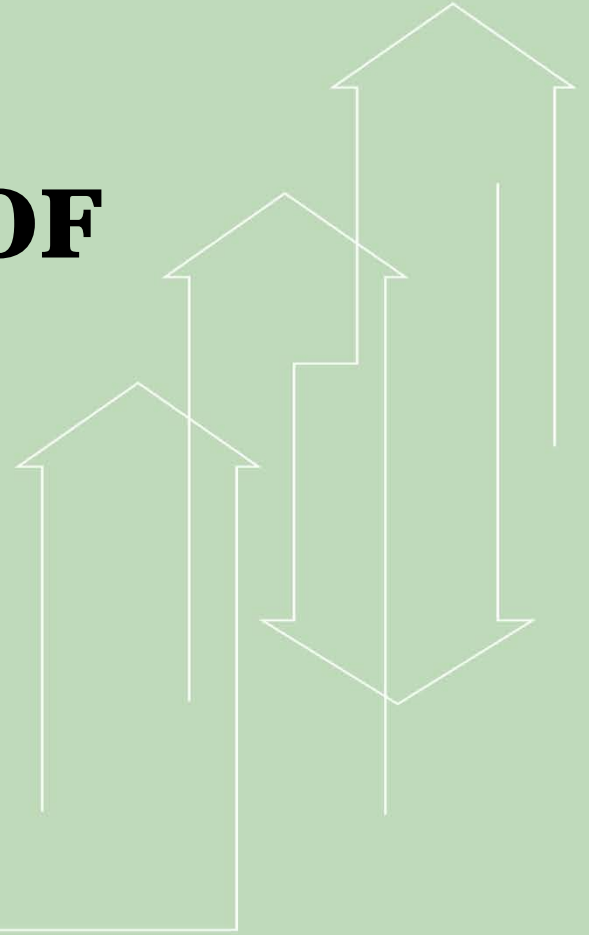


ESG AND THE FUTURE OF INVESTING

CFA MONTRÉAL LUNCHEON

April 25, 2018

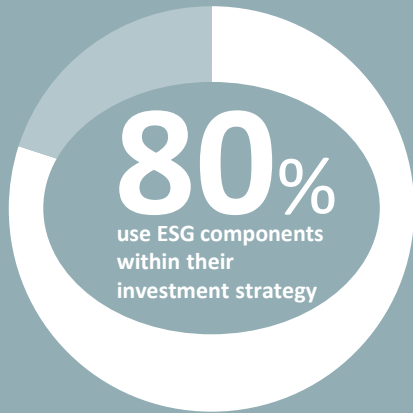


The Current State of ESG

Institutional Investor Survey —“Performing for the Future”

Broad ESG Adoption

The vast majority of investors in our latest survey have some exposure to ESG strategies.



However, Depth of Integration Varies

The depth of exposure is low for all but a small group of investors



44% have **1/4** of assets with exposure to ESG strategies



37% have **1/4–1/2** of assets with exposure to ESG strategies



17% have **over 1/2** of assets with exposure to ESG strategies

Momentum Will Continue...

Many investors believe ESG strategies drive long-term returns



...but there are barriers to overcome
Namely around terminology, data and measurement

