Impact Investing

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EDHEC "The Future of Finance" Speaker Series

What is sustainability in sustainable finance?

- Sustainability of the planet?

- Sustainability of the portfolio value?

- Does an investor believe she is socially responsible based on
  1) What principles she followed when making investment decisions, or
  2) What outcomes her decisions generated?

- What motivates investors to allocate capital to ESG/SRI/impact investing?

Three Questions

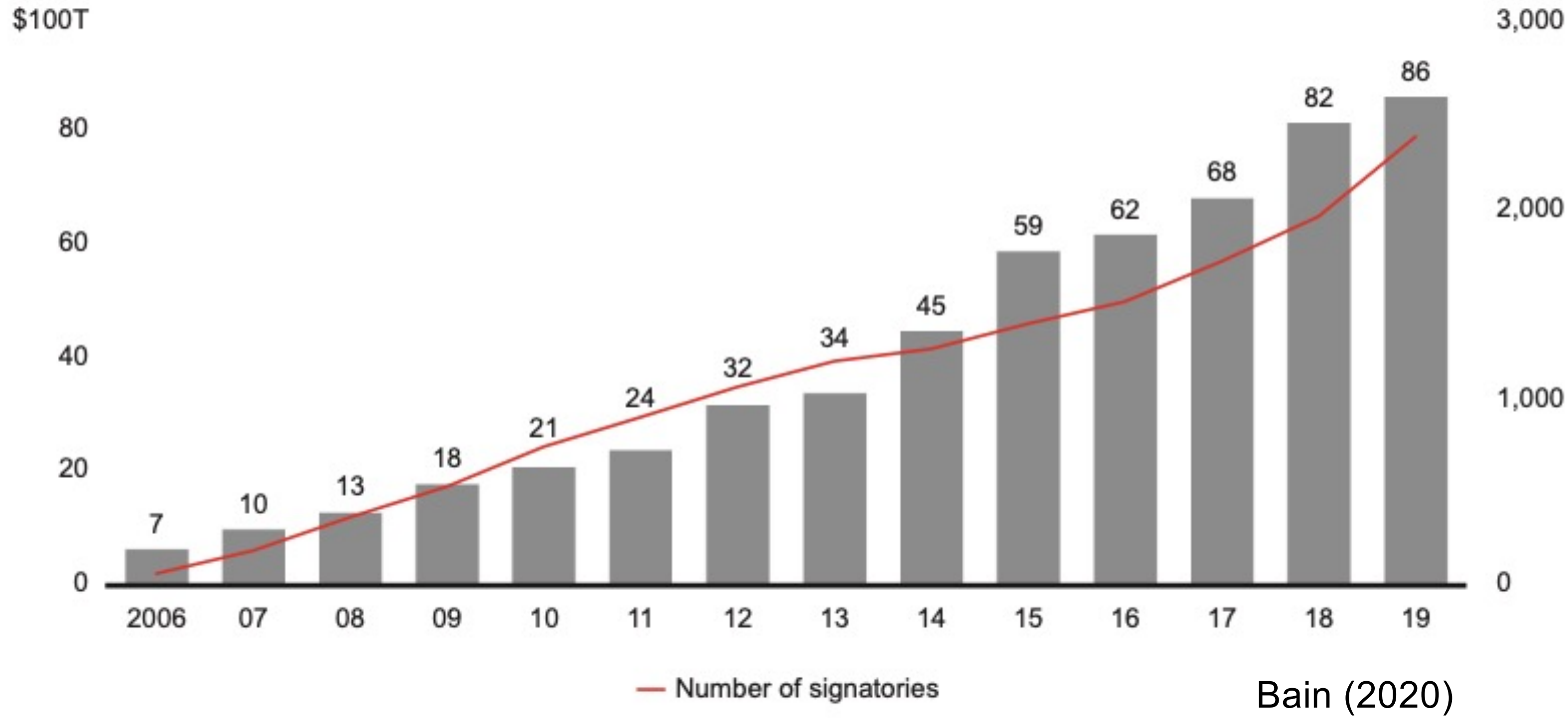
1. What distinguishes impact investing from those of ESG investing and the traditional Socially Responsible Investing (SRI)? Whom does it cater to?
2. Do investors in impact VC funds care about generating positive externality?
3. Can impact investing scale beyond private markets?

