



Man Group

ESG: Bringing order to uncertainty



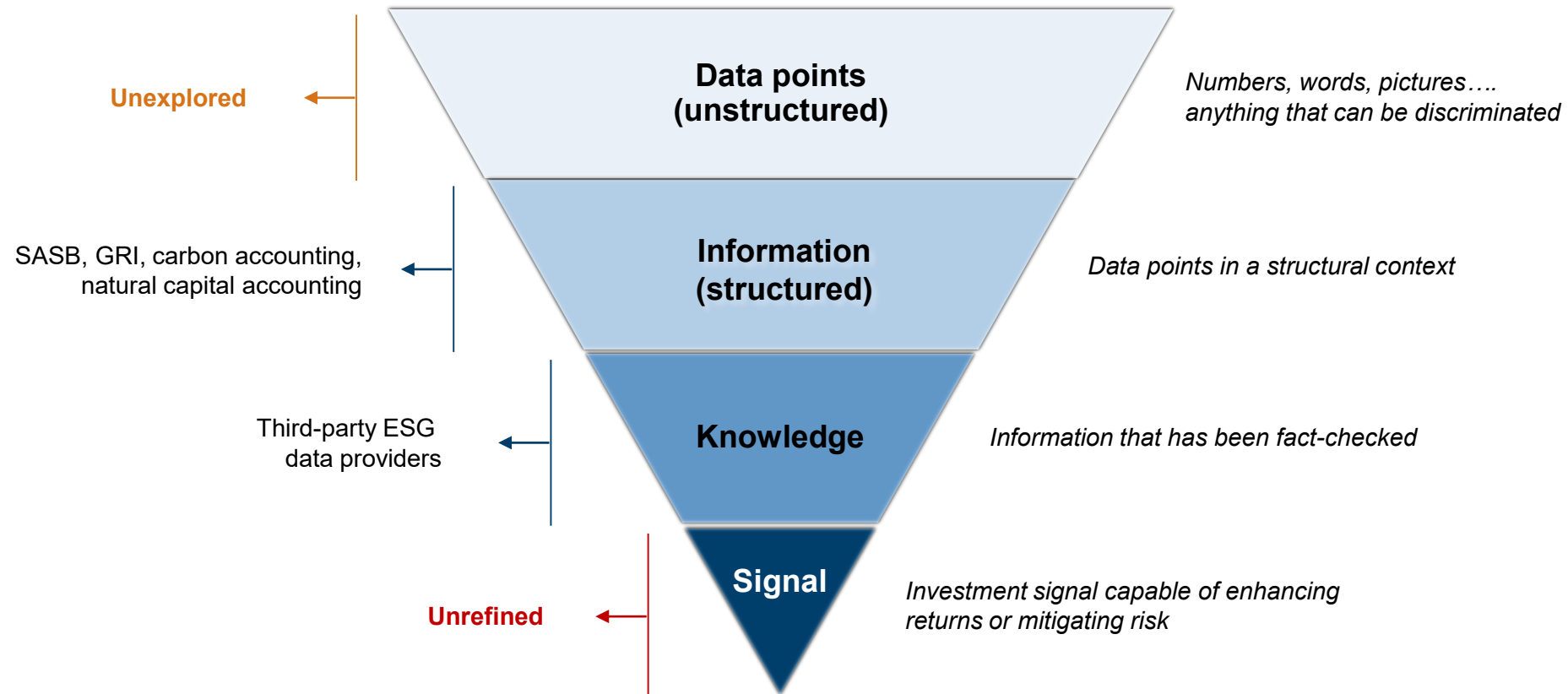
October 2019

For investment professionals only. Not for public distribution.



ROGER SCHILLERSTROM

- There are more than 1,200 non-traditional datasets (Eagle Alpha, 2018)
- The past decade has seen significant improvements in the collection of information and its contextualization
- We believe the key to a meaningful signal is how the information is organized and evaluated
- We expect machine learning and natural language processing to add multiple-speed signalling power

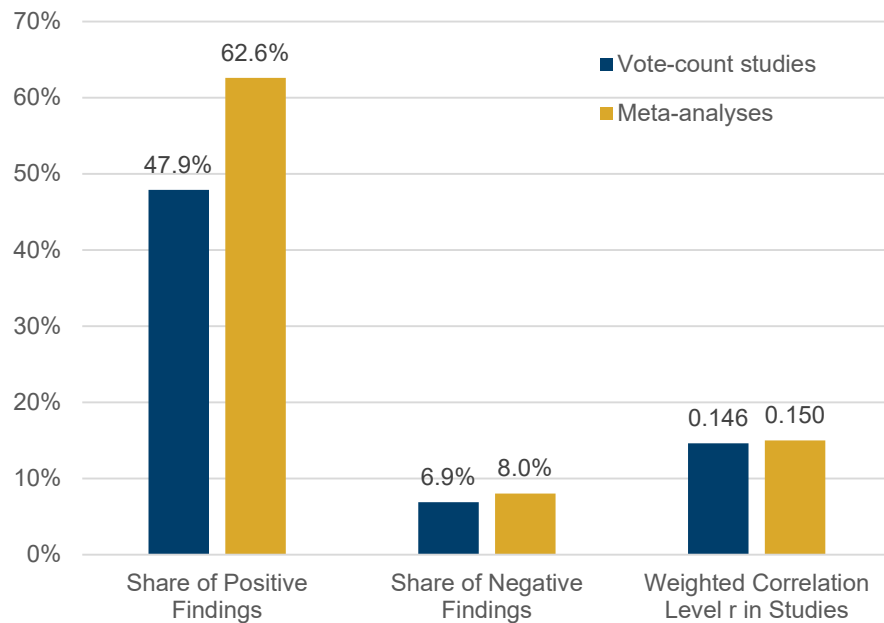


Source: Andreas G.F. Hoepner, *Financial Data Science for Responsible Investors*, 2018.