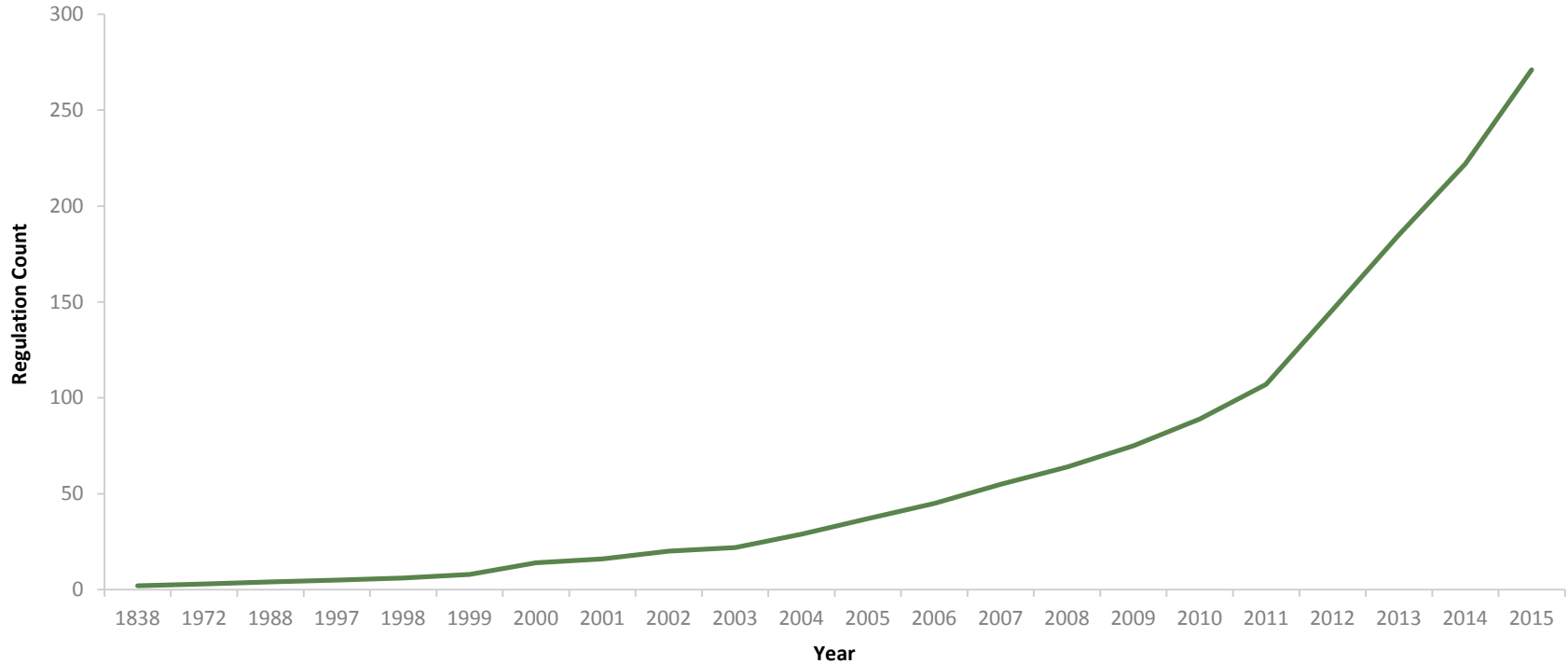
This view is not a testimonial of satisfaction with our advisory services and should not be interpreted as a statement of experience or an endorsement by a client, but rather an opinion on ESG investing in general. Many of the survey respondents are not clients of SSGA.

* About this study: In December 2016 and January 2017, Longitude Research, in association with State Street Global Advisors (SSGA), surveyed senior executives with asset allocation responsibilities

at 475 institutions. They included private and public pension funds, endowments, foundations and official institutions. The survey was conducted by a combination of telephone interviews and online. The results were analyzed and collated by Longitude Research and supplemented by a series of in-depth interviews. This survey explored Institutional Investors' attitudes toward ESG adoption. It sought to gain insights into their strategic approach, asset allocations, performance measures and challenges.

Adoption Driver: Policy/Regulation

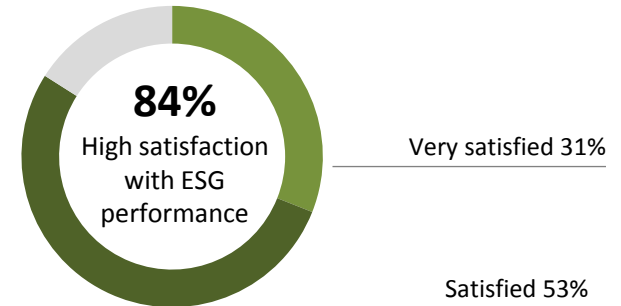
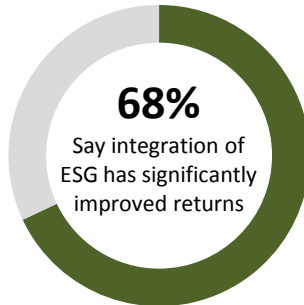
ESG Regulation Passed or Updated 1972–2016, Cumulative



As of September 20, 2016.

