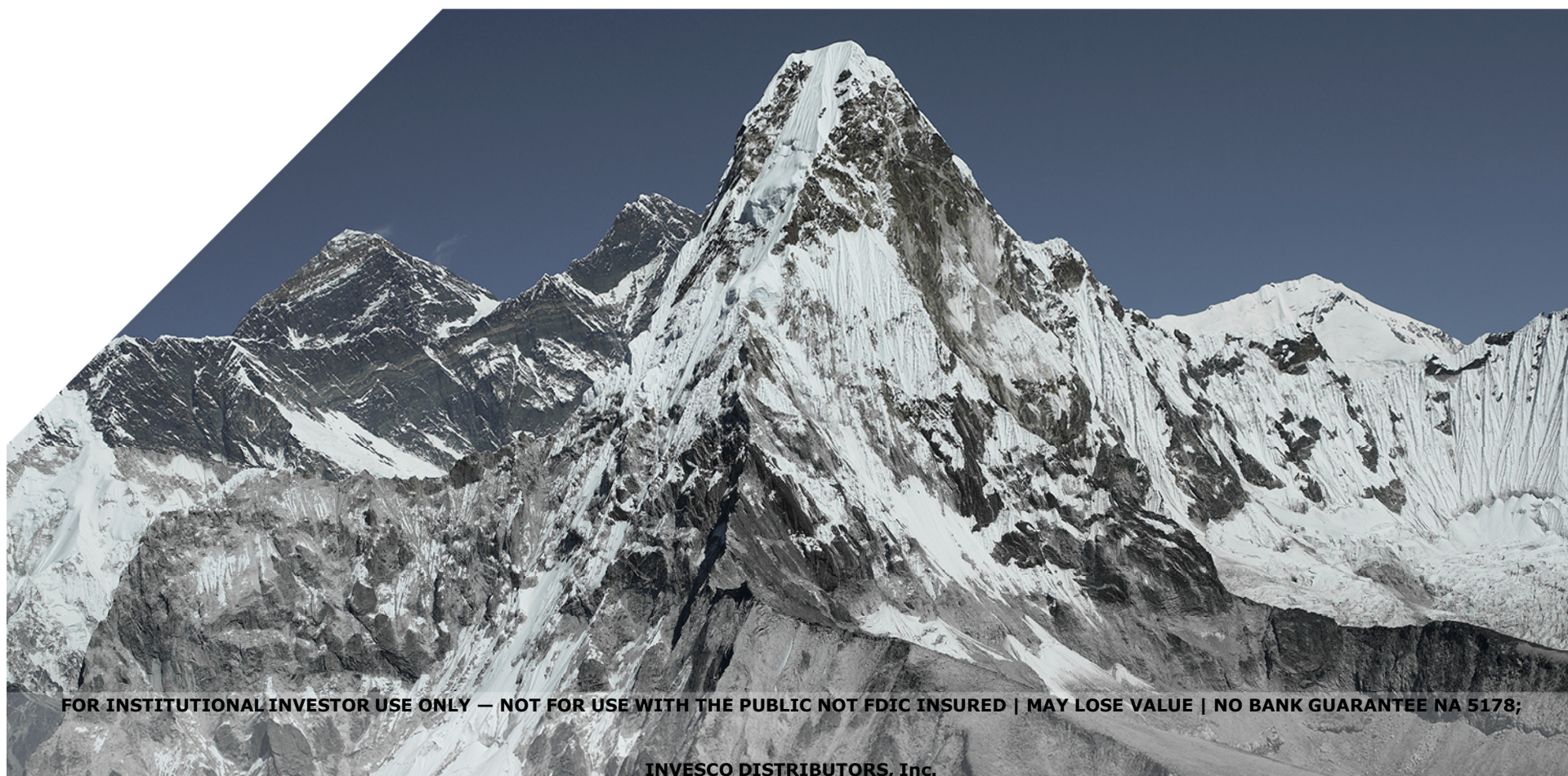




Invesco's Responsible Investment Approach: Fixed Income:

ESG Integration, Performance, Solutions

Paul English
Head of Research – USIG
Director of ESG Research



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Responsible Investment Landscape

Invesco Fixed Income ESG Philosophy

Integration of ESG Factors in credit research

ESG Fixed Income Investment Process

Why invest in ESG?

UN PRI Sustainable Development Goals in Action

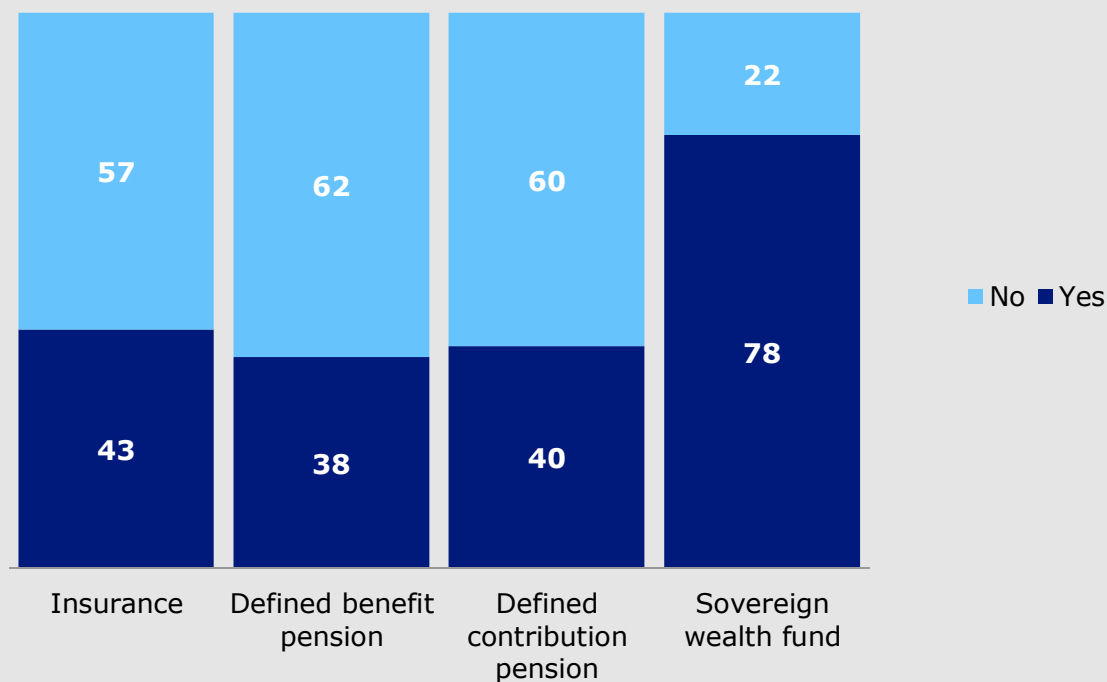


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ESG Segment Adoption



Segment adoption of ESG in fixed income portfolio (%)



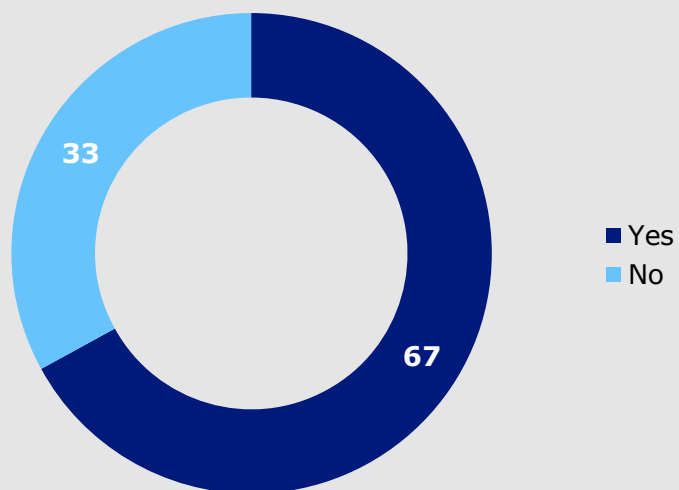
- Sovereign wealth funds (most notably in North America where they include public sector pension funds) are furthest along in incorporating ESG within fixed income, with uptake driven by stakeholders wanting to align fund investments with ESG values.

