



Institute
and Faculty
of Actuaries

ESG Investing: an introduction for GI actuaries

IFOA ESG working party

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The objectives for today's workshop

Aiming to address the following questions:

- What is ESG investing?
- What it isn't!
- Why now and why is it relevant?
- Incorporating ESG risks in investment portfolios
- Further information

**Are ESG considerations part of
your investment strategy?**

What is ESG investing?

PRI definition:

*“Responsible investment is an approach to investing that aims to incorporate **environmental, social and governance** (ESG) factors into investment decisions, to better manage risk and generate sustainable, long-term returns.”*

Whilst there are similarities with approaches, Responsible Investment is not the same as:

- Socially responsible investing (SRI)
 - Impact investing
 - Sustainable investment
 - Ethical investment
 - Green investment
 - Exclusionary screening
-

Global economic mega trends



Population
growth



Ageing
population



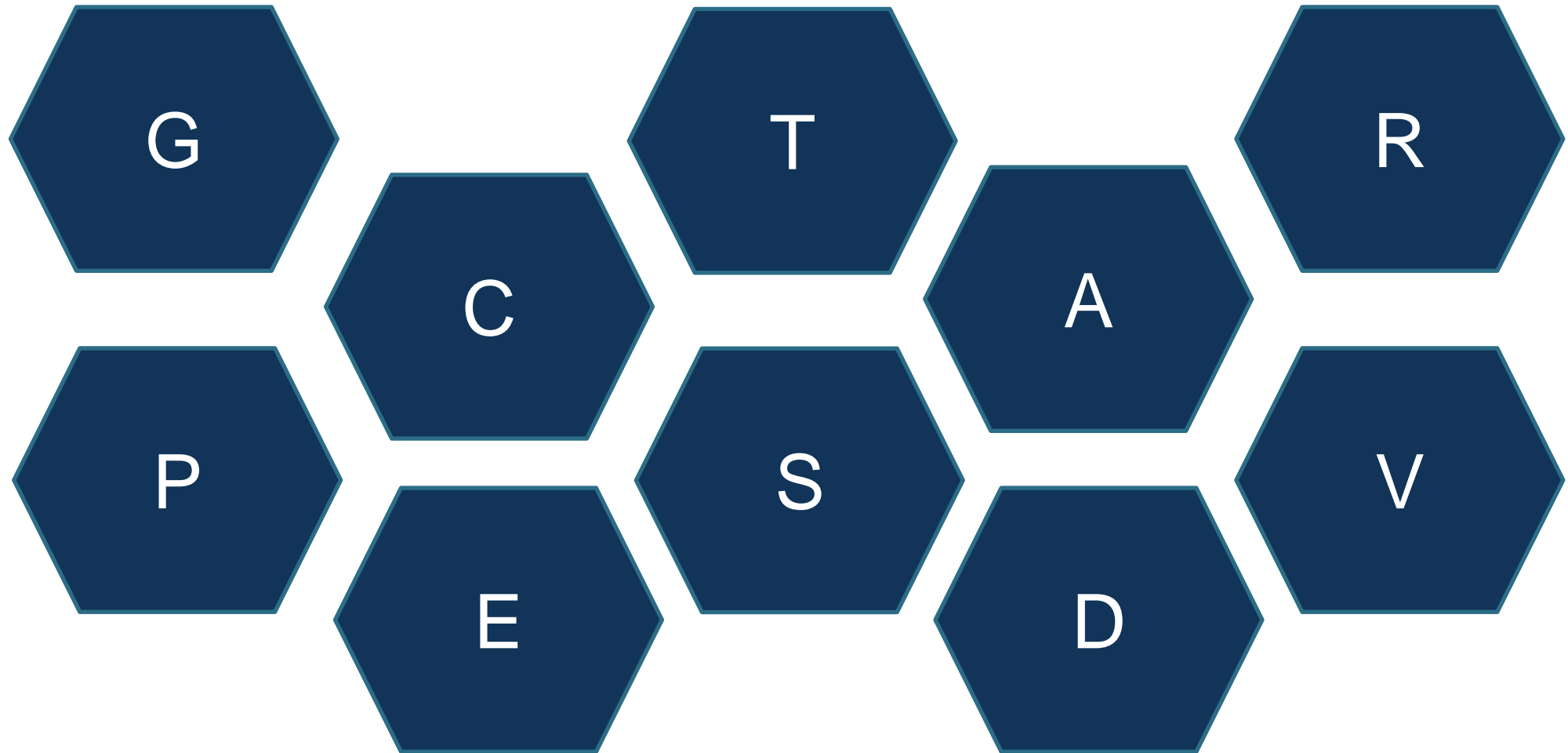
Resource
constraints



Climate
change

These four mega trends will drive long-term investment returns

Why consider ESG investing?



Why consider ESG investing?

G: Good governance is systemically important

P: Public-private partnerships are expanding

C: Climate change is a reality

E: Energy sources are changing

A: Ageing population

D: Demographics are changing

S: Social media is driving convergence

R: Regulation is providing tailwinds

V: Value chains are global

T: Technology is changing what we demand and consume

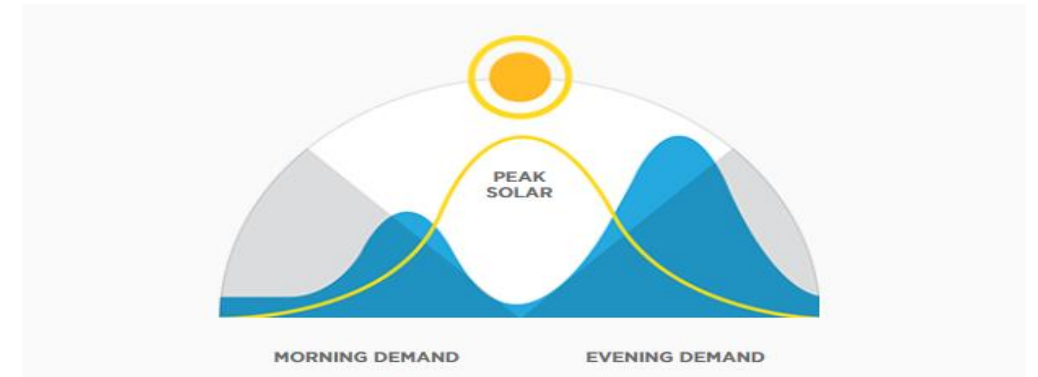
Technological disruption – business is ahead of government



MODEL 3

35,000 USD

215 miles Range per charge	Under 6 seconds Zero to 60 mph	Seating for 5 Adults
5-Star Safety Rating In all categories	Autopilot Safety Features	Supercharging Capable