Sources:

- "Impact Investing", forthcoming in *the Palgrave Encyclopedia of Private Equity,* Palgrave Macmillan.
- "Impact Investing", 2021, *Journal of Financial Economics* 139, 162-185.

ESG/Impact Investing is Big Money

Assets under Management of UN Principles of Responsible Investment Signatories



Bain (2020)

What do investors behind $100 Trillion want to do with their financial muscle?

Preview of Insights

1. Impact investing is explicitly dual objective and activist.
   - It serves investors who derive non-pecuniary utility from generation of positive externality.
2. Investors in impact VC funds are willing to accept 2-3% lower returns/year in exchange for impact.
   - Willingness varies with investor mission, political pressure, and legal restrictions.
3. Many public ESG funds today are ESG-aware funds and not impact funds.

Distinction between Impact and ESG-aware is key

Impact vs. ESG-Aware

Source of Tension and Confusion

What’s your ESG/impact type?

Sam: “I object to private prisons. It bothers me if a mutual fund I hold in my retirement account invests in shares of a private prison operator.”

Inger: “I feel passionate about making access to clean water more equitable. I flex my financial muscle to back companies that promise to make this happen.”

“Impact”

Ellen: “I sense a huge shift in our entire economic system toward decarbonization and want to climate-proof my investment portfolio against stranded asset risk.”

“ESG-aware”

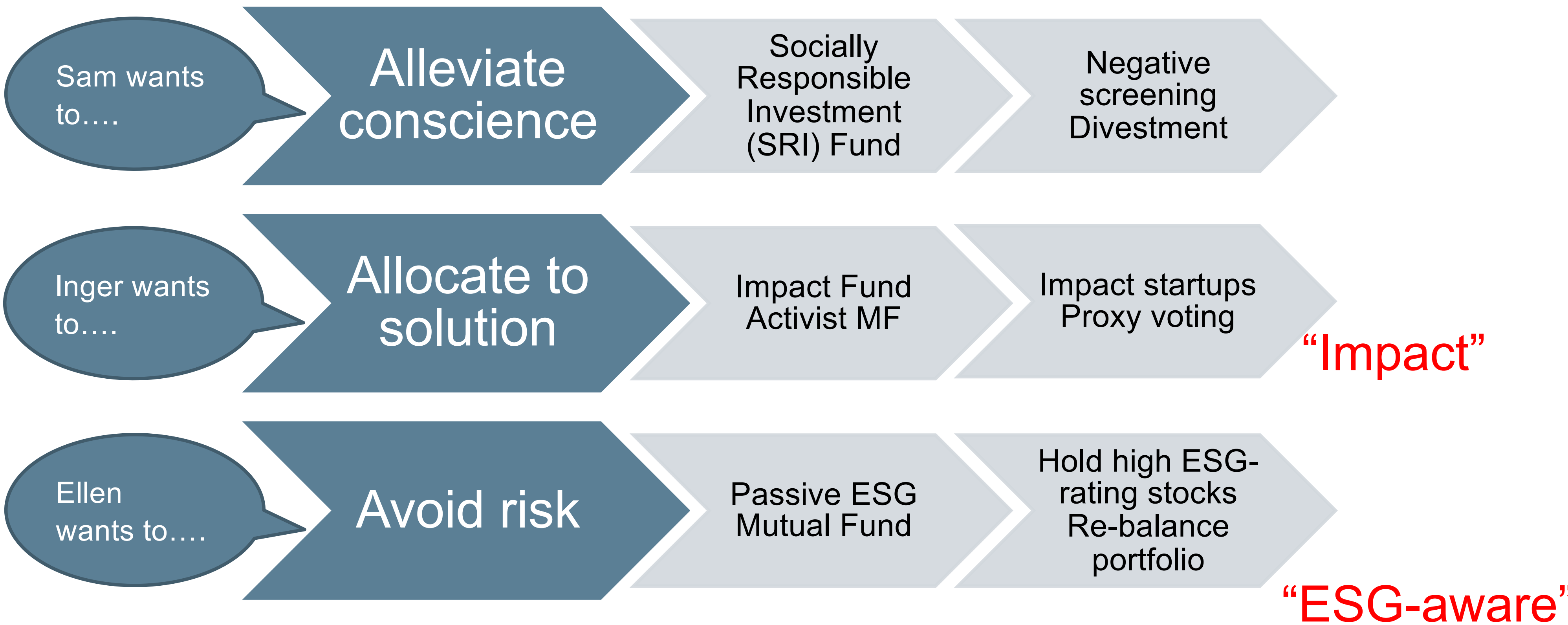
Do you resonate with Sam, Inger, or Ellen?

