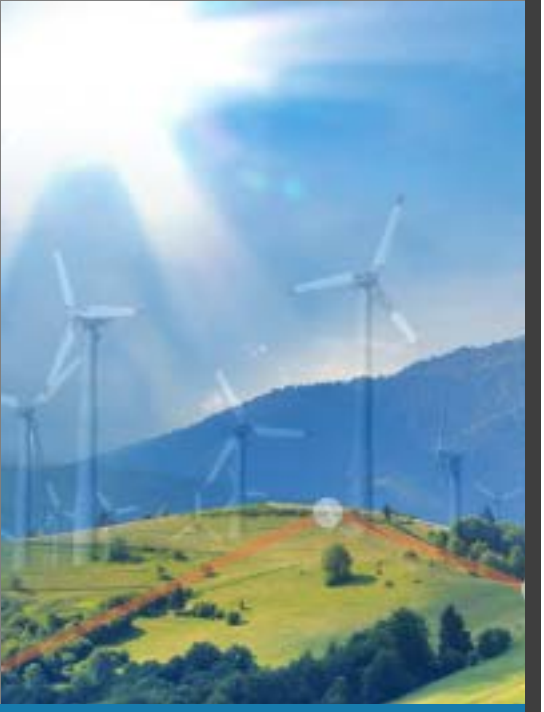

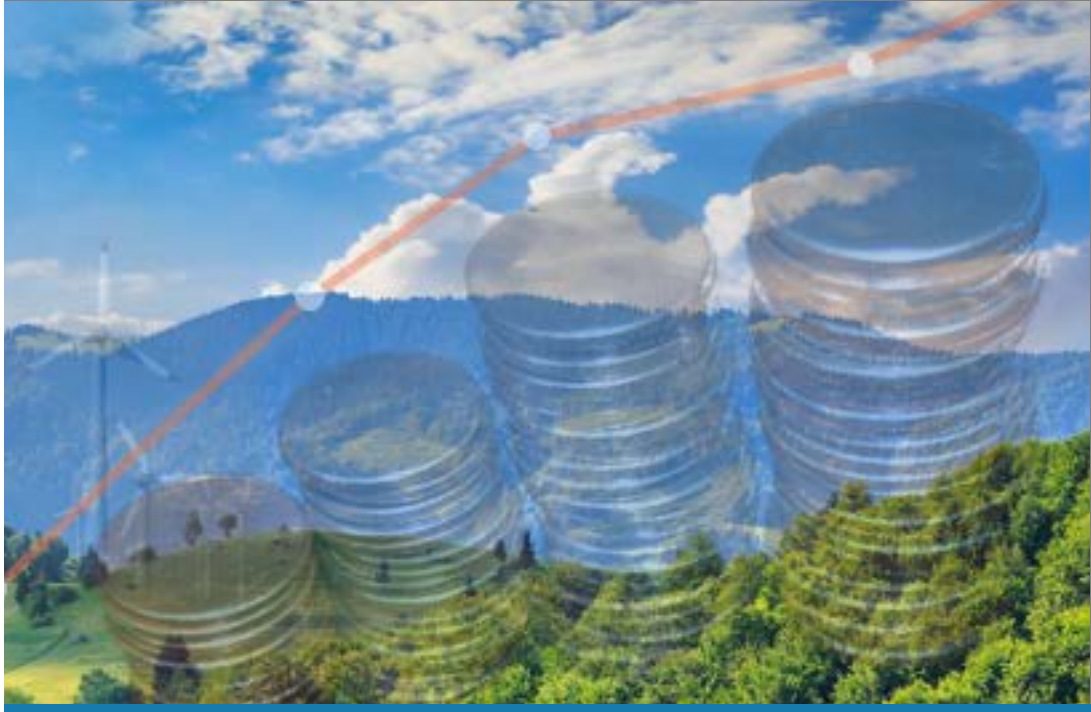

Environmental, Social, and Governance (ESG) Investment Tools: A Review of the Current Field

December 2017

PREPARED FOR:

The Chief Evaluation Office, US Department of Labor

Contract No. DOLQ129633250

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ACKNOWLEDGEMENTS

We would like to thank Sonal Mahida, and Dr. David Wood for providing technical input regarding the content of the literature review and design of the environmental scan. We would also like to thank the staff at the U.S. Department of Labor's Employee Benefits Security Administration (EBSA) and the Chief Evaluation Office who provided feedback and guidance in this study. Special thanks are due to our Contracting Officer Representatives, Janet Javar and Dr. Kuangchi Chang of the Chief Evaluation Office, who provided valuable feedback. We are also grateful for the detailed review provided by EBSA's Lynn Johnson.

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EXECUTIVE SUMMARY

As investors increasingly consider environmental, social, and governance (ESG) factors when selecting and managing investments, questions about ESG's relevance to retirement investing have grown commensurately. With this growth comes greater interest to understand if and to what extent ESG investing might affect American workers' retirement prospects. This study seeks to understand the current state of ESG investing, specifically how it relates to retirement savings of American workers and the tools that individual investors, financial advisors, investment managers, and retirement plan administrators use to identify, assess, and select ESG investments.

> ***ESG*** *refers to environmental, social, and governance issues in business practices including but not limited to clean energy, employee diversity, and shareholder rights.*
>
> ***ESG investing*** *incorporates environmental, social, and governance issues into the selection and management of investments.*
>
> ***ESG tools*** *include online applications, websites, databases, and documents that help investors identify, assess, or select ESG investments.*

This study, for which the Department of Labor (DOL) Chief Evaluation Office (CEO) and Employee Benefits Security Administration (EBSA) contracted Summit Consulting, LLC (Summit), addresses this need by providing:

- A review of the academic and industry literature regarding ESG investing and retirement savings
- An environmental scan of ESG investment tools available to investors

The literature review summarizes the state of the ESG investing field and how four key investor groups—(1) financial advisors and money managers, (2) individual investors, (3) private-sector retirement plans, and (4) public pension plans—incorporate ESG investments into their portfolios. Across the investing sector, researchers have little consensus on the most effective ESG investment strategies (e.g. positive or negative screening versus ESG integration). Additionally, the literature does not provide much insight into how investors and advisors incorporate ESG investments into retirement savings, especially in private-sector retirement plans.

The environmental scan considers 28 ESG investment tools. ESG investment tools are online resources (specifically documents, applications, websites, or databases) that provide information on ESG aspects of investments and/or assist users in selecting and managing ESG investments. While not intended to be exhaustive of all available ESG investing resources, these 28 tools are representative of a segment of the ESG investing field, specifically the ESG research and products produced by third-party information providers for investors, as of May 2017. Summit grouped the 28 tools into four categories based on the types of investments they cover:

- Mutual funds and exchange-traded funds (4 tools)

- Individual companies (16 tools)
- Market segments (6 tools)
- Other entities, e.g. investment manager strategies and retirement plans (2 tools)

This research highlighted the following themes across the ESG tools on their key features and capabilities:

- Most tools (20 of 28) provide a rating that describes a particular aspect of ESG performance for the unit of investment (i.e. mutual fund) and could be compared to the ESG performance of its peers (e.g. those in the same category or sector).[1]
- More than half of the tools (16) did not provide financial information about the investments, such as historical financial performance, which demonstrates the need for these tools to be used alongside tools or resources that provide traditional investment information. At least one tool in every category provided financial information about the investments or index constituents. However, most tools in the individual company category did not provide any financial information.
- All tools are available online, but many (23) have user costs that limit their accessibility to some users.[2] Most of the ESG tools that cover mutual funds, exchange-traded funds, or market segments provide some ESG information at no cost, while most tools for individual companies have user fees.

Beyond familiarizing investors, advisors, and regulators with the current state of ESG investing, this study serves as a digest of the ESG investing sector upon which DOL can expand in future years as the ESG investing landscape continues to grow and mature.

Features of ESG Tools

- *Most ESG tools are performance ratings or provide performance ratings.*
- *ESG information needs to be used alongside traditional financial metrics of investments.*
- *Many tools have user fees and may not be accessible for all investor groups.*

[1] Twenty tools provide ESG ratings and six tools use pre-determined ESG ratings (all tools use ESG ratings to determine the constituents of ESG-focused indices).

[2] Some of the fee-based tools covered in this report may cost anywhere from $450 to $200,000. The providers of some fee-based tools declined to provide cost information due to the sensitivity of such information.

INTRODUCTION

ESG INVESTING AND ESG INVESTMENT TOOLS

In addition to strong financial returns, investors may want to know that the companies receiving their dollars are promoting socially conscious policies, activities, and relationships. Environmental, social, and governance (ESG) investing provides criteria that allow investors and advisors to select investments that align with their values as well as their financial goals.[3]

Examples of issues that investors consider include:

- **Environmental**—climate change, carbon emissions, air and water pollution
- **Social**—gender and diversity policies, human rights, labor standards, employee engagement
- **Governance**—executive compensation, board composition, bribery and corruption policies[4]

> ***ESG Investing*** *incorporates environmental, social, and governance issues into the selection and management of investments.*
>
> *ESG Investing is often used synonymously with other investing terms such as:*
> - *Sustainable Investing (SI)*
> - *Responsible Investing (RI)*
> - *Socially Responsible Investing (SRI)*

Other types of investing terms that are often used synonymously with ESG investing include[5]:

- **Sustainable Investing (SI)**—the full integration of ESG factors into financial analysis and decision-making (Keefe, 2007)[6,7]
- **Responsible Investing (RI)**—an approach that aims to incorporate ESG factors into investment decisions to better manage risk and generate sustainable, long-term returns[8]
- **Socially responsible investing (SRI)**—an investment approach that aims to simultaneously achieve environmental and social goals, as well as financial goals[9]

[3] DB Climate Change Advisors, "Sustainable Investing: Establishing Long-Term Value and Performance," 2012, https://institutional.deutscheam.com/content/_media/Sustainable_Investing_2012.pdf.
[4] Morningstar's 7 Myths and Facts about Sustainable Investing
[5] The related idea of corporate social responsibility (CSR) refers to the act of businesses considering and managing the economic, environmental, social, and governance impacts of their operations. Mercer, "The language of responsible investment: An industry guide to key terms and organisations", 2007, http://www.belsif.be/user_docs/MercerInvestmentConsultingSRI.pdf.
[6] Mercer "The language of responsible investment: An industry guide to key terms and organisations," 2007, http://www.belsif.be/user_docs/MercerInvestmentConsultingSRI.pdf.
[7] According to DB Climate Change Advisors, best-in-class approach is an investment approach that focuses on companies that perform better than their peers in a particular industry or category do.
[8] https://www.unpri.org/about/what-is-responsible-investment.

While ESG, SI, RI, and SRI investing are each unique terms, they refer to the same idea of including non-financial factors alongside financial factors when choosing and managing investments. This report uses these terms under the umbrella term ESG, following the convention of academic and professional literature.

Interest and participation in ESG investing has increased notably in recent years. Bloomberg reported that the number of terminal clients who access ESG data for their analysis grew from 3,010 in 2010 to 12,242 in 2016.[10] Clients accessing ESG data for analysis represented about 3.7% of the 325,000 global subscribers.[11] In addition, total U.S.-domiciled assets under management (AUM) invested in ESG options grew from $6.57 trillion in 2014 to $8.72 trillion in 2016, a 33% increase (or an 18% increase after accounting for general market growth).[12,13] This growth is driven by investor demand for ESG investments. Because of this growth, ESG investments now form a significant share of total U.S.-domiciled AUM (22%).[14]

The growth in ESG investing has strengthened the investing environment, and companies are increasingly reporting their ESG practices. In 2015, 81% of S&P 500 companies issued reports on their corporate social responsibility, a significant increase from 20% of S&P 500 companies in 2011.[15] In addition, aggregating data sources, such as indices designed for researching ESG investments, are growing significantly. Leading industry firms, such as MSCI and Thomson Reuters (Snider, 2016), have released ESG indices, as well as the Dow Jones Sustainability Indices (Tool 24) and FTSE4Good Indices (Tool 23) (Billiteri, 2008).

With the growth of ESG investing, the financial services industry has developed a slate of tools to guide and educate investors. These tools help users identify, assess, or select ESG investments when building investment portfolios, as well as manage existing ESG portfolios. By design, the tools accommodate a variety of users, including individual and institutional investors, money managers, and financial advisors. Primarily offered as online products (websites, documents, databases, interactive applications), these tools are accessible to a broad community.

***ESG tools** include online applications, websites, databases, and documents that help investors and advisors identify, assess, or select ESG investments.*

Using these tools, investors can explore various investment options such as individual company stocks, mutual funds, and exchange-traded funds to identify those that align with the investor's preferred ESG factors (i.e. environmental, social, or governance). The output of these ESG tools is an evaluation of the ESG orientation of specific investments, either conventional or ESG-identified investments, or the ESG orientation of a broad investment market segment, such as the domestic large-cap equities market. The

[9] Ibid.

[10] Bloomberg, "Customers Using ESG Data," https://www.bloomberg.com/bcause/product/.

[11] https://www.bloomberg.com/company/

[12] "Assets under management" is defined by US SIF to include investment assets managed by institutional investors, money managers, and community investment institutions.

[13] US SIF, "Report on US Sustainable, Responsible, and Impact Investing Trends," 2016, http://www.ussif.org/files/SIF_Trends_16_Executive_Summary.pdf.

[14] Ibid.

[15] Governance and Accountability Institute, Inc., Flash Report: http://www.ga-institute.com/press-releases/article/flash-report-eighty-one-percent-81-of-the-sp-500-index-companies-published-corporate-sustainabi.html.

ESG information produced by these tools can be used to select investments, manage portfolios, create investment products (such as mutual funds that track ESG indices), and benchmark performance.

As discussed in the methodology section, our report categorizes ESG tools in four groups based on the types of invested entities or investment vehicles they cover: (1) mutual funds and exchange-traded funds, (2) companies, (3) market segments, and (4) other entities.

As noted by SustainAbility (2010) and Novethic (2013) in their review of ESG rating agencies, the sector continues to undergo rapid evolution. Both reports discuss the substantial changes in the field since 2000, including an increase in tools and services, a broadening of the scope of ESG tools, and a consolidation of the field of tool providers. SustainAbility observed that ESG tool providers frequently use ESG ratings and tools to develop additional products and services.[16] These ESG tools often beget additional ratings and tools from other ESG tool providers. Novethic discussed the increased scope of ESG tools to focus on international markets and rate other types of investments (beyond company stocks and mutual funds), such as government debt. Finally, both reports document the continued consolidation of the field, with some ESG tool providers going out of business or being acquired by other providers.

IMPORTANCE OF ESG INVESTING TO RETIREMENT SECURITY

ESG investing is a growing segment of America's retirement investing landscape. Public pension funds and private retirement plans (7% of corporate defined benefit plans and 24% of corporate defined contribution plans) now include ESG investments in their portfolios.[17] Key groups in the retirement investing field (e.g. individual investors, financial advisors, investment managers, and retirement plan administrators) use ESG investment tools.

The rapid change in the ESG sector and its potential to affect the retirement prospects of American workers raises the need for greater insight into the ESG investing sector. In order to safeguard workers' retirement security, DOL and other policymakers need comprehensive information on the tools used in making ESG investment decisions and a better understanding of the relevance of ESG investing to retirement savings. In June 2016, DOL's Chief Evaluation Office (CEO), in conjunction with the Employee Benefits Security Administration (EBSA), contracted with Summit Consulting, LLC (Summit) to conduct a study that covers two topics:

- The academic and industry literature related to how investors and advisors integrate ESG investments into retirement savings (literature review)
- Current investment tools that focus on ESG investments (environmental scan)

The primary goal of this study is to inform DOL, investors, and advisors on ESG investing as it relates to retirement savings. The report begins with an overview of the academic and industry literature on the current state of ESG investing, investment strategies for ESG investments, and primary critiques of integrating ESG investments into retirement savings. This review provides a digest of the ESG investing sector that can expand in future years as the ESG investing landscape continues to grow, diversify, and mature. The environmental scan provides an overview of current ESG tools, detailing information on each tool's characteristics and features and an assessment of the relative utility to different user groups.

[16] This is observed in our environmental scan, the second part of the study.
[17] Pensions & Investments, "After a bit of help, ESG ready to make even greater gains," 2016, http://www.pionline.com/article/20160404/PRINT/304049998/after-a-bit-of-help-esg-ready-to-make-even-greater-gains.

The environmental scan does not endorse or recommend any specific tool or tool provider. Additionally, the study focuses on the nature of the ESG investments in public equities (though some tools do provide information on private companies).[18]

[18] This study focused on ESG investment in public equities because private equities are generally not available to individual investors, unless they are high net-worth individual investors.

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REVIEW OF LITERATURE ON ESG INVESTING AND RETIREMENT SAVINGS

RESEARCH QUESTIONS AND METHODOLOGY

To review academic and industry literature on ESG investing and retirement savings, Summit focused on literature relevant to the following three research questions:

- Who are the key investors in both the ESG investing and retirement saving sectors?
- How do the key investors assess ESG investments for general and retirement investment portfolios?
- What are the common challenges and critiques of the current methods of assessing ESG investments?

The study included peer-reviewed journal articles, working papers, research briefs, and technical research reports, as well as industry articles, research reports, marketing content, and regulatory guidance. The literature review focused on publications specific to the U.S. investing sector from the last 15 years. We generally used the most recent published findings on a topic but also referenced older foundational research, e.g. studies cited numerous times up through the last year. Initially, the team searched the literature with known sources of information and academic researchers on the following topics:

- ESG investing and public pensions/retirement investing/fiduciary standard
- ESG investing and investment strategies
- ESG investing and performance

Using references, citations, and related articles from these initial sources, the team expanded the literature search to uncover the most prominent and relevant information sources.

WHO ARE THE KEY INVESTORS IN BOTH THE ESG INVESTING AND RETIREMENT SAVINGS SECTORS?

As shown in Figure 1, key ESG investors[19] in the retirement savings sector include money managers and financial advisors, individual investors, private-sector retirement plans,[20] and public pension plans. ESG investing has expanded to include all key investors in the sector. The following sections describe the key investors and show ESG investing growth in each group.

1. Money Managers and Financial Advisors

[19] We defined key investors according to the scope of this study.

[20] private-sector retirement plans include defined benefit and defined contribution plans sponsored by private-sector companies. This group also includes multiemployer or "Taft-Hartley" plans.

Money managers and financial advisors include businesses or banks responsible for managing the securities portfolios of individual or institutional investors. The number of investment funds run by money managers that incorporate ESG factors grew by 12% (from 894 to 1,002 funds) from 2014 to 2016 (US SIF, 2016). In the same period, the total amount of ESG investment assets managed by money managers and community investment institutions grew 69% (from $4.80 billion to $8.1 billion) (US SIF, 2016).

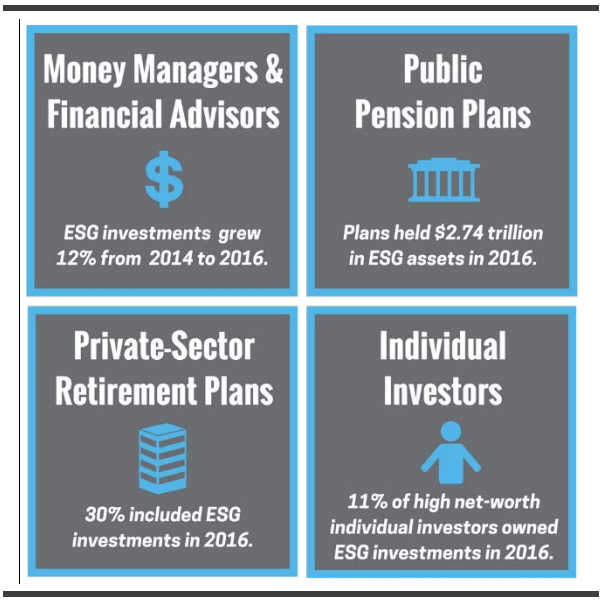

Figure 1: ESG Investing Landscape

2. Individual Investors

Individual investors buy and sell securities for their personal accounts, not for another entity or organization. In 2012, 66% of 401(k) investors said they would like to see their employer offer ESG options.[21] Additionally, in 2016, 11% of high net-worth investors owned ESG investments.[22,23]

ESG investing has grown not only in the general investing sector, but also in the *retirement savings sector*. As outlined in a recent US SIF report, ESG investments held by institutional investors (including public pension, labor union pension, and corporate retirement funds) grew 17% from 2014 to 2016.[24] Next, we discuss two key investor groups relative to ESG investing and retirement savings.

3. Private-Sector Retirement Plans

Private-sector retirement plans are tax-preferred financial arrangements designed to replace employment income upon retirement. In 2011, a survey of defined contribution plans showed that 14% of these plans included ESG investments.[25] In 2015, 7% of corporate defined benefit plans and 24% of corporate defined contribution plans included ESG investments.[26] By 2016, 30% of all corporate plans (defined benefit and contribution) included ESG investments.[27] This demonstrates the growing

[21] Pensions & Investments, "After a bit of help, ESG ready to make even greater gains", 2016, http://www.pionline.com/article/20160404/PRINT/304049998/after-a-bit-of-help-esg-ready-to-make-even-greater-gains.
[22] In this study, high-net-worth and ultra-high-net-worth individuals were those who had at least $3 million in investable assets.
[23] US Trust, "2016 US Trust Insights on Wealth and Worth Survey," 2016, http://www.ustrust.com/publish/content/application/pdf/GWMOL/USTp_AR9R6RKS_2016-05.pdf.
[24] US SIF, "Report on US Sustainable, Responsible, and Impact Investing Trends," 2016, http://www.ussif.org/files/SIF_Trends_16_Executive_Summary.pdf.
[25] This survey included private-sector (for-profit and non-profit) and public sector defined contribution plans, however 60% of the surveys were to for-profit, private-sector plans. Mercer and US SIF, "Opportunities for Sustainable and Responsible Investing in US Defined Contribution Plans", 2011: http://www.ussif.org/blog_home.asp?display=18.
[26] Pensions & Investments, "After a bit of help, ESG ready to make even greater gains," 2016, http://www.pionline.com/article/20160404/PRINT/304049998/after-a-bit-of-help-esg-ready-to-make-even-greater-gains.
[27] Callan Institute, "2016 ESG Interest and Implementation Survey", 2016, https://www.callan.com/wp-content/uploads/2017/02/CallanESGSurvey2016.pdf.

importance of ESG investments in private retirement plans. Additionally, in 2014, corporate institutional investors, including private retirement plans, held $758 billion in ESG investments.[28]

4. Public Pension Plans

Public pension plans, retirement plans offered through government employers, calculate employee retirement benefits based on factors such as length of employment and salary history. Public pension funds own or manage $2.74 of $4.72 trillion of ESG assets managed by institutional investors (US SIF, 2016). Additionally, in 2014, 70 of the world's largest pension funds, including those in New York and California, engaged directly with companies to address climate change issues (Farmer, 2014).

HOW DO KEY INVESTORS ASSESS ESG INVESTMENTS FOR GENERAL AND RETIREMENT INVESTMENT PORTFOLIOS?

Table 1 describes seven methods for assessing ESG investments for inclusion in an investment portfolio. This section discusses commonly used investment strategies, by both general and retirement investors, as well as how investors employ ESG tools in their investment strategies.

