

ESG Data & Technology



Moderator: Bahar Gidwani, CFA, FSA, CSRHub

Panelists:

- **Maximilian Horster, Ph.D. ISS ESG**
- **Maria Mähl, Arabesque**
- **Libby Bernick, Impact-Cubed**
- **Cornelius Graubner, FactSet Truvalue**
- **Ashwin Joshi, CFA, BlackRock**

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CSRHub's Big Data Algorithm Delivers Powerful Consensus Ratings

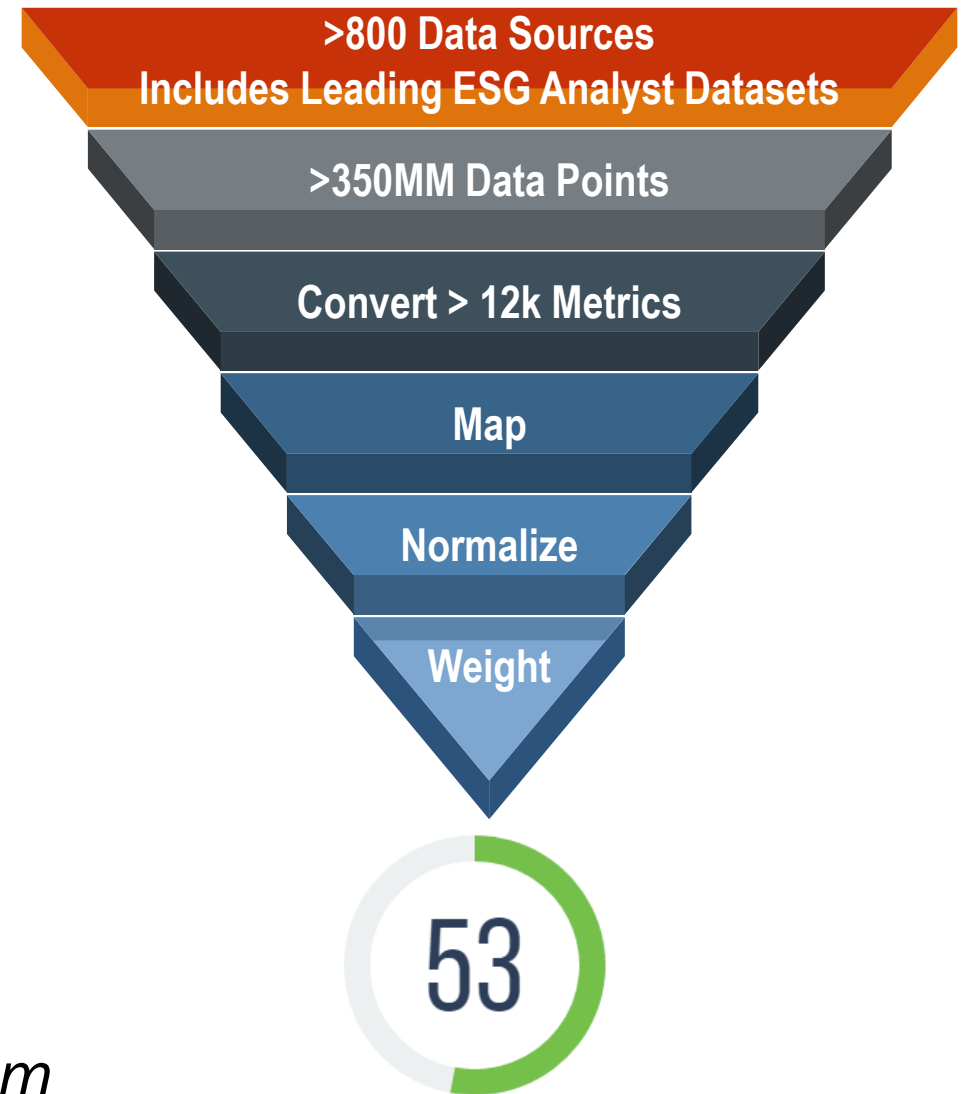
CSRHub Technology Aggregates Disparate ESG Sources to Create Consistent Consensus Ratings.

12 major "Wall Street" sources. Crowd, government, NGO, and publication inputs.

Drill Down to 12 subcategory levels of ESG (Environment, Social and Governance) Ratings and Rankings on 30,000 companies. Inspect the available data on another 20,000. Public, private, governments.