Sources: SSGA, Principles for Responsible Investment.

Adoption Driver: Global Asset Owner Perspectives



Source: "Performing for the Future", State Street Global Advisors, April 2017.

In December 2016 and January 2017, Longitude Research, in association with State Street Global Advisors (SSGA), surveyed senior executives with asset allocation responsibilities at 475 asset-owning institutions. They included private and public pension funds, endowments, foundations and official institutions. The survey was conducted by a combination of telephone interviews and online. The results were analyzed and collated by Longitude Research and supplemented by a series of in-depth interviews.

Adoption Driver: Evolving Global Risk Landscape

Top 5 Global Risks in Terms of Likelihood

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	Breakdown of critical information infrastructure	Asset price collapse	Asset price collapse	Asset price collapse	Storms and cyclones	Severe income disparity	Severe income disparity	Income disparity	Interstate conflict w/regional consequences	Large scale involuntary migration	Extreme weather events
2	Chronic Disease (DM)	Middle East instability	Slowing Chinese Economy (<6%)	Slowing Chinese Economy (<6%)	Flooding	Chronic fiscal imbalances	Chronic fiscal imbalances	Extreme weather events	Extreme weather events	Extreme weather events	Large scale involuntary migration
3	Oil price shock	Failed and failing states	Chronic Disease	Chronic Disease	Corruption	Rising greenhouse gas emissions	Rising greenhouse gas emissions	Unemployment and underemployment	Failure of national governance	Failure of climate change mitigation & adaptation	Major natural disasters
4	China economic hard landing	Oil and gas price spike	Global governance gaps	Fiscal crises	Biodiversity loss	Cyber attacks	Water supply crises	Climate change	State collapse or crisis	Interstate conflict	Large scale terrorist attacks
5	Asset price collapse	Chronic Disease (DM)	Retrenchment from globalization (EM)	Global governance gaps	Climate change	Water supply crises	Mismanagement of population ageing	Cyber attacks	High structural Unemployment & underemployment	Natural catastrophe	Massive incident of data fraud/theft

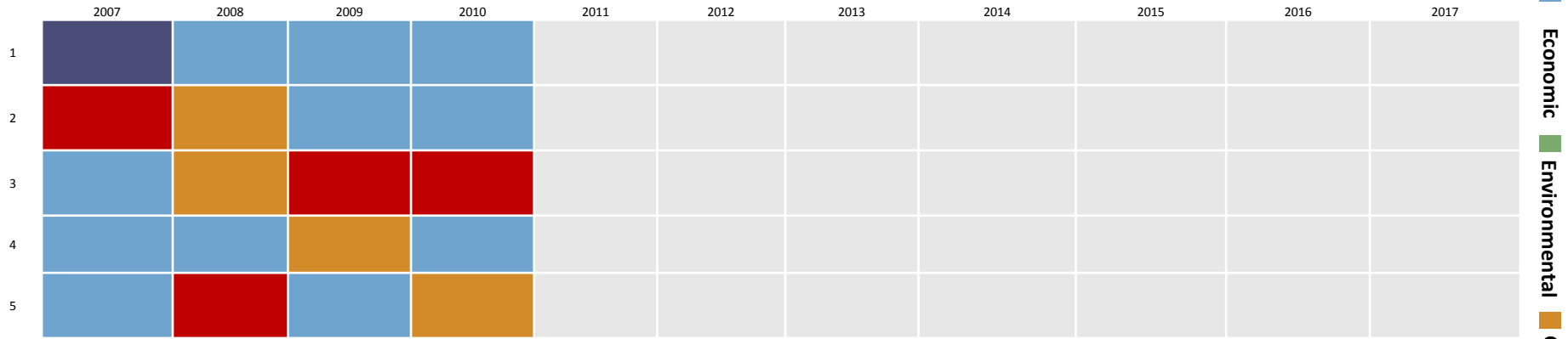
Economic
Environmental
Geopolitical
Societal
Technological