Source: Invesco Global Fixed Income Study 2019
Sample Size: 108

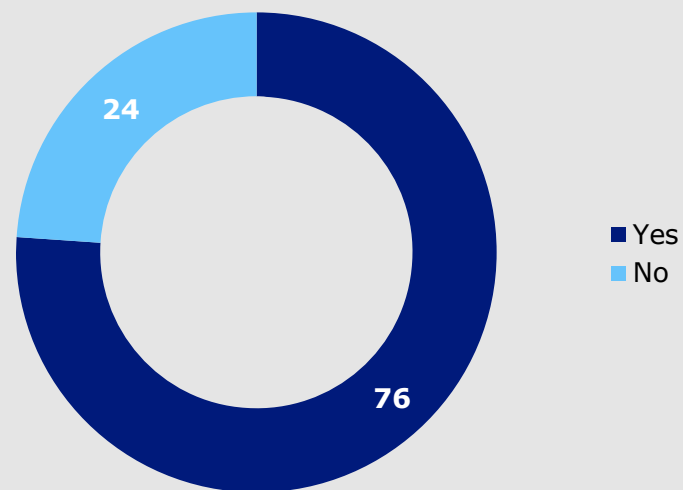
Overview of ESG Adoption Level (%)



Asia Pacific



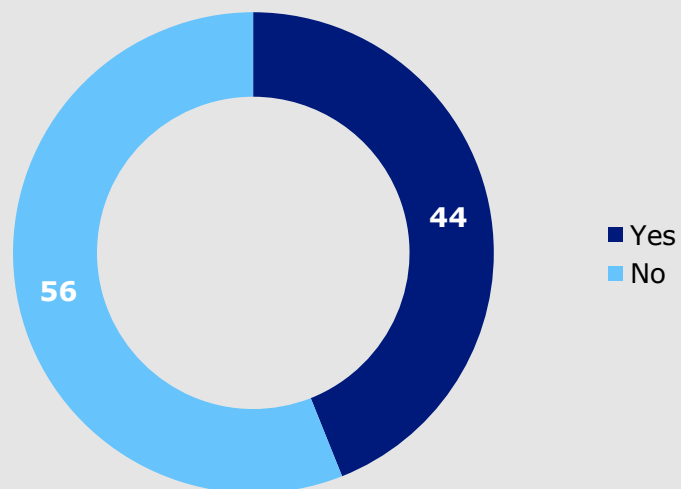
EMEA



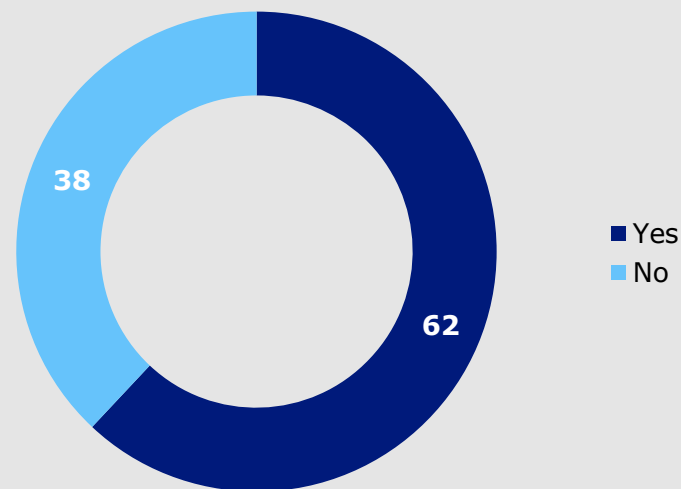
Source: Invesco Global Fixed Income Study 2019
Sample Size: 102

Overview of ESG Adoption Level (%)

North America



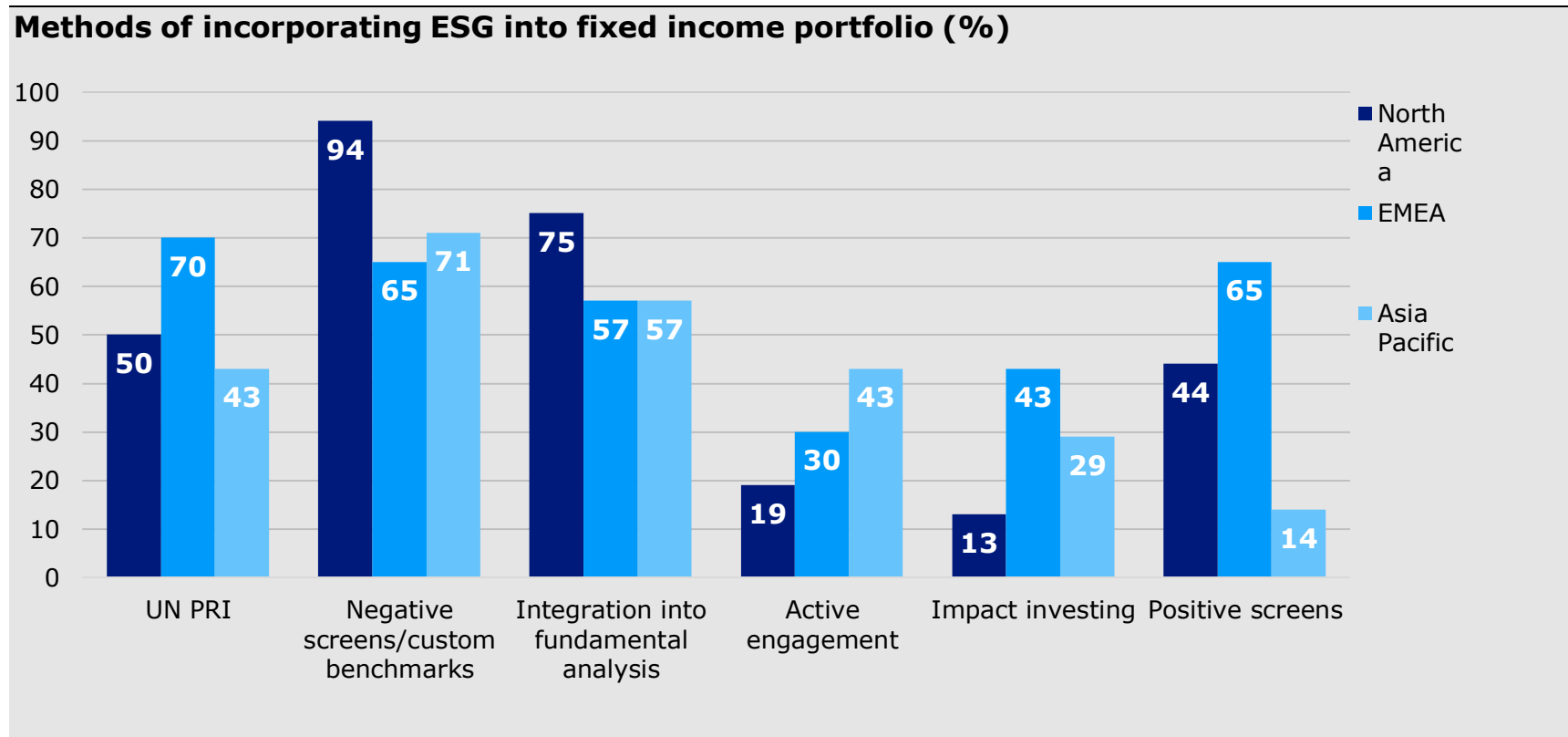
Total



- Global implementation levels are healthy with nearly two-thirds of investors now incorporating ESG considerations into their overall portfolio
- Adoption climbed year-over-year (2017/2018) across all regions

Source: Invesco Global Fixed Income Study 2019
Sample Size: 102

ESG Incorporation



Source: Invesco Global Fixed Income Study 2019
Sample Size: 46

Agenda



Invesco's Responsible Investment Approach

Invesco Fixed Income ESG Philosophy

Integration of ESG Factors in credit research

ESG Fixed Income Investment Process

Our philosophy for integrating ESG in credit research

ESG investing in Invesco Fixed Income



- 1** We believe evaluating ESG criteria will lead to better **long term risk adjusted returns**
- 2** Evaluating issuers based on ESG criteria is **seamlessly integrated** into our fundamental research process
- 3** **Independently assessing** each investment's suitability for ESG strategies is crucial
- 4** **Global standards for research** and investment decision-making across Invesco Fixed Income allows for ESG integration across asset classes
- 5** Focus on **continuing to enhance** our ESG capabilities

Source: Invesco

Evaluating ESG for Better Outcomes



Our approach to ESG is rooted in a belief that evaluating environmental, social and governance criteria leads to better long-term risk-adjusted returns. With this in mind, we look for a combination of **materiality** and **momentum**.