14 Years of Ratings and Rankings History.

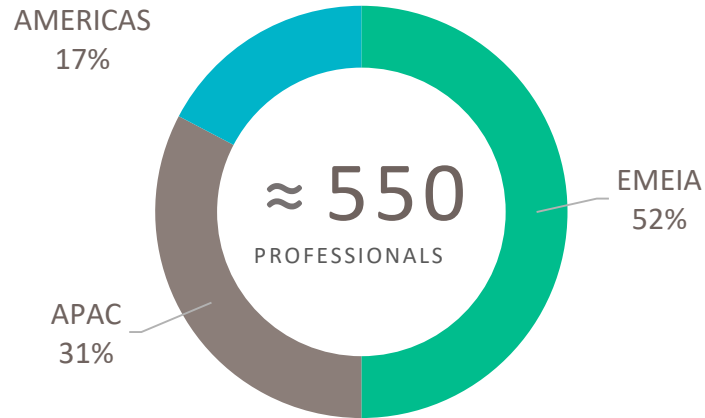
Bahar Gidwani, CFA, bahar@csrhub.com



STRENGTH IN NUMBERS

30 YEARS EXPERTISE TO DELIVER INSIGHT + ACTION

STAFF



~300
ANALYSTS

~ 30
LANGUAGES



COVERAGE

EMITTERS / UNIVERSE

28k+
CLIMATE

10k+
ESG CORPORATE &
COUNTRY RATINGS

25k+
CONTROVERSIES &
NORMS ASSESSMENT

~8k
DATA POINTS PER
COVERED ASSEST

CLIENTS WORLDWIDE TRUST OUR EXPERTISE

ISS	3.500+	Clients globally
ISS ESG	1.300+	Clients globally

All data as of May 2022 (approximate).
*) Out of a total of ~2'800 ISS colleagues globally



FIXED INCOME ESG USE CASES & TOOLS



CORPORATES



SOVEREIGNS



MUNIS &
AGENCIES



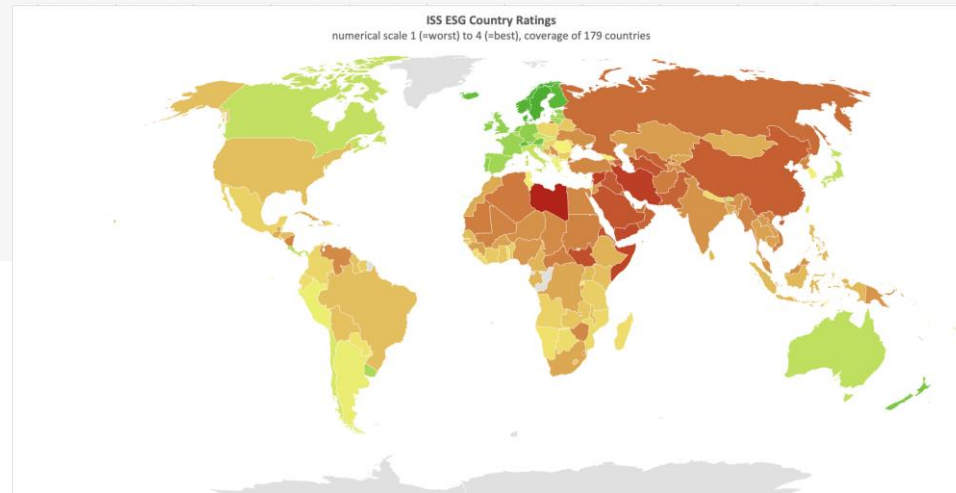
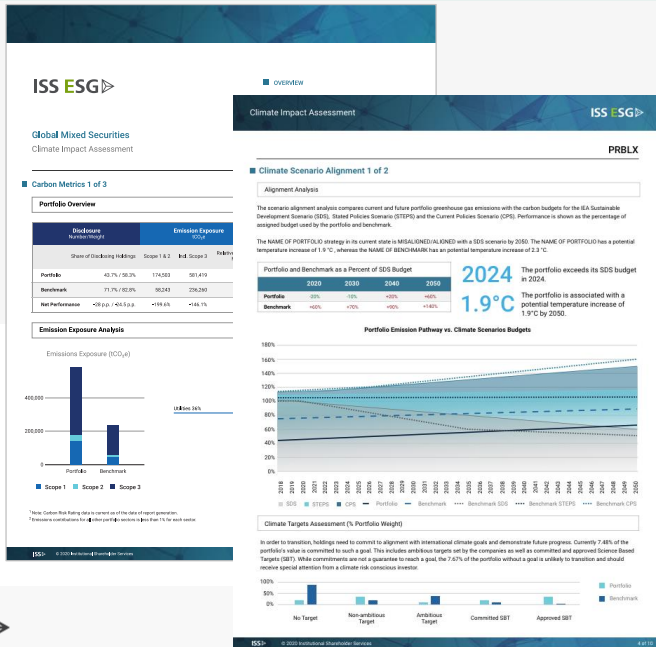
INFRASTRUCTURE



