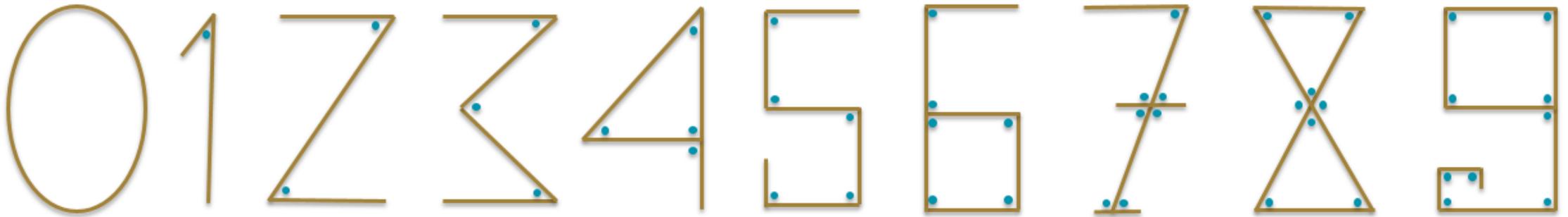




arabesque



Ciaran McCale, Global Head of Media and Communication
Arabesque

Mission Statement



Sustainability

Big Data

Make sustainable investing financially attractive and available to the mainstream.

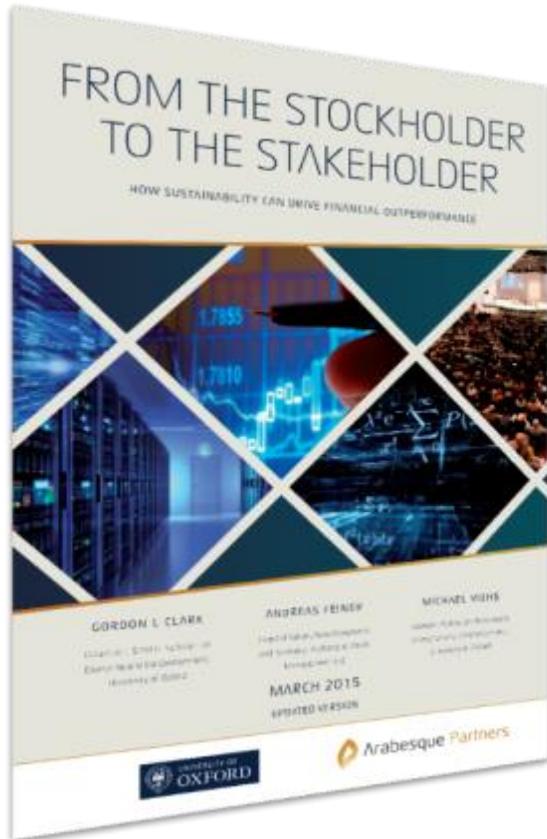
We integrate Environmental, Social and Governance (ESG) data with quantitative investment strategies to generate financial outperformance.



Videos have been removed
from this presentation.

To download the full version (202MB)
please access [this link.](#)

Innovation Based on Sound Research



- Overview of current research on ESG (Environment, Social and Governance)
- Collaboration between Oxford and Arabesque
- Meta-study of over 200 papers
- 85% of the world's 250 largest companies report on sustainability

ESG ~ lower cost of capital

90% of studies

ESG ~ better operational performance

88% of studies

ESG ~ better stock price performance

80% of studies



The background is a dark blue, almost black, space filled with glowing digital elements. Multiple streams of binary code (0s and 1s) flow from the center towards the edges, creating a sense of movement and data processing. The streams are illuminated with a bright white light at their source, which fades into a soft blue glow. There are also numerous small, out-of-focus light spots scattered throughout the scene, giving it a futuristic and ethereal feel.

AI and Big Data: two forces shaping global markets



ESG Big Data

- Over 90% of all the world's data was generated in the past two years
- Current level of ESG data is a fraction of what it will be in five years
- Investor demand for ESG is growing rapidly
- ESG to finance is what the X-Ray was to medicine
- A new dimension to investing



Insights Into Extra-financial Performance From Big Data Analytics

BIG DATA TRAITS



VOLUME

The global 'data sphere' will grow from 29 Zettabytes in 2018 to 163 ZB in 2025¹



VELOCITY

2.5 billion Gigabytes of data is created daily², 56,000 Gigabytes internet traffic per second³



VARIETY

~80% of data is unstructured⁴ such as text, sound, image & video, news, social, mobile