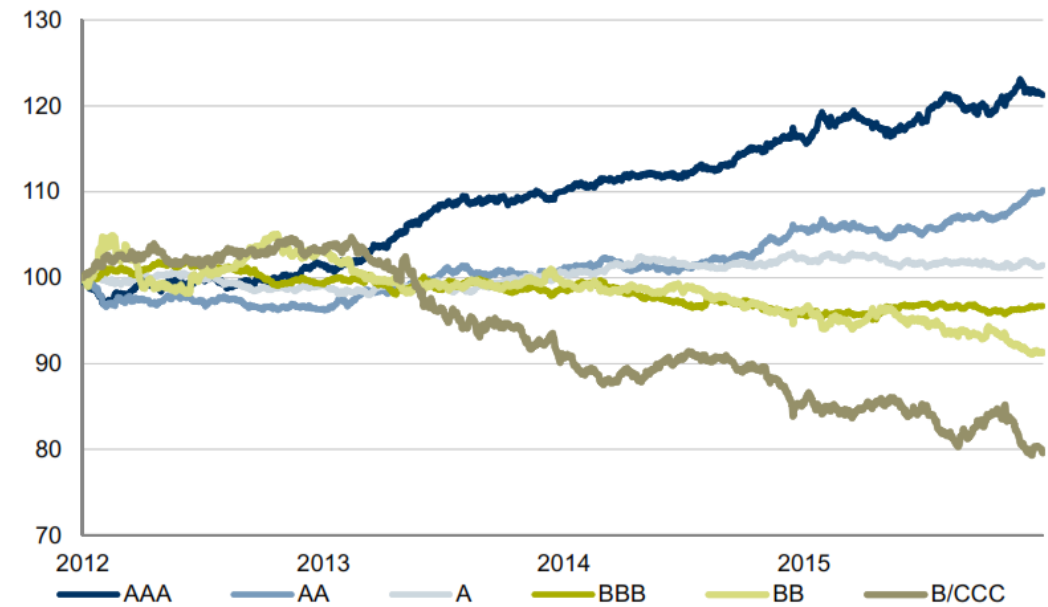
Schematic illustration. Any descriptions or information involving investment process or strategies is provided for illustration purposes only, may not be fully indicative of any present or future investments, may be changed at the discretion of the investment manager and are not intended to reflect performance.

- Is the “ESG doesn’t hurt performance but it doesn’t add performance” message enough?
- A growing body of work suggests ESG overlays can generate meaningful alpha
- But is it really ESG? What’s the evidence for a ESG premia?

Academic survey and meta-analyses supporting linkage between ESG and financial performance¹



Practitioner work - relative performance per MSCI Europe ESG rating²

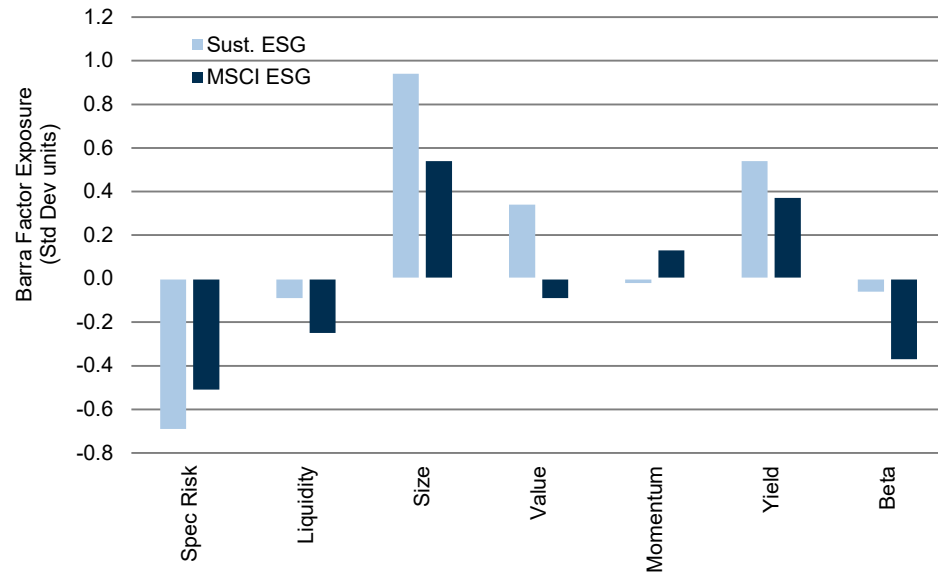


Source (1): Gunnar Friede, Timo Busch & Alexander Bussen. *Journal of Sustainable Finance and Investment*, 5:4, 210-233. “ESG and Financial Performance: Aggregated Evidence from more than 2000 Empirical Studies”. Dec. 15, 2015. 90% of studies find a nonnegative relation between ESG and corporate financial performance, of which 47.9% in vote-count studies and 62.6% in meta-analyses yield positive findings.

