FUND TRANSPARENCY: EXPLORING THE ESG QUALITY OF FUND HOLDINGS

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EXECUTIVE SUMMARY

In the next two decades, an estimated USD 30 trillion will be transferred between baby boomers and millennials in the US, and women are estimated to control more than two thirds of investment decisions in the retail space.[1] These same investors are likely to be younger and more likely to believe investments are a method to express social, political, or environmental values than their baby boomer counterparts.[2] To solve for the next generation of investors' demands for greater transparency around the ESG characteristics of their investments, MSCI ESG Research is introducing the concept of ESG Quality with the calculation of a Fund ESG Quality Score across over 21,000 mutual funds and ETFs. Funds with higher scores are comprised of companies managing their ESG risks relative to industry peers.

KEY FINDINGS[3]

- We found that **government bond funds and European equities scored highest** on ESG Quality, while **small-cap US, emerging market equity, and high yield bond funds scored lowest**. Variation also existed within peer sets – for example, we found that Target Date funds with shorter time horizons tended to exhibit higher ESG quality, while **longer-horizon funds exhibited lower ESG quality**.
- We found that **146 diversified US equity funds** had over 10% exposure to companies owning high-impact fossil fuel reserves like coal or oil sands at potential risk should climate regulations change.
- Meanwhile, **1,051 US equity funds (USD 825 bn NAV) were virtually 'fossil fuel free',** even though very few of these funds – if any – were marketed as such.
- We identified **3,158 funds across asset classes** with significant exposure to sustainable impact themes (like alternative energy, health care, nutrition), representing nearly **USD 1.8 trillion in net asset value**. Of these, only 14% were identified by MSCI ESG Research as specialized thematic or sector funds.
- **Over 6,900 equity funds representing 46% of equity funds analyzed had exposure to companies that manufacture controversial weapons**, such as cluster bombs and land mines. The average exposure to these companies across all funds was 2.9%.

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[1] Accenture. The "Greater" Wealth Transfer – Capitalizing on the Intergenerational Shift in Wealth, 2012

[2] US Trusts' Insights on Wealth and Worth 2014

[3] All fund data used was provided by Lipper and are as of March 1, 2016. US equity funds defined by Lipper as Equity US, Equity US Income, and Equity US Sm&Mid Cap. MSCI defined "Fossil fuel free" as less than 1% of fund allocations to companies with fossil fuel reserves and "significant" sustainable impact exposure as greater than or equal to 10%.

INTRODUCTION

In 2014, there were 10,671 ETFs[4] and mutual funds[5] combined in the US alone, up more than 24% since 2004. To follow Peter Lynch's advice, "know what you own and why you own it"[6], is increasingly difficult, particularly for a new generation of investors with demand for instant access to information that meets their specific preferences. The convergence between demographic, technological, and ideological shifts, particularly for wealth investors, is likely at least partially responsible for the shift in demand for more granular portfolio transparency.

However, not all transparency is created equal. As technology enables investors to both ask deeper questions of their managers and tailor investments to meet their specific preferences, providing new depths of information will take new tools. Where wealth advisors have traditionally relied on definitions of risk tolerance, time horizon, and liquidity requirements with, potentially, some market capitalization, geographic market exposure, or return preferences, ESG data can open the door for evolution in decision-making processes to create a wider degree of options to meet investor preferences.

MSCI ESG Fund Metrics are designed to help clients identify ESG risks and opportunities of their funds and compares them with industry peers and benchmarks. The scores and metrics provide insights across three dimensions:

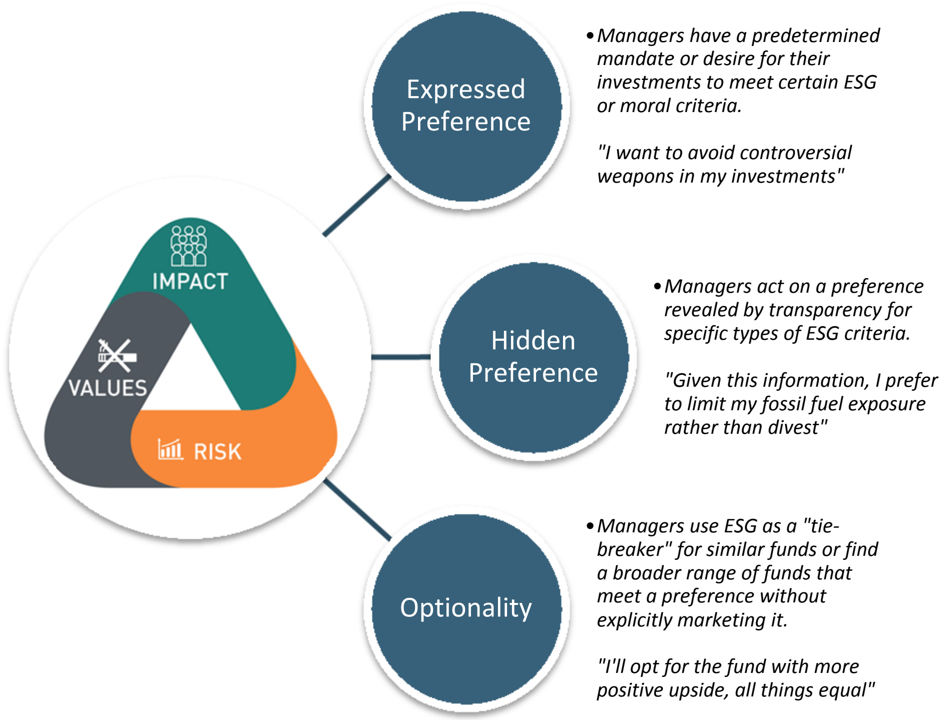
- Sustainable Impact; to measure fund exposure to companies that address core environmental & social challenges,
- Values Alignment; to screen funds for investments that align with ethical, religious or political values
- Risk; to understand fund exposure to ESG-related risks,

[4] http://www.icifactbook.org/fb_ch3.html

[5] http://www.statista.com/statistics/255590/number-of-mutual-fund-companies-in-the-united-states/

[6] http://www.marketwatch.com/story/peter-lynch-25-years-later-its-not-just-invest-in-what-you-know-2015-12-28

EXHIBIT 1: ESG TRANSPARENCY FRAMEWORK



UNCOVERING PREFERENCE BY SOLVING THE TRANSPARENCY PROBLEM

ESG-themed funds may already meet the needs of some investors who wish to align their investments with their worldview, whether regarding the materiality of ESG trends, the role of markets in financing solutions to world problems, or the alignment of investments with ethical or religious values. However, a deficit of objective measurements of the ESG characteristics of fund holdings leaves investors facing several important gaps.

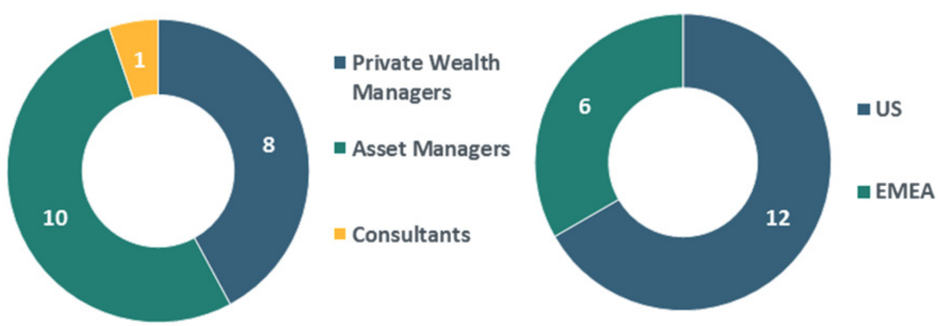
Investors with expressed preferences have limited visibility in evaluating whether stated ESG strategies translate into practice, or may find their options limited and may require additional tools to identify eligible opportunities. A manager could ask, “does this fund successfully avoid companies generating revenue from tobacco?” Other investors may have hidden preferences, wherein visibility uncovers an investment strategy or tilt the investor didn’t realize was possible. To wit, a manager with a desire to divest from fossil fuels could find an alternate method to limit fossil fuel exposure, one they didn’t realize was possible. While each of these cases illustrate how greater transparency can create a new decision point for a wealth manager, transparency also serves as a tool for creating a wider pool of options where product availability may be a limitation (for investors with preferences) or as a differentiator for investors (for investors without preferences).