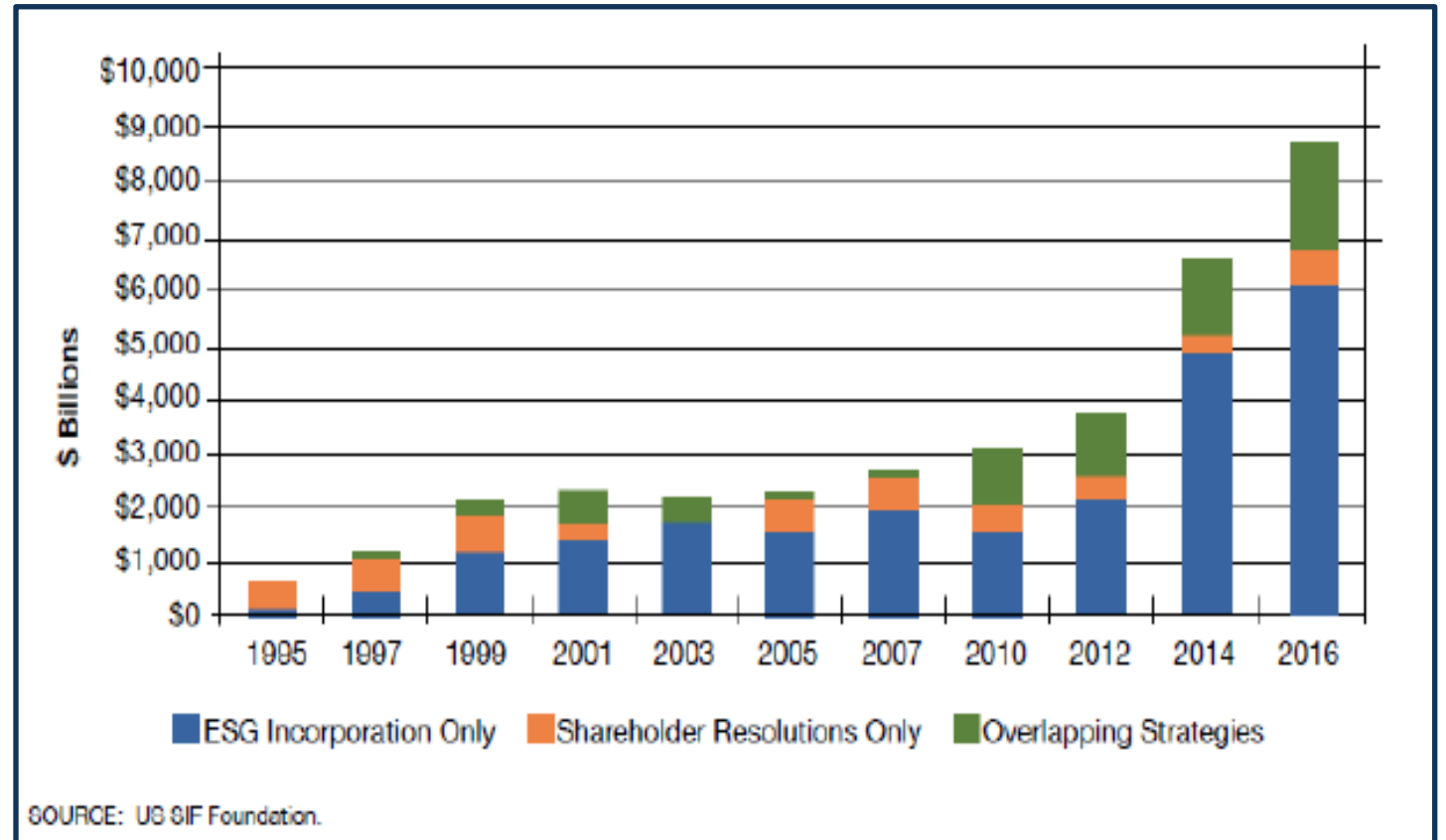


Tesla Motors

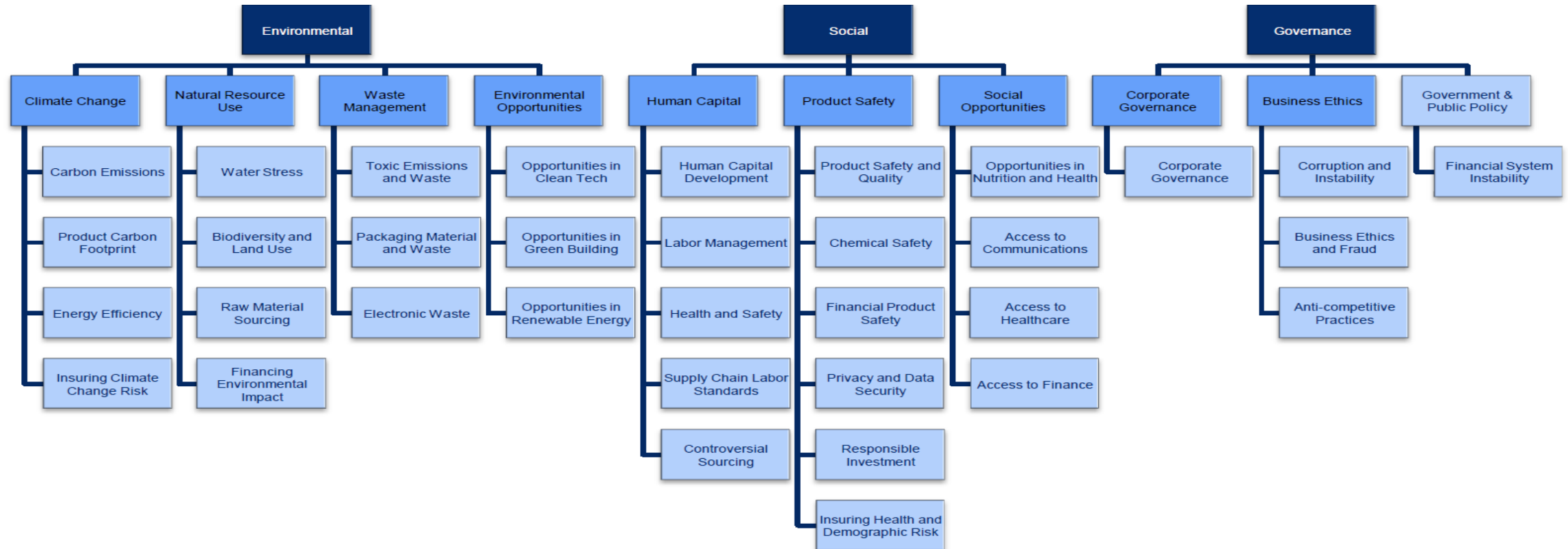
Growth in ESG investing

US SIF Foundation 2016 trends report:

- 33% growth over past two years; 14-fold increase since 1995
- Accounts for over 20% of dollars \$ under professional management in the US
- Total US-domiciled AUM using SRI & ESG strategies grew to \$8.7 trillion in 2016



What do we mean by ESG issues?



Source: MSCI

Environmental Factors (E)

- Considers the **externalities** produced by a firm
- **Costs not captured** in the manufacturing process
- For example, a firm's carbon footprint or its waste production
- Arguably the **clearest** of the three risk factors

Environmental

- Biodiversity / land use
- Carbon emissions
- Climate change risks
- Energy usage
- Raw material sourcing
- Regulatory / legal risks
- Electronic waste
- Waste & recycling
- Water management
- Weather events

Social Factors (S)

- Considers labour rights, such as working hours, fatalities and pay
- **Supply chain management a key issue**
- **Difficult to source proper data**
- Arguably the **most complex** of the three factors and the **most subjective**

Social

- Community relations
- Controversial business
- Customer relations / product
- Diversity issues
- Employee relations
- Health & safety
- Human capital management
- Human rights
- Responsible marketing & R&D
- Supply chain management

Governance Factors (G)

- An evaluation of how a **firm structures** its board, its disclosures, compensation practices and so on...
- An assessment of the firm's **culture**