Top 5 Global Risks in Terms of Impact

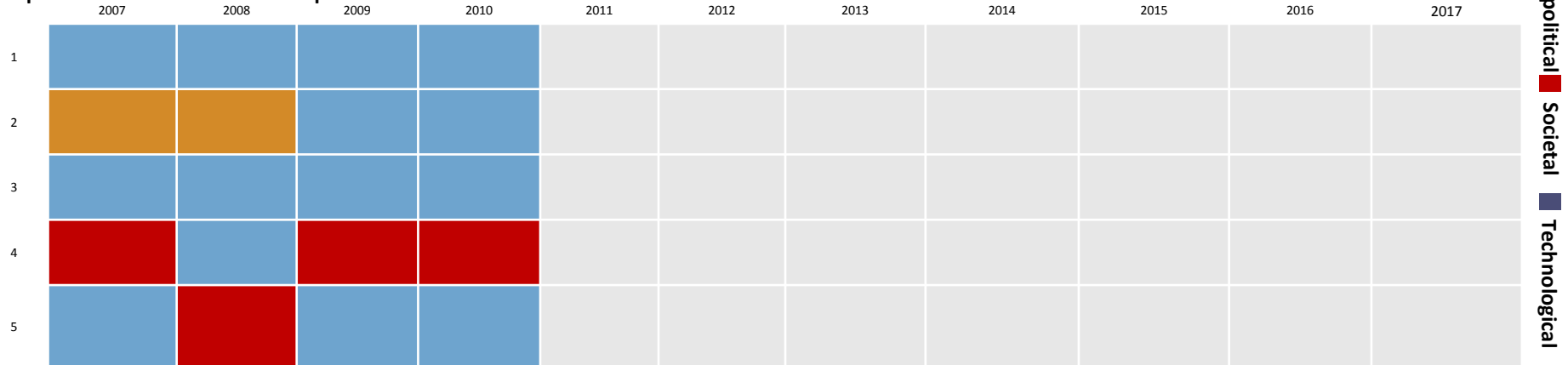
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	Asset price collapse	Asset price collapse	Asset price collapse	Asset price collapse	Fiscal crises	Major systemic financial failure	Major systemic financial failure	Fiscal crises	Water crises	Failure of climate change mitigation & adaptation	Weapons of mass destruction
2	Retrenchment from globalization	Retrenchment from globalization	Retrenchment from globalization	Retrenchment from globalization	Climate change	Water supply crises	Water supply crises	Climate change	Rapid and massive spread of infectious diseases	Weapons of mass destruction	Extreme weather events
3	Interstate and civil wars	Slowing Chinese Economy (<6%)	Oil and gas price spike	Oil price spike	Geopolitical conflict	Food shortage crises	Chronic fiscal imbalances	Water crises	Weapons of mass destruction	Water crisis	Water crisis
4	Pandemics	Oil and gas price spike	Chronic Disease	Chronic Disease	Asset price collapse	Chronic fiscal imbalances	Weapons of mass destruction	Unemployment and underemployment	Interstate conflict w/regional consequences	Large scale involuntary migration	Major natural disasters
5	Oil price shock	Pandemics	Fiscal crises	Fiscal crises	Extreme energy price volatility	Extreme energy/ag price volatility	Failure of climate change adaptation	Critical information infrastructure breakdown	Failure of climate change adaptation	Energy price shock	Failure of climate change mitigation & adaptation