Materiality

means being clear about the ESG considerations that have the potential to impact most significantly on an issuer's ability to meet its debt obligations.



Momentum

means using our expert analysis to determine which issuers are outpacing their peers in making progress around ESG considerations.

ESG Value Proposition



IFI believes that its **independent research**, commitment to **ESG integration**, and **global approach** create a strong proposition for clients seeking an ESG partner for fixed income allocations.

Independent

- Proprietary ESG ratings derived from IFI research
- Comprehensive research where scope and coverage are directed by the needs of clients' portfolios
- A dynamic approach to ratings, enabling timely reviews as new developments emerge

Integrated

- ESG risk factors provide another lens to view potential long-term financial risks to an issuer
- Consideration of ESG risks benefits all client portfolios; not only those with ESG criteria
- ESG assessments are indelibly linked with fundamental credit assessment

Global

- Connectivity between teams and consistency in our ESG approach
- Consistent research and ratings language supports the creation of multi-sector ESG fixed income portfolios
- Comprehensive ESG platform spanning public and private markets and across developed and emerging markets



ESG in Fixed Income

ESG Benchmark (Under) Performance

ESG Benchmarks Introduce Quality Bias

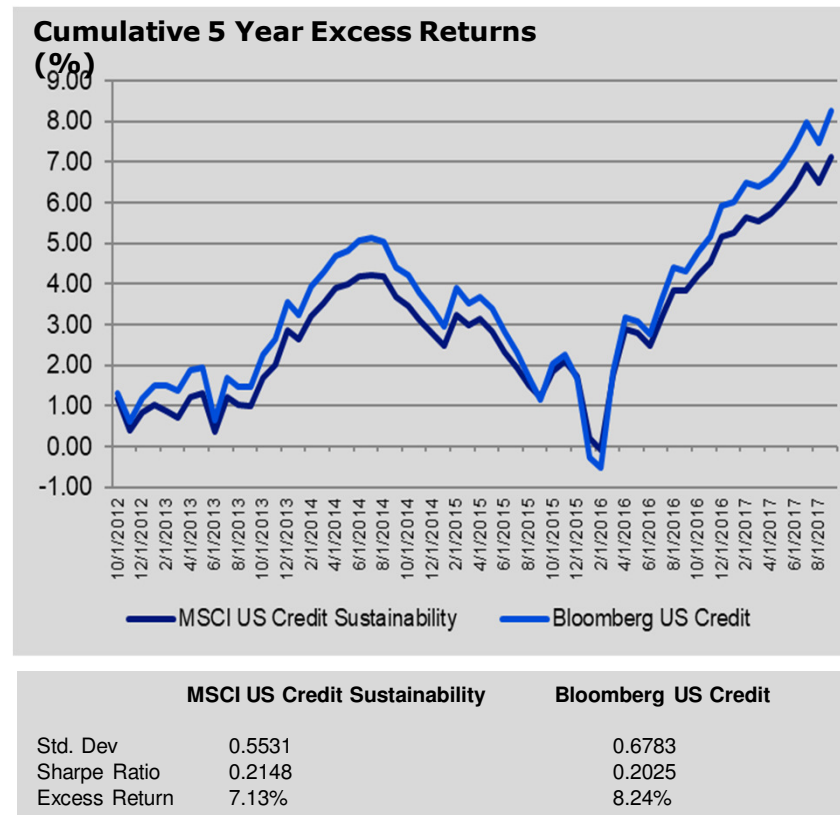
- Higher Average Credit Rating (A1 vs A2)
- Lower Yield (0.18%)
- Lower Spread Duration (0.2 Yrs)
- 5 Yr Excess Return Shortfall (1.11%)

Broad Index Underperformance

- Sustainability, SRI and Weighted Indices
 - All Underperformed Non-ESG Comp
 - On 1, 3 and 5 Year Basis
 - USD and EUR

Risk Adjusted Return Premium Remains

- Lower Volatility
- Higher Sharp Ratios



As of September 2017

Source: Invesco, Barclay's, Bloomberg

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ESG in Fixed Income

Active Management Critical In ESG

Barclay's ESG Portfolio Simulation (2018)

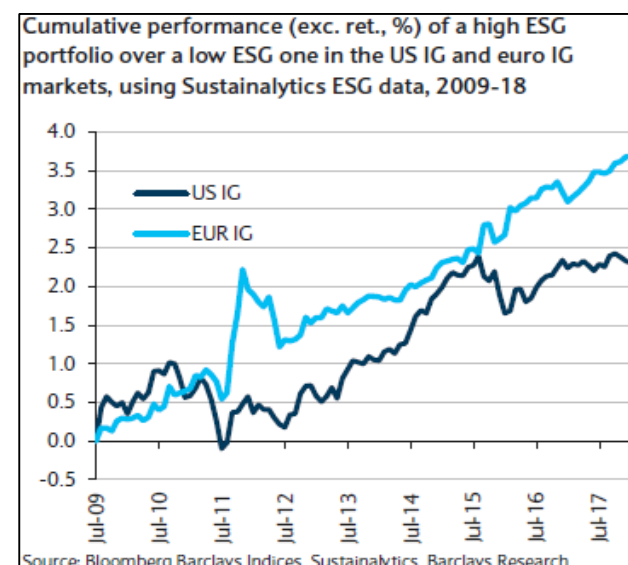
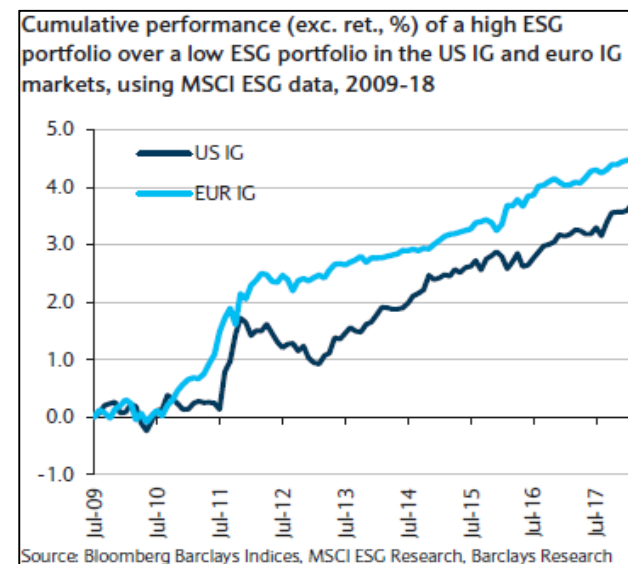
- High ESG Portfolio
- Low ESG Portfolio
- Portfolios Matched Base Index Characteristics
 - Average Spread
 - Duration
 - Spread Duration
 - Offset ESG Index Bias

Risk Adjusted Return Premium – Undeniable

- USIG Outperformed 30-40 bps/yr
- EURIG Outperformed 40-50 bps/yr
- US High Yield Outperformed 25-45 bps/yr
- MSCI or Sustainalytics Ratings

Source: Barclays. Past performance does not guarantee comparable future results. For illustrative purposes only.

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Invesco's Responsible Investment Approach

