

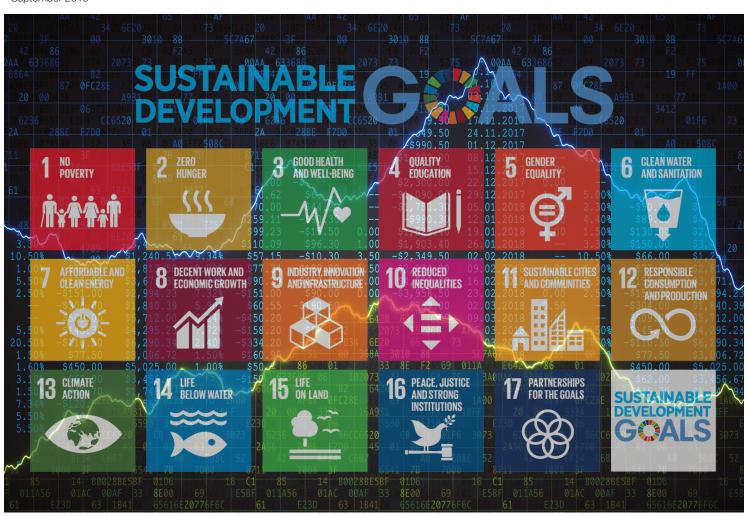


COMMITTED TO IMPROVING THE STATE OF THE WORLD

Community Paper In Collaboration with IEX Group

Unlocking Capital Markets to Finance the SDGs

September 2019



World Economic Forum 91-93 route de la Capite CH-1223 Cologny/Geneva Switzerland

Switzerland
Tel.: +41 (0)22 869 1212
Fax: +41 (0)22 786 2744
Email: contact@weforum.org

www.weforum.org

© 2019 World Economic Forum. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, including photocopying and recording, or by any information storage and retrieval system.

Contents

Foreword	5
Task Force Overview	6
Capital markets represent a powerful mechanism to catalyse digital financing of the SDGs	7
Harnessing capital markets to finance the SDGs is not without impediments	10
Realizing the SDGs requires multi- stakeholder collaboration	13
Recommendations informed by convenings and research	14
Challenge: Risk vs Reward — How to evolve the definition of material information	15
Challenge: Impact Measurement — Getting to consensus on defining and measuring imapet	16
Closing Summary	17
Endnotes	18
Appendices	19
Acknowledgements	25

Foreword



Richard Samans, Managing Director and Member of Managing Board, World Economic Forum



Brad Katsuyama, Chief Executive Officer and Co-Founder, IEX

On behalf of both IEX and the World Economic Forum, it's our honour to serve on the United Nations Task Force on Digital Financing of the Sustainable Development Goals (SDGs). We believe it is critical to apply the lessons learned from the digital finance and data revolution to the Earth's most urgent problems.

Convening stakeholders – whether they are investors, corporations or governments – to improve systems, including markets, economies, and society, is at the core of both of our organizations. We believe in the power of entrepreneurship in the global public interest and in the role of capital markets in supporting a vibrant economy.

This report summarizes insights generated by a diverse group of influential institutional investors and their advisers – all specialists in sustainability – in order to explore how the global capital markets can better accelerate progress on the SDGs. The key takeaway is a startlingly simple framework: harnessing the digitalization of finance requires **the right Data that drives Decisions to deploy Dollars**.

Our other takeaway: some of the brightest minds in capital markets are bringing key tools and innovations to sustainable investing and achieving the SDGs. We are confident the best is yet to come, and while there is still hard work to be done, the insights from this collaboration will propel our work forward.

We thank the esteemed participants who lent their deep expertise to this undertaking, and we are proud to offer this report as a contribution to the broader discussion and collective body of knowledge.

Task Force Overview

Financial and monetary systems have evolved continuously over time; however, the rate of change currently experienced far surpasses historical trends in terms of magnitude and speed. The Fourth Industrial Revolution, characterized by a range of new technologies that are fusing the physical and digital worlds, is impacting all disciplines, economies and industries in unprecedented ways.

The financial services sector, as the cornerstone of economic activity, is at the epicenter of this broad-based digitalization. Be it the explosion in alternative data available to investors to assess investment opportunities, the growing prevalence of Artificial Intelligence (AI) and Machine Learning (ML) in analysing and transacting financial decisions, or the use of distributed ledger technologies for bilateral payment netting of currencies, the Fourth Industrial Revolution is driving change across the financial services ecosystem.

For these reasons the UN Secretary General, António Guterres established the Task Force on Digital Financing of the Sustainable Development Goals (hereinafter "the DFTF"). DFTF is mandated to identify how digitalization will reshape finance and to identify, theorize, and propose how best this transformation can support the financing of the Sustainable Development Goals (SDGs), which, according to the UN, require an estimated \$5-7 trillion in *annual* investment¹. This undertaking requires consideration of the broader context of finance, technology, and the SDGs, and then narrowing to those areas of SDG financing that are changing due to digitalization.

Four core questions are posed by DFTF:

- What is the current experience in harnessing the digitalization of finance in pursuit of the SDGs?
- What are the high-impact opportunities for digital financing of the SDGs today and in the future?
- What are the main impediments to realizing these opportunities and the risks associated with them, and how might those impediments be overcome?
- What actions are needed by which actors, including the United Nations, to overcome impediments and realize the identified opportunities?

DFTF members Brad Katsuyama, Co-Founder and Chief Executive Officer of IEX, and Richard Samans, Managing Director and Member of the Managing Board, World Economic Forum, agreed to co-lead a subgroup that zoomed-in on institutional capital markets. This specific whitepaper is focused on the role of capital markets in financing the sustainable development goals. With global value of outstanding public equity and debt sitting at \$185 trillion, moving the needle even a small amount among capital markets investors can have dramatic downstream impact for the level of investment capital available to finance the SDGs.

After several months of one-to-one interviews and market

research, on 1 August 2019, IEX Group and the World Economic Forum hosted a convening of asset owners (e.g. pensions, sovereign wealth funds, family offices) and asset managers (e.g. institutional asset managers, private equity and venture capital funds). The gathering brought together an intentionally small and diverse group to share their experiences of investing through an Envrionmental, Social and Governance (ESG) and SDG lens, surface the most impactful areas for change, and develop actionable recommendations that could meaningfully improve the deployment of capital towards SDG-related investments. This paper is informed by the outcome of that convening and related research.

This paper is organized into several sections that summarize our findings to date and tease out areas for further exploration. The paper includes a discussion of:

- The powerful, catalysing role capital markets can play in digital financing of the SDGs
- The impediments to harnessing capital markets to finance the SDGs
- The multistakeholder commitments required to realize the SDGs
- The IEX / World Economic Forum DFTF stakeholder convening on 1 August 2019
- The recommendations that crystalized during the convening

Two key challenges in financing the SDGs emerged from discussions with asset owners and managers:

- There is no common definition of material information that includes SDG-linked disclosures for valuation modeling and risk management purposes. Current financial models either don't consider, or have limited place for SDG criteria. This may lead to mis-priced risk and return analysis and a flawed view of asset performance.
- 2. The lack of consensus on a shared definition of "impact" and associated measurement criteria.

 The definition of impact tends to be highly idiosyncratic

(i.e. it means different things to different people); the way it is measured and monitored is similarly disparate. Investors have yet to agree to a set of common standards in the way they accept and align, for instance, to financial accounting frameworks like Generally Accepted Accounting Principles (GAAP). This misalignment often adds complexity to the investment process and detracts from targeted, SDG-aligned investment.

The proposed recommendations present areas for further consideration. During the remainder of the DFTF term, IEX and the World Economic Forum will continue to explore these areas with interested stakeholders. The goal is to put forward actionable recommendations that live on beyond the term of the DFTF and provide a valuable contribution to achieving the SDGs.