Adoption Driver: Evolving Global Risk Landscape

Top 5 Global Risks in Terms of Likelihood

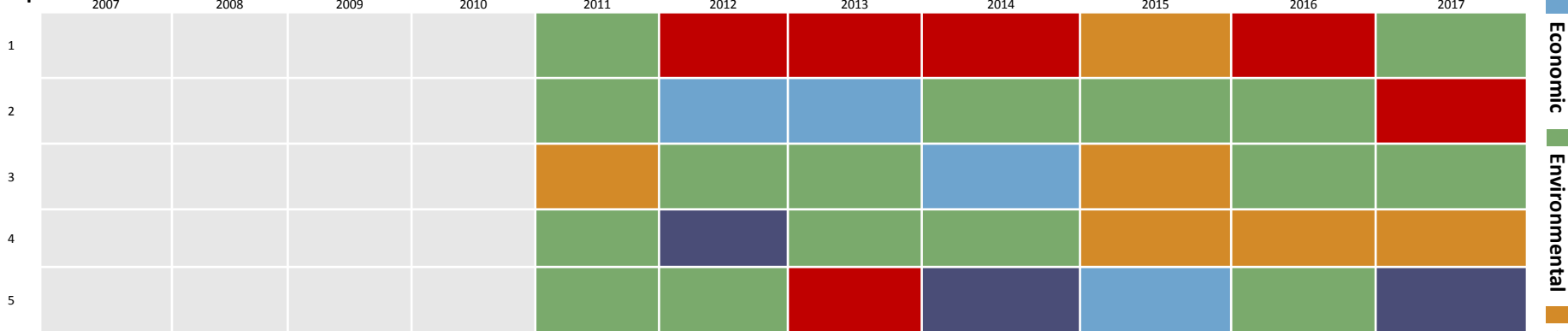


Top 5 Global Risks in Terms of Impact

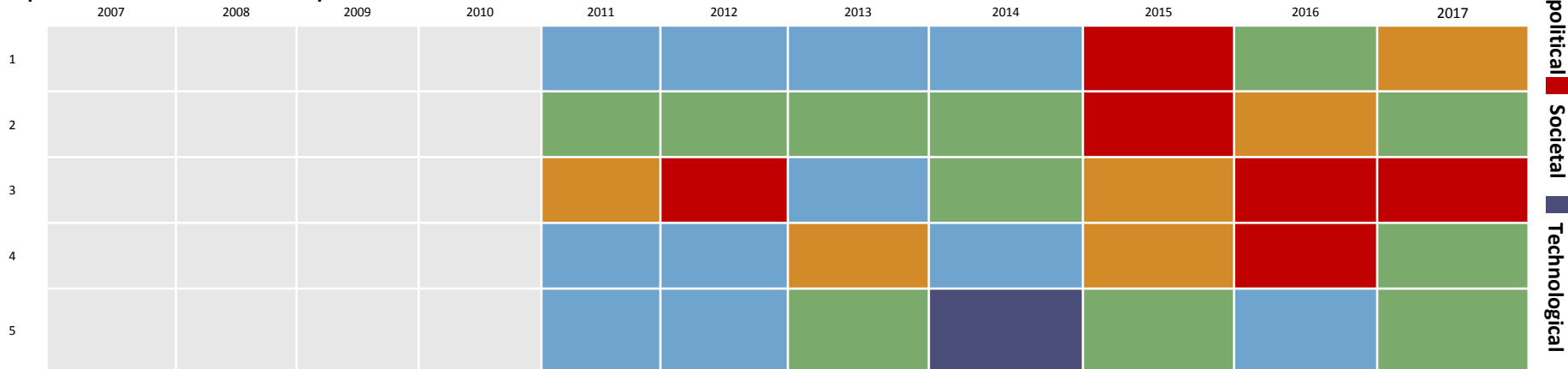


Adoption Driver: Evolving Global Risk Landscape

Top 5 Global Risks in Terms of Likelihood

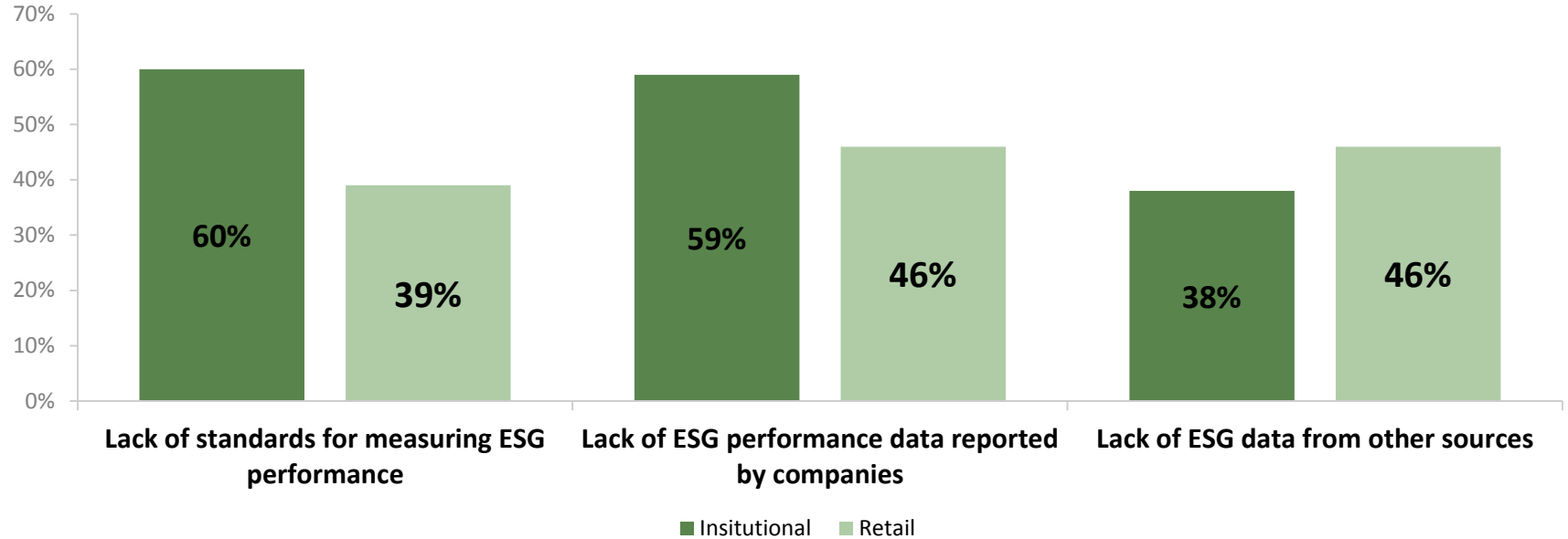


Top 5 Global Risks in Terms of Impact



Adoption Barrier: Data

Types of Data Barriers to Integration Cited by Investors



Source: The Investing Enlightenment: How Principles and Pragmatism Can Create Sustainable Value Through ESG, Center For Applied Research, State Street Corporation
The study was conducted from November to December 2016. The findings are based on a global survey of 582 institutional investors across 29 countries and 750 individual investors across 24 countries, as well as more than 25 interviews with senior executives.

Adoption Barrier: Terminology

56%

of adopters say there's
a lack of clarity over
ESG terminology

“*My goal is for all of my staff, from portfolio managers down to entry-level investment officers, to have a core understanding of what we mean by ESG, how our policies describe it, and how I want to see us integrating it into our investment decisions.*”

Chris Ailman, CalSTRS

Source: “Performing for the Future”, State Street Global Advisors, April 2017.

In December 2016 and January 2017, Longitude Research, in association with State Street Global Advisors (SSGA), surveyed senior executives with asset allocation responsibilities at 475 asset-owning institutions. They included private and public pension funds, endowments, foundations and official institutions. The survey was conducted by a combination of telephone interviews and online. The results were analyzed and collated by Longitude Research and supplemented by a series of in-depth interviews.

