ADVISOR SYMPOSIUM 2019

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ESG Investing: What We Know and What We Should Know

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Road Map

- Why should we care about ESG investing?
- What do we know about ESG investing?
- What is our approach to ESG investing?
- What are the portfolio construction implications of an ESG strategy?

Why Should We Care About ESG Investing?

What Is ESG Investing?

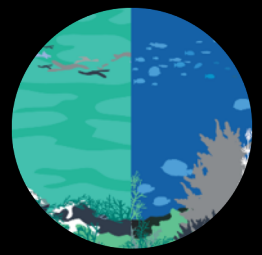
Integration of Environmental, Social, and Governance (ESG) factors into investment processes and decision-making

Decades old objectives that have become popular given the *low cost investment processes*, and the belief that *ESG does not harm investment outcome*

- Socially Responsible Investing (SRI), Impact Investing, ESG – very different terms for similar issues

Examples of ESG Issues

ESG broadly covers many issues. There is no one exhaustive list, but here are examples:



Environmental Issues

- Climate change and carbon emissions
- Air and water pollution
- Biodiversity
- Deforestation
- Energy efficiency
- Waste management
- Water scarcity

Social Issues

- Customer satisfaction
- Data protection and privacy
- Gender and diversity
- Employee engagement
- Community relations
- Human rights
- Labor standards

Governance Issues

- Board composition
- Audit committee structure
- Bribery and corruption
- Executive compensation
- Lobbying
- Political contributions
- Whistleblower schemes

Source: "Environmental, Social, and Governance Issues in Investing: A Guide for Investment Professionals," CFA Institute

Why Should We Care?

84% vs. 67%

Women are more likely than men to consider ethical criteria when investing

Hold US$14 trillion of investable assets (close to 50%) in the United States

86% vs. 75%

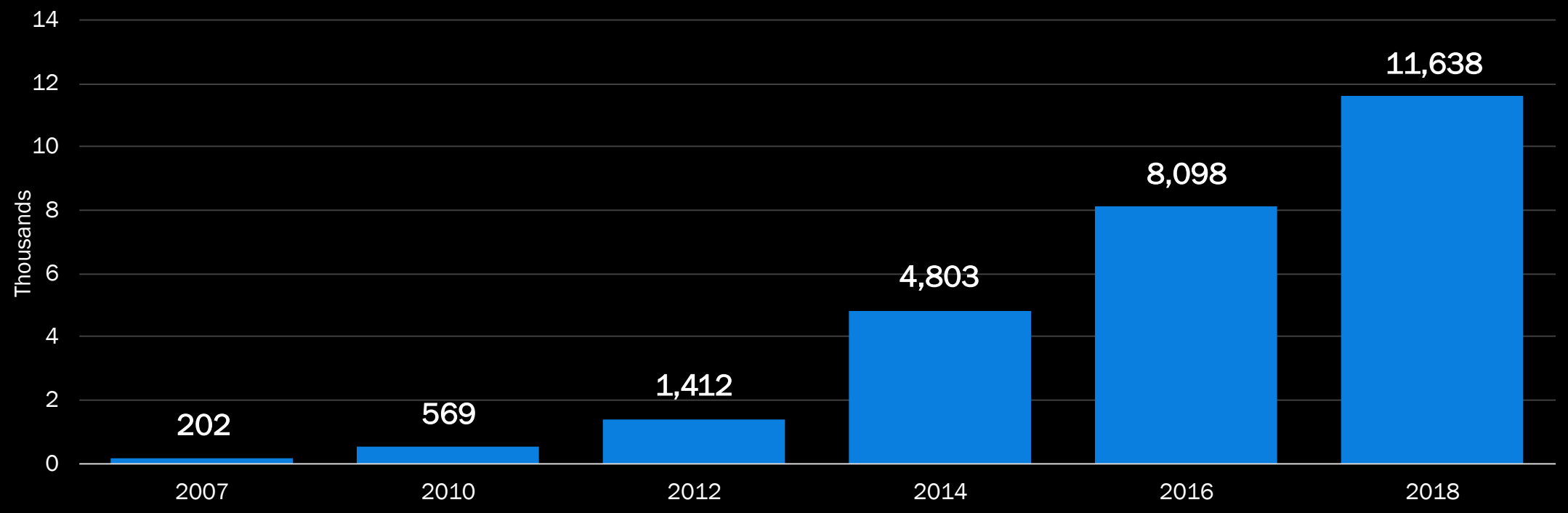
Millennials are more likely than baby boomers to consider ethical criteria when investing