Invesco Fixed Income ESG Philosophy

Integration of ESG Factors in credit research

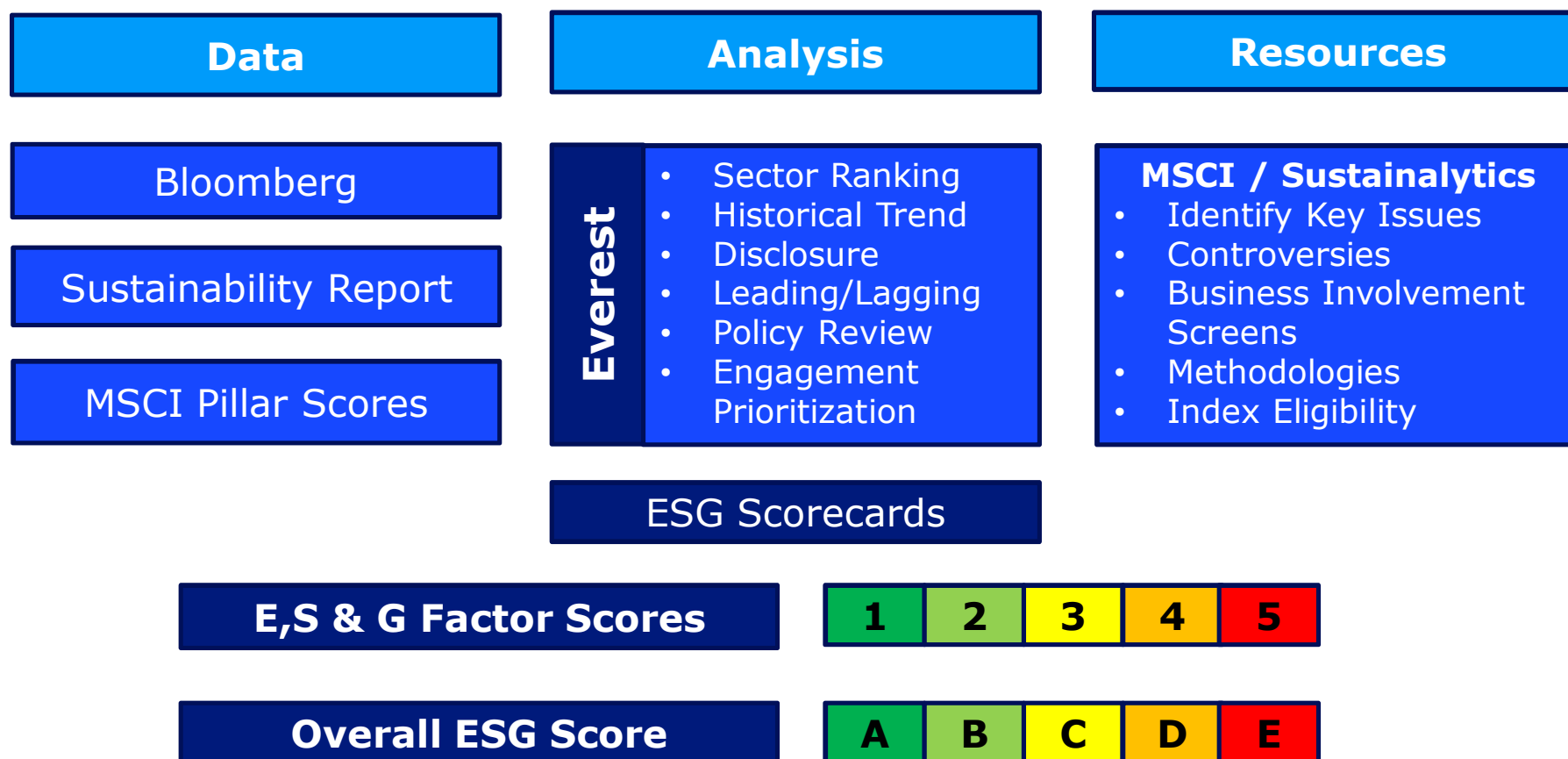
ESG Fixed Income Investment Process

Invesco Credit Research

Proprietary ESG Ratings Process



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.



ESG monitor provides a comprehensive picture of each issuers status and progress



Data Analysis External feeds and scorecards

1

Invesco ESG Monitor ABBVIE INC				Legend	
				✓ Above peer median	
				✗ Equal to peer median	
				✗ Below peer median	
Summary	Levels	Trends	MSCI Rating	Other ESG Scores	
Environmental	Better	Better	IVA Rating BBB	Bloomberg ESG Disclosure Score	34.3
Social	Worse	Worse	E Pillar Score 5.6	Sustainalytics Rank	88.9
Governance	Worse	Better	S Pillar Score 4.7	ISS Quality Score	7
Note: Better/worse is vs. peer median			G Pillar Score 5.7	RobecoSAM Rank	100
Environmental					
Bloomberg			MSCI		
	Current Value	3Y % Change		Current Score	3Y % Change
Direct (Scope 1) Emissions	0.3 ✓	-7.2% ✓	Carbon Emissions	10.0 ✗	0.0% ✗
Electricity Use	453.0 ✓	0.0% ✗	Toxic Emissions & Waste	5.6 ✗	0.0% ✗
Indirect (Scope 2) Emissions	0.3 ✓	0.0% ✗	Water Stress	10.0 ✓	0.0% ✓
Energy Use	2,118.0 ✓	-2.9% ✓			
Energy Use/Employee	70.6 ✓	-19.1% ✓			
Energy Use/Sales	82.6 ✓	-28.8% ✓			
ESG Disclosure Level	34.3 ✗	-9.8% ✗			
Hazardous Waste	13.6 ✓	--			
Lost Time Incident Rate	0.1 ✓	-23.1% ✗			
NOx Emissions	0.2 ✓	0.0% ✗			
Social					
Bloomberg			MSCI		
	Current Value	3Y % Change		Current Score	3Y % Change
% Employees Minorities	29.2 ✓	1.7% ✓	Business Travel CO2	76.4	90.00 ✓
% Management Minorities	15.2 ✓	5.6% ✓	Business Travel CO2 / Employee	3.1	2.18 ✗
Women in Management	31.9 ✗	1.3% ✗	Direct (Scope 1) Emissions	0.2	0.39 ✓
Women in the Workforce	50.4 ✓	0.6% ✗	Indirect (Scope 2) Emissions	0.2	0.66 ✓
			Electricity Use	1,277.8	1,299.48 ✓
			Energy Use	2,861.1	3,506.47 ✓
			Energy Use/Employee	114.4	73.89 ✗
			Energy Use/Sales	147.3	132.54 ✗
			ESG Disclosure Level	43.4	47.52 ✗
			Hazardous Waste	14.5	29.62 ✓
			Lost Time Incident Rate	0.2	0.15 ✗
			Scope 3 Emissions	76.4	267.67 ✓
			Total GHGs/Employee	15.8	20.36 ✓
			Total GHGs/Energy	137.7	303.97 ✓
			Total GHGs/Sales	20.3	29.26 ✓
			Total Greenhouse Gas Emissions	0.4	1.28 ✓
			Total Incident Rate	0.6	0.42 ✗
			Waste Recycled	11.7	56.50 ✓
			Waste Total Generation	35.2	119.50 ✓
			Waste/Sales	1.8	2.49 ✓
			% Employees Minorities	29.2	25.60 ✓
			% Management Minorities	15.2	15.20 ✓
			Women in Management	31.9	36.00 ✗
			Women in the Workforce	50.4	47.50 ✓

Analyst activity

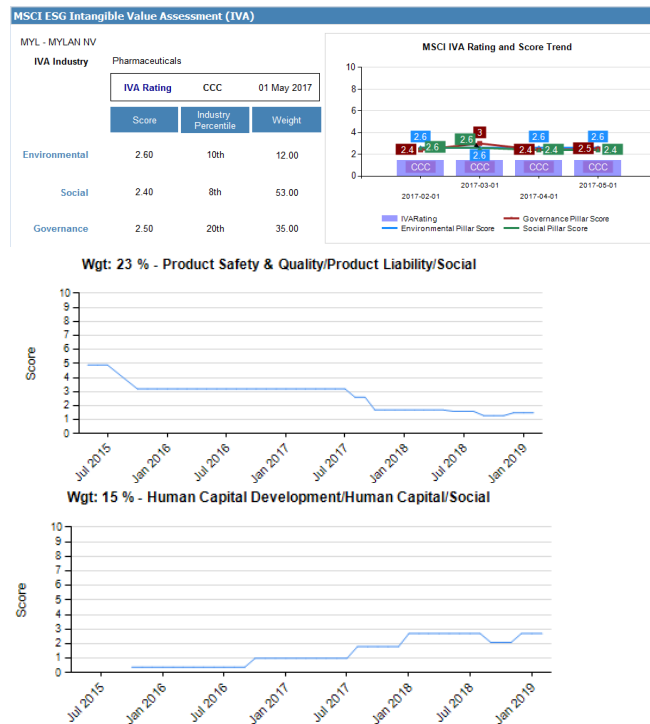
- Review Scorecard Data
 - Peer Rankings for highest priority sector ESG risk factors
 - 3 year CAGR trend
 - Disclosure practices
 - ESG policies
- Review ESG risk monitors
- Review Everest ESG risk tracker (right)
- Assessment of ESG risk factors versus peers

