

### Master of Science Sustainable Management and Technology

# SUSTAINABLE AND ENTREPRENEURIAL FINANCE

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### SUSTAINABLE FINANCE

Lecture 6: Engagement and Performance of ESG Investing

Eric Jondeau

Engagement is the second main approach to ESG investing. It consists for investors to directly engage their portfolio companies in conversations about their ESG expectations, encouraging them to improve their performance and practices, and the disclosure thereof.

Regulations, such as the recent amendment to the EU's Shareholder Rights Directive and the UK Stewardship Code further encourage asset owners and managers alike to exercise their shareholder rights.

Although the impact of shareholder engagement is well-documented in the literature, the levers for successful engagement and strategies being employed are not. In fact, due to its qualitative nature and lack of transparency about the process and outcomes, engagement remains a bit of a black box.

Engage in discussion with companies.

Most investors does not egage in discussions regarding their business.

Disclosure is mainly what a traditional investors is "allowed" to do, everything else: rejected.

### Readings

Ardia, D., K. Bluteau, K. Boudt, and K. Inghelbrecht (2020), "Climate Change Concerns and the Performance of Green Versus Brown Stocks" <a href="https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3717722">https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3717722</a>

Berk, J., J.H. van Binsbergen (2021): "The Impact of Impact Investing" <a href="https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3909166">https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3909166</a>

Pastor, L., R.F. Stambaugh, and L.A. Taylor (2021), "Sustainable investing in equilibrium", *Journal of Financial Economics*, 142(2), 550-571

Pastor, L., R.F. Stambaugh, and L.A. Taylor (2021), "Dissecting green returns" <a href="https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3864502">https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3864502</a>

**Pedersen, L.H., S. Fitzgibbons, L. Pomorski** (2021), "Responsible investing: The ESG efficient frontier", *Journal of Financial Economics*, 142(2), 572-597

- **ESG** Engagement and Large Investors
  - ESG Activism
  - Performance of ESG Investing

Eccles, R., S. Mooij, and J. Stroehle (2021): "Four strategies for effective engagement", <a href="https://www.responsible-investor.com/articles/four-strategies-for-effective-engagement">https://www.responsible-investor.com/articles/four-strategies-for-effective-engagement</a>

Study based on more than 70 in-depth interviews with asset owners, asset managers and listed companies in developed markets globally

- identify what strategies investors use for ESG engagement
- what are the levers for successful engagement

Study wanted to find out: How are the decisions made

Engagement can take different forms

- Conservatism
- Opportunism
- Constructivism
- Activism

Ended up with 4 categories of firms



Activism Want one firm to change. and do all to make one Characteristics Tools firm to change! » Shareholder > Adversarial > Focus on fulfilling (significant) resolutions/campaigns investor demands Naming and shaming > Willingness to escalate > Public engagement > Strategic litigation > Investor knows company and has explicit ideas for change Quality-engagement (High stakes)

Related but more a thematic logic, Opportunism focusing on something special Characteristics Tools > Thematic approach > Letter writing Often reactive (Flavour of the year) Investor collaboration > Often in collaboration with other Public engagement (in case of investor collaboration) Focused on system change (targeting entire sectors) **Public**  Used for public positioning > Quantity-engagement (High scopes)



Constructivism

Characteristics

Collaborative, open language
Consensus-focused
Focus on materiality
Relationship-building
Investor knows company
Quality-engagement

Tools

Frequent outreach from both sides
Active ownership (incl. voting)
Private engagement

Source: Eccles, R., S. Mooij, and J. Stroehle (2021)

Private engagement, when investors engages with the company and takes decision. "Norges Pensjonsfond Utland - NBIM" is an example. Directly talking with the firm.

**Opportunism** and **Conservatism** are **'top-down'**: They focus on system-level issues for the whole portfolio, rather than specific firm-level problems.

- Approaches frequently employed by very large investors, sometimes called universal owners, who invest in thousands of companies globally
- It is impossible to invest in firm-level engagement or one-on-one relationships with all companies

Opportunism and Conservatism differ in purpose and language.

**Opportunism** is often a thematic approach, following global trends (Net Zero commitments) or be influenced by events in the media (Black Lives Matter protests). It tends to be collaborative. Such collaborative engagement often organized by non-profit groups such as ShareAction

Conservatism is focused on screenings (based on controversies, for example) best-inclass rankings or 'red flags'. This helps investors identify which firms may present elevated risk, and those are then selected for engagement. It is less consensus-oriented, engagement tools and topics are inherently more adversarial (including divestment)

Constructivism and Activism are 'bottom-up': they focus on individual company characteristics.

