esg intelligence ™

Research on ESG Integration

A JOURNEY TO ACHIEVE SUSTAINABILITY

Prof. Louis Cheng

Outline

Linkage of CSR & ESG
ESG DEFINITION

United Nations
Framework Convention on
Climate Change

CSR 1992

PRI | Principles for
Responsible
Investment

ESG 2006

Environmental

Social

Governance

ESG

☆ **Sustainable Investing**

¼ of world's investment funds

ESG credential
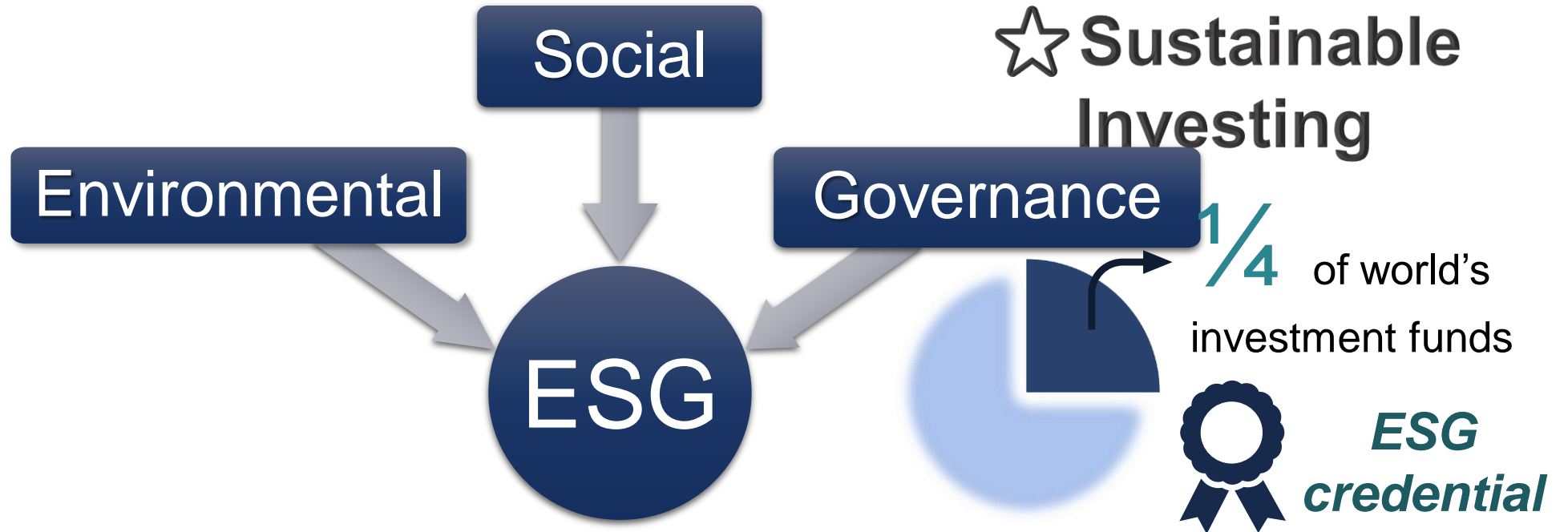
The CSR framework was formalized in 1992 by the The United Nations Framework Convention on Climate Change (UNFCCC).
The ESG concept was developed in 2006 by The United Nations Principles for Responsible Investment, known as UNPRI.

ESG profile positioning for your portfolio

ESG Fully Integrated

Directly invest capital towards companies which provide solutions to ESG issues and affect real world outcomes.