What is Impact Investing?

Impact investing caters to the non-pecuniary preferences of investors and aims to generate a positive externality actively and causally through their ownership and/or governance of the companies they invest in.

1. **Explicitly dual-objective:** An impact investing vehicle aims to generate both (i) positive social and environmental impact and (ii) a financial return.
2. **Activist:** An impact investing vehicle takes an active role in inducing the positive social and environmental outcomes at the companies it invests in.

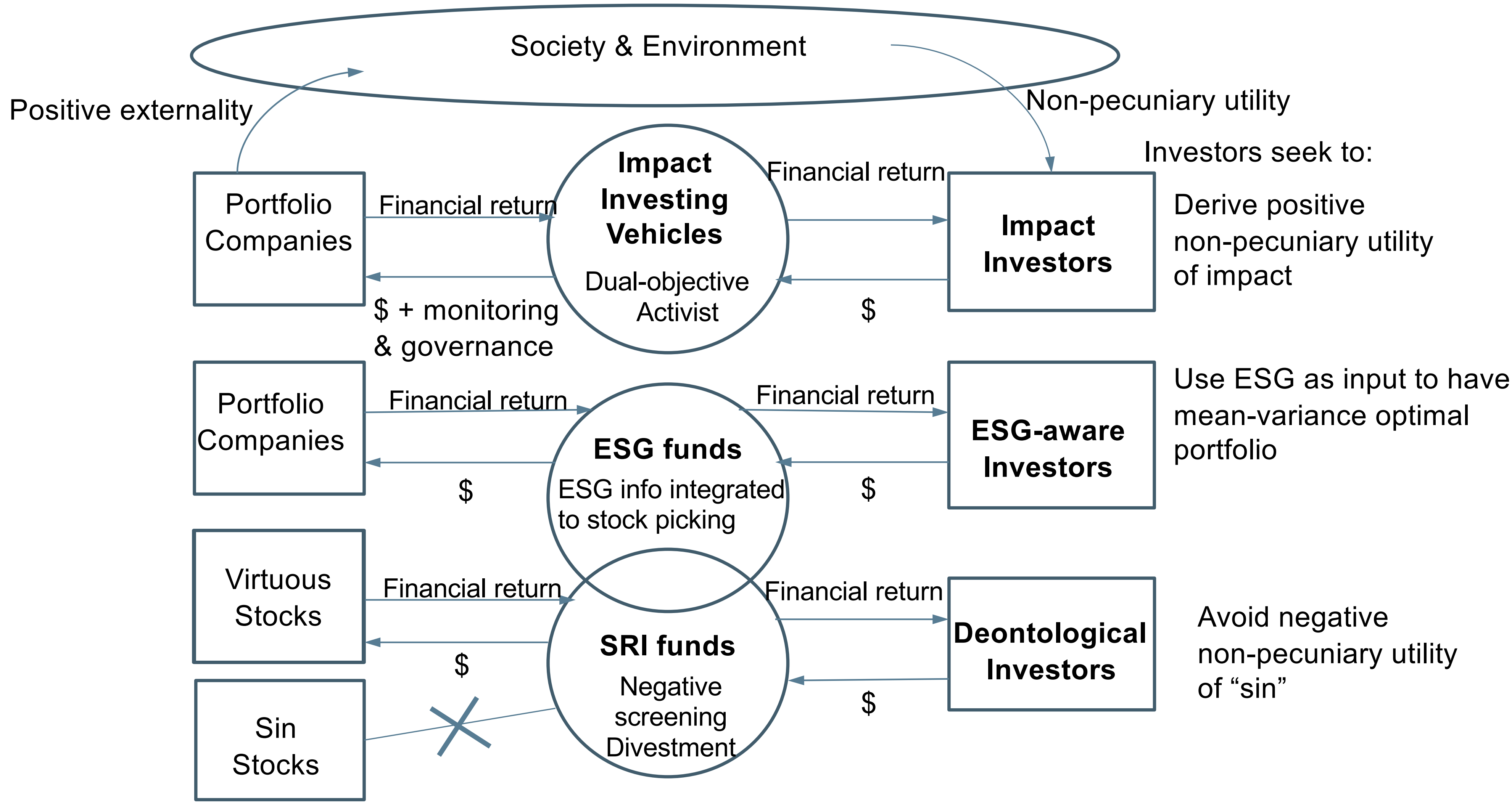
Why – What – How


Sam wants to….
Alleviate conscience
Socially Responsible Investment (SRI) Fund
Negative screening
Divestment
Inger wants to….
Allocate to solution
Impact Fund
Activist MF
Impact startups
Proxy voting
“Impact”
Ellen wants to….
Avoid risk
Passive ESG Mutual Fund
Hold high ESG-rating stocks
Re-balance portfolio
“ESG-aware”