While the growth of ESG investing continues apace for institutional investors – estimated by the Global Sustainable Investment Association (GSIA) at 61% globally from 2012 to 2014, (USD 13 trillion to USD 21 trillion) – the product options and reporting tools for wealth investors have to date been limited. The GSIA estimated that the number of US mutual funds explicitly using environmental, social, and governance factors stood at 456 by year end 2014[7], which would represent just 5% of total available mutual fund product in the US according to the Investment Company Fact Book.[8] ESG data transparency may serve to backfill this product option gap simply by "knowing what you own", and more importantly, what you could.

CREATING A USABLE TOOL FOR INSTITUTIONAL INVESTORS

To meet both the growing demand for data transparency and tools to improve reporting and uncover investor preferences, MSCI ESG Research developed a scoring and metrics-based data set to communicate the overall "ESG quality" and specific ESG characteristics of a given fund's underlying holdings. In the process of doing so, we conducted client consultations to understand use cases and concerns. Exhibit 2 highlights the clients we met by type and location, and Exhibit 3 highlights a summary of our consultations.

EXHIBIT 2: ESG FUND METRICS CLIENT CONSULTATION – SUMMARY OF PARTICIPANTS



[7] http://www.ussif.org/Files/Publications/GSIA_Review.pdf

[8] http://www.icifactbook.org/pdf/2015_factbook_1.pdf

EXHIBIT 3: ESG FUND METRICS CLIENT CONSULTATION – SUMMARY OF RESULTS

COMMON POTENTIAL USE CASES:	COMMON CONCERNS:	AREAS LACKING CONSENSUS:
• Transparency and reporting – establish baseline: “where am I now?”	• Need multiple metrics - customize reporting to client’s individual preferences or align reporting to institution’s ‘house view’	• General disagreement around treatment of short positions
• Complement (not replace) manager due diligence process	• Metrics should be simple, intuitive, and transparent	• Different opinions on fund peer sets - custom peer sets vs. defined peer sets
• Screen for funds aligned with client-specific preferences and values	• Impact and climate change themes are top priorities	
• Fund managers reporting ESG strategy	• Approach should be consistent across regions and asset classes	
	• Potential third party data gaps, including recent holdings, or ESG data coverage gaps	
	• Ultimate goal is total portfolio reporting – (e.g. across funds, ETFs, stocks, bonds)	

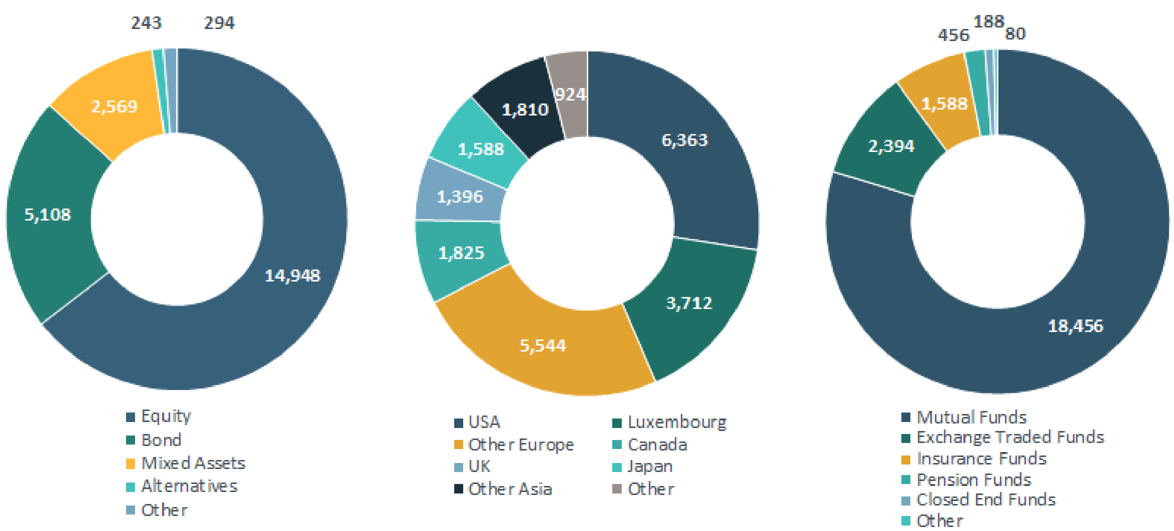
MEASURING THE ESG QUALITY OF FUNDS

We introduce MSCI's **Fund ESG Quality Score**, which aggregates issuer-level ESG scores to provide an analysis of the **overall ESG Quality of a fund's underlying holdings**.

*We define **ESG Quality** as the **ability of an issuer to manage key medium- to long-term risks and opportunities arising from environmental, social, and governance factors**.*

We analyzed the ESG exposures of over 21,000 funds, all of which had at least ten holdings, 65% ESG ratings coverage, and holdings data provided within the last 12 months. The average net asset value of funds analyzed was USD 469 million and the maximum was USD 175 billion. In total, mutual funds and ETFs constituting over USD 6.6 trillion were analyzed.[9]

EXHIBIT 4: THE UNIVERSE OF FUNDS IN COVERAGE



Source: MSCI ESG Research, results as of 3/1/2016, n = 23,164 funds. Coverage is subject to change based on the availability of holdings data and matching ESG scores.

[9] Data provided by Lipper as of March 1, 2016

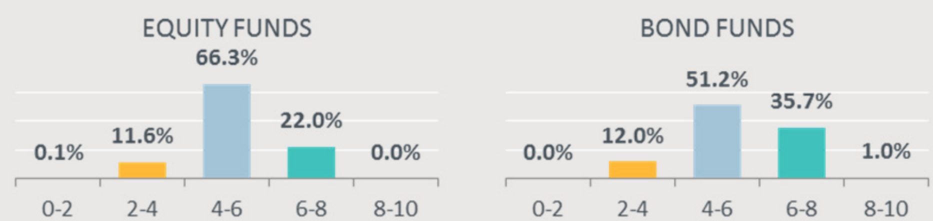
EXHIBIT 5: UNDERSTANDING MSCI'S ESG QUALITY SCORE

The **ESG Quality Score** measures the ability of underlying holdings to manage key medium- to long-term risks and opportunities arising from environmental, social, and governance factors.

SCALE: **0-10 Score**

8-10	**Very high ESG quality** – underlying holdings largely rank best in class globally based on their exposure to and management of key ESG risks and opportunities
6-8	**High ESG quality** – underlying holdings largely rank above average globally based on their exposure to and management of key ESG risks and opportunities
4-6	**Average ESG quality** – underlying holdings rank near the global peer average, or ESG quality of underlying holdings is mixed
2-4	**Low ESG quality** – underlying holdings largely rank below average globally based on their exposure to and management of key ESG risks and opportunities
0-2	**Very low ESG quality** – underlying holdings largely rank worst in class globally based on their exposure to and management of key ESG risks and opportunities

ESG Quality Score Distribution



Source: MSCI ESG Research and Lipper, as of 3/1/2016, n = 14,949 equity funds, 5,108 bond funds.

Methodology: Weighted average ESG Score of underlying issuers. Short positions, cash, and unrated positions are excluded from consideration in the overall score.

Percentiles: Percentiles are calculated based on the fund's ESG Quality Score relative to all global funds receiving a score, as well as relative to fund's peer set as determined by the Lipper Global category.