➤ *Best-in-class*

Investors actively invest in a sub-set of the best practitioners in a sector.
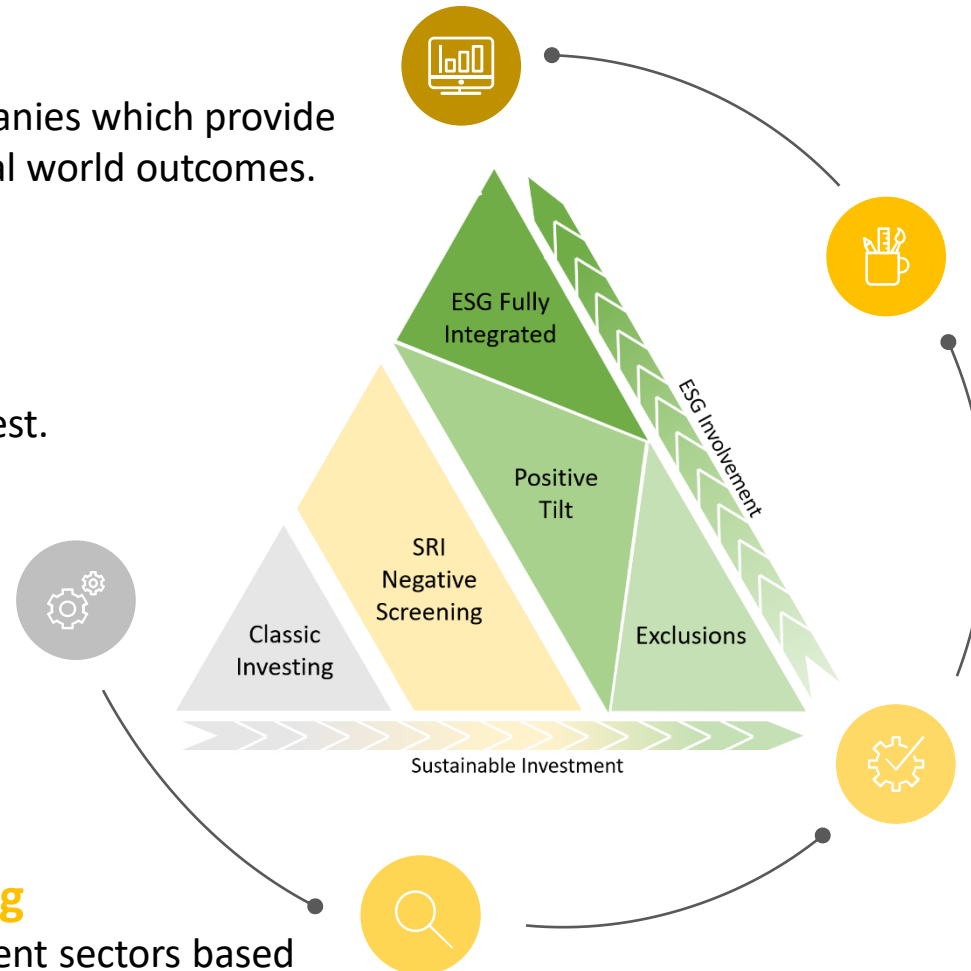
➤ *Thematic*

Investors often follow themes to invest.

Classic Investing

Investment involves little ESG-related issues.

SRI Negative Screening

Passively excluding investment sectors based on ethical and religious values.

ESG Positive Tilt

With the intention to generate measurable and beneficial societal impacts alongside a financial return.

ESG Exclusions

Excluding the companies or sectors based upon low ESG factors.

ESG Fully Integrated

Positive Tilt

SRI Negative Screening

Classic Investing

Exclusions

ESG Involvement

Sustainable Investment

3

Part I: ESGi Rating

About ESG intelligence

The Problem:

Aggregate Confusion

The **Aggregate Confusion Hypothesis*** shows that there is a huge problem for asset managers and owners to assess the quality of the ESG rating provided by commercial vendors.

Since there exists a serious **divergence of ESG rating from different providers**, it is challenging for ESG data users to determine which rating is more appropriate for them.
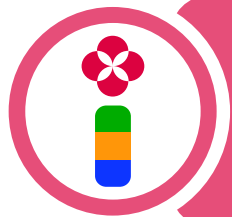
Our Solution:

The i Score

The i score serves as a divergence-adjusted rating system regarding an investment portfolio:

❖ **PBESG rating:**
   By generating a unique and proprietary rating beyond a single number, we evaluate the overall ESG performance of a given portfolio in a fair and comprehensive manner using a **peer-based approach for each composite stock.**
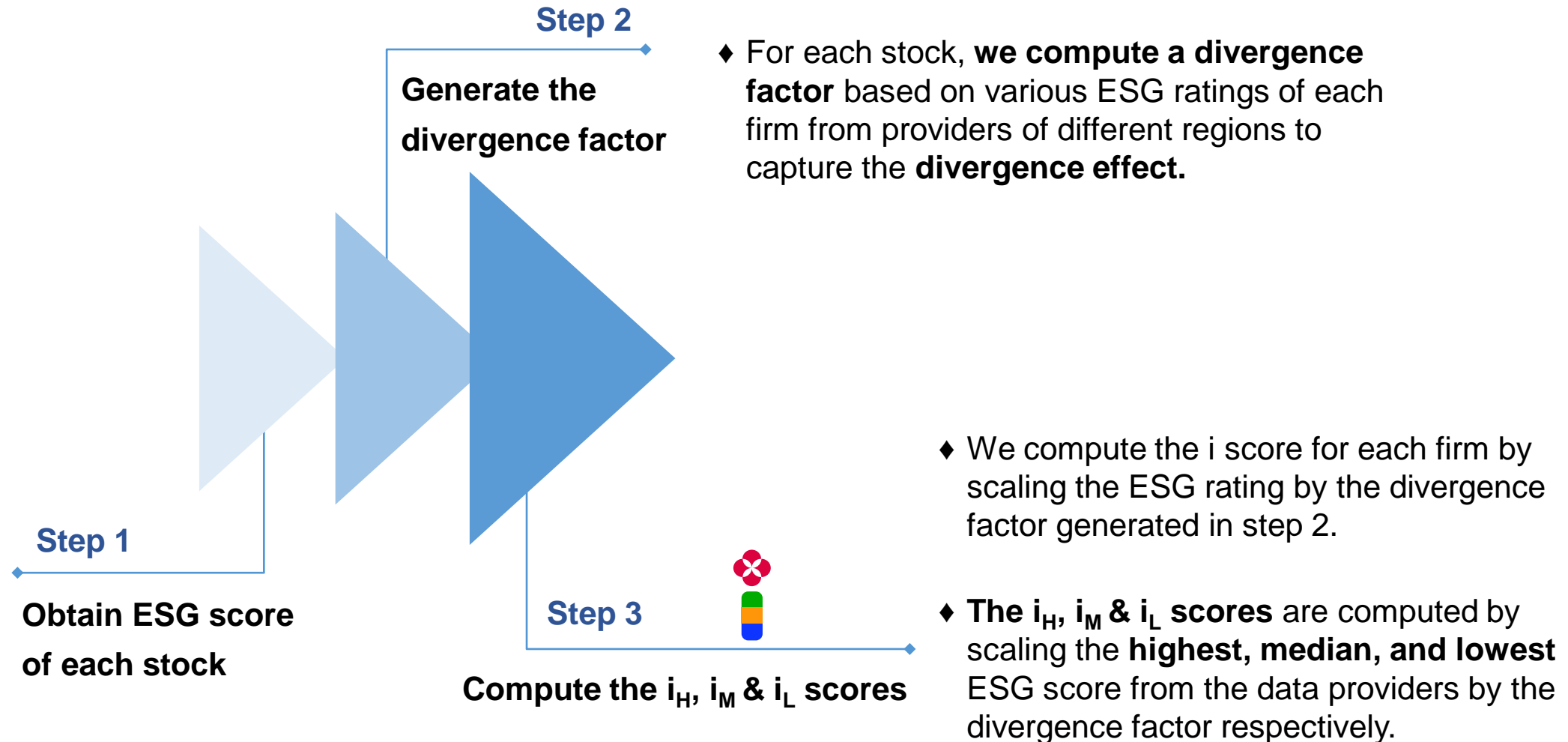
*Berg, F., JF Koelbel, and R. Rigobon (2020). Aggregate confusion: The divergence of ESG ratings, MIT working paper.

PBESG Evaluation

Peer-Based ESG (PBESG) evaluation framework uses the idea of **peer benchmarking** to rate each component stock of a given portfolio based on the stock's i score relative to the i scores of all the stocks in the same industry. Using this i score percentile standing for each stock, we then aggregate these percentiles into a single rating for the portfolio.

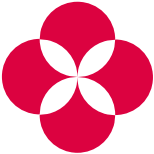− Comprehensive & fair

− Unique and proprietary

The i score

Step 2

Generate the divergence factor

♦ For each stock, **we compute a divergence factor** based on various ESG ratings of each firm from providers of different regions to capture the **divergence effect.**

Step 1

Obtain ESG score of each stock

Step 3

Compute the i_H, i_M & i_L scores

♦ We compute the i score for each firm by scaling the ESG rating by the divergence factor generated in step 2.