- investment strategies that favor a concentrated portfolio, whereby the investor knows the companies well or has high stakes in them

**Constructivism** is more focused on collaboration and mutual understanding, which is valued by companies.

- Engagement tools are 'soft', based on finding consensus and relationship-building.
- Also uses voting rights but not in a matter that is too controversial.

Activism relies on shareholder resolutions and public engagement

- Focus on investor objectives rather than on finding consensus.
- Seen as the last resort in persuading 'Corporate Castles' that are largely unreceptive to the ESG conversation
- Recent 'Reenergise Exxon' campaign, where large investors backed a new director slate proposed by the small activist hedge fund Engine No. 1, on climate grounds



## Apple – 15 Largest Shareholders

	Holder	% owned	Mkt. Value (USD in mm)
1	The Vanguard Group, Inc.	7.162	51,590
2	BlackRock, Inc.	6.254	45,046
3	Berkshire Hathaway Inc.	5.338	38,450
4	State Street Global Advisors, Inc.	4.071	29,320
5	FMR LLC	2.273	16,369
6	Northern Trust Global Inv.	1.238	8,920
7	Geode Capital Management, LLC	1.160	8,357
8	BNY Mellon Asset Management	1.017	7,324
9	Norges Bank Investment Mgmt	1.008	7,259
10	Invesco Capital Management LLC	0.905	6,520
11	Morgan Stanley, IB / Brokerage	0.806	5,807
12	TIAA-CREF	0.775	5,581
13	UBS Asset Management	0.757	5,453
14	J.P. Morgan Asset Management	0.706	5,086
15	T. Rowe Price Group	0.623	4,489



## Nestlé – 15 Largest Shareholders

	Holder	% owned	Mkt. Value (USD in mm)
1	Plaak Daak Ina	2 044	
1	BlackRock, Inc.	3.944	10,069
2	Capital Research and Management	3.485	8,897
3	The Vanguard Group, Inc.	2.820	7,200
4	Norges Bank Investment Management	2.367	6,044
5	UBS Asset Management	1.961	5,006
6	Massachusetts Financial Services Company	1.746	4,458
7	Credit Suisse Asset Management	1.050	2,680
8	Harris Associates L.P.	0.573	1,463
9	Zürcher Kantonalbank, Investment Arm	0.530	1,352
10	Gardner Russo & Gardner	0.504	1,286
11	Deutsche Asset & Wealth Management	0.491	1,254
12	Pictet Asset Management Limited	0.486	1,240
13	Flossbach von Storch AG	0.476	1,216
14	First Eagle Investment Management, LLC	0.447	1,141
15	FMR LLC	0.440	1,123

### **Large Shareholders**

- BlackRock, Vanguard, State Street, the Norwegian Sovereign Wealth Fund, Capital Research and Management, and Fidelity own some 20% of world market capitalization, and most of their ownership is passively managed
- Corporate governance research attributes an important role to large shareholders
  - they have enough shares to get involved in the company and to supervise management
  - they are important enough to be able to speak to management
  - they can help orchestrate a takeover of the company if things do not go well
- However, when we think about large shareholders and their importance for supervising companies, they have activist shareholders in mind (like Warren Buffet, CEO of Berkshire Hathaway, or Daniel Loeb, CEO of hedge fund Third Point)

### **Institutional Asset Managers**

These large investors are 99% passive.

- How do institutional investors protect their stake in poorly governed companies?
  - Voice channel: Become active and try to bring about change
  - Exit channel: Walk away and sell your shares: "The Wall-Street-Walk" (we have discussed Exclusion in the previous lecture)

Strategy: do nothing, -> Small fees -> When starting to excluding firms, -> Create invest corresponding to the benchmark. "Tracking a benchmark" your'e not reproducing the benchmark! "Sustainable Fund"

- Both channels, however, appear ill-suited for index-tracking institutions:
  - **Voice channel**: Expensive for low-cost and low-overhead passive institutional investors that cover thousands of stocks
  - Exit channel: Not available to institutional investors who track indexes and are often paid by tracking error

Very difficult for big companies to follow these strategies!

• Passive institutional investors insist that they have a fiduciary duty to exercise governance and that it is in their interest, as they are long-term holders

## Institutional Asset Managers: BlackRock

"Globally, investors' increasing use of index funds is driving a transformation in BlackRock's fiduciary responsibility and the wider landscape of corporate governance. [...]