Underlying Issuer-Level ESG Scores

- 0-10 score relative to global same-industry peers
- Data-driven model measures exposure to and management of Key ESG Issues covering the following themes:
  - **Environment**: Climate Change, Natural Capital, Pollution & Waste, Env Opportunities
  - **Social**: Human Capital, Product Liability, Stakeholder Opposition, Soc Opportunities
  - **Governance**: Corporate Governance, Corporate Behavior
- Based on industry-specific weighting of Key ESG Issues
- Updated annually or when triggered by a significant event
- Covers over 6,000 issuers (including 198 sovereign countries), and 280,000 securities

ANALYSIS: EXPLORING THE ESG QUALITY OF FUND HOLDINGS

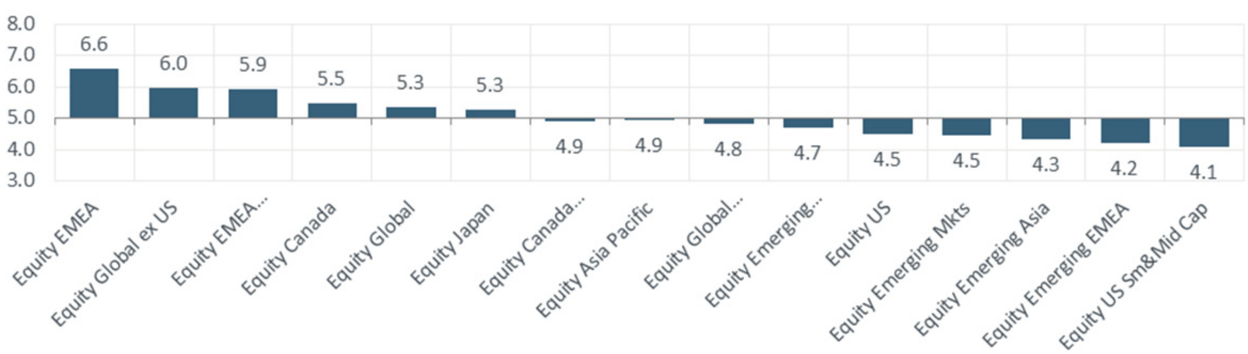
We found that the ESG Quality Score varied along with other fund characteristics such as asset class, market, and size. It is possible that these reflect underlying differences in regulation, standards, culture, and expectations between markets. As Exhibit 6 shows, of the over 21,000 funds that we analyzed, bond funds tended to score higher than equity funds on average, with government bond funds exhibiting the highest ESG Quality as of 1 March 2016[10].

EXHIBIT 6: AVERAGE ESG QUALITY OF FUNDS BY ASSET CLASS

Source: MSCI ESG Research, results as of 3/1/2016, n = 23,023 funds.

Among equity funds, scores varied primarily along size and regional lines with European funds scoring highest and US small cap and emerging market funds scoring lowest).

EXHIBIT 7: AVERAGE ESG QUALITY OF EQUITY FUNDS

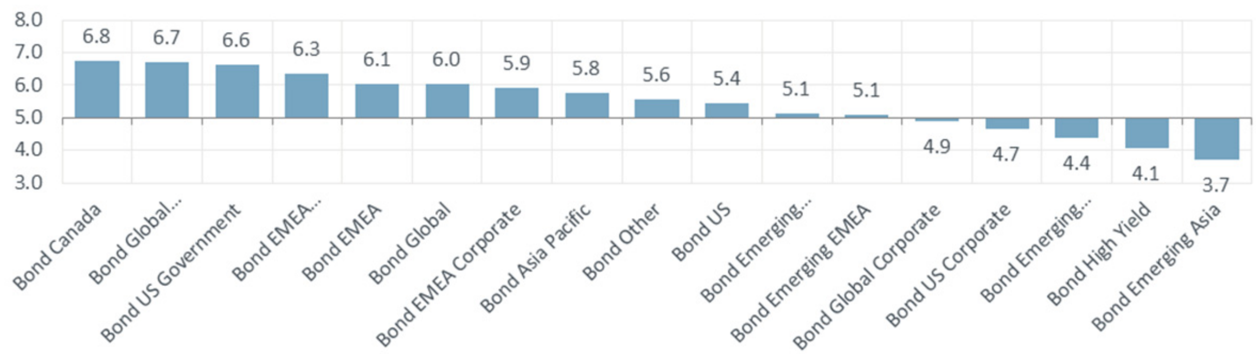


Source: MSCI ESG Research, results as of 3/1/2016, n = 13,031 equity funds (excluded sector funds and unclassified equity funds)

[10] At the issuer level, the distribution of ESG scores and ratings is similar between corporates and governments when viewed from a global perspective. However, government bond funds score higher due to the greater concentration of government bond issuance from higher quality names.

Among fixed income funds, investment grade corporate bond and convertible bond funds tended to score roughly in line with large cap equity funds, but developed market government bond funds scored higher on average and high yield corporates scored lowest, regardless of region (see Exhibit 8).

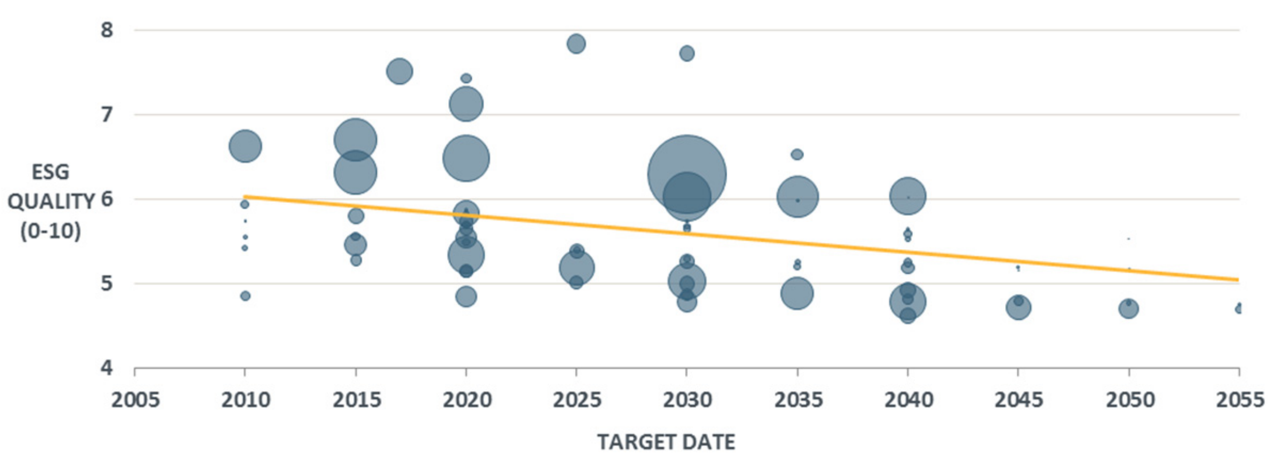
EXHIBIT 8: AVERAGE FUND ESG QUALITY OF BOND FUNDS



Source: MSCI ESG Research, results as of 3/1/2016, n = 4,916 bond funds (excluded unclassified bond funds)

As might be expected, the ESG Quality of target date funds decreased substantially as the target date increased, which was most likely due to the more aggressive asset mix for longer-time horizons. On the other hand, ESG factors tend to be viewed as long-term by many universal long-horizon investors given the medium- to long-term in nature of ESG trends (see Exhibit 9).

EXHIBIT 9 – ESG QUALITY OF TARGET DATE FUNDS



Source: MSCI ESG Research, results as of 3/1/2016, n = 79 funds, size of bubble represents net asset value

ESG QUALITY OF HOLDINGS VS ESG QUALITY OF MANAGER

Transparency around the ESG Quality of a fund's holdings may be used by institutional investors to complement their evaluation and due diligence of fund managers, for example by providing them with objective tools and meaningful comparisons to facilitate a concrete dialogue around a manager's approach toward ESG incorporation.

However, ESG Quality Scores **do not** provide an indication of the quality of a fund manager's ESG strategy, capabilities, process, or intentionality. A high ESG Quality Score may be accidental and may not indicate a consistent ESG integration approach or continued high ESG quality of holdings going forward.

