Whitepaper
Responsible investing and active ownership

This document is intended only for Professional Clients and Financial Advisers in Continental Europe (as defined in the important information); for Qualified Investors in Switzerland; for Professional Clients in Dubai, Ireland, the Isle of Man, Jersey and Guernsey and the UK; for Institutional Investors in the United States and Australia, for Institutional and/or Accredited Investors in Singapore, for Professional Investors only in Hong Kong, for Qualified Institutional Investors, pension funds and distributing companies in Japan; for Wholesale Investors (as defined in the Financial Markets Conduct Act) in New Zealand and for Accredited Investors as defined under National Instrument 45-106 in Canada.

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Introduction

The consideration of environmental, social and governance (ESG) issues in investing has grown in importance and developed in its implementation in recent years. Different terms, often used interchangeably, are used to express the various approaches: these include responsible investing (the term preferred at Invesco) and sustainable investing.

In Europe and Australia/New Zealand more than half of all professionally managed assets take into account such considerations; in North America the proportion is lower but rising quickly.[1] ESG considerations cover a wide range of factors: from air pollution to audit committee structures; from biodiversity to bribery; from child labour to climate change.

In the past, ESG issues typically resulted in the exclusion of certain industrial sectors (in armaments, tobacco and alcohol companies, for example) or certain countries from investment portfolios. While such 'exclusion' techniques are still widely used, the incorporation of ESG considerations in investment decisions is now done in a variety of ways.

The hallmark of Invesco's ESG approach is responsible investing and active ownership. In our function as fiduciaries for our clients, we see our role as business owners rather than shareholders. We believe that active ownership is the singular most effective mechanism to drive responsible investment and strong investment stewardship.

That 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.

In this Whitepaper we consider the different approaches to ESG taken in the investment industry, the evidence of the impact of adopting ESG criteria on investment performance and the approaches to ESG investing offered by Invesco.

What is ESG investing?

Investing according to ESG principles involves the consideration of environmental, social and governance issues when selecting companies and countries in which to invest. Figure 1 shows a selection of the issues commonly considered under each of the three headings, but the list is not exclusive. ESG criteria can cover many different aspects of corporate behaviour, with as many as 250 different ESG criteria assessed by EIRIS (Ethical Investment Research Services), for example.[2]

The assessment can be a binary one – acceptable or not – or one based on a scale. For example, EIRIS use a ranking from A (the best scorer in the selected universe of companies) to E (the worst). These are then weighted together to give an overall score.

Figure 1
Selected ESG factors

Environment	Social	Governance
- Environment impact and risk management - Environment performance - Environment solution companies - Climate-change impact and risk management - Biodiversity impact and risk management - Water scarcity and risk management - Sector-specific issues, e.g. chemicals, timber, tar sands - Allegations of environmental pollution or damage to biodiversity	- Human rights - Supply-chain labour standards - Relations with customers and suppliers - Relations with employees - Stakeholder engagement - Community involvement - Sector-specific issues, e.g. access to medicines - Allegations of breaches of human rights norms and labour standards	- Board practice and structure - Anti-bribery practices - Codes of ethics - ESG risk management - Board-level responsibility for stakeholders - Board-level gender diversity - Allegations of bribery

Source: EIRIS global sustainability ratings as at 17 May 2017.

Has ESG investing become more widely adopted?

One indicator of the increasing awareness of ESG issues is the growing number of institutional investors that are signatories to the United Nations-supported Principles for Responsible Investment (UN PRI). Invesco became a UN PRI signatory in 2013. 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 US$62 trillion as of April 2016 (Figure 2), more than three quarters of the global asset management industry's assets.[3]

As signatories, institutional investors have a duty to act in the best long-term interests of their beneficiaries. In that fiduciary role, signatories believe that ESG issues can affect the performance of investment portfolios and recognise that applying six key ESG principles may better align investors with broader objectives of society. The six key principles are: (i) to incorporate ESG issues into investment analysis and decision-making; (ii) to be active owners and incorporate ESG issues into ownership policies and practices; (iii) to seek appropriate disclosure of ESG issues; (iv) to promote acceptance and implementation of the principles in the industry; (v) to work together to enhance effectiveness in implementing the principles and (vi) to report on activities and progress towards implementing the principles. The six principles are, however, voluntary and aspirational.

