Perception Index by Transparency International</td>
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<tr>
<td>• The World Bank's six Worldwide Governance Indicators</td>
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<tr>
<td>• Our engagements with government officials, political consultants, journalists credit rating agencies and MSCI-ESG</td>
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</table>
Real Estate

Real Estate’s ever-growing environmental relevance is summarized in numerous sustainability metrics, benchmarks and certifications. Such measurement and monitoring have helped foster strategies that reflect a building’s complete lifecycle, with many investments considering environmental concerns during every phase from acquisition, construction/development, ongoing management/operations and disposal in a bid to generate benefits throughout the process.

For investment managers it is important to establish precisely what these instruments, tools and initiatives offer in terms of genuine insight. We believe they should foster proactive engagement on material ESG issues in which dialogue, transparency and the potential for change can be considered. For example, to purchase a property that scores well on a number of environmental measures, as opposed to one that fails somewhat short of a required or recommended standard, success or failure has been determined entirely by headline environmental data, which can happen if outputs are prized over outcomes.

Sustainability has also become part of the agenda for our European hotel investments, by following a top-down and bottom-up sustainable strategy and tracking of industry benchmarks. We pursue nationally recognized sustainable building ratings, adopt physically responsible green building practices and reviews, and implement initiatives applicable to each property. It is also a consideration within our investment process and is already part of our due diligence process.

It is vital that ESG does not become a box-ticking exercise. It is not enough merely to be seen as green and accumulate actionable data and then decide to take meaningful action. What is required is a holistic view, underpinned by the willingness to act and a capacity to effect positive change. This is where investment managers, a determination to engage and the power of active ownership can make an enormous difference.

“ESG is increasingly being integrated into real estate investment decisions. Given the enormous contribution that buildings can make to both augmenting and tackling climate change, a genuinely holistic and authentic approach is needed, one that champions the importance of wide-ranging engagement and recognizes that outcomes are as important as outputs.”

Michael C Kirby
MD Asset Management

Case study 1
Hotel sustainability in action
Invesco Real Estate acquired the QO Hotel in Amsterdam, part of the Intercontinental Hotels and Resorts stable, which represent a new breed of properties that are being built with sustainability in mind: 80 percent of the 288-room property’s lighting is sourced from natural daylight and it includes sustainable materials for all construction and day-to-day operations such as a green roof, energy and water efficiency, and lower waste and carbon emissions.

Case study 2
The value of tenant engagement
An authentic approach to ESG requires engagement with tenants and occupants, since how they use a building space goes a long way towards determining its performance. Engagement can take many forms and it is essential to educate them on, for example, how a property makes use of green technology. In Warsaw, Poland, our office asset engages with tenants through its tenant satisfaction survey, thus actively listening to the needs of its occupiers. The outcome is that a successful tenant wellbeing and educational program has been put in place.
The QO Hotel exterior features a series of fully responsive thermal panels that help control the temperature inside.
Finding opportunities in the ESG space
The Invesco Unit Investment Trusts (UIT) team has a dedicated ESG strategy that provides an opportunity to access a growing market segment that allows investors to invest beyond profit and returns, with the goal of long-term value creation aligned with environmental, social and corporate responsibility.

The strategy seeks to provide the potential for capital appreciation and current income by investing in a portfolio of US listed companies demonstrating highly favourable ESG characteristics and practices. To achieve this, two common ESG investment methods are incorporated within the process:

- Best-in-class: Our best-in-class approach helps define our selectable universe. However, rather than just including companies that are “above average” from an overall ESG rating/score, the strategy seeks companies that are consistent leaders across environmental, social and corporate governance factors. The strategy seeks to identify leaders who are increasing their level of ESG engagement, rather than companies that excel at one or two things while ignoring other areas that could leave them open to controversy.

- ESG integration: The UIT team also believes in the value of ESG integration within the fundamental investment framework. We use this method to build the final portfolio by incorporating ESG data with fundamental financial analysis. We believe that combining these approaches allows for a diversified portfolio with broader sector representation.

“...The UIT team sees investors integrating ESG in a myriad of ways, including investing with values, impact investing and using ESG to help manage risk.”

Nathan Miller
Equity Portfolio Manager, UIT

<table>
<thead>
<tr>
<th>ESG selection process</th>
<th>For illustrative purposes only.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fundamental ESG analysis/ Selectable universe</strong></td>
<td>Evaluate a company’s ESG profile primarily through examination of the company’s environmental impact, social values and governance practices to focus on companies demonstrating highly favourable ESG practices</td>
</tr>
<tr>
<td><strong>Fundamental financial analysis</strong></td>
<td>Identify companies exhibiting attractive valuations, history for above average growth, generating attractive operating and free cash flows, history of maintaining a strong balance sheet as well as making disciplined capital management decisions, and a history of above average returns on invested capital</td>
</tr>
<tr>
<td><strong>ESG commitment analysis</strong></td>
<td>From the selected companies, focus on companies with generally stable or increasing levels of commitment towards their ESG practices</td>
</tr>
</tbody>
</table>
Invesco is one of the world’s largest ETF providers, managing US$190bn\(^1\) in assets. ESG is an integral part of our ETF strategies, with leading examples including ETFs focused on clean energy, timber, water, solar and clean technology.

**Clean energy investments**
- Energy prices are volatile and hard to predict: Energy prices fluctuate so knowing when to lock in the best price, and for how long, is a perennial challenge for businesses. Unless, that is, you are considering signing a long-term Power Purchase Agreement with an energy provider that specializes in predictable renewable energy - or install your own clean energy infrastructure. Both options will help businesses avoid that energy price roller-coaster and save money over time.
- Energy choices, competition go hand-in-hand: Knowing how to maximize the benefits of your energy choice requires a thorough analysis of your energy needs and appetite for risk.
- Business needs and policies must be aligned: Thirty-one states in the US don’t offer state tax credits for solar panels, and seven states have yet to let companies sell power back to the grid - to highlight a few barriers.

**Investing in timber**
- Timber offers an uncorrelated, high-returning asset class for diversification and long-term income.
- Unlike other agricultural commodities, where the crop is ripe just once and then you have to harvest it, you don’t have to harvest timberland every year. In a bad year, say, when timber prices are low, you can always “bank it on the stump.” In fact, older trees provide higher-quality wood. While timber companies will see inventories increase during bad times, the value of their inventory will steadily increase in value.
- Increasing demand and shrinking supply means rising prices: The world’s supply of timber is decreasing as governments ban the logging of old growth forests and logged forests are converted to agricultural land or pasture. At the same time, developing countries are increasing their consumption of raw lumber. Chinese tropical log imports alone grew 35% between 2009-2010. Plantation timber can help meet this growing demand while easing the pressure on biodiverse old growth forests.

**Investing in water**
- According to United Nations Global Environment Outlook by 2030 global demand for water could exceed supplies by 40%. As the world population grows, the demand for clean water also grows. Water is one of the most basic human rights and the global water crisis is taking shape.
- According to NASDAQ, infrastructure is outdated and will require and estimated $1 trillion over the next 25 years for maintenance and expansion of the drinking water system in the US alone.
- Innovation in water conservation is taking water digital. The impact of digital solutions is substantial, particularly for capital constrained water utilities that currently lose billions of gallons of water around the globe every day.
- Innovation will drive the water conservation efforts and the companies that foster this innovation will be critical to bring the solutions to a huge market. As global demand increases, conservation modernization will be critical to provide the supply to meet the demand.