Capital markets represent a powerful mechanism to catalyse digital financing of the SDGs

Capital markets represent an important capital mobilization and deployment mechanism in the digital financing of the SDGs. Recent estimates place global bond markets outstanding value at over \$100 trillion and global equity market capitalization at \$85 trillion². Global bond and equity markets present a major opportunity to deploy capital at scale by harnessing the cumulative firepower of institutional and retail investors.

Capital markets fulfil critical functions within an economy, such as offering consistent access to a broad set of investment opportunities, dynamic pricing, hedging and risk mitigation, liquidity provisioning and a tried and tested transaction-execution mechanism. Each of these core functions are increasingly enabled by digitalization. For example, Al coupled with alternative data sources is raising capabilities around risk analysis that allow for earlier and more accurate risk estimation, which can unearth vulnerabilities in underlying asset holdings3. Furthermore, more markets are digitizing. Estimates suggest that nearly 70% of US Treasuries⁴, over 70% of global spot FX turnover⁶, and 26% (and rising quickly) of corporate bond⁵ volumes are traded electronically. As more markets digitize, more data is generated which creates new ways of assessing risks in near real-time, further cementing the role of capital markets as a critical mechanism for generating, collecting, analysing and distributing data for better economic decision-making⁵.

Digitalization has changed how investors engage with markets by lowering barriers to entry, reducing trading costs by pressuring margins, increasing processing power, and reinforcing the growth in quantity and usability of data. This evolution allows investors to respond to developments in near-real time, fostering ever-deeper analysis, significant efficiency gains and the sprouting up of new business models. For example, companies like Dataminr have stepped in to take advantage of the market for alternative data by enabling traders and investors to access potentially market-moving events and news faster than the competition by using non-traditional data sources like social media, market sentiment and real-time analytics to advance real-time decision making.

These synergistic forces – the interplay of tech-enabled innovations like AI and ML with exponential growth in data – join yet another positive force: growing investor interest in investment strategies that address Environmental, Social and Governance (ESG) criteria, which measure the sustainability and ethical impact of an investment in a company or business.

The GSIA definitions of sustainable investment, published in the *Global Sustainable Investment Review 2012*, have emerged as a global standard of classification. These are:

- Negative/exclusionary screening: the exclusion from a fund or portfolio of certain sectors, companies or practices based on specific ESG criteria
- Positive/best-in-class screening: investment in sectors, companies or projects selected for positive ESG performance relative to industry peers
- Norms-based screening: screening of investments against minimum standards of business practice based on international norms, such as those issued by the OECD, ILO, UN and UNICEF
- **4. ESG integration:** the systematic and explicit inclusion by investment managers of Environmental, Social and Governance factors into financial analysis
- Sustainability themed investing: investment in themes or assets specifically related to sustainability (for example clean energy, green technology or sustainabile agriculture)
- 6. Impact/community investing: targeted investments aimed at solving social or environmental problems, and including community investing, where capital is specifically directed to traditionally under-served individuals or communities, as well as financing that is provided to businesses with clear social or environmental purpose
- 7. Corporate engagement and shareholder action: the use of shareholder power to influence corporate behaviour, including through direct corporate engagement (i.e., communicating with senior management and/or boards of companies), filing or co-filing shareholder proposals, and proxy voting that is guided by comprehensive ESG guidelines.

Investments with a sustainability mandate surpassed \$30 trillion in 2018, up 34% from two years prior⁶. One aspect driving the increase in sustainable investment is generational. According to one recent study, nearly twothirds (64%) of millennials said ESG issues are important in their investing decisions, with Gen Xers reporting 54% and Baby Boomers at 42%7. As investors develop agreedupon systems and protocols to evaluate risk, reward and impact as part of their core investment thesis, fund flows toward sustainable products will rise. Recent global statistics validate this hypothesis. Since the end of 2003, Assets Under Management (AUM) of responsible investment vehicles in the Refinitiv Lipper database, which tracks \$50 trillion in AUM across publically traded investment funds globally, grew from \$285 billion to approximately \$1.4 trillion as of July 2019, with roughly half of said increase (\$514 billion) resulting in fund contributions from investors8.

Global asset managers, such as 17 Asset Management are seizing the opportunity, engaging directly at the nexus of sustainable development, investing and capital markets. Firms like these are increasingly looking at digitalization and specific technologies as enablers of more efficient SDG-linked investment. For example, according to 17 Asset Management, blockchain is very compatible with the structuring of blended finance transactions, which consistently struggle due to their inherent complexity. Distributed Ledger Technology's (DLT) fundamentally open, immutable, and participatory database could aid in raising and distributing capital, reporting impact outcomes and validation, and managing complex deals across a diverse stakeholder base⁹.

Moreover, a growing body of statistical evidence demonstrates that allocating capital toward sustainable investments makes sound economic sense: it is estimated that achieving the SDGs could unlock \$12 trillion in market opportunities globally and create 380 million new jobs¹⁰. Agreement on a shared definition of impact and measuring the effects of deployed capital on attaining the SDGs remains an important, yet elusive, objective of the investment management community.

In terms of asset valuation, positive sustainability scores, and rankings based on ESG criteria, have demonstrated significant predictive power over a company's ability to remain competitive five years out, as well as providing visibility into a company's earning potential¹¹. Reflecting on the benefits of sustainable investing from a risk and reward standpoint, and agreeing with corporates on what ESG and SDG-related risks and information is material to disclose alongside traditional financial risks, is an area of increasing investor interest.

As a result, over the past several years there has been a major increase in vendors offering solutions to asset managers and institutional investors. MSCI ESG Research, Refinitiv, and S&P Global Ratings are among the best known for providing research, ratings and analysis on sustainable business practices on thousands of companies worldwide. Technologies like AI and ML are often leveraged to deliver in-depth insights. Using natural language processing (NLP)

and ML companies like Sensefolio aggregate data from more than 100,000 sources of information — including financial news, quarterly and annual reports, ESG reports, and social media— before providing a sustainability score on the company¹².

Asset Manager: Richmond Global

There are two mega-trends at the centre of 21st century human life: climate change and artificial intelligence. Research illustrates that certain non-financial (ESG/sustainability) metrics have a material impact on the investment performance of corporate and sovereign securities. At present, most investment models and methodologies do not rigorously account for the impact of ESG factors on key indicators of financial performance.

Richmond Global believes it is an investment adviser's fiduciary duty to include all such information into its analysis. The firm has built proprietary machine learning technology – a subset of artificial intelligence – to ingest hundreds of millions of disparate public and private ESG data points to map the materiality of specific metrics to the financial performance of securities across industry, region, and sector. Two recent developments make this approach possible: 1) the dramatic reduction in the cost of computing and 2) availability of usable data, much of which didn't exist even five years ago.

By augmenting the traditional bottom-up fundamental analysis with material information on sustainability, which allows for greater precision around the underlying security valuation due to a more complete risk-analysis process, Richmond Global Compass Fund has outperformed comparable benchmarks. Richmond Global Compass intends to be the flag bearer for using liquid global capital markets not only to achieve outperformance, but also as a catalyst for large-scale, meaningful change in the world

Peter Kellner, Founder & Chief Executive Officer, Richmond Global

Fintech: Tradewind Markets

Investors and industrial buyers are increasingly interested in purchasing metal from sustainable, responsible, conflict-free zones. The market lacks a sufficiently scalable solution that provides transparency on how and where the metal was sourced.

Several issues have converged to produce a unique problem in the precious metals space:

- A concentration of mining projects in countries with a history of conflict, including presence of rebel groups and illicit drug trading.
- Producers, especially smaller-scale, familyowned producers in South America and Sub-Saharan Africa, are unable to harvest the value of their responsible production. In 2018, there was approximately 821 tonnes of gold mined across Africa and another 558 tonnes from Central and South America, making a total of 3,502 tonnes globally.*
- Several high-profile cases involving supply-chain problems — ranging from counterfeit gold bars to sourcing of gold from conflict zones. In one case, a US based gold refiner was barred from trading precious metals for allegedly conspiring to import illegally mined and smuggled gold from South America, totaling \$3.6 billion.