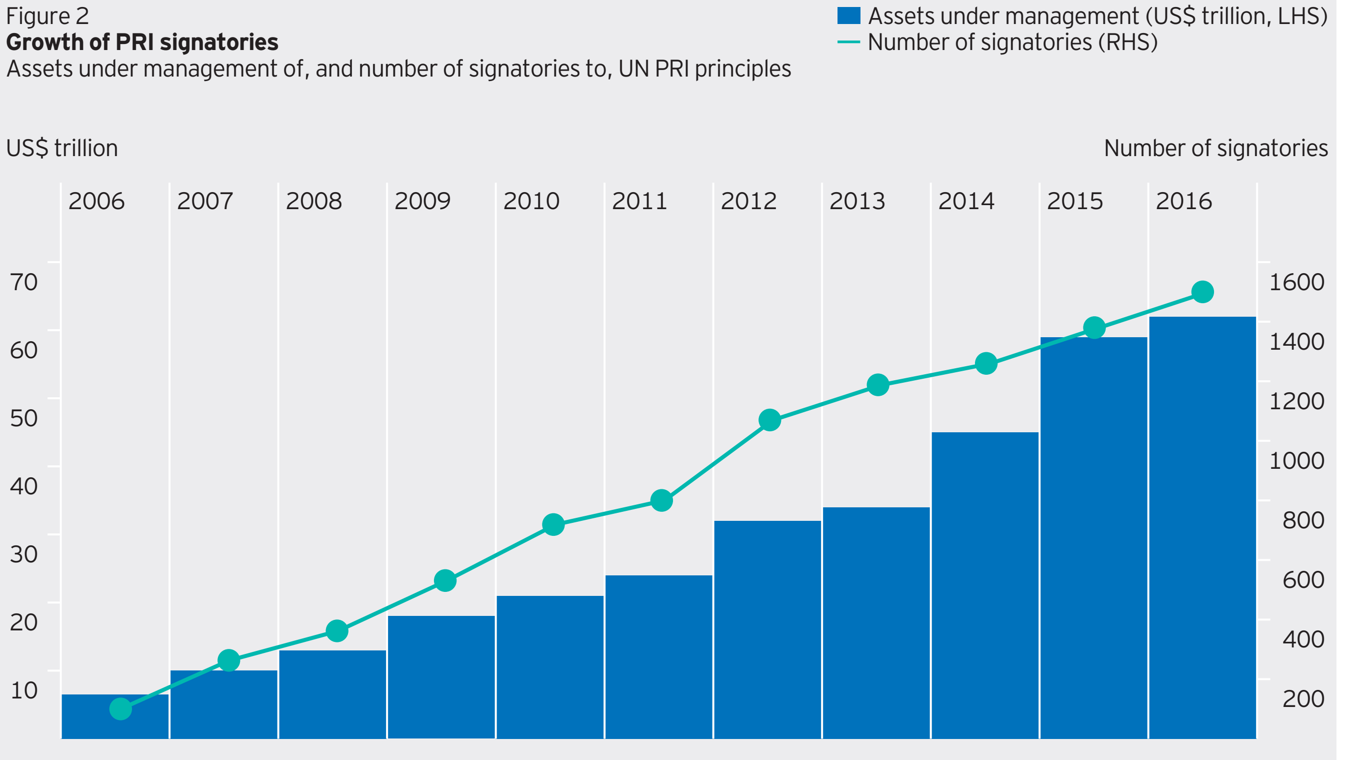
ESG in context

Taking ESG factors into account is certainly not a new phenomenon. They have been evident at the country, corporate and sector level for many years. In the 1970s, selective disinvestment from South Africa because of the apartheid system became a global phenomenon. Other countries have been subject to divestment pressures and investment boycotts including Iran and Russia. There are about 150 countries with stock exchanges, but about half of them are omitted by all the major index providers.[4]

Many faith-based charities have long-prohibited investment in areas such as gambling, armaments, alcohol and tobacco. The 'negative externalities' associated with consumption and production decisions – the fact that consumers and producers may not take into account all the costs of their activities (such as pollution) were recognised in the work of British economist Pigou[5] as long ago as the early twentieth century. Corporate governance issues – in particular, the attention which companies pay to the interests of their shareholders – have been a focus of many active fund managers for a long time. So, in an important sense ESG considerations are not new.

Recently, however, there has been a growing view that owning shares or bonds in a company or investing in a country implies a complicity with the actions of the company or country. A defining moment in the evolution of that idea was 2003 when a committee which the Norwegian government appointed to propose ethical guidelines for the Government petroleum Fund advised that: "owning shares or bonds in a company that can be expected to commit gross unethical actions may be regarded as complicity in those actions. The reason for this is that such investments are directly intended to achieve returns from the company, that a permanent connection is thus established... with the company, and that the question of whether or not to invest in a company is a matter of free choice."[6] On this view, shareholders in a company share in the responsibility for the firms' actions and so are complicit when errors are made.

Figure 2
Growth of PRI signatories
Assets under management of, and number of signatories to, UN PRI principles



Source: UN PRI as at 7 November 2016. Latest data available.

Why now?
That means when events such as Deepwater Horizon (BP's rig explosion), Bhopal (Union carbide's gas leak) and Fukushima (Tokyo Electric Power's nuclear power station meltdown) happen, it is shareholders in those businesses that can be seen as partly responsible, even though they will not be legally liable. The responsibility to hold the companies accountable for their actions is one which is increasingly being demanded by the beneficial owners of the assets held by investment companies. It is not just such disastrous events that are of concern. Fair pay, the use of child labour, working conditions and low tax payments by multinational companies have all received much public attention and have come to be regarded as reasons for not investing in certain companies.