Table 1: General Investment Strategies for ESG Investments[29]

Type of Investment	Description of Strategy/Method	Examples
1. Positive screening/ best-in-class	Select investments for positive performance on ESG factors relative to industry peers (also involves avoiding investments that do not meet the ESG performance thresholds)	Social(k) Faith Based mutual fund
2. Negative/exclusionary screening	Exclude investments connected to activities or industries deemed controversial or unacceptable	Social(k) Fossil Free mutual fund
3. ESG integration	Include ESG risks and opportunities in financial analysis of potential investments	Pax Global Environmental Markets Fund
4. Impact investing	Select investments to generate positive social and environmental impact along with financial returns, regardless of whether the returns are below market	W.K. Kellogg Foundation's Mission Driven Investment (MDI)
5. Sustainability thematic	Select assets related to sustainability	Morgan Stanley's Inclusive Growth Opportunities Index
6. Index based	Construct a portfolio of investments to match established indices of environmentally and socially responsible companies, such as the Dow Jones Sustainability Index (Richardson, 2007)	Calvert U.S. Large Cap Core Responsible Index Fund
7. Direct corporate engagement and activism	Work directly with corporations to promote adoption of ESG practices (may be used in combination with other ESG investment strategies [Richardson, 2007])	Stock divestiture in state pension funds

[28] Pensions & Investments, "After a bit of help, ESG ready to make even greater gains", 2016, http://www.pionline.com/article/20160404/PRINT/304049998/after-a-bit-of-help-esg-ready-to-make-even-greater-gains.
[29] US SIF, "Report on US Sustainable, Responsible, and Impact Investing Trends, 2016," http://www.ussif.org/files/SIF_Trends_16_Executive_Summary(1).pdf.

1. Money Managers and Financial Advisors

Money managers and financial advisors often follow two ESG investment selection strategies that rely on either positive or negative screening or index-based methods. In the positive/negative screening strategies, financial advisors assess the ESG orientation of existing mutual funds and exchange-traded funds (ETFs), screening in funds that meet their ESG requirements.[30] Previously, advisors may have only chosen mutual funds or ETFs defined as ESG funds or ESG-identified indexed mutual funds. Now that ESG ratings are available for all mutual funds and ETFs, ESG-conscious advisors may choose based on ratings of all funds instead of focusing on self-identified ESG funds.

The index-based method involves creating indices or mutual funds that incorporate ESG factors in the investment selection process. For indices, financial services firms create SRI (or ESG) indices using a benchmark of the general investment market as a foundation and adjust the included companies' weights in the index based on specific ESG or SRI criteria (Berry, 2013). Similarly, for mutual funds, money managers create mutual funds of individual company stocks using positive and negative screening criteria that are easy to identify (Berry, 2013).

Both investment strategies often incorporate the use of ESG tools. Advisors can use ESG tools—such as the Morningstar Sustainability Rating (Tool 1) or MSCI ESG Fund Metrics (Tool 4)—to identify appropriate mutual funds for their investors. Likewise, as money managers create ESG-oriented mutual funds or ETFs, they may employ ESG tools to more easily identify appropriate stocks. ESG rating tools for companies, such as Sustainalytics Company ESG Reports (Tool 6) or MSCI ESG Company Rating Reports (Tool 12), allow money managers to better identify specific company stocks. Finally, managers can use ESG investment indices, such as the Dow Jones Sustainability Indices (Tool 24) and the FTSE4Good Index Series (Tool 23), to create passive ESG funds.

2. Individual Investors

The academic and industry literature on individual investors' methods for assessing or selecting ESG investments is scant. Most of the academic literature focuses on individual investors' motivations for, and attitudes toward, engaging in ESG investing (Pasewark and Riley, 2010; Nilsson, 2008; Jansson et al., 2011; Williams, 2007). With respect to investment strategies, individual investors often use ESG integration methods, taking a more holistic approach to assessing ESG investments. They focus on a company's overall profile and pro-social responsibility actions (Berry 2013). Similarly, Nilsson et al. (2010) found that ESG investors search more for ESG-related information about companies and funds, (e.g. corporate behavior strategies and charitable donations) than for traditional investment information (e.g. financial performance and risk).

Many ESG tools are designed specifically to help individual investors identify appropriate ESG investments (companies or funds) using these more holistic assessment approaches focusing on a company's overall profile and pro-social responsibility actions. Most tools that are reviewed in the environmental scan identify ESG-oriented companies and investments by incorporating multiple components across each of the three ESG factors, thus showing a complete picture of the company's practices in all areas of ESG orientation. For instance, Morningstar's Sustainability Rating (Tool 1) is based on Sustainalytics' assessments of companies' environmental, social, and governance practices. Environmental variables include carbon emissions, climate change effects, and renewable energy. Social

[30] Information on this strategy was obtained through conversation between Summit and Dr. Meir Statman.

variables include supply chain management, company discrimination lawsuits, and community relations. Governance variables include executive compensation, shareholder rights, and independent directors.

Unlike with key investors in the general investing sector, there are fewer clear preferences in investment strategies among the key investors in the retirement savings sector.

3. Private-Sector Retirement Plans

There do not seem to be ESG investment strategies specific to private retirement investing portfolios. The literature on ESG investing and retirement savings focuses on the suitability of ESG investments for public pension funds and the permissibility of including ESG investments in private-sector plans. A few companies, including general investment firms (Vanguard and TIAA) and more specialized investment firms (Calvert and Social(k)), offer ESG investments for private-sector plans. Rather than use specific investment strategies for private retirement plans, these companies use standard ESG investment strategies, such as positive or negative screening methods, to select retirement plan investments.[31]

4. Public Pension Plans

Public pension plans may have more latitude in incorporating ESG factors into their investments than private-sector retirement plans, because public plans are not regulated by the requirements of the Employee Retirement Income Security Act (ERISA). In earlier years, legislative and political action typically determined whether the plans considered ESG factors, emphasized ESG investments, or followed specific investment strategies in choosing investments (Entine, 2005).[32]

Previously, state and other public pension plans focused on the divestiture of companies and funds from their portfolios (i.e. selling securities) (Billiteri, 2008). For example, California's public pension plans (CalSTRS and CalPERS) divested their portfolios of tobacco stocks and securities tied to Iran and Sudan (Billiteri, 2008). Recently though, public pension plans have focused more on using ESG integration methods to incorporate ESG factors into their financial analysis to better identify risk and improve quality management (Billiteri, 2008).

INDUSTRY PERSPECTIVES ON ESG INVESTMENT STRATEGIES

Currently, different segments of the investing landscape employ different ESG investment strategies. There is a lack of consensus about investment strategies, which both reflects *and* compounds questions surrounding the methods for selecting appropriate ESG investments and their ability to accurately balance ESG factors with investment performance.

Prompted by the diversity of ESG investment strategies and the lack of consensus about the "best strategies," a few organizations have developed standards for incorporating ESG factors in the investment process. In 2006, the United Nations (UN) released the "Principles for Responsible Investment (PRI)" to help institutional and other investors integrate ESG factors into their investment

[31] Social(k) provides a list of pre-screened ESG mutual funds for inclusion in retirement plans and four ESG screened portfolios developed by Social(k): http://socialk.com/responsible/investments/. Calvert (https://www.calvert.com/mutual-funds.php), Vanguard (https://personal.vanguard.com/us/funds/snapshot?FundId=0213&FundIntExt=INT), and TIAA (https://www.tiaa.org/public/offer/products/mutual-funds/responsible-investing) follow a similar strategy.
[32] National Conference of State Legislatures, "Pension and Retirement State Legislation Database," http://www.ncsl.org/research/fiscal-policy/pension-legislation-database.aspx.

decisions and ownership practices.[33] One of the outlined principles was to fully integrate ESG issues into general investment analysis and decision-making. As part of this effort, the Investment Practices Team of UN PRI produces guides, webinars, and other information to help investors implement the principles of responsible investing within their investment practices. As of 2016, nearly 300 organizations were signatories to the PRI in the United States, 76% of which are investment managers. Likewise, the Sustainability Accounting Standards Board (SASB) is developing and disseminating industry-specific standards for disclosing ESG factors, specifically corporate sustainability practices. SASB helps ensure these disclosures are useful to investors and advisors in evaluating ESG investments.[34]

WHAT ARE THE COMMON CHALLENGES AND CRITIQUES OF THE METHODS FOR ASSESSING ESG INVESTMENTS?

During the industry and academic literature review, researchers identified four main critiques of the current methods of assessing and incorporating ESG investments:

- General ESG Investment Strategy Critiques
  1. Identifying and appropriately weighing ESG factors in investment selection
  2. Potential trade-off between ESG factor preferences and investment performance
- Specific Retirement Savings Critiques
  3. Suitability of ESG investments for public pension plans
  4. Appropriateness of ESG investments for private retirement plans

The following sections discuss these general and specific critiques.

GENERAL CRITIQUES OF ESG INVESTMENT STRATEGIES

1. Identifying and Appropriately Weighing ESG Factors

One of the most common critiques of ESG investing is the difficulty for investors to correctly identify, and appropriately weigh, ESG factors in investment selection. Vogel (2005) lays out concerns about the precision, validity, and reliability of ESG investment strategies (as shown in Table 2).

Over the years, other researchers have consistently raised three of the concerns about ESG investment strategies summarized by Vogel.

General Critiques of ESG Investment Strategies

It can be difficult to correctly identify—and weigh—ESG factors when selecting investments.

Four major topics of critique:

- *Too inclusive*
- *Dubious criteria*
- *Quality of information*
- *Strong emphasis on short-term returns*

[33] United Nations Principles for Responsible Investment, www.unpri.org.
[34] Sustainability and Accounting Standards Board, http://www.sasb.org/.

Table 2: Issues with ESG Investment Strategies

General Issue	
Too Inclusive	ESG mutual funds and ETFs often hold investments in companies that are acknowledged as "bad actors" in one or more of the ESG spaces. Nearly all the economy's largest companies, regardless of ESG orientation, may be included in one or more ESG funds.
Dubious Criteria	The criteria used for selecting ESG factors are too subjective and can reflect narrow or conflicting ideological or political viewpoints.
Quality of Information	The information used for selecting ESG factors comes from the companies themselves, which complicates the ability to verify, compare, and standardize this information.
Strong Emphasis on Short-Term Returns	Some financial advisors screen investments first for performance and only after that for ESG factors. This initial emphasis on performance can exclude companies with high ESG practices that focus on longer-term performance.

Source: "The Market for Virtue," David Vogel, 2005.

Too Inclusive

Hawken (2004) raises the issue of overly inclusive selection criteria. In a review of ESG-oriented mutual funds, Hawken found the investment strategies used by most funds allowed nearly any publicly held company to be included in an ESG fund. This practice resulted in little difference between the portfolios of many ESG and conventional funds. Likewise, Billiteri (2008) points out that many ESG-oriented funds and portfolios still included stock of companies with controversial ESG practices in particular areas, such as McDonald's, Coca-Cola, and the now defunct Enron.[35] Finally, Delmas and Doctori Blass (2010) show that a focus on positive screening or best-in-class methods in one ESG factor can result in including companies that are poor performers in other dimensions of ESG.

Dubious Criteria

Several researchers raise the dubious criteria critique (Dunfee, 2003; Stanley and Herb, 2007; Richardson, 2009; Sandberg et al., 2009; Chatterji, 2014; and Munnell and Chen, 2016). Sandberg et al. (2009) discuss the lack of consensus about basic aspects of ESG investing, observing considerable heterogeneity in how investors, advisors, and money managers approach ESG investing in terms of terminology, strategy, and practice. Dunfee (2003) notes the potential contradictions of ESG investment strategies such as different investments being screened out of the Islamic Amana Fund vs. the Ave Maria Catholic Values Fund, both of which use religious values as a preference. Finally, Chatterji (2014) reviewed ratings from six of the leading ESG ratings firms and found low agreement across the firms on how they measured ESG factors.

Quality of Information

Similarly, many researchers raise the quality of information critique (Dunfee, 2003; Hummels and Timmer, 2004; Billiteri, 2008; Richardson, 2009; SustainAbility, 2010; Dhaliwal, 2011; Nilsson et al., 2012). Hummels and Timmer (2004) discuss the difficulty in obtaining sufficient information to determine whether a company's operations conform to the investor's values. A 2010 report from SustainAbility confirms this finding, noting that the ESG sector's increasing reliance on voluntarily disclosed information and the insufficient context and content of this information can hamper an investor's assessment of companies' ESG performance. In addition, Dhaliwal (2011) found that

[35] Controversial ESG practices may include: sourcing materials from rainforests (environmental), poor labor practices (social), and lack of gender representation on company board (governance).

companies with high ESG practices were more likely to report their ESG performance, possibly making the pool of available ESG information biased.

Responses to Critiques of Appropriately Weighing ESG Factors

In response to these critiques, some researchers have promoted different ESG rating approaches to quantify and verify the selection process (Dillenburg et al., 2003; Ballestero et al., 2012; Wimmer, 2013; von Wallis and Klein, 2015). Wimmer (2013) describes a simplified, general two-step process: (1) a company is scored on how well it behaves with respect to factors in the environmental, social, and governance arenas and (2) these individual scores are averaged together for each company. For ESG-identified mutual funds, the average scores of the companies are weighted by each company's proportion in the fund. As described, the researchers' proposed ratings approaches are like the ESG ratings developed by tool providers. However, the academic approaches are geared toward verifying the validity of a rating system and reliably differentiating the "ESG-ness" of ESG-identified and conventional investments to make the rating system more effective in later research, such as with comparative performance (von Wallis and Klein, 2015).

2. Potential Trade-off between ESG Factors and Investment Performance

The second general critique of ESG investing relates to the potential trade-off between ESG factors and investment performance. Individual investors appear to believe they sacrifice returns for exercising their ESG values in investing. Several examinations (Mackenzie and Lewis, 1999; Williams, 2005; Renneboog et al., 2008; Nilsson, 2008; Paetzold and Busch, 2014; Riedl and Smeets, 2014) of individual investors' motivations, beliefs, and attitudes about ESG investing found that many investors believe there is some performance trade-off for pursuing ESG preferences. For instance, Riedl and Smeets (2014) conclude from their experiments, "Social preferences rather than return expectations or risk perceptions are the main driver of investments in socially responsible (SRI) mutual funds (which are discussed interchangeably with ESG funds). In fact, most investors who hold SRI funds expect to earn lower financial returns on these funds than on other funds." Beyond investors' *beliefs* about the trade-off between ESG and performance, there has been substantial research to attempt to answer the question. This is by far the most researched topic on ESG investing (Capelle-Blancard and Monjon, 2012).

***Investors** perceive a trade-off between ESG factors and investment performance: individual investors believe ESG investments perform worse than conventional investments.*

*However, **empirical research** suggests that ESG investments perform at least as well as conventional investments.*

Qualitative Research

Researchers disagree as to whether ESG investments perform as well as non-ESG investments. In a review of the research literature on ESG investment performance, Statman (2007), considered three hypotheses about how the actual returns (i.e. performance) of ESG investments compare with the returns of non-ESG investments: (1) "no effect" or same performance, (2) "doing good but not doing well" or poorer performance, and (3) "doing well while doing good" or better performance. He applied these hypotheses to several common types of ESG investment strategies. His overview of the literature found that on balance some types of ESG investments (e.g. those that avoid gambling, alcohol, or tobacco stocks) conformed to the "doing good, but not well" hypothesis. On the other hand, Statman's

review of the literature found that ESG investment stocks focused on environmental and governance factors on balance conformed to either the "no effect" or "doing good while doing well" hypotheses.

Empirical Studies

The academic literature provides several empirical studies that address this topic. Relying on analysis of individual ESG funds, indices, portfolios, or company stocks, several studies (Statman, 2006; Humphrey and Tan, 2013; Eccles et al., 2014; Melas et al., 2016; Khan, 2016) found that incorporating ESG factors into investments generally produced investment performances on par with or better than non-ESG investments. For instance, Eccles et al. (2014), in a comparison of companies that adopted high and low sustainability practices, found that high sustainability companies significantly outperformed in the stock market over the long term.

Meta-Analyses

Other studies, relying on meta-analyses of ESG and non-ESG investment performance, found that ESG factors do not have a negative effect on investment performance compared with non-ESG investments (UN Environmental Program and Mercer, 2007; Revelli and Viviani, 2015). In fact, several meta-analyses found that ESG factors were positively correlated with better investment performance (Mercer, 2009; Deutsche Bank Climate Change Advisors, 2012; Friede et al., 2015; von Wallis and Klein, 2015; Lu and Taylor, 2016). Moreover, a few of these meta-analyses (Revelli and Viviani, 2015; Friede et al., 2015) highlight how the diversity of ESG investment strategies, investment time horizon considered, and data comparison methods used have contributed to the varying findings among research studies examining the relative performance of ESG investing.

Overall, many individual and institutional investors continue to believe ESG investing entails accepting lower investment performance (Nilsson, 2008; Renneboog et al., 2008; Paetzold and Busch, 2014; Riedl and Smeets, 2014). However, the academic literature indicates that, when appropriately compared (e.g. ESG strategies, investment time horizon, performance measures), ESG investments provide performance at least comparable to that of non-ESG investments. The following literature demonstrates these findings: Eccles et al. (2014); Humphrey and Tan (2015); Melas et al. (2016); and the meta-analyses of Deutsche Bank Climate Change Advisors (2012); Revelli and Viviani (2015); Friede et al. (2015); von Wallis and Klein (2015); and Lu and Taylor (2016).

ESG INVESTING CONCERNS SPECIFIC TO RETIREMENT SAVINGS

A second set of critiques on ESG investing investment strategy focuses on retirement savings.

1. Suitability of ESG Investments for Public Pension Plans

One long-standing point of contention in the academic literature is the suitability of ESG investments for public pension plans. Some researchers argue that ESG investments are suitable for public pension plans (Sethi, 2005; Richardson, 2007; Hess, 2007; Marlowe, 2014; Rose, 2016). Richardson (2007) asserts that ESG investing may be an ideal strategy for public pension plans for the following reasons:

- Providers of ESG investments (e.g. corporations) do not compete with (or have ties to) the underlying public pension funders (e.g. state and local governments).
- Public pension plans focus on long-term investment horizons.
- Public pensions cater to ordinary workers.

In addition, Marlowe (2014) found public pension plans were active in ESG investing, and the performance of these ESG investments was indistinguishable from conventional public pension investments.

Some researchers express concerns about the suitability of ESG investments for public pension plans and how ESG investing could be appropriately incorporated into them (Entine, 2005; Munnell, 2005; Barber, 2007; Wang et al., 2015; Munnell, 2016). For instance, Entine (2005), in response to public pension plans' reliance on negative and exclusionary screening, argues that this is not a good strategy because it does not allow public pension plans to effectively assess ESG factors separately from their investment return prospects. He asserts the pension plans' belief that they can accurately assess ESG corporate intentions may inadvertently promote corporate behaviors that are both socially irresponsible and economically adverse for pension beneficiaries. For instance, Entine (Billiterri, 2008) notes that almost every major financial company involved in the 2008 Financial Crisis was ranked highly by social investors.

ESG Investing Concerns Specific to Retirement Savings

ESG investments may not be suitable for public pension funds for the following reasons:

- *Limited effectiveness of ESG selection methods*
- *Potential for political motivation*
- *Distraction from core purpose of pension plans*

Munnell and Chen (2016) outlined three specific reasons why ESG investments are not suitable for public pension plans:

- The effectiveness of social investing on promoting social responsibility is limited.
- Social investing distracts public pensions from their core purpose, which is providing retirement security for members.
- ESG investing has a principal-agent problem (i.e. pension decision-makers do not bear the risk of any financial losses incurred by ESG preferences).[36]

Wang et al. (2015) discusses the various ways ESG investment decisions of public pension funds (in the form of shareholder activism) are influenced by the political incentives of the funds' board members. These results echo the findings of Brown et al. (2015) and Bradley et al. (2016) that political considerations can bias the general investment decisions of public pension funds, which raises concern about the potential for the management of public pensions (and retirement benefits) to be influenced by political considerations. The debate about the suitability of ESG investing for public pension plans is ongoing.

2. Appropriateness of ESG Investments for Private Retirement Plans

Unlike public pension plans, private-sector retirement plans (including both defined contribution and defined benefit plans) must maintain compliance with ERISA regulations, specifically the fiduciary requirements of the Act, when selecting investment options. For at least the last 33 years, DOL has

[36] This problem is also referenced in other areas of investing.

released guidance on the applicability of the fiduciary standard to ESG investing for private retirement plan administrators.[37]

The guidance has clarified and refined the agency's stance on ESG investing in ERISA-regulated retirement plans and has prompted various reactions from the investment industry. The earliest guidance specified that ESG factors could only be included as a *tiebreaker* among equally suitable investment options. This guidance kept many private retirement plan administrators from including ESG investment options.

The 1998 Calvert Letter clarified that administrators could include ESG factors if they do not negatively affect the fiduciary requirements of diversification, liquidity, and risk and return, among others. Some investment industry practitioners, such as Vanguard, TIAA, Social(k), and Calvert, took the guidance in this letter as permission to offer ESG investments as private retirement plan options.[38] Finally, DOL's 2015 guidance acknowledged that ESG factors might have a direct relationship to the economic value of an investment rather than being simply a *tiebreaker* or *add-on* feature. In these cases, DOL advised that these ESG factors can be formal components when the fiduciary analyzes competing investment options, reminiscent of the ESG integration strategy discussed above.

Throughout the years and multiple rounds of guidance, retirement advisors have grappled with how to square their fiduciary responsibility with investors' growing demand for ESG investments (Richardson, 2007; Martin, 2009; Richardson, 2011; Sandberg, 2011; Woods and Urwin, 2012; Sandberg, 2013; Sanders, 2014). Richardson (2007) provides a perspective for affirmatively squaring investors' ESG interests with fiduciary responsibility by focusing on the type of ESG selection method used. He suggests meeting the fiduciary responsibility by using positive screening or best in class as per the 2006 UN Principles. These investment strategies steer away from excluding specific types of investments in favor of focusing on best practice standards for environmental assessment, shareholder activism, public reporting, and other accountability measures.[39]

Private-Sector Retirement Plans' Concerns Regarding ESG Investing

- *ESG investments may not be permissible for private-sector retirement plans under ERISA.*
- *DOL guidance has shifted from ESG as a tiebreaker, to an add-on, to full integration.*
- *Advisors have grappled with how to interpret DOL's guidance.*

On the other hand, Sandberg (2013) and Sanders (2014) argue that ESG investing is, in most cases, legally incompatible with the fiduciary responsibility of financial advisors that oversee private-sector retirement plans. For instance, Sanders (2014) argues that retirement plan trustees are prohibited from investing in ESG due to the "exclusive-benefit" rule of ERISA, which requires trustees to invest for the exclusive benefit of the plan's beneficiaries rather than for larger considerations such as social value.

[37] 2015 DOL guidance on including ESG investing in retirement plans: https://webapps.dol.gov/FederalRegister/PdfDisplay.aspx?DocId=28547.
[38] Social(k): www.socialk.com.
[39] United Nations, "Principles for Responsible Investment," www.unpri.org. (Signatories include the Canada Pension Plan, British Telecom Pension Scheme, New Zealand Superannuation Fund, and the UK Universities Superannuation Scheme. See further signatories listed online: www.unpri.org/signatories.)