♦ **The i_H, i_M & i_L scores** are computed by scaling the **highest, median, and lowest** ESG score from the data providers by the divergence factor respectively.

PBESG Evaluation

Rating scheme by i score: the 4-petal rating

★ **Peer-based ESG evaluation framework (PBESG) is our core competence in evaluating the ESG performance of a given investment portfolio.**

4-petal — **100%** of the invested value of the composite stocks in the portfolio rank the upper **50%** of industry peers

3-petal — **75%** of the invested value of the composite stocks in the portfolio rank the upper **50%** of industry peers

2-petal — **50%** of the invested value of the composite stocks in the portfolio rank the upper **50%** of industry peers

1-petal — **25%** of the invested value of the composite stocks in the portfolio rank the upper **50%** of industry peers

0-petal — **0%** of the invested value of the composite stocks in the portfolio rank the upper **50%** of industry peers

PBESG Evaluation

Key features & limitations

★ **Our ESG intelligence PBESG framework provides a comprehensive picture for the clients to market their investment choices with a peer-based ESG performance.**

Unique & Proprietary	Comprehensive & Potential for value enhancement	Limitations

➢ Peer ESG scores from different commercial ESG data providers to capture the divergence

➢ Tailor-made peer benchmarking based on ESG divergence adjustment by industry

✓ The given portfolio can either be passive or active

✓ Full picture of the ESG aspect for each stock and the portfolio

✓ Potential with risk mitigation and alpha generation based on the i scores

✘ Only Hong Kong and Mainland listed stocks are considered

✘ Only 20% of the listed stocks in Hong Kong have ESG scores

Part II: Earlier Research on ESG Integration

ESG Research for Chinese Market

Cumulative raw return for industry neutral high vs low ESG groups evolving over time (20150701–20200331)
This figure plots the cumulative raw return for industry neutral high vs low ESG groups trend evolving over time. As the end of Mar 2020, we sort stocks into high vs low portfolios based on their sample median ESG total scores every six months period, and track their cumulative raw return, starting from Jul 1, 2015.


Cumulative raw return for industry neutral high vs low ESG groups evolving over time
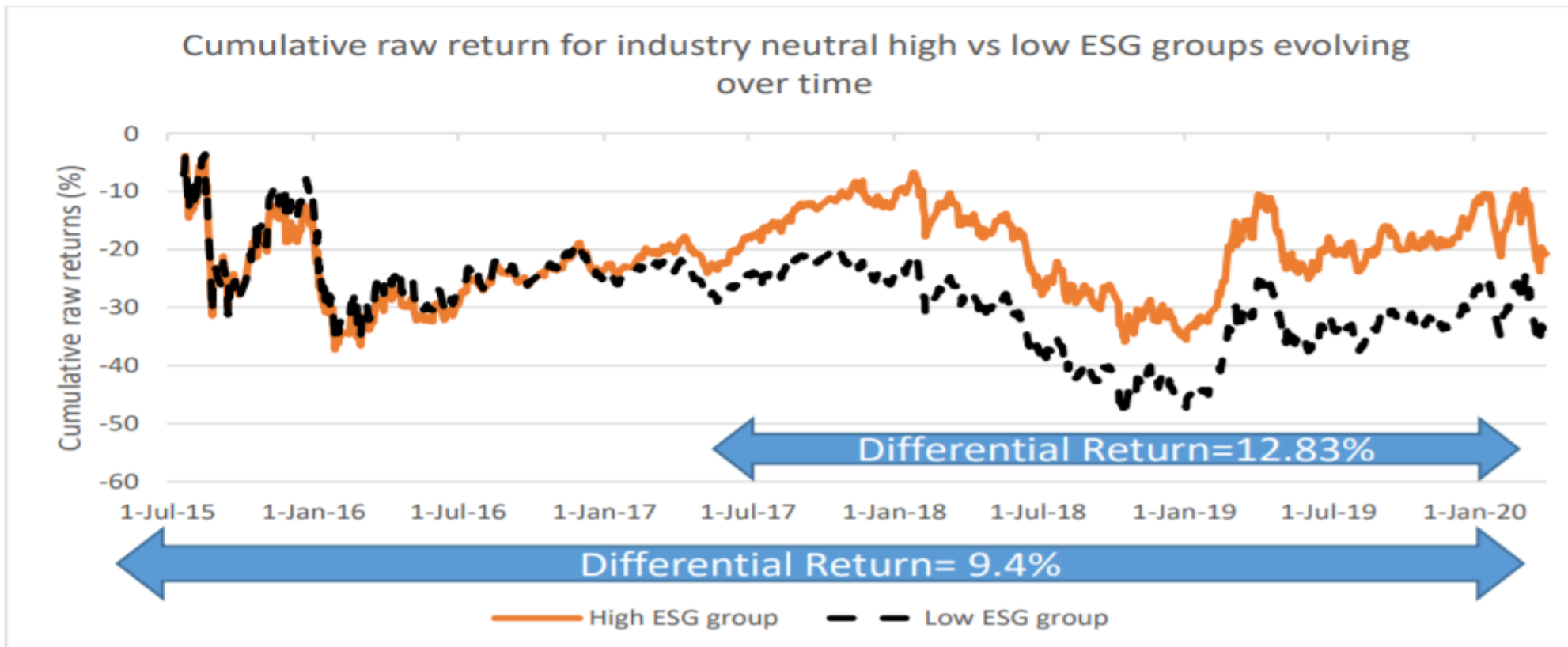
ESG coverage on China, by different data provider
Evidence from China Top 1000 by December 2019 market cap., 2015:06-2019:12