Hold US$16.9 trillion of wealth globally

Sources: "Financial Concerns of Women," BMO. (March 2015). "Sustainable Signals New Data from the Individual Investor," Morgan Stanley. (April 2018) "Millennials—The Global Guardians of Capital," UBS. (June 2017)

Growing Momentum in ESG Investing!

Growth of ESG Incorporation by US Asset Managers



Source: 2018 US SIF Money Managers and SRI:
https://www.ussif.org/files/2018%20Infographic%20money%20managers(1).pdf.

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What Do We Know About ESG Investing?

The Great Debate: ESG and Investment Performance

PAST COMMON WISDOM:

ESG must result in *under*performance!

EMERGING COMMON WISDOM:

ESG must result in *out*performance!

"Up to a few years ago, there was widespread perception that ESG came at a cost. These days...we may conclude that ESG automatically produces improved results. We are appending the ESG adjective to all sorts of activities and products: sustainable shoes, sustainable coffee, even sustainable tobacco."

ANDREW PARRY,
Head of Sustainable Investing,
Hermes Strategy Group

Puca, Antonella, Andreas Dal Santa, and Gregory Siegel. 2018. "Effective ESG Investing: An Interview with Andrew Parry." (June 15). https://blogs.cfainstitute.org/investor/2018/06/15/effective-esg-investing-an-interview-with-andrew-parry/.

What Is ESG Research Actually Telling Us?

PERFORMANCE			RISK
Articles Finding Return Deterioration	Articles Finding Neutral Impact	Articles Finding Return Improvement	Articles Finding ESG Investing Lowers Risk
Brammer, Brooks, and Pavelin (2006)	Bauer, Koedijk, and Otten (2005)	Clark, Feiner, and Viehs (2015)	De and Clayman (2015)
Fabozzi, Ma, and Oliphant (2008)	Bauer, Derwall, and Otten (2007)	Friede, Busch, and Bassen (2015)	Kumar, Smith, Badis, Wang, Ambrosy, and Tavares (2016)
Renneboog, Ter Horst, and Zhang (2008)	Kahn and Sharples (2013)	Kahn, Serafeim, and Yoon (2017)	Dunn, Fitzgibbons, and Pomorski (2017)
Hong and Kacperczyk (2009)	Liu et al. (2017)		

"A lot of investors want to understand the implications of a low-carbon economy....Quantifying that is difficult."

ROBERT LITTERMAN, Co-Founder, Kepos Capital

Mufson, Steven, Brady Dennis, and Chris Mooney. 2018. "Clean Up Climate Change? It's Just Good for Business." (October 12.) https://www.washingtonpost.com/business/economy/clean-up-climate-change-its-just-good-for-business/2018/10/12/30f13e40-cda2-11e8-920f-dd52e1ae4570_story.html?utm_term=.129dff5e7e1a.

The Honest Truth

Empirical results are mixed and limited by:

- A lack of long-term, consistent data
- No standard international guidelines for ESG reporting which may lead to a positivity bias (e.g., only reporting information that reflects positively on the company)

Impact on results

- Studies are mixed in terms of performance and ESG
- Potential to draw inaccurate conclusions is heightened

How to proceed

- Keep in mind the future may well look very different from the past
- Accept that some ESG investing comes down to beliefs
- Best path forward: Combine ESG objectives with low cost solutions (e.g., smart beta) that have excess return potential

What Is Our Approach to ESG Investing?