GREEN BONDS



LOANS



MARCH 9, 2022

ISS ESG Provides Climate-Related Data and Reporting Under Eurosystem Central Banks Framework Agreement



HUMAN VERSUS MACHINE?

THREE DIMENSIONS OF AI IN FI

Data Identification

- AI, Machine Learning & Natural Language Processing automatically locate relevant information.
- It requires thousands of specialists hours to develop training data for educating the algorithm

Machines, if trained properly, can identify relevant data points.



Data Collection & Extraction

- Machines can state for thousands of companies if a certain topic is mentioned – in real time.
- Machines can not judge and extract quality and error-proof data.

Machines can make data-processing super efficient but can't yet extract quality results.



Rating Companies

- ESG ratings require deep company & industry knowledge.
- Machines can't pass judgment on ESG strategies, have no specialist business knowledge, can't cut through marketing spin etc.

Machines can't replace analysts for a comprehensive ESG assessment.



Thesis after four years of AI experience:

The future of quality ESG research and ratings will not be machines, but machine-augmented analysts.

Business as usual*

*Is no longer an option.

The Market-Leading Solution Provider

ESG Book is the global leader in ESG data and technology.

Innovative Solutions to Meet New Client Demands

ESG Data

Gain access to the ESG data of over 25,000 companies worldwide, including over 9,000 listed corporations. Combining analyst research with AI, ESG Book covers over 450 data points per company, mapped against leading frameworks.

ESG Analytics

ESG Book provides access to a suite of market-leading sustainability analytics that enable clients to gain deeper insights into ESG risks and opportunities, together with a range of products to meet regulatory requirements.

ESG Technology

Through a SaaS data management and corporate disclosure platform, ESG Book enables clients to assess over 50,000 corporate disclosures. Our solutions are delivered through the latest API technology for seamless integration.

1 Cloud-based data platform

150+ ESG data experts

450+ ESG metrics per company

25,000+ Companies covered

15,000,000 Data points daily

The Data Problem

Inconsistency and lack of transparency is holding back ESG growth.

1. Data Quality

Capital markets require good ESG data to allocate finance efficiently to more sustainable outcomes. However, there is a lack of accessible, reliable corporate sustainability information available.

2. Comparability

The complexity of hundreds of different frameworks leads to inconsistencies and a lack of comparability, increasing the burden for both investors and companies.

3. Transparency

For sustainable finance to be effective, greater trust in ESG data is needed. Currently, there are too many opaque sustainability ratings in the market.

4. Timeliness

Corporate ESG data is still largely reported on an annual basis, meaning that investors lack up-to-date information to guide capital flows.

5. Greenwashing

Opaque and anecdotal reporting, often by human analysts, can give rise to biased analysis and the risk of greenwashing.