By the end of 2019, Tradewind will launch functionality that embeds supply chain information directly into digital records of ownership. Producers will tag their output with the country and mine of production. The Canadian Mint, the sovereign depository that stores the metal and recognizes Tradewind's ledger as the official title record, will verify receipt of the metal before recording it on the ledger. Over time, investors, banks, and refiners can select responsible counterparties and choose metal with verifiable provenance. The functionality will provide primary suppliers with the tools necessary to bring responsibly sourced metal to market.

By helping to break the link between illicit transactions in gold, silver, and other metals, institutional investors can help prevent conflict metal from entering the mainstream market. Such efforts can also enhance the legitimate trade in precious metals — helping to improve the livelihoods of families relying on their small-scale production as a source of basic income.

Michael Albanese, Chief Executive Officer Tradewind Markets, Inc.

An annual investment of \$5-7 trillion is required to finance the SDGs

Combined outstanding value of global bond markets and global equity market capitalization is \$185 trillion

Investments with a sustainability mandate surpassed \$30 trillion in 2018

Achieving the SDGs could unlock \$12 trillion in market opportunities and create 380 million new jobs globally

Harnessing capital markets to finance the SDGs is not without impediments

Over the next decade, a cumulative \$25 trillion+ in additional capital will have to be deployed across developing economies alone in order to meet the SDGs¹³. The enormity of the problem is clear: private and institutional investors will need to commit significantly more capital.

There are multiple challenges associated with financing the SDGs that, left unaddressed, will constrict investment flows. Asset owners (e.g. pension funds, family offices, sovereign wealth funds) and asset managers (e.g. banks, private equity, venture capital) polled for this paper highlighted several key impediments, including:

- Unclear delineation between risk and reward: Current asset pricing and decision models fail to account for evolving externalities, like climate risk, or other similarly important SDG-related criteria. The absence of SDG factors in financial and economic analyses may lead to a material misrepresentation of risk as reflected in the underlying asset price. Layering in additional SDGrelated criteria that have a material impact on the risks to the business could result in a more complete, accurate and objective assessment of the risks and returns on deployed capital. For example, a manufacturing firm building a factory in a coastal area may be subject to increased risks of flooding from sea levels rising and more intense storms. If that data is not included as a risk, the investment opportunity is under-assessing the inherent risk and incorrectly inflating the expected return.
- Limitations in impact measurement: Defining and measuring impact is a longstanding challenge of the investment community and, more broadly, corporates responsible for delivering that impact. Finding a common definition, and associated measurement criteria, however, becomes increasingly important as investors demand results beyond a pure financial return. The fact that the definition of "impact" is highly idiosyncratic by nature (i.e. it means different things to different constituencies) is one of the core drivers of this challenge. The way in which impact is measured and monitored is similarly disparate, reflecting this definitional ambiguity. Further complicating matters, the SDGs were not created with the investment community at the centre. A reverse engineering of investment strategy and products to the SDGs is therefore required. The United Nations has offered an expansive set of 230 indicators to track progress against the SDGs¹⁴. Other efforts, like the Impact Measurement Project, seek to drive consensus among a diverse group of stakeholders on how to measure and report on impact. There are many others weighing in on the impact debate as well¹⁵. Nonetheless, the persistent lack of consensus around impact measurement adds complexity to the investment process, ultimately detracting from SDG-aligned investment flows.

Questioning the merits of investing with a sustainability mandate: Intertwined with the two previous challenges, and despite a growing body of empirical research demonstrating otherwise, debate continues on the merits of SDG-aligned investment approaches verses "traditional" investment strategies when it comes to earning a superior return. This disconnect is further complicated and magnified by regulations in jurisdictions like the U.S. that focus on a strict interpretation of fiduciary duty: fiduciaries must weigh economic interests above all others in managing retirement benefits¹⁶. Other jurisdictions, notably in Europe, have taken the other side of the debate around fiduciary standards, signaling that not accounting for sustainability factors in investment decisions equates to a breach of fiduciary duty.

Professional Services: Oliver Wyman

Over the past two years, Oliver Wyman has worked with the global financial sector to pilot and implement the Task Force for Climate-Related Disclosures (TCFD) recommendations to evaluate climate-related risks and opportunities using scenario analysis. Scenarios, the TCFD reasoned, could help institutions assess the robustness of their portfolios to uncertain outcomes that may materialize with climate change.

We quickly found that financial institutions faced real challenges in incorporating the rich research on climate change's economic and physical impacts into scenario-based assessments. Even though economic climate scenarios were high-quality, many were too high-level and focused on academic problems, with model outputs mismatched to the risk management and opportunity assessment needs of the finance sector. To bridge that gap, we worked with some of the leading climate modelers and banks to develop new model outputs and methods for performing more rigorous and financially material analysis of climate risk on investment performance.

Despite our progress, much work remains to bring the wealth of available academic research on climate risk into the hands of more finance practitioners. Digital efforts to enhance the data landscape can help at every step from academic research to scenario application. Academic data relevant for climate risk can be more widely published (e.g. through public-use databases), and a research agenda can be developed that is tailored to the risk assessment needs of investors and financial institutions. Communities of practice could help translate the changing landscape of climate research into reference scenarios with indicators relevant for financial institutions. And finally, companies can be incentivized to disclose data that would help investors evaluate their corporate risk profile using such reference scenarios.

But a scenario-based approach to assessing climate risk isn't just relevant for disclosures. Most ESG risk evaluation strategies are still based on an assessment of a company's current performance on ESG measures relative to other institutions, rather than the company's vulnerability or competitive advantage under

future scenarios. Water efficiency metrics, for example, are rarely published alongside a company's exposure to increased drought frequency. Such measures could help investors evaluate how a company's performance would change as climate-related risks become more prevalent: including drought, flood, carbon taxes and fires.

An evaluation of a company's performance against climate scenarios can be a financially material consideration for investment, both for long-term institutional investors as well as for the average retail investor. Here, digital technology can play a variety of roles: helping to develop tools, data, price-adjusted indices that reflect carbon risk or climate resiliency and analytics that can lead the way toward greater visibility of climate risk through scenario-based measures.

Samir Misra, Partner, Oliver Wyman Jared Westheim, Management Consultant, Oliver Wyman A set of additional, and in some instances related, impediments were also highlighted by constituents:

- Data inconsistency and reliability: The teams of analysts and investment professionals at asset owners and managers feed their decision and financial models with public and uniquely sourced information. A key source of public information are the disclosures that companies make about their operations. Without agreed-upon or enforced standards, companies report their ESG- and SDG-related activity differently based on industry-specific criteria and geographical location, among other considerations. This greatly complicates analysts' and investors' ability to create common analyses and benchmarking methods. Further, a proliferation of vendors (e.g. MSCI, Sensefolio, Arabesque, etc.) attempt to provide measurement frameworks, analysis and insights on behalf of their customers based on different underlying criteria. All of this leads to inconsistent and sometimes unreliable data.
- Drawing distinctions between investing in the SDGs and ESG investing: Many investors think of ESG and SDG investing as synonymous; however, there are key differences. At a high-level, SDG-aligned investment strategies focus on companies producing products and services that seek to achieve the SDGs; whereas ESG focuses on the environmental, social and governance aspects of business operations with an eye toward enhancing risk management. Some argue that the ESG framework of criteria offers only a limited scope for investors, while SDG-aligned investing has a more clearly defined, goal-oriented path, with a standardized language for areas of impact, and a means to track and compare progress¹⁷. Regardless of where one lands on this debate, it is generally accepted that applying an ESG-aligned investment strategy helps to channel capital in the direction of the SDGs.
- Long term returns vs short term incentives: Achieving the SDGs is a long-term effort. There is a misalignment between the long-term return mandates of many funds and the pressure to deliver returns in the short term inherent in the quarterly or annual evaluations and compensation structures of investors. Asset owners may have 10-25 year horizons for their return expectations and can calibrate their decision and financial models accordingly. However, many of these same asset owners tradtionally evaluate their own staff and external investment managers on an annual basis. With typical compensation structures aligned to annual cycles, there is a strong incentive to optimize short-term gains which can come at the expense of long-term value. Moreover, pensions, sovereign wealth funds, and almost all institutional asset managers have a fiduciary responsibility to maximize returns. The time horizon is often not specified leading to conflicts between short and long-term return horizons.