ESG INVESTING AND RETIREMENT SAVINGS: PRESENT STATE AND FUTURE POSSIBILITIES

Despite critiques, the continued and increasing growth in ESG investing makes this sector an important part of the future retirement investing landscape. Several issues illustrate the need for additional development and refinement in ESG investing sector research, including the following:

- Continued concerns about the effectiveness of ESG investment strategies, particularly those applied to retirement savings
- Debate over the potential performance disadvantage of ESG investments
- Questions about the suitability of ESG investments for public pension plans
- Concerns about the permissibility of ESG investments for private-sector retirement plans

Another area of ESG literature that needs further development is research on the proliferation of indices, information sources, and assessment tools for ESG factors. Except for a few reports, such as SustainAbility's "Rate the Raters" series (2010) and Novethic's "Overview of ESG Rating Agencies" report (2013), there has been little research conducted to systematically assess and understand ESG tools.[40] Our report helps to fill in this gap in the literature. Our environmental scan of ESG tools provides a digest of ESG tools, a comparison of their key features and capabilities, and description of their relative utility for different user groups.

[40] Novethic, "Overview of ESG Rating Agencies," 2013, https://www.scribd.com/document/270989929/2013-Overview-of-ESG-Rating-Agencies.

ENVIRONMENTAL SCAN OF ESG INVESTMENT TOOLS

The second part of our study provides an environmental scan of available online ESG investment tools. Our environmental scan involved a systematic search of the ESG investing landscape for available ESG tools using a well-defined scope and methodical categorization and collection of information on the tools. We defined ESG tools to include online documents, applications, websites, or databases that perform at least one of the following activities:

- Provide information on ESG aspects of investments
- Assist users with selecting ESG investments
- Assist users with creating or managing a portfolio of ESG investments

The ESG tools are designed to assist a variety of users to sort through various investment options to identify those that align with their ESG preferences. The output of the tools is information on the ESG orientation of specific investments or market segments, such as the U.S. large-cap equities market. The ESG tools serve as an important source of information as investors and advisors use the tools to include ESG factors in their investment selection and management processes.

The scan provides a broad comparison of the tools based on specific features and describes their relative utility to different users, without endorsing or recommending any specific tools. There are numerous sources of ESG information (online and otherwise) besides the tools highlighted in this report. However, some of these sources fall outside of our definition of ESG investment tools and the scope of the environmental scan.

RESEARCH QUESTIONS AND METHODOLOGY

The following three research questions guided this environmental scan:

1. Which ESG tools are available and relevant to investors (individual and institutional investors, and money managers) and advisors?
2. How are these tools different and similar with respect to their features and capabilities?
3. What is the relative utility of these tools for different investors?

The following section describes the five-step analysis used to conduct the environmental scan of available ESG tools. Figure 2 illustrates these steps and their sequence.

1. Defining the scope of the environmental scan. To answer the first research question, *which ESG tools are available*, we first needed to define the scope of the search. Our analysis restricted the scope of ESG tools to reflect the needs of DOL and other policymakers seeking to orient themselves to the field of ESG investing. We limited our environmental scan to ESG tools with all the following attributes:

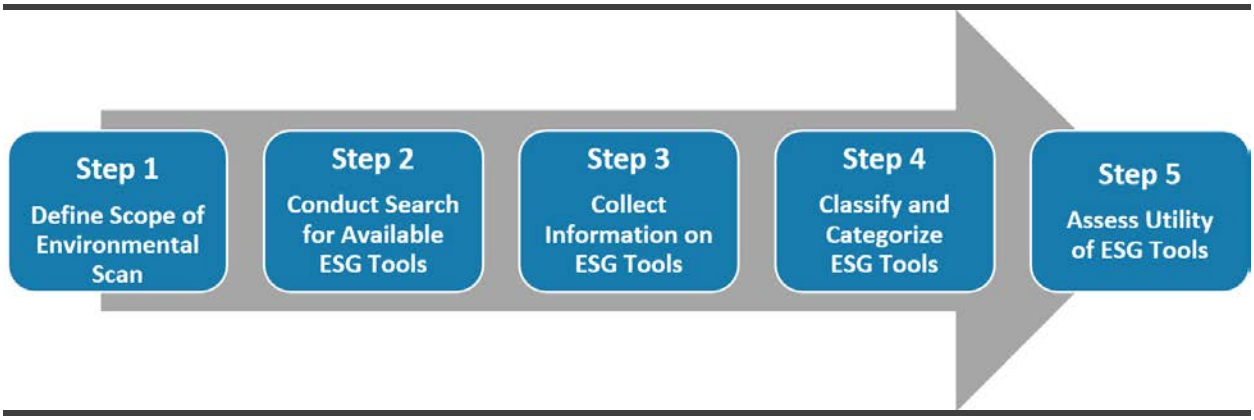

Figure 2: Process for Conducting Environmental Scan of ESG Investment Tools

- Cover investments, e.g. company stocks or securities, mutual funds, and market segments
- Assess U.S.-based investments[41]
- Oriented to individual and institutional investors and advisors
- Are standalone products that are widely available (in contrast to some firms that offer customized ESG analyses or their ESG services that are only available to their existing clients)
- Cover multiple issues across one or more pillars

ESG investing is a diverse subject encompassing many topics and players. However, this report's intended audience is investors (individual investors, institutional investors, and money managers), advisors, plan administrators, and policymakers, so the tools discussed are those deemed relevant to this audience. The tools in this study may also be used by those outside of the intended audience such as nonprofit organizations, consultants, governments, and publicly and privately owned firms.

The tools reviewed in the environmental scan represent a specific segment of the available resources on ESG investing. These tools produce and utilize external ESG research and are developed by third-party organizations. Other types of ESG-related resources were not included in this study, as they did not fit within our definition of ESG investment tools and scope of the environmental scan. Those excluded resources include but are not limited to the following:

- ESG education and training resources (e.g. courses, research studies, issue briefs)
- Codes of conduct (e.g. UN Principles of Responsible Investment, UN Principles on Business and Human Rights, UN Global Compact)
- Limited tools (tools that covered one sector [e.g. human capital management] or a specific ESG-related issue [e.g. Carbon Tracker, Barclays Women in Leadership Index])
- Impact investing tools[42]
- Bespoke consulting services or ESG advisory services—many organizations (First Affirmative Financial Network, Trillium Asset Management, Boston Common Asset Management, Wells Fargo

[41] While we refined the scope of this review to focus on U.S.-based ESG investments, international ESG investments are not drastically different.

[42] Impact investing is related to ESG investing, but the two are not necessarily synonymous or interchangeable, though some practitioners disagree.

Private Bank, Morgan Stanley, and Merrill Lynch, to name a few) provide advice and assistance to those interested in ESG investing

2. Conducting a search for available ESG investment tools. This search began with known sources of information on ESG tools, such as US SIF, Social Funds, and Morningstar, as well as the articles of academic researchers. References, citations, and links from these sources helped expand the search to ensure the inclusion of all ESG tools within scope.

3. Collecting information on ESG investment tools. Once we gathered a list of ESG tools that fit within the study's scope, we systematically collected information on the tools. We started by reviewing the ESG tool provider's website and any materials available from the company related to the tool. Next, we conducted an internet search for additional materials specific to each tool. We also reached out to the ESG tool providers directly to acquire any missing information. We contacted individuals (in sales, business development, or customer service) at each provider, by phone or email, following up regularly until we acquired the needed information. Using the tool classification system described in Step 4 and the utility criteria described in Step 5, our team standardized the type, amount, and format of information collected.

Table 3: Issues with ESG Investment Strategies

General Issue	Explanation
Too Inclusive	ESG mutual funds and ETFs often hold investments in companies that are acknowledged as "bad actors" in one or more of the ESG spaces. Nearly all the economy's largest companies, regardless of ESG orientation, may be included in one or more ESG funds.
Dubious Criteria	The criteria used for selecting ESG factors are too subjective and can reflect narrow or conflicting ideological or political viewpoints.
Quality of Information	The information used for selecting ESG factors comes from the companies themselves, which complicates the ability to verify, compare, and standardize this information.
Strong Emphasis on Short-Term Returns	Some financial advisors screen investments first for performance and only after that for ESG factors. This initial emphasis on performance can exclude companies with high ESG practices that focus on longer-term performance.

Source: "The Market for Virtue," David Vogel, 2005.

4. Creating a classification system for categorizing the available ESG investment tools. To answer the second research question, *how are the tools similar and different with respect to their features and capabilities*, we developed a classification system for categorizing the ESG tools. This classification system provides a comprehensive and standardized set of tool features and capabilities, making it easier for investors and advisors to identify tools that fulfill their needs and preferences. Table 4 lists and describes the tool characteristics in our classification system.

5. Assess the utility of available ESG investment tools. To answer the third research question, *what is the relative utility of these tools for investors and advisors,* we developed a set of criteria to describe the utility of the identified ESG tools. Table 4 lists and describes the five criteria of ESG tool utility.

Table 4: ESG Investment Tool Utility Criteria

Utility Criterion	Description
Coverage of investment options	Extent of inclusion of mutual funds, companies, or other entities
Provision of investment information	Information such as providing expense ratios, performance data, and assessment of risk
Focus of ESG analysis	Whether the tool provides information on ESG specializations such as environmental or governance
Information used for assessing ESG investments	Information such as using independently verifiable data versus data provided by companies
Ease of use/accessibility	Ease or difficulty that users encounter when using the tools

These criteria, applied to each ESG tool, allowed us to develop narratives that compare the utility of ESG tools within a similar group (e.g. ESG tools for mutual funds and ETFs). These descriptive assessments, while not recommending specific tools or offering investment advice, help investors and advisors determine which ESG tool best fits their needs.

ASSESSMENT OF ESG INVESTMENT TOOLS BY KEY FEATURES

This environmental scan uncovered 37 ESG tools, 28 of which were in scope as defined by our study. Appendix A lists the 37 ESG tools and the four categories into which each tool falls. Once we identified the characteristics and developed the utility criteria, we assessed the 28 ESG tools within these established frameworks. First, we assessed the tools across the eight characteristics.

INVESTMENTS COVERED

Our team determined that the ESG tools, in this study, correspond to one of four focus areas, described in Table 5.

As Figure 3 shows, 16 ESG tools focus on company

Tool Category	Description
Mutual funds and exchange-traded funds (ETFs)[43]	ESG information, ratings, or both on mutual funds and ETFs
Companies	ESG information, ratings, or both on the securities of individual companies (Most tools in this category largely or exclusively focus on public companies.)
Indices	ESG information on market segments (e.g. U.S. domestic large-cap companies)
Other entities (e.g. investment strategies, retirement plans)	ESG information and ratings on entities other than mutual funds, ETFs, individual companies, and indices

Table 5: ESG Investment Tool Categories

[43]Exchange-traded funds (ETFs) are funds that track indices like the NASDAQ-100 Index, S&P 500, and Dow Jones. See http://www.nasdaq.com/etfs/what-are-ETFs.aspx.

stock or securities investments. Two tools fall into the "other entities" category, covering investments that do not fall into any of the other three categories and instead provide information on subjects such as investment strategies and retirement plans. Of the remaining 10 tools, six focus on ESG indices, and four provide information on mutual funds or ETFs.

Table 6 identifies the 28 ESG tools used to answer the project's research questions. Appendix B provides individual profiles of the 28 tools discussed in this report.

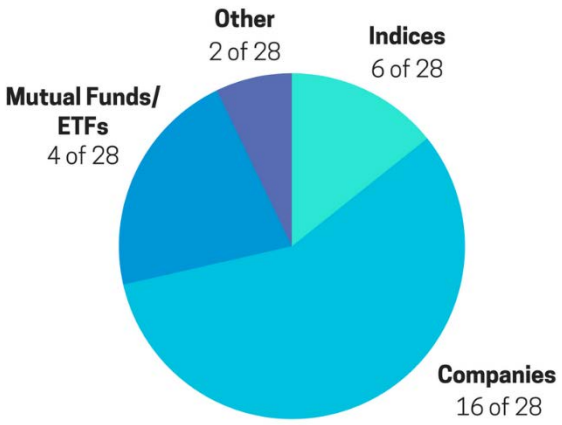

Figure 3: Investments Covered by the ESG Investment Tools

SERVICES PROVIDED AND ESG RATING

Most ESG tools included in this study provide information and ratings to help investors and advisors identify investments that align with ESG factors. More than half of the tools provide a numerical rating or ranking of investments. These ratings, alongside financial information, may assist

Table 6: In-Scope ESG Investment Tools (28)

ESG Investment Tools			
Mutual Funds & ETFs	**Companies**	**Indices**	**Other Entities**
1) Morningstar Sustainability Rating	5) Bloomberg ESG Disclosure Score	21) Thomson Reuters Corp. Responsibility Indices	27) Mercer ESG Ratings
2) SocialFunds.com	6) Sustainalytics Company ESG Reports	22) Calvert Responsible Index Series	28) Social(k)
3) US SIF Sustainable & Responsible Mutual Fund Chart	7) Oekom Corporate Rating Reports	23) FTSE4Good Index Series	
4) MSCI ESG Fund Metrics	8) ISS QualityScore	24) Dow Jones Sustainability Indices	
	9) Covalence EthicalQuote Ethical Snapshots	25) MSCI ESG Indexes	
	10) RobecoSAM Corporate Sustainability Assessment	26) Morningstar Global Sustainability Index	
	11) RepRisk Company Reports		
	12) MSCI ESG Company Rating Reports		
	13) FTSE ESG Ratings		
	14) HIP Investor Ratings		
	15) Thomson Reuters Corp. Responsibility Rating		
	16) Vigeo Eiris Rating		
	17) Solaron emRatings		
	18) Inrate Sustainability Rating		
	19) CDP Open Data Portal		
	20) ISS-IW Financial Score		

Note: The tools are numbered in order of how they appear in the report. Their numbering does not indicate an ordinal ranking or endorsement of any tools.

investors in creating and managing their portfolios. Two tools, US SIF's Sustainable and Responsible Mutual Fund Chart (Tool 3) and Social(k) (Tool 28), provide information on ESG-oriented investments without assessing the ESG performance of the underlying holdings.

RATING SOURCE

Most tool providers use their own unique methodology to create their ratings, thus the ratings are not easily comparable across different tools. Appendix C details the underlying methodologies for each rating. Additionally, the ratings identify various aspects of ESG performance that prevent them from being compared to each other. For example, the Covalence EthicalQuote ESG Rating measures a company's reputation on ESG factors, whereas the Oekom Corporate Rating assesses the environmental and social performance of individual companies.

Some tool providers use data from other organizations, which creates some interdependency in their ESG assessments. For example, the Morningstar Sustainability Rating (Tool 1) for funds relies on Sustainalytics' Company ESG Reports (Tool 6) for individual companies. Likewise, the ESG-oriented mutual funds that Social(k) (Tool 28) offers to retirement plans are the same set of funds listed in US SIF's Sustainable and Responsible Mutual Fund Chart (Tool 3). The Heart Rating, available through SocialFunds.com (Tool 2), is produced by Natural Investments.

FINANCIAL INFORMATION

As Figure 4 shows, several tools give financial information on the covered investments. Most of the tools in the mutual funds and ETFs and indices categories give financial information on the investments. Investors who use ESG tools without financial information would require additional sources of information to make complete investment decisions.

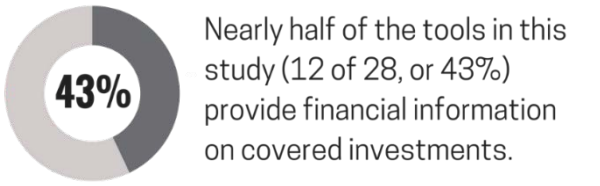

Figure 4: Financial Information Provided by ESG Investment Tools

ESG FACTORS COVERED

Given the scope of the environmental scan, most tools provide information on all three ESG factors (e.g. Environmental, Social, and Governance). A few tools focused on investors and advisors with more focused ESG interests. The Oekom Corporate Rating Report (Tool 7) and Morningstar Global Sustainability Index Family (Tool 26) focus on the environmental and social aspects of ESG. In addition, the ISS QualityScore (Tool 8) and CDP Open Data Portal (Tool 19) focus on governance and environmental factors, respectively. In the wide array of ESG investing tools and resources (many of which were outside the scope of this study), the scope applied to ESG varies from encompassing one specific issue (e.g. clean energy) that falls under one aspect of ESG (such as environmental) to several issues that encompass all three aspects of ESG.

COST OF TOOLS

A majority of the tools require a fee to access the information, as shown in Figure 5. Half of the ESG tools that cover mutual funds and ETFs or indices (five of ten) provide their information at no cost. However, all tools that cover company-level investments charge a fee for access to their ratings or underlying data. Given that many of these tools are geared toward advisors and institutional investors, the fees can be steep. For instance, an annual subscription to the data for the companies rated under the Covalence Ethical Quote (Tool 9) costs $7,900 and for the ISS QualityScore (Tool 8) costs $20,000 for up to five users.[44]

Most tools (23 of 28, or 82%) require users to pay an access fee.

Figure 5: Fees for ESG Investment Tools

COMPARING ESG INVESTMENT TOOLS BY THEIR UTILITY

After describing the characteristics of the 28 ESG tools, the team compared the relative utility of the tools within each investment type group (e.g. companies, mutual funds, and ETFs) using the ESG tool utility criteria we developed (see Table 4).The following sections discuss general patterns found across all the ESG tools for each utility criterion.

COVERAGE OF INVESTMENT OPTIONS

The completeness of coverage varies substantially across ESG tools, with some tools assessing a defined sub-sample of the underlying universe and other tools attempting a larger set. The main delineator of inclusion across ESG tools is size. For tools that cover companies, mutual funds, and EFTs, many will only assess the largest investments per some cut-off (e.g. largest 200, 500, 1,000, or 3,000 companies). For tools that cover indices, most will cover at least the major respective conventional investment indices (e.g. large-, mid-, and small-cap U.S. stock, total U.S. stock). In addition, ESG tools that cover companies focus on publicly traded companies more than private firms.

[44] These tool fees were provided to Summit through direct consultations with the tool providers.

PROVISION OF INVESTMENT INFORMATION

Most ESG tools that cover companies, mutual funds, or ETFs often do not provide financial information alongside their ESG analyses of the investments. ESG tools that cover investment indices are the only set of tools that regularly provide financial information on the covered investments (generally historical performance). A lack of investment information within an ESG tool does not necessarily reduce its usefulness. Financial data about public companies, mutual funds, and ETFs are usually readily available through other sources, so they need not necessarily be available in the ESG tools themselves.

FOCUS OF ESG ANALYSIS

Most of the ESG tools do not provide information on ESG specializations, opting instead for an assessment of all three ESG factors, which is most appropriate for investors with broad ESG interests. The ratings in the five tools with a broad ESG focus can be disaggregated into separate scores for each aspect of ESG. These tools, in addition to the tools that specialize in one or two of the ESG factors would be useful to investors with more specific ESG interests.

INFORMATION USED FOR ASSESSING ESG INVESTMENTS

The sources of information used to assess ESG investments vary across the ESG tools. ESG tools that cover companies or investment indices are much more likely to collect information directly from the companies through surveys, direct communication with companies, and from company documents (e.g. annual reports). For some tools that cover market segments, the providers use information collected from individual companies to create their own company ESG ratings that are specifically used in determining the index constituents and weights. Across all tool categories, other information sources include news articles and third-party reports (e.g. nonprofits or nongovernmental organizations).

ACCESS TO ESG TOOLS

The ESG tools vary considerably with respect to their accessibility. Most of the ESG tools that cover mutual funds and ETFs or market segments provide partial or complete information online and at no charge to the public. In addition, a few of the tools that cover market segments allow users to customize their use of information by creating customized indices. ESG tools that cover companies are much less accessible to individual investors and smaller-scale advisors. A fee is generally required to access the information from these tools.

ESG INVESTMENT TOOLS MATRICES BY TOOL CATEGORY

After analyzing the set of 28 ESG tools, we then assessed them within their investment categories. The following matrices provide side-by-side comparisons of the ESG investment tools in each category in Figures 6, 7, and 8. Following each figure is a discussion of the utility of each tool within its tool category.

Figure 6: Comparison of ESG Investment Tools for Mutual Fund and ETFs

Features	ESG Investment Tools			
	1) Morningstar Sustainability Rating	2) SocialFunds.com	3) US SIF Sustainable & Responsible Mutual Fund Chart	4) MSCI ESG Fund Metrics
Services provided				
Information	✓	✓	✓	✓
Rating	✓	✓	✗	✓
Investments covered				
Mutual funds	20,503	208	214	18,456
Exchange Traded Funds (ETFs)	2,496	0	0	2,397
Other	12,347	0	0	0
ESG rating				
Rating type (Low to High) (Illustration)	1–5	1–5	–	0–10
Rating source				
Funds rated by tool provider	✓**	✗	✗	✓
Funds rated by third party	✗	✓ Natural Investments	✗	✗
Financial information				
Information provided	• Historical returns • Minimum investment	• Historical returns • Minimum investment • Investment fees	• Historical returns • Minimum investment • Assets under management • Management fees • Expense ratios	–
ESG factors covered				
Environmental	✓	✓	✓	✓
Social	✓	✓	✓	✓
Governance	✓	✓	✓	✓
Provider of tool				
Financial services firm	✓	✗	✗	✓
Non-financial services firm	✗	✓	✓	✗
Tool cost* **				
Free or Fee-based	Free	Free	Free	Fee-based: Undisclosed

Information for items marked – is not available.

NOTES: **Morningstar uses company-level information from Sustainalytics to develop its fund ratings.

*** Notes on tool fees: MSCI ESG does not disclose its products' fees. Fees are customized based several factors including total and types of assets under management, how data and products will be used, what products the client wants and geographic coverage of what information the client wants.

UTILITY OF ESG INVESTMENT TOOLS FOR MUTUAL FUNDS AND ETFS

Coverage of investment options. Tools in the mutual fund and ETF category cover between 208 and over 20,000 mutual funds and ETFs. The Morningstar and MSCI tools (Tools 1 and 4) provide the largest coverage in this category. They each include over 18,000 mutual funds and more than 2,000 ETFs.[45] SocialFunds (Tool 2) covers a smaller, more restricted set of socially responsible or religion-based funds. Similarly, US SIF's tool (Tool 3) includes a set of mutual funds designated as sustainable and responsible funds.

Provision of investment information. The Morningstar and SocialFunds tools (Tools 1 and 2) offer financial information on funds such as minimum investment amounts and historical returns. This helps investors and advisors to simultaneously consider funds' financial and ESG performance. US SIF (Tool 3) includes financial information on the mutual funds that it covers but does not provide any assessment of the mutual funds' ESG orientation. The MSCI tool (Tool 4) does not provide any financial performance information on mutual funds and ETFs. Users would need to supplement their analysis of funds with financial performance information from other source.

Focus of ESG analysis. All four tools incorporate the three pillars of ESG: environmental, social, and governance. These tools could be useful for investors with a broad interest in ESG investing. In contrast, investors who want to compare individual pillars across mutual funds and ETFs would likely find Morningstar and MSCI tools (Tools 1 and 4) most useful, since their ESG scores can be disaggregated into comparable E, S, and G scores.