 - Wells Fargo: “Eight is Great!”
 - LIBOR scandal

Governance

- Accountability
- Anti-takeover measures
- Board structure
- Bribery & corruption
- CEO duality
- Executive compensation
- Ownership structure
- Shareholder rights
- Transparency
- Voting procedures

What do ESG factors impact the most?

A: Risk

B: Return

C: Risk & Return (both equally)

D: Neither (no impact)

ESG factors and the impact on expected returns

Whilst the majority of research suggests a good ESG score leads to improved returns, there is also lots of evidence to the contrary:

Low ESG score = lower expected returns

- A low ESG score (in particular governance) translate into unfavourable business decisions
- Companies more likely to suffer losses or incur increased costs of refinancing

Low ESG score = higher expected returns

- Investor preference matters: low demand for investments with low ESG scores
- Investor demand has impact on prices: Lower prices today and higher returns in the future

Conclusion: academic research provides mixed evidence of the impact of ESG factors on expected returns

ESG factors and the impact on risk

ESG factors leads to a range of potential impacts on stakeholders

Environmental

- Firm generating high levels of pollution may suffer from a future tax

Social

- Firm that poorly treats its employees or suppliers may be boycotted by consumers

Governance

- Firm with poor governance heavily fined by the regulator



Low ESG score =
higher risk

- Events can have a meaningful impact on the value of the firm
- Impact is uncertain
- Timeframe is long and uncertain