IFI Credit Process – ESG Integration

Resources, Data Capture, Analysis



Field Name	12/2016	12/2015	12/2014	12/2013
Governance				
Size of the Board	12.00	12.00	13.00	12.00
Independent Directors	75.00	91.67	92.31	91.67
Women on the Board	8.33	8.33	15.38	16.67
Board Meetings per Y...	6.00		7.00	6.00
Attendance	75.00		75.00	75.00
Board Average Age	61.92	62.83	61.54	61.08
Board Duration	1.00	1.00	1.00	1.00
Board Average Age	61.92	62.83	61.54	61.08
Board Age Limit	75.00		72.00	72.00
% Ind Dir Comp Cmte	100.00	100.00	100.00	100.00
Average Length Srvc ...				
Compensation				
CEO Salary + Bonus	1312500.00	1200000.00	1200000.00	1200000.00
Total Executive Salar...	7018624.00	3605208.00	4149000.00	3548667.00
Total Director Compe...	2632642.00	2878648.00	2724868.00	2719945.00
Policies				
Energy Efficiency Policy		Y	Y	Y
Emissions Reduction ...		Y	Y	Y
Environmental Suppl...		N	Y	Y
Green Building Policy		N	Y	Y
Waste Reduction Policy		Y	Y	Y



- Issuer provided data
 - Bloomberg
 - Corporate Sustainability Reports
- ESG metrics & policies
- Baseline for historical trends & analysis
- Aids Portfolio Management
- Facilitates product design to align with values
- Time series MSCI ratings

Source: Invesco.

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Identification of lagging ESG indicators and potential for financial or headline risk frames each engagement plan



ESG-specific Process Elements

Analyst activity

▪ Review

- Leading/Lagging Chart (below)
- ESG Data – Risk Monitors
- Sector Considerations

▪ Prioritize outliers by relevance

- Financial Risks

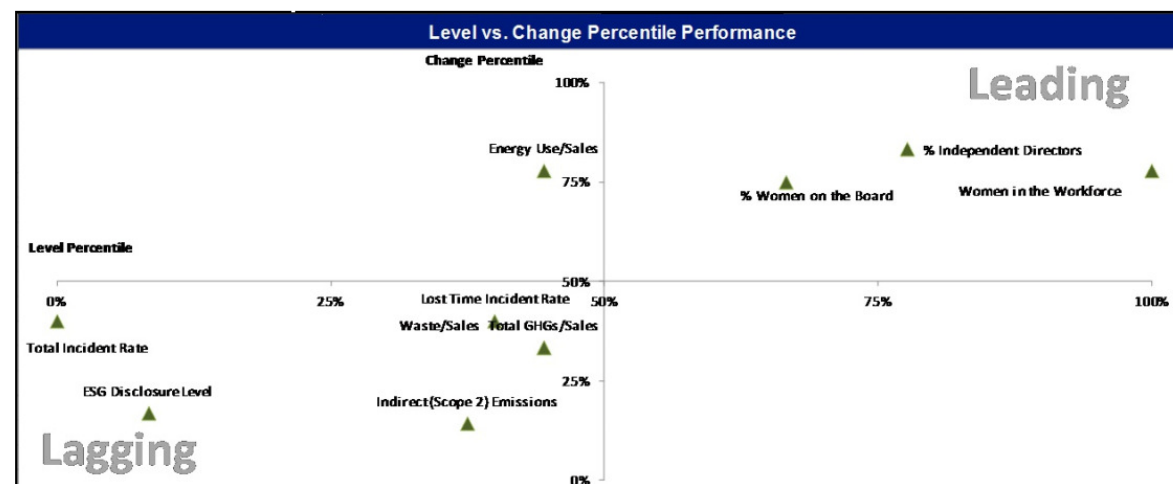
- ESG Reputational Risks

▪ Develop Initial Engagement Plan

- Moderate Risks
 - Investor Relations
 - One-on-One Roadshow Opportunities

- Elevated Risks

- Senior Management Contact
- Invesco Initiatives
- Document in research platform



Source: Invesco. For illustrative purposes only.

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ESG engagement activity documented and communicated broadly



Everest System

Ticker	Company Name	Commentary Type	Comment Analyst	Sector Team	Headline	Commentary	Curr IFI ESG	Curr IFI ESG Trend
X	UNITED STATES ST...	ESG Engagem...	Rahim Shad	Industrials	X: Concerted effort to raise ESG score via footprint enhan...	IVZ conducted an ESG engagement call with US Steel's management today. Given the...	D	Improving
KMI	KINDER MORGAN INC	ESG	Bixby Stewart	Energy	05/28/2019: Sell-side energy ESG awareness continues in...	05/28/2019 I have noticed a lot of ESG emails coming through my inbox in recent m...	B	Stable
BPL	BUCKEYE PARTNER...	ESG	Bixby Stewart	Energy	05/23/2019: BPL to publish first-ever ESG report in June 2...	BPL, which has historically lacked any meaningful ESG-related material on its website, ...	D	Stable
NBL	NOBLE ENERGY INC	ESG Engagem...	Bixby Stewart	Energy	05/21/2019: ESG engagement with NBL	05/21/2019 I joined Norm McDonald and Kristin Ali for an engagement call with Nobl...	B	Stable
BATSLN	BRITISH AMERICAN...	ESG Engagem...	Christopher ...	Consumer	BATS ESG Engagement	We held an ESG engagement call with BATS and covered a broad array of topics. Ove...	C	Stable
NDASS	NORDEA BANK ABP	ESG Engagem...	Ian Centis	Financials	Nordea's Compliance and Green Investments	Since 2015 Nordea has invested €700m in ramping up its compliance and AML function...	B	Stable
GD	GENERAL DYNAMIC...	ESG Engagem...	Andy Stone	Industrials	ESG Engagement call	Invesco held a proxy governance and ESG call with GD. They discussed the increasin...	D	Stable
DVA	DAVITA INC	ESG	Mike Kelley	Healthcare	DVA - Longtime CEO Thiry Stepping Down	DVA announced this morning that long time CEO, Kent Thiry, will be stepping down as ...		
SRE	SEMPRA ENERGY	ESG Engagem...	Jay Sammons	Energy	SRE Engagement call with Mgmt	Sempra Energy attendees: Jennifer Jett - Corporate Secretary Randy Clark - CHRO J...	C	Improving
ETR	ENTERGY CORPORA...	ESG Engagem...	Jay Sammons	Energy	Notes from ESG Engagement Call	Entergy Corp attendees: David Borde - Vice President, investor Relations Dan Falstad ...	A	Improving
PEP	PEPSICO INC	ESG Engagem...	Michael Bre...	Consumer	[PEP] Notes from ESG Engagement Call	PepsiCo Attendees: Cindy Nastanski - SVP, Legal Anna Xanthos - SVP, Executive Co...	A	Stable
BA	BOEING CO	ESG	Andy Stone	Industrials	Lower ESG			
T	AT&T INC	ESG Engagem...	Andy Stone	TMT	ESG engag			
WOWAU	WOOLWORTHS GRO...	ESG	Christopher ...	Consumer	Woolworth			
OC	OWENS CORNING	ESG Engagem...	Ray Janssen	Real Estate	OC leader			
AAPL	APPLE INC	ESG	Andy Stone	TMT	Green Bon			
DVA	DAVITA INC	ESG Engagem...	Mike Kelley	Healthcare	DVA - ESG			
BEEFBZ	MINERVA LUXEMBO...	ESG Engagem...	Peter Wietrak	Consumer	Met with co			
HIDRVS	HIDROVIAS INTERN...	ESG Engagem...	Peter Wietrak	Industrials	Met with co			
COMENG	COMETA ENERGIA S...	ESG Engagem...	Peter Wietrak	Energy	Met with co			
CSCO	CISCO SYSTEMS INC	ESG	Andy Stone	TMT	CSCO recd			
D	DOMINION ENERGY ...	ESG Engagem...	Jay Sammons	Energy	ESG call w			
WPPLN	WPP PLC	ESG Engagem...	Sam Morton	TMT	WPP: Mana			
CMCSA	COMCAST CORPOR...	ESG Engagem...	Andy Stone	TMT	ESG Engag			
BRITEL	BT GROUP PLC	ESG Engagem...	Sam Morton	TMT	BT Group:			
TALKLN	TALKTALK TELECOM...	ESG Engagem...	Sam Morton	TMT	Meeting wi			
EBAY	EBAY INC	ESG Engagem...	Andy Stone	Consumer	ESG Engag			
MSFT	MICROSOFT CORPO...	ESG Engagem...	Andy Stone	TMT	ESG Call w			
HAL	HALLIBURTON COM...	ESG Engagem...	Bixby Stewart	Energy	11/07/201			
BMV	BRISTOL-MYERS SQ...	ESG Engagem...	Michael Bre...	Healthcare	[BMV] Not			
MRK	MERCK & CO INC	ESG Engagem...	Michael Bre...	Healthcare	[MRK] Not			
AXP	AMERICAN EXPRES...	ESG Engagem...	Jacob Habibi	Financials	ESG Engag			

X UNITED STATES STEEL CORP

Lead Credit Analysis: Rahim Shad

Date	Type	Trend	Thesis
03 Jun 2019	ESG Engagement	Improving	Consistent

Headline

X: Concerted effort to raise ESG score via footprint enhancements

IVZ conducted an ESG engagement call with US Steel's management today. Given the historically poor ("D") grade the company is making a concerted effort to address the perennially weak environmental and social scores. The reporting of these metrics will also be incorporated into quarterly/annual reporting beginning YE19.