EXHIBIT 10: MANAGER VS. HOLDINGS ESG QUALITY

MANAGER ESG QUALITY*

- ESG capabilities, experience, processes
- ESG integration strategy
- ESG track record of manager
- Engagement strategy

** Not covered by MSCI's ESG Fund Metrics*

HOLDINGS' ESG QUALITY

- ESG Quality of underlying holdings:
- Ability of underlying holdings to manage medium- to long-term risks and opportunities related to ESG issues

Furthermore, it is not always the case that an investor's objectives are best met by a high ESG quality portfolio. For example, it is possible that high ESG quality names are overvalued and would not meet an investor's financial objectives. Exhibit 11 illustrates archetypes of common ESG investment approaches and suggests how they might be reflected in the ESG Quality scores and supplemental data.

EXHIBIT 11: SELECTED ESG INVESTOR USE CASES WITH POTENTIALLY RELEVANT METRICS

APPROACH	DESCRIPTION	RELEVANT METRICS: ESG QUALITY SCORE VS. PEERS	POSITIVE TREND (%)	ESG LEADERS (%)	SUST. IMPACT (%)	OTHER METRICS
ESG INTEGRATION	Incorporate ESG into the fundamental research or investment process	✓	✓	✓	✓	✓
ESG BEST IN CLASS	Screen or filter based on minimum ESG quality of issuers	✓✓	✓	✓✓		✓
ESG TILT	Incorporate ESG data into top-down investment process (e.g. optimized, tilted)	✓✓	✓	✓✓		✓
ESG ENGAGEMENT	Hold underperforming companies, but engage mgmt directly or through collective approaches.	✓	✓✓			✓
ESG THEMATIC	Overweight companies with specific thematic exposure (e.g. clean energy, water)				✓✓	✓

KEY: ✓✓ = most relevant metrics to track; ✓ = supplementary metrics

EXHIBIT 12: ESG-THEMED FUNDS BY REGION + ASSET CLASS

	ESG / Thematic	
	# of funds	% of asset class group
Equity	461	3.1%
Bond	79	1.5%
Mixed Assets	73	2.8%
Mutual Funds	545	3.0%
Exchange Traded Funds	39	1.6%
Insurance Funds	26	1.6%
Pension Funds	7	1.5%

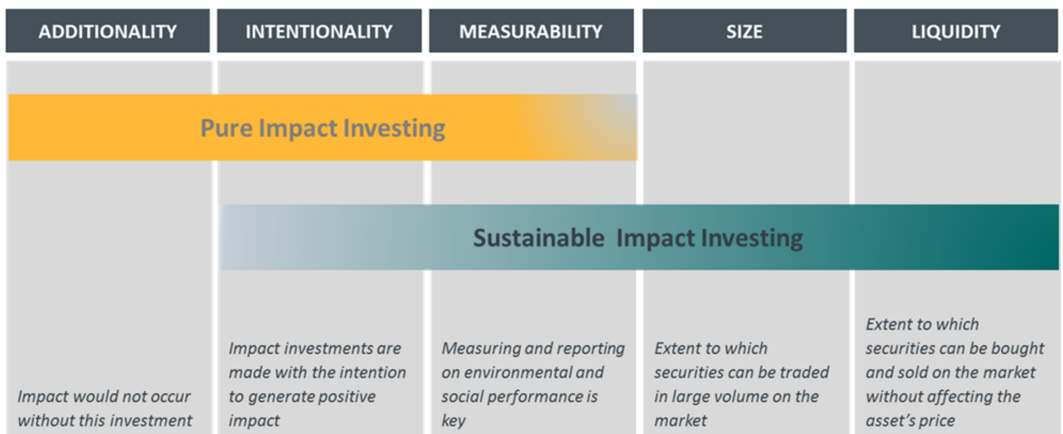
Source: MSCI ESG Research, as of 3/1/2016; n=23,163 funds; asset class and fund universe as categorized by Lipper, ESG / Thematic funds flagged by MSCI ESG Research.

MEASURING FUND EXPOSURE TO SUSTAINABLE IMPACT THEMES

A growing segment of investors aims to **measure or increase the positive social and environmental impact of investment decisions**.

Traditionally, impact investing has been restricted to small-scale, impact- or outcome-oriented private investments. Increasingly, we've seen institutional investor interest in achieving scale through sustainable impact-themed investments in public markets or through measuring the potential impact of their core holdings.

EXHIBIT 13: SUSTAINABLE IMPACT INVESTING: SCALE VS. ADDITIONALITY



Source: MSCI ESG Research

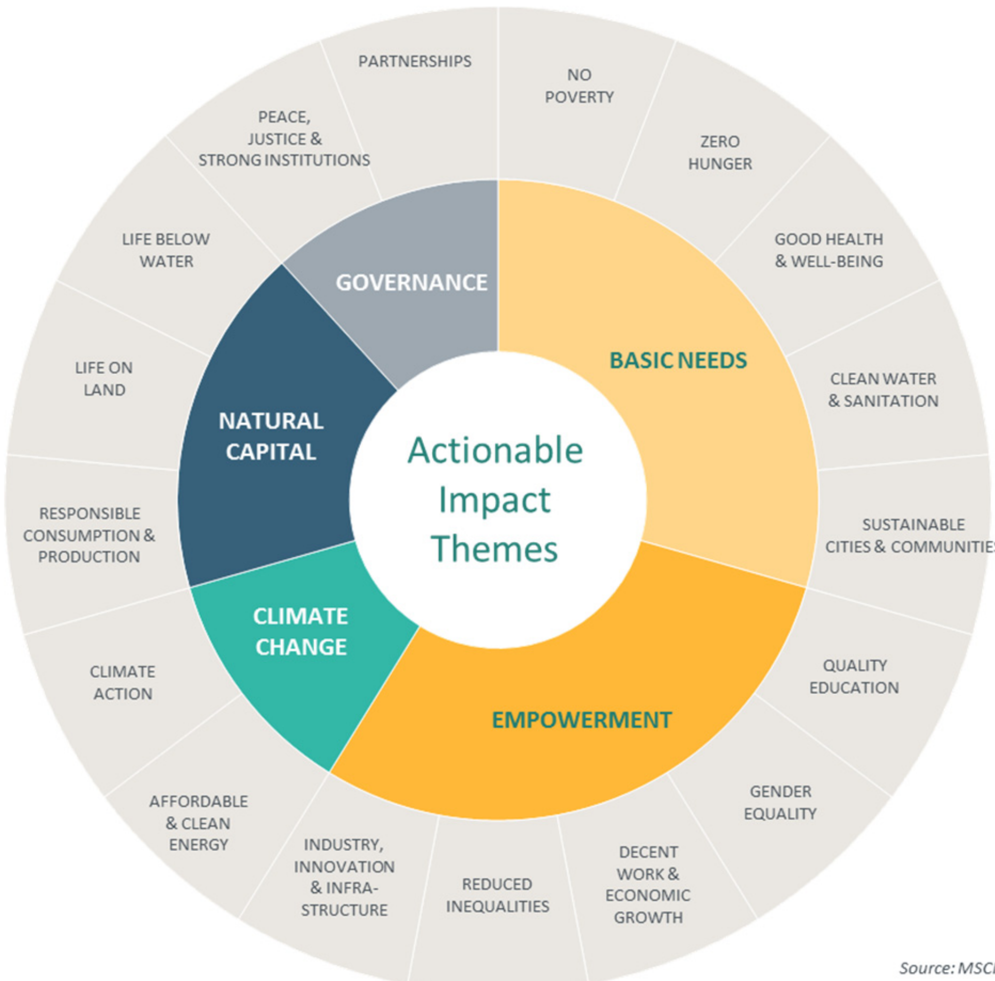
Whether used for screening, reporting, or monitoring, the institutional investor's ability to measure the social or environmental impact of portfolios ultimately depends on the availability of comparable impact metrics across a wide range of investments. Impact measurement already presents significant enough challenges for private investments in specific projects or pure-play companies[11], but the challenges only multiply as scale and diversification increase.