ESG factors and the impact on risk

- Analysis by AQR Capital Management on the risk implications of incorporating ESG considerations into an investment strategy
- Clear support for the hypothesis that **ESG exposures may be informative about the risks of individual firms**
 - Stocks with the worst ESG exposures have total and stock-specific volatility that is up to 10-15% higher and betas up to 3% higher, than stocks with the best ESG exposures
 - A stock's ESG score helps forecast future statistical risks up to 5 years later
- The findings suggest ESG may have a role in investment portfolios that **extend beyond ethical considerations**, particularly for investors wishing to tilt towards safer stocks

Corporate fines from ESG issues

Company	Year	Sector	\$ billions	Reason
BP	2016	Energy	20.8	Deepwater horizon
Bank of America	2014	Financials	16.7	Financial fraud
Volkswagen	2016	Automotive	14.7	Emissions tests
JPMorgan Chase	2013	Financials	13.0	Toxic mortgages
BNP Paribas	2014	Financials	8.9	Flouting sanctions
Citigroup	2014	Financials	7.0	Toxic mortgages
Anadarko Petroleum	2014	Energy	5.2	Environmental fraud
Goldman Sachs	2016	Financials	5.1	Toxic securities
GlaxoSmithKline	2012	Pharmaceuticals	3.0	Misbranding
Credit Suisse	2014	Financials	2.9	Tax evasion

Source: U.S. Department of Justice

Case Study - Volkswagen

“Our pursuit of innovation and perfection and our responsible approach will help to make us the world’s leading automaker by 2018...both economically and ecologically.”

Dr. Martin Winterkorn, 2014 Volkswagen report & accounts

“We find that firms with good performance on material sustainability issues significantly outperform firms with poor performance on these issues”.

Corporate Sustainability: First Evidence on Materiality
Harvard Business School, 2015



Source: Bloomberg, as at 31 December 2015

Incorporating ESG factors in the investment process

- Fund managers are recognising the importance of understanding how ESG risk factors can potentially impact an investment
 - Analysis of ESG considerations should be embedded into the process and documented in research and recommendations
 - ESG events are infrequent and difficult to model and so may not be fully captured in traditional risk models which are typically calibrated to shorter-term time horizons
- Portfolios may have a deliberate tilt to equities and bonds which exhibit strong ESG characteristics
- Even if portfolios don't have an ESG tilt, the manager still needs to ensure an understanding of the exposure to ESG risks and whether the return adequately compensates for this

Case study: ESG integration in fixed income

- MSCI ESG ratings report available for many Euro and US IG and HY issuers
- Quarterly ESG sector report reviewed by sector analysts and available on Bloomberg
- ESG report includes data from RepRisk, which tracks changes in levels of negative news on issuers, helping flag potential downside risk.
- Due diligence reports on private deals covering ESG issues in depth (Secured Loans)