Data Provider: Refinitiv

Balancing short-term performance pressures with the need to invest in a long-term future is one of the most important tasks faced by today's leaders. Those that achieve it will contribute to a sustainable ecosystem in which the company and its stakeholders will thrive. Meeting these obligations requires a measurement framework that establishes a set of agreed criteria to serve as a benchmark, and standards that enable companies to improve their long-term strategy through a better understanding of the financial and non-financial impact of their business activities. It also requires a commitment to use data when communicating with investors and other stakeholders about these impacts.

Since 2016, the World Economic Forum and Refinitiv partnered with a diverse group of stakeholders to create the Sustainable Leadership Monitor (SLM) to enable leaders in this task. The SLM helps answer questions around long-term sustainable growth and gain situational awareness through sophisticated data analytics, an intuitive user interface and a deep bedrock of transparent and standardized ESG/Financial data.

Growing evidence suggests that *not* focusing on sustainability presents key risks. Research also shows that over one, three, and five-year periods, companies that make investments and focus on sustainability deliver a stronger stock performance and better long-term profitability. For example, data now shows a high correlation between gender diversity and return on equity. Large-cap companies with the highest sustainability rankings also tend to have consistently lower future price volatility than poorly-ranked companies.

By harnessing the power of digitalization, the SLM allows users to visualize trends in specific sustainability criteria, allowing for more informed decisions at the portfolio and managerial level.

Adaptation of article: "Leaders need hard data to make the hard decisions about sustainability", Debra Walton, Chief Customer Proposition Officer, Refinitiv; World Economic Forum Agenda Blog, 10 January 2019

Realizing the SDGs requires multistakeholder collaboration

Realizing the full potential of the SDGs will require public-private cooperation at a grand scale. Among the key actors required to move the needle include:

Actor	Description and key action steps
Corporates	Across public and private markets, ranging from large conglomerates to small- and medium-size enterprises (SMEs), corporates have the ability to generate data based on company practices and performance highlighting the steps taken to run a sustainable business. At present, companies are responsible for the content and manner of disclosure to the public sphere; they are also often effective in serving the last mile. They may provide information on request directly to other organizations — for example, to data providers and investors.
Standard setters	Publish detailed guidelines that support companies to understand what sustainability-related information they should disclose, by topic. Through their standards, they influence decisions about the choice of metrics and the methodologies underpinning those metrics. Well-known examples in this space include CDP (formerly the Carbon Disclosure Project), the Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB).
Framework de- velopers	Influence the type of sustainability-related information a company chooses to publish, but have a greater focus on principle-based concepts for how a report is structured. They help companies to understand the best way to develop and present their disclosures, they outline how to consider reporting practice through the lens of long-term value creation, and reinforce the position and importance of sustainability factors in and alongside traditional annual reporting practices. Examples include the International Integrated Reporting Council (IIRC), the GRI 10 Reporting Principles and the Task Force for Climate Related Disclosure (TCFD).
Assurance pro- viders	Offer professional advice to companies on how to publicly disclose data, and they offer assurance on publicly disclosed non-financial information. Examples include Deloitte, EY, PwC and KPMG.
Data providers	Play an important role in the information chain by aggregating data available on companies and making that information available to audiences. Users of such services include investors looking for information to aid in their investment decision-making and companies themselves. Data providers can present SDG-related information to users in different forms, including individual metrics or rankings and indices. Some providers also offer ratings on companies, to serve as assessments of a company's performance. Among these companies are Bloomberg, DJSI (formerly Dow Jones Sustainability Index), FTSE4Good, MSCI, Refinitiv, S&P Global, and Sustainalytics.
Investment banks and research providers	Assess market trends and company performance to make buy, hold and sell recommendations to investors. Examples include Bank of America Merrill Lynch, Citigroup, Goldman Sachs, JPMorgan Chase and Morgan Stanley.
Investors	A broad segment that includes asset owners, asset managers and private equity firms—leverage available information on sustainability to inform their decisions on capital allocation, engage with company boards on sustainability-related issues and aggregate information on their portfolio companies into their investment reporting practices. The breadth and depth of information analysed varies by investor; for example, depending on whether they are looking only to issues of greatest perceived financial importance or company contribution to wider societal causes.
Regulators	Represent a multitude of bodies that can demand sustainability-related disclosure from companies under their jurisdiction. They can include local, national and supranational governments, financial regulators, and stock exchanges for companies listed on the market. Equivalent regulators may stipulate very different requirements in different markets.
Additional key players	Include a range of organizations that offer various operations and services to help companies understand how to better measure, benchmark, improve or report important aspects of their performance. A few well-known examples include Ceres, Science Based Targets, World Business Council for Sustainable Development (WBCSD) and World Benchmarking Alliance.

Language modified and adapted from "Seeking Return on ESG Advancing the Reporting Ecosystem to Unlock Impact for Business and Society", World Economic Forum, January 2019

Recommendations informed by convenings and research

The opportunities and challenges of digital financing of the SDGs are many. The struggle is to consider the most critical challenges to solve. During our discussions and research with asset owners and managers, two challenges came up repeatedly in various forms:

- 1. The need to evolve the definition of material information to include new, SDG-linked disclosures for valuation modeling and risk management purposes.
- 2. The lack of consensus on a shared definition of impact and associated measurement criteria.

At the core of both of these challenges is the impact on investment decisions. Institutional investors make decisions based on financial models and their own risk and return tolerance. In their simplest form, the output of these models are 'prices' for various 'risks'. By definition, the value of the risks will be determined by variables included in the models. To put the old adage on its head – If it isn't measured, it is not managed. In this case, if it is not a variable in the model, it isn't considered in the value.

When assessing what to measure and what is material information, the answers to both questions boil down to what to include in the various decision and financial models used by investors to direct their capital deployment. Changing those models to include SDG related criteria could cause more capital to be deployed towards SDG-related investments.

Asset Manager: BlackRock

For asset managers, the key is to understand the components of the SDGs that have material outcomes for investors. This requires more than offering exposure to SDG-themed investments because exposure itself is not an investment target. Indeed, when exposure is provided without an underlying investment thesis, performance results can be volatile and subject to uninformed risk. While this proposition may be acceptable to a small group of investors, we believe that interest and capital flows would increase significantly if you can clearly articulate the compelling investment outcomes that could be captured by aligning with the SDGs

This is why BlackRock is investing in the tools and capabilities to allow investors to better understand the investment-material risks and opportunities associated with achieving the SDGs. Specifically, our research is directed at uncovering the link between financial materiality and SDG outcomes. When we say materiality, we're talking about the different elements of an investment that could lead to better returns, lower risk, and higher risk-adjusted returns, in addition to making a positive impact

We need to overcome the perception of investors that aligning their investments with the SDGs or other ESG outcomes will lead to underperformance. It is possible to both make a positive impact and achieve attractive returns. While investment data specifically measuring SDG outcomes is scarce, there is a growing interest from the asset management community as well as from academia to link ESG and other data to SDG outcomes. BlackRock is continuing to invest resources into research in this space as we seek to bring better insights and investment solutions to our clients.