Information used to assess ESG investments. SocialFunds (Tool 2) relies on an ESG rating produced by a third-party organization. Morningstar (Tool 1) uses company-level information from Sustainalytics to develop its fund ratings. MSCI ESG (Tool 4) independently develops and maintains the research on which its ESG ratings are based. US SIF (Tool 3) does not rate mutual funds' ESG performance. MSCI and Morningstar's tools (Tools 1 and 4), provide more detailed information on their methodologies than SocialFunds (Tool 2).[46]

Ease of use/accessibility. The ease of using and accessing the tools depends on the identity of users, their purpose for using the tool, and cost. Morningstar and MSCI (Tools 1 and 4) develop ESG ratings through sophisticated processes, which may not be easy for some users to understand. Additionally, their ratings cover a large volume (more than 20,000) of mutual funds and ETFs. These tools could be better suited for institutional investors, advisors, or investment managers, though they are available to individual investors as well. The mutual fund listings that are provided by SocialFunds and US SIF (Tools 2 and 3) would likely be the most user-friendly tools for individual investors. They provide less complex information (e.g. a list of mutual funds, the funds' returns, and investment minimums) on mutual funds that have already been designated as sustainable or socially responsible. Finally, all tools are free

[45] Morningstar and MSCI rate 20,000 and nearly 21,000 mutual funds and ETFs, respectively. US SIF and SocialFunds include 208 and 214 mutual funds, respectively.
http://www.sustainalytics.com/morningstar-introduces-industrys-first-sustainability-rating-20000-funds-globally
https://www.msci.com/documents/10199/84bcc5fa-783e-4358-9696-901b5a53db3b
http://charts.ussif.org/mfpc/

[46] The information provided by MSCI might be limited, since its tool is fee-based.

(except MSCI's Fund Metrics, Tool 4) and available online, which makes them easily accessible to all investors.[47]

[47] MSCI ESG does not disclose its products' fees. Fees vary by client because the tools are customized for each client's needs and profile. Customization factors include total and types of assets under management, how data and products will be used, what products the client wants, and geographic coverage of what information the client wants.

Figure 7: Comparison of ESG Investment Tools for Companies

Features	ESG Investment Tools							
	5) Bloomberg ESG Disclosure Score	6) Sustainalytics Company ESG Reports	7) Oekom Corporate Rating Reports	8) ISS QualityScore	9) Covalence EthicalQuote Ethical Snapshots	10) RobecoSAM Corporate Sustainability Assessment	11) RepRisk Company Reports	12) MSCI ESG Company Rating Reports
Services provided								
Information	✓	✓	✓	✓	✓	✓	✓	✓
Rating	✓	✓	✓	✓	✓	✓	✓	✓
Investments covered								
Individual companies	10,000+	6,500	3,800*	5,600+	3,400	4,000	85,524	6,500
ESG rating								
Rating type (Low to High)	0–100	0–100	A+–D-	1–10	0–100	0–100	AAA–D	AAA–CCC
Rating source								
Funds rated by tool provider	✓	✓	✓	✓	✓	✓	✓	✓
Funds rated by third party	✗	✗	✗	✗	✗	✗	✗	✗
Financial information								
Information provided	– **	• Total revenue • Net income • Net earnings before taxes • Market capitalization	–	• Share price • Market capitalization • Annual company revenue	–	–	–	–
ESG factors covered								
Environmental	✓	✓	✓	✗	✓	✓	✓	✓
Social	✓	✓	✓	✗	✓	✓	✓	✓
Governance	✓	✓	✗	✓	✓	✓	✓	✓
Provider of tool								
Financial services firm	✓	✓	✓***	✓	✗	✓	✗	✓
Non-financial services firm	✗	✗	✗	✗	✓	✗	✓	✗
Tool cost								
Free or Fee-based	Fee-based: $24,000–$36,000 per year	Fee-based: Undisclosed	Fee-based: $200,000 per year	Fee-based: $20,000–$25,000 per year	Fee-based: $7,900 per year	Fees based on Bloomberg Terminal fees (see note 6)	Fee-based: $450–$3,500 per Company Report.	Fee-based: Undisclosed

Information for items marked – is not available.

NOTES: * Oekom's research covers 5,600 companies overall, but only provides 3,800 individual ratings. Companies that are subsidiaries receive the same rating as their parent company and are not scored separately.

** The scores do not provide financial information themselves, however the scores are provided alongside companies' financial information in the Bloomberg Terminal.

Figure 7: Comparison of ESG Investment Tools for Companies (continued)

Features	ESG Investment Tools							
	13) FTSE ESG Ratings	14) HIP Investor Ratings	15) Thomson Reuters Corporate Responsibility Ratings	16) Vigeo Eiris Sustainability Rating	17) Solaron emRatings	18) Inrate Sustainability Rating	19) CDP Open Data Portal	20) ISS-IW Financial Score
Services provided								
Information	✓	✓	✓	✓	✓	✓	✓	✓
Rating	✓	✓	✓	✓	✓	✓	✓*	✓
Investments covered								
Individual companies	4,100	5,770+	4,600	3,260	901	2,600	5,600+	3,000
Mutual funds	✗	1,000+**	✗	✗	✗	✗	✗	✗
ETFs	✗	✓	✗	✗	✗	✗	✗	✗
Other	✗	26,800+**	✗	✗	✗	✗	✗	✗
ESG rating								
Rating Type (Low to High)	1–5	0–100	0–100	0–100	0–100	A+ to D-	A–F	1–100
Rating source								
Funds rated by tool provider	✓	✓	✓	✓	✓	✓	✓	✓
Funds rated by third party	✗	✗	✗	✗	✗	✗	✗	✗
Financial information								
Information Provided	–	–	–	–	–	–	–	• Historical returns • Minimum investment • Investment fees • Investment allocation
ESG factors covered								
Environmental	✓	✓	✓	✓	✓	✓	✓	✓
Social	✓	✓	✓	✓	✓	✓	✗	✓
Governance	✓	✓	✓	✓	✓	✓	✗	✓
Provider of tool								
Financial services firm	✓	✗	✗	✗	✗	✗	✗	✗
Non-financial services firm	✗	✓	✓	✓	✓	✓	✓	✓
Tool cost								
Free or Fee-based	Fee-based: Undisclosed	Fee-based: Undisclosed	$600 per year	Fee-based: Undisclosed	Fee-based: Undisclosed	Fee-based: Undisclosed	Fee-based: Carbon dataset- $16,000; Water dataset - $10,000	Fee-based: Undisclosed

Information for items marked – is not available.

NOTES: *CDP provides the CDP Disclosure Score which measures companies how well companies provide their environmental performance data. The score does not measure how well the companies perform on different ESG issues.

**HIP Investor rates over 1,000 mutual funds and ETFs but does not provide a breakdown of the number of mutual funds and ETFs. HIP Investor also rates bonds and real-estate investment trusts.

Additional Fee Information:

1. Bloomberg (Tool 5)—The fee is $2,000–$3,000 per month for a 2-year Bloomberg Terminal subscription. The ESG Disclosure Scores and other ESG data are accessible through a Bloomberg Terminal. After paying the fee for the terminal, there are no other fees for the ESG Disclosure Score or other ESG data.
2. Sustainalytics (Tool 6)—The ratings are accessed through Sustainalytics' Global Access Tool. Sustainalytics does not disclose its fees for the Global Access Tool or other products. However, it did disclose that its fees are customized based on the type and coverage of data access, the amount of assets under management a client has, and how the client uses the data.
3. Oekom (Tool 7)—The Oekom corporate ratings are accessed through Oekom's ORBIT database, which includes other types of ESG data. The fee for complete access (the corporate ratings and other ESG information) to the ORBIT database is $200,000 per year.
4. ISS—On an annual basis, access to the ISS QualityScore tool costs $20,000 for 5 accounts with one client. Ten accounts cost $25,000.
5. Covalence (Tool 9)—Access to Covalence EthicalQuote ESG Snapshots costs $7,900 per year. However, this is not a fixed fee and may be modified for a company (or other client) with different needs. The quoted fee would be for a company that wanted access to the ESG ratings for all 3,400 companies in the coverage universe and did not redistribute the data to its clients.
6. RobecoSAM (Tool 10)—The CSA is an internal tool used by RobecoSAM. It does not have a fee associated with it, because most CSA data are available to the public. Limited information (such as percentile ranks for companies on the various criteria measured in the CSA) from the results of the CSA are available via the Bloomberg Terminal.
7. MSCI ESG (Tool 12)—MSCI ESG does not disclose its products' fees. MSCI customizes its fees based on several factors, including total and types of assets under management, how data and products will be used, what products the client wants and geographic coverage of what information the client wants.

UTILITY OF ESG INVESTMENT TOOLS FOR COMPANIES

Coverage of investment options. The set of companies covered by each tool varies widely. The size of the coverage universe for most tools in this category ranges from 901 to over 80,000 companies, most of which are publicly traded companies.[48] The Bloomberg and RepRisk tools have the largest coverage universes in this category, with respect to the number of companies they assess. However, the types of ESG information provided in each tool differ, thus the comprehensiveness of their coverage universes are not comparable. Here, the most relevant tools for different investors and users would depend on their specific ESG interests *and* the size of the coverage universe of tools that offer that type of information.

Provision of investment information. Most tools in this category do not provide financial information on the companies they rate, except Sustainalytics ESG Company Reports (Tool 6), ISS QualityScore (Tool 8), and ISS-IW Financial Score (Tool 20). Users of these tools need to seek additional information or tools to analyze companies' financial and ESG performance. For example, Bloomberg's ESG Disclosure Score (Tool 5) does not incorporate companies' financial data. However, Bloomberg provides scores alongside the extensive financial data available within the Bloomberg Terminal, making it easy to incorporate both financial and ESG data into an analysis of one or several companies.

Information used to assess ESG investments

Most ESG tools that cover companies collect some information for the ESG ratings directly from the companies. ***RepRisk Company Reports*** *is one of the few tools that rely solely on third-party information to rate companies.*

Focus of ESG analysis. Most tools in this category incorporate information on all three aspects of ESG. Three tools focus on one or two aspects of ESG. Tools in this category provide options to investors with both general and specific ESG interests. Additionally, the tools provided by Bloomberg, Sustainalytics, and MSCI ESG (Tools 5, 6, and 12) can provide both comprehensive ESG scores and disaggregated scores for the individual pillars (E, S, and G) of ESG.

Information used to assess ESG investments. The tools in this category use several types of data to develop their ratings. They typically include company information (e.g. annual reports, public filings, sustainability reports, and company websites), news stories, and third-party information such as reports from independent research institutes, non-governmental organizations, and business associations.

Several providers, including Oekom Research, Bloomberg, Sustainalytics, ISS, and RobecoSAM (Tools 7, 5, 6, 8, and 10) directly engage with the companies to obtain feedback or information that informs the rating process. RobecoSAM engages with companies through its annual Corporate Sustainability Assessment (CSA) (Tool 10) that relies on firms to fill out a survey on their sustainability practices. Bloomberg (Tool 5) also provides a survey to companies in its coverage universe. RepRisk (Tool 11) only uses information from media and stakeholder sources in its research and does not engage with companies, directly or indirectly. Users who prefer ratings based on external data, which may be

[48] RobecoSAM's ratings are developed from its annual Corporate Sustainability Assessment, which has data on more than 4,000 companies. Covalence EthicalQuote covers approximately 3,400 firms. Oekom Research's coverage universe contains around 3,800 companies. ISS's QualityScore assess more than 5,600 companies. Sustainalytics covers 6,500 firms. MSCI notes that its ESG ratings cover over 6,000 companies. See http://charts.ussif.org/mfpc/.

considered more objective, may select RepRisk Company Reports (Tool 11), which does not rely on information from the companies being assessed.

Ease of use/accessibility. Some factors to consider with regard to ease of use and accessibility include how information is accessed (i.e. report, list, database, etc.) and how much it costs. The remaining tools provide their ESG ratings and other information through individualized company reports or an online database. Users can only access Bloomberg ESG Disclosure Scores (Tool 5) and CSA (Tool 10) data through the Bloomberg Terminal, limiting access to clients with terminals. The Terminal requires some training to understand how to use it, but there are no additional fees to access ESG data on Bloomberg once a client has access to the Terminal.

On an annual basis, fees for five tools (Thomson Reuters, Bloomberg, Oekom[49], ISS, and Covalence – Tools 15, 5, 7, 8, and 9) range from $600 to $200,000.[50] RepRisk Company Reports' (Tool 11) fees vary from $450 to $3,500 per report. These costs may be prohibitive to individual investors and small advisors, so institutional investors, investment managers, and financial advisors are more likely to use these tools.

[49] Oekom also charges a fee for each of its Corporate Rating Reports, however this fee was not provided to us. The fee estimate given was for accessing their entire database of ratings and other ESG data.
[50] Sustainalytics and MSCI ESG Research did not disclose their product fees. CSA data is accessed through Bloomberg Terminals and do not have a separate user fee associated, outside of the Bloomberg Terminal fees, with their data.

Figure 8: Comparison of ESG Indices

Features	ESG Investment Tools					
	21) Thomson Reuters Corporate Responsibility Indices	22) Calvert Responsible Index Series	23) FTSE4Good Index Series	24) Dow Jones Sustainability Indices	25) MSCI ESG Indexes	26) Morningstar Global Sustainability Index Family
Services provided						
Information	✓	✓	✓	✓	✓	✓
Rating	✗	✗	✗	✗	✗	✗
Investments covered						
Indices	12	7	17	29	180–190	25+
ESG rating*						
Rating type	–	–	–	–	–	–
Rating source						
Funds rated by tool provider	–	–	–	–	–	–
Funds rated by third party	–	–	–	–	–	–
Financial information						
Information provided	• Historical returns • Investment allocation	• Historical returns • Investment allocation**	• Historical returns • Investment allocation	• Historical returns • Market capitalization***	• Historical returns • Investment allocation	–
ESG factors covered						
Environmental	✓	✓	✓	✓	✓	✓
Social	✓	✓	✓	✓	✓	✓
Governance	✓	✓	✓	✓	✓	✗
Provider of tool						
Financial services firm	✓	✓	✓	✓	✓	✓
Non-financial services firm	✗	✗	✗	✗	✗	✗
Tool cost						
Free or Fee-based	Free	Free	Fee-based: $18,000 per year	Fee-based: $20,000 per year	Fee-based: Undisclosed	Fee-based: Undisclosed

Information for items marked – is not available.

NOTES: * The indices do not have ratings themselves. However, ratings are applied to the companies in the indices and tool providers use them to determine the composition of the indices.
** Additional information (minimum investment and investment fees) are provided for mutual funds that track the indices.
*** Market capitalization is only available by country and is not provided for each company in the indices.

Additional Fee Information:

1. Thomson Reuters (Tool 21)—The companies included in the indices are available to the public at no charge. However, a $500 monthly fee per index is associated with specific uses of the indices, such as benchmarking. Other types of usage need additional licensing fees.
2. FTSE Russell (Tool 23)—Limited information such as historical returns, market capitalization by country, and total number of constituents is free to the public. Although the fee varies by client type, a client with less than $20 million in assets under management using the data for fund management research paid $18,000 licensing for access to the underlying data for the entire index series.
3. Dow Jones (Tool 24)—While some information on the indices, such as the historical returns and market capitalization by country, is available for free, a $20,000 per year licensing fee provides access to the component files for standard and customized indices.
4. MSCI ESG (Tool 25)—MSCI ESG does not disclose its indices' usage and licensing fees. Fees are customized based on several factors including total and types of assets under management, use of data and products, and geographic coverage. It does provide limited information to the public such as historical returns and the top 10 index constituents through individualized factsheets for each index.

UTILITY OF ESG INDICES

Coverage of investment options. Each ESG index provider offers a different number of indices, with the Calvert Responsible Index Series offering as few as seven indices, and the MSCI ESG Indexes providing 180–190 indices. The indices are developed around different themes, such as geography (e.g. United States, developed countries, emerging markets, etc.), individual ESG themes (e.g. E, S, or G), and company size (as in separate indices for firms by market capitalization). The number of indices that each tool offers does not necessarily imply that one tool has more complete investment coverage, because each index family and its individual indices have different underlying coverage universes. Thus, investors would need to understand the coverage universe of each index family to determine which tool provides the most comprehensive coverage of the companies and market segments (e.g. U.S. large-cap, U.S. mid-cap) that interest them.

Provision of investment information. All tool providers give publicly available information on historical index performance. Thomson Reuters and Calvert (Tools 21 and 22) also provide, at no charge, complete lists of the companies that comprise their respective indices. The FTSE4Good and MSCI ESG indices (Tools 23 and 25) provide a list of the top 10 constituents of each index free of charge, while the DJSI (Tool 24) does not provide this information at all.

Provision of Investment Information

*The **Calvert Responsible Indices** and **Thomson Reuters Corporate Responsibility Indices** offer complete investment information for ESG-oriented indices at no charge to users. Other indices provide information for a fee.*

Focus of ESG analysis. Most families of indices incorporate the three aspects of ESG in their respective index construction, though some individual indices have specific E, S, or G themes. In addition, the Morningstar Global Sustainability indices (Tool 26) are focused on the environmental and social themes of ESG.

Information used for assessing investments. These indices use company-level ESG ratings in their construction. Thomson Reuters (Tool 21), FTSE Russell (the provider of the FTSE4Good indexes – Tool 23), Calvert (Tool 22), and MSCI ESG (Tool 25) create their own company-level ESG ratings, and then use those ratings to create indices. The Dow Jones index tool (Tool 24) also uses company-level ESG ratings to create its indices, relying on the Total Sustainability Score obtained from RobecoSAM's CSA (Tool 10) (which, to a limited extent, in turn relies on data collected from RepRisk). The Dow Jones and Thomson Reuters indices (Tool 24 and 21) may be of interest to investors who want detailed information on the data and methodology underlying the ratings.

Ease of use/accessibility. The indices can be used to create ESG investment products as well as for other purposes (e.g. research, benchmarking the performance of ESG investments, and monitoring the ESG performance of index constituents). All indices are accessible online; however, these alternative uses require a licensing fee. The licensing fee for the Thomson Reuters indices is $500 per index, for use as a benchmark for investments. The FTSE4Good and Dow Jones indices licensing fees range from $18,000–$20,000[51] per index, to access the data on their index constituents. This usage of the indices, and their associated licensing fees, make institutional investors, investment managers, and financial managers the most likely users of these tools. Another user-friendly feature of the index tools is the capability to

[51] These fees only pertain to Dow Jones and FTSE Russell. MSCI did not disclose any fees for its ESG indices.

create customized indices for specific ESG interests and preferences (e.g. excluding companies from certain industries or investing in companies that perform well in clean energy, employee diversity, or other ESG areas). All index tools, except Calvert (Tool 22), include this capability. [52]

[52] These customized indices are also fee-based.

Figure 9: Other Types of ESG Investment Tools

Features	ESG Investment Tools	
	27) Mercer ESG Rating	28) Social(k)
Services provided		
Information	✓	✓
Rating	✓	✗
Investments covered		
Other	Investment manager strategies	Retirement plans*
ESG rating		
Rating type (High to Low)	1–4	–
Rating source		
Funds rated by tool provider	✓	✗
Funds rated by third party	✗	✗
Financial information		
Information provided	✗	• Historical returns • Minimum investment • Assets under management • Management fees • Expense ratios**
ESG factors covered		
Environmental	✓	✓
Social	✓	✓
Governance	✓	✓
Provider of tool		
Financial services firm	✗	✗
Non-financial services firm	✓	✓
Tool cost		
Free or Fee-based	Fee-based: $50,000-$60,000 per year***	Fee-based: Annual fees of $250 per plan and $10 per plan participant

Information for items marked – is not available.

NOTES: *Social(k) offers ESG investments for retirement plans.

**Social(k) uses US SiF's Sustainable and Responsible Mutual Fund Chart.

***Mercer's fees can be customized depending on a client's needs and types of asset classes.

OTHER TYPES OF ESG INVESTMENT TOOLS

The tools listed in this matrix, Figure 9, do not fit into any of the other tool categories. These tools also differ from each other in their focus and services provided. While following the same matrix format as the other tools, these tools are distinct in their purposes and do not warrant comparison. These tools are included because of their relevance to ESG investing and retirement plans.

Mercer's ESG Ratings (Tool 27) evaluate the extent to which investment managers incorporate ESG factors into their investment strategies. Social(k) (Tool 28) specializes in providing ESG mutual funds[53] and portfolios to a variety of retirement plans, including Simple IRA, SEP, 401(k), 403(b), profit share, and cash balance plans which are subject to ERISA. It also collaborates with other organizations to provide recordkeeping, fiduciary oversight, and investment advisory services to retirement plans. Mercer's ESG ratings could be used in selecting investment managers to help manage plan assets and Social(k)'s services directly connect ESG investing and ERISA-compliant retirement plans.

[53] Social(k) uses the list of sustainable and responsible mutual funds from US SIF.

CONCLUSION

In recent decades, the number of tools designed to help investors and advisors identify, select, or manage ESG-oriented investments have proliferated (SustainAbility, 2010). As ESG investing, and the tools that support this sector, grow and multiply, it has become important to better understand the current state of ESG investing and the ESG tools available to investors and advisors. Our study provides this overview of the current field of ESG tools, their features and capabilities, and an assessment of how useful these tools may be for investors and advisors.

28 ESG Tools Reviewed in the Study

- *4 tools cover mutual funds and exchange-traded funds*
- *16 tools cover individual company investments*
- *6 tools cover investment indices*
- *2 tools cover portfolio and investment strategies*

Our scan of the current field of ESG tools uncovered 28 tools. We grouped these 28 ESG tools into four categories based on the types of investments they cover:

- Mutual funds and exchange traded funds
- Company securities
- Investment indices
- Other entities, e.g. portfolio and investment strategies

These tools are available online and are geared specifically toward investors or advisors. The tools help users identify, select, and/or manage ESG investments, and they cover U.S.-based investments, among others.

A detailed description of the characteristics, features, and capabilities of the 28 ESG tools is provided in this report. Using the information collected on the features and capabilities of the 28 ESG tools included in our report, we assessed the relative utility of the tools. Focusing on five specific criteria, we discussed the utility of the tools in helping the intended audiences—institutional and individual investors and advisors—learn about and participate in ESG investing.

The majority of the ESG tools covered in the environmental scan provided information on the ESG orientation of investments and market segments, as well as quantitative or qualitative analysis of their ESG performance evaluations (e.g. how well entities managed their ESG risk or disclosed ESG information). However, the landscape of ESG tools showed more disparity of capabilities and features in the following three areas: (1) providing financial information, (2) requiring a fee for access, and (3) identifying the organization that provides the tool. Most of the selected ESG tools in our environmental scan will be useful for and accessible to investors and advisors who are interested in the E, S, and G factors and can afford the usage fees.