In managing our index funds, BlackRock cannot express its disapproval by selling the company's securities as long as that company remains in the relevant index. As a result, our responsibility to engage and vote is more important than ever. In this sense, index investors are the ultimate long-term investors – providing patient capital for companies to grow and prosper.

 $[\dots]$ 

If engagement is to be meaningful and productive, then engagement needs to be a year-round conversation about improving long-term value."

Source: <a href="https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter">https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter</a>

### **Evidence**

- Passive institutional investors exercise governance
  - through informal meetings with management
  - through voting at annual general meetings
  - through publications of their proxy voting guidelines
  - through support of more active investors, if they believe their reasoning is sound

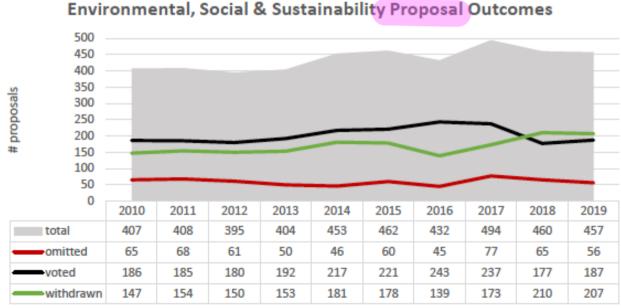
## Sustainability Topics at General Meetings

Shareholders can present their own proposals at general meetings

In recent years, some sustainability proposals presented by international alliances of shareholders have been backed by a significant portion of the shareholders.

According to the Sustainable Investments Institute (2020):

- The number of shareholder resolutions filed by U.S. companies on the environmental, social and sustainability impacts of corporate activity increased from 407 in 2010 to 457 in 2019



90% -> disclosing more information.

Excludes 62 not voted for other reasons, 7 in 2019.

Source: Sustainable Investments Institute (Si2)

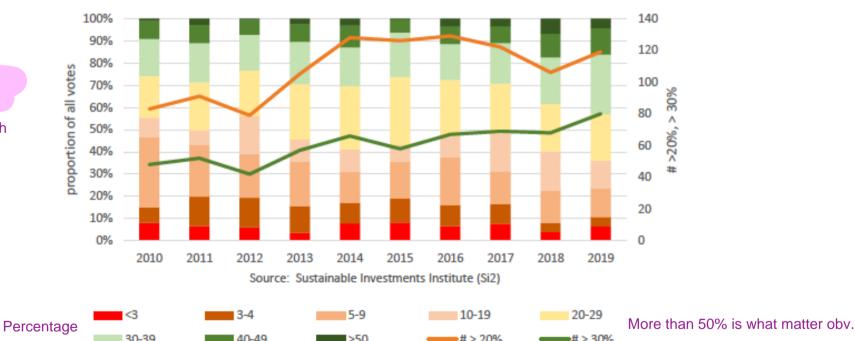
## Sustainability Topics at General Meetings

- Average support has increased from about 18% in 2010 to nearly 26% in 2019.
- Less than 5% of proposals are eventually accepted.



Go to annual meeting and ask for change:

Less than 5 cases each year in the US



Most common ESG-related themes of shareholders' proposals in the US in 2020 were:

- Corporate political activity, Climate change, Decent work, Diversity, Human rights
- 75% of proposals related to climate change were related to carbon assets risks.

### **Channels of Engagement**

#### 1- Through Investors Alliances

Groups of investors who decide to work together. Remind: some pension funds: 20% off all the world market cap

Investors can increase the weight of engagement through alliances.

United Nations Principles for Responsible Investment (UNPRI) was the first platform to start engagement projects

100 of trillions
99% greenwashing

Nonprofit organizations are also coordinating investors' cooperation projects:

- CDP (formerly, Carbon Disclosure Project)
- Institutional Investor Group on Climate Change (IIGCC)

An index fund cannot follow ESG criteria by definition!!

- Climate Action 100+

#### 2- Through service providers

Vanguard, BlacRock: 1% of assets under management (AUM) is actively invested.