NEW INSIGHTS



BIG DATA ANALYTICS

Natural language processing combined with machine learning increasingly used to extract information & insights from unstructured data



EVIDENCE-BASED DECISIONS

Derive insights from high-frequency information to shift from retrospective reactions to evidence-based proactive / preventive actions

BIG DATA CHALLENGES

- > Making impactful **corporate sustainability actions** requires an understanding and management of stock- & stakeholder perceptions of those actions, which are increasingly **derived from unstructured external data** sources, such as online content, newsfeeds and social media
- > Only 15% of organizations reported deploying their big data project to production⁵
- > 45% say analyzing unstructured data is a growing challenge⁶

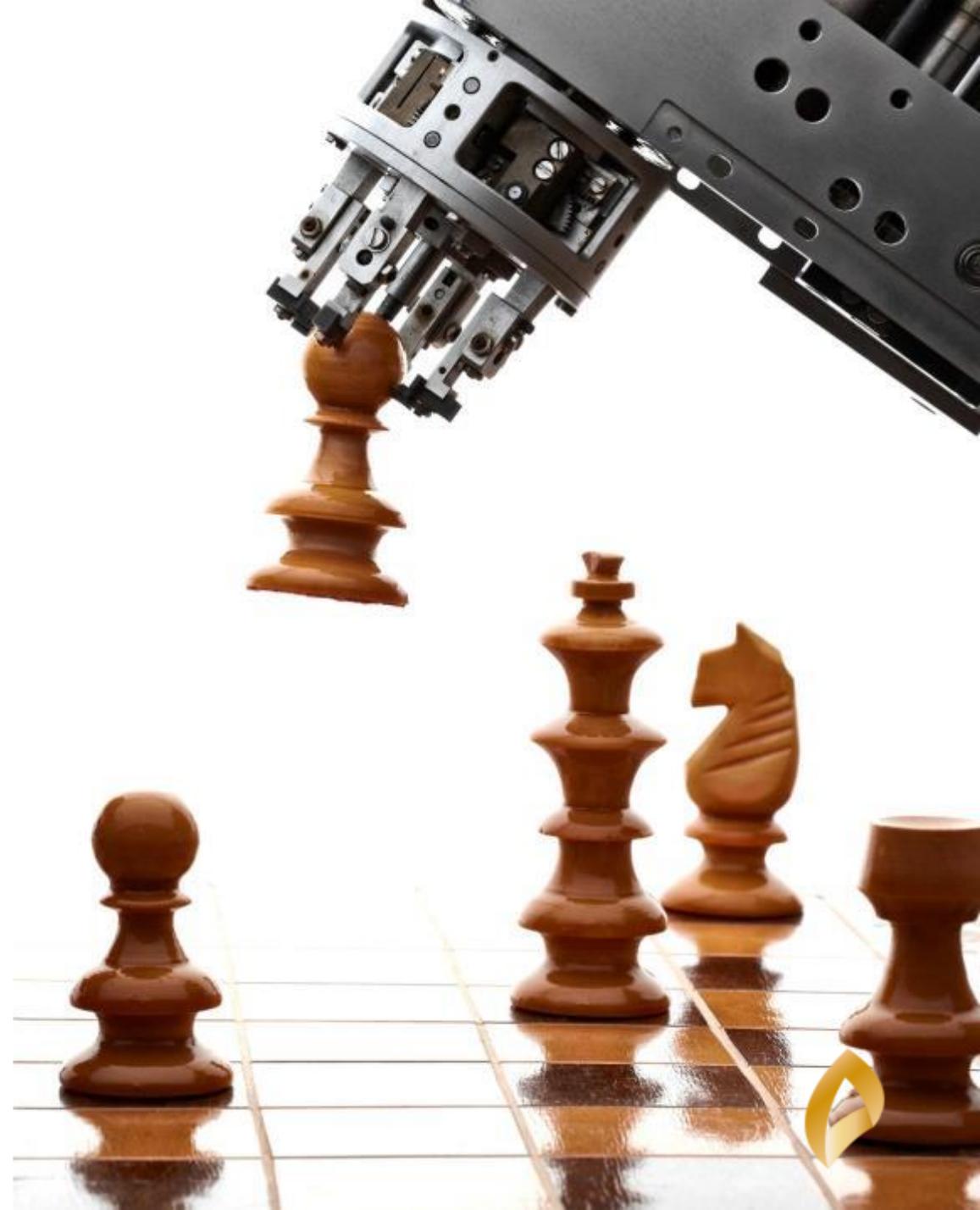
BENEFITS

- > Traditional ESG ratings are interview and survey-based: they can be biased and are infrequent. **New ratings** based on external data from news sources **are continuously updated and more objective**
- > **Big data analytics** provide a complementary, **fact-based lens** into extra-financial performance
- > High-frequency, objective insights into previously hidden **risks & evolving opportunities**