**Solar energy**
- Demand for solar energy is growing. Corporations are realizing the benefit of purchasing clean energy. In 2018 corporations doubled the amount of clean power purchased through long-term contraction, more than doubling 2017’s total.
- Once thought for the developed world, solar is now tapping into emerging market growth potential. African businesses are utilizing solar power to help provide a reliable energy source.
- Globally many countries are eager to meet their carbon-reductions targets under the Paris COP21 global climate agreement.

**Clean technology**
- Global demand for clean technology in agriculture, air purification, energy, transportation, water purification and recovering and recycling materials is increasing. The developments in technology in these industries will drive the future for cleaner productions and more sustainable approaches to utilizing resources.
- Agriculture: With the growing population and the effect that large-scale farming has on the environment, advances in this industry will drive the future to more efficient and eco-friendly farming.
- Energy-related: As the world lives in a digital world, many developments in efficient grid management and related software is critical to monitoring power quality and outages.
- Transportation: More efficient forms of transportation, not just electric vehicles, but ride sharing, public transportation and logistics technologies.

\(^1\) As of 31 December 2018.
ESG risk framework

ESG investing offers a holistic framework for risk assessment which is becoming an ever-more important theme in investment management. There is broad acceptance of the need to take such criteria into account, as evidenced by, the widespread adoption of the PRI’s six Principles for responsible investment.

Looking ahead, ESG investing may be capable of mitigating the risks of adverse outcomes.

<table>
<thead>
<tr>
<th>01</th>
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<tbody>
<tr>
<td>Qualitative inputs</td>
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<td>- Industry/Region level/Global ESG trends</td>
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<tr>
<td>- Company level ESG risks/opportunities</td>
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<td>- Controversies</td>
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<tr>
<td>- Quality of management</td>
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<tr>
<td>- Sources: Company ESG disclosure/Third-party ESG research</td>
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<th>02</th>
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<td>Quantitative impacts</td>
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<td>- Integrated financial forecasting of</td>
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<tr>
<td>- Revenue</td>
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<td>- Op cost/margins</td>
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<td>- Asset book value</td>
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<td>- Capex</td>
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<td>- Discount rate: Cash flows</td>
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<td>- Fixed income</td>
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<td>- Default probability</td>
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<td>- Credit quality evaluation</td>
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<td>- Liquidity</td>
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<th>03</th>
<th>Integrate</th>
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<td>Investment decision</td>
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<td>- Investment Committee/Fund Manager</td>
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<td>- Buy/increase weighting</td>
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<td>- Hold/maintain weighting</td>
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<td>- Sell/decrease weighting</td>
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<td>- Don’t invest</td>
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<td>- Portfolio ESG attribution</td>
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<td>- Continuous portfolio monitoring</td>
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<th>04</th>
<th>Engage</th>
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<td>Active ownership</td>
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<td>- Proxy Voting</td>
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<td>- Democratized</td>
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<td>- Decentralized</td>
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<td>- Engagement</td>
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<td>- Direct</td>
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<td>- Collaborative</td>
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<td>- Letter writing</td>
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<td>- Lobbying</td>
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<td>- Litigation</td>
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<td>- Onsite visit</td>
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Viewing investments using an ESG risk framework.
Thematic investing

As responsible investment is continuously gaining in importance, the macro thematic landscape on environmental, social, and governance topics is evolving. Change is driven by numerous stakeholders: regulators, institutional asset owners, retail client demand, data vendors, non-governmental organizations (NGOs), initiatives and advocacy networks such as the PRI.

The macro themes can become a blueprint for how asset managers determine their focused responsible investment (RI) strategy. Invesco has identified 15 key themes that will continue to drive efforts in RI space and will shift how the capital markets respond.

A number of investment themes are based on ESG issues, including clean tech, green energy and sustainable forestry and agriculture. Thematic investing is not, of course, confined to ESG issues.

Climate Change
This represents an urgent and irreversible threat to human society, such as the heatwave in northern Europe during the summer of 2018. The financial sector plays a pivotal role in combatting climate change by demanding increased transparency. Environmental impact reduction strategies have been developed by almost half of corporate issuers worldwide.¹

Water Scarcity
Water is not only essential for human health - it’s also a crucial resource for agricultural production, energy generation, industry and manufacturing. In Europe, water policy aims to manage household water use, degradation of coastlines, marine life, pollution, drought and flooding.

Plastics
There are obvious benefits of using plastic: durability, safety, hygiene, and packaging weight. Unfortunately, one consequence of our “disposable” lifestyle is that single-use plastic comprises 50% of marine litter. In 2018, the European Commission adopted a strategy for a new plastics economy.²

Inclusive Growth
This aims to reduce poverty and address income inequality. Europe is well represented in the World Economic Forum’s Inclusive Development Index (IDI) with 9 of the top 10 most inclusive advanced economies and 6 of the top 10 most inclusive emerging economies, but the degree of success varies widely.³

Human Capital Development
Human Capital is an important long-term investment of public money for the future of a country’s population and economy. Europe is not a leading region among developed countries in mathematics, sciences, or reading.⁴ While unemployment has been decreasing recently, it remains higher among low educated workers and young adults.

Gender Diversity
A contributing factor to the gender pay gap is the lack of women in senior positions within companies. On average, women in the European Union earn 16% less than men.⁵ One attempt to combat this issue in the UK is the Equality Act 2010’s requirement of companies to annually disclose their gender pay gap, effective April 2018.

Data Privacy
Data breaches are soaring in volume and complexity and institutional investors have started taking stronger interest in this area of data privacy risk. The EU Parliament’s General Data Protection Regulation⁶ to better protect the rights of its citizens came into force in 2018.

Technology & Artificial Intelligence (AI)
AI is expected to impact nearly all industries and geographies over the next few decades. The EU has more than 400,000 openings for Information Communication Technology Specialists, but there is a lack of digital skills.⁷ The European Commission has partnered with European industry to form the world’s largest civilian-funded robotics innovation programme.⁸

Top: Glacier tongue, Kyrgyzstan: Global warming has led to c25-35% surface loss in the country’s glaciers. © Getty Images.

Bottom: Data privacy – billions of us rely on robust information technology. © Getty Images.
Transparency, Disclosure & Regulatory Requirements
Corporations around the world are reporting with heightened Transparency to meet increased regulation and demand from shareholders regarding ESG activities. There are more than 400 sustainability reporting requirements in place globally. In Europe, 16 countries have both pension fund regulations related to ESG and government-imposed corporate ESG disclosures in place or in progress.

Board Accessibility and Accountability
Europe was the location of 20% of activism activity globally during the 2018 proxy season. Shareholders can hold directors accountable by elections. However, German companies have five-year terms; on the other end of the spectrum is Switzerland, which has a legal limit of one year.

Corporate Governance Diversity
Europe leads the global regions with 22.6% of board seats held by women. This can be attributed to various forms of gender quotas in place across 14 countries in Europe.

Emerging Markets
Despite relatively higher risk exposure to ESG issues, the lack of high-quality corporate disclosures has led to exaggeratedly low ESG scores and has so far restricted rigorous application of ESG to Emerging Markets portfolios. This is expected to improve with regulatory momentum and accurate corporate disclosures.