As a first step toward tackling the challenges presented by scalable impact measurement, MSCI ESG Research Fund Metrics measures a fund's **exposure to sustainable impact themes** based on the aggregation of a new and unique company-level data set. We define exposure to sustainable impact themes as a portfolio's exposure to companies whose core business model is tied to activities that address the world's social and environmental challenges.

[11] http://hbswk.hbs.edu/item/the-hard-work-of-measuring-social-impact

Exhibit 14 groups the 17 Sustainable Development Goals, launched by the United Nations in 2016, to five broader Impact Themes. For each of these themes, MSCI ESG Research has developed a robust taxonomy of potential solutions. At the company level, we estimate revenue derived from products and services tied to each of these activities. At the fund level, we further aggregate the overall fund exposure (% weight) exposed to companies that derive the majority of their revenues from these products and services.

EXHIBIT 14: SUSTAINABLE IMPACT THEMES



Source: MSCI ESG Research

In addition, we exclude from this metric a portfolio's exposure to companies that have faced severe controversies in the provision of those goods and services. This aims to ensure that a company accused of predatory lending or predatory drug pricing, for example, would not be counted toward a portfolio's exposure to themes of Social Finance or Access to Healthcare.

EXHIBIT 15: DEFINING SUSTAINABLE IMPACT EXPOSURE

Exposure to Sustainable Impact Themes:

% market value exposed to companies that meet the following criteria:

Revenue Exposure: The majority of company revenue derived from one or more of the following themes:

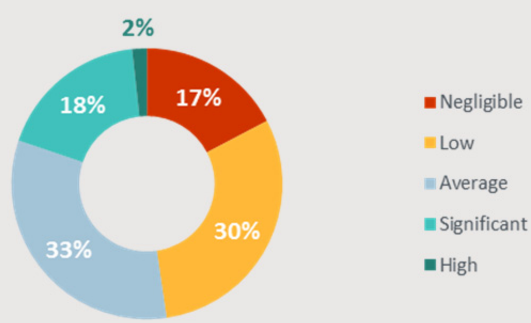
- **Climate Change**: Alternative Energy, Energy Efficiency, Green Building
- **Natural Capital**: Sustainable Water, Pollution Prevention
- **Basic Needs**: Health Care, Nutrition, Sanitation
- **Empowerment**: Education, Social Finance, Affordable Housing

Minimum ESG Standards: Excluded from consideration are companies that have faced Severe or Very Severe controversies in the provision of above-mentioned products and services

SCALE: **Percentage (0-100%)**

25-100%	**High exposure to sustainable impact themes**
10-25%	**Significant exposure to sustainable impact themes**
5-10%	**Average exposure to sustainable impact themes**
1-5%	**Low exposure to sustainable impact themes**
0-1%	**Negligible exposure to sustainable impact themes**

Distribution of Equity Funds by Exposure to Sustainable Impact Themes



Source: MSCI ESG Research, as of 3/1/2016, n = 14,949 equity funds.

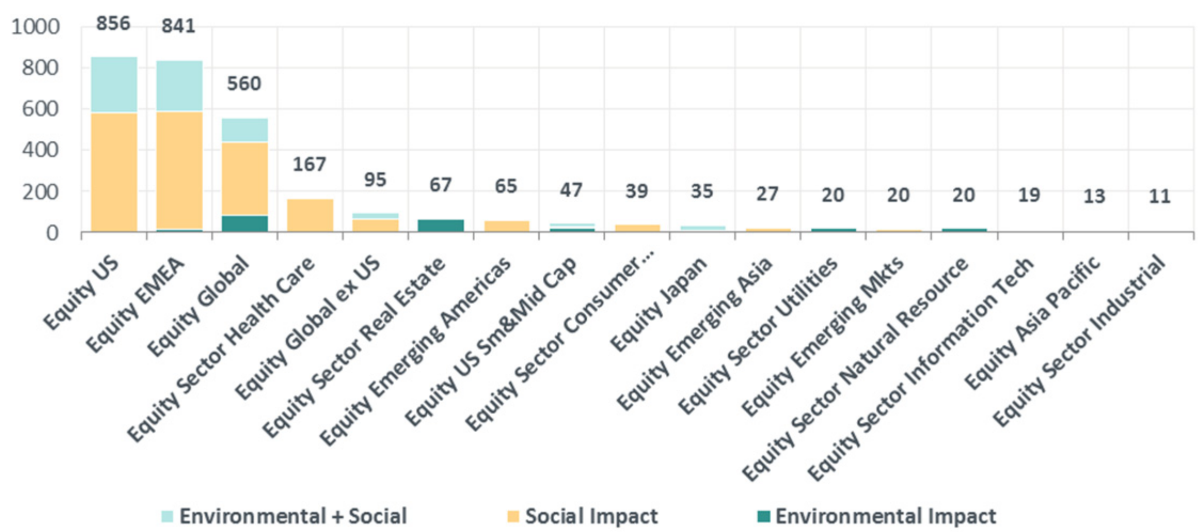
For more information, see full Methodology document on ESG Manager or from MSCI Client Service representatives.

ANALYSIS: EXPLORING THE SUSTAINABLE IMPACT EXPOSURE OF FUNDS

In aggregate, fund exposure to sustainable impact themes was small; average exposure among regional equity funds was as low as 0.3% in some regions, and the average exposure globally was around 5% as of 1 March 2016. Sustainable impact exposure among bond and mixed asset funds tended to be lower due to limited data availability and the sector concentrations of those funds. However, within each fund peer set there was a wide range of exposures and it was possible to identify specific funds with significantly higher tilt toward sustainable impact themes relative to the peer average.

Among the over 21,000 funds screened, we identified 3,158 funds with a significant tilt toward sustainable impact themes (defined as 10% of portfolio weight or higher), representing USD 1.8 trillion in net asset value as of 1 March 2016. Unsurprisingly, the funds showing the highest exposure are sector and thematic funds - 261 funds flagged by MSCI ESG Research as ESG- or environmentally-themed funds and 167 funds categorized by Lipper as Healthcare sector funds. But the remaining 2,730 funds were spread across multiple diversified categories.

EXHIBIT 16: NUMBER OF FUNDS WITH SIGNIFICANT EXPOSURE TO SUSTAINABLE IMPACT THEMES



Source: MSCI ESG Research, results as of 3/1/2016, n = 16,729 equity funds.

MEASURING THE ESG RISK EXPOSURE OF FUNDS

Environmental, social, and governance factors may lead to material risks and opportunities, which may not be evident in traditional financial metrics. Failure to measure a portfolio's exposure to key environmental and social factors could result in institutional investors making unintended bets on future trends like climate change, water stress, demographic shifts, and technology advances. The ability to quantify these factors can allow the investor to diagnose their current exposure to ESG risks.