Research Affiliates Approach to ESG Investing

Two key elements:

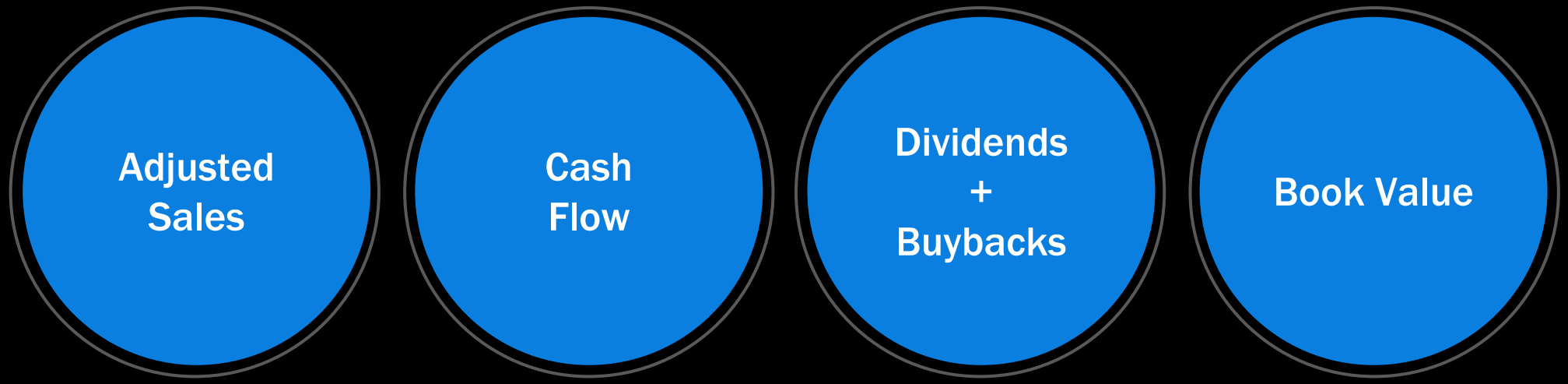
1. **Fundamental Index™ – A proven smart beta strategy built on the principles of *contrarian* investing and *disciplined rebalancing***
   - Has shown to provide excess returns vs. cap weight
   - Broadly diversified, economically representative
   - Low tracking error relative to cap weight
   - Low implementation costs

2. **Leverage metrics that are wholly consistent with ESG, support *long-term value creation* & *sustainable growth***
   - Financial discipline
   - Diversity

The Fundamental Index Approach

Selects and weights companies using non-price measures of company size

- Fundamentals act as stable rebalancing anchors to contra-trade against the markets constantly shifting expectations.



Non-Price Weighting Outperforms

1997–JUNE 2018	RETURN %	VOLATILITY %	TRACKING ERROR %
MSCI ACWI	7.1	15.2	—
Equal Weight	8.9	16.3	5.2
Adjusted Sales	10.9	14.9	4.2
Cash Flow	10.2	15.6	3.8
Dividends+Buybacks	10.1	14.7	4.4
Book Value	9.4	16.5	4.4
RAFI Fundamental Composite	10.2	15.3	3.9