The Age of AI

- AI infiltrating into everything we do, from Apple's Siri, to Amazon's Alexa
- Arabesque's quant models extract information out of data through pattern recognition and machine learning
- AI and sustainability big data combined
- Our mission is to make this technology accessible to more investors





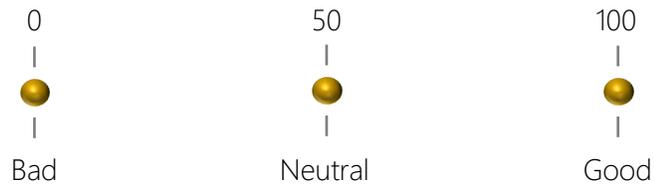
Explore the sustainability of the world's biggest companies

Three Pillars of S-Ray



GC Score

A normative assessment of each company based on the core principles of the United Nations Global Compact



ESG Score

A sector specific analysis of each company's performance on financially material environmental, social and governance (ESG) issues



Preferences

A search tool that allows anyone to check the business involvements of companies against their personal values



How do we arrive at top level scores?

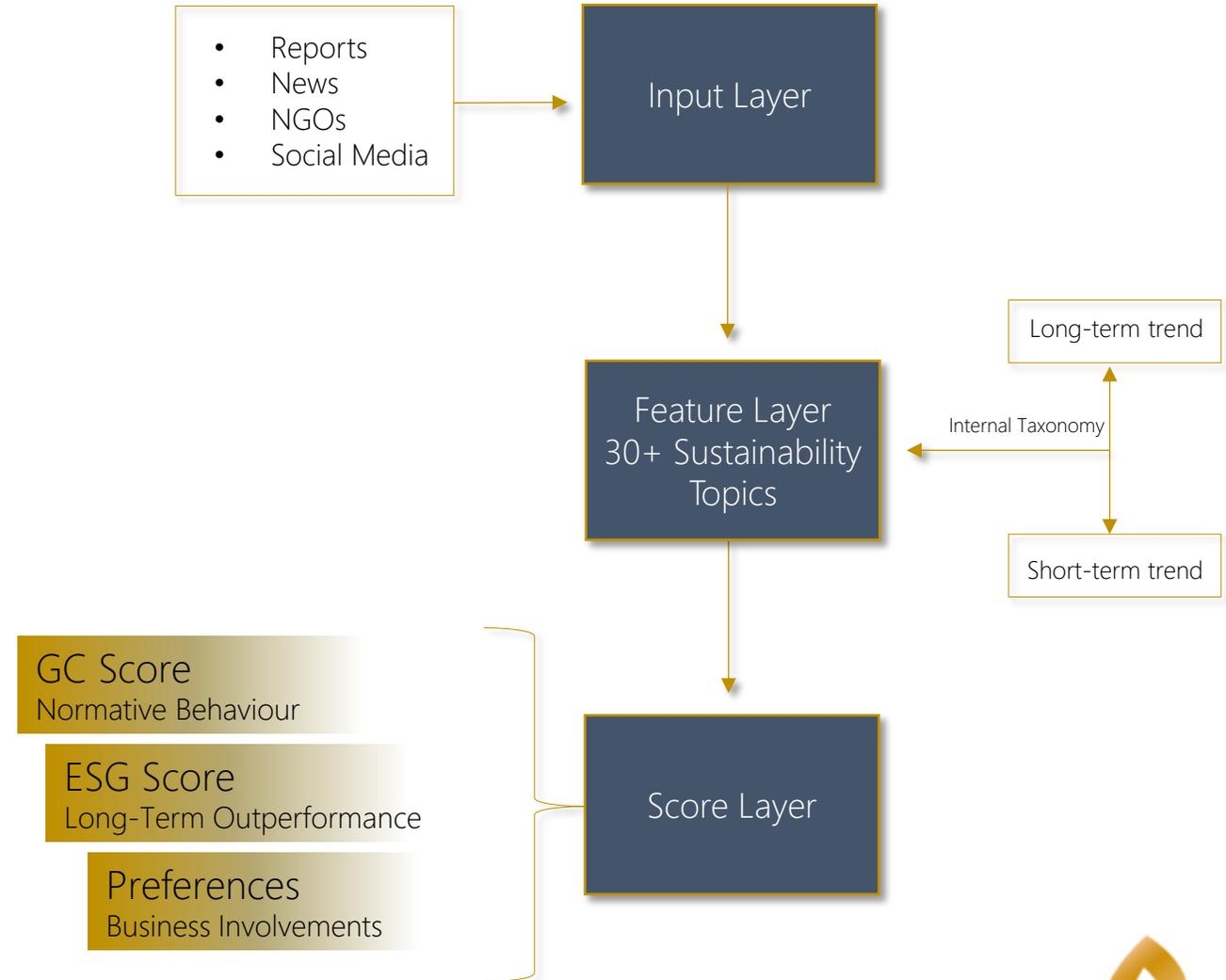
There are 3 layers to our process:

- **Input layer:** Analyze over 250 raw data points. Data is measured for quality, cleaned and normalized before being mapped to the “feature layer.”
- **Feature layer:** +30 sustainability themes that serve as building blocks for top level scores.
- **Top Level Scores:** Combine features into easy-to-use S-Ray® scores.

GC Score: The GC Score provides a normative assessment of companies based on the four core principles of the United Nations Global Compact (GC) to approximate reputational risk: human rights, labour rights, the environment and anti-corruption.

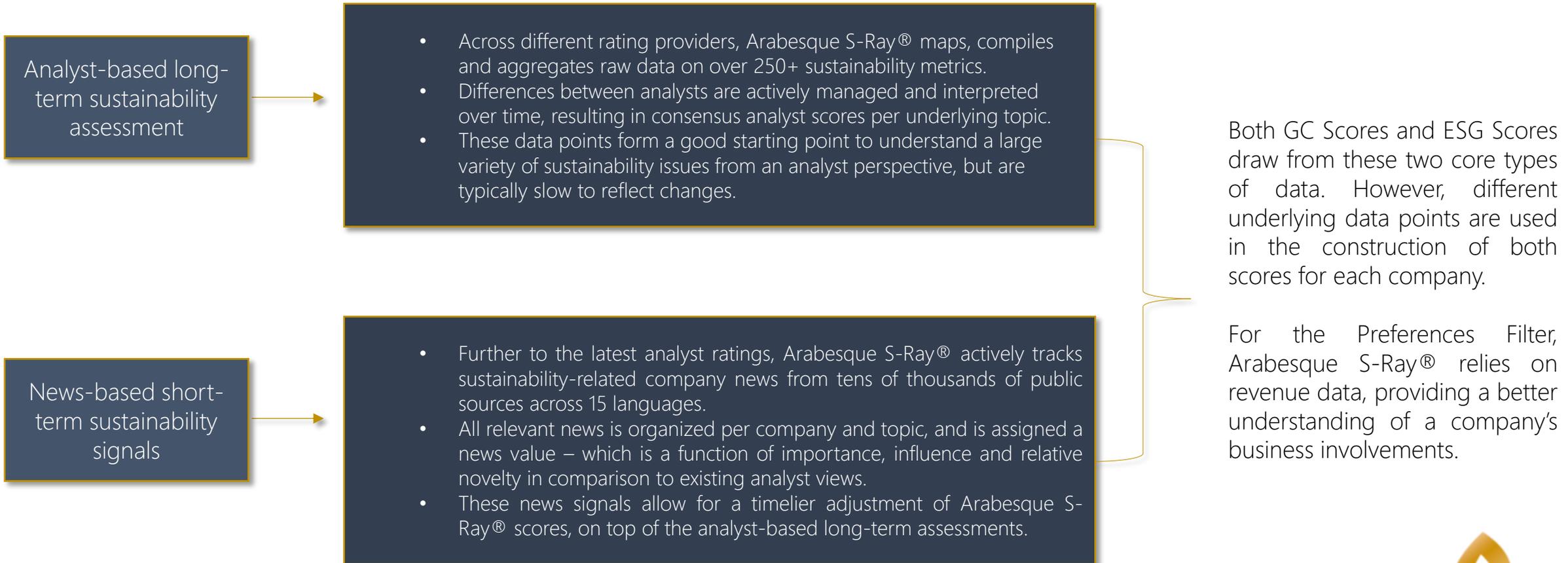
ESG Score: Identifies companies that are better positioned to outperform over the long term by measuring what is financially material for future profitability.

S-Ray® Methodology



Where does the data come from?