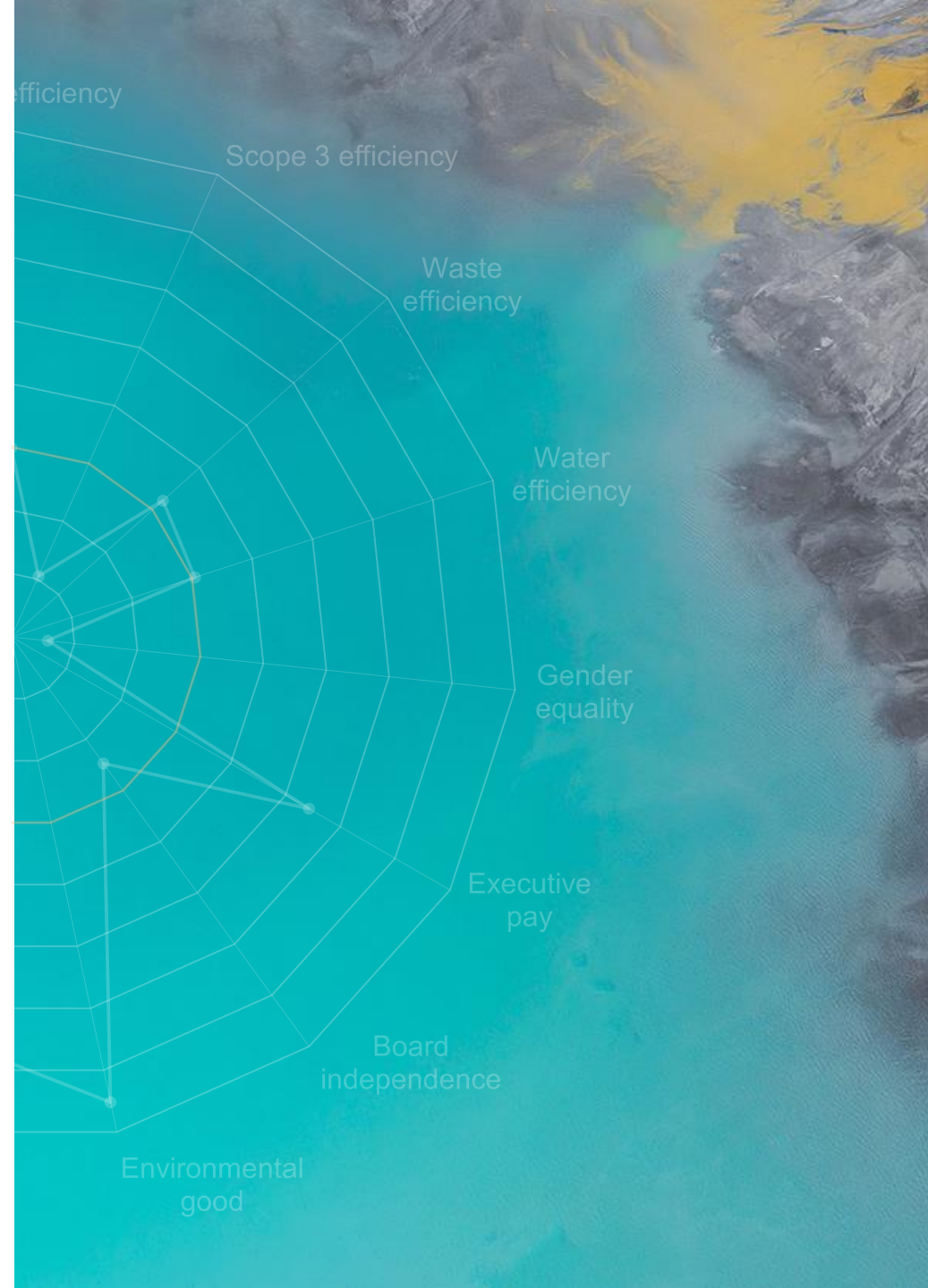


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Panel Discussion at the FIASI ESG and Fixed Income Event, May 2022