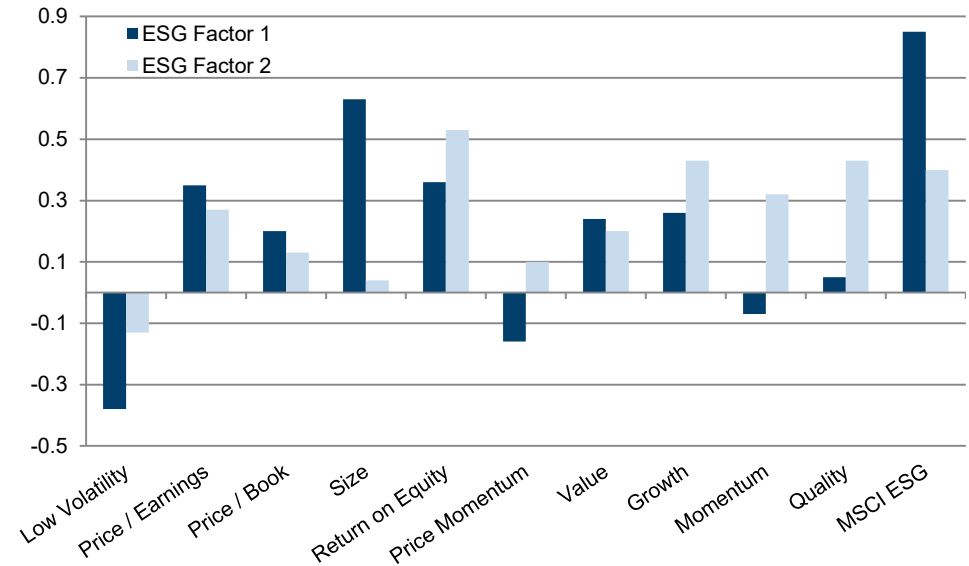
Source (2): MSCI ESG Research, FactSet and Nordea Markets.

- Scepticism is warranted around the quality of the data
- Cross-vendor correlations remain low, but why should ESG ratings converge anyways?
- Where are the returns from existing ESG ratings really coming from?

What factors are really driving existing ESG signals?¹



What factors are really driving existing ESG signals?²



Source (1): Man Numeric, MSCI and Sustainalytics, 2019.

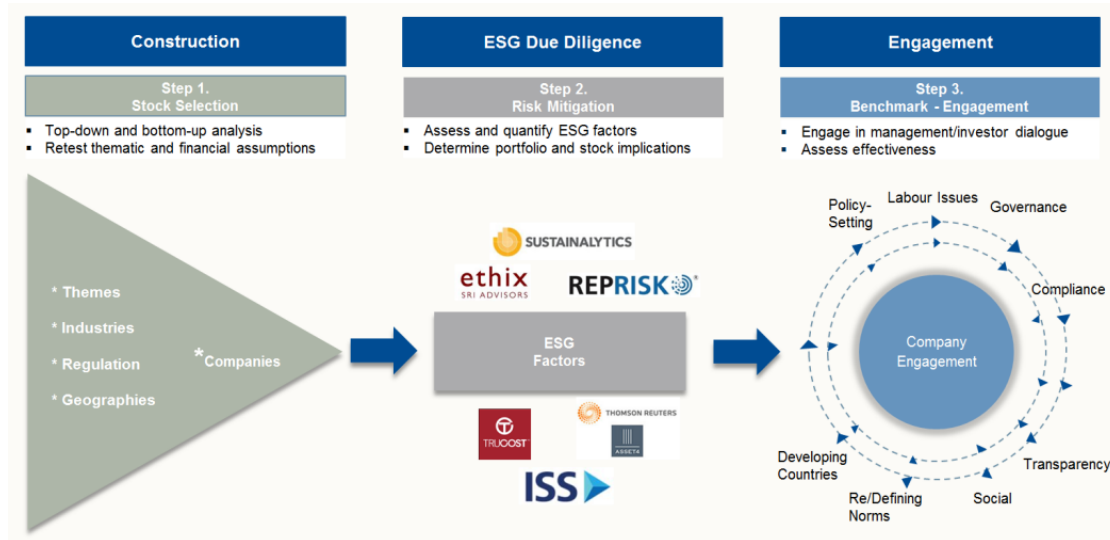
Source (2): JP Morgan research, "ESG – Environmental, Social and Governance Investing," 2018.

The necessary exercise of defining ESG

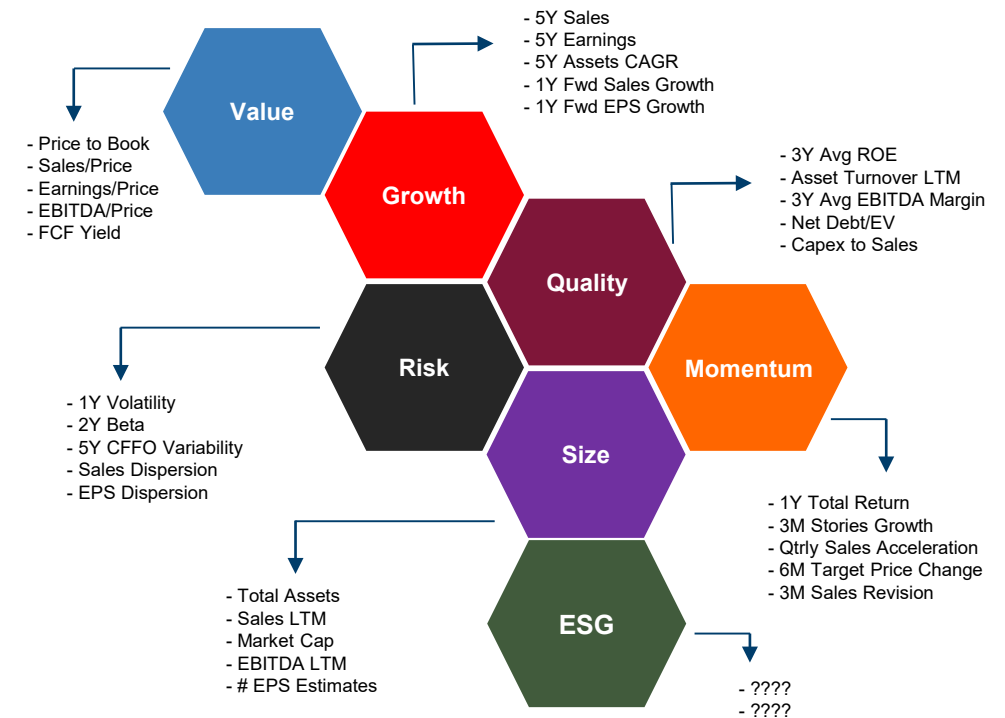
Process, premia or both?