Fixed Income Sustainability Investing
ESG credentials have a high positive correlation with credit quality of fixed income instruments worldwide, studies suggest. Invesco Fixed Income’s research shows that, compared to the general emerging markets debt index, the ESG subset performed comparably in up markets and outperformed in down markets.

Demographic Shifts
Asset owners around the world are demanding more RI options. This is especially true in Europe with 82% of institutional asset managers and owners incorporating ESG into their investment decision-making process and 75% of retail investors saying that sustainable investing is more important today than five years ago.

Shift to the Social
Macroeconomic themes underscore the increasing importance of the “S” factor in RI. In 2017, 77% of the largest companies in each European country issued Corporate Social Responsibility reports. While demand continues to grow for exclusionary portfolios based on social values, asset managers must also demonstrate increasingly sophisticated approaches to RI combined with active ownership.

Source: HSBC Sustainable Financing Survey, global survey of issuers, investors, and NGOs conducted in 402 countries across 20+ countries conducted by East & Partners.
Source: European Commission 2018 Report on Equality between Women and Men in the EU.
Source: https://www.eu-robotics.net/sparc/about/index.html as of 13 September 2018.
Source: PRI responsible investment regulation database as of 27 August 2018.
Source: Schroders Global investor survey; Global perspectives on sustainable investing 2017, a global survey of retail investors.
Chicago City Hall rooftop garden – improving air quality and reducing urban heat. Chicago became the first city treasury in the world to sign onto the PRI in 2018.
Good governance

The importance of good corporate governance does not rely on empirical evidence for support, in Invesco’s view. Good corporate governance (strong and accountable boards, high performance cultures, strong risk frameworks, diverse boards, etc.) leads, we believe, to strong financial results.

As an institutional investor, our first mandate is to generate strong returns for clients. This is achieved by investing in high quality corporate issuers that demonstrate good corporate governance. As stewards of good governance, our fund management teams frequently engage with and visit portfolio companies, challenge boards, and drive for change where and when it is appropriate.

Invesco’s corporate stewardship programs focus on human capital development and our responsibility to help sustain a healthy, clean environment for future generations. We are committed to fostering greater transparency and continuous improvement with regard to responsible investment and corporate stewardship within our business.

Invesco’s Corporate Responsibility Committee (CRC) includes executive management sponsorship and representation, oversees and drives the company’s global corporate and investment stewardship programs and policy. The committee, working in coordination with global work streams, drives the strategy, oversight and governance of our internal programs and demonstrates Invesco’s broad executive leadership commitment to responsible investment. The CRC provides direction to Invesco’s investment and corporate stewardship leaders on core ESG topics, participation in industry advocacy and policy efforts and participation in charitable and community organizations to enhance our impact in sustainable global efforts.

Active ownership means that we take a long-term, high quality, high conviction investment approach. This involves purposeful engagement with corporates and proxy voting. The key inputs to this process include our ongoing engagement with corporates, their boards and advisory firms; our on-site due diligence and our own internal governance committees.
Global Invesco Proxy Advisory Committee

Guided by our philosophy that investment teams should manage proxy voting, Invesco has created the Global Invesco Proxy Advisory Committee (“Global IPAC”). The Global IPAC is a global investments-driven committee comprised of representatives from various investment management teams and Invesco’s Global Head of Responsible Investment.

The Global IPAC provides a forum for investment teams to monitor, understand and discuss key proxy issues and voting trends within the Invesco complex. Absent a conflict of interest, the Global IPAC representatives, in consultation with the respective investment team, are responsible for voting proxies for the securities the team manages (unless such responsibility is explicitly delegated to the portfolio managers of the securities in question). In addition to the Global IPAC, for some clients, third parties (e.g., U.S. mutual fund boards) provide oversight of the proxy process. The Global IPAC and Invesco’s proxy administration and governance team, compliance and legal teams regularly communicate and review this Global Proxy Policy and the operating guidelines and procedures of each regional investment center to ensure that they remain consistent with clients’ best interests, regulatory requirements, governance trends and industry best practices.

Given this Policy and the operating guidelines and procedures of each regional investment center (which are pre-determined and crafted to be in the best economic interest of clients), applying them to vote client proxies should adequately resolve any potential conflict of interest in most instances. As an additional safeguard, persons from Invesco’s marketing, distribution and other customer-facing functions may not serve on the Global IPAC.

Dedicated ESG focused groups

Broadly governed by the CRC, Invesco has focused ESG groups at various sectors of the organization to ensure there is a purposeful, holistic and impactful approach and integration towards responsible investing.

### Dedicated ESG focused groups

For illustrative purposes only.

<table>
<thead>
<tr>
<th>Corporate Responsibility Committee</th>
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<tbody>
<tr>
<td>Invesco Real Estate</td>
<td>Sustainability Focus Group</td>
<td></td>
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<tr>
<td>Invesco Fixed Income</td>
<td>ESG Focus Group</td>
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<tr>
<td>Global Investments Council</td>
<td>Sub-Committee on Responsible Investment</td>
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<tr>
<td>Cross Border Controversial Weapons Implementation Group</td>
<td>Cross Border Responsible Investment Implementation Group</td>
<td></td>
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<tr>
<td>Product Strategy</td>
<td>ESG Focus Group</td>
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</tbody>
</table>
Decentralized Proxy Voting

Invesco believes the voting of proxies should be managed with the same care as all other elements of the investment process. The proxy voting process at Invesco, which is driven by investment professionals, focuses on maximizing long-term value for our clients, protecting clients’ rights and promoting governance structures and practices that reinforce the accountability of corporate management and boards of directors to shareholders.

Invesco has an investor-led, investor-driven approach to proxy voting. We believe that aligning the investment decision with the proxy voting decision results in robust voting outcomes for our clients. One of the most important foundations of Invesco’s ESG efforts is a highly flexible proprietary proxy voting platform actively used in the US for over 4 years and rolled out globally in early 2017. This enables fund managers to vote in an efficient manner, increase transparency, share knowledge and effectively influence corporate practices and behaviors.

The Invesco fund manager portal was granted a US Patent by the USPTO and is awaiting patent in India. We recently integrated third party ESG research and ratings into the platform enabling our fund managers to make well-informed, thoughtful and independent proxy investment decisions.

In line with Invesco’s investor-led, investor-driven approach to ESG and responsible investment, we wanted our managers to make their own decisions in AGM votes, so that their votes reflect their own opinions. Most importantly, we wanted to create a global knowledge-share platform that could be leveraged by fund managers to build the institutional base of knowledge on corporate issuers. This is our differentiating democratic approach to proxy voting.

A dedicated proxy voting policy is in place that sets forth the framework for our corporate governance approach, broad philosophy and guiding principles that inform the proxy voting practices of Invesco’s investment teams around the world.