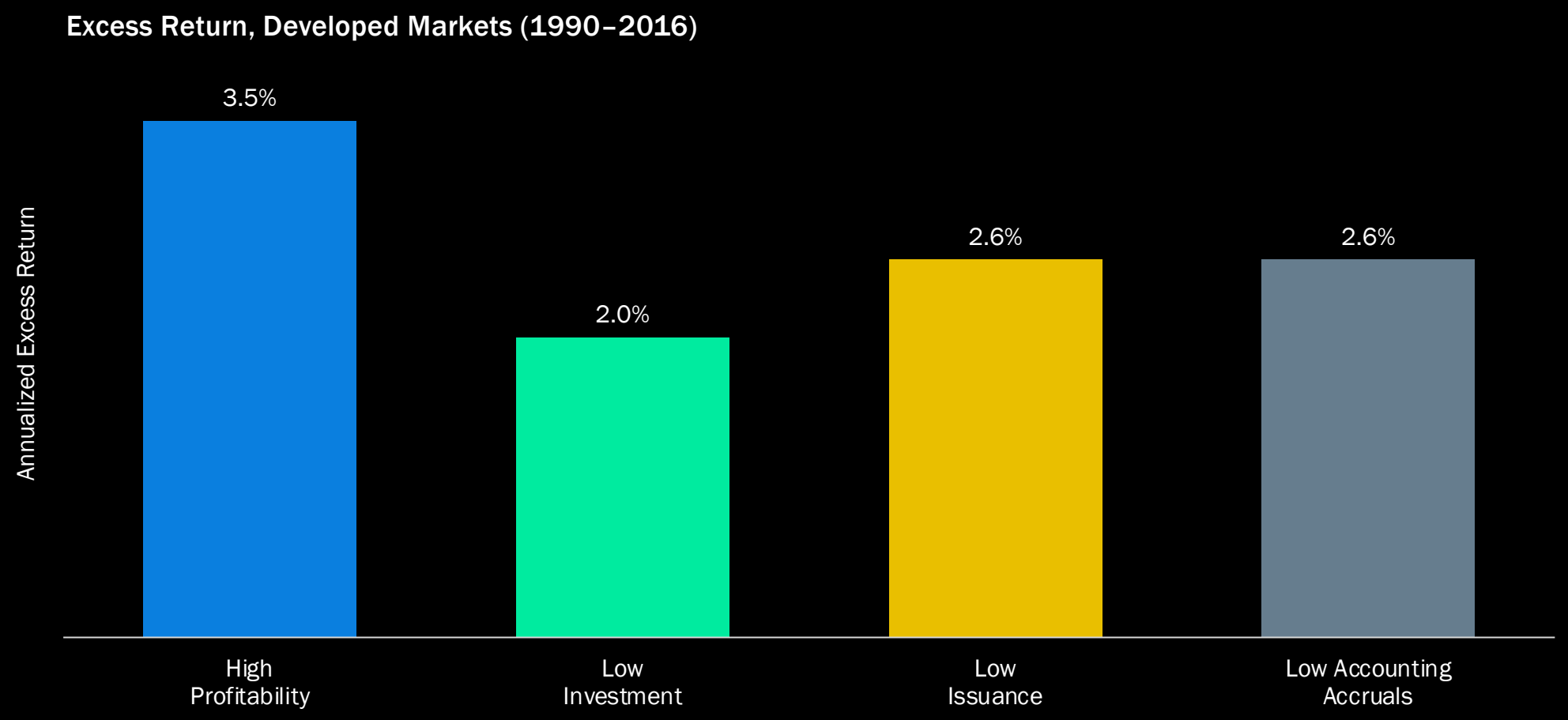
For the period 1996–12/31/2017. Return, Volatility, and Tracking Error figures are annualized. Note: The index data published herein is simulated. For more information related to simulated data, please see full disclosures at the end. Source: Research Affiliates, LLC, based on data from CRSP/CompuStat and FactSet. Equal-Weight is a simulated index that equal weights the top 3000 global equities and rebalances annually.

Financial Discipline

- Generating sustainable long-term performance rather than making decisions to benefit managers in the short run
- Financial discipline has historically led to better company performance[1]
- Four measures of financial discipline that are aligned with long-term value creation and sustainable growth:
  - High profitability[2]
  - Low investment[3]
  - Low issuance and dilution[4]
  - Low accounting accruals[5]

[1] Hsu, Kalesnik, and Kose (2017).
[2] Fama and French (2006, 2008, 2015, 2016), Novy-Marx (2013).
[3] Fama and French (2008, 2016), Titman, Wei, and Xie (2004).
[4] Laughran and Ritter (1995), Boudoukh et al. (2005), Fama and French (2008).
[5] Sloan (1996), Hirshleifer et al. (2004), Dechow and Ge (2006).