Adoption Barrier: Benchmarking/Measurement

Which of the following ways does your institution evaluate ESG performance?

Against our own performance history/track record

49%

By using a common benchmark index

47%

Against peers with comparable portfolios

46%

Non-financial measures

24%

No specific measures

4%

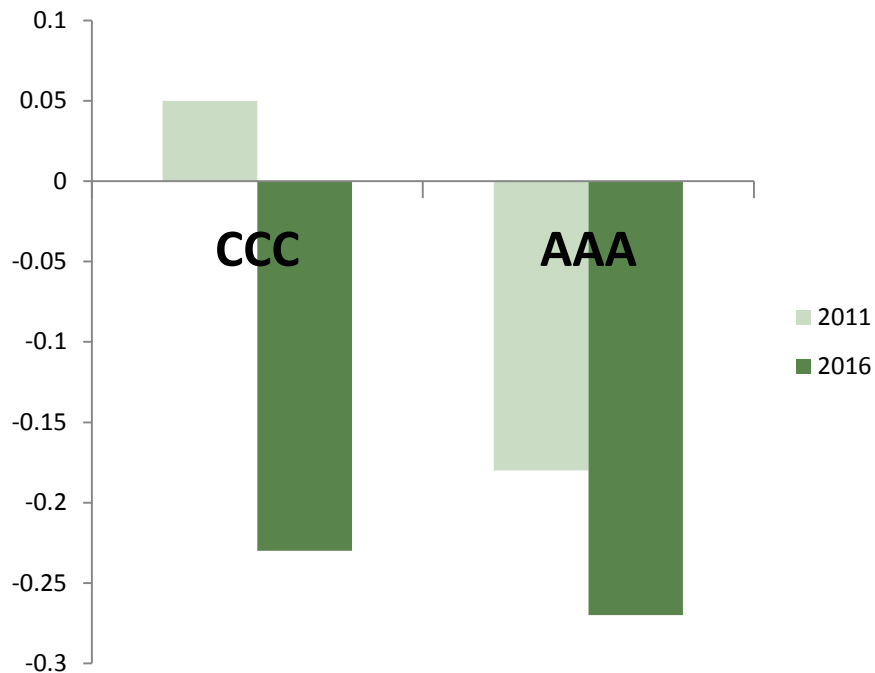
Source: "Performing for the Future", State Street Global Advisors, April 2017.

Respondents were able to select multiple answers to the above survey question causing percentages to sum to more than 100.

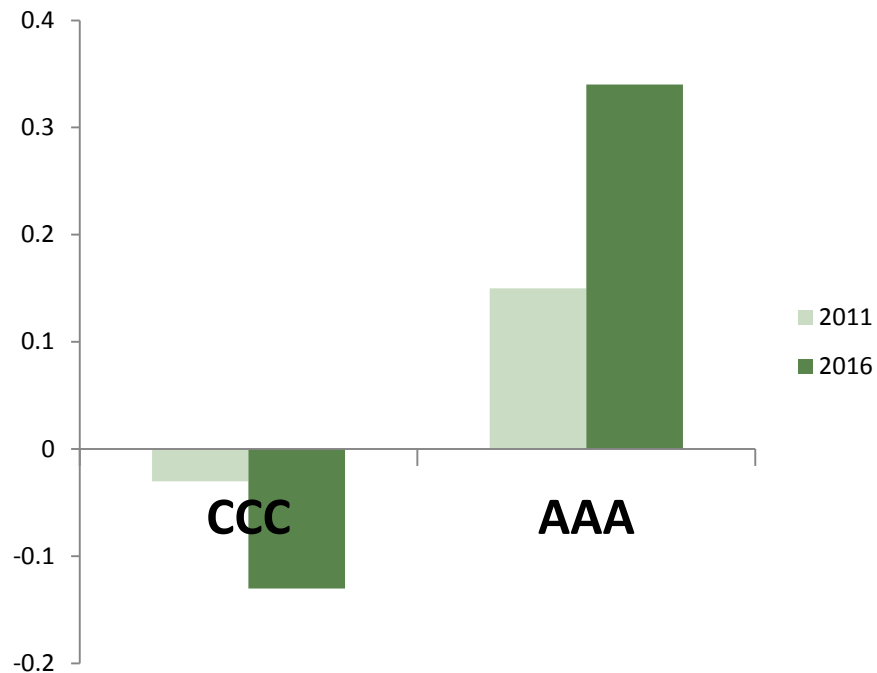
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Integrating ESG With Factors