Invesco Proxy Voting 2018

<table>
<thead>
<tr>
<th>Meetings voted</th>
<th>99.96%</th>
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<tbody>
<tr>
<td>Markets</td>
<td>74</td>
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<tr>
<td>Meetings</td>
<td>18,500</td>
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<tr>
<td>Support of proxy access proposals</td>
<td>100%</td>
</tr>
<tr>
<td>Increase in support of board diversity proposals</td>
<td>14.7%</td>
</tr>
<tr>
<td>Increase in overall support of shareholder proposals</td>
<td>9.7%</td>
</tr>
<tr>
<td>Supported 2 degree change scenario proposals</td>
<td>21%</td>
</tr>
<tr>
<td>Supported all activist campaigns with 8% increase since last year</td>
<td>50%</td>
</tr>
<tr>
<td>Supported data security and privacy proposals</td>
<td>30%</td>
</tr>
</tbody>
</table>

2. Voting from 1 July 2016 to 30 June 2017.
4. Votes that are not cast as FOR may be “Against”, “Do Not Vote” or “Abstain”.
5. Frequency on advisory vote to approve the compensation of executives (Say on Pay).
6. Invesco Unit Investment Trusts; Invesco Senior Secured Management.

Stats excludes exceptions such as share-blocking, etc.
Invesco Proxy Voting 2018

By voting location

<table>
<thead>
<tr>
<th>Location</th>
<th>% Meetings 2018¹</th>
<th>% Meetings 2017²</th>
</tr>
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<tbody>
<tr>
<td>Americas</td>
<td>67</td>
<td>11</td>
</tr>
<tr>
<td>UK and Continental Europe</td>
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<td>11</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Others⁶</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

Management Support – Regional

<table>
<thead>
<tr>
<th>Region</th>
<th>% Support in-line with mgmt. 2018¹</th>
<th>% Support in-line with mgmt. 2017²</th>
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<tr>
<td>Global</td>
<td>88</td>
<td>88</td>
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<tr>
<td>Americas</td>
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<td>90</td>
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<tr>
<td>UK and Continental Europe</td>
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<td>83</td>
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<tr>
<td>Asia Pacific</td>
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<td>86</td>
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Environmental and social shareholder proposals voted FOR (%)⁴

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<tr>
<th>Proposal Type</th>
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<th>2017²</th>
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<td>Environmental Proposals</td>
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<td>59</td>
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<tr>
<td>Political Lobbying</td>
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<td>Board Diversity</td>
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<tr>
<td>GHG Emissions</td>
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<td>48</td>
</tr>
<tr>
<td>Climate Change</td>
<td>21</td>
<td>43</td>
</tr>
<tr>
<td>Labour Issues</td>
<td>11</td>
<td>8</td>
</tr>
</tbody>
</table>

Key shareholder proposals voted FOR (%)⁴

<table>
<thead>
<tr>
<th>Proposal Type</th>
<th>2018¹</th>
<th>2017²</th>
<th>2016³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proxy Access</td>
<td>84</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>Corporate Governance</td>
<td>66</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Separate Chair/CEO</td>
<td>53</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Compensation</td>
<td>56</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>Say on Pay</td>
<td>14</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>

2018 Voting instruction (numbers of proposals and %)¹

<table>
<thead>
<tr>
<th>Instruction</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstain</td>
<td>1,408</td>
</tr>
<tr>
<td>Against</td>
<td>14,680</td>
</tr>
<tr>
<td>For</td>
<td>179,979</td>
</tr>
<tr>
<td>One year⁶</td>
<td>1,130</td>
</tr>
<tr>
<td>Do not vote</td>
<td>5,197</td>
</tr>
<tr>
<td>Withhold</td>
<td>2,757</td>
</tr>
</tbody>
</table>

Management proposals voted AGAINST (%)

<table>
<thead>
<tr>
<th>Proposal Type</th>
<th>2018¹</th>
<th>2017²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Say on Pay</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>Director Related</td>
<td>6</td>
<td>15</td>
</tr>
</tbody>
</table>

¹ Numbers of proposals; % indicates voting instruction vote or voting instruction for proposal. ² Figures include results from previous years. ³ Results for 2016 are included for comparison purposes. ⁴ Environmental and social shareholder proposals include proposals on environmental, social, political, lobbying, board diversity, GHG emissions, climate change, and labour issues. ⁵ Votes equal to or larger than 1% of 2018 shareholders. ⁶ One year includes one-year related proxy access agreements and one-year related say on pay agreements.
Shareholder engagement

One of Invesco’s key priorities is ensuring robust outreach and engagement with shareholders and the owners of the company. We do this in order to:

- Understand governance practices and compensation programs
- Determine which issues are important to our shareholders and share our views on those issues
- Identify emerging issues that may impact our business and influence our practices

Invesco leadership in asset ownership strategies is intensifying and developing toward collaborative approach as we continue to engage with companies to understand and support their management of sustainability risks and opportunities. Invesco’s work with corporates is aimed not only at advocating for clarity and transparency, but also at promoting ambitious social and environmental targets globally, in line with the growing interest and accountability in sustainability-focused proxy voting policies and direct engagements, supported by investor organisations like the PRI, Stewardship Codes, regulations such as the EU’s Shareholder Rights Directive and initiatives like The Task Force on Climate-related Disclosures (TCFD) recommendations.

Truly active managers view their roles as business owners, not just as shareholders. The very spirit of responsible investment is the opportunity to engage, drive change and deliver strong investment returns for clients in a sustainable manner.

Industry approach on engagement (general market trends, %)
Source: Morrow Sodal’s 3rd Annual Institutional Survey 2018. For illustrative purposes only.

| When voting for directors | 51% place high importance on the quality of engagement with shareholders |
| When engaging with companies | 59% say that board skills and experience is an important factor |
| 73% subscribe to ESG research vendors |
| When engaging with companies | 54% say that climate risk disclosure is an important factor |
| When engaging with companies | 27% say that board diversity is an important factor |
| 60% will pursue engagement with companies that do not allow direct communication between directors and shareholders |
| 12% are willing to collaborate with other shareholders on initiatives |
### How we engage

1. Investor relations
2. Shareholder
3. CEO or Board of directors
4. Proxy Solicitors
5. Activists
6. Service providers

### Our fund managers driving engagement in 2018

- Direct corporate issuer engagement
- Letter writing campaign
- Engagement services vendor
- The implementation of ESG objectives into direct property management
- Support Sustainability Reporting proposals
- Collaboration with activist campaign

### Our practical guide to active ownership in listed equity

- Portfolio managers actively involved in engagement and proxy voting decisions
- Investment teams actively joining engagement meetings and roadshows
- Decentralized engagement platforms and frameworks
- Investor's discretion to influence portfolio holdings based on interaction, outcomes and voting
- Considering active ownership as a mechanism to assess potential future investments

---

### Shareholder engagement 2018 (%)

Source: Invesco, as of December 2018.