The pressures on the investment management industry to take these factors into account were highlighted in a recent survey by CFA Institute (see Figure 3). The primary reason for taking ESG issues into account is that it helps to manage investment risks. That risk can be business risk – a drop in a company's asset value or earning ability as a result of a breach of ESG standards; a risk from accounting irregularities; or a risk of a or a risk of the company's equity being valued more cheaply (trading at a lower price/earnings multiple, for example).

The fact that clients/investors demand a consideration of ESG issues, not least because of such risks, was the second highest-ranked reason.

Figure 3
Why consider ESG issues?

Survey response	**Respondents (%)**
To help manage investment risks	63
Clients/investors demand it	44
ESG performance is a proxy for management quality	38
It's my fiduciary duty	37
To help identify investment opportunities	37
My firm derives reputational benefit	30
Regulation requires it	7
Other	5

Source: CFA Institute as at 7 November 2016. The results are from the survey of CFA Institute members on ESG issues on 26 May 2015. 44,131 members who are portfolio managers and research analysts were invited via email to participate in an online survey. The survey closed on 5 June 2015; 1,325 valid responses were received.

The concept of the universal owner
Some asset management companies are very large and, especially when they have a substantial investment in passive, index-tracking funds, they can be regarded as essentially 'owning the entire market' or, in a term which has received increasing popularity, they become 'universal owners'. They are then exposed to the risk that some investments in their portfolio may affect the returns of other investments. For example, some companies might benefit by not being responsible for the costs of the pollution they generate and this, in turn, will affects other companies held by the universal owner. This is often cited as a reason why universal owners should engage with investee companies and policymakers.

What approaches to ESG investing are used?
In recent years a seven-way classification of ESG strategies, set out by the Global Sustainable Investment Alliance (GSIA), has become generally accepted.[7] The seven strategies are described briefly in Figure 4 and the latest estimates of the assets under management in each category are shown in Figure 5. The first three of the seven strategies involve the use of screening techniques.

1. **Negative/exclusionary screening**
   Exclusionary screening is the oldest and perhaps still the best-known ESG method. It refers to avoiding entirely the securities of companies or countries which do not meet specific ESG criteria. This can mean the exclusion of companies in the alcohol, tobacco, gambling or armaments sectors, for example; or the exclusion of countries because of breaches of human rights or environmental standards. Entire sectors or countries are excluded. Such exclusion can be a legal requirement or one stipulated in the investment principles of an organisation. Negative/exclusionary screening is the most widely-adopted of the seven strategies according to the GSIA's 2016 report (see Figure 5).

2. **Positive/best-in-class screening**
   Best-in-class screening refers to preferring companies with better or improving ESG performance relative to their sector peers. It can be implemented based on the level or the change in ESG performance. Best-in-class methodology is sometimes referred to as positive selection or positive alignment.

3. **Norms-based screening**
   Norms-based screening selects investments against minimum standards of business practice, typically based on international norms. The UN Global Compact and the OECD (Organisation for Economic Co-operation and Development) Guidelines for Multinational Enterprises are two of the foremost voluntary initiatives that promote sustainable business practices.[8] They seek to create a more responsible and accountable corporate sector. The UN Global Compact, for example, covers human rights, labour practices, the environment and anti-corruption.

4. **Integration of ESG factors**
   ESG integration refers to the systematic and explicit inclusion of ESG risks and opportunities in investment analysis. Unlike the best-in-class method, ESG integration does not necessarily require overweighting the best performing companies on ESG criteria. Conventional valuation measures, or market capitalisation, for example, may still guide that decision. The integration of ESG risks and opportunities into investment analysis is relevant for most, if not all, investors. ESG integration was the second most widely-adopted strategy according to the GSIA's 2016 review (see Figure 5).

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

6. **Impact/community investing**
   Impact investing refers to investing with the intention of generating social and environmental benefits alongside a financial return. According to Global Impact Investing Network[9], the practice of impact investing has four key characteristics: (i) investors intend to have a social and/or an environmental impact; (ii) investments are expected to generate a financial return on capital and, at a minimum, a return of capital; (iii) investments are to generate returns that range from a below-market to a risk-adjusted market rate; and (iv) investors are committed to measuring and reporting social and environmental impacts. It is possible that such limitations on the scale of such investment has led to this approach being the least widely used of the seven main strategies in GSIA's 2016 survey.