Financial Discipline



Please see important information at the end for full disclosures.
Note: Profitability represents the average excess return of long/short strategies formed on Operating Profitability, ROE, and ROA. Investment represents the average excess return of long/short strategies formed on Low Asset Growth and Low Book Growth. Issuance represents the average excess return of long/short strategies formed on Net Share Issuance and Debt Issuance. Low Accounting Accruals represents the average excess return of long/short strategies formed on Net Operating Assets and Accruals.
Source: Hsu, Kalesnik, and Kose, 2019, "What Is Quality?"

Diversity

More diverse groups recall facts more precisely and produce more accurate results[1]

- Are more likely to constantly reexamine facts and remain objective
- May outperform homogeneous groups in decision-making because they process information more carefully

A growing literature suggests that corporations with greater diversity tend to produce better results[2]

- Better corporate outcomes
- Greater innovation
- Lower incidences of governance-related controversies

The investment case for diversity is not so clear

- Cannot appropriately answer the question with current data





[1] Rock and Grant (2016).
[2] Vasilescu et al. (2015), Eastman (2017), Dezso and Ross (2012), Gao and Zhang (2016).
A complete review of research on the benefits of diversity is available from Research Affiliates upon request.

RAFI™ ESG Investment Process

1. Segment Companies by Region and Size

- Create 5 regions: US, Japan, UK, Europe ex UK, and Other Developed
- Within each region, select the top 86% by cumulative fundamental weight (RAFI weight)
- RAFI weight is the equally weighted average of the following four fundamental measures:
- Adjusted Sales, Cash Flow, Dividend + Buybacks, Book Value

2. Security Selection

- Within each region calculate the percentile rank of each security by their Environment (E), Social (S), Governance (G), Financial Discipline (FD), and Diversity (D) Scores
- Rank securities by individual score and remove companies in the bottom 10% by RAFI weight by each E, S, G, FD, and D score

3. Apply Exclusions

Exclude companies in the following industries:

- Fossil Fuels[1]
- Gambling
- Tobacco
- Weapons[2]

4. Weighting

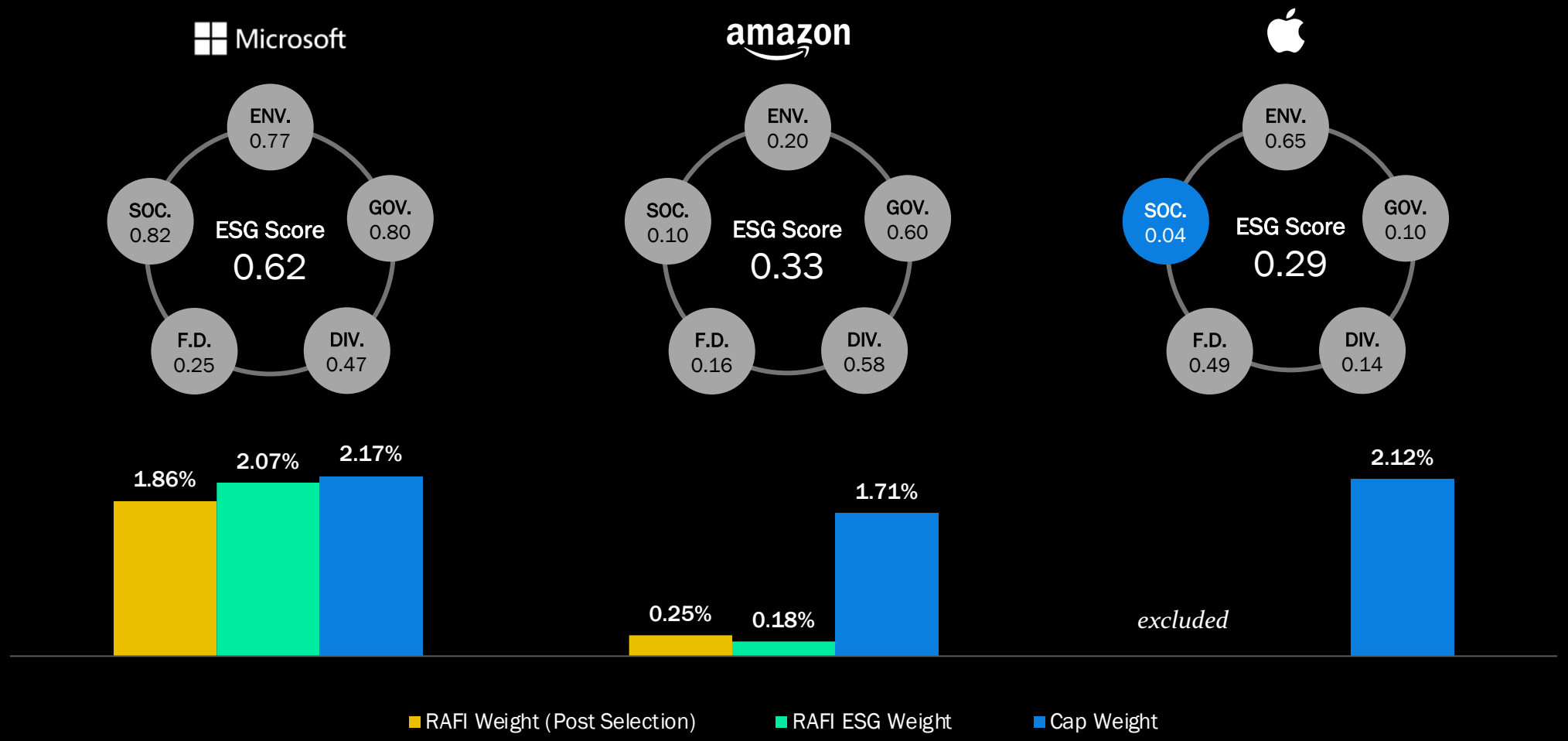
- Calculate company overall ESG score: 1/5 x (E + S + G + FD + D)
- Final index is RAFI weighted with a tilt toward higher ESG Companies