Andre Bertolotti, Global Head, Sustainable Research & Data, BlackRock

Challenge: Risk vs Reward — How to evolve the definition of material information

Recommen<u>dation:</u>

Evolve the definition of material information to include SDG-related criteria for 1) corporations to disclose and 2) investors to consider in their models. By evolving the definition of what is material, asset owners and managers would be required to refresh their decision-making and financial models to include material criteria that relates to the SDGs.

Context:

Current financial models either don't consider, or have a limited place for, SDG criteria. This may lead to mis-priced risk and return analyses. Inclusion in models used to make allocation decisions ensures that SDG-related criteria are appropriately "priced" into risk and return analyses.

Role of Digitalization:

Financial models require readily accessible, reliable data as inputs. In many cases, the data is available in a very limited fashion or available only on a custom-basis with significant human effort. As a result, entities interested in a particular SDG are forced to source or create their own data. This leads to challenges with comparability, agreement on veracity and utility.

Digitalization lies at the heart of the evolution proposed. It is the new availability of reliable data for measurement, risk, and return analyses that makes this solution feasible. Innovators and entrepreneurs continue to deliver new data and capabilities to leverage that data. The lack of clarity on what are desired as inputs for decision-making and financial models reduces the utility of newly available data and technology.

Underlying Risk Considerations:

Moving towards a shared definition of material information with respect to the SDGs must balance at least two factors:

- 1. Is the definition specific enough to be relevant in different industries and geographies?
- 2. Is the definition universal enough that data can be measured and compared across firms, industries and geographies?

Striking the right balance when redefining material information will require significant stakeholder involvement. A definition that is overly prescriptive may be inappropriate in new circumstances or require such granularity to cover all industries and geographies as to be overly burdensome. A definition that is too broad could lose its explanatory power in specific circumstances.

Stakeholder Engagement Required to Drive Change:

- Standard setting bodies: publish guidelines that support SDG-related investment, and provide guidance on agreed sustainability metrics on which corporates and investors align
 - SASB
 - FASB
 - IFRS
 - ISO / International Organization of Standards
 - SEC
- Convening bodies: bring together the relevant stakeholders, frame issues, address pain points, and build consensus around impact measurement guidelines and metrics
 - United Nations
 - World Economic Forum
- Consultants/gatekeepers: research, originate thought leadership, and share information across stakeholders who influence others in the ecosystem. Offer various services to help companies understand how to better measure, benchmark, improve or report important aspects of their performance as it relates to SDGs.
- Government/policy-makers/regulators: draft legislation, propose regulations and supervize/enforce compliance with established rules
- Data providers: play an important role by aggregating available company information and making it available to a broader audience
 - MSCI ESG Research
 - Refinitiv
 - S&P Dow Jones Indices LLP
- Industry associations: advocate on behalf of membership to inform public opinion and legislative and rulemaking processes
 - CFA
 - ILPA

In addition, we need to expand the ecosystem to encourage new entrants that bridge the gap between intentions to deploy capital towards SDG achievement and the reality of day-to-day decision making that is informed by financial models that don't include SDG considerations.

Entrepreneurs are already filling the gaps. There are dozens of ESG and SDG reporting frameworks¹⁸. Start-ups are forming daily that offer data related to ESG and SDGs. Clear goals and standards on material information would focus entrepreneurial activity on the data gaps in current decision-making and financial models.

Challenge: Impact Measurement — Getting to consensus on defining and measuring impact

Recommendation:

The investment community would benefit from a common taxonomy to define impact and a corresponding measurement framework. Having these two essential elements clearly established would trigger increased SDG-aligned investment.

Context:

As investors increasingly look beyond current financial return measurements that do not consider SDG-related criteria when evaluating performance, the ability to define and measure the "impact" of investment capital becomes ever more important. Investors lack a shared taxonomy to define impact. Additionally, there are two hundred impact indicators tied to the 17 SDGs. This expansive list of impact indicators and persistent lack of common definitional parameters adds complexity to the investment process, detracting from targeted, SDG-aligned investment at scale.

Role of Digitalization:

New technologies can play an important role in assessing and measuring impact. For example, distributed ledger technology could allow for the precise tracking and monitoring of products across the supply chain, allowing consumers and investors to evaluate corporate sustainability from end-to-end. Aggregation of corporate, non-profit, public and financial institution-disclosed social and environmental indicators in authoritative, public-use databases aligned to SDG reporting frameworks, could help foster transparency and create standards for evaluating company performance.

Underlying Risk Considerations:

Similar to Challenge 1: In defining impact, it is important to balance prescriptiveness with flexibility. Being overly prescriptive may have the unintended consequence of limiting investor discretion and market-driven innovation. Flexibility is also important because different asset classes require different approaches and capabilities when measuring impact: measuring a clean water program in sub Saharan Africa will require a different approach than evaluating a corporate bond offering. A balance must also be struck between being overly granular when the underlying time series data supporting the impact claim is limited. The key will be to focus on the intended impact of the investment strategy and measure progress toward reaching the stated goal.

Stakeholder Engagement Required to Drive Change:

- Standard setting bodies: publish guidelines that support SDG-related investment, and provide guidance on agreed sustainability metrics for corporates and investors to align
 - SASB
 - FASB
 - IFRS
- Convening bodies: bring together the relevant stakeholders, frame issues, address pain points, and build consensus around impact measurement guidelines and metrics
 - United Nations
 - World Economic Forum
 - Impact Management Project
- Government/policy-makers/regulators: draft legislation, propose regulations and supervise/enforce compliance with established rules
- Industry associations: advocate on behalf of membership to inform public opinion and legislative and rulemaking processes
 - International Institute of Finance
 - Alternative Investment Management Association
 - European Fund and Asset Management Association
- Assurance providers: advise corporates on the disclosure of sustainability data
 - KPMG
 - Deloitte
 - PwC
 - Ernst & Young
- Data providers: play an important role by aggregating available company information and making it available to a broader audience
 - MSCI ESG Research
 - Refinitiv
 - S&P Dow Jones Indices LLP

Closing Summary

The recommendations developed highlight the continuing uncertainty among institutional asset owners and managers around measurement and the evolving definition of material information. The authors acknowledge that much of the material is known and reflects ongoing desire within the institutional asset owner and management community for greater certainty and transparency ¹⁹.

The DFTF aspires to turn ideas into action. To that end, during the remainder of the DFTF term, IEX and the World Economic Forum will continue to explore these areas with interested stakeholders, support existing efforts, and launch new initiatives as appropriate. Successful resolution of these critical questions will unleash new innovation, capitalize on current digital innovations, and reduce stakeholder uncertainty around measurement, risks and returns.

With more than \$5-7 trillion required annually in additional capital, a focus on accelerating progress among institutional asset owners and managers could drive dramatic increases in financing the Sustainable Development Goals.

Endnotes

- 1. United Nations, Financing for the SDGs: Breaking the Bottlenecks of Investment from Policy to Impact, 2018.
- 2. SIFMA, SIFMA Fact Book, 2018.
- 3. World Economic Forum, The New Physics of Financial Services, 2018.
- 4. Greenwich Associates, Sizing and Segmenting Trading in the U.S. Treasury Market, 2017.

Bank for International Settlements (BIS). Triennial Central Bank Survey of foreign exchange and OTC derivatives markets in 2016, 2016.