- Lack of definition means ESG as perceived more as a discretionary process
- Process is subjective. How can we measure performance returns through attribution analysis?
- A true ESG factor remains widely unestablished due to greater data complexity and dimensionality

ESG as process¹



ESG as style factor?²

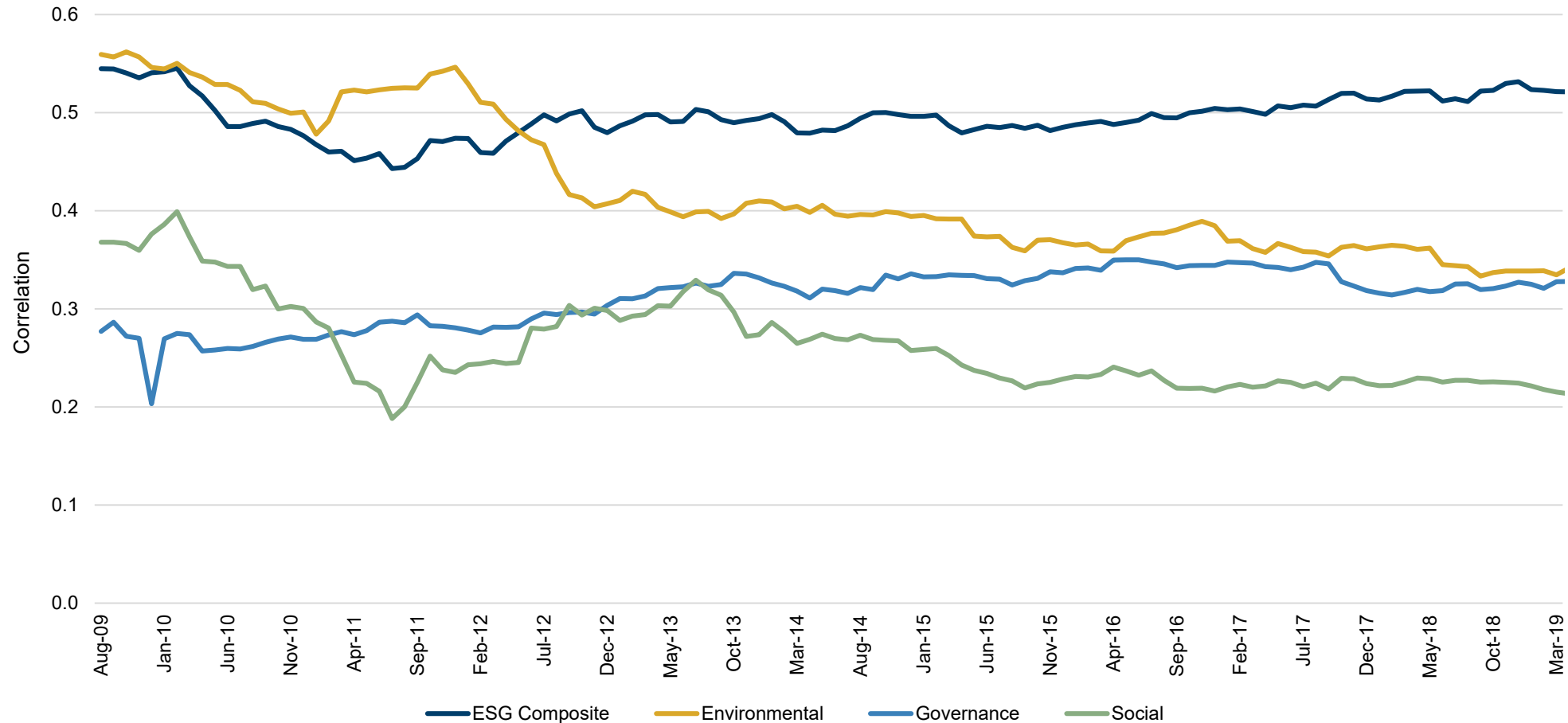


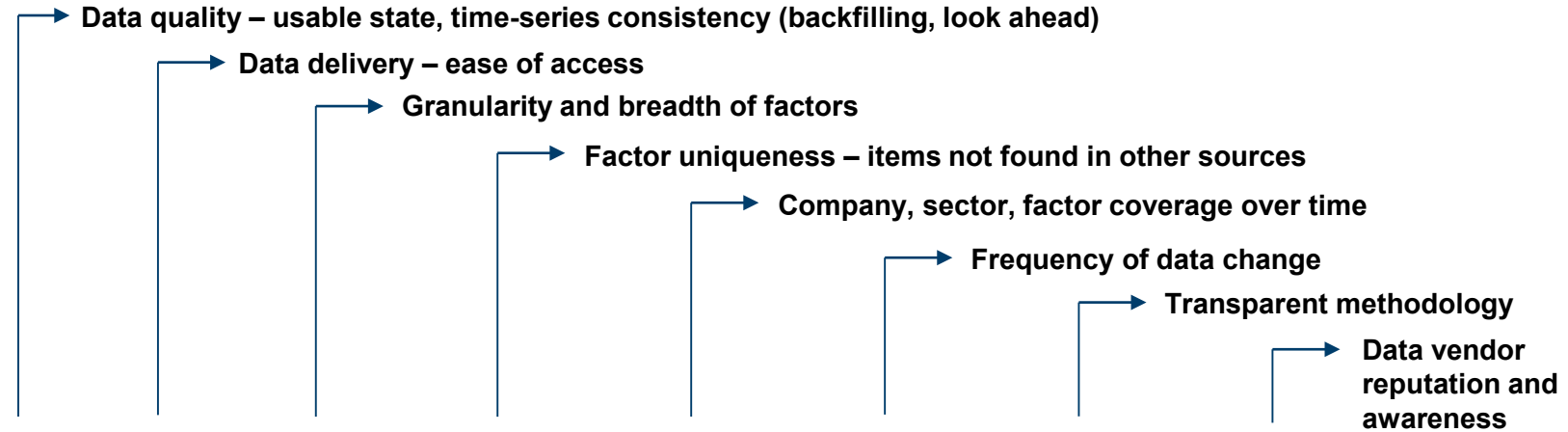
Source (1): Man GLG, 2015.
Source (2): Man Group Plc, 2019

Comparing ESG datasets

Skepticism is high, cross-vendor correlations remain low....that is a good thing

MSCI v. Sustainalytics Correlation (within Numeric Global Universe)



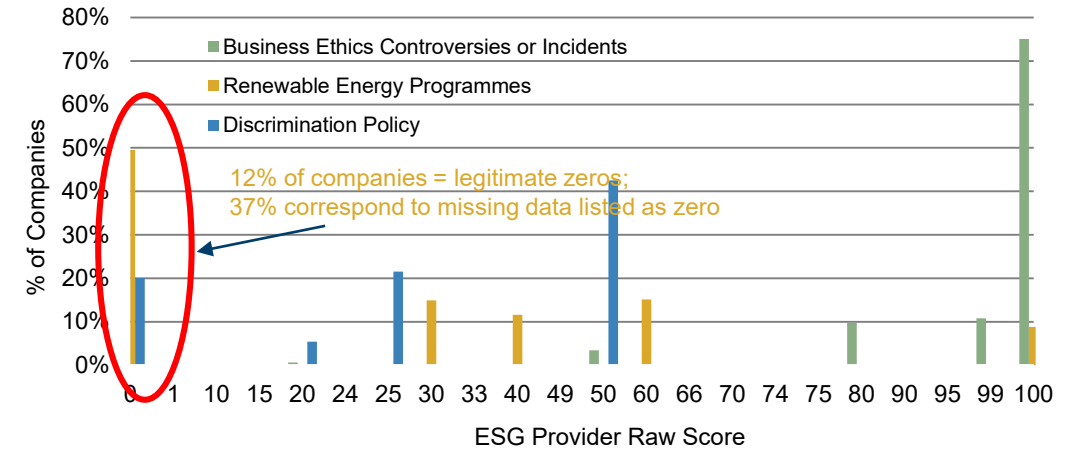


| Data vendor | Data Quality | Data Delivery | Factor Granular | Factor Uniqueness | Data Coverage | Data Frequency | Data Transparency | Market Adoption | Final Score |
|-------------|--------------|---------------|-----------------|-------------------|---------------|----------------|-------------------|-----------------|-------------|
| Vendor 1 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 18 |
| Vendor 2 | 2 | 1 | 3 | 3 | 3 | 2 | 1 | 3 | 18 |
| Vendor 3 | 3 | 2 | 1 | 2 | 2 | 2 | 3 | 3 | 18 |
| Vendor 4 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 17 |
| Vendor 5 | 3 | 2 | 2 | 3 | 1 | 3 | 1 | 1 | 16 |
| Vendor 6 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 14 |
| Vendor 7 | 1 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 13 |
| Vendor 8 | 1 | 3 | 1 | 1 | 1 | 2 | 2 | 1 | 12 |