5. Rebalance

Rebalance index on a quarterly staggered basis (i.e., rebalance a quarter of the index back to target rebalance weight every three months).

[1] Includes companies classified by Vigeo Eiris as having major involvement in Fossil Fuels, Coal, Tar Sands, and Oil Shale.
[2] Includes companies classified by Vigeo Eiris as having major involvement in both Civilian Firearms and Military Weapons.

Determining Index Weight – RAFI ESG Developed



Source: Research Affiliates, LLC, based on data from Bloomberg Back Office and Vigeo Eiris. Results are based on index build as of 11/16/2018. RAFI ESG Weight represents index weight from model index build on 11/16/2018. RAFI Weight (Post Selection) represents the RAFI weight, (without ESG tilts), of companies in the RAFI ESG Developed Index. Cap Weight is a simulated cap-weight index that represents the top 86% of companies by cumulative market capitalization weight in the Developed region.

Sustainability Characteristics – Developed

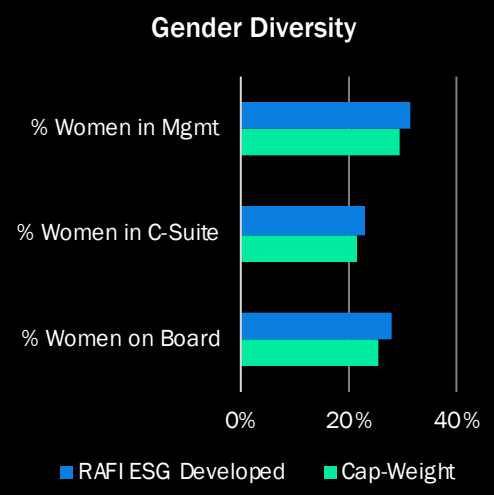
AS OF 12/31/2018	VIGEO ESG SCORE (0-100)	% CHANGE VS. BENCHMARK	CARBON FOOTPRINT (T CO_2 EQ)	% CHANGE VS. BENCHMARK	VIGEO DIVERSITY SCORE (0-100)	% CHANGE VS. BENCHMARK
RAFI ESG Developed	45	17.4%	2,473,576	-64.6%	49	21.9%
RAFI Fundamental Developed	40	4.6%	12,109,863	73.3%	43	6.3%
Cap-Weight	38		6,989,337		40	