The CFO highlighted factors that will improve ESG considerations as the enhancement projects are completed. As an example, the Mon Valley project (25% by volume) addresses two key pillars:

Environmental:

- Goal: Address carbon footprint and environmental concerns
- \$150mm capex project to build an electricity co-generation facility from coke plant gas
- Trapped gases reduce air emissions and subsequent environmental impact
- Self sufficiency in electricity reduces overall carbon footprint for the facility

Source: Invesco. For illustrative purposes only.

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IFI Corporate Research – ESG Score Card

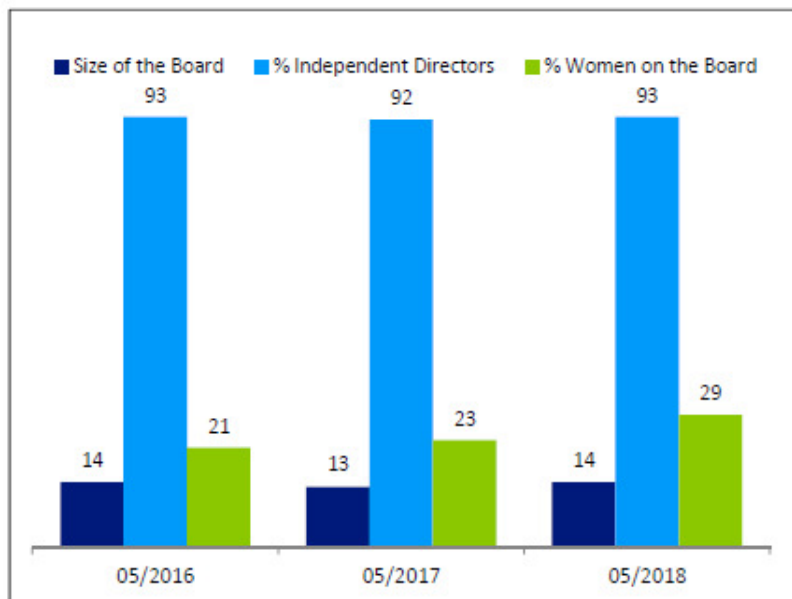


Environmental, Social, and Governance

ESG Rating & Commentary

IFI ESG Rating:	B				
	Trend: Stable				
Environmental	1	2	3	4	5
Social	1	2	3	4	5
Governance	1	2	3	4	5

GIS's environmental and governance metrics are generally positive. They have a number of sustainable agriculture programs that are designed to reduce water and energy use. They are also the only food products company to set GHG emissions reduction target for their full value chain. They also have a goal to source 100% of 10 priority ingredients from sustainable sources. Their social metrics are generally positive as well but disclosure in this area is a bit lacking and a number of product recalls highlight how product safety and quality remains a risk them. Overall, GIS is ahead of peers on ESG matters and we do not expect ESG to negatively impact their business results in the near-term.



ESG Summary

MSCI ESG Rating: AA

Environmental: 6.5 , Social: 4.2 , Governance: 6.8







✓ Better performance than sector median; or has policy

✗ Worse performance than sector median; or does not have policy

Direction	Level	FY2016		3yr CAGR		
		Level	%ile	Level	%ile	
		Environmental				
✖	✖	Total GHGs/Sales	58.62	47%	1.01%	32%
✔	✖	Energy Use/Sales	169.79	52%	0.98%	27%
✖	✖	Water/Sales	1,050.53	50%	4.85%	25%
✖	✖	Waste/Sales	13.34	46%	7.67%	30%
		--				
		--				
✔	✔	Energy Use	2,812.2	52%	-1.37%	67%
✖	✖	ESG Disclosure Level	47.5	26%	1.80%	61%
		Social				
	✔	Lost Time Incident Rate	0.51	50%	-4.74%	54%
	✔	Total Incident Rate	1.20	50%	-9.52%	64%
		Fatalities/1,000 Emp.	na	na	na	na
		--				
		--				
		--				
✔	✖	Community Spending	56.9	80%	-28.09%	0%
		Women in the Workforce	na	na	na	na
		Governance & Financials				
✔		% Independent Directors	92.31	91%	0.00%	30%
✖	✖	% Women on the Board	23.08	43%	-9.14%	9%
		--				
		--				
✖	✔	Board Average Age	64.5	23%	-1.01%	91%
✔		Size of the Board	13.0	63%	0.00%	24%
✔	✖	CEO Salary + Bonus	1,206,500.0	60%	2.10%	44%
✖	✔	Board Average Age	64.5	23%	-1.01%	91%
		ESG Policies				
✔		Emissions Reduction Initiatives				
✔		Green Building Policy				
✔		Energy Efficiency Policy				
✔		Climate Change Policy				
✔		Environmental Quality Management				
✔		Equal Opportunity Policy				
✔		Human Rights Policy				
✖		Poison Pill Plan				

Source: Invesco

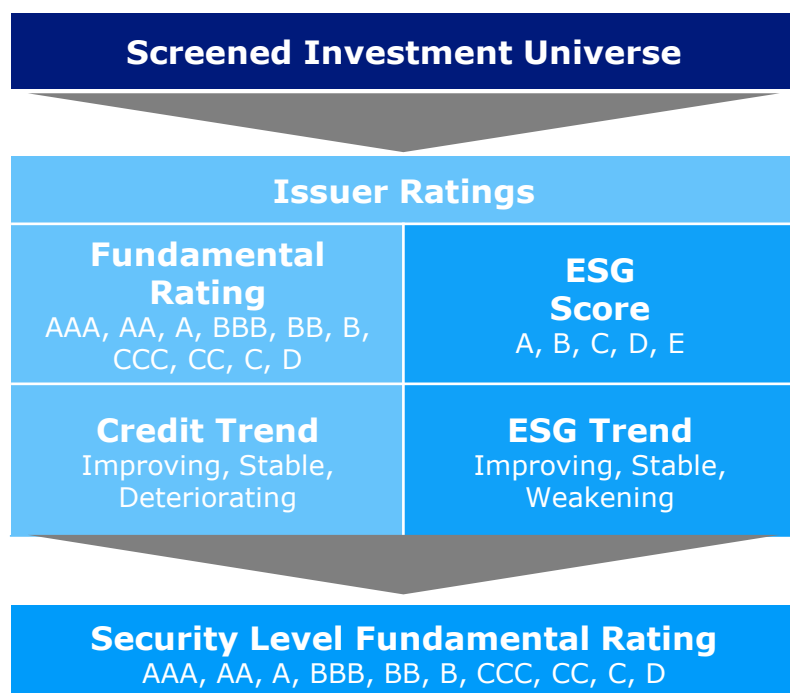
Commodity Team Focus Factors

	Key ESG considerations	Leaders	Laggards
Metals	<ul style="list-style-type: none"> - Environment impact on de-forestation, water usage and waste treatment - Employee health and safety - Bribery / corruption, typically more prevalent in emerging economies, pose risks related to legality of new contract - Climate change on carbon emission from coal, coke and natural gas consumption 		
Coal	<ul style="list-style-type: none"> - Environment: Emissions risks and pollution - Social: Employee health and safety; community relations - Governance: Bribery / corruptions in business development activities; integrity to investors (willingness to repay debt, etc.) 		
Oil	<ul style="list-style-type: none"> - Employee health and safety - Community relations, largely as it relates to operation and development of energy assets (E&P wells and / or pipelines) - Bribery / corruption in emerging markets (primarily an issue for globally integrated names) - Climate change resolutions and greenhouse gas emissions (note that upstream activities typically exhibit high carbon intensity) - Midstream / MLP governance structures 		
ESG considerations vary across commodity-related sectors, though key industry leaders continue setting industry-wide standards			

Source: Invesco.