<table>
<thead>
<tr>
<th>Topic</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of engagements took place to discuss executive compensation topics (the most common topic)</td>
<td>89</td>
</tr>
<tr>
<td>Of times the company reach out to us directly</td>
<td>78</td>
</tr>
<tr>
<td>Of engagements took place to discuss environmental/sustainability topics</td>
<td>51</td>
</tr>
<tr>
<td>Of engagements took place to discuss corporate governance topics</td>
<td>47</td>
</tr>
<tr>
<td>Offered CEO/Chairman and Directors to speak to our portfolio managers, analysts and governance team</td>
<td>30</td>
</tr>
<tr>
<td>Of engagements took place to discuss social related topics</td>
<td>23</td>
</tr>
<tr>
<td>Increase in engagement requests received</td>
<td>22</td>
</tr>
<tr>
<td>Of engagements occurred by proxy solicitor firms</td>
<td>13</td>
</tr>
<tr>
<td>Of engagements conducted by activists</td>
<td>6</td>
</tr>
</tbody>
</table>
### Case studies

#### Proxy Voting case study 1

**Company**  
Energy/Oil, Gas and Consumable Fuels  
**Country**  
Australia  

**ESG consideration**  
Environmental  
- Climate change and advocacy.  

**Method/Research**  
- Annual meeting in 4th Quarter 2018.  
- Invesco was a <1% holder and not a rank holder.  

**Proxy Voting**  
- Proxy Proposal – Approve Contingent Resolution: Public Policy Advocacy on Climate Change and Energy by Relevant Industry Associations.  
- All Invesco locations voted AGAINST management.  
- Inquisitional Shareholder Services (ISS) and Glass Lewis (GL) recommended AGAINST management.  
- ISS: A recommendation FOR this proposal is warranted, as additional information regarding the company's public policy advocacy on climate change and energy policy could be beneficial for shareholders.  
- GL: The requested disclosure could help the company mitigate potential reputational risks.  

**Outcome**  
Proxy Proposal – Approve Contingent Resolution – Public Policy Advocacy on Climate Change and Energy by Relevant Industry Associations.  

46.32%  
FOR (AGAINST management) = Rejected.  
Invesco supported the shareholder proposal.

#### Proxy Voting case study 2

**Company**  
Energy/Oil, Gas and Consumable Fuels  
**Country**  
USA  

**ESG consideration**  
Environmental  
- Climate change and advocacy.  

**Method/Research**  
- Annual meeting in 2nd Quarter 2018.  
- Invesco was a Top 20 ranked holder with 1-2%.  

**Proxy Voting**  
- Shareholder proposal regarding climate change and energy advocacy report.  
- All Invesco locations voted AGAINST management.  
- ISS and GL recommended AGAINST management.  
- ISS: A vote FOR this resolution is warranted, as comprehensive disclosure of the company's methane reduction policies, including performance metrics and oversight mechanisms, would enable shareholders to better understand how the company is managing its methane emissions and assess the effectiveness of the company's related efforts.  
- GL: Shareholders would benefit from enhanced disclosure of the company's policies, actions, and plans related to methane emissions management.  

**Outcome**  

48.62%  
FOR (AGAINST management) = Rejected.  
Invesco supported the shareholder proposal.

#### Proxy Voting case study 3

**Company**  
Consumer Staples/Food Processing  
**Country**  
USA  

**ESG consideration**  
Environmental  
- Climate change and advocacy.  

**Method/Research**  
- Annual meeting in 1st Quarter 2018.  
- Invesco was a <1% holder and not a rank holder.  

**Proxy Voting**  
- Proxy Proposal – Shareholder Proposal to Implement a Water Quality Stewardship Policy.  
- Shareholder proposal regarding climate change and energy advocacy report.  
- All Invesco locations voted AGAINST management.  
- ISS and GL recommended AGAINST management.  
- ISS: The company does not disclose the policies, initiatives, or management mechanisms it has implemented to address runoff and other water quality issues from company-owned operations and contracted facilities. Also, there has been litigation as well as a number of controversies regarding water contamination from company-owned and contracted facilities.  
- GL: Adoption of this proposal would ensure that the company was mitigating significant risks to long-term shareholder value.  

**Outcome**  
Proxy Proposal – Shareholder Proposal to Implement a Water Quality Stewardship Policy.  

15.83%  
FOR (AGAINST management) = Rejected.  
Invesco supported the shareholder proposal.
Proxy Voting case study 4

Company
Information Technology/Software

Country
USA

ESG consideration
Social
- Gender Pay Equity.

Method/Research
- Annual meeting in 4th Quarter 2017.
- Invesco was a <1% holder and not a rank holder.

Proxy Voting
- Shareholder Proposal Regarding Report on Gender Pay Equity.
- ISS and GL recommended AGAINST management.
- ISS: A vote FOR this resolution is warranted, as the company lags its peers in addressing gender pay disparity at the company. By not keeping pace with its peers, the company is put at a competitive disadvantage in the recruitment and retention of employees.
- GL: Increased disclosure would allow shareholders to fully understand the steps the Company is taking to ensure equitable compensation.

Outcome

37.44%
FOR (AGAINST management) = Rejected.

Invesco supported the shareholder proposal.

Proxy Voting case study 5

Company
Consumer Staples/Food and Staples Retailing

Country
Canada

ESG consideration
Social
- Gender Pay Equity.

Method/Research
- Annual meeting in 3rd Quarter 2017.
- Invesco was a <1% holder and not a rank holder.

Proxy Voting
- Proxy Proposal – Adopt Policy as well as Objectives with Respect to the Representation of Women on the Board and in Management Positions.
- Shareholder Proposal Regarding Report on Gender Pay Equity.
- ISS and GL recommended AGAINST management.
- ISS: A vote FOR this resolution is warranted, as shareholders would benefit from additional information about how the company is ensuring that female candidates are included among prospective board nominees and executive officer appointments.
- GL: Adoption of this proposal would ensure the board is considering the widest possible pool of candidates.

Outcome
 Proxy Proposal – Adopt Policy as well as Objectives with Respect to the Representation of Women on the Board and in Management Positions.

10.19%
FOR (AGAINST management) = Rejected.

Invesco supported the shareholder proposal.

Proxy Voting case study 6

Company
Consumer Discretionary/ Internet and Direct Marketing Retail

Country
USA

ESG consideration
Governance
- Separate Chair and CEO.

Method/Research
- Annual meeting in 2nd Quarter 2018.
- Invesco was a Top 20 ranked holder.

Proxy Voting
- Proxy Proposal – Require an Independent Board Chairman.
- Shareholder Proposal to Require Independent Board Chairman.
- All Invesco locations voted AGAINST management.
- ISS and GL recommended AGAINST management.
- ISS: A vote FOR this proposal is warranted as the lead director role does not present a sufficient counterbalance to a combined CEO/chairman position. Specifically, the lead director’s role lacks approval authority over meeting agendas, schedules and materials sent to the board and it is not disclosed if the lead director would be available to engage with shareholders upon request. Further, the proposal is non-binding and it does not necessarily require an immediate change in the board leadership structure.
- GL: An independent chair is better able to oversee the executives of a company and set a pro-shareholder agenda.

Outcome
 Proxy Proposal – Require an Independent Board Chairman.

25.83%
FOR (AGAINST management) = Rejected.

Invesco supported the shareholder proposal.
Our commitment to PRI

Invesco became a signatory to the Principles for Responsible Investment in 2013. The PRI is the largest and leading global responsible investment network of investment managers and asset owners. Invesco joins several other peer organizations in our support of the PRI initiative and material ESG topics.

The PRI is based on six key Principles that serve as a foundational framework for large diversified investment managers to establish a well-articulated and supportive approach to ESG issues. As a signatory, Invesco fully supports the Principles for Responsible Investment:
- We will incorporate ESG issues into investment analysis and decision-making processes.
- We will be active owners and incorporate ESG issues into our ownership policies and practices.
- We will seek appropriate disclosure on ESG issues by the entities in which we invest.
- We will promote acceptance and implementation of the Principles within the investment industry.
- We will work together to enhance our effectiveness in implementing the Principles.
- We will each report on our activities and progress toward implementing the Principles.