Arabesque S-Ray® organizes all data in two main groups:



Search company

reset Country Sector Size

Overview

List

Companies 6900 / 6900

Countries 75

Trend over time

-3 Years

-1 Year

-6 Months

-3 Months

05 Feb 2018

GC Score

GC

Score

65

60

55

50

45

40

35

30

25

20

15

20

25

30

35

40

45

50

55

60

65

70

ESG Score

GC distribution

average 53.83

ESG distribution

average 50.45



Search company

reset

Country

Sector

Size

Overview

List

GENERAL

GC DETAIL

ESG DETAIL

Company name	Country	Sector	GC	ESG
Gecina SA	France	Finance	78.62	87.31
TrueBlue, Inc.	United States	Commercial Serv...	76.06	83.00
Navigant Consulting, Inc.	United States	Commercial Serv...	76.56	83.00
Knoll, Inc.	United States	Producer Manufa...	76.06	82.62
Brambles Limited	Australia	Commercial Serv...	73.00	81.94
Forte Oil PLC	Nigeria	Energy Minerals	77.19	81.94
Unibail-Rodamco SE	France	Finance	75.69	81.81
TechnipFMC Plc	United Kingdom	Industrial Services	81.44	81.81
Steelcase Inc. Class A	United States	Producer Manufa...	77.00	81.50
Fonciere des Regions SA	France	Finance	75.81	80.81

Apple Inc.

Country

United States

Sector

Electronic Technology

Size

Mega

Region North America

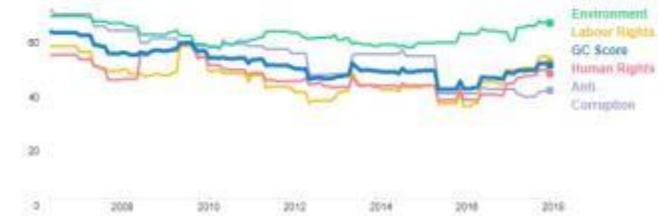
Industry Telecommunications

As of 05 Feb 2018

Equipment

GC Score 80.69

ESG Score 40.22



Country Rank

56.38

Sector Rank

30.24

Human Rights



6-month momentum

1.91%

Labour Rights



6-month momentum

4.28%

Environment



6-month momentum

1.10%

Anti-Corruption



6-month momentum

6.15%

Business involvements



Alcohol



Arms



Fossil Fuel



Gambling



GMO



Tobacco



Weapons





S-Ray GC Score: companies with the lowest scores underperform the stock market

The Bottom 20% underperform the overall market by 1.7%



Source: Arabesque S-RAY™

- Cumulated stock price performance of six portfolios.
- “Universe” is the performance of all companies which are evaluated by Arabesque S-Ray™.
- Q1 to Q5 are quintiles which are selected based on the S-Ray GC Score.
- Q1 comprises the worst 20% based on the S-Ray GC score. Q5 comprises the best 20% GC scores.
- The portfolios are rebalanced on a quarterly basis