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ESG analysis is now an intrinsic part of our credit research investment process



- Research analysts conduct fundamental analysis of screened issuers
- **Issuer fundamental ratings** provide an independent assessment of creditworthiness using an AAA-D format
- Analysts identify the **12–18 month** trend in creditworthiness as **improving, stable, or deteriorating**
- **ESG scores and trend** assessments are integrated into the credit analysis process
- **Security level fundamental ratings** differentiate instrument specific credit attributes
- Assessments are documented and communicated in platform technology

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Source: Invesco as of 31 December 2018. For illustrative purposes only.

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Agenda



Invesco's Responsible Investment Approach

Invesco Fixed Income ESG Philosophy

Integration of ESG Factors in credit research

ESG Fixed Income Client Solutions

The ESG spectrum of needs



PROCESS

PRODUCT

"Broad" ESG Integration	Exclusionary solutions	Sustainability focused solutions	Impact investing
<ul style="list-style-type: none"> • Broad and systematic ESG integration taking place at strategy level and across the process, with regards to ESG data and research, proprietary knowledge and understanding of ESG factors, investment and financial analysis for security selection and portfolio construction, risk • Best practices in voting and engagement are integrated across the investment platform • Ability to report on ESG integration • However these factors alone do not constitute an explicit responsible investment approach 	<ul style="list-style-type: none"> • Specific exclusions or ESG factors have been integrated into the investment objectives and policy to address specific constraints from ESG aware client groups • May be combined with a broad integration approach • ESG considerations are embedded in the process for portfolio construction but the overall objective of the fund does not have a responsible investment "outcome" 	<ul style="list-style-type: none"> • SRI outcomes included as part of the investment objectives so the fund is legally bound to apply an SRI strategy • The fund must fully describe its ESG criteria and strategy • The fund must screen the entire portfolio according to one or more of the RI strategies and standards such as: <ul style="list-style-type: none"> - Best in class/ positive screening: leading or best-performing within a universe or category are selected or weighted - Multiple exclusion strategies: excludes multiple investments or classes of investment - Specific sustainability themes • The fund must demonstrate how it integrates its ESG strategy and criteria throughout the investment process • Exclusion policies need to be documented • Voting and Engagement: the fund should be an active investor and participate in targeted engagement • The fund must be transparent and provide full disclosure to investors 	<ul style="list-style-type: none"> • Primary intention to generate a measurable, beneficial social or environmental impact alongside a financial return • Mainly addressable through private markets and thematic strategies (e.g. SDG/ impact focus)

ESG Product Solutions



ESG Strategy	Product Design	Benchmarks
Screening	Negatively screens issuers that are involved in undesired activities including Alcohol, Gambling, Weapons, Nuclear Power, Firearms, Genetically Modified Food, etc.	Barclays MSCI Socially Responsible Indices (USD/EUR/GBP/GLB)
Best In Class	Positively screens for issuers with ESG ratings in top half of peer group, those more effective at managing ESG risks relevant to specific industry.	Barclays MSCI Credit Sustainability Indices (USD/EUR/GBP/GLB)
Momentum	Includes issuers with higher ESG ratings and/or positive ratings momentum.	Barclays MSCI Credit ESG Weighted Indices (USD/EUR/GBP/GLB)
Custom	Tailored to deliver solutions that enable clients to match corporate values with investment policy	Based on MSCI Pillar Scores, Key Issue Ratings
Green Bonds	Broad global portfolio based on definitions from Climate Bonds Initiative and Green Bond Principals, inclusive of Sovereign, Corporate, ABS and Municipal obligations	S&P Green Bond Index
Impact Investing	Investment approach that intentionally seeks to create both financial return and positive social or environmental impact that is actively measured.	Early Stages

Invesco Global Fixed Income Capabilities Offer Multiple Solutions

Source: Invesco. FOR INSTITUTIONAL INVESTOR USE ONLY – NOT FOR USE WITH THE PUBLIC

Key ESG Considerations by Sector

Analyst Training Framework

Sector	Key ESG Factors
Common ESG Considerations	Board Independence/Diversity; Ethics; Cyber Risk; Audit Risks; Country Risk; Political Lobbying; Climate Risk; Water Stress; Gender Diversity; Gender Pay Gap
Consumer Discretionary	Supply Chain; Labor relations and benefits; Regulatory policies for labor and products; Potential liabilities related to legislative litigation; Health and Wellness
Consumer Staples	Resource utilization; Packaging; Water initiatives; Recycling; Labor management; Product safety; Health and wellness; Animal welfare issues; Human Rights; Child Labor; Responsible Consumption
Energy	Environmental Impact; Health and safety; Geographical exposure; Repressive regimes; Waste disposal; Labor shortages; Alternative energy; Climate Risks; Board independence; Bribery & Corruption; Community relations
Financials	Compensation structure; Lending practices; Regulatory compliance; Cyber Risk; Talent acquisition/retention; Corporate responsibility; Consumer Fraud; Changing demographics; Reduced Inequalities
Health Care	Benefit and cost effectiveness of medicines and devices; Quality of management and validity of strategies for reinvestment; Product Safety is fundamental to the success of any new medicine; Bribery & Corruption; Cyber Risk
Industrials	Global emission-control legislation; Energy efficiency; Clean Water; Outsourcing of labor/low cost labor; Energy independence; Health and safety of operations; Waste Management; Sustainable forestry; Supply chain; Human Rights; Child Labor; Sustainable Communities; Responsible Consumption
Materials	Environmental Impact; Health and safety; Labor relations; Board independence; Compensation structure; Geographical exposure; Community relations; Clean Water
Real Estate	Energy Efficiency of buildings (certifications); Changing Demographics; Community relations; Corporate Governance; Bribery & Corruption; Human Rights; Human Rights; Child Labor
Telecommunications	Cyber Risk; Quality and integrity of management; Reporting transparency; Compensation and incentives; Insider ownership; FCC regulatory issues; Energy efficiency; Labor relations; Supply Chain
Tech, Software & Hardware	Cyber Risk; Power efficiency (data centers); Retention of highly skilled labor; Materials usage; Supply chain efficiencies; Executive compensation; Transparency; Regulation (telecom); Health impacts; Disposal of electronics; Fleet management; Logistics; Smart grid; Autonomous driving; Environmental Impact
Utilities	Climate legislation; Regulatory requirements; Asset mix; Clean fuels; Operational history; Carbon profile; Efficient usage of Water; Management quality; Transparency; Health & Safety; Supply Chain quality

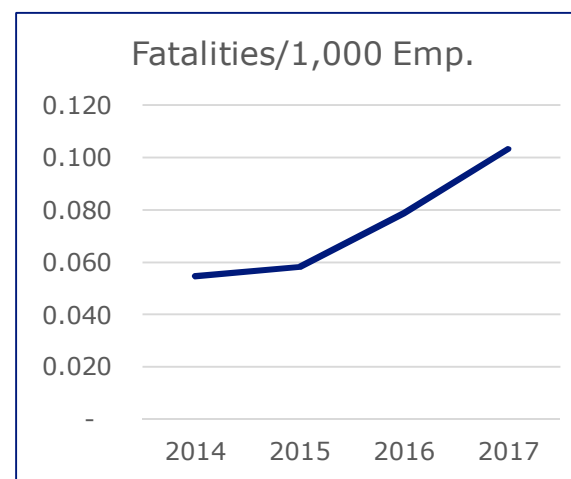
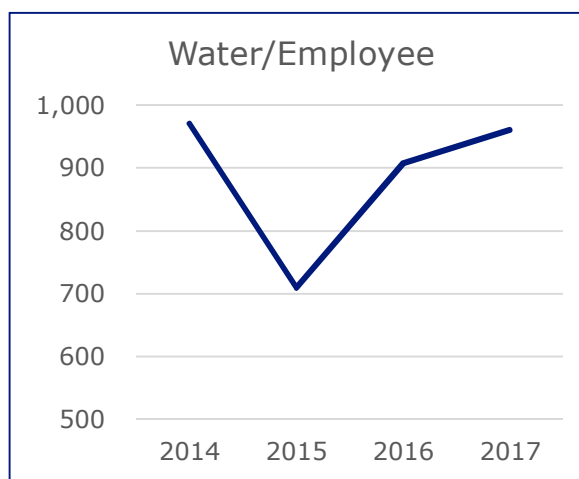
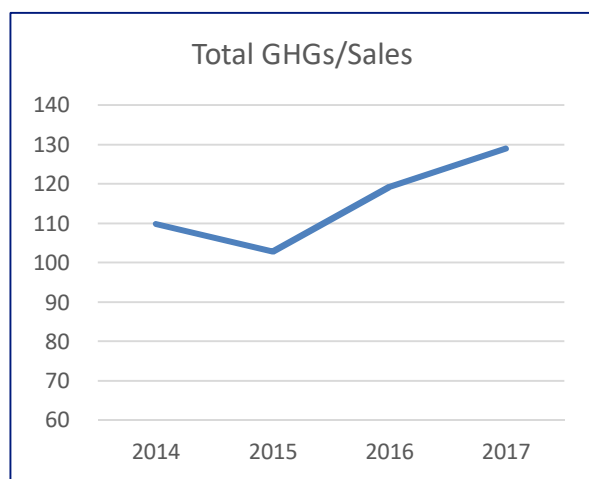
Source: Invesco as of 31 December 2017. FOR INSTITUTIONAL INVESTOR USE ONLY – NOT FOR USE WITH THE PUBLIC