The PRI carries out the annual assessment based on how a signatory has progressed year-over-year and relative to peers. The investment categories are evaluated using six performance bands (A+, A, B, C, D, and E), where A+ distinguishes the top scoring signatories, representing a score of 95% or above.

In each of the modules listed, Invesco maintained our score from 2017, reflecting our global commitment to the Principles for Responsible Investment.

According to PRI, the assets under management of its signatories have grown from less than US$7 trillion at PRI’s launch in 2006 to more than US$82 trillion as of 2018, more than three-quarters of the global asset management industry’s assets.1

Invesco is committed to adopting and implementing responsible investment principles in a manner that is consistent with our fiduciary responsibilities to clients. Invesco supports the Principles for Responsible Investment and recognizes the importance of considering environmental, social and governance issues as part of a robust investment process. We believe that our policy, processes and overall company approach comply with the spirit of the PRI.

Invesco’s Responsible Investment strategy is client focused and investor driven, ensuring broad execution across the Invesco platform. Invesco is an authentic leader and trusted partner to clients, shareholders, industry and market constituents with a responsive and proactive approach to growing market, regulatory and internal demand.

A+ results in PRI assessment: Strategy & Governance.

2018 Summary scorecard
Source: 2018 Assessment Report for Invesco Ltd., PRI.

<table>
<thead>
<tr>
<th></th>
<th>2017 Invesco Score</th>
<th>2018 Invesco Score</th>
<th>2018 Median Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy &amp; Governance</td>
<td>A+</td>
<td>A+</td>
<td>A</td>
</tr>
<tr>
<td>Direct &amp; Active Ownership Modules</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listed Equity - Incorporation</td>
<td>A</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Listed Equity - Active Ownership</td>
<td>A</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Fixed Income - SSA</td>
<td>A+</td>
<td>A+</td>
<td>B</td>
</tr>
<tr>
<td>Fixed Income - Corporate Financial</td>
<td>A</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Fixed Income - Corporate Non-Financial</td>
<td>A</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Fixed Income - Securitised</td>
<td>E</td>
<td>E</td>
<td>C</td>
</tr>
<tr>
<td>Property</td>
<td>A</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

1 Principles of Responsible Investment (unpri.org).
SDGs in Active Ownership Working Group
Invesco is a part of the PRI working group for Sustainable Development Goals (SDGs) helping PRI provide research, education and facilitate collaboration, to help investors align their responsible investment practices with the broader sustainable objectives of society - as currently best defined by the SDGs.

PRI Fixed Income Advisory Committee (FIAC)
Invesco is on the FIAC advising on Fixed income strategy including goals and objectives for the work stream as a whole, and for on-going and distinct projects.

PRI Macroeconomic Risks Advisory Committee
Invesco assists PRI with its objective to explore long-term macroeconomic risks (such as slow global growth, low interest rates, and emerging societal and technological trends), how these will have an impact on ESG issues (such as inequality, employment and human rights), and in turn, investors and the financial system - and identify and provide practical ways that investors can respond to these risks.

PRI ESG Engagements Advisory Committee
As part of this committee, Invesco within the PRI Executive is responsible for coordinating collaborative engagements with listed companies on ESG topics, developing guidance documents, briefings or collaborative initiatives on ESG issues, and supporting the participation of signatories in engagements promoted on the PRI’s Collaboration Platform.

PRI Advisory Group for Plastic
This committee will raise investor’s awareness and understanding of the impacts, risks and opportunities related to plastic, explore the materiality of plastics to companies across the plastic value chain and provide input on resources that PRI develops to support signatory understanding of the issue.

PRI Global Policy Reference Group
The purpose of the group is to share policy developments, questions, concerns and information on policy engagement, and to ensure that PRI signatories policy engagement is current and aligned and supports responsible investment.

Cambridge Judge Business School Advisory Board
Invesco is on the Advisory Board of the Cambridge Judge Business School providing valuable advice on strategy and policy, and plays a critical role in the School's development by providing top-level connections and collaboration.

UKSIF Board of Directors
Committed to growing sustainable and responsible finance in the UK for a fair, inclusive and sustainable financial system that works for the benefit of society and the environment, Invesco’s Head of ESG, Henley Centre is a non-executive member of the UK Sustainable Investment and Finance Association Board of Directors.

SASB Standards Advisory Group
Advise SASB on emerging issues that should be considered in the standards development process.
Invesco believes that focusing on Sustainable Development can be helpful in aligning client priorities with investment opportunities. Invesco further applies the UN’s 17 Sustainable Development Goals both as a responsible global employer and as a responsible investor. Invesco’s authentic approach and commitment to SDG’s was published in Reuters Plus’ “Business Debate on SDG in Business” initiative.

Although there are many approaches and action items existing within Invesco with an indirect influence on sustainable development from now through to 2030, Invesco’s responsible investment team is currently developing a focused concept framework for SDG integration into its investments.

**Concept framework for SDG integration**

The current concept framework is divided into several parts:

1. **Linking operational ESG risks to the SDGs**
   Categorize factor level ESG scores into group scores such as below, linking the groups to one or more SDGs.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>Employees</td>
</tr>
<tr>
<td>Contractors &amp; Supply Chain</td>
<td>Customers</td>
</tr>
<tr>
<td>Products &amp; Services</td>
<td>Product Liability</td>
</tr>
</tbody>
</table>

   Outperformance of portfolio social score (product liability) vs. that of the benchmark, for example, would indicate that the portfolio is doing a good job from a responsible consumption standpoint (goal #12).

2. **Linking company level products and services to the SDGs**
   This approach involves estimating (or using third party estimates) a particular company’s revenue exposure to sustainable impact solutions and calculating portfolio and benchmark revenue exposure to sustainable impact solutions.

3. **SDG to portfolio holding mapping**
   Based on investment team’s judgement, each portfolio and benchmark holding could be mapped to one or more SDGs if possible (not all holdings would have a link to the SDGs). Portfolio exposure could then be compared with benchmark exposure one SDG at a time.

4. **Benchmark relative portfolio exposure by region**
   A portfolio with higher relative ESG score and higher relative exposure to the emerging/non-developed markets may signal positive benchmark relative overall SDG performance.