Monitor	View	Indicators	News	Link To	UD-RES	UD-RES	UD-RES	FL-CURRENT_V	FL-PREVIOUS_V	FL-CHANGED_V	5Y Mid Par	
Event	Ticker	Country	UD-MSCI	UD-MSCI	ESG	ESG	ESG	Current	Peak		CS5 Spd	
			ES	ES	Quick	Quick	Quick				Ref New	
			RATING	RATING								
- AM												
	(Unclassified) (73)											
	COMCAST CORP-A	US	CCC	Yellow	30	24	39		OW	OW	N	38.50
	DISCOVERY CORP-A	US	BBB	Green	30	20	38		UW	UW	N	35.00
	DAILY MAIL TST A	GB	BBB	Green	30	10	25		UW	UW	Y	235.00
	HELLENIC TELECOM	GR	BBB	Green	30	20	29		UW	UW	NO	329.00
	LIBERTY GLOBAL-A	GB		Green	30	5	25		HM	HM	NO	
	OI SA-PREF	BZ		Green	30	24	32		UW	UW	NO	6827.7952
	ORACLE CORP	US	A	Green	30	24	32		HM	HM	N	35.00
	SBC	US	A	Green	30	0	0		HM	HM	N	90.00
	TELECOM ITALIA S	IT	A	Yellow	30	16	30		HM	HM	NO	217.00
	TELEKOM AUSTRIA	AS	A	Yellow	30	15	24		HM	HM	NO	67.00
	SAP SE	DE	AAA	Green	9	22	38		UW	UW	N	90.00
	ERICSSON LM-B	SE	AA	Green	8	20	25		UW	UW	N	90.00
	SKY PLC	GB	A	Yellow	8	0	34		OW	OW	N	90.00
	ORION LTD	NO	A	Green	7	0	0		HM	HM	N	130.00
	CABLE & MOBILE	US	A	Green	7	0	20		UW	UW	NO	
	BSN	US	A	Yellow	7	26	60		UW	UW	N	61.50
	TELSTRA CORP	AU	A	Green	7	1	23		UW	UW	N	64.00
	TIME WARNER CABL	US	A	Yellow	7	19	36		OW	OW	N	61.50
	MICROSOFT CORP	US	AAA	Yellow	6	35	63		OW	OW	N	42.50
	SWISSCOM AG-REG	CH	AA	Green	6	18	33		UW	UW	N	45.00
	AT&T INC	US	BB	Yellow	6	25	56		HM	HM	N	85.50
	VERIZON COMM-NC	US	BB	Orange	6	41	49		OW	OW	N	60.50
	ALCATEL-LUCENT	FR	A	Yellow	5	15	40		HM	HM	NO	40.00
	PUBLICIS GROUPE	FR	BBB	Green	5	16	25		HM	HM	N	75.00
	CENTRAL EURO M-A	DE	BB	Green	4	4	25		HM	HM	NO	
	BLAD SA	FR	BBB	Green	4	0	25		UW	UW	N	
	TELEOR ASA	NO	AAA	Green	4	25	54		UW	UW	N	55.00
	VIVENDI	FR	AA	Green	4	17	27		HM	HM	N	68.00
	ZIGGO HOLDING BV	NL	B	Green	4	0	33		HM	HM	NO	265.00
	SOFTBANK GROUP C	JP	BB	Green	3	24	34		HM	HM	NO	152.50
	SOLOCAL GROUP	FR	A	Green	3	0	0		UW	UW	NO	
	MODY'S CORP	US	BB	Orange	3	23	36		HM	OW	Y	
	ORANGE	FR	AA	Yellow	3	24	42				N	62.50
	WOLTERS KLUWER	NL	AA	Green	3	6	25		HM	HM	N	39.00
	ASPL HOLDING NV	NL	AAA	Green	2	0	17		UW	UW	N	123.00
	DEUTSCHE TELEKOM	DE	BBB	Orange	2	23	49		OW	OW	N	46.50
	STV PLC	GB	AAA	Green	2	8	35		HM	HM	N	108.50
	KPM (KOHIN) NV	NL	AA	Yellow	2	0	25		UW	UW	NO	74.00
	PARSON PLC	DE	AA	Green	2	3	25		UW	UW	N	104.00
	SINGAPORE TELECO	SG	AA	Green	2	0	23				N	65.00
	TDC A/S	DK	BBB	Green	2	23	25		HM	HM	NO	118.00
	VODAFONE GROUP	GB	AAA	Orange	2	24	32		HM	HM	N	95.00
	WPP PLC	GB	AAA	Green	2	32	32		HM	HM	N	57.00
	BT GROUP PLC	GB	AAA	Yellow	1	15	27		OW	OW	N	81.50
	CAPGEHNE	FR	AA	Green	1	6	25		HM	HM	N	78.00
	EUTELSAT COMMUN	FR	BBB	Green	1	0	24		UW	HM	Y	
	RELX NV	GB	AAA	Green	1	34	35		HM	HM	N	
	USM PLC	GB	AA	Green	1	0	0				N	90.00
	SUNRISE COMM-NC	CH							UW	UW	NO	147.50
	UNIFY GERMANY HO	DE							UW	HM	NO	
	NORDELL SWEDEN H	SE							HM	HM	NO	
	EDISON HOLDINGS	FR							HM	HM	NO	
	ALTICE FINANCING	FR							HM	HM	NO	432.50
	WATTEWORTH FINANC	FR							HM	UW	YES	397.50
	ANDREA BROADCAST	GB							HM	OW	YES	
	ORBERTHUR TECHNOL	FR							HM	HM	NO	
	CABLE COMMUNICAT	NL							UW	UW	NO	
	TELECOM SECURED	GB							HM	HM	N	
	OL THALES-REG-B	GB							HM	HM	N	