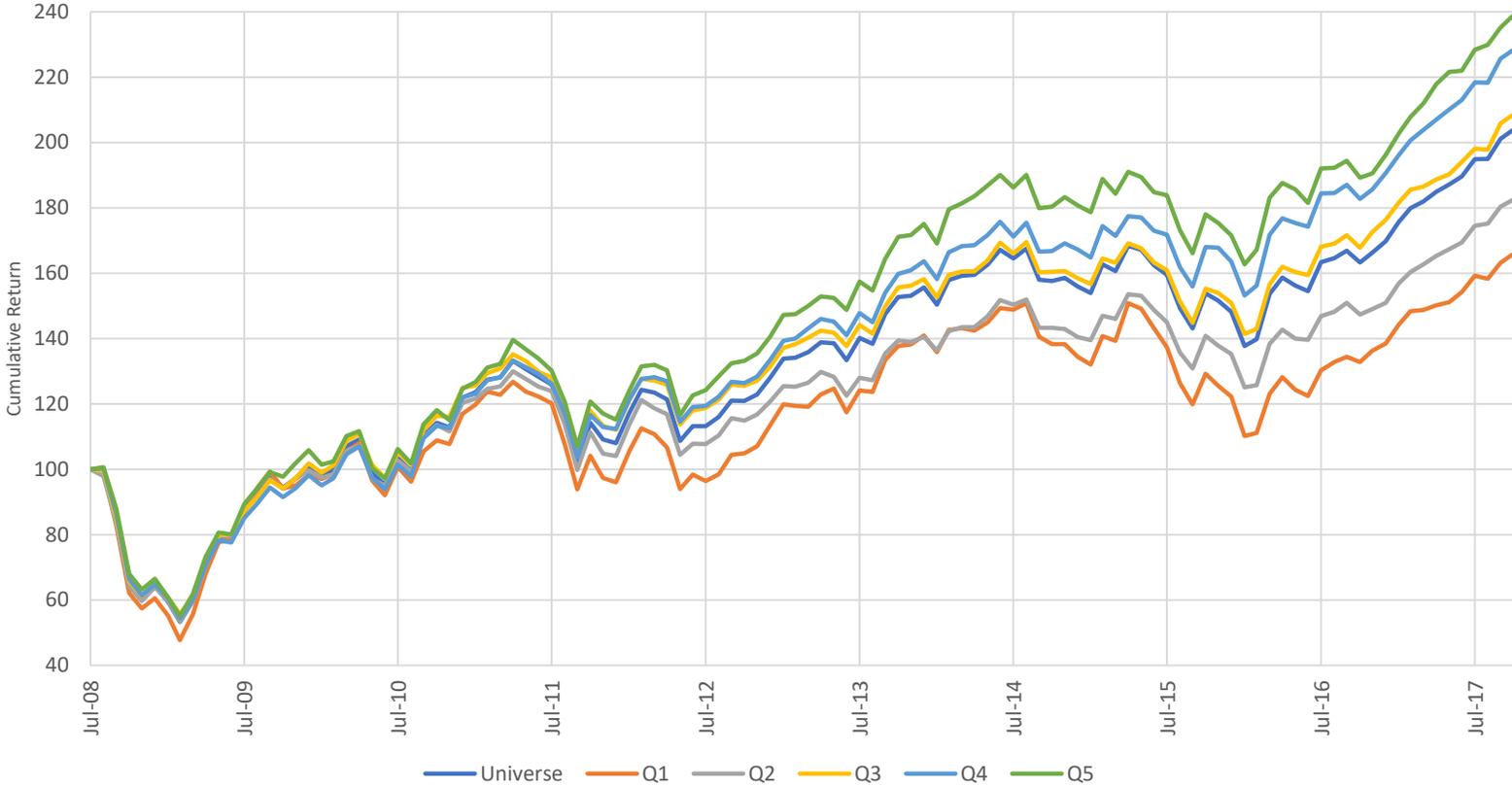
Insights:

- The portfolio of the “Top 20%” S-Ray GC scores outperforms the “Bottom 20%” S-Ray GC scores by 2.0% p.a.
- The “Bottom 20%” underperform the overall investment universe by 1.7% p.a.



S-Ray ESG Score: companies with superior scores significantly outperform the stock market

The “Top 20%” outperform the “Bottom 20%” by 4.3% annually



- Cumulated stock price performance of six portfolios.
- “Universe” is the performance of all companies which are evaluated by Arabesque S-Ray™.
- Q1 to Q5 are quintiles which are selected based on the S-Ray ESG Score.
- Q1 comprises the worst 20% based on the S-Ray ESG score. Q5 comprises the best 20% ESG scores.
- The portfolios are rebalanced on a quarterly basis

Insights:

- The portfolio of the “Top 20%” S-Ray ESG scores outperforms the “Bottom 20%” scores by 4.3% p.a.
- The volatility of the Top 20% is significantly lower than the volatility of the Bottom 20%
- The Bottom 20% companies underperform the overall investment universe by 2.4% p.a.



AVERAGE ACROSS ALL SECTORS

GC



 58.41

ESG



50.23



53.83

50.55



54.24

50.96

OUTPERFORMING INDUSTRIES

COMMERCIAL SERVICES



AVERAGE GC 

BRAZIL: 55.39

GLOBAL: 53.87



AVERAGE ESG

BRAZIL: 53.63

GLOBAL: 50.57

TOP COMPANIES

1. Cielo S.A.
2. Multiples S.A.
3. Kroton Educacional S.A

OUTPERFORMING INDUSTRIES

COMMUNICATIONS



AVERAGE GC 

BRAZIL: 65.08

GLOBAL: 57.17



AVERAGE ESG

BRAZIL: 53.41

GLOBAL: 52.90

TOP COMPANIES

1. TIM Participacoes S.A.
2. Telefonica Brasil SA Pfd
3. Oi SA Pfd



A new standard to measure sustainability



Sustainable finance for all