958,760

Passenger vehicles driven for one year

540,745

Homes' energy use for one year



Source: Research Affiliates, LLC, based on data from FactSet and Vigeo Eiris as of 12/31/2018. The average carbon footprint is calculated by Vigeo Eiris and is the weighted average of portfolio constituents total carbon scope 1 & 2 emissions. Carbon footprint equivalent's obtained from https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator. Cap-Weight represented by the iShares MSCI World ETF.

Index Characteristics & Returns - Developed

Characteristics

AS OF 12/31/2018	P/E	P/B	DIVIDEND YIELD	WEIGHTED AVG. MKT. CAP ($B USD)	# OF SECURITIES	ACTIVE WEIGHT	CAPACITY ($B)	MARKET IMPACT (%)
RAFI ESG Developed	13.3	1.5	3.6%	108	425	56.4%	160	0.13%
RAFI Fundamental Developed	12.5	1.4	3.4%	98	1,595	30.6%	950	0.02%
Cap-Weight Developed	14.9	2.1	2.6%	127	1,181		1,263	0.02%

Performance

AS OF 12/31/2018	1-YEAR	3-YEAR	5-YEAR	SINCE 7/2009	STANDARD DEVIATION (7/2009)	TRACKING ERROR (7/2009)	SHARPE RATIO (7/2009)	INFORMATION RATIO (7/2009)
RAFI ESG Developed	-10.17%	5.87%	4.99%	10.61%	14.07%	3.11%	0.73	0.17
RAFI Fundamental Developed	-10.63%	7.18%	4.48%	10.01%	13.74%	2.31%	0.70	-0.03
Cap-Weight Developed	-8.20%	6.91%	5.14%	10.09%	13.09%		0.74	

Source: Research Affiliates, LLC, based on data from FactSet and Worldscope/Datastream. Capacity measure assumes 50bps of implementation shortfall due to trading while market impact cost assumes $10B of AUM in the strategy. Capacity and market impact cost as of 12/31/2017. The RAFI ESG Index series launched on 3/30/18. Returns prior to launch are simulated. Please see disclosures for important information regarding simulated data. Cap-Weight represents the iShares MSCI World ETF for characteristics and the MSCI World Index for performance.

What Are the Portfolio Construction Implications of an ESG Strategy?

What Are the Common Approaches Used in Investment Strategies?

Negative Screening Overlay

- Investment process remains the same, except the opportunity set is narrowed to exclude the most sinful companies
- Investors clearly seek to demonstrate their commitment to ESG

Best in Class

- Managers use a scoring system / proprietary model for ESG rating, and generally adopt systematic rules to ensure a certain outcome is achieved
- Underweights (overweights) companies with poor (favorable) awareness to ESG issues

Integration into Valuation

- Define investment process that incorporates ESG as an integrated part of the assessment and the valuation of companies
- Appeals to investors who believe in active management and want to see their manager's actions to be aligned with their values & beliefs

Thematic Funds

- Explicitly focus on a thematic issue such as low carbon. They may be concentrated if the theme is narrowly defined, but they exhibit clear links to achieving a specific outcome
- They seek to clearly demonstrate and report positive ESG related benefits

Source: "How to Invest in the Low Carbon Economy," PRI.