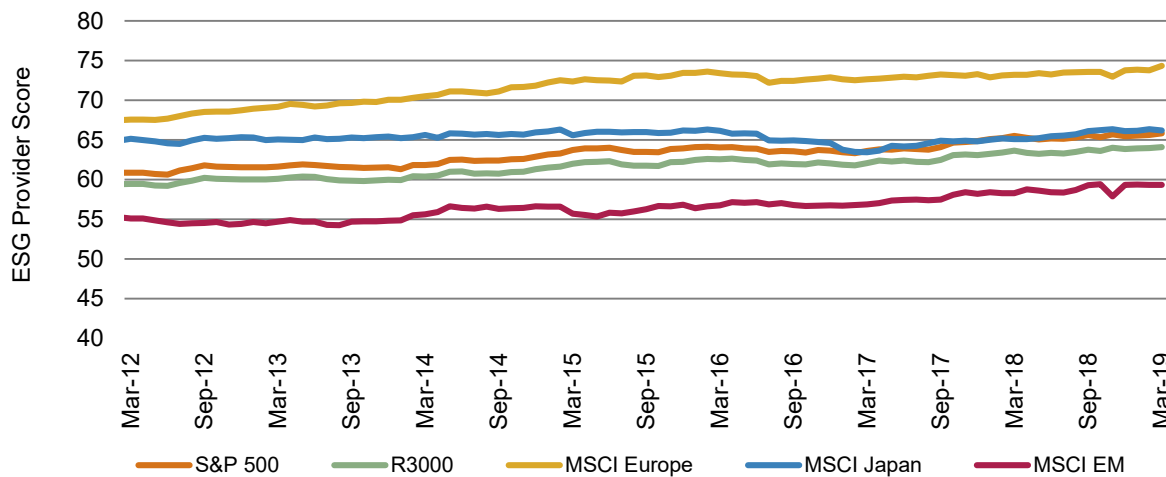
Overview

- (1) Data granularity: 12% of companies are legitimate zeros; 37% correspond to missing data listed as zero
- (2) Many ESG data items have biases - ie, sector, region, factor which must be adjusted to make fair and accurate comparisons.
- (3) ESG data providers often score sectors quite differently (ie, tobacco ranks poorly while controversial weapons is viewed favourably).

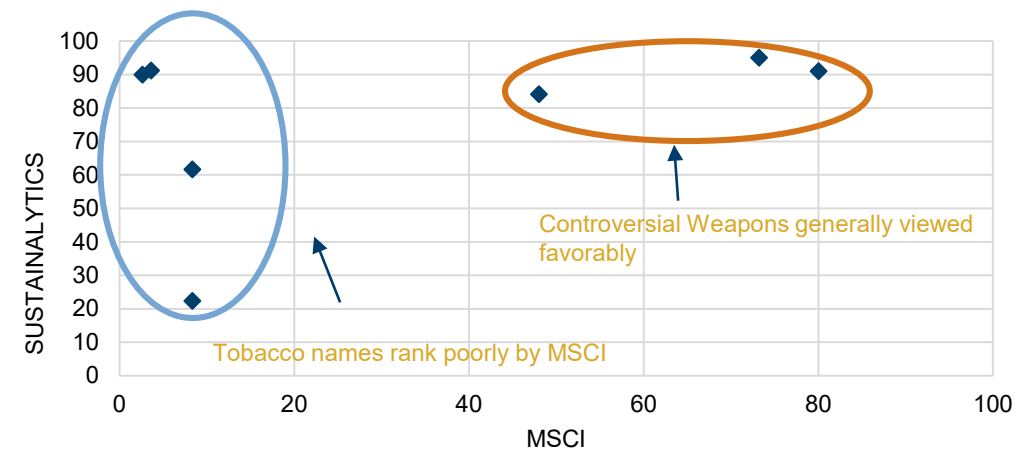
(1) Data granularity – tail biased vs continuous distribution