Many investors use commercial service providers (Sustainalytics, Institutional Shareholder Services) for part of their engagement

Some service providers define goals for engagement, which are increasingly consistent over investors

### Criticism of Governance Approach of Passive Asset Managers

### 1- Passive Investors Underinvest in Corporate Governance Activities

- According to a Wall Street Journal article, in 2016
  - Vanguard employed about 15 staff for voting and stewardship at its 13,000 portfolio companies
  - BlackRock employed 24 staff for voting and stewardship at 14,000 portfolio companies
  - State Street Global Advisors employed fewer than 10 staff for voting and stewardship at 9,000 portfolio companies
  - Most governance activities restricted to proxy voting

How can 10-20 people take decisions for ~10.000 companies?

• Passive fund managers are compensated for tracking error and compete over management fee, and have thus little incentive to improve value through governance at any single portfolio

**Source:** Krouse, Benoit, and McGinty (2016), "Meet the New Corporate Power Brokers: Passive Investors." *Wall Street Journal*, October 24.

"We also intend to double the size of the investment stewardship team over the next three years. The growth of our team will help foster even more effective engagement with your company by building a framework for deeper, more frequent, and more productive conversations." (From BlackRock's Larry Fink 2018 letter)

### Criticism of Governance Approach of Passive Asset Managers

### 2- The Controversial Role of Proxy Advisory Firms

- Proxy advisors counsel investors on how to vote their shares on major corporate decisions, such as mergers and acquisitions, director elections, executive compensation, and corporate governance policies.
- Low-cost way to solve fiduciary duties such as those created by the Minder Initiative in Switzerland
- Criticisms:
  - Inaccurate recommendations
  - "One-size-fits-all"
  - "Who will watch the watchmen?"

### Criticism of Governance Approach of Passive Asset Managers

### 3- Conflicts of Interests because of Investment Services to Corporations

- Investment managers may also provide investment management services to corporations
  - e.g., pension funds that are sponsored by public corporations
- Several empirical studies provide evidence that business ties with corporations influence the voting decisions of investment managers
- Fund families that have greater business ties to corporations tend to vote with management

skip

- ESG Engagement and Large Investors
- **→** ESG Activism
  - Performance of ESG Investing

### Who Are Active Investors?

- Corporate Raiders (think of Gordon Gekko, but with a longer-term horizon)
  - 1980s phenomenon Carl Icahn, Victor Posner, Carl Lindner
  - Many of the anti-takeover provisions are a direct response to the takeover attempts of these investors

Activist in stock market

- Pension funds
  - California Public Employee Retirement System (CalPers) Usually helping activist funds
  - Mainly through shareholder proposals and talks with management
- Hedge funds and private equity funds
  - MLF Investments; KKR
- Activist funds
  - Hermes UK focus fund; Eddie Lampert

### **Active investors – Tools**

Usually small funds, invest in 1-3 firms and want to change them!

- Class action lawsuits
- Letter writing with management
- Private negotiations
- Media campaigns
   these two go together
- Shareholder proposals
- Proxy fights

### **ESG** Activism

### **Recently Launched Funds**

#### **Engine No. 1**

• Launched in late 2020 by three hedge fund industry veterans, Engine No. 1 is an ESG-focused fund founded on the belief that a "company's performance is greatly enhanced by the investments it makes in workers, communities, and the environment"

# Inclusive Capital Partners

- Launched in June 2020 by ValueAct founder Jeffrey Ubben, Inclusive Capital Partners is an ESG-focused fund with a "passion for positively leveraging capitalism and governance in pursuit of a healthy planet and the health of its inhabitants"
- Inclusive will focus on investing in companies across industries generally avoided by most impact / sustainability investors

#### Impactive Capital

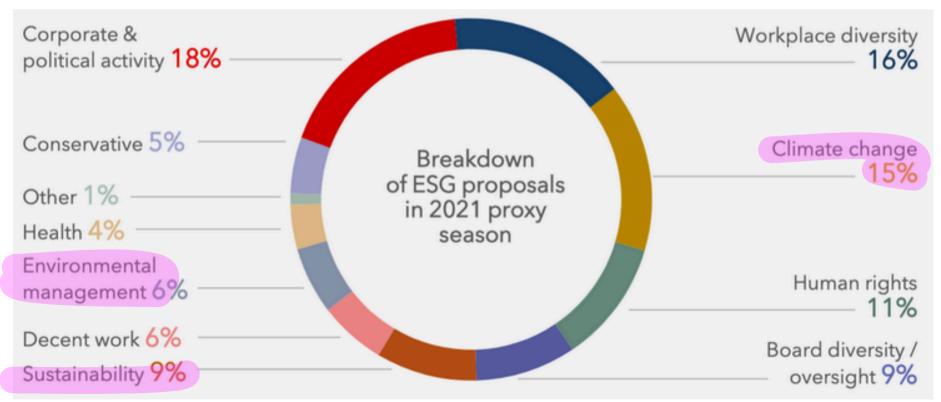
• Launched in 2018 by Lauren Taylor Wolfe and Christian Alejandro Asmar, Impactive Capital is an ESG-focused fund with a focus on driving "positive systemic change to help build more competitive, sustainable businesses for the long run"

https://corpgov.law.harvard.edu/2021/01/25/annual-review-of-shareholder-activism/