- 5. World Economic Forum, The Role of Financial Services in Society: A Multistakeholder Compact, 2013.
- 6. Global Sustainable Investment Alliance, 2018 Global Sustainable Investment Review, 2018.
- 7. Allianz, ESG Investor Sentiment Study, 2018.
- 8. Lipper Fund Performance Data provided by Refinitiv.
- 9. 17 Asset Management, How Blockchain Can Advance Blended Finance & SDG-Aligned Investing, 2019,
- 10. Business & Sustainable Development Commission, Better Business Better World, 2017.
- 11. Bank of America Merrill Lynch, The ABCs of ESG, 2018.
- 12. AltData Insights, Top 3 Vendors for ESG Data, 2019.
- 13. United Nations, Financing for SDGs: Breaking the Bottlenecks of Investment from Policy to Impact, 2018.
- 14. United Nations, Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, 2016.
- 15. See Appendix for Initiatives on the Measurement of Long-term Value and Non-Financial Reporting.
- 16. The Society of Human Resource Managment, DOL Affirms Fiduciary Standards for 'Socially Responsible' Funds, 2018.
- 17. The Asset ESG Forum, Impact investing versus ESG investing aren't they the same thing?, 2018.
- 18. See UN Global Compact (UNGC), UN Development Programme (UNDP), World Business Council for Sustainable Development (WBCSD), Global Reporting Initiative (GRI), World Economic Forum, Sustainability Account Standards Board (SASB), International Organization for Standardization (ISO), Dow Jones Sustainability Indices (DJSI), MSCI, Sustainalytics/Morningstar, Task Force on Climate-related Financial Disclosures (TCFD), et al.
- 19. See Petition for a rulemaking on environmental, social, and governance (ESG).

Appendices

Initiatives On The Measurement Of Long-Term Value And Non-Financial Reporting

This overview details initiatives and tools for measuring long-term value and non-financial reporting. These initiatives and tools aim to help investors and corporates make better strategic decisions and in providing guidance for better performance disclosure.

The overview encompasses frameworks and key initiatives, standards bodies and data providers. Frameworks provide high-level guidance in the form of principles to corporations and investors. Standards bodies concretely advise corporations on the relevant metrics to measure and communicate their long-term value proposition. They also provide guidance on how to apply the metrics in the process of disclosure, which leads to more transparent and actionable corporate reporting. A range of data providers also support this reporting by collecting, analysing and packaging data that helps corporates measure and benchmark their sustainable performance and shape value for their shareholders and investors.

Frameworks And Key Initiatives

Corporate Reporting Dialogue

The Corporate Reporting Dialogue (the Dialogue) is an initiative designed to respond to market calls for greater coherence, consistency and comparability between corporate reporting frameworks, standards and related requirements. Participants of the Dialogue improve the alignment of sustainability reporting frameworks, as well as frameworks that promote further integration between non-financial and financial reporting. The Better Alignment Project of the Corporate Reporting Dialogue is a groundbreaking two-year project focused on driving better alignment in the corporate reporting landscape, making it easier for companies to prepare effective and coherent disclosures that meet the information needs of capital markets and society.

International Finance Corporation — Operating Principles for Impact Management

The Operating Principles for Impact Management (the Principles) describe the essential features of managing investment funds with the intent of contributing to measurable positive social, economic or environmental impact, alongside financial returns. This goes beyond asset selection that aligns investment portfolios with impact goals (for example, the SDGs) to requiring a robust investment thesis of how the investment contributes to the achievement of impact. The Principles have been designed from the perspective of an end-to-end process.

Impact Management Project

The Impact Management Project (IMP) facilitates a network of leading standard-setting organizations to coordinate specific impact measurement and management efforts so enterprises and investors have the complete rules of the road. The norms established under the IMP, by a cross-section of the market, provide a shared definition of impact and the type of data expected in any good impact framework and impact report. The norms also provide a logic for sharing data about impact goals and performance across increasingly complex value chains. Thus far, over 2,000 practitioners have agreed to these norms globally.

International Integrated Reporting Council (IIRC)

The International Integrated Reporting Council (IIRC) is a global coalition of regulators, investors, companies, standard setters, accounting professionals and NGOs. The coalition promotes communication about long-term value creation as the next step in the evolution of corporate reporting. The IIRC's mission is to establish integrated reporting and thinking within mainstream business practice as the norm in the public and private sectors.

Task Force on Climate-related Financial Disclosures

The FSB Task Force on Climate-related Financial Disclosures (TCFD) will develop voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders. It will help companies understand what financial markets want from disclosure in order to measure and respond to climate change risks and encourage firms to align their disclosures with investors' needs. The Task Force will consider the physical, liability and transition risks associated with climate change and what constitutes effective financial disclosures across industries.

United Nations Global Compact

The United Nations Global Compact is a voluntary initiative based on Chief Executive Officer commitments to implement universal sustainability principles and to take steps to support UN goals. It helps companies to: 1) do business responsibly by aligning their strategies and operations with Ten Principles on human rights, labour, environment and anti-corruption

and 2) take strategic actions to advance broader societal goals, such as the UN Sustainable Development Goals, with an emphasis on collaboration and innovation.

United Nations Principles of Responsible Investment

The United Nations Principles of Responsible Investment (PRI) is the world's leading proponent of responsible investment. It works to understand the investment implications of ESG factors and to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions. The PRI encourages investors to use responsible investment to enhance returns and better manage risks but does not operate for its own profit; it engages with global policy-makers but is not associated with any government; it is supported by, but not part of, the United Nations. The PRI's six Principles for Responsible Investment are a voluntary set of investment principles developed by investors that offer a menu of possible actions for incorporating ESG issues into investment practice. They have a global signatory base representing most of the world's professionally managed investments.

World Economic Forum Compact for Responsive and Responsible Leadership

The World Economic Forum Compact for Responsive and Responsible Leadership is sponsored by the International Business Council of the World Economic Forum. Corporations and investors are powerful actors in society. As such, their responsive and responsible leadership can significantly improve the state of the world. This Compact creates a corporate governance framework that focuses on the long-term sustainability of corporations as well as the long-term goals of society for corporations, their Chief Executive Officers and boards of directors, and leading investors and asset managers.

Accounting for Sustainability

The Prince of Wales's Accounting for Sustainability Project (A4S) Inspires action by finance leaders to drive a fundamental shift towards resilient business models and a sustainable economy. To do this, A4S has three core aims to: 1) Inspire finance leaders to adopt sustainable and resilient business models; 2) Transform financial decision making to enable an integrated approach, reflective of the opportunities and risks posed by environmental and social issues; 3) Scale up action across the global finance and accounting community.

WBCSD's Redefining Value

WBCSD is a global, Chief Executive Officer-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world. Redefining Value helps companies measure and manage risk, gain competitive advantage and seize new opportunities by understanding Environmental, Social and Governance (ESG) information.

Focus Capital on the Long Term (FCLT)

FCLTGlobal is a not-for-profit organization that works to encourage a longer-term focus in business and investment decision-making. We accomplish this by developing practical tools and approaches to support long-term behaviors across the investment value chain.

NYU Stern CSB Framework

The NYU Stern Center for Sustainable Business uses its Return on Sustainability Investment (ROSI™) methodology to monetize the benefits of sustainable practices. ROSI™ can be applied to practices throughout an organization that have already been implemented, are currently in development, or for future projects.

Chief Executives for Corporate Purpose (CECP)

Chief Executives for Corporate Purpose® (CECP) is a Chief Executive Officer-led coalition that believes a company's social strategy — how it engages with key stakeholders including employees, communities, investors and customers — determines company success.

Global Impact Investing Network (GIIN)

By convening impact investors to facilitate knowledge exchange, highlighting innovative investment approaches, building the evidence base for the industry, and producing valuable tools and resources, the GIIN seeks to accelerate the industry's development through focused leadership and collective action.

Shared Value Initiative

Shared value is a management strategy in which companies find business opportunities in social problems. While philanthropy and CSR focus efforts on "giving back" or minimizing the harm business has on society, shared value focuses company leaders on maximizing the competitive value of solving social problems in new customers and markets, cost savings, talent retention, and more.

World Benchmarking Alliance

The World Benchmarking Alliance (WBA) seeks to generate a movement around increasing the private sector's impact towards a sustainable future for all. In 2015, the United Nations developed 17 Sustainable Development Goals (SDGs) to help guide us. The WBA is now working to incentivize and accelerate companies' efforts towards achieving these goals. The benchmarks will aim to empower all stakeholders, from consumers and investors to employees and business leaders,

with key data and insights to encourage sustainable business practices across all sectors. The benchmarks' methodologies will also be free to use and continually improved through an ongoing and open multi-stakeholder dialogue.