7. **Corporate engagement/shareholder action/ active ownership**
'Corporate engagement', 'shareholder action' and 'active ownership' refer to the practice of engaging with companies on ESG issues. So, rather than just excluding a company as a possible investment on ESG grounds (the negative/ exclusionary screening technique described above), ownership rights can be used to encourage change. Some investors may use highly publicised and confrontational measures, whereas others may prefer a more discreet 'behind the scenes' approach. 'Active ownership' is not necessarily the same as 'activist investing', an approach used (in particular) by certain hedge funds with the aim of bringing about change in the management and operation of a company.

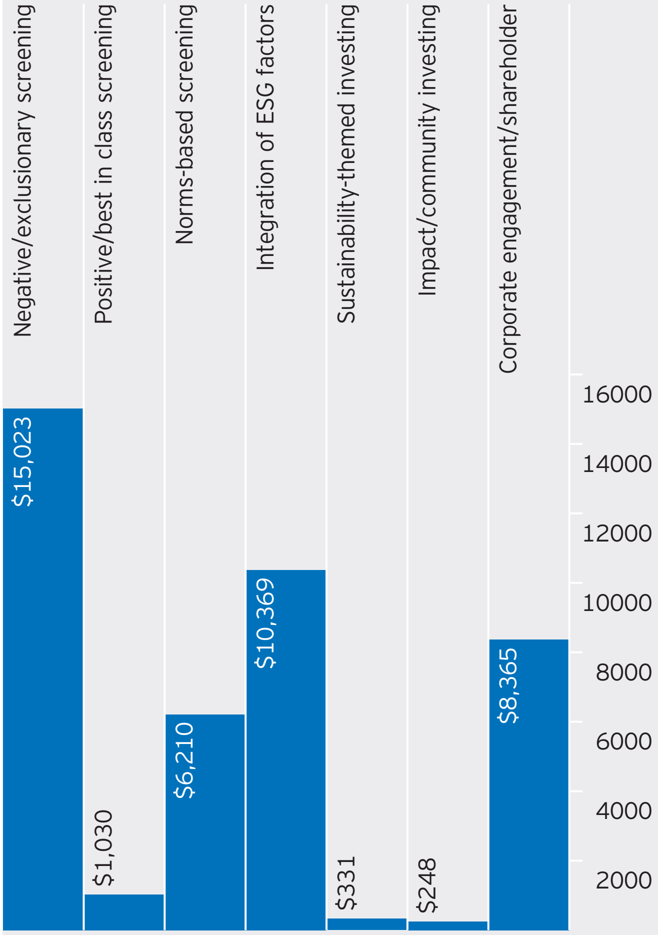
Voting and raising questions at shareholder general meetings; meeting with company representatives; attempting to gain a seat on the board; calling for an extraordinary/special meeting of the shareholders; filing a complaint with a company's regulatory body or issuing a press statement are all more closely aligned with activist investing.

Figure 4
Classification of ESG investing techniques

1. Negative/exclusionary screening: the exclusion from a fund or portfolio of certain sectors, companies or practices based on specific ESG criteria. (Example: not investing in tobacco companies).
2. Positive/best-in-class screening: investment in sectors, companies or projects selected for positive ESG performance relative to industry peers. (Example: investing in companies ranked in the best 10% in their sector on ESG criteria).
3. Norms-based screening: screening of investments against minimum standards of business practice based on international norms such as the UN Global Compact. (Example: investing only in companies that do not employ child labour).
4. Integration of ESG factors: the systematic and explicit inclusion by investment managers of environmental, social and governance factors into traditional financial analysis. (Example: scoring companies on ESG factors and incorporating this into stock selection).
5. Sustainability themed investing: investment in themes or assets specifically related to sustainability in areas such as energy, the environment, food and agriculture. (Example: investing in clean energy companies).
6. Impact/community investing: targeted investments, typically made in private markets, aimed at solving social or environmental problems. (Example: investing in a scheme to help former prisoners find work).
7. Corporate engagement and shareholder action: the use of shareholder power to influence corporate behaviour. (Example: putting pressure on a company to comply with international tax standards).

Source: Global Sustainable Investment Alliance Global Sustainable Investment Review 2016 and Invesco as at 17 May 2017.

Figure 5
Size of various sustainability strategies, US$bn



Source: Global Sustainable Investment Alliance Global Sustainable Investment Review 2016.

Does ESG investing lead to weaker performance?

One concern that many investors have in adopting ESG strategies is that they may compromise investment performance. Partly because there is a wide variety of different ESG criteria and an equally wide variety of ways in which they can be reflected, the empirical evidence on the question of whether ESG investing leads to weaker performance is mixed. Differences in the time periods covered, the ESG criteria assessed, whether the impact is measured with regard to corporate or equity market performance all affect the findings. However, we are encouraged by evidence that an emphasis on governance has been associated, in the past, with stronger returns.

ESG and corporate financial performance (CFP)

Perhaps the most comprehensive assessment of the link between ESG criteria and corporate financial performance (CFP), produced recently[10], found that "the business case for ESG investing is empirically very well founded. Roughly 90% of studies find a nonnegative ESG–CFP relation. More importantly, the large majority of studies reports positive findings and that the positive ESG impact on CFP appears stable over time."