Finally, our literature review found a lack of research that specifically addresses how ESG investing is incorporated into retirement savings. Very little of the academic research studies how the private-sector retirement industry participates in ESG investing. DOL has recently provided additional interpretation of the fiduciary standard in a way that helps advisors and plans understand how to consider ESG investments for their clients.[54]

With the frameworks presented in this study, the research can be used as a benchmark assessment of the field that DOL can update periodically in future years as the ESG investing landscape continues to diversify and mature. A second avenue of possible future research involves taking a longer view of the ESG investing landscape. This study focuses on the current state of, and recent trends in, ESG investing and available tools. As the "Rate the Raters" (SustainAbility, 2010) report argues, the only constant in the ESG investing landscape is change. In our scan of the field of available ESG tools, we have seen this near continuous change and the diversity it produces. However, given the fast and continuous pace of change in the ESG investing sector, it may be helpful to DOL to have a fuller perspective on the development of the sector from its earliest forms through the most likely direction of the sector in the near-term.

This research could explore several questions:

- To what extent do retirement plan administrators and other investors, respectively, currently include, or want to include, ESG investments in their retirement plans?
- What factors (e.g. ESG-orientation, financial performance, cost, etc.) are most important to retirement plan administrators and investors when they consider ESG investments? Does the relative importance of these factors differ when they consider conventional investments?
- Are there significant differences between retirement plan administrators and other investors in how much they prefer and how they evaluate ESG investments for retirement plans?

These three areas of future research can help DOL gain a fuller understanding of the development of the ESG investing sector, develop a knowledge base specific to how retirement investors and advisors incorporate ESG investments, and keep track of future developments in the ESG investing sector.

ESG Investment: Future Research Possibilities

- *Periodically update the environmental scan of available ESG tools.*
- *Review the development of the ESG investing sector and its near-term direction.*
- *Explore the attitudes toward ESG investing and decision-making process among retirement plan administrators and other investors.*

[54] http://webapps.dol.gov/FederalRegister/PdfDisplay.aspx?Docid=28547

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GLOSSARY BY TOPIC

General Investing

Assets Under Management (AUM): AUM includes investment assets managed by institutional investors, money managers, and community investment institutions.[55]

Company Stocks/Securities: A stock is a type of security that signifies ownership in a corporation and represents a claim on part of the corporation's assets and earnings. Company stocks are also known as "shares" or "equity."[56]

Defined Contribution Plans: A defined contribution plan is a retirement plan in which a certain amount or percentage of money is set aside each year by a company for the benefit of each of its employees. The defined contribution plan places restrictions that control when and how each employee can withdraw these funds without penalties.[57]

Defined Benefit Plans/Public Pension Plans: A defined benefit plan is a retirement plan that an employer sponsors, where employee benefits are computed using a formula that considers factors, such as length of employment and salary history. The company administers portfolio management and investment risk for the plan. There are also restrictions on when and by what method an employee can withdraw funds without penalties.[58]

Exchange Traded Funds: An exchange traded fund (ETF) is a marketable security that tracks an index, a commodity, bonds, or a basket of assets like an index fund. Unlike mutual funds, an ETF trades like common stock on a stock exchange.[59]

Financial Advisor: A financial advisor provides financial advice or guidance to customers for compensation. Financial advisors, or advisers, can provide many different services, such as investment management, income tax preparation, and estate planning. "Financial advisor" is a generic term with no precise industry definition. Many different types of financial professionals fall into this general category, including stockbrokers, insurance agents, tax preparers, and financial planners.[60]

Indices: In finance, an index typically refers to a statistical measure of change in a securities market. In the case of financial markets, stock and bond market indices consist of an imaginary portfolio of securities representing a particular market or a portion of it.[61]

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[55] US SIF, "Report on US Sustainable, Responsible, and Impact Investing Trends," 2016, http://www.ussif.org/files/SIF_Trends_16_Executive_Summary.pdf.
[56] Investopedia: http://www.investopedia.com.
[57] Ibid.
[58] Ibid.
[59] Ibid.
[60] Ibid.
[61] Ibid.

Individual/Retail Investor: A retail or individual investor is an investor who buys and sells securities for their personal account, and not for another company or organization. An individual investor is also known as a "small investor."[62]

Institutional Investor: An institutional investor is a nonbank person or organization that trades securities in large enough share quantities or dollar amounts that it qualifies for preferential treatment and lower commissions. Examples of institutional investors include pension funds and life insurance companies.[63]

Money Managers: A money manager is a business or bank responsible for managing the securities portfolio of an individual or institutional investor. In return for a fee, the money manager has the fiduciary duty to choose and manage investments prudently for his or her clients, including developing an appropriate investment strategy, and buying and selling securities to meet those goals. A money manager is also known as a "portfolio manager" or "investment manager."[64]

Mutual Funds: A mutual fund is an investment vehicle made up of a pool of funds, collected from many investors, used to invest in securities such as stocks, bonds, money market instruments, and similar assets. Mutual funds are operated by money managers, who invest the fund's capital and attempt to produce capital gains and income for the fund's investors.[65]

Other Entities: In this study, we define "other entities" as subjects of ESG tools that are not mutual funds, ETFs, company securities, or indices. Other entities include investment strategies, investment portfolios, and retirement plans.

Investing Sectors

Corporate Social Responsibility (CSR): CSR refers to the act of businesses considering and managing the economic, environmental, social, and governance impacts of their operations.

Environmental, Social, and Governance (ESG) Investing: ESG investing incorporates environmental, social and governance factors into the investment selection and management process.

Responsible Investing (RI): RI includes the process of considering ESG issues in investment management and ownership.

Socially Responsible Investing (SRI): SRI is an investment approach that aims to simultaneously achieve environmental and social goals as well as financial goals.

Sustainable Investing (SI): Sustainable investing is the full integration of ESG factors into financial analysis and decision-making (Keefe, 2007). SI uses a best-in-class approach to ESG investing.

ESG Investing

Direct Corporate Engagement/Activism: Direct corporate engagement/activism involves investors interacting directly with companies to pursue ESG factors in company operations. This method may be used in combination with other ESG investment selection strategies (Richardson, 2007).

[62] Investopedia: http://www.investopedia.com.
[63] Ibid.
[64] Ibid.
[65] Ibid.

ESG Integration: Investment managers systematically include ESG risks and opportunities in financial analysis of potential investments.[66]

ESG Investment Strategies: ESG investment strategies are strategies that investors and advisors use to identify, assess, and select specific investments that conform to ESG factors for an investment portfolio.

ESG Rating: Tools aggregate ESG performance of funds (mutual or ETF), companies, indices, or portfolios in different ways. Some tools provide a quantitative ESG rating (e.g. on a scale of 0–5, 0-100, etc.), a qualitative score (e.g. a certain number of hearts from SocialFunds.com), and other tools do not provide a rating or score at all.

ESG Investment Tools: ESG investment tools are online applications, websites, databases, and documents that help individual and institutional investors, advisors, and others accomplish any of the following activities: identify, assess, or select ESG investments for investment portfolios or manage existing ESG investments.

Impact Investing: Investments are selected with the intention to generate social and environmental impacts along with financial returns, regardless of whether the returns are below market.[67]

Index Based: Investors construct a portfolio through established indices of environmentally and socially responsible companies, such as the Dow Jones Sustainability index (Richardson, 2007).

Negative/Exclusionary Screening: Negative/exclusionary screening involves excluding investments connected to activities or industries deemed controversial or unacceptable.[68]

Positive Screening/Best-in-Class: Investments are selected for positive performance on ESG factors relative to industry peers. This method also involves avoiding investments that do not meet the ESG performance thresholds.[69]

Sustainability Themed: Assets in funds are selected specifically related to sustainability.[70]

[66] US SIF, "Report on US Sustainable, Responsible, and Impact Investing Trends, 2016," http://www.ussif.org/files/SIF_Trends_16_Executive_Summary(1).pdf.
[67] Ibid.
[68] Ibid.
[69] Ibid.
[70] Ibid.

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APPENDIX A – LIST OF ESG INVESTMENT TOOLS

Below is a list of 37 ESG tools, found in this study, categorized into four groups: (1) mutual funds, (2) companies, (3) indices, and (4) other entities. Twenty-eight tools[71] fit within the study's scope[72] and nine tools are out of the study's scope.

ESG Investment Tools			
Mutual Funds & ETFs	**Companies**	**Indices**	**Other Entities**
In-Scope Tools			
1) Morningstar Sustainability Rating 2) SocialFunds.com 3) US SIF Sustainable & Responsible Mutual Fund Chart 4) MSCI ESG Fund Metrics	5) Bloomberg ESG Disclosure Score 6) Sustainalytics Company ESG Reports 7) Oekom Corporate Rating Reports 8) ISS QualityScore 9) Covalence EthicalQuote Ethical Snapshots 10) RobecoSAM Corporate Sustainability Assessment 11) RepRisk Company Reports 12) MSCI ESG Company Rating Reports 13) FTSE ESG Ratings 14) HIP Investor Ratings 15) Thomson Reuters Corp. Responsibility Rating 16) Vigeo Eiris Rating 17) Solaron emRatings 18) Inrate Sustainability Rating	21) Thomson Reuters Corp. Responsibility Indices 22) Calvert Responsible Index Series 23) FTSE4Good Index Series 24) Dow Jones Sustainability Indices 25) MSCI ESG Indexes 26) Morningstar Global Sustainability Index	27) Mercer ESG Ratings 28) Social(k)

[71] We define ESG tools to include online documents, websites, databases, or applications. These online materials must perform at least one of the following activities: (1) list and provide information on ESG aspects of investments or entities, (2) assist users with selecting individual ESG investments, or (3) assist users with creating or managing a portfolio of ESG investments.

[72] We limited the scope of our environmental scan to ESG tools that: (a) cover investments, e.g. company stocks, mutual funds, and market segments, (b) assess U.S.-based investments, (c) are oriented to individual and institutional investors and advisors, (d) are standalone products that are widely available (in contrast to some firms that offer customized ESG analyses or their ESG services that are only available to their existing clients), and (e) cover multiple issues across one or more pillars of ESG.

ESG Investment Tools			
Mutual Funds & ETFs	**Companies**	**Indices**	**Other Entities**
Out-of-Scope Tools			
	29) Access to Medicine Index* 30) JUST Capital* 31) Corporate Equality Index* 32) Ethos Foundation's ESG Analyses* 33) Global Engagement Services' ESG Analyses Services* 34) Gaia Index* 35) Novethic Institutional Circle* 36) Verisk Maplecroft* 37) ET Global 800 Carbon Rankings*		

Note: The out-of-scope tools are denoted with an asterisk.

APPENDIX B – COMPLETE PROFILES OF ESG INVESTMENT TOOLS (INCLUDED IN

Appendix B provides detailed profiles of all ESG investment tools discussed in this report. The tools profiled in this section are:

1. Morningstar Sustainability Rating
2. SocialFunds.com
3. US SIF Sustainable and Responsible Mutual Fund Chart
4. MSCI ESG Fund Metrics
5. Bloomberg ESG Disclosure Score
6. Sustainalytics Company ESG Reports
7. Oekom Corporate Rating Reports
8. ISS QualityScore
9. Covalence EthicalQuote Ethical Snapshots
10. RobecoSAM Corporate Sustainability Assessment
11. RepRisk Company Reports
12. MSCI ESG Company Rating Reports
13. FTSE ESG Ratings
14. HIP Investor Ratings
15. Thomson Reuters Corporate Responsibility Ratings
16. Vigeo Eiris Sustainability Rating
17. Solaron emRatings
18. Inrate Sustainability Rating
19. CDP Open Data Portal
20. ISS-IW Financial Score
21. Thomson Reuters Corporate Responsibility Index
22. Calvert Responsible Index Series
23. FTSE4Good Index Series
24. Dow Jones Sustainability Indices
25. MSCI ESG Indexes
26. Morningstar Global Sustainability Index Family
27. Mercer ESG Ratings
28. Social(k)

Tool Profile 1: Morningstar Sustainability Rating

Morningstar Sustainability Rating

TOOL DESCRIPTION

The Morningstar Sustainability Rating (MSR) measures how well the companies held within a mutual fund manage their ESG risks and opportunities versus their peers. The rating uses company-level ESG analytics from Sustainalytics, a leading provider of ESG research, to calculate an aggregate rating for each mutual fund. The Morningstar Portfolio Sustainability Score (PSS) and MSR are calculated every month.

INVESTMENTS COVERED

The MSR is provided for over 20,000 mutual funds and over 2,000 ETFs. At least 50% of a fund's assets must be in one of the companies covered by Sustainalytics to be included. The MSR rates a fund relative to its peers. Thus, a minimum of 10 funds in a Morningstar Category must also receive a Portfolio Sustainability Score to receive an MSR rating.

ESG RATING

The MSR is created in a two-step process. First, Morningstar calculates a fund's Portfolio Sustainability Score (PSS). This measures how well the firms within the fund are managing their ESG risks. The PSS relies on Sustainalytics' ESG ratings for individual companies. Each individual company's ESG score is comprised of more than 70 general and industry-specific indicators that are weighted in calculating the final ESG score. The PSS is an asset-weighted average of the company ESG scores. The Portfolio Sustainability Score is the difference between the Portfolio ESG Score and the Portfolio Controversy Deduction; all three of these scores are on a scale of 0–100.

Morningstar then rates the fund relative to its Morningstar Category peers to derive the fund's Morningstar Sustainability Rating. Morningstar assigns ratings along a bell curve distribution to five groups: Low (1), Below Average (2), Average (3), Above Average (4), and High (5).

Morningstar applies the MSR based on the position of portfolio's overall sustainability score (PSS) within its Morningstar Category. For example, a portfolio whose PSS is in the highest 10% of its Morningstar Category receives an MSR of High (5), which means the portfolio's holdings have a high level of sustainability. The MSR can also be calculated for the individual pillars of ESG (E, S, and G) using the company-level information from Sustainalytics.

RATING SOURCE

Morningstar internally created the Morningstar Sustainability Rating, but the underlying data are company ESG ratings, provided by Sustainalytics.

FINANCIAL INFORMATION

The Morningstar Sustainability Rating is displayed in Morningstar Fund Reports, in addition to the historical financial performance of the fund and minimum investment required for investing in the fund. Trailing financial returns are displayed at 1 month, 3 months, 1 year, 3 years, and 5 years.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

Morningstar, a financial services firm, provides this tool and lists the Morningstar Sustainability Rating alongside other financial information about the fund in their fund report.

COST OF TOOL

The tool is provided at no cost to Morningstar members.

TOOL WEBSITE

The tool can be found at http://www.morningstar.com/company/sustainability.

Tool Profile 2: SocialFunds.com

SocialFunds.com

TOOL DESCRIPTION

SocialFunds.com provides information on socially responsible mutual funds, community or social investments, corporate research, and shareholder actions. It includes the Heart Rating, which measures certain ESG aspects of mutual funds.

INVESTMENTS COVERED

SocialFunds.com provides various types of information on over 200 mutual funds and other investments.

ESG RATING

The Heart Rating measures *socially responsible and religion-based* mutual funds' ESG performance. It is an aggregate of individual composite scores in three areas: shareholder advocacy, community investing, and ESG screening.

The scores range from 0–5 hearts. The largest component of this score is an ESG screening of sustainable and responsible mutual funds, which deals with how funds choose their holdings: avoidance/exclusionary screening, best in class screening, or affirmative screening. The second component is shareholder advocacy, which demonstrates the involvement of shareholders in decision-making. The third component is community involvement, which measures contributions to building communities in the form of investments in municipal bonds in low-income areas and community development financial institutions, for example.

RATING SOURCE

The Heart Rating is derived from Natural Investments (NI), a registered investment advisor. The Heart Ratings are based on information from a questionnaire and the mutual funds' prospectuses.

FINANCIAL INFORMATION

SocialFunds.com provides access to mutual funds' prospectus reports, which includes details like historical returns, minimum investment requirements, and investment fees for each fund. However, the Heart Rating does not include any financial information on funds.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

SRI World Group, an independent organization, creates and maintains information on SocialFunds.com.

COST OF TOOL

The tool is provided at no cost.

TOOL WEBSITE

The tool can be found at www.socialfunds.com.

Tool Profile 3: US SIF Sustainable and Responsible Mutual Fund Chart

US SIF Sustainable and Responsible Mutual Fund Chart

TOOL DESCRIPTION

US SIF's Sustainable and Responsible Mutual Fund Chart is a public tool that allows individual investors to compare cost, financial performance, screens, and voting records of various mutual funds.

INVESTMENTS COVERED

The US SIF Sustainable and Responsible Mutual Fund Chart includes sustainable and responsible mutual funds from US SIF's institutional members. As of March 2017, the chart included 214 mutual funds.

ESG RATING

The chart does not provide a rating system for the listed mutual funds.

RATING SOURCE

The Mutual Fund Performance Chart does not provide ratings on the funds. The financial information it provides, including financial returns and the total USD of assets under management, comes from Bloomberg.

FINANCIAL INFORMATION

The US SIF Sustainable and Responsible Mutual Fund Chart provides year-to-date, 1-year, 3-year, 5-year, and 10-year average returns. Additionally, it reports management fees, expense ratios, and account minimums for general and IRA investing.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

US SIF is a non-financial services firm.

COST OF TOOL

The tool is provided at no cost.

TOOL WEBSITE

The tool can be found at http://charts.ussif.org/mfpc/.

Tool Profile 4: MSCI ESG Fund Metrics

MSCI ESG Fund Metrics

TOOL DESCRIPTION

MSCI ESG Fund Metrics provide ESG ratings and analysis for mutual funds and ETFs.

INVESTMENTS COVERED

MSCI ESG Fund Metrics provides ESG metrics and ratings on 18,456 mutual funds and 2,397 ETFs around the world. To be included, a fund must have at least ten holdings, 65% ESG ratings coverage, and holdings data within the last 12 months.

ESG RATING

The MSCI Fund ESG Quality Score reflects how well the underlying holdings in a fund manage the medium- to long-term risks and opportunities that affect a holding's sustainability. The MSCI Fund ESG Quality Score rates funds on a scale of 0–10 (low–high). To calculate this score, MSCI first scores the underlying issuers within a fund based on their exposure to and management of key ESG issues. Next, MSCI produces a weighted average ESG score for the fund. Finally, percentiles are calculated in two ways. First, MSCI calculates a percentile based on the fund's ESG Quality Score relative to all global funds receiving a score. Second, MSCI calculates a percentile relative to the fund's peers.

The Score is based on the ESG scores of the issuers of the funds' holdings. The MSCI ESG Fund Metrics tool also provides data in 100 ESG-related categories to help evaluate portfolios on ESG-related risks, Exposure to Sustainable Impact Themes and Values Oriented Issues. The Fund Quality Score can also be calculated for the individual pillars of ESG (E, S, and G).

RATING SOURCE

MSCI ESG Research produces the ratings and uses a variety of data sources in its research, including government and non-governmental organization reports, company disclosures such as 10-K's, and media and news sources. It incorporates over 100 ESG metrics into the MSCI ESG Fund Quality Score.

FINANCIAL INFORMATION

The tool does not measure or provide financial performance information on companies.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

MSCI ESG Research, a subsidiary of MSCI, provides the tool. MSCI ESG Research is a Registered Investment Advisor and provides research, rating, and analysis of ESG-related business practices for companies, mutual funds and ETFs, and fixed income securities.

COST OF TOOL

Fees are customized based on several factors including total and type of assets under management, how the tool will be used, and geographic coverage.

TOOL WEBSITE

The tool can be found at https://www.msci.com/esg-fund-metrics.

Tool Profile 5: Bloomberg ESG Disclosure Score

Bloomberg ESG Disclosure Score

TOOL DESCRIPTION

The Bloomberg ESG Disclosure Score measures the degree to which companies demonstrate transparency by disclosing their approach to ESG issues.

INVESTMENTS COVERED

Bloomberg reports a score for over 10,000 mid to large capitalization (market capitalization of $2 billion or more) companies. Companies that are in a major investment index, or disclose quantitative environmental and social data are included in the assessment.

ESG RATING

The ratings range from 0 (low) to 100 (high) based on the extent and robustness of a firm's disclosure on ESG criteria. A higher number indicates that a company reports more information.

RATING SOURCE

Bloomberg score firms on 120 metrics using a proprietary model. Data are collected from annual reports, sustainability reports, press releases, publicly available data, third-party research, and a proprietary survey.

FINANCIAL INFORMATION

The score does not include financial performance information on companies. However, the score is provided alongside financial information in the Bloomberg Terminal.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

Bloomberg L.P. provides this score and other ESG information. Bloomberg is a leading provider of financial and business information.

COST OF TOOL

The tool is accessed through Bloomberg Terminals (which are fee-based). Bloomberg terminals cost $2,000–$3,000 per month for a two-year subscription.

TOOL WEBSITE

The tool can be found at https://www.bloomberg.com/bcause/.

Tool Profile 6: Sustainalytics Company ESG Reports

Sustainalytics Company ESG Reports

TOOL DESCRIPTION

Sustainalytics Company ESG Reports provide qualitative analysis and quantitative ratings that assess the extent to which individual companies address environmental, social and governance issues.

INVESTMENTS COVERED

Sustainalytics provides their Company ESG Reports for 6,500 companies with market capitalization ranging from less than $2 billion to greater than $10 billion across 42 industry sectors.

ESG RATING

Sustainalytics ESG Rating is on a scale of 0–100 (low–high). The ESG Rating calculates the extent to which a company addresses ESG issues in three areas:

- Preparedness
- Disclosure
- Performance

The rating accounts for more than 70 general and industry-specific weighted indicators and uses a specific combination of indicators for each industry peer group to enable company-level comparisons.
The report also contains a rating for each company (on a scale of 1 (low) -5 (high)) on its response to ESG-related incidents. The score accounts for the incident's ESG impact and the risk to the company's viability.

RATING SOURCE

Sustainalytics develops its ratings from company disclosure forms as well as from direct outreach to the companies.

FINANCIAL INFORMATION

The tool provides information on total revenue, net income, net earnings before taxes, and market capitalization.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

Sustainalytics specializes in providing ESG and governance research and analyses on over 6,000 companies.

COST OF TOOL

The tool is fee-based. Pricing is customized based on client needs including type and coverage of data access, the amount of assets under management, and how the data will be used.

TOOL WEBSITE

The tool can be found at http://www.sustainalytics.com/.

Tool Profile 7: Oekom Corporate Rating Reports

Oekom Corporate Rating Reports

TOOL DESCRIPTION

The Oekom Corporate Rating Reports reflects the social and environmental impact of individual companies.

INVESTMENTS COVERED

The Oekom Corporate Rating is available for approximately 3,800 companies.

ESG RATING

The Oekom Corporate Rating assesses the environmental and social factors of individual companies, on a letter grade scale from A+ to D−. Oekom uses a set of approximately 100 criteria on measures of environmental and social sustainability per industry to develop each company's rating. The OCR has a set of approximately 700 criteria, though only about 100 are used for a given industry.

Two components combine to create each rating: environmental sustainability and social sustainability. The two components are weighted according to the environmental and social impacts of the company's industry. If a company's industry has higher environmental impacts than its social impact, then when calculating the company's overall OCR, its environmental rating will have a larger weight than the social rating.

RATING SOURCE

Oekom develops the rating using several sources of information including annual reports, sustainability reports, interviews with company representatives and independent experts, news stories, and assessments from external parties (i.e. non-governmental organizations, governments, business associations, consumer protection groups, and research institutes).

FINANCIAL INFORMATION

The tool does not provide financial performance information on companies.

ESG FACTORS COVERED

The tool provides information on environmental and social factors.