Case study: ESG integration in fixed income

Environmental

Energy, Chemicals, Utilities, Industrials, Packaging

Impact of CO2 targets on domestic policies
Pollution and negative externalities
Longer term environmental impacts
Technological changes

Social

Healthcare, Gaming

Changes in government policy, regulation and country law that directly and indirectly impact issuers

Governance

Relevant across all sectors

Management history
Related party transactions
Management pay
Shareholder base
Aggressive accounting practices

Case study: Murray Energy

Environmental concerns. Acquired Foresight Energy, becoming one of the largest US coal producers. Competitive pressure from cleaner, renewable energy sources is placing pressure on coal.

Case study: EU Telecoms sector

Changes in the EU Commission (Telecoms & Competition) has raised concerns that mobile consolidation transactions have a greater risk of regulatory deal failure, as seen recently in Denmark. We remain positive on fixed line regulation and fixed-mobile convergence M&A, however our overall view on the sector has been tempered.

Case study: Unione di Banche Italiane (UBI)

Governance and controls within the UBI have been strained by a continued search for acquisitions. The aggressive acquisition strategy has been at odds with messaging to investors and has negatively impacted credit metrics, with the core tier 1 ratio lower than peers and the non-performing loan (NPL) book significantly worse than peers.

Note: Sectors listed are examples, not an exhaustive list of areas that ESG factor could impact

The above examples are intended for illustrative purposes only and are not indicative of the historical or future performance of the strategy or the chances of success of any particular strategy. Janus Henderson Investors, one of its affiliated advisors, or its employees, may have a position mentioned in the securities mentioned in the report. References made to individual securities should not constitute or form part of any offer or solicitation to issue, sell, subscribe or purchase the security.

Implementation

ESG refers to the integration of environmental, social, and governance factors in the investment process:

Risk management

- Inclusion of ESG factors into financial analysis to evaluate risks and opportunities

Strategy

- Explicit incorporation of ESG objectives into investment products and strategies

Stewardship

- Actively engage with companies to protect and enhance their value

ESG Scoring

Pillar	Category	Score	Weight %
Environmental	Resource use	20	11%
	Emissions	22	12%
	Innovation	19	11%
Social	Workforce	29	16%
	Human rights	8	8%
	Product responsibility	12	9%
Governance	Management	30	20%
	Shareholders	12	7%
	CSR strategy	8	6%
Total		20.6	100%



Score range	Grade
27 < score <=30	AAA
24 < score <=27	AA
21 < score <=24	A
18 < score <=21	BBB
15 < score <=18	BB
12 < score <=15	B
9 < score <=12	CCC
6 < score <=9	CC
3 < score <=6	C
0 < score <=3	D

**Will you now consider
incorporating ESG into your
investment strategy?**

The ESG IFOA working party

Who we are:

- Formed in January 2017, 14 members - actuaries & non-actuaries
- Jointly report to R&E Board and F&I Board
- Diverse experience: academia, asset management, consultancy, environmental law, GI, life, pensions, risk management

Purpose:

- Co-ordinate & expand the IFOAs ESG-related investment activities & advance actuarial capacity in the field

Questions

Feedback

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Useful links

- Principles for Responsible Investment www.unpri.org
- The Forum for Sustainable & Responsible Investment www.ussif.org
- UN Global Compact www.unglobalcompact.org
- Global Reporting Initiative (GRI) www.gri.org
- Sustainability Accounting Standard Board (SASB) www.sasb.org
- The Social Stock Exchange <http://socialstockexchange.com>
- Smith School of Enterprise & the Environment <http://www.smithschool.ox.ac.uk/>
- Sustainalytics <http://www.sustainalytics.com/>
- MSCI <https://www.msci.com/esg-ratings>
- Bloomberg www.bloomberg.com