ESG and overall stockmarket performance

Looking at the link between ESG and stock market performance, a recent analysis by TIAA (Teachers Insurance and Annuity Association of America)[11] of leading ESG equity indexes over the long term (from 1990) found "no statistical difference in returns compared to broad market benchmarks, suggesting the absence of any systematic performance penalty". Moreover, incorporating environmental, social and governance (ESG) criteria in security selection did not entail additional risk. ESG and their broad market counterparts had similar risk profiles, based on Sharpe ratios and standard deviation measures. Although return patterns were similar over the long term, there were significant return and tracking error differences between ESG indexes and broad market benchmarks over shorter periods.

ESG-based market indices

A number of ESG-based market indices have been developed. The variety reflects the different approaches, discussed above, to ESG assessment.

Perhaps the most widely-known index series, and the one with the longest history (it was launched in 1999), is the Dow Jones Sustainability Index (DJSI). This uses the 'best in class' approach. The companies in the DJSI World Index are selected from the S&P Global BMI (Broad Market Index), its parent index. The best 10% of each industrial group are assessed using industry-specific sustainability analyses and are then pooled together in the DJSI. In each of the last five years, the DJSI World Index has underperformed its parent index, as it has over the last 10 years (see Figure 6).

The FTSE4Good global index was launched on 1 November 2001 and selects companies from the FTSE Developed World Index, its parent universe. The approach used is to exclude certain sectors and rate the companies eligible for inclusion according to a proprietary ESG rating system. This is based on over 300 Indicators. The excluded companies are those in certain sectors – tobacco, weapons systems, components for controversial weapons (cluster munitions, anti-personnel mines, depleted uranium, chemical/biological weapons and nuclear weapons) and coal. The FTSE4Good Global index has produced higher returns than its parent index over the last five years, but lower returns over the last 10 years.

The MSCI ACWI (All Country World Index) ESG Universal index, is a much newer index, launched in 2017. It seeks to reflect the concept of the 'universal owner'. It includes companies from both developed and emerging markets, which are included in its parent index, the MSCI ACWI Index. There are minimal exclusions from this index; and tilts in asset allocation towards those companies demonstrating a robust and improving ESG profile are made. Historically, the MSCI ACWI ESG Universal index has produced marginally higher returns than its benchmark index, although this is on the basis of back-tested data.

In terms of regional indices, the performance of ESG indices relative to their parent indices is mixed. For example, the UK FTSE4Good UK, similar to its global counterpart, has produced higher average returns over the last five years, but lower average returns over the last ten years than its parent index; the MSCI US ESG Select index, has produced lower returns, on average over both the last five and ten years, than its benchmark index.

There are many different indices designed to reflect specific ESG criteria – for example, indices excluding all fossil fuels (not just coal as in the FTSE4Good indices) – or those in compliance with Islamic or Catholic values.

The MSCI World Governance Quality Index, an index which seeks to capture the performance of companies with better governance quality standards, has outperformed the MSCI World index, its parent index, over the last five years.

Figure 6
Performance of selected ESG indices

World Equity Indices	ESG approach:	31.12.16	31.12.15	31.12.14	31.12.13	31.12.12	5 years	5 years ACR[1]	10 years	10 years ACR[1]
DJSI World Index - net total return*	**Best in class: top 10% of the largest 2,500 companies in the S&P Global BMI based on ESG criteria**	**7.5**	**-4.4**	**1.1**	**22.2**	**15.5**	**46.7**	**8.0**	**24.7**	**2.2**
S&P Global BMI Index - net total return	Parent index for DJSI World Index	9.4	1.5	9.0	26.5	16.3	78.2	12.3	56.0	4.5
FTSE4Good Global Index - total return	**Exclusion of tobacco, controversial weapons and coal**	**7.1**	**-0.3**	**5.1**	**27.0**	**19.8**	**70.7**	**11.3**	**44.5**	**3.8**
FTSE Developed World Index - total return	Parent index for FTSE4Good global index	8.2	-0.3	5.1	26.8	17.0	68.3	11.0	54.1	4.4
MSCI ACWI ESG Universal Index - total return	**"Universal owner" approach. Tilts towards those companies demonstrating a robust and improving ESG profile, using minimal exclusions from the MSCI ACWI Index.**	**7.2**	**-1.8**	**4.2**	**24.8**	**15.6**	**58.2**	**9.6**	**n/a**	**n/a**
MSCI ACWI Index - total return	Parent index for MSCI ACWI ESG Universal index. Includes large and mid-cap stocks in 23 developed markets and 23 emerging markets.	7.9	-2.4	4.2	22.8	16.1	56.4	9.4	n/a	n/a
Regional/Specialist Equity indices										
FTSE4Good UK Index - total return, £ terms	**Exclusion of tobacco, controversial weapons and coal**	**15.6**	**1.1**	**2.1**	**22.7**	**14.1**	**67.1**	**10.8**	**69.2**	**5.4**
FTSE All Share Index - total return, £ terms	Parent index for FTSE4Good UK index	16.8	1.0	1.2	20.8	12.3	61.8	10.1	71.8	5.6
MSCI US ESG Select Index[2]	**Overweights those companies, relative to their MSCI US index weights, with a high ESG rating, and underweights those with a low ESG rating**	**12.8**	**-1.4**	**14.1**	**31.5**	**10.8**	**85.0**	**13.1**	**91.2**	**6.7**
MSCI US - total return, US$ terms	Parent index for MSCI ESG Select index	11.6	1.3	13.4	32.6	16.1	97.4	14.6	97.0	7.0
MSCI World Governance-Quality Index - total return[3]	**"Seeks to capture the performance of companies with better governance standards. The standard of corporate governance is assessed by measures such as independence and diversity of board of directors, ownership and control structure of the company, accounting practices and auditor opinions."**	**7.0**	**0.9**	**9.8**	**28.0**	**15.6**	**75.3**	**11.9**	**n/a**	**n/a**
MSCI World Index- total return	Parent index for MSCI World Governance-Quality Index. Includes large and mid-cap stocks in 23 developed markets.	8.2	-0.3	5.5	27.4	16.1	68.2	11.0	n/a	n/a