PROVIDER OF TOOL

Oekom Research AG, a sustainable investment rating agency, provides the tool along with other research.

COST OF TOOL

The tool is fee-based. The cost of accessing Oekom's entire database including the Oekom Corporate Ratings is $200,000 per year.

TOOL WEBSITE

The tool can be found at http://www.oekom-research.com/index_en.php?content=orbit.

Tool Profile 8: ISS QualityScore

ISS QualityScore

TOOL DESCRIPTION

The ISS QualityScore is a scoring system that allows institutional investors to review governance metrics for individual companies.

INVESTMENTS COVERED

The ISS QualityScore provides coverage at the company level across 30 markets of mostly developed and emerging countries. ISS QualityScore covers approximately 5,600 companies, including members of stock indices such as the U.S. Russell 3000.

ESG RATING

The ISS QualityScore measures the quality of firms' governance practices in the following areas: Board Structure, Compensation/Remuneration, Shareholder Rights, and Audit & Risk Oversight.

The ISS QualityScore is measured on a scale of 1 to 10. A score of 1 denotes high quality governance practices and a score of 10 denotes poor governance practices. ISS QualityScore updates the scores daily.

Additionally, there are individual scores for four different pillars of governance:

- Board structure
- Compensation/remuneration
- Shareholder rights
- Audit & risk oversight

More than 200 individual factors that are used to calculate the ISS QualityScore. The set of factors that applies to a company varies by region, and each factor is weighted by the standards and understanding of governance practices by region.

RATING SOURCE

The ISS QualityScore is developed by ISS using several sources including public company filings and annual reports as well as feedback from the companies.

FINANCIAL INFORMATION

The tool does not provide financial performance information on companies. However, the company reports that contain the QualityScore include financial information (e.g. share price, market capitalization, and annual revenue) on the firms.

ESG FACTORS COVERED

The tool provides information on governance factors.

PROVIDER OF TOOL

ISS (Institutional Shareholder Services, Inc.) provides governance and responsible investment services to asset owners and managers, hedge funds, and asset service providers.

COST OF TOOL

The tool is fee-based. Pricing for a comprehensive dataset is approximately $20,000–$25,000.

TOOL WEBSITE

The tool can be found at https://www.issgovernance.com/solutions/iss-analytics/qualityscore/.

Tool Profile 9: Covalence EthicalQuote Ethical Snapshots

Covalence EthicalQuote Ethical Snapshots

TOOL DESCRIPTION

Covalence EthicalQuote provides monthly ESG Reputation Snapshots of companies that include an ESG rating, ranking within and across sectors, and performance in a number of areas (governance, economic, environmental, labor practices and decent work, human rights, social, and product responsibility).

INVESTMENTS COVERED

Covalence reviews the reputations of 3,400 companies because they are either the world's largest companies or members of the Swiss Performance Index. A company can ask to be reviewed if it has similar characteristics to companies that are currently reviewed.

ESG RATING

The Covalence EthicalQuote ESG Rating scores companies based on the sentiment of ESG-related news mentions. Companies who receive more positive media reaction to their ESG efforts have higher scores than frequently maligned companies.

The Covalence EthicalQuote ESG Rating is based on ESG-related news about companies. ESG news stories are categorized as positive or negative depending on the language and content of the news story and are mapped to at least one of Covalence's 50 ESG criteria. A company known for positive work in ESG areas will have a score closer to 100. Covalence largely gathers reports on a company's ESG behavior from online sources. Covalence assigns each news story points depending on the number of ESG criteria that the content is relevant to. The points are either positive or negative depending on whether the content of the story is positive or negative. Altogether, the Rating is based on the combination of both positive and negative points that a company accrues from its ESG-related news stories.

RATING SOURCE

Covalence gathers information using search engines and examining websites. Information can also be submitted directly to Covalence for their review.

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

Covalence is a Swiss company that provides this tool along with other ESG research.

COST OF TOOL

The tool is fee based. The annual subscription is $7,900 for ratings on the universe of companies.

TOOL WEBSITE

The tool can be found at http://www.ethicalquote.com/.

Tool Profile 10: RobecoSAM Corporate Sustainability Assessment

RobecoSAM Corporate Sustainability Assessment

TOOL DESCRIPTION

The RobecoSAM Corporate Sustainability Assessment (CSA) evaluates how prepared companies are to address ESG issues. In addition, the Dow Jones Sustainability Indices uses RobecoSAM's company-level ESG research to create its ESG equity indices.

INVESTMENTS COVERED

The RobecoSAM Corporate Sustainability Assessment covers 4,000 companies that participate in its annual assessment. These 3,400 companies include the largest 2,500 public companies in the world.

ESG RATING

Each company is given a Total Sustainability Score (TSS), from 0 (low) to 100 (high), based on the answers to the CSA questionnaire. Benchmarks are also provided within each industry.

RATING SOURCE

The scores come from 80–120 industry-specific questions gathered in the CSA. The CSA measures companies' performance on sustainability issues that directly affect financial outcomes The CSA also incorporates other information on ESG-related controversies from sources that include consumer organizations, NGOs, governments, and international organizations.

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

RobecoSAM is an investment firm that specializes in sustainability investing. Its service offerings include asset management, indices, impact analysis and investing, sustainability assessments, and benchmarking services.

COST OF TOOL

The tool is accessed through Bloomberg Terminals (which are fee-based). Bloomberg terminals cost $2,000–$3,000 per month for a two-year subscription.

TOOL WEBSITE

The tool can be found at http://www.robecosam.com/.

Tool Profile 11: RepRisk Company Report

RepRisk Company Report

TOOL DESCRIPTION

The RepRisk Company Report is one of a suite of reputational analytics services RepRisk provides that assesses companies based upon their exposure to ESG risks. These reports summarize both qualitative research gathered from third-party sources and quantitatively derived grades that cover up to 10 years of company history.

INVESTMENTS COVERED

The RepRisk Company Report provides individual assessments on 85,524 firms and performance by industry.

ESG RATING

The RepRisk Rating is a proprietary measure of a company's ESG-related risk. Companies are assigned a grade from AAA to D. AAA-rated companies are least exposed to ESG risk, whereas D-rated companies are exposed to the highest risk. The industry sector determines the risks.

RATING SOURCE

The ratings are based on data collected through the RepRisk ESG Risk Platform.

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

RepRisk provides this tool and specializes in ESG risk data and analytics.

COST OF TOOL

The tool is fee-based and varies by report. Company reports range from $450–$3,500.

TOOL WEBSITE

The tool can be found at https://www.reprisk.com/our-solutions.

Tool Profile 12: MSCI ESG Company Rating Reports

MSCI ESG Company Rating Reports

TOOL DESCRIPTION

The MSCI ESG Ratings measure ESG-related risks and opportunities of companies and rate their performance relative to industry peers to inform institutional investors on ESG issues.

INVESTMENTS COVERED

The ratings cover 6,500 companies.

ESG RATING

The ESG rating is on a scale of AAA to CCC, with AAA being the highest rating that a firm can receive and CCC being the lowest rating that a firm can receive. The ratings measure individual companies' exposure to ESG-related risks based on industry and region. Companies are scored on industry-specific key issues, which are weighted and normalized by industry. The normalized score is converted to a letter rating.

RATING SOURCE

MSCI ESG Research develops the ratings using information from company disclosures, government databases, media sources, and macro data from academic, government, and NGO sources.

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

MSCI ESG Research, a subsidiary of MSCI, provides the tool. MSCI ESG Research is a Registered Investment Advisor and provides research, rating, and analysis of ESG-related business practices for companies, mutual funds and ETFs, and fixed income securities.

COST OF TOOL

This tool is fee based. Fees are customized based on several factors including total and type of assets under management, how the tool will be used, and geographic coverage.

TOOL WEBSITE

The tool can be found at https://www.msci.com/esg-ratings.

Tool Profile 13: FTSE Russell's ESG Ratings

FTSE Russell's ESG Ratings

TOOL DESCRIPTION

FTSE Russell's ESG Ratings and data model are available to subscribers through a web interface. Users can also download the data to their local environment.

INVESTMENTS COVERED

The online data model provides information on over 4,100 companies. These companies are located in over 46 countries, including both developed and emerging markets.

ESG RATING

The ESG ratings are built on three pillars (Environmental, Social, and Governance) and fourteen themes (e.g. Biodiversity, Customer Responsibility, Anti-corruption, etc.). Each of these factors is quantified as an indicator, and each company's rating is built upon an average of 125 indicators. Ratings are presented in absolute terms on a scale of 1–5 and translated into relative ratings, on a scale of 1–100, by sector. Not only does the tool provide overall ratings by company, but it also allows users to view data at the pillar and theme level for customized analysis.

RATING SOURCE

While FTSE creates the ratings, an independent committee, external to FTSE Russell, oversees the ESG data model. To promote transparency, this rating tool uses publicly available data and FTSE provides their calculation methodology to users.

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

FTSE Russell, a global index firm, provides this tool.

COST OF TOOL

The tool is provided for an undisclosed fee.

TOOL WEBSITE

The tool can be found at http://www.ftse.com/products/indices/f4g-esg-ratings.

Tool Profile 14: HIP Investor Ratings

HIP Investor Ratings

TOOL DESCRIPTION

HIP (Human Impact plus Profit) Investor Inc. provides information on the quantifiable impact of investments on society. The firm's aim is to provide a society-wide framework for all sectors that focuses on outcomes and results.

INVESTMENTS COVERED

HIP Investor rates over 32,000 investments globally, including 5,770+ equities, 26,700+ bond issuances, 100+ real-estate investment trusts (REITs), and 1000's of mutual funds and EFTs.

ESG RATING

The HIP Investor Rating analyzes three dimensions (operational outcomes, products and services, management practices) across five impact pillars (health, wealth, earth, equality, and trust). HIP produces a rating from 0-100 that quantifies the mitigators of future risk and drivers of return potential, along with the net positive or negative impact across the five pillars. This rating provides a way to measure and rank the current sustainability of a security, strategy, or fund against peers.

RATING SOURCE

HIP uses data collected from company annual reports and publicly available data from other sources such as governments, non-profits, among others.

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

ESG FACTORS COVERED

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

HIP Investor, Inc. is an investment adviser and portfolio management firm.

COST OF TOOL

The tool is provided for a fee calculated as a percentage of total assets that are rated by the tool.

TOOL WEBSITE

More information on the HIP Investor Ratings can be found at http://hipinvestor.com/how-clients-use-hip/ratings/.

Tool Profile 15: Thomson Reuters Corporate Responsibility Rating

Thomson Reuters Corporate Responsibility Rating

TOOL DESCRIPTION

The Thomson Reuters Corporate Responsibility Ratings (TRCRR) measure the ESG performance of individual companies. The Ratings measures a company's ESG performance as well as its E, S, and G score.

INVESTMENTS COVERED

The TRCRR analyze the ESG performance of over 4,600 companies globally.

ESG RATING

The TRCRR are comprised of two separate scores: a 0 to 100 normalized score and a 0–100 percentile rank score. First, Thomson Reuters rates a firm using a normalized score ranging from 0–100 that measures all areas of a company's environmental, social, and governance performance. Next, a percentile rank is calculated that shows a company's performance percentile within its industry.

RATING SOURCE

The ratings are based on data from the ASSET4 database, which is managed by Thomson Reuters and contains over 226 key performance indicators on ESG. The rating itself is calculated using a Thomson Reuters internal methodology (described in Appendix C).

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

ESG FACTORS COVERED

The ratings use information on environmental, social, and governance factors.

PROVIDER OF TOOL

Thomson Reuters, an investment company, provides this tool along with news on business, financial, and global affairs.

COST OF TOOL

The cost of accessing the ratings in the Asset4 database is $600 per year or $60 per month.

TOOL WEBSITE

More information on the Thomson Reuters Corporate Responsibility Ratings can be accessed at http://www.trcri.com/images/TRCRR_Fact_Sheet_March_24_2014.pdf.

Tool Profile 16: Vigeo Eiris Rating

Vigeo Eiris Rating

TOOL DESCRIPTION

Vigeo Eiris rates individual companies using the Vigeo Eiris Rating, which reflects a composite score across six domains that reflect ESG issues.

INVESTMENTS COVERED

Vigeo Eiris provides ESG ratings for 3,500 securities across the globe on over 300 indicators. These ratings primarily include publicly listed firm with sparse coverage of private firms. While they do not rate mutual funds and other investments, they can conduct a custom analysis per client request.

ESG RATING

Vigeo Eiris developed a proprietary rating that is composed of six domains, which are built on 38 sustainability drivers (such as a company's environmental policies). These domains are the environment, social commitment, market behavior, human rights, governance, and human resources.

Criteria are weighted per sectoral relevance using three factors:

- Nature of rights, interests and expectations of stakeholders
- Stakeholders' vulnerability
- Risk categories for business

The final rating is numeric and ranges from 0–100. It measures the relevance of companies' and organizations' commitments, the effectiveness of their managerial systems, their ability to control risks and improve their performance on all environmental, governance, social and societal responsibility factors.

RATING SOURCE

Vigeo Eiris uses annual reports questionnaires and independently conducted research to develop its rating.

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

THEMATIC FOCUS OF TOOL

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

Vigeo Eiris is the provider of the rating, along with other investment information. The company offers thematic and generic universes that can be customized to meet client demands. Vigeo Eiris focuses its assessment on the relevance of commitments about policy, the efficiency of policy implementation, and results.

COST OF TOOL

There are three levels of access to company information. Pricing varies depending on the level of access requested, areas and indexes covered and number of companies allocated.

TOOL WEBSITE

The Vigeo Eiris Rating can be found at http://www.vigeo-eiris.com/vigeo-eiris/methodologie-assurance-qualite/.

Tool Profile 17: Solaron emRatings

Solaron emRatings

TOOL DESCRIPTION

Solaron offers emRatings to evaluate a company's performance against a comprehensive set of over 400 ESG and industry-specific criteria. An overall rating is provided, as well as ranking against peers, benchmarking against peers overall and on specific Environmental, Social and Governance pillars.

INVESTMENTS COVERED

Solaron covers public and private firms based on client requirements.

ESG RATING

Solaron evaluates a company's performance against 400 ESG and industry-specific criteria. Companies are assigned a letter rating based on a weighted average of industry specific and general indicators across Environmental, Social, and Governance factors.

RATING SOURCE

The Solaron emRatings use a wide range of primary and secondary data sources including company annual reports, local language media and stakeholder interviews with customers, employees, suppliers, regulators, NGOS and 'non-customers'. The rating is created using a BIC (Best-in-Context) methodology, which reflects the most important ESG risks and opportunities that might influence shareholder value. This includes 16 key performance indicators across four metrics: financial impact, regulatory or policy implications, innovation potential and industry norms.

FINANCIAL INFORMATION

Solaron has limited financial information available on securities.

THEMATIC FOCUS OF TOOL

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

Solaron is the provider of the ratings.

COST OF TOOL

Solaron provides custom pricing based on the number and type of securities. Its fees are undisclosed to the public.

TOOL WEBSITE

The Solaron emRatings can be found at http://www.solaronworld.com/downloads/emRatings_Factsheet.pdf.

Tool Profile 18: Inrate Sustainability Rating

Inrate Sustainability Rating

TOOL DESCRIPTION

Inrate provides sustainability ratings through its customer tool on individual companies that reflect ESG issues. Inrate's sustainability assessment focuses especially on the impact of the product and services have on the environment and society.

INVESTMENTS COVERED

Inrate's Sustainability Rating covers over 2,600 companies across all major markets and over 300 bond issuers.

ESG RATING

Inrate's Sustainability Rating is a measure of the environmental and social impacts a company has throughout its products and practices, and a measure of its willingness and ability to effectively address related issues it faces. Inrate's sustainability assessment focuses on the impact the product and services have on the environment and society. Criteria fall into four major categories: environment, human resources, social issues, and governance. The rating uses an absolute sustainability scale to compare investment portfolios with each other or against an index.

RATING SOURCE

Inrate provides an assessment of 180 indicators that include a systematic assessment of management and operation practices with respect to sustainability. Inrate weights rates according to sectors. Each company is provided a qualitative rating as follows:

- A—Sustainable
- B—On the path to sustainability
- C—Not sustainable, but with less negative impact
- D—Not sustainable

Pluses and minuses are used to offer further nuance to the letter grades.

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

THEMATIC FOCUS OF TOOL

The tool provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

Inrate is the provider of the ratings. This European firm offers ESG research, sustainability assessment, and shareholder services. Inrate's focus is to provide sustainability intelligence that allows capital markets to redirect investment flows toward a more sustainable economy. Inrate examines how companies integrate ESG issues into their products, services, strategy, and operations.

COST OF TOOL

The rating is provided at an undisclosed price to meet the client's need.

TOOL WEBSITE

The Inrate research offerings can be found at http://www.inrate.com/Site/Services/Sustainability-assessments.aspx.

Tool Profile 19: The Carbon Disclosure Project

The Carbon Disclosure Project

TOOL DESCRIPTION

The Carbon Disclosure Project is a non-profit organization that focuses on combating climate change. They measure the size of companies' carbon footprints and highlight ways to reduce them through adjusting business practices. The Carbon Disclosure project provides company-level scores for water stewardship and climate change.

INVESTMENTS COVERED

The Carbon Disclosure Project covers companies that respond to its survey. Over 1,400 of the largest relevant global companies are targeted. These companies are filtered from the MSCI All Country World Index based on economic and environmental criteria. Companies fall principally into the Consumer Discretionary, Consumer Staples, Energy, Healthcare, IT, Industrials, Materials, and Utilities sectors.

ESG RATING

The Carbon Disclosure Project scores companies A through F based on responses to survey questions about water stewardship and climate change.

RATING SOURCE

The Carbon Disclosure Project developed a survey, which it uses to calculate the rating.

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

THEMATIC FOCUS OF TOOL

The Carbon Disclosure Project provides information on environmental factors, specifically water stewardship and climate change.

PROVIDER OF TOOL

The Carbon Disclosure Project is the provider of the ratings.

COST OF TOOL

Certain information is free. Datasets are available for an annual fee. The fees for the carbon and water datasets are $16,000 and $10,000, respectively.

TOOL WEBSITE

The Carbon Disclosure Project research can be found at https://www.cdp.net/en/research.

Tool Profile 20: ISS-IW Financial Score

ISS-IW Financial Score

TOOL DESCRIPTION

ISS offers the ISS-IW Financial score, which rates companies on E, S, and G factors.

INVESTMENTS COVERED

ISS-IW Financial Score covers over 3,000 companies.

ESG RATING

The ISS-IW Financial scores companies on a scale of 1–100. This is a customized scoring solution and allows clients to assign weights to the different ESG categories to tailor the scores.

RATING SOURCE

ISS uses information from various sources such as inter-governmental bodies, national bodies or agencies, the target company, proprietary research, and leading independent third-part services to create the score.

FINANCIAL INFORMATION

Financial data includes 52 Week High, 52 Week Low, Annual Dividend, Annualized Five Year TSR (%), Annualized Three Year TSR (%), Cumulative Five Year TSR (%), Cumulative Three Year TSR (%), Dividend Yield (%), EBITD (%), EPS, Market Cap (USD), One Year TSR (%), P/B Ratio, P/E, Price To Cashflow, Profit (%), ROA (%), ROE (%), ROI (%).

THEMATIC FOCUS OF TOOL

The ISS-IW Financial Score provides information on environmental, social, and governance factors.

PROVIDER OF TOOL

ISS is the provider of the ratings.

COST OF TOOL

Cost is customized based on a client's research needs.

TOOL WEBSITE

The ISS tools can be found at http://www.iwfinancial.com.

Tool Profile 21: Thomson Reuters Corporate Responsibility Indices

Thomson Reuters Corporate Responsibility Indices

TOOL DESCRIPTION

The Thomson Reuters Corporate Responsibility Indices function as a benchmarking system for ESG investors.

INVESTMENTS COVERED

This series of 12 indices measures the financial performance of companies with high ESG ratings. The individual ratings rely on information from the Thomson Reuters ASSET4 ESG database that rates the ESG practices of 4,600 public companies on 226 ESG metrics.

ESG RATING

ESG Ratings are provided for individual companies included on the indices, referred to as the Thomson Reuters Corporate Responsibility Ratings (TRCRR, see Tool Profile 15). The ratings are used in determining the indices' constituent companies.

RATING SOURCE

Data comes from the ASSET4 database managed by Thomson Reuters and contains over 226 key performance indicators that are used for creating the ESG ratings. The rating itself is calculated using a Thomson Reuters internal methodology (described in Appendix C).

FINANCIAL INFORMATION

Financial returns and company allocations for indices are available on fact sheets published by Thomson Reuters. The constituents and allocation of companies in Indices are available in their quarterly reports.

ESG FACTORS COVERED

The indices use information on environmental, social, and governance factors.

PROVIDER OF TOOL

Thomson Reuters provides this tool along with news on business, financial, and global affairs.

COST OF TOOL

To use the indices as a benchmark, there is a fee of $500 per month per index.

TOOL WEBSITE

The tool can be found at http://financial.thomsonreuters.com/en/products/data-analytics/market-data/indices/esg-index.html.

Tool Profile 22: Calvert Responsible Index Series

Calvert Responsible Index Series

TOOL DESCRIPTION

The Calvert Responsible Index Series is a set of indices composed of companies that operate their businesses in a manner consistent with Calvert's principles for responsible investment.

INVESTMENTS COVERED

The Calvert Responsible Index Series tracks general categorizations of companies, such as U.S. large capitalization companies and companies in developed markets, in a set of seven indices.

ESG RATING

Calvert weights ESG factors and assigns an ESG score to individual companies. The score measures each company's ESG performance. Calvert's ESG ratings are based on separate characteristics related to environmental, social, and governance issues. The score is calculated from multiple data inputs within these three ESG factors, and companies are scored within their common industries. Calvert includes companies in an index if their Calvert ESG scores meet specific requirements. The ESG scores are only used to develop the indices and are not a separate tool.

Calvert's Responsible Research Review Committee regularly reviews those companies to determine if they continue to warrant inclusion or should be excluded. The composition of the index is weighted based on the market capitalizations of the ten largest industries in the respective non-ESG index. Therefore, companies in larger industries receive larger weights in the responsible index, reflecting their weight in the general market.

RATING SOURCE

Calvert creates the ESG score. Calvert's Responsible Research Review Committee oversees all aspects of the ESG research process.

FINANCIAL INFORMATION

Calvert provides fact sheets that show the company allocations and indices' historical returns for the quarter-to-date and year-to-date, as well as 1-year, 3-year, 5-year, 10-year, and overall return. These fact sheets also display the minimum investment amount, investment fees and asset allocation for mutual funds that track these indices.

ESG FACTORS COVERED

The indices use information on environmental, social, and governance factors.

PROVIDER OF TOOL

The indices are developed by Calvert Research and Management, an investment company. In October 2016, global asset management firm Eaton Vance acquired Calvert to augment its ESG research offerings.

COST OF TOOL

Index information is available online for free. Funds that track each of these indices have required minimum investment amounts.

TOOL WEBSITE

The tool can be found at http://www.calvert.com/resources/calvert-responsible-indexes.