Libby Bernick, CEO

www.impact-cubed.com

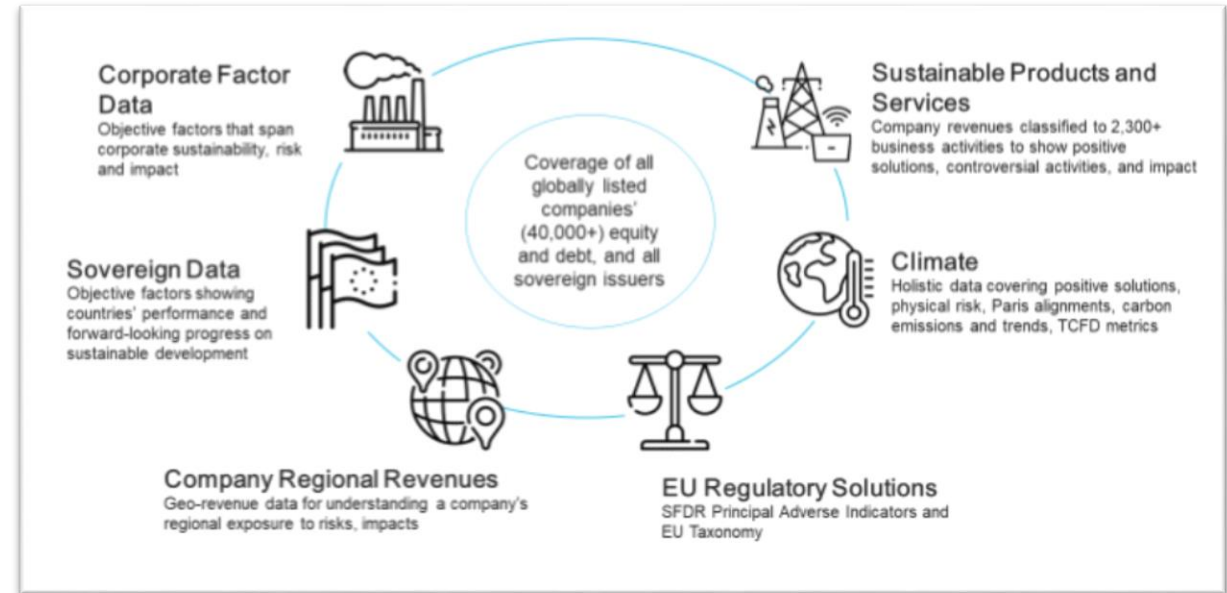


ABOUT **IMPACT CUBED**



- Headquartered in London, UK and trusted by over 35 top institutional asset managers representing over \$1Tn in AuM.
- Award winning, tech-enabled ESG data and investment solutions created by investors, for investors.
- Factual, unbiased factor data for any investment strategy
- Portfolio analytics platform to simplify fund analysis, securities research, and reporting
- Data covers all listed corporate and sovereign issuers of debt

ESG and Impact Factor Data



www.impact-cubed.com

AWARDS



WINNER 2018
Research Innovation



WINNER 2019
Best Innovation



SHORTLISTED 2019
Best Research Paper



WINNER 2019
Best Thought Leadership Paper



2019
Top 10 Impact Measurement Services



WINNER 2020
Best Independent House for ESG Research



WINNER 2020
Best ESG Specialist Data Provider

HOW ARE FIXED INCOME INVESTORS USING ESG DATA?



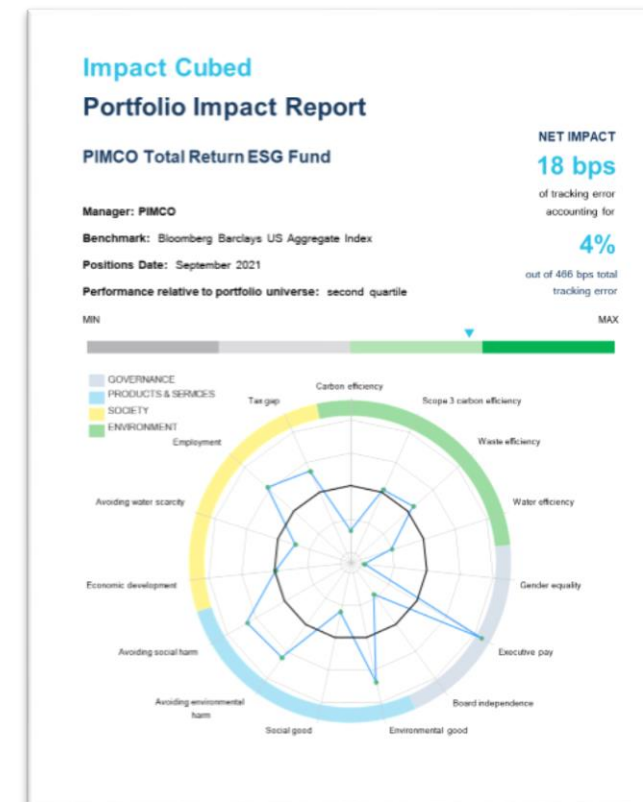
Risk



Ratings

Security	ESG Score
Fund 1	A-
Fund 2	
Fund 3	34/100
Climate ETF	A
Impact ETF	

Reports





WHAT MIGHT FIXED INCOME INVESTORS ALSO CONSIDER?

Using tech to harvest data and (most importantly) create more complete information that gives investors better insights on ESG and impact.

Impact + Risk

Isn't this what investors care about?