Syntao : Focus on China's largest and most liquid firms as captured in the CSI 300 membership. Covers at least 200 firms further back than 2017:12

MSCI gave limited China coverage until 2017:12, after which it is the most comprehensive provider.

Sustainalytics were tracking more companies than MSCI until 2017:12, and then lag in coverage.

Overall ESG score coverage by data provider

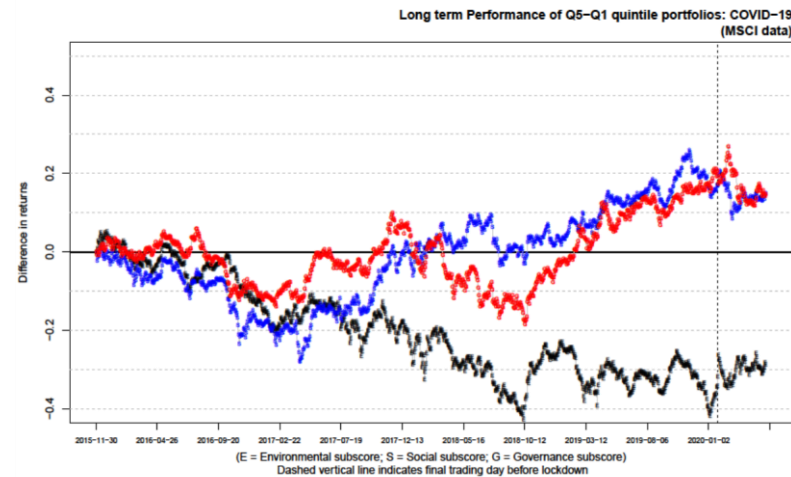(ST = Syntao; MSCI = MSCI; SA = Sustianalytics)
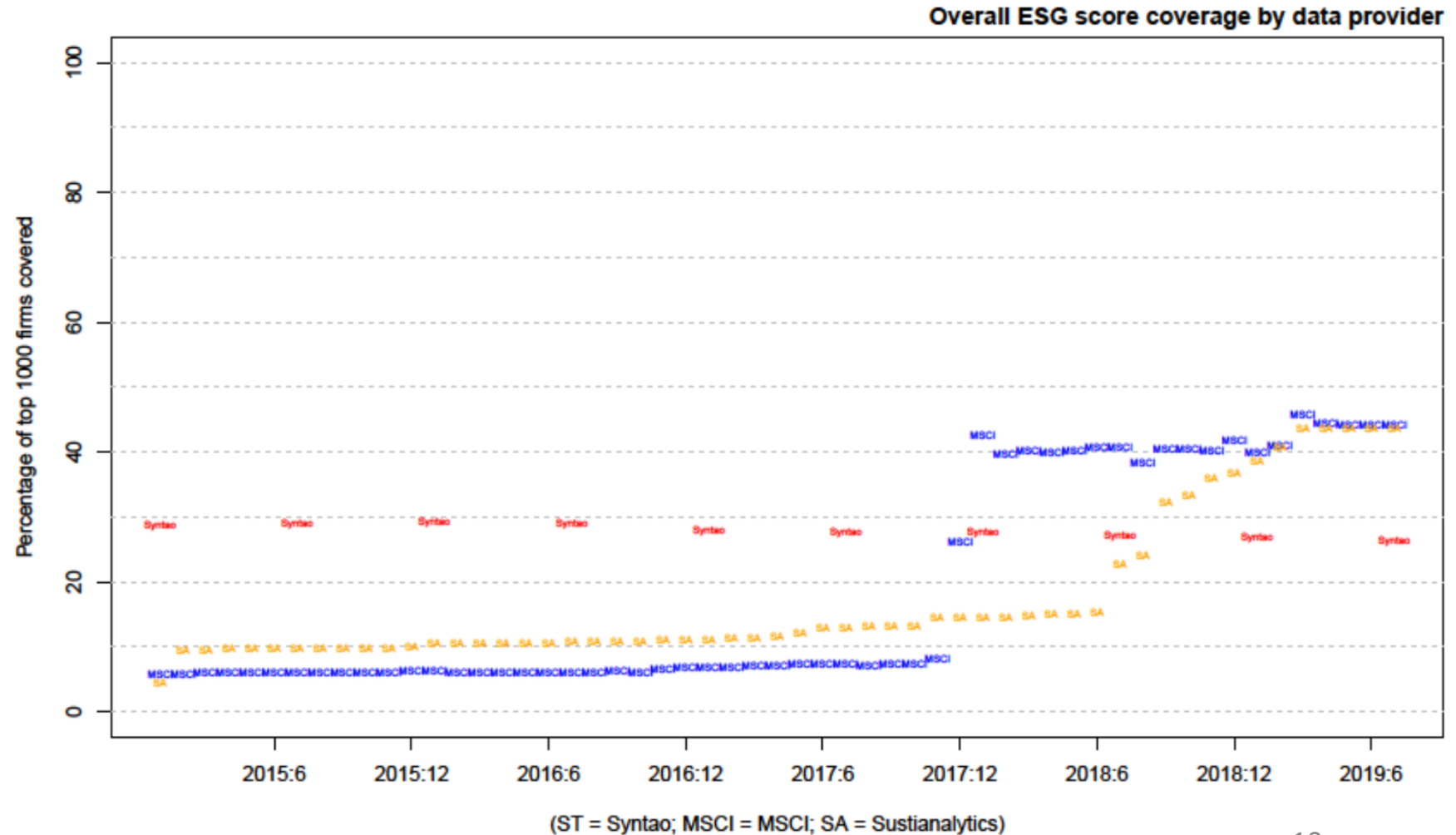
Long term performance of ESG portfolio (high ESG – low ESG) during 2015-2020
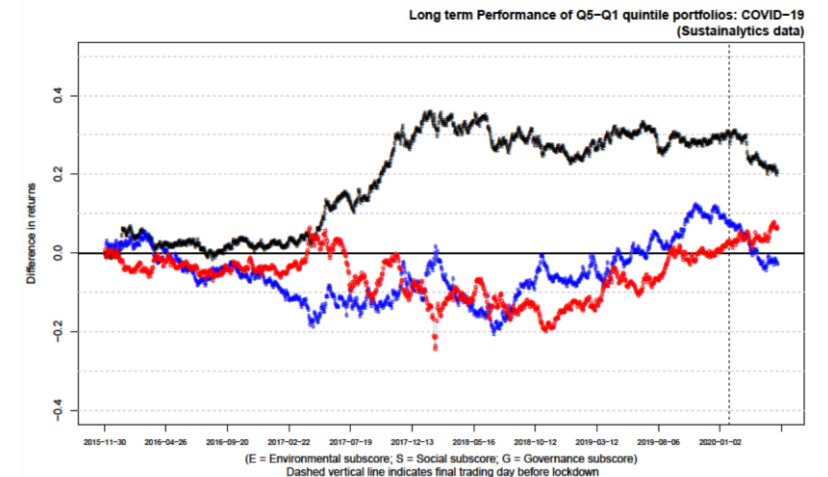*Evidence from China Top 1000 by December 2019 market cap., 2015:06-2019:12*
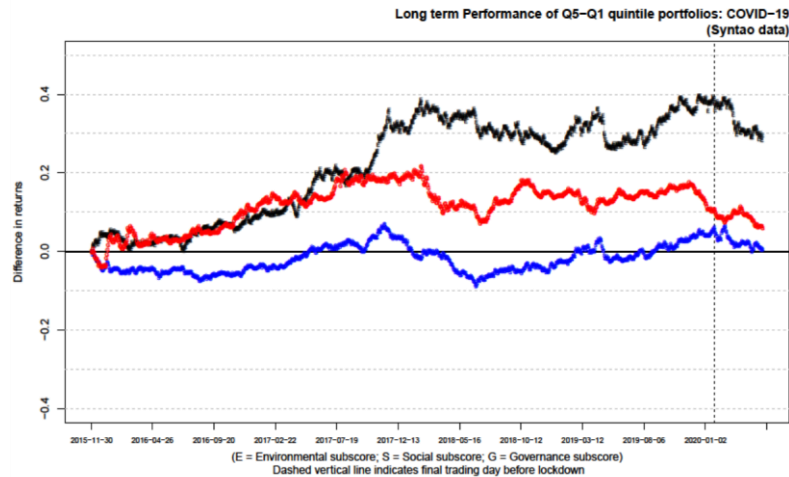
SynTao