Sources: Thomson Reuters Datastream and MSCI; data as at 27 February 2017. Unless specified all indices returns are stated in US$.
1 Annual Compound Return.
2 The MSCI ACWI ESG Universal Index was launched on 8 February 2017. Data prior to the launch date is back-tested data (i.e. calculations of how the index might have performed over that time period had the index existed. There are frequently material differences between back-tested performance and actual results.
3 The MSCI World Governance-Quality Index was launched on 2 July 2015. Data prior to the launch date is back-tested data (i.e. calculations of how the index might have performed over that time period had the index existed. There are frequently material differences between back-tested performance and actual results.
* Net total returns are after the deduction of withholding taxes, using (for international indices) a tax rate applicable to non resident institutional investors who do not benefit from double taxation treaties.

Governance and returns
Focussing just on corporate governance issues (the "G" in ESG) an 18-year period from 1992-2010, a Harvard study[12] concluded that high-sustainability companies outperformed low-sustainability ones in terms of both stock market and CFP measures. The annual above-market average return for the high-sustainability sample was 4.8% higher than for their low-sustainability counterparts and with lower volatility. The high-sustainability companies also performed better as measured by return on equity and return on assets.

A comprehensive study by Dimson et al[13] analyzed an extensive proprietary database of corporate social responsibility engagements with U.S. public companies from 1999–2009. These engagements address environmental, social, and governance concerns. Successful engagements were found to be followed by positive abnormal returns. Success in engagements was found to be more probable if the engaged firm has reputational concerns and a higher capacity to implement changes. Collaboration among active investors is instrumental to increase the success rate of environmental/social engagements. After successful engagements, particularly on environmental/social issues, companies experience improved accounting performance and governance and increased institutional ownership.

Downside risk
There is also evidence of the integration of ESG criteria in investment selection reducing downside risk. One study of 1,500 firms from 26 developed countries found that, from 2004-2010, integrating corporate environmental criteria into pension fund investment processes substantially reduces downside risk of pension portfolios.[14]

Equally, however, companies with a poor ESG record can still be good investments if they have the desire to change. Evidence on engagement with companies on ESG issues shows that excess returns can be generated. One study[15] found that, over an 10-year period from 1999-2009, corporate social responsibility engagements generate a cumulative size-adjusted abnormal return of +2.3% over the year following the initial engagement. Understandably, investment performance is higher for successful engagements (+7.1%) and gradually flattens out after a year. There is a neutral market reaction to unsuccessful engagements. The abnormal returns are similar for successful environmental/social and successful corporate governance engagement; and similar for unsuccessful environmental/social and unsuccessful corporate governance engagements. In other words, investors placed much the same financial value on successful social activism as on successful governance interventions.

Past performance
The important note of caution with all of these measures of performance is that they do, of course, relate to past performance. Looking ahead, one of the most important aspects of ESG investing is that, as it sets a higher standard for investment selection, it may be capable of mitigating the risks of adverse outcomes.

Which approaches to ESG investing are used by Invesco?
Invesco has deep experience in the ESG approach, having been actively involved for over 15 years. It currently manages over US$50bn in sustainable investments across eight investment centres, 17 different investment strategies and various ESG integration approaches. Invesco is supported by a six-member Responsible Investment team located across two regions. Bonnie Saynay, Global Head of Responsible Investment believes that the approach taken in our global active equity funds has "always been one which has placed a strong emphasis on governance. It is an approach which regards us not as shareholders of companies but as business owners."