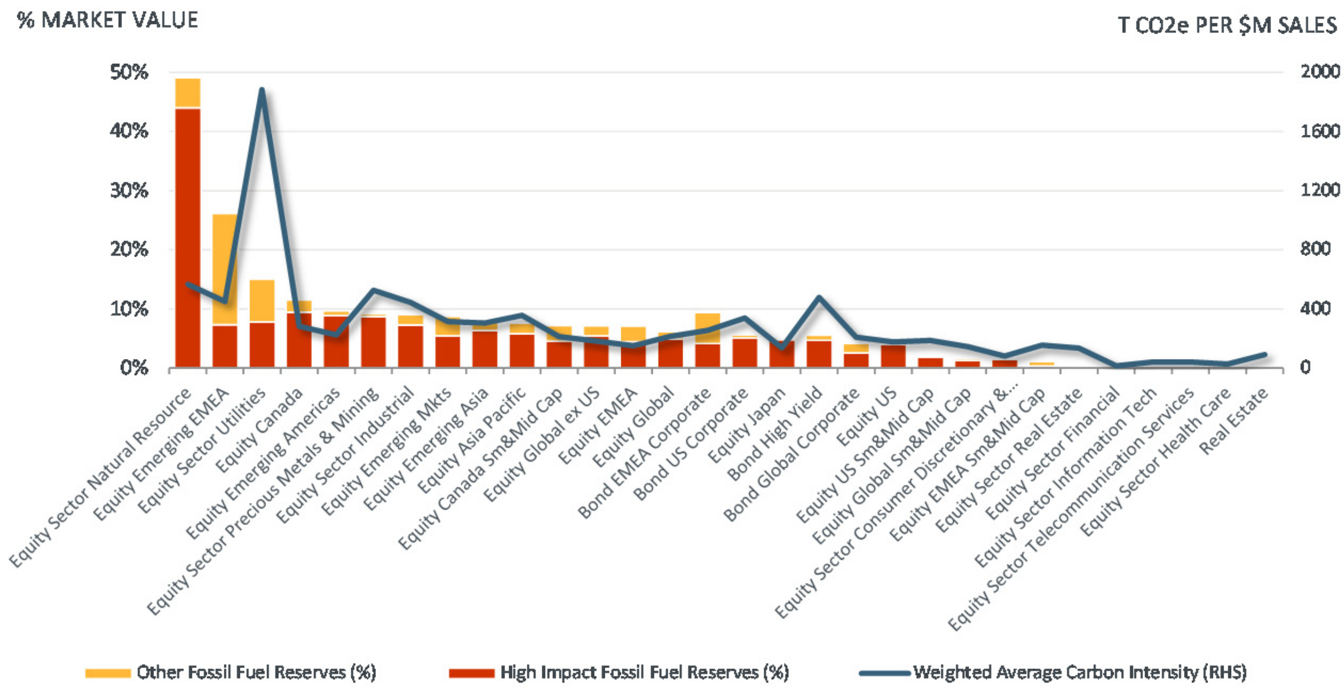
MEASURING THE CLIMATE RISK EXPOSURE OF FUNDS

Climate change presents one of the most significant economic and political challenges of the 21st century. Over the coming decades, efforts to mitigate and adapt to climate change may have wide-ranging policy, economic, and technological impacts, which could negatively affect the valuations of both physical and financial assets.

The first steps in addressing the investment implications of climate change involve assessing the carbon footprint of a portfolio and understanding its exposure to fossil fuels. Several measurements exist to assess portfolio carbon footprint, but the simplest to calculate across multi-asset class portfolios is the **weighted average carbon intensity** – which measures the tons of carbon dioxide equivalent emitted per million dollars of sales generated by portfolio companies in a given year.

Current carbon emissions may provide a picture of a fund's exposure to high-emitting companies and assets, but a climate risk assessment should also include measuring exposure to *potential future emissions* in the form of fossil fuel reserves. In particular, high-impact fossil fuel reserves such as oil sands, coal, shale oil, and shale gas may be more vulnerable to 'stranding' or losing economic value in the transition a low-carbon economy.

EXHIBIT 17: AVERAGE CARBON EXPOSURE OF EQUITY AND CORPORATE BOND FUNDS

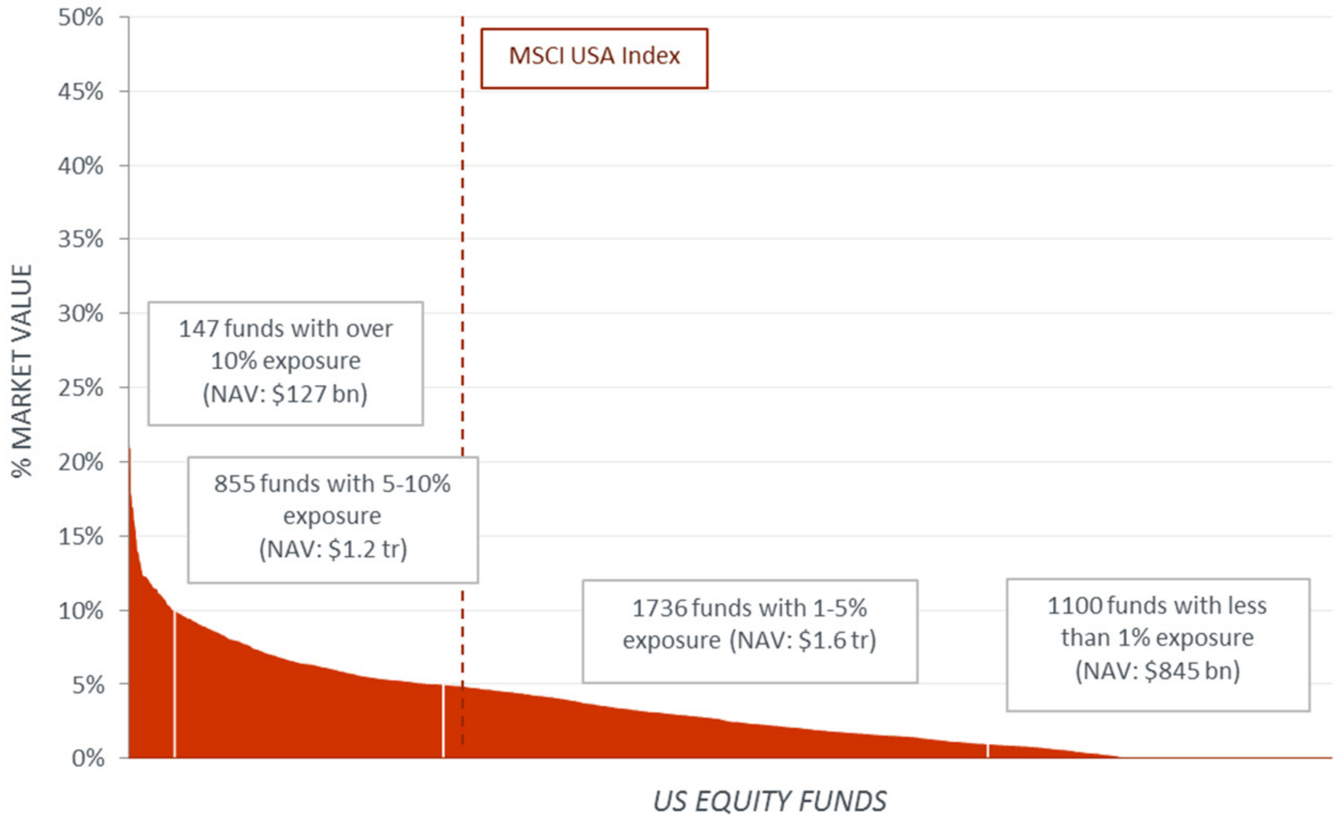


Source: MSCI ESG Research, as of 3/1/2016; n = 15,632 funds with sufficient ESG data; high-impact fossil fuel reserves include coal, oil sands, shale oil, and shale gas.

On average, Natural Resources and Utilities funds had the greatest exposure to high-impact fossil fuel reserves and carbon emissions respectively. Among regional funds, Canadian and Emerging Market equity funds had higher exposure to fossil fuel reserves, while Asian equity funds had higher exposure to carbon intensive holdings. What might be less obvious are differences between asset classes: US corporate bond funds on average had nearly double the weighted average carbon intensity of US equity funds, and EMEA corporate bond funds had 68% higher weighted average carbon intensity relative to EMEA equity funds.

What averages conceal is that individual fund exposures can vary widely within a single fund category (see Exhibit 18). For instance, although the exposure of Natural Resource funds to fossil fuel reserves is obvious, we also identified 146 diversified US Equity funds where over 10% of the portfolio weight was exposed to high-impact fossil fuel reserves. Conversely, over 1,051 diversified US equity funds were virtually "fossil fuel free" based on the latest holdings data (including a high number of Growth funds), even though very few – if any – of these funds were designated / labelled as such.

EXHIBIT 18: US EQUITY FUND EXPOSURE TO HIGH-IMPACT FOSSIL FUEL RESERVES



Source: MSCI ESG Research, results as of 3/1/2016; n = 3,838 funds with sufficient ESG data, as classified by Lipper as Equity US, Equity US Income, or Equity US Sm&Mid Cap (excludes sector focused funds); high-impact fossil fuel reserves include coal, oil sands, shale oil, and shale gas.