- Forward looking, empirical insights showing how issuers are deploying capital to more sustainable, low carbon business models and economies

Factor Data + Ratings

No greenwashing accusations



- Unbiased, objective factor data measuring outcomes
- Digital sourcing, quality assurance for timely global coverage of all listed issuers
- Issuer + Issuance: comparable, complete analysis

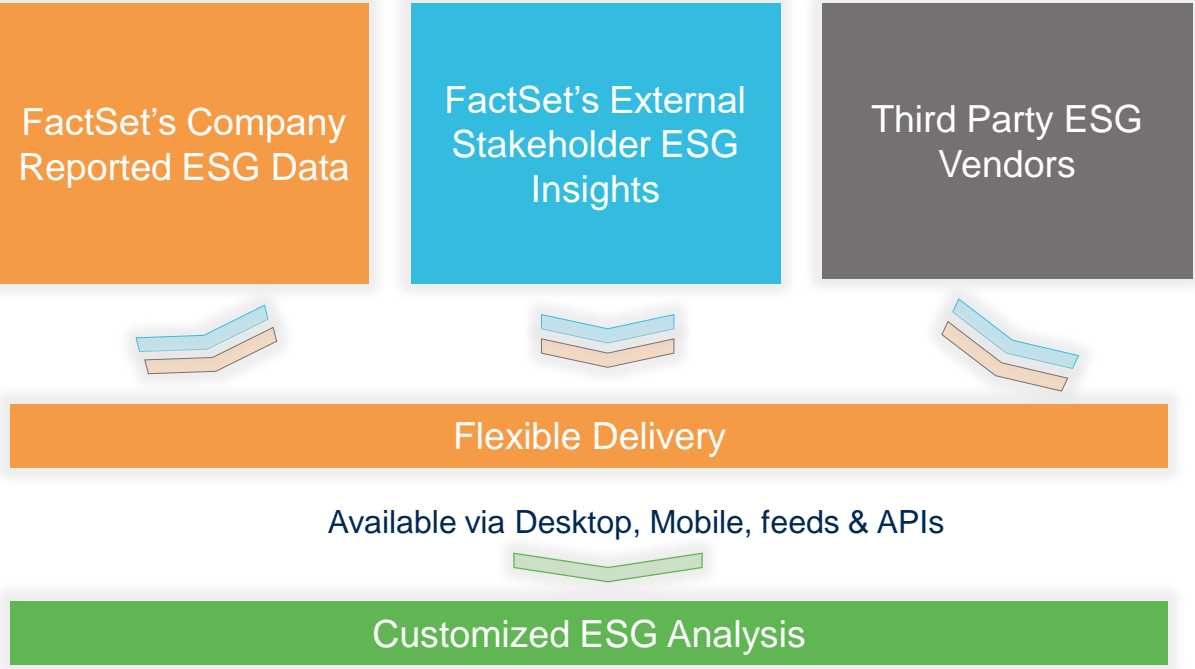
Investments + Reports

Differentiated products



- Cross-sectional, values focused analysis
- Comparing factual ESG performance on plain and green bonds: are green bonds worth the "greenium"?
- Fixed income maturity and carbon ROI

FactSet ESG Overview



Comprehensive ESG Ecosystem

Over 40 third-party ESG datasets to create the most complete view of ESG performance

Differentiated ESG Insights

Real-time intelligence from FactSet's Truvalue Labs to objectively assess corporate ESG behavior

Unparalleled Flexibility

Configurable ESG solutions to integrate ESG into the investment process on your own terms

Sustainable investing at BlackRock

Investment Management

Integration of ESG insights and data into all active and advisory investment processes and portfolio construction.

Sustainable Investment Solutions

Extensive platform encompassing index and active funds across all asset classes, designed to help clients meet their sustainability and financial objectives.

Data & Technology

Aladdin allows investors and clients to understand and manage portfolio risk



ESG Research

Dedicated sustainable research team focuses on the link between ESG and financial materiality, producing insights that drive firm investment processes.

Company Engagement

Fundamental investors and Investment Stewardship team engage with companies we invest in on sustainability-related issues that impact long-term financial performance

Transparency & Reporting

We want clients and investors to clearly see the sustainability risks of their investments. We publicly provide this information on both sustainable and non-ESG focused strategies.

BLK by the Numbers

\$509 billion

Assets under management in dedicated sustainable strategies*

\$696 billion

Assets under management in additional strategies which utilize ESG screens

300+

Sustainable mutual fund and ETF offerings

3,500+

Annual stewardship engagements

100%

ESG Integrated in active and advisory strategies

\$3.46 trillion

In assets incorporate ESG insights

Source: BlackRock Sustainable Investing, as of December 31, 2021. All values in \$USD.

* Comprised of ESG Broad, ESG Thematic, Impact strategies and selected priority screened products

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