Size and ESG



Quality and ESG



Source: SSGA, MSCI ESG Ratings. MSCI uses ESG criteria to score securities on a scale of AAA–CCC. AAA is the highest rating possible, relative to a company or issuer’s peer group, while CCC is the lowest. On the equity side, MSCI ESG ratings cover more than 6,000 public companies. For fixed income, they cover roughly 11,000 issuers.

* Average Exposure by ESG Rating as of December 31, 2017

† Source: SSGA, MSCI. Ratings as of December 31, 2011.

^ Source: SSGA, MSCI. Ratings as of December 31, 2016.

Sustainable Development Goals



State Street supports the SDGs

STATE STREET
GLOBAL ADVISORS.



Wall Street, Meet Fearless Girl

Overnight on the eve of **International Women's Day 2017**, we placed a statue of a bold young girl in the heart of New York's financial district, symbolizing the **power** of women today and tomorrow.

Gender Diversity on Boards

152

Companies have added a woman director, out of the 700+ we identified for having no women on their boards.

34

Additional companies have committed to enhancing board quality in the coming year as a result of our outreach.

500+

Companies we voted against because they failed to address board diversity in a meaningful way.

\$13T*

Total shareholder assets held by asset owners & managers dedicated to increasing board gender diversity.

Source: State Street Global Advisors Asset Stewardship Team, March 8, 2018

WSJ.com, Bloomberg, Pensions & Investments, CNBC March 2018

* Shown in USD

THANK YOU

Biography



Christopher McKnett

Chris McKnett is a Managing Director of State Street Global Advisors and Head ESG Strategist. He is responsible for delivering SSGA's ESG value proposition to the marketplace and helping clients develop and implement their ESG strategies. Chris and his team of ESG Strategists focus on understanding client needs and positioning our products, services and capabilities to make our clients more successful and in turn, to grow our ESG business. The team collaborates with our internal business partners, including asset stewardship, investment, product and client facing teams, and leverages external resources in support of these efforts. Chris is a member of SSGA's Proxy Review Committee and State Street's Executive Corporate Responsibility Committee. He's also a member of SSGA's Senior Leadership Team. Before joining SSGA in 2007, Chris worked for KLD Research & Analytics, Inc.

Chris is a First Mover Fellow at the Aspen Institute Business & Society Program. He earned his MBA from the Daniels College of Business at the University of Denver and a Bachelor's of Science in Business Administration from the University of Connecticut.

Survey Methodology

In December 2016 and January 2017, Longitude Research, in association with State Street Global Advisors (SSGA), surveyed senior executives with asset allocation responsibilities at 475 institutions. They included private and public pension funds, endowments, foundations and official institutions.

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The returns on a portfolio of securities that excludes companies that do not meet the portfolio's specified value criteria may trail the returns on a portfolio of securities that includes such companies. A portfolio's value focus may result in the portfolio investing in securities or industry sectors that underperform the market as a whole.

Investing involves risk including the risk of loss of principal.

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Diversification does not ensure a profit or guarantee against loss.

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The views expressed in this material are the views of ESG Strategist Team through the period ended December 31, 2017 and are subject to change based on market and other conditions. This document contains certain statements that may be deemed forward-looking statements. Please note that any such statements are not guarantees of any future performance and actual results or developments may differ materially from those projected.

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