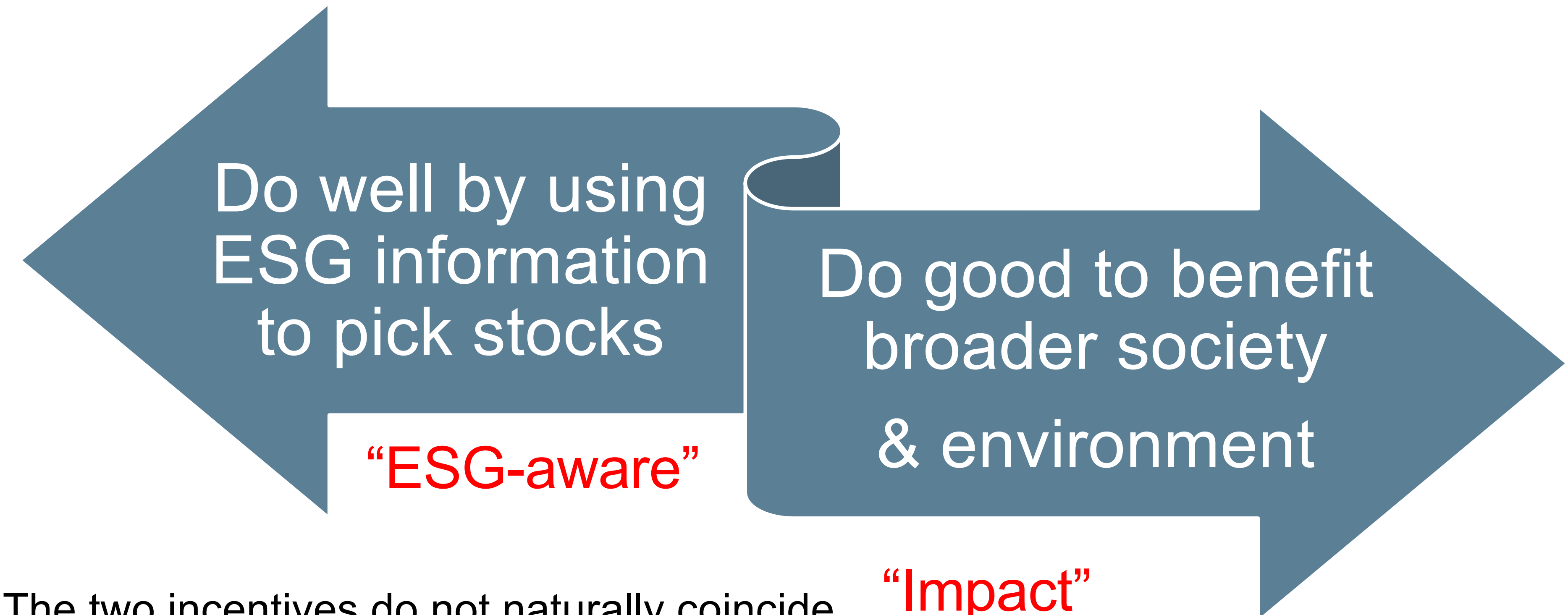
3 ESG/Impact Investment Objectives

		Belief about social responsibility	
		Consequentialist Output-based	Kantian (deontological) Input-based
Investor Objectives	Include non-pecuniary preferences	Impact Investing (Inger)	Socially Responsible Investing (Sam)
	Financial risk/return only	ESG-aware investing (Ellen)	

Only impact investing is designed to induce transformative change in generation of externalities by corporations


Society & Environment
Positive externality
Non-pecuniary utility
Investors seek to:
Portfolio Companies
Financial return
$ + monitoring & governance
Impact Investing Vehicles
Dual-objective Activist
Financial return
$
Impact Investors
Derive positive non-pecuniary utility of impact
Portfolio Companies
Financial return
$
ESG funds
ESG info integrated to stock picking
Financial return
$
ESG-aware Investors
Use ESG as input to have mean-variance optimal portfolio
Virtuous Stocks
Financial return
$
Sin Stocks
SRI funds
Negative screening Divestment
Financial return
$
Deontological Investors
Avoid negative non-pecuniary utility of "sin"

A dilemma between two investor motivations



The two incentives do not naturally coincide
The ESG taxonomy often mixes up the two

Materiality vs. Impact in Sustainable Finance

"Material" in the accounting sense

Materiality-based (ESG-aware)

Investment strategy that incorporates ESG factors that could affect a company's financial performance.

The focus is **sustainability of the company**.

ESG is an **input** to the investment.

Goal is **singular** - financial bottom-line

ESG ratings measure what's relevant for this.

MSCI, Sustainalytics, Moody's, S&P, Refinitiv

Impact Investing

Investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return. **Activist by definition**