Standard Bodies

Climate Disclosure Standards Board (CDSB)

The Climate Disclosure Standards Board (CDSB) is an international consortium of businesses and environmental NGOs. It aims to advance and align the global mainstream corporate reporting model to equate natural capital with financial capital. They do this by offering companies a framework for reporting environmental information. In turn, this helps provide investors with decision-useful environmental information via the mainstream corporate report, enhancing the efficient allocation of capital. Regulators also benefit from compliance-ready materials.

The Embankment Project for Inclusive Capitalism (EPIC)

The Embankment Project for Inclusive Capitalism (EPIC) created a forum where players across the investment chain have candid conversations and share their different perspectives about how to measure long-term value. Their goal is to forge consensus on how to measure value beyond pure financials, to improve communications along the investment chain and to make a case for long-termism that could strengthen not just businesses but the entire economy. EPIC's efforts have resulted in an open-source framework and an initial set of impact metrics on corporate actions.

Global Reporting Initiative (GRI)

The Global Reporting Initiative (GRI) is an independent, international organization that has pioneered sustainability reporting. GRI helps businesses and governments worldwide understand and communicate their impact on critical sustainability issues. This enables action to create social, environmental and economic benefits for everyone. The GRI Sustainability Reporting Standards (GRI Standards) are the first and most widely adopted global standards for sustainability reporting. They are developed with multi-stakeholder contributions and rooted in the public interest.

Sustainability Accounting Standards Board (SASB)

Sustainability Accounting Standards Board (SASB) connects businesses and investors on the financial impacts of sustainability. SASB's mission is to help businesses around the world identify, manage and report on the sustainability topics that matter most to their investors. SASB standards are based on extensive feedback from companies, investors and other market participants as part of a transparent, publicly-documented process. These standards differ by industry, enabling investors and companies to compare performance from company to company within an industry.

ISO 26000

The ISO 26000 is an international standard that offers voluntary guidance on CSR and SR for all types of businesses and organizations. It can be used by any entity regardless of adoption at the national level.

Value Balancing Alliance

A cooperation of international companies, the Big 4 Professional Services firms and the OECD to drive impact measurement and valuation to the next level. The objective is to: 1) develop a standardized model that empowers decision makers to create and protect long-term value based on impact valuation techniques; 2) design a common disclosure frame for results and embed them in management accounting and 3) make outcomes publicly available.

Data Providers (Ratings/Ranking/Indices)

Market

Bloomberg LP

As a global information and technology company, Bloomberg connects decision makers to a network of data, people and ideas, delivering business and financial information, news and insights to customers around the world. Bloomberg L.P. provides financial software tools, such as an analytics and equity trading platform and data services, to financial companies and organizations through the Bloomberg Terminal. The Terminal is a computer software system that enables professionals in the financial service sector and other industries to access the Bloomberg Professional service through which users can monitor and analyse real-time financial market data and place trades on the electronic trading platform. Overall, they supply data to financial markets while also focusing on ESG and long-term oriented products. The system also provides financial news, price quotes and messaging across its proprietary secure network. The Terminal covers both public and private markets globally.

FTSE4Good Index Series

The FTSE4Good Index Series measures the performance of companies demonstrating ESG practices. They create investible indices based on ESG data that aim to steer investor decisions towards sustainability. Transparent management and clearly-defined ESG criteria make FTSE4Good indices suitable tools to be used by a range of market participants when creating or assessing sustainable investment products. FTSE4Good indices can be used in four main ways: as tools in the

creation of financial products; for researching sustainable companies; as a reference for companies by being a standard by which they can assess their progress and achievement; and as a benchmark index to track the performance of sustainable investment portfolios.

MSCI ESG Research

MSCI ESG Research provides in-depth research, ratings and analysis of the environmental, social and governance-related business practices of thousands of companies worldwide. Their research is designed to provide critical insights that can help institutional investors identify risks and opportunities that traditional investment research may overlook. Their clients use their research to help implement their responsible investment objectives. MSCI has completed the integration of MSCI ESG ratings, data and indexes into all their analytics systems.

Refinitiv

Refinitiv is one of the world's largest providers of financial market data and infrastructure, serving over 40,000 institutions in over 190 countries. It provides leading data and insights, trading platforms, and open data and technology platforms that connect a thriving global financial markets community – driving performance in trading, investment, wealth management, regulatory compliance, market data management, enterprise risk and fighting financial crime. Refinitiv considers ESG data as a fundamental dataset to inform investment analysis, public discourse and regulatory evolution. In addition to providing comprehensive ESG data, Refinitiv also supplies company financials, estimates, macroeconomics, pricing and a wide range of other data — standardized and using a common taxonomy — ready to power today's holistic investment approaches.

Sustainable Leadership Monitor

In 2016 Refinitiv and the World Economic Forum partnered with a diverse group of stakeholders to create the Sustainable Leadership Monitor (SLM) in order to help investors and leaders answer questions around long-term sustainable growth and gain situational awareness through big data analytics, an intuitive user interface and a deep bedrock of transparent and standardized ESG/Financial data. The SLM is currently an application available inside Refinitiv Eikon, a flexible, open platform built for trade innovation, connecting users to the world's largest directory of verified financial professionals.

S&P Dow Jones Indices LLC and Dow Jones Sustainability Indexes

S&P Dow Jones Indices LLC is the largest resource for index-based innovation, data and research, bringing independent, transparent and cost-effective solutions to the global investment community. S&P Dow Jones Indices LLC produces, maintains, licenses and markets stock market indices as benchmarks and as the basis of investable products, such as exchange-traded funds (ETFs), mutual funds and structured products. The company's best-known indices are the S&P 500 and the Dow Jones Industrial Average (DJIA). The Dow Jones Sustainability Indices (DJSI) are a family of indices evaluating the sustainability performance of companies trading publicly through surveys. They are the longest-running global sustainability benchmarks worldwide and have become the key reference point in sustainability investing for investors and companies alike. The DJSI is based on an analysis of corporate economic, environmental and social performance, assessing issues such as corporate governance, risk management, branding, climate change mitigation, supply chain standards and labor practices. It includes general as well as industry-specific sustainability criteria for 60 industries.

ESG Exclusive

Arabesque

Arabesque has pioneered a new approach to asset management. Through big data and machine learning, their technology integrates ESG information with quantitative investment strategies, with the aim of delivering long-term performance while reducing portfolio risk. By making this approach accessible to all, they believe that finance can be a catalyst of change and allow people to invest through their values.

Covalence

Covalence SA helps companies and investors integrate ESG factors into strategy and decision making. To investors and asset managers, it offers services enabling them to implement responsible and sustainable investment strategies: ESG ratings, investment product design, impact analysis and ESG controversy monitoring. Covalence also delivers data and research to corporates, academics and non-profits relying on its EthicalQuote reputation index.

CSRHub

CSRHub's mission is to foster access to CSR information, aiming to be an engine of transparency that encourages more consistent and actionable disclosure from all types of organizations. It provides access to corporate social responsibility and sustainability ratings and information on 18,424+ companies from 136 industries in 132 countries. Managers, researchers and activists use CSRHub to benchmark company performance, learn how stakeholders evaluate company CSR practices and seek ways to change the world. It rates 12 indicators of employee, environment, community and governance performance and flags many special issues.

Ethos

Ethos, Swiss Foundation for Sustainable Development, is composed of 230 Swiss pension funds and other tax-exempt institutions. It aims to promote socially responsible investments (SRI) as well as a stable and prosperous socio-economic environment that safeguards the interests of civil society. Ethos offers four product lines dedicated to SRI and to the promotion of sustainability in the finance industry: investment funds, proxy voting, sustainability analyses and company dialogue.