(2) Sector, region, factor biases - environmental scores by region



(3) Different approaches to ESG scoring among sectors

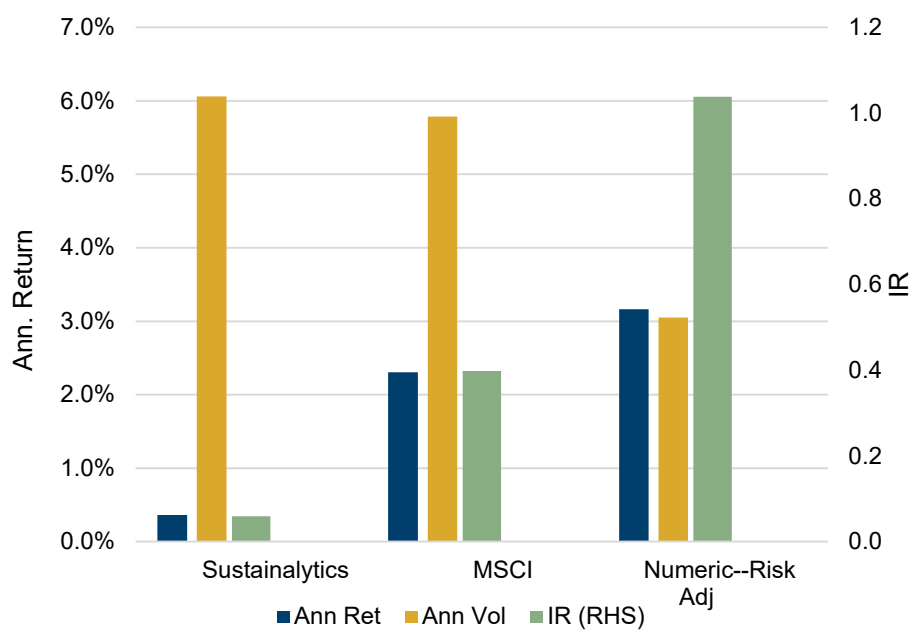


* Average Sustainalytics by sector January 2013 – March 2019

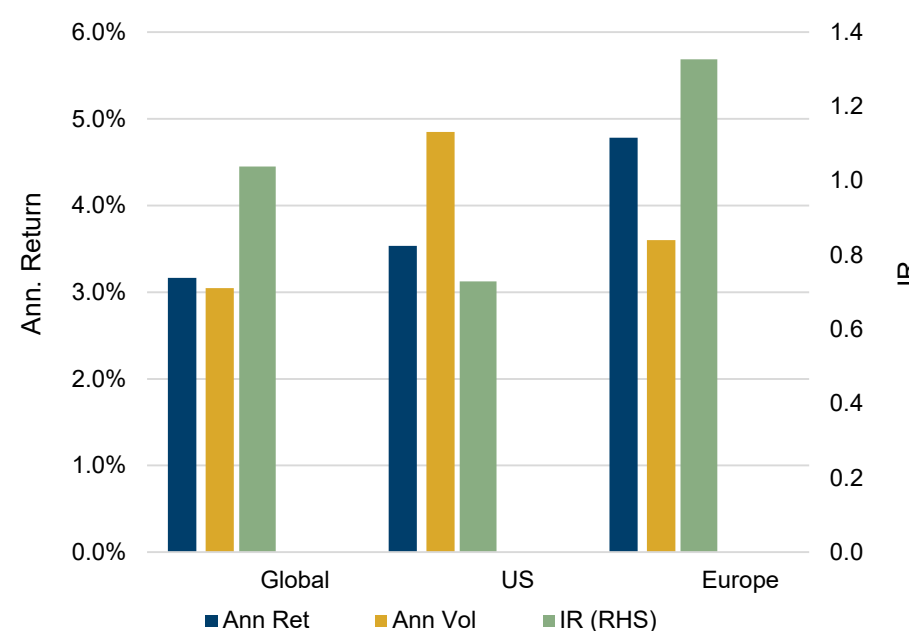
Any information involving investment process or strategies is provided for illustration purposes only, may not be fully indicative of any present or future investments, may be changed and are not intended to reflect performance.

- Numeric ESG Model maps vendor data to 15 principles-based pillars
- Industry-focused framework, adjusted for country, sector and factor biases
- Simulations show better risk-adjusted performance than off the shelf data from vendors
- Proprietary ESG signal has historical predictive power in global, US and Europe

Standalone ESG Signal (Global Universe)



Standalone ESG Signal (Region)



Any descriptions or information involving investment process or strategies is provided for illustration purposes only, may not be fully indicative of any present or future investments, may be changed and are not intended to reflect performance. SIMULATED HYPOTHETICAL PERFORMANCE. The simulated performance data above reflecting hypothetical results is shown for the time period from December 31, 2012 to March 31, 2019. Simulated performance data and hypothetical results are shown for illustrative purposes only, do not reflect actual trading results, have inherent limitations and should not be relied upon. Please see the back of this presentation for additional information on simulated performance.

ESG is complementary

ESG signal has low correlation with other factor models



- ESG models have low correlation with each other
- Near zero correlation between ESG and traditional models
 - Governance and Quality 0.01 correlation
 - Provides a unique source of information

Score Correlation of ESG Signals with other Models

Global Universe

| | ESG Composite | Environment | Social | Governance | Global Combo | Quality | Value | Momentum | Informed Investor |
|-------------------|---------------|-------------|--------|------------|--------------|---------|-------|----------|-------------------|
| ESG Composite | 1.00 | | | | | | | | |
| Environment | 0.68 | 1.00 | | | | | | | |
| Social | 0.70 | 0.32 | 1.00 | | | | | | |
| Governance | 0.75 | 0.26 | 0.28 | 1.00 | | | | | |
| Global Combo | 0.04 | 0.06 | 0.02 | 0.02 | 1.00 | | | | |
| Quality | 0.03 | 0.07 | 0.04 | 0.01 | 0.44 | 1.00 | | | |
| Value | 0.03 | 0.06 | 0.01 | 0.00 | 0.64 | 0.14 | 1.00 | | |
| Momentum | 0.00 | 0.00 | 0.00 | 0.00 | 0.48 | 0.06 | -0.09 | 1.00 | |
| Informed Investor | 0.01 | 0.01 | -0.01 | 0.02 | 0.38 | 0.10 | 0.18 | 0.08 | 1.00 |

Source: Man Numeric. Daily stock level correlation of ESG signals with other Numeric composite signals. Global Universe December 31, 2012 – December 31, 2018.

This slide contains hypothetical or simulated model results that have certain inherent limitations. Unlike an actual portfolio record, simulated results do not represent actual trading. Also, since the trades have not actually been executed, the published results may have under-or-over compensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. There exist limitations inherent with model results. Results include simulated transaction costs, but do not include the impact of actual trading.

Multi-factor ESG framework

| Company | Model Scores | | | | Combos | | | |
|---------|--------------|----------|---------|------|--------|------|-----------|----------|
| | Value | Momentum | Quality | ESG | Combo | Rank | ESG Combo | ESG Rank |
| A | 0.90 | 0.90 | 0.90 | 0.00 | 0.90 | 1 | 0.68 | 2 ← |
| B | 0.80 | 0.90 | 0.50 | 0.10 | 0.73 | 2 | 0.58 | 3 |
| C | 0.60 | 0.60 | 0.60 | 1.00 | 0.60 | 3 | 0.70 | 1 ↑ |
| D | 0.60 | 0.60 | 0.60 | 0.00 | 0.60 | 3 | 0.45 | 4 ↓ |
| E | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 5 | 0.25 | 5 ← |