Tool Profile 23: FTSE4Good Index Series

FTSE4Good Index Series

TOOL DESCRIPTION

The FTSE4Good Index Series is a set of indices comprised of companies that have incorporated effective ESG practices into their operations. It is a set of benchmark and tradable indices for ESG investors. The index series is based on the FTSE Global Equity Index Series. The FTSE ESG Ratings are used to select the companies represented in the FTSE4Good Index.

The indices themselves can be invested in through various investment management platforms and are tracked by different ETFs on the market. Ratings are available through the QSD client platform, managed by FTSE and Russell, or through a data download.

INVESTMENTS COVERED

The FTSE4Good Indices consist of companies that have strong ESG-related practices. Each of the indices focus on a specific universe of investment, such as emerging markets or Malaysian markets, but with the additional focus on ESG. ESG Ratings are calculated by FTSE Russell. Ratings are provided for over 4,100 securities.

ESG RATING

The individual companies included in the indices have ESG ratings calculated by FTSE Russell.
FTSE Russell's ESG Ratings are on a scale of 0 (low) – 5 (high). The ratings are discussed in Tool Profile 13

A company must have an overall ESG rating of 3.1 to be included in an index. The score can be disaggregated into separate E, S, and G scores and is based on more than 300 indicators.

RATING SOURCE

FTSE Russell generates the ESG Ratings. Data is aggregated into different themes based on Environmental, Social, and Governance factors. FTSE Russell uses publicly available information, such as annual reports and company disclosures, to analyze the firms' ESG performance.

FINANCIAL INFORMATION

Information provided by FTSE regarding its FTSE4Good Series includes the historical financial returns of the index. In some instances, the composition of the index is also publicly available.

ESG FACTORS COVERED

The indices use information on environmental, social, and governance factors.

PROVIDER OF TOOL

FTSE Russell, a subsidiary of FTSE International Limited, provides this index series. It does not specifically sell investment advice or products, but its indices are used to create investment products.

COST OF TOOL

The tool is fee-based. An annual $18,000 licensing fee, to access the underlying data for the index series, is assessed to a client with $20 million in assets under management. Pricing is customized for clients so this would be different for other types of clients.

TOOL WEBSITE

The tool can be found at http://www.ftse.com/products/indices/FTSE4Good.

Tool Profile 24: Dow Jones Sustainability Indices

Dow Jones Sustainability Indices

TOOL DESCRIPTION

The Dow Jones Sustainability Indices are comprised of different geographically based indices that track companies with strong sustainability metrics. Dow Jones uses the RobecoSAM Corporate Sustainability Assessment (Tool Profile 10) to determine the companies to be included in each index.

INVESTMENTS COVERED

The Dow Jones Sustainability Indices covers 26 developed market and 20 emerging market countries. Each index is comprised of the top 10% of companies by Total Sustainability Scores from each industry categorization. The universe that Dow Jones covers is approximately 10,000 public companies represented in the S&P Global Broad Market Index.

ESG RATING

Each company is given a Total Sustainability Score (TSS), from 0 (low) to 100 (high), based on the answers to the RobecoSAM's Corporate Sustainability Assessment (CSA). Benchmarks are also provided within each industry.

RATING SOURCE

The CSA provides the Total Sustainability Score. Dow Jones uses the CSA scores in a rules-based selection process for inclusion into the index.

FINANCIAL INFORMATION

The Dow Jones Sustainability indices provide historical returns for each of their indices at the 1-month, 3-month, 1-year, 3-year, 5-year, 10-year, and year-to-date intervals. Information on the largest asset allocations in the index is also provided.

ESG FACTORS COVERED

The indices use information on environmental, social, and governance factors.

PROVIDER OF TOOL

Dow Jones and RobecoSAM develop the indices. All financial information about the indices is provided on Dow Jones' website. Various other investment companies use the indices to generate funds that track the Dow Jones Sustainability Indices. The indices are managed by S&P Dow Jones Indices.

COST OF TOOL

Limited index information (such as the historical returns and market capitalization) is available online for free. There is an annual $20,000 licensing fee for access to the list of companies and their associated weights in the indices.

TOOL WEBSITE

The tool can be found at http://www.sustainability-indices.com/index-family-overview/djsi-family-overview/.

Tool Profile 25: MSCI ESG Indexes

MSCI ESG Indexes

TOOL DESCRIPTION

MSCI creates its ESG Indexes using the MSCI ESG Ratings (Tool Profile 12).

INVESTMENTS COVERED

The MSCI ESG Indexes consist of several resources, including a series of global sustainability indices, a group of global socially responsible indices, and a group of global environmental indices. Each index family consists of global companies.

ESG RATING

The MSCI ESG Ratings for individual companies (discussed in Tool Profile 12) are the underlying ESG ratings used to construct the MSCI ESG Indexes. These ratings are on a scale of AAA to CCC. Indices are constructed by selecting companies with high ESG ratings from a parent index.

RATING SOURCE

MSCI ESG Research Inc. creates the ratings using information from company disclosures, government databases, media sources, and macro data from academic, government, and NGO sources.

FINANCIAL INFORMATION

Annual performances of the ESG Indexes are available through MSCI's fact sheets. Historical returns at 1-month, 3-month, 1-year, 3-year, 5-year 10-year, and year-to-date intervals are included. Investors can also find some information on the top constituents of the index.

ESG FACTORS COVERED

The MSCI ESG Indexes use information on environmental, social, and governance factors.

PROVIDER OF TOOL

MSCI ESG Research Inc., a subsidiary of MSCI, provides the tool. MSCI ESG Research Inc. is a Registered Investment Advisor and provides research, rating, and analysis of ESG-related business practices for companies, mutual funds and ETFs, and fixed income securities.

COST OF TOOL

This tool is fee-based and fees are only provided to clients. Fees are customized based on several factors including total and type of assets under management, how the tool will be used, and geographic coverage.

TOOL WEBSITE

The tool can be found at https://www.msci.com/esg-indexes.

Tool Profile 26: Morningstar Global Sustainability Index Family

Morningstar Global Sustainability Index Family

TOOL DESCRIPTION

The Morningstar Global Sustainability Index Family is a series of indices comprised of companies that exhibit high standards of sustainability while maintaining a risk/return profile similar to that of the overall market.

INVESTMENTS COVERED

The Morningstar Global Sustainability Index Family contains more than 25 indices. The indices provide benchmarks for ESG investment strategies. The series construction process assesses roughly 4,000 securities. The Indices include subsets that meet sustainability criteria.

ESG RATING

The indices do not provide an ESG rating; however, a Company Sustainability Score is created and applied in selecting the index constituents.

Morningstar assigns each company an ESG score on a scale 0 (low) -100 (high). This score is based on a company's management systems, practices, policies, and other ESG indicators. Then, Morningstar assigns a Controversy Score to each company. The Controversy Score gauges the seriousness of incidents related to company from 1 (low) -5 (severe). Finally, Morningstar creates the Company Sustainability Score by subtracting the Controversy Score from the company-level ESG score. When constructing the indices, the Company Sustainability Score is used to prioritize which company stocks are selected for each index.

RATING SOURCE

Morningstar creates the Company Sustainability Scores, but the underlying data are company-level ESG information, provided by Sustainalytics.

FINANCIAL INFORMATION

The tool does not provide financial information on the companies.

ESG FACTORS COVERED

These indices provide information on environmental, social, and governance factors.

PROVIDER OF TOOL

Morningstar, an investment company, provides this tool.

COST OF TOOL

The tool is provided for an undisclosed fee.

TOOL WEBSITE

The tool can be found at https://corporate.morningstar.com/us/documents/Indexes/Susatainabilty_Factsheet_092716_FIN.pdf.

Tool Profile 27: Mercer ESG Rating

Mercer ESG Rating

TOOL DESCRIPTION

Mercer assesses over 5,000 investment manager strategies on how they integrate ESG risk and opportunities into their strategies, and active engagement with shareholders.

INVESTMENTS COVERED

Mercer's ratings measure the integration of ESG factors into investment strategies.

ESG RATING

The ratings are on a scale of ESG1 (highest ESG integration) to ESG4 (lowest ESG integration).
The criteria used to rate active investment strategies on ESG practices differ according to asset class, such as infrastructure, private equity, and hedge funds. In Mercer's ESG ratings process, they look for ESG factors to be a main driver in investment decisions. These factors include: how ESG factors are integrated and considered in the investment process, whether the investment manager and decision maker have some level of ESG expertise, if ownership is engaged in and aware of the actively managed fund's strategy, and if business leaders within the firm personally invest and believe in ESG-related values.

Mercer also rates passive investment managers on the same scale, ESG1 to ESG4 scale. However, the criteria used to rate these investment strategies are different. Industry collaboration, shareholder voting and engagement, ESG implementation and expertise, and ESG integration in the wider business of the company being evaluated are key factors in these strategies.

RATING SOURCE

Mercer creates the ratings internally. They collect information to develop the ratings through surveys and direct contact with the investment managers.

FINANCIAL INFORMATION

The tool does not measure or provide financial performance information on companies.

ESG FACTORS COVERED

The tool incorporates information on environmental, social, and governance factors.

PROVIDER OF TOOL

Mercer is an advisory company that provides this tool along with services in the following areas: health and benefits, wealth and investments, workforce and careers, and mergers & acquisitions.

COST OF TOOL

The tool is fee-based. Pricing is customized based on a client's needs and types of assets and ranges from $50,000–$60,000 per year.

TOOL WEBSITE

The tool can be found at https://www.mercer.com/our-thinking/mercer-esg-ratings.html.

Tool Profile 28: Social (k)

Social(k)

TOOL DESCRIPTION

Social (k)[73] offers ESG investment options and plan administration services to retirement plans and employers.

INVESTMENTS COVERED

Social(k) provides access to ESG investments for retirement plans.

Examples of its investment options include four types of ESG portfolios: Social(k) Fossil Free, Social(k) Low-Cost ESG, Social(k) Target Date, Social(k) Faith Based. Social(k) Fossil Free focuses on climate change issues, Social(k) Low-Cost ESG's main feature is low fees, Social(k) Target Date is designed for those who plan to retire by a certain date, and Social(k) Faith Based focuses on the environment and social justice issues. Social(k) also provides a list of sustainable and responsible mutual funds (from US SIF) and SRI account managers.

ESG RATING

Social(k) does not provide an ESG rating system.

RATING SOURCE

Social(k) does not provide an ESG rating system.

FINANCIAL INFORMATION

Social(k) provides information about historical returns and investment allocation for the ESG investments.

ESG FACTORS COVERED

The ESG investments available through Social(k) services incorporate information on environmental, social, and governance factors.

PROVIDER OF TOOL

Social(k) acts as a third-party administrator for retirement plans.

COST OF TOOL

The services provided to retirement plans are fee-based. Social(k) charges an annual fee of $250 per plan and $10 per plan account.

TOOL WEBSITE

The tool can be found at https://socialk.com/responsible/investments/socialk-esg-portfolios/.

[73] Social(k) is a company and its services are the tool that is described in the profile.

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APPENDIX C – SUMMARIES OF ESG RATING METHODOLOGIES

Appendix C provides summaries of the methodologies used to create the ESG tool ratings discussed in this report. Twenty-three summaries are included *only* for ESG tools that release information about their methodology to the public. The summaries outline, where information is available: (1) the rating format and range of values, (2) the general uses for the rating, (3) the specific ESG criteria used for the rating, (4) the sources of information used for the rating, and (5) the specific process used to create the rating. Tools that do not provide ratings are excluded from this appendix.

Morningstar Sustainability Rating (Tool 1)

The Morningstar Sustainability Rating is a numeric score that evaluates the extent to which mutual funds manage environmental, social, and governance issues. Morningstar uses Sustainalytics company-level ESG scores on more than 6,500 companies worldwide and controversy scores on more than 10,000 companies worldwide to assess its mutual funds at the portfolio level. The Sustainalytics methodology is discussed in more detail later in this section.[74]

SocialFunds.com (Tool 2)

SocialFunds.com offers research and financial data regarding Socially Responsible Investing (SRI) oriented mutual funds in addition to company-level data that addresses ESG performance. The Natural Investments provides the Heart Rating included on SocialFunds.com and rates the ESG performance of a collection of these SRI mutual funds. The Heart Rating is a score from 1 to 5 hearts that covers the breadth and depth of social responsibility criteria. The rating solely evaluates the mutual fund; it does not evaluate holdings within the fund.

The Rating's methodology examines the avoidance and affirmative screening ESG selection methods used by the fund, shareholder advocacy (governance), community investing (social), and the research process that a firm uses. It weights the fund's screening and research as the largest component of the Rating. A fund that conducts proactive affirmative screening, including companies in its holdings based on their commitment to ESG values in their practices and production, receives the highest score in this category. Funds that conduct negative screening, excluding companies with products not aligned with ESG values, receive the next highest score. Those funds that include a company most committed to ESG values in a sector, without forsaking the sector itself, receive the lowest score.

The Heart Rating equally weights Shareholder Advocacy and Community Investment for the remaining components of the rating. Funds that take a more active role in promoting shareholder advocacy within the companies they hold receive a higher rating than those taking a more passive role. For the

[74] Detailed information on the methodology used to calculate the Morningstar Sustainability Rating can be found at https://corporate1.morningstar.com/Morningstar-Sustainability-Rating-Methodology-2/.

Community Investment criteria, funds that include companies that directly lend microcredit, for example, receive a higher score than those funds that invest in companies that invest in agency securities and corporate bonds.

SocialFunds collects information on these criteria from each fund manager using a questionnaire specifically developed to capture these issues. In addition, SocialFunds evaluates fund prospectus information using these three factors of ESG.

The 5-level Heart Rating is based on ranking the funds in equal 20 percentile buckets. The lowest 20% are given a score of 1 and the highest 20% are given a score of 5. This 5-level Heart Rating is generated separately for three categories: shareholder advocacy, community investing, and avoidance and affirmative screening.[75]

Bloomberg ESG Disclosure Score (Tool 5)

The Bloomberg ESG disclosure score is a numeric score from 1 to 100 that scores individual companies on their disclosure and transparency regarding environmental, social, and governance characteristics. Investors can use the Bloomberg ESG disclosure score to create custom ESG scores based on what variables or data points they find important. The investor can then share and inspect ESG scores for a subset of companies of interest.

Over 20,000 companies across more than 50 countries are scored based on information from company-sourced filings such as Corporate Social Responsibility reports, annual reports, company website, and Bloomberg surveys sent directly to the company. These ratings are a supplement to the Bloomberg Professional service that Bloomberg provides.

Bloomberg's ESG ratings are based on separate characteristics related to environmental, social, and governance issues. Environmental variables include data points related to carbon emissions, climate change effects, pollution, waste disposal, and renewable energy. Social variables include data points related to supply chain management, company discrimination lawsuits, political contributions, human rights abuses, and community relations. Governance variables include data points related to executive compensation, shareholder rights, staggered board of directors, and independent directors. However, all data points can be translated back to documents and filings from the company being scored.[76]

Sustainalytics Company ESG Reports (Tool 6)

Sustainalytics integrates quantitative and qualitative ESG insights into customer's investment processes. Their research methodology addresses a broad range of high-level ESG issues and trends that significantly affect each industry and company. Sustainalytics' research process uses data disclosed by companies (the companies that are rated) as well as those from media sources and nongovernmental organizations' reports.

Each ESG report highlights key indicators that are essential in assessing how good companies manage their exposure to key EGS issues. Sustainalytics defines the key ESG issues as the most material areas of exposure that determine key management areas for the company. Sustainalytics identifies these key

[75] Detailed information on the Heart Rating is available at https://www.naturalinvestments.com/using-the-social-rating/.
[76] Detailed information on the methodology used to calculate the Bloomberg ESG disclosure scores is available at: https://www.cfaboston.org/docs/ESG/BloombergLookBeyond2014.pdf.

ESG issues based on the following: an analysis of the peer group and its broader value chain, a review of companies' business models, the identification of key activities associated with environmental and/or social impacts, and an analysis of the business impacts that may result from inadequate management of these factors.

Performance on ESG issues is analyzed by comparing the company on a comprehensive set of core and sector-specific metrics. Based on the comparison, companies are then scored on these metrics and the scores weighted to determine the company's overall ESG performance. Each industry has a customized weight matrix that defines the relative importance of each metric and reflects the emphasis on key ESG issues per industry.

Sustainalytics also assesses companies by their level of involvement in major controversies or incidents that influence the environment and associated business risks. A company's involvement in controversy could indicate that the company's management systems are not sufficient to protect it from its ESG risk exposure. Controversy analysis includes a forecast of how the ESG rating will be affected over the next 12 months based on the category of the controversy.[77]

OEKOM Corporate Ratings (Tool 7)

Oekom Corporate Ratings assess a company's social and environmental performance of a company. The ratings system covers 5,500 companies in 56 countries. Oekom's coverage includes companies in large national and international indices, as well as companies leading sustainable social and environmental practices. Oekom's rating system consists of about 100 different social and environmental criteria for each individual company that result in an A+ to D- grade rating.

An important component of this rating process is close collaboration with the individual company. To calculate each rating, Oekum relies on company reports and documentation as well as interviews with company representatives. Additionally, Oekom employs a variety of independent experts to calculate the ratings. Oekum also collects external information through media scraping, interviews with independent experts (specifically, experts in environmental and social topics, such as sustainability, human rights, and employer rights), and assessments from independent specialists from NGOs, government agencies, business associations, research institutions, and other credible sources.

Oekom uses 700 total environmental and social criteria, however approximately 100 apply to each individual company based on industry specific factors. Environmental criteria include eco-efficiency, environmental products and services, and environmental management practices. Social criteria include fair treatment of staff and suppliers, societal and product responsibility, and strong business ethics.

Oekom calculates two scores, one for a company's social-based performance and one for a company's environmental-based performance. These two scores are combined to generate a single Corporate Rating. The combinations of scores differ for each rating; for example, a company in the automobile industry will have a higher weight on their environmental score than their social score. [78]

[77] Detailed information about the Sustainalytics ESG Research and Ratings is available at http://www.sustainalytics.com/esg-research-ratings/.

[78] Detailed information on Oekom's Corporate Ratings methodology is available at http://www.oekom-research.com/index_en.php?content=rating-methodik.

ISS QualityScore (Tool 8)

The ISS QualityScore is a numeric ranking from 1 to 10 that scores individual companies on four different governance themes, as well as an aggregate ranking for all four governance themes. Over 5,600 publicly traded companies across more than 30 countries are scored, including companies from investment indices such as the Russell 3000 and the S&P/TSX Composite that track the largest companies in the stock market. ISS provides a data verification system that allows companies to verify the quality of the data used to create their QualityScore and make any necessary change requests to ISS.

ISS QualityScore ratings are based on 220 questions falling under four themes related to company governance: (1) company board of directors, (2) company audits, (3) shareholder rights, and (4) compensation. Board of director data points include factors such as the number of women directors that serve on the board, the proportion of independent directors on the board, and the number of outside directors on the board. Audit data points include factors such as the tenure of an external audit, non-audit fees as a percentage of total assets, and adverse auditor opinions. Shareholder rights data points include factors such as voting rights of different classes of stock, number of shares designated as depositary receipts, and if the company has an absolute voting right ceiling. Compensation data points include factors like whether there is a cap on CEO bonuses, the ratio of CEO total compensation to next highest paid compensation, and whether the company provides loans to executives.

Answers to these 220 questions are used to calculate a raw numeric score for each company. The final 1-10 numeric ranking is based on these raw numeric scores and represents the decile ranking that a company's score falls under when compared to other companies in a specific region or investment index. The first decile represents the highest scores while the 10th decile represents the lowest scores.[79]

Covalence EthicalQuote ESG Ratings (Tool 9)

The Covalence EthicalQuote ESG Rating is a numeric score that measures a company's reputation on environmental, social, and governance factors. The score can be negative or positive and include fraction values (i.e. 35.5). The numeric score is accompanied by a ranking (on an A–E scale).

The universe of companies for the score consists of 2,800 companies across the globe within 18 sectors, plus the 100 largest companies from the Swiss Performance Index. Covalence EthicalQuote ratings are based on separate characteristics related to seven categories: (1) Governance, (2) Economic, (3) Environmental, (4) Labor Practices, (5) Human Rights, (6) Social, and (7) Product Responsibility. The environmental category is like the environmental category in the traditional ESG framework and the governance category is like the governance category in the traditional ESG framework. The remaining five categories map to the social category in the traditional ESG framework. Environmental variables include news items relating to impact of products on nature and animals, reuse and recycling of products, and compliance with environmental standards. Social variables include news items related to humanitarian actions, impacts on local communities, and contributions to political parties. Governance variables include news items related to stakeholder engagement, governance structure, and board independence.

Companies are scored based on aggregated online documents that include environmental, social, and governance factors. These documents come from three sources: search engines, individual websites,

[79] Detailed information on the methodology used to calculate the ISS QualityScore is available upon request at: https://www.issgovernance.com/solutions/iss-analytics/qualityscore/.

and user-based submissions via e-mail or Covalence's contact form. Information and data for the ratings are gathered through news items resulting from search engines, websites, and correspondents. The search engine scours the web for information coming from the companies themselves, the media, blogs, NGOs, consultants, trade unions, international organizations, governments, and academia. Covalence also follows individual websites for news updates and gets information from reader submission of content.

News items are translated to data points by conducting sentiment analysis and determining how many positive and negative criteria the news item hits on based on a total of 50 criteria spread across the seven categories above. News items can match at most five criteria, so the maximum score for each news article can be +5 or -5.

The ratings methodology for the Covalence EthicalQuote score is based on the integer scores that result from their sentiment analysis of online content. The first score is taken by summing together the positive and negative news items ($Score = Positive\ News - Negative\ News$). The score is then divided by the total absolute value of points awarded to a company ($Rate\ Score = Score/(Positive\ News + Negative\ News$), giving the rate of positive news of all the company's current news. Next, the raw score is multiplied by the rate score calculated, ($Rate\ Adjusted\ Score = Score * Rate\ Score$). Lastly, the final EthicalQuote score is calculated by multiplying the rate adjusted score with a sum of EthicalQuote scores from previous time periods weighted to place more importance on recent scores. The Ethical Quote equation is calculated as follows:

$$EthicalQuote(t) = Rate\ Adjusted\ Score * \sum_{i=i}^{T} EQ(t-i) * (1 - (.02 * i)$$

The final EthicalQuote score is given a grade from A–F based on its ranking for each of the seven umbrella categories.[80]

RobecoSAM Corporate Sustainability Assessment (Tool 10)

The RobecoSAM Corporate Sustainability Assessment (CSA) is a questionnaire sent to companies that includes questions on environmental, social, and governance-related issues in their industry. In 2016, 867 companies completed the assessment. RobecoSAM invites 3,400 companies, the world's largest publicly traded companies in 60 different industries, to participate in the survey. Each question is scored on a scale of 1 to 100. Once the scores for each question are tabulated, the questions are rolled up into larger criteria categories. The companies are then ranked against their peers in each criterion and assigned a score based on their percentile ranking from 1 to 100. The questions within a criterion are weighted so that some questions are more important in determining a criterion score than others. The question weights for each criterion are posted on RobecoSAM's Corporate Sustainability Assessment website. Companies assessed by RobecoSAM's CSA are included in the ESG ratings and rankings of other providers, such as the Dow Jones Sustainability Index (DJSI) World Index.