MEASURING FUND ALIGNMENT WITH ETHICAL VALUES

Greater transparency around the underlying characteristics of fund holdings can enable better understanding of the trade-offs of expressed ESG preferences and constraints. Not all investor values and preferences are created equal – some are much more restrictive than others. Better metrics based on robust company-level screening data can help institutional investors in terms of limiting the universe of eligible funds, or it could present a larger-than-expected range of funds that are in line with the investor's own values.

While some screening categories - such as conventional weapons – may only implicate a small number of individual companies, they may implicate a much larger proportion of funds if those companies are widely held.

Exhibit 19 compares the percentage of constituents in the MSCI ACWI Index as of 1 March 2016 exposed to selected values-based themes (any tie) with the percentage of equity funds exposed to each theme (at a threshold of 0.1% portfolio weight).

EXHIBIT 19: TIES TO CONTROVERSIAL BUSINESS ACTIVITIES – COMPANIES VS. FUNDS

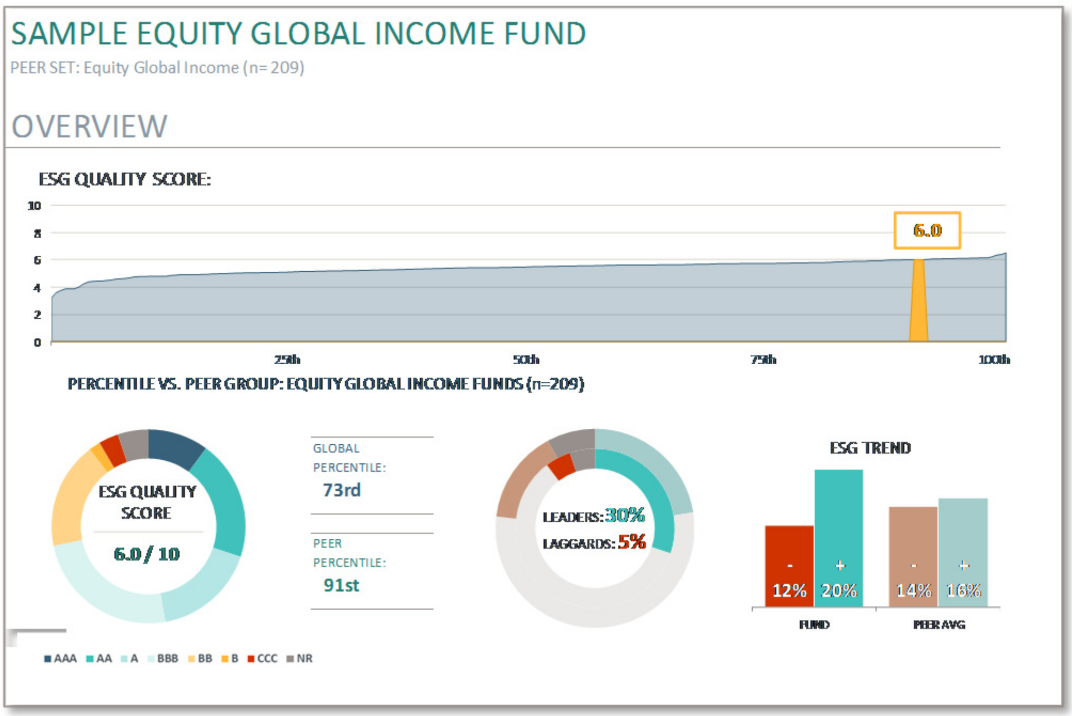
	% OF EQUITY FUNDS WITH ANY TIE	% OF COMPANIES WITH ANY TIE
Alcohol	**92.9%**	**8.1%**
SRI Exclusions	**87.2%**	**4.4%**
Tobacco	**83.4%**	**3.4%**
Catholic Values	**80.0%**	**2.6%**
Conventional Weapons	**77.4%**	**2.4%**
Gambling	**74.2%**	**2.1%**
Nuclear Power	**72.0%**	**2.2%**
Adult Entertainment	**65.1%**	**1.1%**
Controversial Weapons	**45.0%**	**0.5%**
Genetic Engineering	**43.1%**	**0.3%**
Predatory Lending	**40.1%**	**0.5%**

Source: MSCI ESG Research, results as of 3/1/2016. N = 8,622 companies that were constituents of the MSCI ACWI Index as of 1 March 2016, 14,949 equity funds as classified by Lipper.

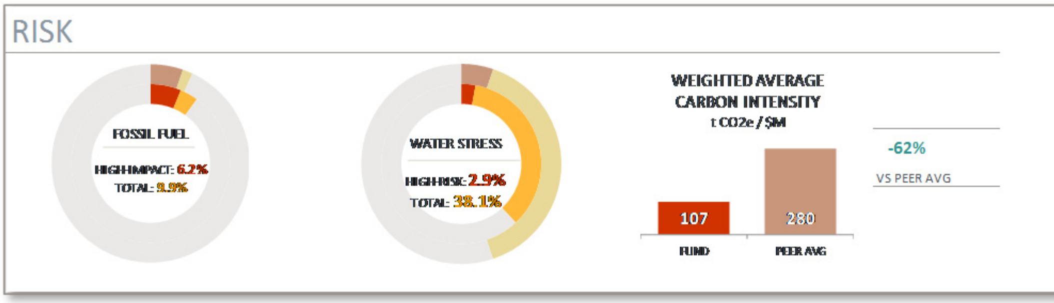
FUND ESG REPORTING – CASE STUDY

Most of the participants in MSCI ESG Research's client consultation stressed the need for customized fund reporting; either to conform to an institution's established "house view" on ESG or to align with a specific client's preferences. Most participants expressed the need to mix and match between metrics addressing the Risk, Impact, and Values goals to provide full transparency to a fund's ESG exposures.

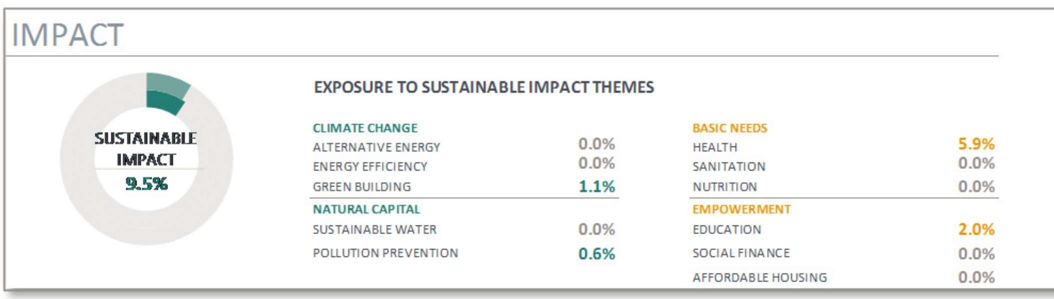
To illustrate the most commonly used approaches for fund-level ESG reporting, we walk through selected metrics as applied to a sample Global Equities Income fund.



Consultation participants stressed the need to view the overall ESG Quality Score both in absolute terms as well as relative to a peer group. The Sample fund scored 6.0 out of 10, which is high relative to the full set of funds and ranks in the 91st percentile relative to other Global Equity Income funds (n = 209 funds). The fund had significantly higher exposure industry Leaders relative to industry Laggards (30% vs. 5%), and also had significantly higher exposure to companies facing an upward trend in their ESG ratings between 1 March 2016 and the companies prior rating date (20% of market value, vs. 16% peer average).