All purely hypothetical

Alpha scores follow a 0 to 1 scoring system

Alpha scores are equally weighted

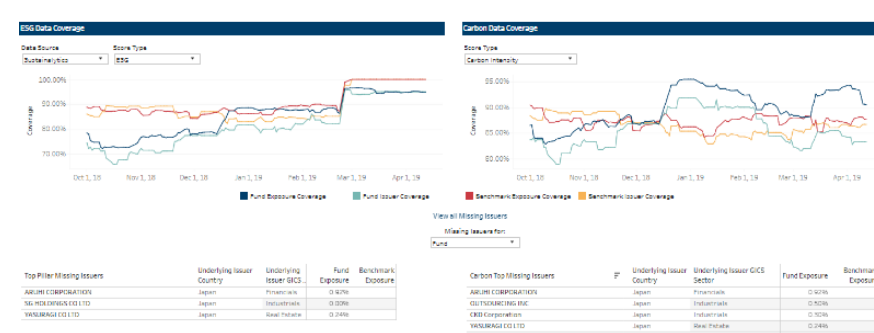
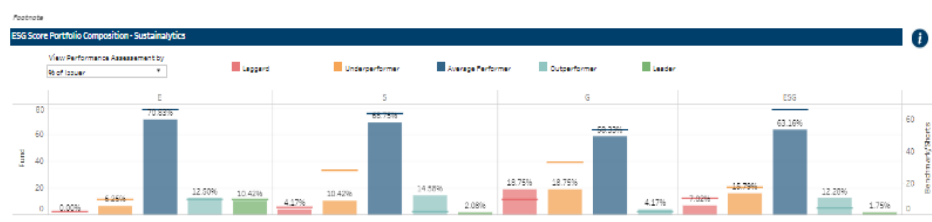
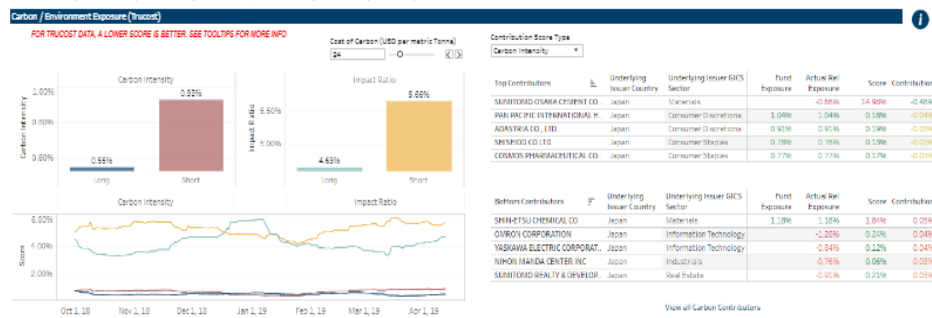
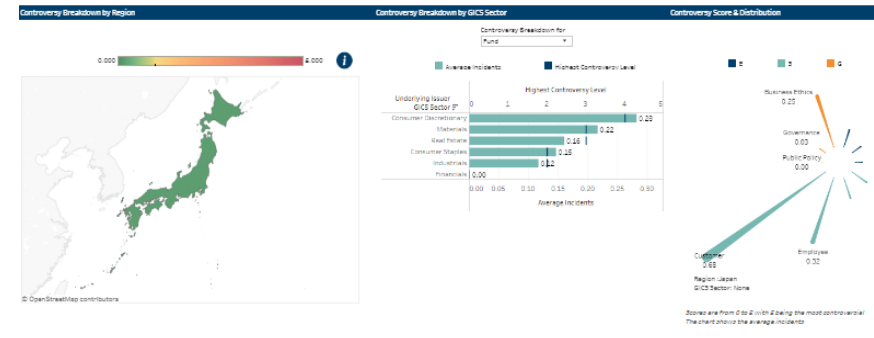
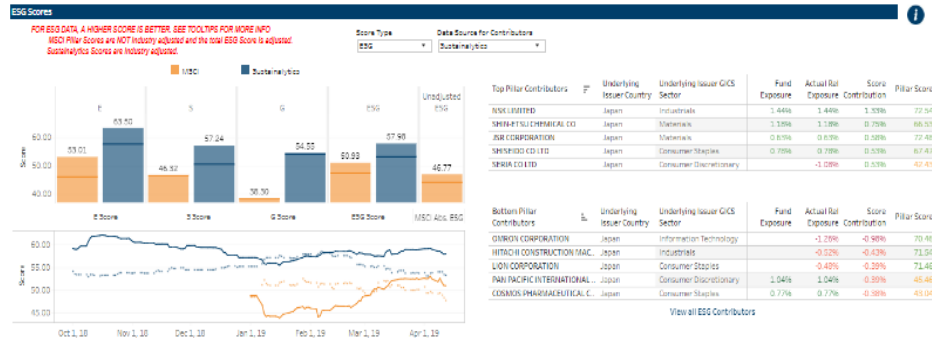
- **Pros**
 - Ability to combine multiple views of the company
 - Explicit weight can be assigned (e.g. Blend ESG model at 25% to the overall Combined model)
- **Cons**
 - Does not guarantee that a certain target ESG exposure is achieved
 - Does not guarantee that obviously 'bad' names do not make it into the portfolio

Next generation ESG exposure and risk analytics

Combines off-the-shelf ESG data with proprietary approach



- Proprietary ESG analytics inform PM research with non-financial information sources
- Tool contributes to investment process, rather than purely reporting
- Scores are measurement, not targets



Source: Man Group plc.
 Illustrative examples - for information purposes only.