MSCI

Sustainalytics

E - In the long run there appear to be large gains when basing investment on Syntao or Sustainalytics scores, but negative for MSCI.

S - scores result in positive long run returns for all 3 providers

G - investment returns are mixed, being clearly positive for MSCI, but closer to zero for the others.

Part III: Research Idea on ESG Rating and Divergence

Idea 1: To explore how IR Award voting behaviour can lead to the coverage of ESG
Idea 2: ESG divergence and information quality
Idea 3: Examining the characteristics of firms to be rated by ESG data providers
Idea 4: ESG Pricing

Part IV: ESG Intelligence Framework (IDS)

Rationale

We recognize the importance of measuring ESG efforts of corporations from the perspectives of major stakeholders, namely, asset owners and analysts, accounting professionals, consumers, and institutional investors. Our four interlocking research components address measurement issues from various stakeholders so that a comprehensive ESG intelligence database can be established for future research on business sustainability.

Objective

Overall Objective **Research Centre on ESG & Business Sustainability**	Aim to integrate knowledge from researchers and experts from different academic areas in finance, accounting, marketing, decision sciences, and communication to construct a comprehensive research infrastructure on ESG intelligence for future ESG research under a new Research Centre on ESG & Business Sustainability.	Stakeholders
Research Component #1:	Integrating social returns into performance benchmarks related to ESG portfolios.	Investors
Research Component #2:	Improve KPIs of ESG reporting for listed firms.	Accounting professionals
Research Component #3:	Measure consumer satisfaction on ESG performance.	Consumers
Research Component #4:	Enhance the effectiveness of strategic corporate communication on ESG efforts for listed firms.	Corporate communication professionals

Impact

Overall Impact	To integrate different academic areas including finance, accounting, marketing, decision sciences, and communication to construct a comprehensive platform as a research infrastructure on ESG intelligence.
Specifically	This research infrastructure on ESG should provide useful information (i.e., alternative data) for future ESG research for local as well as international researchers who needs to have integrated ESG measures for listed firms from multi-stakeholder perspective.
Relevant Stakeholders	Stakeholders include asset owners and analysts in investments, accounting professionals, clients and consumers, and corporate communication professionals.

How to Implement?

Possible Synergistic Effects at HSU

ESG Intelligence Platform Integrating for Research Components

- ESG integration
- ESG reporting
- Consumer demand
- Corporate communication

Enhance All Research Areas related to Sustainability by Providing ESG Intelligence Data

- Research Institute for Business (RIB)
- Big Data Intelligence Centre (BDIC)
- Policy Research Institute of Global Supply Chain (PRISC)

Enhance Teaching and Learning and Students' Employability by Understanding the Latest Sustainability Issue

- Deep Learning and Cognitive Computing Centre (DLC^3)
- Centre for Teaching and Learning (CTL)

Enhance HSU's Impact to Society through Knowledge Transfer

- Research Institute for Business (RIB)
- Wu Jieh Yee Centre for Innovation and Entrepreneurship

~Thank You~