## ESG Proposals in the 2021 Proxy Season

Proponents have filed over 435 shareholder resolutions on ESG issues in the 2021 proxy season. Over 90 proposals have been withdrawn, many after corporate concessions around ESG reporting metrics, GHG reduction targets, business impact assessments and sustainability strategies.

--> Not very extreme... reasonable



Source: <a href="https://justcapital.com/news/shareholder-activism-takes-hold-as-proxy-season-gives-rise-to-esg-issues/">https://justcapital.com/news/shareholder-activism-takes-hold-as-proxy-season-gives-rise-to-esg-issues/</a>

### Engine No. 1 / ExxonMobil

Engine No. 1 is founded in December 2020 with \$250 million.

Started with nothing ESG related!

In December 2020, Engine No. 1 takes a stake in ExxonMobil worth \$40 million, about 0.02% of the oil company's shares. On December 7, 2020, Christopher James (Engine No. 1's CEO) writes an open letter to the board of directors, pointing out Exxon's poor return on capital employed (ExxonMobil incurred a \$22 billion loss that year). The letter asked for widespread reform and proposed four independent directors, all with experience of the energy sector. -> Complaining that they're not managing risk properly.

Given their small stake in the company, Engine No. 1's strategy relies on convincing Exxon's large shareholders, the largest three being BlackRock, Vanguard Group and State Street, to back its plans. Engine No. 1 appealed less to environmental principles and more to profitability in their strategy to convince investors. It says that Exxon's focus on fossil fuels threatened future returns and that the company faced "existential risks".

Engine No. 1 estimated its costs to add up to \$30 million for the proxy battle (at least \$35 million for ExxonMobil). It gets the support from CalPers, the US second largest public pension fund. On 26 May 2021, two of Engine No. 1's candidates are elected to the board of directors, with the vote over a third one being too close to call. A week later, Exxon announces that Engine No. 1 has won a third seat. Enigne No. 1 got 3 members of the board

- ESG Engagement and Large Investors
- ESG Activism
- **→** Performance of ESG Investing

Impact on stock returns: related but not the same

- Stock financial performance ≠ corporate financial performance = earnings (what you did last year)
- Heterogenous results Stock Fin Perf = supposed to be forward looking, stock performance: anticipated earnings
- Return-oriented or risk-oriented investment style?
- Mixed results
- → Relatively old papers: negative impact of ESG investing on financial performance

Hong and Kacperczyk (2009), "The price of sin: The effects of social norms on markets" .> higher returns to attract them!

- Triumvirate of Sin: tobacco, alcohol, and gaming
- Sin stocks also have higher expected returns than otherwise comparable stocks

Bolton and Kacperczyk (2020), "Do investor care about carbon risk?"

- Stocks of firms with high CO<sub>2</sub> emissions earn higher returns (after control for factors)
- Investors demand compensation for their exposure to carbon emission risk

What do Equilibrium models say?

Pastor, Stambaugh, and Taylor (2020), "Sustainable investing in equilibrium"

- Investors with ESG preferences pay a premium for investing in green stocks (equivalently, green assets have lower expected returns than brown)
- In equilibrium, green assets have negative alphas, whereas brown assets have positive alphas