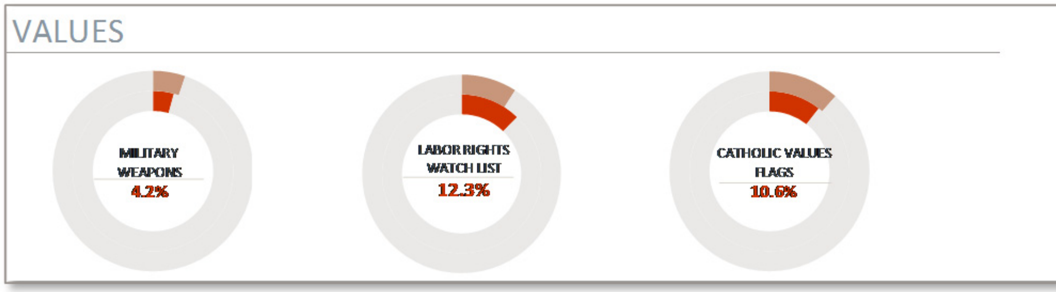


Drilling down into specific metrics addressing ESG risk factors, such as Climate Change, provides insight into potentially unknown exposures and unintended bets. The sample fund showed mixed results – on one hand, it had slightly higher exposure to companies that own high-impact fossil fuel reserves (such as oil sands, shale oil, shale gas, and coal) relative to peers, potentially exposing the fund to risks arising from climate policy and technology change. On the other hand, the fund's exposure to water stress was lower than the fund peer average, and its carbon intensity is 62% lower than the Global Equity Income fund peer average.[12]



The sample fund had an average level of exposure to Sustainable Impact Themes overall, with almost 10% of the fund exposed to companies that derive the majority of their business from sustainable impact-themed products and services. The breakdown of those revenue exposures showed that this tilt arose from a number of themes, namely 1.1% exposure to the Green Building theme, 0.6% exposure to the Pollution Prevention theme (companies primarily involved in recycling or environmental remediation), 5.9% exposure to the Health Care theme (i.e. companies focused on addressing the world's top 20 diseases or deriving significant revenue from orphan drugs), and 2.0% exposure to the Education theme (companies engaged primarily in educational services).

[12] All data as of March 1, 2016



Finally, the metrics provided allow for reporting on a wide range of values-oriented screens. These metrics include exposure to controversial business activities (tobacco, alcohol, gaming, weapons, nuclear), global sanctions (Syria, Russia), controversies and global norms (UN Global Compact, etc.), and faith-based screens (Catholic, Islamic, etc.).

The sample fund, for example, had 4.2% exposure to companies with any tie to the production of military weapons; had 12.3% exposure to companies flagged by MSCI as in potential breach of global norms surrounding Labor Rights (higher than the peer average); and 10.6% exposure to securities that fail common Catholic Values screens, including those informed by the investment guidelines of the US Council of Catholic Bishops (USCCB).

WHAT'S NEXT?

Ultimately, our goal was to create a robust tool that can be leveraged to meet both ESG use cases and create new levels of transparency in the investment decision tree. This first iteration is designed to give wealth managers an initial set of metrics, though there are gaps and limitations to reaching the totality of potential uses. An ESG Quality Score and accompanying metrics only fills one half of the investment need – transparency. Crucially, assessment of intentionality or strategy is missing, giving only part of the picture.

However, transparency is an important milestone in and of itself. For instance, where screening has traditionally been a focus of values-style institutional investors (excluding based on morals), non-values based investors will inevitably be able to screen their investments by impact or risk criteria. Risk-based screening, in particular, may add a new dimension to the traditional risk tolerance due diligence of wealth managers. Increasing the level of transparency beyond even what is in the current iteration to encompass topics across values, impact, and risk dimensions is a next step in enhancing the existing tool.

APPENDIX: METHODOLOGY SUMMARY

The below topics cover top level methodology and data coverage of this paper. For the full methodology with examples and definition lists, please download the MSCI ESG Fund Metric Methodology document on ESG Manager or contact MSCI ESG Client Services.

FUND COVERAGE

MSCI ESG Fund Metrics (Fund Metrics) holdings data is sourced from Lipper. To be included in Fund Metrics, a fund must meet the following three criteria:

1. Securities included in MSCI ESG Research's ocverage universe must comprise 65% of the fund's gross weight.
    a. The coverage universe for issuers consists of MSCI ESG Ratings (6,000+ corporate issuers) and MSCI ESG Government Ratings (198 countries and regions).
    b. Short positions are treated as not covered.
    c. Security asset type must have recourse to the rated issuer. See Appendix 3 for a list of eligible asset types.
2. Fund holdings data must be less than one year old.
3. Fund must have at least ten securities.

FACTOR CALCULATIONS

While Fund Metrics includes over 100 metrics, the calculation for each one is done according to one of three basic methodologies – Weighted Average, Factor Weighted Average, and Percentage Sum. Form more information on calcuations in full, including a data definition dictionary, please consult the full methodology document on ESG Manager or from a client service representative

TREATMENT OF CASH

Cash holdings are treated the same as any other asset type not covered by ESG. For example, the percent of a fund held as cash will be considered uncovered when calcuating a fund's ESG coverage. Likewise, the cash holdings would contribute as a percent of the fund not tagged for exposure to involvement factors such as Tobacco and Weapons. When calculating score based factors, like ESG Score, cash is excluded, and the covered portion of the fund is normalized to 100%. This is necessary for weighted-average calculations, and is handled consistently for all unrated positions.

TREATMENT OF SHORT POSITIONS

When calculating fund coverage, short positions are always treated as uncovered, even if held as a security of an issuer within ESG coverage. By including short positions in the uncovered portion of a fund, the coverage % will not overstate ESG coverage.

Although short positions are included in the gross value when calculating coverage, they are removed prior to calculating the rest of the Fund Metrics results. This is because the interpretation of short positions, from an ESG perspective, varies widely based on use case and the specific factor being considered.

MSCI ESG RATINGS COVERAGE

The ESG Ratings coverage universe comprises the following as of March 2016:

- MSCI World Index
- MSCI Emerging Markets Index
- MSCI US Investable Market Index (IMI)
- MSCI UK IMI
- MSCI Nordic IMI
- MSCI Australia IMI
- MSCI South Africa IMI
- MSCI Canada IMI
- Fixed Income: ESG Ratings coverage of over 84% of the market value of a widely used global fixed income benchmark, including:
    - Approximately 90% of the corporate investment grade (listed and non-listed)
    - Approximately 90% of the covered bonds
    - Approximately 99% of the Treasuries/Sovereign*
    - Approximately 85% of the government related (ex-Sovereign)*

  *The overall ESG Rating for government-related bond issuers will be either in the ESG Ratings or Government ESG Rating framework.
- More than 6,000 companies linked to 280,000 individual securities including selected Agencies and Supranationals

MSCI ESG GOVERNMENT RATINGS – SOVEREIGN: COVERAGE

MSCI ESG Government Ratings covers 198 countries and regions and provides ratings on more than 99 percent of outstanding sovereign debt in the marketplace. Furthermore, Government Ratings are available for selected sub national and supra national issuers, including:

- States, provinces, and cities
- Government-owned agencies with close ties to the state
- Supranational administrative bodies such as the European Community, European Union, and the European Financial Stability Facility

ELIGIBLE ASSET TYPES

Following is a list of asset types that are eligible for ESG coverage. Asset types outside of this list are not included in Fund Metrics analysis:

Asset Type		
Agency Security	Equity Option	Preferred Security
American Depository Receipt	Equity Warrant	Provincial Bond
Bank Loan	Global Depository Receipt	Real Estate Invst. Trust
Bond Future	Government Debt	Rights
Certificate	International Depository Receipt	Supranational
Commercial Paper	Limited Partnership	Tracking Instrument
Common Shares	Loan	Treasury Bill
Corporate Debt	Municipal Bond	Units
Depository Receipt	Option on Future	
Equity Future	Preference Shares	

LIPPER GLOBAL CLASSIFICATION SCHEME

Lipper categorizes funds into the 344 distinct categories listed in full methodology document available on ESG Manager and by contacting an MSCI ESG client representative. Peer groups not qualifying for Fund ESG Quality Score – Peer Percentiles (as of February 22, 2016) are noted using the following designation:

*Peer group contains less than 30 funds

^Peer group standard deviation of Fund ESG Quality Scores is less than 0.1

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Our line of products and services includes indexes, analytical models, data, real estate benchmarks and ESG research.

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