Inrate

Inrate is an independent Swiss sustainability rating agency. They help clients with in-depth knowledge of sustainability research, helping them develop and successfully implement innovative sustainability solutions. They do not advise companies they assess nor do they exercise asset management mandates.

ISS-oekom

ISS-oekom provides corporate and country ESG research and ratings that enable its clients to identify material, social and environmental risks and opportunities, including through advisory services.

RobecoSam

RobecoSAM is an investment specialist that focuses exclusively on Sustainability Investing. To this end, they offer a comprehensive palette of products, including in-house asset management, Sustainability Indices, corporate sustainability assessments, active ownership and engagement and customized portfolio benchmarking solutions.

Sustainalytics

Sustainalytics is a global leader in ESG and Corporate Governance research and ratings, bringing together leading ESG research and client-servicing professionals. Sustainalytics supports investors who incorporate ESG and corporate governance insights into their investment processes. Their mission is to provide the insights required for investors and companies to make more informed decisions that lead to a more just and sustainable global economy.

Vigeo Eiris

Vigeo Eiris conducts ESG analysis that helps companies and investors adapt their strategies. They also act as a stakeholder and driving force in developing ESG awareness amongst civil society and public authorities. Innovation is at the core of their DNA. With over 500 projects completed worldwide, Vigeo Eiris helps companies, local authorities, administrations, joint and mutual benefit organizations and asset management firms meet their CSR commitments.

Specialized

Carbon Disclosure Project (CDP)

CDP, formerly the Carbon Disclosure Project, is a non-profit charity that runs the global disclosure system that enables companies, cities, states and regions to measure and manage their environmental impacts. They have built the most comprehensive collection of self-reported environmental data in the world. Their network of investors and purchasers, representing over \$100 trillion, along with policy-makers, use their data and insights to make better-informed decisions.

RepRisk

RepRisk generates ESG and business conduct due diligence data. They are the only ESG research provider to cover private companies as well as emerging and frontier markets. As a due diligence solution, they help their clients prevent and manage business conduct risks related to their operations, business relationships and investments. Their suite of risk management and compliance tools helps to reduce blind spots and shed light on potential business conduct risks that may lead to reputational, compliance and financial risks.

Roundtable on Sustainable Palm Oil (RSPO)

Roundtable on Sustainable Palm Oil (RSPO) is a not-for-profit that unites stakeholders from the 7 sectors of the palm oil industry to develop and implement global standards for sustainable palm oil. The RSPO has a set of environmental and social criteria which companies must comply with in order to produce Certified Sustainable Palm Oil. Their criteria helps minimize the negative impact of palm oil cultivation on the environment and communities in palm oil-producing regions.

Public Relations Related Indices

The Edelman Trust Index

The Edelman Trust Index is a global communications marketing firm that partners with the world's leading businesses and organizations to evolve, promote and protect their brands and reputations. In addition to traditional and enhanced PR, their work encompasses communications marketing, integrated campaigns driven by data and insight, advisory services and digital strategies and solutions. The firm is an independent, family-owned company.

JUST Capital

JUST Capital measures and ranks companies on the issues Americans care about most, so they can then act positively on that knowledge with their voice, purchasing decisions, investment dollars, career choices and leadership.

Acknowledgements

Task Force Members

Maria Ramos (Co-Chair), Chief Executive Officer Emeritus, ABSA Group Limited, South Africa

Achim Steiner (Co-Chair), Administrator, UNDP, USA

Eric Jing, Executive Chairman and Chief Executive Officer, Ant Financial Services, China

Pooma Kimis, Director, Autonomous Research, United Kingdom

Patrick Njoroge, Governor, Central Bank of Kenya, Kenya

Piyush Gupta, Chief Executive Officer, DBS Group Holdings, Singapore

Maiava Atalina Emma Ainuu-Enari, Governor, Central Bank of Somoa, Somoa

Natalie Jabangwe, Chief Executive Officer, EcoCash, Zimbabwe

Mats Granryd, Director-General, GSMA, United Kingdom

Bradley T. Katsuyama, Chief Executive Officer and Co-Founder, IEX Group, USA

Aurelie Adam Soule Zoumarou, Minister of Digital Economy and Communications, Government of Benin, Benin

Ambareen Musa, Founder and Chief Executive Officer, Sougalmal, UAE

Liu Zhenmin, Under-Secretary General for Economic and Social Affairs, UN Department for Economic & Social Affairs, USA

Henrietta H. Fore, Executive Director, UNICEF, USA

Phumzile Mlambo-Ngcuka, Executive Director, UN Women, USA

Kristalina Geogieva, Chief Executive, World Bank, USA

Richard Samans, Managing Director and Member of the Managing Board, World Economic Forum, Switzerland

Working Group Members

Anne Folan, President, Anne Folan and Associates, USA

Meng Yan, Senior Director, International Cooperation and Pernerships, Ant Financial Services, China

Matu Mugo, Assistant Director in the Bank Supervision Dept., Central Bank of Kenya, Kenya

Lanna Lome-Ieremia, Manager, Financial Systems Development Department, Central Bank of Somoa, Somoa

Mikkel Larsen, Chief Sustainability Officer, DBS Bank, Singapore

Alix Jagueneau, Head of External Affairs and Industry Purpose, GSMA, United Kingdom

Barry Wentworth, Principal Adviser, Innovative Finance, USA

Cyriaque Edon, Technical Advisor for Innovation and Financial Inclusion for State Minister of Planning and Development, Government of Benin, Benin

Sharon Spiegel, Chief of Policy Analysis and Development Branch, Financing for Sustainable Development Office (FSDO),

UN Department for Economic and Social Affairs, USA

Laurence Latimer, Head of Ventures, IEX Group, USA

Magdi M. Amin, Investment Partner, Omidyar Network, India

Mahadevan Ramachandran, Co-Founder, Prosperity Exchange, Japan

Amil Aneja, Inclusive Finance, United Nations Capital Development Fund, USA

Till Bruett, Director, Secretariat of the UN Secretary-General's Task Force on Digital Financing of the SDGs, UNCDF, USA Simon Zadek, Project Catalyst, UNDP, USA

Helene Molinier, Senior Policy Advisor on Innovation, Director for the Innovation and Technology Facility, UN Women, USA Ceyla Pazarbasioglu, Vice-President, Equitable Growth, Finance & Institutions, World Bank, USA

Matthew Blake, Head of Financial and Monetary Systems, Member of the Executive Committee, World Economic Forum, USA

Subject Matter Experts

John Morris, Founder and Chief Executive Officer, 17 Asset Managemet, USA

Jackie Vanderbrug, Head of Sustainable and Impact Investing Strategy, Bank of America, USA

Andre Bertolotti, Global Head of Sustainable Research and Data, BlackRock, USA

Tim Wright, Senior Managing Director, Head of Strategy, Guggenheim Partners, USA

Paul Bauccio, Head of Listings, IEX Group, USA

Jimmy Yan, Special Counsel to the Chief Investment Officer and Deputy Comptroller for Asset Management, Office of the NYC Comptroller, USA

Jared Westheim, Management Consultant, Oliver Wyman, USA

Samir Misra, Partner, Oliver Wyman, USA

Deborah Ng, Director, Strategy and Risk, Ontario Teachers' Pension Plan, Canada

Peter Kellner, Founder and Chief Executive Officer, Richmond Global, USA

Paper Authored By

Laurence Latimer, Head of Ventures, IEX Group, USA

Matthew Blake, Head of Financial and Monetary Systems, Member of the Executive
Committee, World Economic Forum, USA







COMMITTED TO IMPROVING THE STATE OF THE WORLD

The World Economic Forum, committed to improving the state of the world, is the International Organization for Public-Private Cooperation.

The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas.

World Economic Forum 91–93 route de la Capite CH-1223 Cologny/Geneva Switzerland

Tel.: +41 (0) 22 869 1212 Fax: +41 (0) 22 786 2744

contact@weforum.org www.weforum.org