---

**UN Sustainable Development Goals**

For illustrative purposes only.
**SDGs – Corporate practices**

Invesco is a part of PRI Investor working group for plastics:
- To raise investor awareness and understanding of the impacts, risks and opportunities surrounding plastic
- To explore the materiality of plastic to companies across the plastic value chain
- To provide input on resources that PRI develops to support signatory understanding and engagement on plastic

<table>
<thead>
<tr>
<th>Goal/topic</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 Poverty</strong></td>
<td>- Active Ownership - supporting investees where board motions enables SDGs.</td>
</tr>
</tbody>
</table>
| **5 Gender equality** | - Japanese strategy focused on Women  
- Signing up the UK Charter for gender equality  
- Invesco Women's Network  
- CSR |
| **6 Clean water & sanitation** | - Invesco received certification to the Carbon Trust Standard (UK) where we exceeded our global objective of not only achieving the triple standard, we additionally achieved quadruple certification to the Standard. Invesco has achieved an actual carbon reduction of 36.9%; a waste reduction of 11% with zero waste to landfill status and a water reduction of 29.6% over the 2-year compliance period.  
- Our Invesco Quantitative Strategies team conducts (in coordination with an external vendor) targeted engagement on key ESG themes, including water scarcity |
| **7 Affordable & clean energy** | - Invesco Real Estate team's holistic ESG approach includes investing in sustainable buildings with goals towards clean energy  
- Procurement of green renewable energy in the UK, significantly reducing our carbon impact in the UK. Along with installation of electric car charging points in Henley |
| **13 Climate action** | - Invesco is a signatory of CDP  
- 21% support to climate risk S/H proposals  
- Invesco Cares & Green Teams - Environmental events this year have included; participation in world environment day, recycling days, tree plantations and engagement with local groups and communities on topics such as traffic related emissions reduction. Additionally in excess of 500 employee voluntary hours were dedicated last year to environmental projects, including shoreline clean-ups, street and park cleans in North America alone |
| **14 Life below water** | - PRI Investor working group for plastics  
- UN Clean Seas campaign: we have committed to removing single use plastic water bottles from our corporate properties, we have now removed in excess of 4 tonnes of single use plastic from our properties (annually) |
| **17 Partnership for the goals** | - Invesco on UN SDG working group committee  
- Global ISO 14001 recertification (14 offices globally, meeting the requirements of the new ISO 14001 Environmental Management Standard) |
Lost in translation – In search of authenticity in ESG Integration
A joint paper written by Danske Bank and Invesco Asset Management highlighting the vital loss when “ESG integration” is disconnected from the investment process: When it is hijacked by screening, scoring, overlaying, filtering or any other form of framework or tool – something vital is lost in translation. We encourage a sincere search for authenticity in ESG integration and call for clarity in the approaches, strategies and methods used by investors and asset managers in the diverse space of responsible and sustainable investing.

Responsible investing in focus: Emerging market bonds
Exploring a wholly different approach to responsible investing, focusing on emerging market bonds, our analysis in the paper addresses three questions:
- Can an ESG-focused fundamental analysis improve the assessment of investment risk?
- What is the impact of ESG investing objectives on returns?
- Is responsible investing likely to have an impact on the world and help lead to better future outcomes?

Green China
Going green has emerged as a key component of China’s current growth plans as the country sets its sights on addressing pollution concerns and ensuring a sustainable future. Ken Hu, Chief Investment Officer, Fixed Income, Asia Pacific published this whitepaper in October that examines the country’s growing appetite for green finance and the emerging investment opportunities.

Managing the migration of Environmental, Social and Governance to fixed income
As ESG becomes embedded in equities processes, fixed income often follows. Adoption of ESG in fixed income is expected to rise rapidly, driven in part by pension fund stakeholders.

Asset managers will do the heavy lifting
As responsible investment is continuously gaining in importance, the macro thematic landscape on environmental, social and governance topics is evolving. Change is driven by numerous stakeholders: regulators, institutional asset owners, retail client demand, data vendors, NGOs, initiatives and advocacy networks, such as the PRI. The macro themes can become a blueprint for how asset managers determine their focused responsible investment (RI) strategy.

“What does ‘ESG integration’ really mean? We say that the only people who can deliver a genuine answer are the asset managers tasked with buying and selling securities.”

An extract from ‘Lost in translation – In search of authenticity in ESG Integration’ whitepaper
Accommodating ESG objectives through factor investing

Responsible investing (RI) has evolved from a niche consideration to a mainstream focus as investors increasingly set objectives beyond pure returns. However, the understanding of how best to implement it has not yet caught up with the enthusiasm. As interest in this area grows, factor investing should emerge as a preferred approach to implement RI strategies. It enables managers to accommodate unique ESG objectives without constraining performance, provides flexibility to make changes as new information becomes available and facilitates an objective comparison between investment options with clarity and purpose.

Broad diversity as a driver of meritocracy

In this whitepaper, we trace the story of diversity in the workplace over the course of almost 50 years. We begin by revisiting the ground-breaking research that highlighted its contribution to team performance and conclude by exploring the millennial generation’s unprecedented and increasingly influential commitment to the cause. We pay particular attention to the emerging notion of diversity of thought, which is a cornerstone of Invesco’s corporate ethos. We seek to explain how, in tandem with an inclusive culture that allows all voices to be heard, such an approach can underpin a meritocracy that benefits a business and its stakeholders.

Active ownership drives responsible investment stewardship

Environmental, social and governance (ESG) issues in investing have strongly grown in importance for investors across the globe and are now considered a mainstream consideration. ESG considerations are incorporated in a variety of ways, including active ownership as an overlay, which has become a very effective mechanism to drive responsible investment and strong investment stewardship, and encourage the companies in which we invest to adopt best-in-class ESG practices. At the same time, research indicates that performance is generally on par and in some cases can deliver stronger returns and reduce volatility.

A map for the future of the Euro: Navigating political conflicts:

Co-authored by Jacek Rostowski, a former Deputy Prime Minister and Finance Minister of Poland, and Arnab Das, Global Market Strategist and member of Invesco’s Global Thought Leadership team, the series examines Europe’s troubled past, uncertain present and likely future. The first paper, 'A Map for the Future of the Euro: Navigating Political Conflicts', focuses on the tensions currently at play as the European project attempts to find a way forward in the era of Brexit, Trump and Putin.

“Many investors remain unsure how to implement responsible investing despite growing interest. Factor investing provides a customizable approach that can accommodate unique ESG objectives. Potentially, adverse impact of ESG screening constraints can be neutralized by factor-based strategies.”

An extract from ‘Accommodating ESG objectives through factor investing’ whitepaper
Invesco has a centralized team of dedicated RI professionals that deliver and equip investment teams with a best-in-class support platform of tools, research, resources and training. Invesco leverages multiple ESG vendors providing in depth ESG research and systematically delivers ESG data to our global network of more than 700 investment professionals.

We provide our investment teams with access to research, resources and training around ESG criteria and how they can be incorporated into a robust investment process. We ensure they have the tools necessary to allow them to assess and evaluate specific ESG criteria at investee companies both within and outside of the proxy voting process.

Summary of our 2018 Consultative Advisory Services and Industry Engagements

Client/Investment engagement
- 54 client engagements regarding our ESG capabilities around the globe
- Invesco Sovereign Initiative Group (Hong Kong): ESG roundtable discussion
- Invesco Factor Investing Summit (Vienna): “ESG in Factor Investing”
- UK Institutional Investment Summit (Cambridge): “Responsible investing comes of age”
- Schroders & Invesco Seminar (Amsterdam): “ESG according to Invesco and the application to bonds”
- Invesco Eyes On 2019 (Zurich): “How to integrate ESG in Fixed Income”
- 2018 Invesco Asia Pacific Institutional Client Conference (Shanghai): “ESG investing and the way forward”
- Invesco Asia Pacific Institutional Client Conference (Beijing): “Does responsible investing matter?”

Industry Engagement
- CIO (Chief Investment Officer) Summit (NYC): “Getting ESG Right.”
- The Rights & Responsibilities of Institutional Investors (Amsterdam): “Artificial Intelligence” and “Human Capital Development, Data Privacy and Business Ethics”
- National Association of Government Defined Contribution Administrators Annual Conference (Philadelphia): “ESG - Environmental, social and governance investment criteria”
- Wo+Men’s Leadership Council (Cambridge): “Career success: building a sustainable pipeline”
- Geneva Centre for Philanthropy & Cambridge University’s Centre for Endowment Asset Management (Geneva): “Institutional Investors engagement and other ESG policies: why and how?”