Usual Suspects Associated With High Trading Costs

- Low Weighted-Average Market Cap
- Low Number of Holdings
- Turnover
- Rebalancing Frequency

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https://www.researchaffiliates.com/en_us/advisors/advisor-video.html

Case Study: Reducing Carbon Footprint

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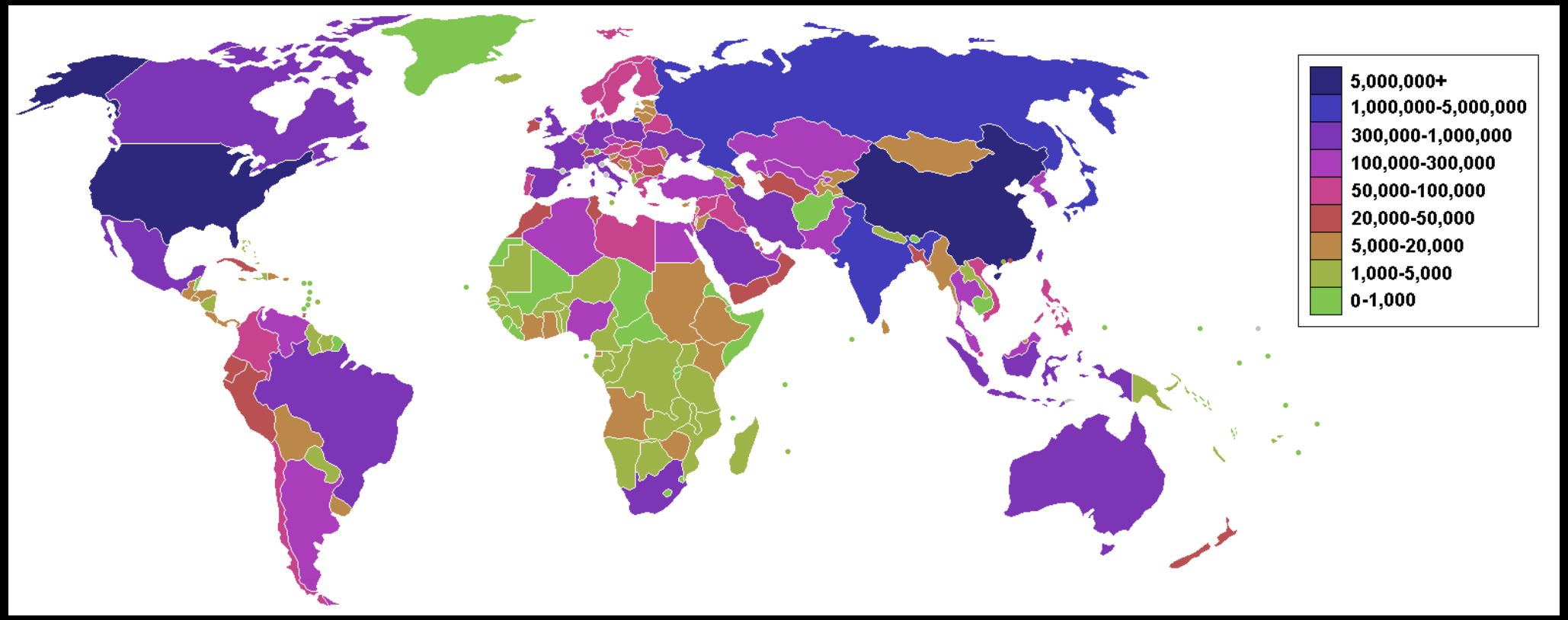
Case Study: Reducing Carbon Footprint



Countries by carbon dioxide emissions in thousands of tonnes per annum, via the burning of fossil fuels (blue the highest and green the lowest)

Source: https://en.wikipedia.org/wiki/List_of_countries_by_carbon_dioxide_emissions

Case Study: Reducing Carbon Footprint

Objective:

- Reducing portfolio level carbon emission and preserving the strategy's original characteristics as much as possible

Metrics:

- Carbon Emission vs. Intensity vs. Energy Transition (forward looking)

Methodology:

- Exclusion vs. Tilting; Country/Sector allocation

What are the portfolio construction implications of an ESG strategy?

- Modest increase in transaction costs, if designed thoughtfully

Summary

- ❑ Get more informed – what are the universal issues?
- ❑ Engage with potential investors to understand specific needs.
- ❑ Conduct due diligence on ESG integrated strategies to understand the tradeoff
- ❑ Recommend solutions that meet investors' social goals yet produce solid investment outcomes

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