At the eq we should have a premium for the brown firms

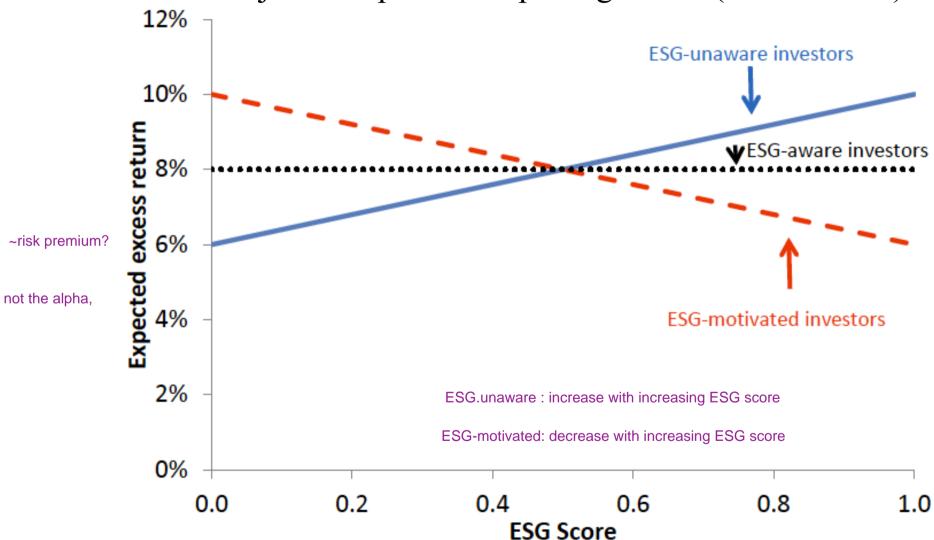
Pedersen, Fitzgibbons, and Pomorski (2020), "Responsible investing: The ESG efficient frontier"

- Assumption: ESG quality is a good predictor of future firm's performance
- 3 types of investors
- ESG-unaware investors: unaware of ESG scores and simply seek to maximize their unconditional mean-variance utility
- ESG-aware investors: have mean-variance preferences, but use assets' ESG scores to update their views on risk and expected return

  Use it to maximize profit. Not in my interest to impact the world.
- ESG-motivated investors: use ESG information and have preferences for high ESG scores

would earn money on green firms

ESG-adjusted capital asset pricing model (ESG-CAPM)



Source: Pedersen, Fitzgibbons, Pomorski (2020), Responsible investing: The ESG efficient frontier

What do Empirical results say?

**Ardia, Bluteau, Boudt, and Inghelbrecht** (2020), "Climate Change Concerns and the Performance of Green Versus Brown Stocks"

- Concerns about climate change increase unexpectedly, green firms' stock prices increase, while brown firms' decrease

#### Pastor, Stambaugh, and Taylor (2021), "Dissecting green returns"

- Green assets delivered high returns in recent years because of strong increases in environmental concerns

long rur

- So, the model predicts that green assets have lower *expected returns* than brown assets, but green assets can have higher *realized returns* if agents' tastes shift unexpectedly in the green direction.
- Example: Green premium (*Greenium*) on bonds

All in all a paradox...

### **Inflows into ESG Funds**

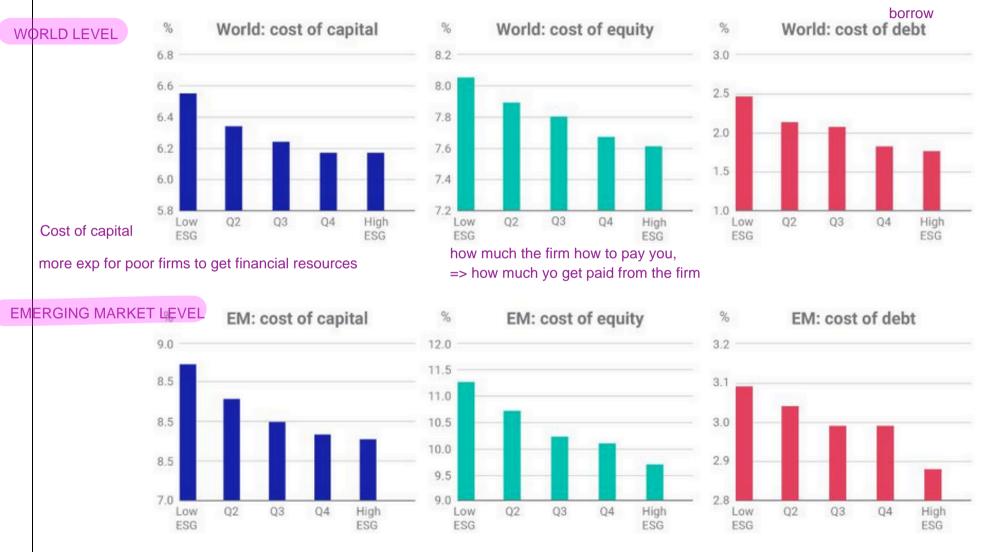
#### ETFs based on MSCI ESG indexes



Source: <a href="https://www.etfstrategy.com/is-esg-investing-a-price-bubble-probably-not-38494/">https://www.etfstrategy.com/is-esg-investing-a-price-bubble-probably-not-38494/</a>