Responsible investment team mandate
For illustrative purposes only.

<table>
<thead>
<tr>
<th>Practice</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Governance</td>
<td>Management of firm-wide RI strategy, policy and capabilities. Govern firm level and portfolio level RI/ESG reporting and disclosures requirements.</td>
</tr>
<tr>
<td>Investments Engagement</td>
<td>Advise global investment teams on ESG integration frameworks, research and analysis.</td>
</tr>
<tr>
<td>Industry Engagement</td>
<td>Promote Invesco as an authentic differentiator in RI with international market outreach and industry participation.</td>
</tr>
<tr>
<td>Client Engagement</td>
<td>Advisory and consultation to client-facing teams with client engagement.</td>
</tr>
</tbody>
</table>
Shanghai, China; one of many key global locations Invesco has promoted ESG and responsible investment.
Responsible investment resources

Our Global ESG Risk Repository is Invesco’s ESG knowledge engine and was built to comprise ESG reports and presentations, information on Invesco’s ESG capabilities, corporate stewardship, ESG fund scores and oversight, ESG industry information, ESG issuer and industry ratings, and the ESG watchlist report.

Invesco’s Custom Portfolio ESG Reporting capability
To cater to our reporting needs, we have developed a thorough ESG Reporting capability that summarizes a portfolio’s ESG profile for our investment teams to be able to communicate with both existing and prospective clients. The simple flyer meaningfully captures the ESG, corporate governance scores, weights and rating exposures along with SDG, global compact exposures at a portfolio level.

ESG Risk Repository
Our global risk repository is a SharePoint inventory of knowledge and information on ESG topics that helps our global investment teams access ESG reports, presentations, industry insights, ESG capabilities and share best practices on products and vendor data sources. The Risk Repository acts as a main source of information to many of our investment teams to make reliable investment decisions.

ESG Illuminate
The Illuminate platform is a web-based tool that integrates fund holdings with ESG scores and underlying company level ESG details. The tool allows fund managers to screen for new ideas based on ESG factors and to analyze fund-level ESG characteristics. The Illuminate platform is customizable based on an investor’s preferences (portfolio asset class, investment style, geography, etc.) and shows how holdings measure up in terms of ESG and calculates portfolio ESG scores, at both the fund and sector level. It includes a list of the most prominent metrics as identified by an investment team leading the tool’s development.

Watchlists
We also enable our investment teams access the critical watch list at a one-stop location on our SharePoint that allows them to effectively track and manage the companies in their portfolios. Our current Watchlists include:
- Global Compact
- ESG + Corporate Governance
- ESG laggards
- Severe ESG risk
- Product involvement

Responsible investing – Invesco’s global footprint
As of 31 December 2018.

Chief Executive Officer
Senior Managing Director, Investments
Investments (ISS)

Global Head of Responsible Investment

North America
- Senior Responsible Investment Analyst
- Responsible Investment Analyst
- Senior Proxy Governance Administrator
- Proxy Governance Administrator

Europe
- Head of Responsible Investment Client Strategy EMEA
- Senior Responsible Investment Officer (open)

Asia Pacific
- Senior Responsible Investment Specialist (2)
- Assistant Manager, Proxy RI Admin
- Senior Proxy RI Admin
- Reporting Analyst
- Proxy RI Admin (4)
Our publications
- Annual Investment Stewardship and Proxy Voting Report
- Annual Corporate Social Responsibility Report
- Thought leadership papers
- Invesco.com/ESG
- Invesco.com carousel
- Global News of Note
- Marketing Express
- Watchlist

Interviews/articles
- Newsmanagers.com: We have a democratic approach to voting in general assembly
- PensionPro: The investor's voice sounds increasingly louder
- HospitalityInside.com: The most sustainable hotel in Europe: QO Amsterdam proves how to use material and resources intelligently
- HospitalityInside.com: Between drivers and laggards: Invesco Roundtable describes contrasts in the sustainability discussion
- Institutional Money: “Invesco launches its ESG multi-asset fund”
Invesco Real Estate launched a strategy excluding military related investments

Invesco Quantitative Strategies launched a fund with Positive/Best-in-class Screening ESG strategy

Invesco ETFs launched two ESG thematic ETFs

Invesco Direct Real Estate began asset based ESG integration

Invesco Fundamental Equities offers a fund excluding alcohol, tobacco and gambling

Invesco Quantitative Strategies & Invesco Fixed Income launched a co-managed fund with a combination of best-in-class, positive, negative and exclusionary ESG strategies

Invesco Japan launched a fund using a Womanomics Score

The PRI Principles were launched by the UN at the New York Stock Exchange

The UK Stewardship Code was first published
Invesco signed on to the Japanese Stewardship Code
Invesco ETFs Proxy voting transitioned to Invesco
Invesco’s first PRI report submitted for period ended 2014

Invesco Canada began voting on FM Portal
FRC (Financial Reporting Council) began tiering signatories and Invesco Perpetual was assessed as Tier 1 for our robust process and adherence to stewardship code principles
Invesco is ranked #1 in the Capital Markets industry out of 19 companies
'A' rated by PRI for 2016 in Fixed Income, Direct Property, Proxy Voting
Invesco Quantitative Strategies launched a fund with a global focus on social and environmental investing
Invesco ranked #1 in amLeague's Global Low Carbon Mandate for April, July, and September 2016
Invesco Real Estate has three strategies ranked #1 in their peer group for the 2016 Global Real Estate Sustainability Benchmark assessment (GRESB)

Council of Experts Concerning the Japanese version of the Stewardship Code published the Principles for Institutional Investors (Japan's Stewardship Code)
Invesco US began voting proxies on Invesco’s proprietary Fund Manager (FM) Portal
Invesco signed on to the Japanese Stewardship Code
Invesco ETFs Proxy voting transitioned to Invesco
Invesco’s first PRI report submitted for period ended 2014

Named to PRI Fixed Income Advisory Committee
Named to PRI Macroeconomic Risks Advisory Group
Invesco collaborates with Danske Bank on Whitepaper
'A+’ rated by PRI in 2018 for Strategy & Governance and Fixed Income SSA

Invesco became a PRI signatory
Invesco signed on to the UK Stewardship Code
Invesco US Proxy Advisory Committee (IUPAC) established
Invesco Proxy Advisory Committee (IPAC) expanded to global scope
Established a global ESG research vendor
Commenced global distribution of an ESG watchlist

Any reference to a rating, ranking or an award is not a guarantee of investment performance and is not constant over time.
Investment risks

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

Property and land can be difficult to sell, so investors may not be able to sell such investments when they want to. The value of property is generally a matter of an independent valuer’s opinion and may not be realised.

Important information

This document is written, unless otherwise stated, by Invesco professionals. The opinions expressed herein are based upon current market conditions and are subject to change without notice. This document does not form part of any prospectus. Any reference to a ranking, a rating or an award provides no guarantee for future performance results and is not constant over time. All data is as of 31 December 2018 and sourced by Invesco unless otherwise noted.

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