The questions in RobecoSAM's CSA consist of two general categories: transparency-based questions and performance-based questions. Transparency questions relate to a company's ability to disclose information, such as whether the company reports the number of women managers in its corporate

[80] Detailed information on the methodology used to calculate the Covalence EthicalQuote scores is available at http://www.ethicalquote.com/docs/CovalenceEthicalQuoteMethodology.pdf.

structure. Performance questions relate to the actual number of women managers in its corporate structure. Both the transparency and performance sets of questions cover governance, environmental, and social factors. In addition, governance, environmental, and social factors are included in the questionnaire for each industry. However, based on the industry, the weights and types of questions may change. For instance, an electric utilities company will have a higher weight on environmental questions than a banking or pharmaceutical industry. Specifically, examples of governance related issues include questions on codes of business conduct, marketing practices, and supply chain management. Questions on environmental issues include biodiversity issues, climate change strategies, and water-related risks arising from companies. Questions on social issues include human capital development, occupational health and safety, and philanthropy. The questions themselves are formatted in mostly quantitative ways to ensure a standardized scoring process, however some questions are qualitative or subjective. In these instances, RobecoSAM analysts evaluate the response based on a predefined scoring system that can be converted to a quantitative score.

News and media coverage are also built into RobecoSAM's CSA. RobecoSAM uses RepRisk's platform to gather news on companies related to crime, fraud, human rights issues, and other negative news. An additional media coverage-related weight is added to the CSA so that this may affect the CSA score. The weight will vary based on industry.[81]

RepRisk Company Reports (Tool 11)

RepRisk Company Reports and their associated ratings cover 84,000 companies globally in 34 different sectors. The issues that RepRisk reviews cover environmental, social, and governance portions of a company's risk. Environmental issues include global pollution, impacts on ecosystems and landscapes, and animal mistreatment. Social issues include human rights abuses, social discrimination, and forced or child labor practices. Governance issues include fraud, tax evasion, and instances of corruption, bribery, or extortion. RepRisk pays special attention to key and timely ESG-related issues, including gambling, weapons manufacturing, land grabbing, fracking, and other issues when deciding upon their ESG ratings. RepRisk data comes from a proprietary screening tool that screens over 80,000 media and stakeholder sources in 15 different languages. These media sources include government agencies, NGOs, newsletters, blogs, social media feeds such as Twitter, think tanks, and regulator publications.

The RepRisk Rating is a grade based metric that rates companies on a range of AAA to D. The grade measures a company's ESG-related reputational risk exposure (the RepRisk index) against the ESG risk exposure of the respective country and industry group for that company.[82]

MSCI ESG Ratings, MSCI ESG Indexes, and MSCI Fund ESG Metrics (Tools 12, 25, and 4)[83]

The methodology for constructing the MSCI ESG Ratings (Tool 12) includes several steps. First, the data collection process begins with over 140 research analysts assessing over 1,000 indicators based on ESG policies, programs, and performance metrics. These data include information from 65,000 individual directors and 13 years of shareholder meeting results. The data sources come from specialized datasets from the government, NGOs, company disclosure documents such as 10-K's and sustainability reports,

[81] Detailed information on RobecoSAM's CSA is available at http://www.robecosam.com/images/Measuring_Intangibles_CSA_methodology.pdf.
[82] Detailed information on RepRisk Company reports is available at https://www.reprisk.com/content/static/reprisk-esg-business-intelligence_introductory-presentation_short.pdf/.
[83] These two tools are listed together because Tool 25 uses the ratings in Tool 12.

and daily-monitored news sources. Then, the indicators are aggregated to focus on 37 key issues that are selected annually for each industry and weighted. These 37 key issues are used to determine a rating for the environmental, social, and governance components separately and for an overall ESG rating.

For environmental indicators, key issues include carbon emissions, raw material sourcing, toxic emissions and waste, and opportunities in clean technology. For social indicators, key issues include health and safety issues, chemical safety, controversial sourcing, and access to health care. For governance indicators, key issues include corporate pay and tax transparency. Companies are rated on a 1-10 scale for each key issue. Next, ratings are calculated for each company relative to the company's industry and are weighted according to importance of the component issues for that industry. Formal review of the issue weights is conducted at the end of the year. Finally, a AAA to CCC rating for each company is calculated by normalizing scores within the company's respective industry.

MSCI ESG Indexes (Tool 25) provide 180-190 indices to track companies with strong environmental, social, and governance profiles. The ESG indices are constructed based on a "Parent," non-ESG-oriented index. For example, the MSCI USA ESG Universal Index starts out with a potential universe of companies based on the MSCI USA Index. MSCI then reweights and screens securities based on its ESG rating.

Indices are created by excluding stocks of companies with the weakest ESG ratings or missing scores. Stocks are also excluded if the company has severe controversies regarding ESG issues, such as being involved with controversial weapons manufacturing. The remaining stocks are re-weighted based on the market capitalization weights of the respective industries in the parent, non-ESG index.

MSCI Fund ESG Metrics (Tool 4) also use the MSCI ESG Ratings. MSCI Fund ESG Metrics provides the ESG Quality Score, which is a weighted average of the ESG Ratings of the issuers of each fund's holdings. The percentile ranks assigned to each fund are based on each fund's ESG Quality Score in comparison to the ESG Quality Scores of all other funds and funds in its peer category.[84]

FTSE ESG Ratings and FTSE4Good Indices (Tools 13 and 23)

FTSE4Russell's ESG ratings cover 300 indicator variables across 14 themes that fit into three pillars that relate to environmental, social, and governance practices. Environmental variables include data points related to water use, climate change effects, biodiversity, and pollution. Social variables include data points related to customer responsibility, human rights and community issues, labor standards, and health and safety practices. Governance variables include data points related to anti-corruption practices, tax transparency, risk management, and governance. Criteria to create variables are not described, such as transforming variables to threshold variables or the methodology used to create any new variables. All data points fall under the oversight of an independent committee of experts from the investment community, companies, NGOs, unions and academia. Criteria are based only on publicly available data and do not involve any data privately provided by a company.

The FTSE4Good Indices is a series of 17 indices that consists of companies that rate highly on environmental, social, and governance characteristics and are a subset of the universe of companies in

[84] Detailed information on these MSCI tools is available at:

- MSCI ESG Ratings https://www.msci.com/documents/1296102/1636401/MSCI_ESG_Ratings.pdf
- MSCI ESG Indexes https://www.msci.com/documents/10199/242721/MSCI_ESG_Indexes.pdf/42ef2d23-c4ef-4672-8476-52bbb8c98cca
- MSCI Fund ESG Metrics https://www.msci.com/esg-fund-metrics

the FTSE Global Equity Index series. These non-ESG indices cover 7,400 securities across 47 different countries. For example, the FTSE4Good Global Index may consist of any of the companies currently in the FTSE Developed Index, an underlying index of conventional investments. Each constituent of the underlying index is rated based on FTSE's ESG Ratings model. This model rates companies on a scale of 1 to 5. This rating system is used as a criterion for inclusion into various FTSE4Good indices. A company will be included in an ESG-related index for the developed market if the ESG rating of the company is 3.1 or higher. For ESG-related indices based on emerging markets, an ESG rating of 2.0 is required. Once included, a company may be removed from a developed market index if they receive an ESG rating below 2.5. For an emerging market, the removal threshold is 1.8. Companies that produce tobacco, weapons, weapon components, or coal are automatically excluded. Companies involved in sensitive areas, such as nuclear power generation, are subject to additional constraints besides the ESG rating for inclusion.[85]

HIP Investor Ratings (Tool 14)

The HIP Investor Ratings cover over 32,000 investments from across the global and asset classes. Among these are more than 5,770 companies, 26,700 bond issuances, 100 real-estate investment trusts (REITs), and over 1,000 mutual funds and ETFs. Each investment is rated on a scale of zero to 100 that represents the company's sustainability. HIP defines sustainability as a combination of financial return and human impact and reports that their ratings quantify 84% of an investment's market value that cannot be explained by balance sheet data.

The HIP Investor Ratings are built on three dimensions: Operational Outcomes, Products and Services, Management Practices. HIP assesses each company's sustainability along these dimensions using a construct that they term the five "impact pillars:" health, wealth, earth, equality, and trust. These dimensions and themes are intended to holistically address future risk, return potential, and net effect on society. HIP collects the data for their quantitative assessment from company annual reports, as well as publicly available data from other sources such as governments and non-profits.[86]

Thomson Reuters Corporate Responsibility Ratings (Tool 15)

The Thomson Reuters Corporate Responsibility Ratings (TRCRR) measure the ESG performance of over 4,600 companies globally. The TRCRR are based on data provided by ASSET4, a leading global provider of ESG data. ASSET4 collects data on over 500 individual ESG criteria from multiple sources including company reports, company filings, company websites, NGO websites, CSR Reports, and established and reputable media outlets.

The full rating process produces three numeric values for each company screened. First, there is a raw score on a scale of 0 to 1. These raw scores are calibrated to be robust over time while also robust relative to each company's peer group. Second, the raw scores are normalized and adjusted for skewness and the differential between the mean and the median of all the scores. These normalized scores are then fitted to a bell curve to derive ratings between 0 and 100 for each company. Third, percentile ranks are calculated for all companies screened, based on a company's normalized raw score.

[85] Detailed information on the methodology used to create the FTSE4Good indices is available at http://www.ftse.com/products/downloads/f4g-index-inclusion-rules.pdf.

[86] Summary information on HIP Investor Ratings is available at http://hipinvestor.com/how-clients-use-hip/ratings/.

The TRCRR follow the convention of ASSET4's classification by using three pillars. The environmental pillar consists of three categories: emission reduction, product innovation, and resource reduction. The social pillar has seven categories: community, diversity, employment quality, health-and-safety, human rights, product responsibility, and training-and-development. The governance pillar has five categories: board functions, board structure, compensation policy, shareholders' policy, and vision-and-strategy.[87]

Vigeo Eiris Sustainability Rating (Tool 16)

Vigeo Eiris provides ESG research and tools to investors. Their Vigeo Eiris Sustainability Ratings span over 3,200 companies and consider performance on all ESG factors (environmental, social, and governance). Their analytical framework incorporates recommendations from the United Nations, International Labour Organization, Global Compact, European Union, and others. This framework considers six risk factors: environment, community involvement, business behavior, human rights, governance, and human resources. These factors may or may not be included in the composite score assigned to each company, depending on the business sector, and each component is weighted depending on its importance in an individual company's business model.

Vigeo Eiris next maps these risk factors into three pillars: leadership, implementation, and results. Vigeo Eiris selected these pillars due to their broad applicability across business models, and their relationship to practical results. Each of these pillars is rated from multiple angles to form a composite score. Leadership is assessed on visibility, exhaustiveness, and ownership. Implementation is assessed on means, scope, and coverage. Results are scored via indicators, stakeholder feedback, and the company's responsiveness. The final ratings fall on a scale of zero to 100. Vigeo Eiris considers 0–30 to be weak, 31–50 to be limited, 51–60 to be robust, and 61–100 to be advanced.

The Vigeo Eiris Sustainability Rating methodology is certified by ARISTA. This standard indicates that the Vigeo Eiris tool has passed an audit of the quality, integrity and the transparency of the methods.[88]

Solaron emRatings (Tool 17)

Solaron emRatings are a global ESG ratings product that rates over 900 stocks originating in over 40 countries on various practices in environmental, social, and governance issues. The emRating can be integrated with the tools that Solaron provides to its clients, such as the Global ESG Performance Tracker and the Global Newsfeed. The performance tracker is a platform that can be used to look at various ESG metrics and can be customized to the user. The Newsfeed is a database of global ESG-related news that has been drawn from over 3,000 sources.

emRatings are based on 400 general and 200+ industry-specific indicators that can be grouped into separate environmental, social, and governance categories. Solaron analysts extract data from company website and publicly available company reports to collect the information for these indicators. These reports include a company's annual reports, sustainability reports, corporate social responsibility reports, codes of conduct, and other company filings. Solaron analysts also investigate news sources to collect additional information to factor into scores. In addition, Solaron reaches out to stakeholders and

[87] Detailed information on Thomson Reuters Corporate Responsibility Ratings is available at https://www.thomsonreuters.com/content/dam/openweb/documents/pdf/tr-com-financial/methodology/corporate-responsibility-ratings.pdf.
[88] Detailed information on Vigeo Eiris Sustainability Ratings is available at http://www.vigeo-eiris.com/en/vigeo-eiris/methodology-quality-assurance/.

relevant interviewees, such as customers, employees, competitors, regulatory bodies, suppliers, and other parties. Once all the data are collected, the company is scored based on the 600+ indicators within each ESG category and each indicator is given industry-specific weights. The weighted score of each indicator is aggregated up to its respective ESG category to create a separate environmental, social, and governance score. Finally, these separate ESG scores are combined to create an overall weighted average score.[89]

Inrate Sustainability Rating (Tool 18)

Inrate's tool is primarily used by financial institutions and institutional investors. Inrate explicitly connects the information provided in their tool to methods for engaging companies on sustainability issues and indicates that their tool can be used to follow the UN Principles for Responsible Investment. While the ratings are primarily produced by Inrate's in-house staff, the organization partners with multiple experts such as the Green Design Institute at Carnegie Mellon University and INFRAS, a policy consultancy.

Inrate's first step in developing a company's sustainability rating is identifying the most appropriate sector for the company. For some companies, this assignment will not correspond with how the company is usually classified, for example for a financial index. However, Inrate prioritizes a classification that matches the final purpose of a company's products and services. For example, a car manufacturer would be categorized as transportation rather than manufacturing. From the sector identified, Inrate uses metrics that correspond to sector-specific sustainability issues. The goal is to identify companies that achieve high levels of sustainability relative to their peers. After the quantitative assessment is complete, Inrate's analysts perform a qualitative review where adjustments may be made. While the quantitative results are based on company reports, the qualitative assessment is based largely on observable results. Inrate's final Sustainability ratings are reported as letter grades where an A would be considered a safe investment, B would be good, C merits concern, and a D rating would be considered very problematic.[90]

CDP Open Data Portal (Tool 19)

CDP (formerly called the Carbon Disclosure Project) is a global non-profit that focuses on environmental sustainability. CDP performs research on over 5,600 companies and 533 cities across 90 countries and focuses on risks associated with climate change, forests, greenhouse gas emissions, and water. The purpose of the CDP rating (called the CDP Disclosure Score) is to measure the degree to which entities have assessed, disclosed, and engaged with their environmental impact. A high score does not directly indicate high performance on environmental issues. Instead, it measures a company's level of engagement with the issues. The data for CDP's analyses are voluntary disclosures from rated entities via a questionnaire.

Companies that respond to the questionnaire are assessed on four levels of environmental stewardship: disclosure, awareness, management, and leadership. Disclosure is the most basic level of environmental stewardship and leadership is the highest. Companies can accumulate points for each level and are scored based on what percentage of the total points they accumulate. However, if companies rate

[89] Detailed information on the Solaron's emRatings is available at http://www.solaronworld.com/downloads/emRatings_Factsheet.pdf.
[90] Detailed information on the Inrate Sustainability Rating is available at http://inrate.com/Site/Approach/Sound-Understanding.aspx.

poorly on a low level (i.e. disclosure), they do not accumulate points on higher levels. Point scores are converted to letter grades based on the highest level they achieve. Companies that merely disclose environmental data receive D grades while companies that show leadership on environmental issues receive A grades.[91]

ISS-IW Financial Score (Tool 20)

The IW Financial Score is an ESG tool that includes a platform where users can define their own criteria and receive customized ratings that facilitate comparisons among companies. The IW Financial Score covers a broad range of environmental, social, and governance issues. In January 2017, Institutional Shareholder Services Inc. (ISS) acquired IW Financial, an ESG research firm. The IW Financial Score tools are still marketed independently through ISS. However, ISS intend to integrate them with their existing QualityScore tool that focuses specifically on governance issues. ISS expects to launch the combined product at the end of 2017.[92]

Thomson Reuters Corporate Responsibility Indices (Tool 21)

Thomson Reuters Corporate Responsibility Indices consist of 12 indices and include companies with strong ESG practices. The indices are derived from an underlying index published by S-Network Global Indices. The Corporate Responsibility Indices are mapped to the S-Network Global Indices based on similar regions and capitalization sectors. For instance, the Thomson Reuters Corporate Responsibility Large Cap ESG Index has a potential universe of companies that consists of all companies that are included in the S-Network U.S. Equity Large-Cap 500 Index. The Corporate Responsibility Indices take a subset of the companies in the S-Network equivalent based on their rating from Thomson Reuter's Corporate Responsibility Ratings. This ratings system scores approximately 4,600 companies worldwide.

To construct the Corporate Responsibility indices, each of the companies in the underlying index are separated by one of ten industry sectors. The stocks that correspond to the highest 50% of Corporate Responsibility rating for each of the ten sectors are included in the Corporate Responsibility index. Each stock is then weighted within its sector based on two factors. The first factor is the float market capitalization of the stock compared to other stocks in a similar sector. The second factor is the stock's Corporate Responsibility rating. After the stocks are weighted within sector, the entire index universe is examined. Each sector is reweighted based on the representation of that sector (in terms of market capitalization) in the underlying index. Each index is reviewed during scheduled quarterly reviews. Changes to the index include weight adjustments, and additions/deletions to the index. Additions and deletions are executed in December or when a stock undergoes deletion in the underlying index.[93]

Calvert Responsible Indices (Tool 22)

The Calvert Responsible Indices are a group of seven indices tracking companies with strong environmental, social, and governance practices. The indices initial universe is based on the universe of the corresponding non-ESG index based on geography and market capitalization, such as the S-Net 1000 U.S. Large Cap Index (SN1000), or companies that are involved in specific ESG-related practices, such as

[91] Detailed information on the CDP Ratings is available at https://www.cdp.net/Documents/Guidance/2016/Scoring-Introduction-2016.pdf.
[92] Information on the IW Financial Score is available upon request at: https://www.issgovernance.com/esg/iwfinancial/
[93] More detailed information on Thomson Reuters Corporate Responsibility Indices can be found at http://financial.thomsonreuters.com/content/dam/openweb/documents/pdf/tr-com-financial/methodology/corporate-responsibility-indices-methodology.pdf.

water research or global sustainable energy research. Each company in the initial universe for Calvert's responsible indices is given an ESG score calculated from Calvert.

Calvert's ESG ratings are based on separate characteristics related to environmental, social, and governance issues. The score is calculated from multiple data inputs within these three ESG factors and companies are scored within their common industries. Companies are included in an index if their Calvert ESG scores meet specific inclusion requirements. Companies are reviewed on an ongoing basis to determine whether the company should continue to be included or be excluded from the respective index by Calvert's Responsible Research Review Committee. Calvert's Responsible Research Review Committee oversees all aspects of the ESG research process. The composition of the index is weighted based on the market capitalizations of the ten largest industries in the respective non-ESG index. Therefore, companies in larger industries receive larger weight in the responsible index, correctly reflecting their weight in the general market.[94]

Dow Jones Sustainability Indices (Tool 24)

The Dow Jones Sustainability Indices is a series of 29 indices that consists of companies that rate highly on environmental, social, and governance practices. The initial universe for each index consists of the companies in the respective non-ESG Dow Jones index. For example, the DJSI World Index may consist of any of the 2,500 largest companies in the S&P Global Broad Market Index (BMI). Each DSJI index may consist of approximately 200 or more companies from these underlying conventional indices. Scores are taken from RobecoSAM's Total Sustainability Score, which is calculated from RobecoSAM's annual Corporate Sustainability Assessment (CSA).

The universe of possible companies for each Sustainability index is reduced to include only the following: (1) companies that participate in RobecoSAM's CSA questionnaire or (2) companies that have a float-adjusted market capitalization above a specified threshold. This threshold differs for each index, but ranges between $100 million and $500 million. The companies are then grouped by region and industry. Once the companies are separated into region/industry combinations, Dow Jones will sum up the market capitalization of all the selected companies in each region/industry combination. If the summed market capitalization does not meet the threshold of 50% of the conventional companies' market capitalization for that region/industry combination, Dow Jones will add companies to the DJSI region/industry combination until the 50% threshold is met. These companies are added to the region/industry combination in descending order of market capitalization. After this population of companies is finalized for each Sustainability index, all companies that have a Total Sustainability Score less than 40% of the highest scoring company in the index are removed. The final set of companies included in the index are selected by ranking the companies from the last step by their Total Sustainability Score and taking those that are in the top percentile of Sustainability scores. This percentile differs for each index, but ranges between 10–30%. Companies with scores that are within 0.3 points of the last selected company will also be included. Companies are then weighted in the index based on industry-specific market capitalizations of the underlying conventional index.[95]

[94] Detailed information on the Calvert Responsible Indices is available upon request at https://www.calvert.com/calvert-responsible-indexes.php.

[95] Detailed information on the methodology for the Dow Jones Sustainability indices is available at http://us.spindices.com/documents/methodologies/methodology-dj-sustainability-indices.pdf.

Morningstar Global Sustainability Index Family (Tool 26)

The coverage universe of the Morningstar Global Sustainability indices draw from the large- and mid-capitalization subsets of the Morningstar Global Equity Indexes, which represent 90% of global market capitalization in developed and emerging markets.

The indices are created through a series of steps. Companies manufacturing controversial weapons (including anti-personnel mines, cluster munitions, and chemical or biological weapons) or derive more than 50% of revenue from tobacco products are excluded from the coverage universe. Then, a company level ESG score on a scale of 0 (low) to 100 (high) is applied based on a company's management systems, practices, policies, and other ESG indicators. Additionally, a Controversy Score gauges the seriousness of incidents related to company from 1 to 5 (low to severe). The two scores are combined to create the Company Sustainability Score. Next, stocks are selected in priority order of their Sustainability Scores until they reach 50% coverage by float-adjusted market capitalization of the parent index. Eligible companies that have experienced serious controversies are excluded from the index. Lastly, the index constituents are weighted according to the same benchmarks (e.g. by region or industry) in their parent index. The weights in the Sustainability indices are within zero to two percentage points of the parent index's corresponding weights.[96]

Mercer ESG Rating (Tool 27)

Mercer provides ESG ratings for more than 5,000 active investment strategies. The ESG rating is qualitative and ranges from ESG1 to ESG4, with ESG1 being the rating that corresponds to strong ESG integration in their investment process. The criteria used to rate investment strategies on ESG practices differ by asset class, such as infrastructure, private equity, and hedge funds.

Mercer's ESG ratings focus on four factors:

1. How are ESG factors integrated and considered in the investment process?
2. Does the investment manager and decision maker have some level of ESG expertise?
3. Is ownership engaged in and aware of the actively managed fund's strategy?
4. Do business leaders within the firm personally invest and believe in ESG-related values?

The ratings criteria above are collected through surveys and talking with the investment manager.

Mercer also provides another ratings system, the ESG(P) ratings. This rating scale is used to assess passive investment managers. This rating is on the same ESG1 to ESG4 scale. However, the criteria used to rate these investment strategies are different. Key factors in the ESG(P) rating process include industry collaboration, shareholder voting and engagement, ESG implementation and expertise, and ESG integration in the wider business of the company being evaluated.

[96] Detailed information on the Morningstar Global Sustainability Index Family is available at https://corporate.morningstar.com/us/documents/Indexes/Susatainabilty_Factsheet_092716_FIN.pdf.