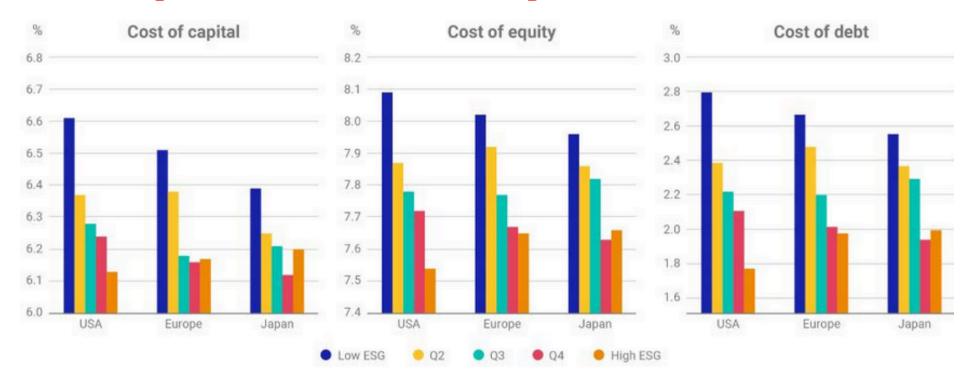
be aware of manipulation

### Cost of capital related to MSCI ESG profile



Source: Monthly industry-adjusted ESG scores for all firms in the MSCI World index and MSCI Emerging Markets, segmented by SG-score quintiles. https://www.msci.com/www/blog-posts/esg-and-the-cost-of-capital/01726513589

### Cost of capital related to MSCI ESG profile



Source: Monthly industry-adjusted ESG scores for all firms in the US, Europe and Japan, segmented by SG-score quintiles. https://www.msci.com/www/blog-posts/esg-and-the-cost-of-capital/01726513589

### Market valuation related to MSCI ESG profile



Source: The MSCI ESG Leaders Indexes select the top 50% ESG-rated stocks in each GICS sector. MSCI SRI indexes select top 25% ESG-rated stocks in each GICS sector.

https://www.msci.com/www/blog-posts/esg-and-the-cost-of-capital/01726513589

ACWI:all countries SRI: social responsible

THEY are selling green assets!

NB!! Select the leaders so that the graph sells their product

Calibrate their index so that it performs better than the standard form

#### Market-to-Book ratio related ESG performance scores and public sentiment

Variable	Model (1)	Model (2)	Model (3)
Intercept	-0.55595**	-0.55603**	-0.55631**
ESG Performance	0.03043**	0.03043**	0.03034**
ESG Sentiment Momentum		0.00002	0.00003
ESG Performance × ESG Sentiment Momentum			0.00044**
Past return	0.52341**	0.52339**	0.52326**
Leverage	0.43290**	0.43291**	0.43208**
Log market cap	0.11372**	0.11372**	0.11372**
Revenue growth	0.40213**	0.40211**	0.40242**
ROE	0.22268**	0.22263**	0.22213**
Industry effects	Yes	Yes	Yes
Year-month effects	Yes	Yes	Yes
Adjusted R <sup>2</sup>	39.47%	39.47%	39.49%

Source: Serafeim (2020), Public sentiment and the Price of corporate sustainability, Financial Analysts Journal. ESG performance is MSCI ESG score, ESG Sentiment Momentum is from TruValue Labs. The dependent variable is the natural logarithm of market to book. Models include fixed effects for each year-month pair. Standard errors were clustered at the company level and are robust to heteroscedasticity. The number of observations is 138,349. \*Statistically significant at the 5% level; \*\*Statistically significant at the 1% level.

(MSCI)

Intermediate position of MSCI: driving the business.

### **Impact on Performance**

Create models, but also indexes where investors will create portfolios.

Some people argue that the positive impact of ESG scores/ratings on performance may be overestimated because rating agencies may give higher weights on large companies.

#### Possible explanations:

Will i be impacted because of climate change?