As well as being a PRI signatory, Invesco is a Tier 1 signatory of the Stewardship Code of the UK Financial Reporting Council (FRC). This emphasises the importance of constructive engagement between investors and companies. Its assessment of the stewardship of fund managers takes into account seven principles and categorises them on a three-tier scale. Invesco's Tier 1 level means it provides "a good quality and transparent description" of its approach to stewardship and "explanations of an alternative approach where necessary".[16]

One of the most important foundations of Invesco´s ESG efforts is a highly flexible proprietary voting platform that enables the company´s fund managers to take well-informed, thoughtful and independent proxy investment decisions.

According to Saynay, "At Invesco, we have 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. We have developed our own in house proxy voting system that has been actively used in the US for three years and that will be rolled out globally in early 2017. This will enable fund managers to vote in an efficient manner, increase transparency and knowledge share and effectively influence corporate practices and behaviours."

Saynay also stresses the importance of good corporate governance and that this is something that does not rely on empirical evidence for support. "You do not need data to support the fact that good corporate governance (strong and accountable boards, high performance cultures, strong risk frameworks, diverse boards, etc.) lead 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.

Three examples of Invesco's approach to ESG investing in specific areas are particularly noteworthy. They are illustrated in Figure 7-11 and summarised below.

Figure 7
Invesco's high quality, high conviction approach to ESG
More than US$50bn across 8 investment centres

Invesco Direct Real Estate	Invesco Quantitative Strategies	Invesco Fixed Income
US$28.5bn in ESG AUM - Annual Sustainability Report using G4 Sustainability Product Reporting Guidelines - Three funds ranked #1 in their respective peer group for 2016 Global Real Estate Sustainability Benchmark assessment - 55% of our office portfolio and 12% of our Multifamily Portfolio hold a third-party green building certification[1]	**US$1.9bn in ESG AUM** - 15 years' ESG experience - Combination of Invesco's quantitative investment process and ESG factors - €140m separate account (Global Low Volatility + SRI) - €50m separate account (Low Volatility + SRI) - Invesco Global Low Carbon ranks #1 for 1-yr performance as of April, July, and September 2016 in amLeague's Global Equities Low Carbon - ESG paper: *Sustainable investment - getting it right*	**US$1.0bn in ESG AUM** - US$302m separate account (Bloomberg Barclays MSCI US Corporate Sustainability Index)

AUM as of 31 December 2016.
[1] Figures are calculated on a square footage basis as of 30 September 2016.
Any reference to a ranking, a rating or an award provides no guarantee for future performance results and is not constant over time.

1. **Invesco Direct Real Estate**
   The Invesco Direct Real Estate team has been active in ESG investing for many years. They had US$28.5bn in assets under management as at 31 December 2016 (see Figure 7), with three products ranked first in their respective peer groups in the 2016 Global Real Estate Sustainability Benchmark assessment. Saynay comments that team takes "a managed approach to procurement of energy in deregulated markets and the process has evolved from energy efficiency to water, waste and recycling, renewable energy, tenant and community engagement and, most recently, health and well-being. They use this perspective throughout the whole investment process." More than half of the office portfolio holds a third-party green building certification (see Figure 8).

Figure 8
Invesco's high conviction approach to ESG
Invesco Direct Real Estate

Source: Invesco. For illustrative purposes only. As of 17 May 2017.

2. **Invesco Quantitative Strategies Group**
Our Invesco Quantitative Strategies (IQS) had US$1.9bn in ESG assets under management as at 31 December 2016. Two main approaches are offered by IQS.

The first is a positive screening approach, using the Dow Jones Sustainability Global Index (DJSGI) family as a benchmark and as the investable stock universe.

The second approach uses the Portfolio Manager service from Ethical Investment Research Service (EIRIS) in cooperation with a global network of partners. This analyses 3500 companies worldwide (nearly all of the constituents of the MSCI World index are included) according to more than 250 ESG criteria. The choice of which criteria to use is decided by the individual client, to meet relevant portfolio needs. Broad exclusion and inclusion criteria can be set, as can specific criteria in order to comply with individual needs.

In both cases, whether the Dow Jones Sustainability Global Index or the individually-screened MSCI World index is used, the Invesco's Quantitative Strategies team stock selection process is used. Their stock selection process is designed to identify attractive and unattractive stocks by providing an impartial assessment of the expected relative price performance of each stock. This is achieved using IQS' proprietary stock selection model which has a proven real-time track record of over 30 years. The process quantifies four different factors (summarised in Figure 9), each of which has a proven impact on relative price performance. Each of the stocks in the universe is evaluated based on stock selection factors.