ESG Impact Reporting – The Future State

SDG Mapping



ESG ----> SDG	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND
Environmental												
Water/Sales												
Water/Employee												
Water/BOE												
Water/Sq Ft												
Waste/Sales												
Total Incident Rate												
Lost Time Incident Rate												
Fatalities/1,000 Emp.												
ESG Disclosure Level												
Total Greenhouse Gas Emissions												
Direct (Scope 1) Emissions												
Indirect (Scope 2) Emissions												
Scope 3 Emissions												
Energy Use												
Electricity Use												
Renewable Energy Use												
Water Consumption												
Waste Water												
Waste Total Generation												



For Illustrative Purposes Only

Agenda



Invesco's Responsible Investment Approach

Invesco Fixed Income ESG Philosophy

Integration of ESG Factors in credit research

ESG Fixed Income Products

Appendix

ESG is central issue for fixed income investors



The fixed income market landscape is changing

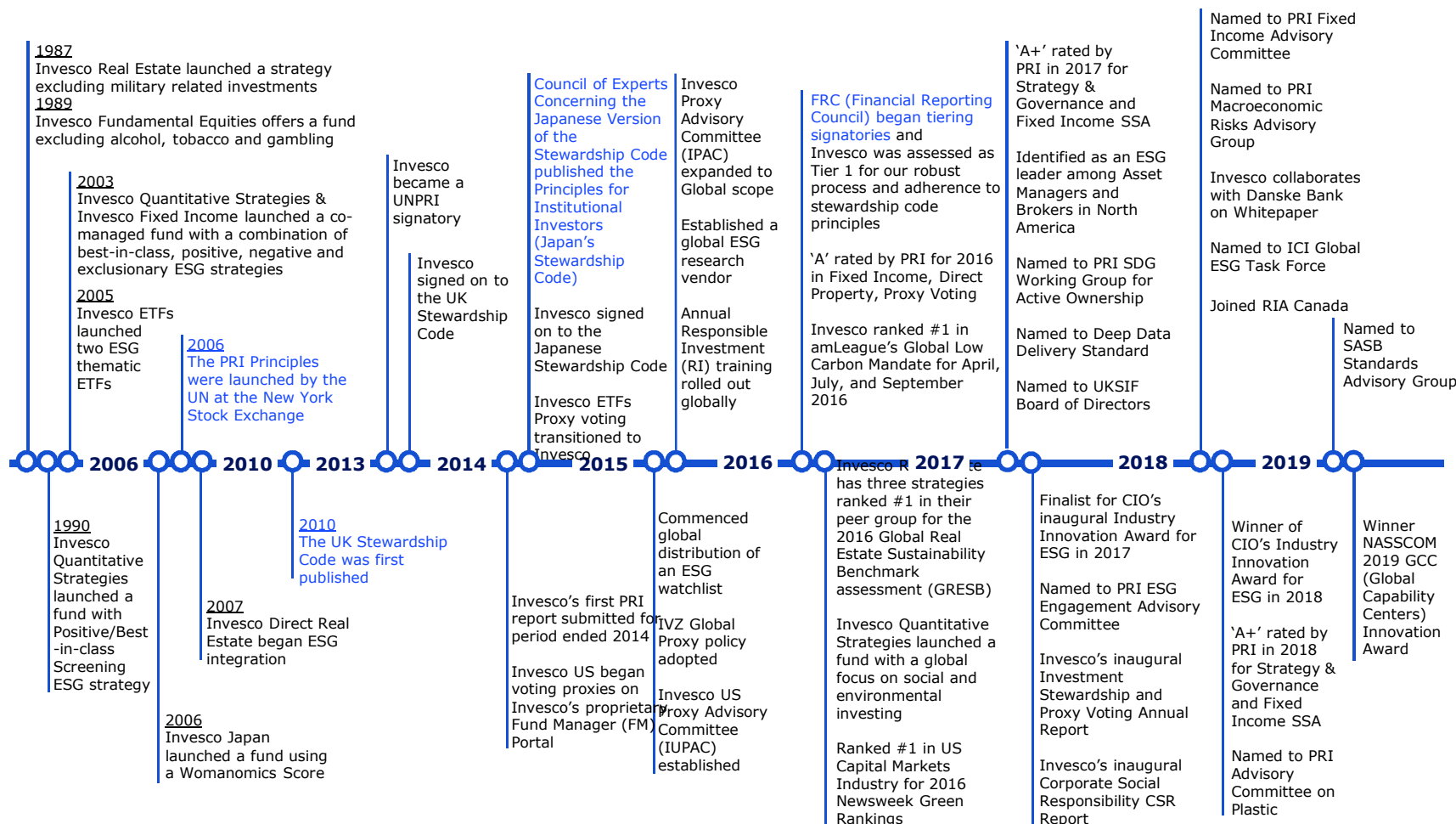
- Clients have historically addressed their ESG objectives through equities first but fixed income is now center stage¹
- European ESG fund AUM has **grown by 15% per annum since 2013**. Now totals US\$540 billion².
- Bonds are increasingly being utilized by issuers to target specific sustainability issues or projects
 - New issuance of **green bonds** totaled US\$83.8 billion in the first eight months of 2018³
 - **Social and sustainability** bond issuance exceeded US\$30 billion last year and is expected to continue to rise
- Research suggests that issuers with above-median ESG ratings are less susceptible to downwards rating migration further underlining the relevance of ESG for credit investors⁴

Source: Invesco. ¹ Invesco Global Fixed Income Study 2018. ² Morningstar Direct, 31 May 2018. ³ HSBC "Green Bond Insights", 3 September 2018. ⁴ "Challenges and Opportunities for ESG Investing", Barclays, September 2017

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Invesco's ESG Journey

A broad, deep, demonstrated and authentic approach



Any reference to a ranking, a rating or an award provides no guarantee for future performance results and is not constant over time.
Source: Invesco as of 15 May 2019.



Important information

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Any simulation presented here was created to consider possible results of a portfolio (not previously managed by Invesco for any client). These risk and performance results are hypothetical (not real) and were achieved by using a model. It may not be possible to replicate these results. The hypothetical results were derived by back-testing using a simulated portfolio. There can be no assurance that the simulated results can be achieved in the future. While the model was used to reflect the investment process for this strategy, it does not factor in all the economic and market conditions that can impact results.

Invesco cannot assure that the simulated performance results shown for this strategy would be similar to the firm's experience had it actually been managing portfolios using this strategy. In addition, the results actual investors might have achieved would vary from those shown because of differences in the timing and amounts of their investments.

Returns shown for this simulation would be lower when reduced by the advisory fees and any other expenses incurred in the management of an investment advisory account. For example, an account with an assumed growth rate of 5% would realize a net of fees annualized return of 3.91% after three years, assuming a 1% management fee.

Simulated performance results have certain limitations. Such results do not represent the impact of material economic and market factors might have on an investment advisor's decision-making process if the advisor were actually managing client money. Simulated performance also differs from actual performance because it is achieved through retroactive application of a model investment methodology and may be designed with the benefit of hindsight.