- "There's virtually no connection between MSCI's "better world" marketing and its methodology. That's because the ratings don't measure a company's impact on the Earth and society. In fact, they gauge the opposite: the potential impact of the world on the company and its shareholders. MSCI doesn't dispute this characterization. It defends its methodology as the most financially relevant for the companies it rates."
- Illustration: E score attributed to McDonald's.
  - o McDonald's emitted 54 million tons of carbon in 2019 (+7% in 4 years) but MSCI gave McDonald's a rating upgrade Rated good, not a energy company. A problem for the world but not the company.
  - o MSCI determined that climate change neither poses a risk nor offers opportunities to McDonald's financial performance.
  - o MSCI gave credit to McDonald's for mitigating "risks associated with packaging material and waste" relative to its peers (including recycling bins at some locations in France and the U.K.).

----> A joke....

- From Jan. to June 2020, MSCI upgraded 155 firms from S&P 500
  - o In 51 upgrades, it is due to the adoption of policies involving ethics and corporate behavior (such as bans on money laundering and bribery, which are already crimes).
- O In 35 reports, firms got upgraded for employment practices (such as an annual employee survey), which should reduce turnover
  - o In 23 reports, firms adopted data protection policies
  - o In 25 reports, firms adopted board-of-director practices, which should protect shareholder value
  - Possible conflict of interest: MSCI provides ESG ratings, but it also sells ESG funds
    - o Bloomberg Intelligence estimate that approx. 60% of all the money retail investors have invested into sustainable or ESG funds globally has gone into ones built on MSCI's ratings
    - O UBS estimates that MSCI earns almost 40 cents out of every dollar the investment industry spends on such data

https://www.bloomberg.com/graphics/2021-what-is-esg-investing-msci-ratings-focus-on-corporate-bottom-line/

Berk and van Binsbergen (2021): "The Impact of Impact Investing"

They evaluate the quantitative impact of ESG divestitures.

A divestment strategy will lead to a change in the cost of capital of

$$\Delta \bar{R} - \Delta \bar{R}^* = MRP \times \left(\frac{\gamma}{1 - \gamma}\right) \times f \times (1 - \rho^2)$$

where MRP is the historical market risk premium (under CAPM) (MRP = 6%)

 $\gamma$  fraction of socially conscious investor wealth ( $\gamma = 2\%$ )

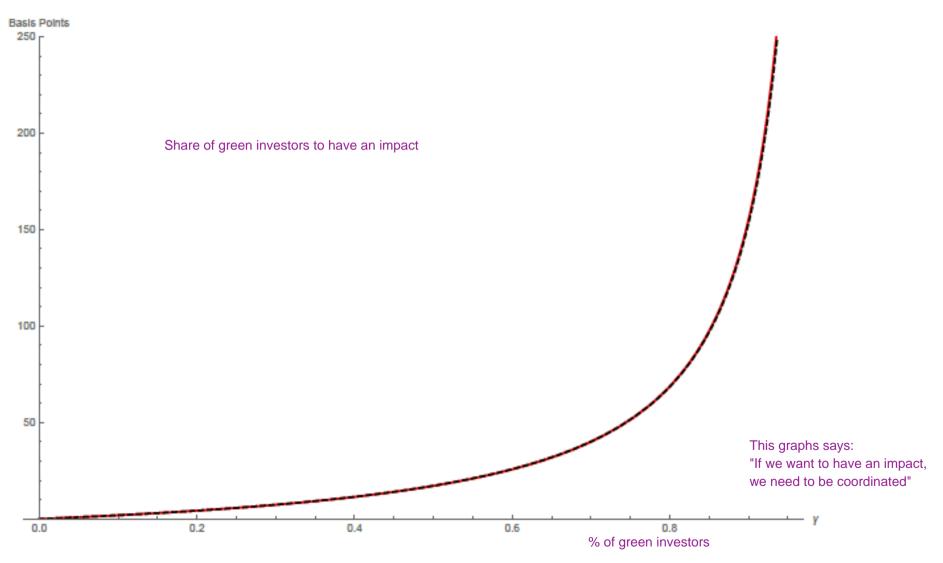
f fraction of the economy that is considered "green" (f = 48.5%)

 $\rho$  correlation between these companies and the rest of the market ( $\rho = 0.97$ )

Benchmark:  $\Delta \bar{R} - \Delta \bar{R}^* = 0.35$  bp

Very simplistic model

#### Effect on the Cost of Capital of Introducing ESG Investors into the Economy



Source: Berk, van Binsbergen (2021), p. 15.

A substantial increase in the amount of socially conscious capital is required for the strategy to affect corporate policy

- Bad news: Exclusion is not likely to have a large effect on increasing the cost of financing of brown firms. Large scale exclusion (through coalition) may have a bigger effect.
- Good news: Exclusion strategies are not likely to suffer from lower performance