Figure 9
IQS stock selection model

ESG stock selection model				
Earnings expectations	**Market sentiment**	**Management and quality**	**Value**	**Concepts**
How are expectations changing?	What is market sentiment telling us?	What is management doing?	How attractive are valuations?	
- Earnings momentum - Earnings revisions - Cash flow surprise - Revisions against trend	- Price momentum - Long-term reversal - Short term reversal - Short interest	- Net external financing - Net asset growth - Capital efficiency - Fundamental health score - Liability payback horizon	- Cash flow yield - Gross profit yield - Earnings yield - Dividend yield	**Factors**[1] Quantifiable Predictive Complementary
Stock return forecast				

Source: Invesco. For illustrative purposes only. As of 17 May 2017.
[1] Not all factors are used in all regions and sub-models. Additional factors are used in specific sub-models and definitions may vary across regions.

Within IQS managed balanced accounts, the team uses the Country Sustainability Rating from VigeoEIRIS to rate government bonds. As with the EIRIS Portfolio Manager for equities, the rating can be modified to match the individual requirements of an investor. In order to assess a country or region based on sustainability criteria, numerous indicators in the areas of environment, government policy (equivalent to corporate governance for stocks) and social factors are taken into account and aggregated to arrive at an overall rating. VigeoEiris makes use of reliable international sources like Amnesty International, UNICEF, World Bank and WHO, which it regularly reviews and updates.

IQS also enters regularly into dialogue with companies via the Global Engagement Service of VigeoEiris. The objective is to identify weaknesses in the company's sustainability management and discuss these with management to enable the companies to achieve a better ESG performance in the medium to long term. A distinction is made between two engagement methods (Figure 10). Theme-based engagement aims to encourage companies to expose and reduce systemic risks in areas such as climate change, bribery and corruption. Controversy-led engagement aims to prompt companies to observe internationally-recognized standards and conventions and correspondingly improve their company guidelines.

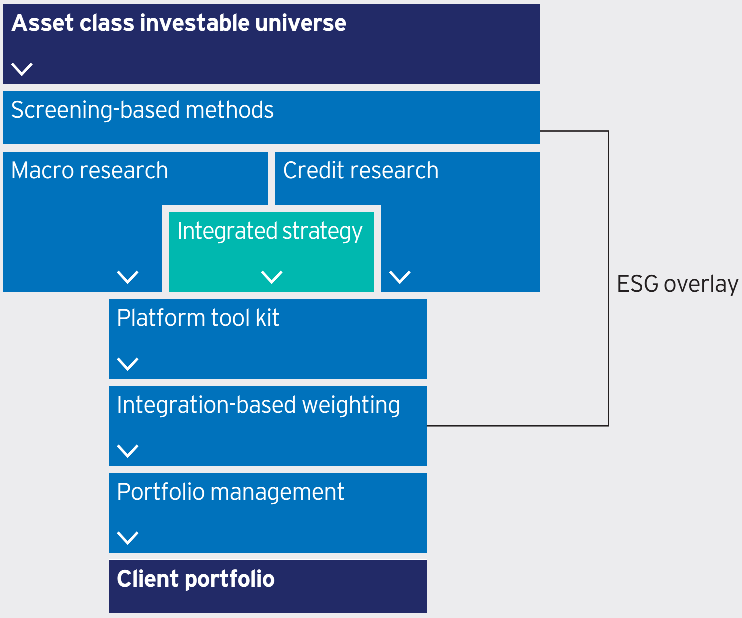
Figure 10
Engagement approaches

Theme-based engagement	**Controversy-led engagement**
- Climate change - Water risk - Bribery and corruption - Labour standards - Human rights	Encourage companies to fully address allegations of corporate breaches of global norms and conventions

Source: Invesco, VigeoEiris. As of 17 May 2017.

3. **Invesco Fixed Income**
   The Invesco Fixed Income team manages US$1.0bn in ESG assets, with US$302m in separately managed accounts. These are benchmarked against the Bloomberg Barclays MSCI US Corporate Sustainability Index. Investments for potential inclusion are screened according to a range of criteria to meet the specific investment mandate – including exclusionary screening (on designated names, industries or sectors) or ratings-based screening (which involves avoiding issuers below a threshold ESG score). The post-screening portfolio construction process involves the combination of top-down macro research and bottom-up analysis to create a portfolio which maximises risk and return opportunities given the ESG constraints.

Figure 11
Invesco's high conviction approach to ESG: Invesco Fixed Income



Source: Invesco. For illustrative purposes only. As of 17 May 2017.

Conclusion

ESG investing is becoming an ever-more important theme in investment management. There is a broad acceptance of the need to take such criteria into account, as evidenced by, for example, the widespread adoption of the PRI principles. There are seven different strategies for implementing ESG investment criteria: ESG investing is no longer confined to the exclusionary principles of the past. The hallmark of Invesco's ESG approach is active ownership. In our function as fiduciaries for our clients, we see our role as business owners rather than shareholders. We believe that active ownership is the singular most effective mechanism to drive responsible investment and strong investment stewardship.

Appendix

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