The focus is **sustainability of the broader society and the environment**.

ESG is an **output** of the investment.

Goal is **explicitly dual** – both return and impact

GIIN (Global Impact Investing Network) leads impact metrics standardization

What are MSCI ESG Ratings?

"MSCI ESG Ratings aim to measure a company's management of financially relevant ESG risks and opportunities. We use a rules-based methodology to identify industry leaders and laggards according to their exposure to ESG risks and how well they manage those risks relative to peers."

MSCI ratings do not measure how much "good" the company produces for the world. It is explicitly about the resilience of the company in managing its risk.

https://www.msci.com/our-solutions/esg-investing/esg-ratings

ESG-aware vs. Impact

- ESG-aware sustainability is survivalist: “If the world is on fire and the government imposes carbon tax, my portfolio will not lose as much value because it consists of stocks with relatively low carbon footprint”
- Impact sustainability is communal: “My portfolio allocates capital to companies actively aiming to curb temperature rise so that we can save our planet for the future generation.”
- They both serve purposes. Ellen would want ESG-aware sustainability, and Inger would want impact sustainability in their respective portfolios. The two portfolios will look different.

BlackRock ESGU (iShares ESG Aware MSCI USA ETF)

- Tracks MSCI USA index and tilts toward stocks with high ESG ratings by MSCI
- MSCI ESG ratings are materiality-based (ESG-aware), not impact based.
- Big tech stocks (profitable, great employee perks, small carbon footprint) are among favorite ESG-aware stocks

Top holdings (2021):

1. Apple
2. Microsoft
3. Amazon
4. Alphabet
5. Facebook
6. Nvidia
7. Tesla

..

Top holdings (2022):

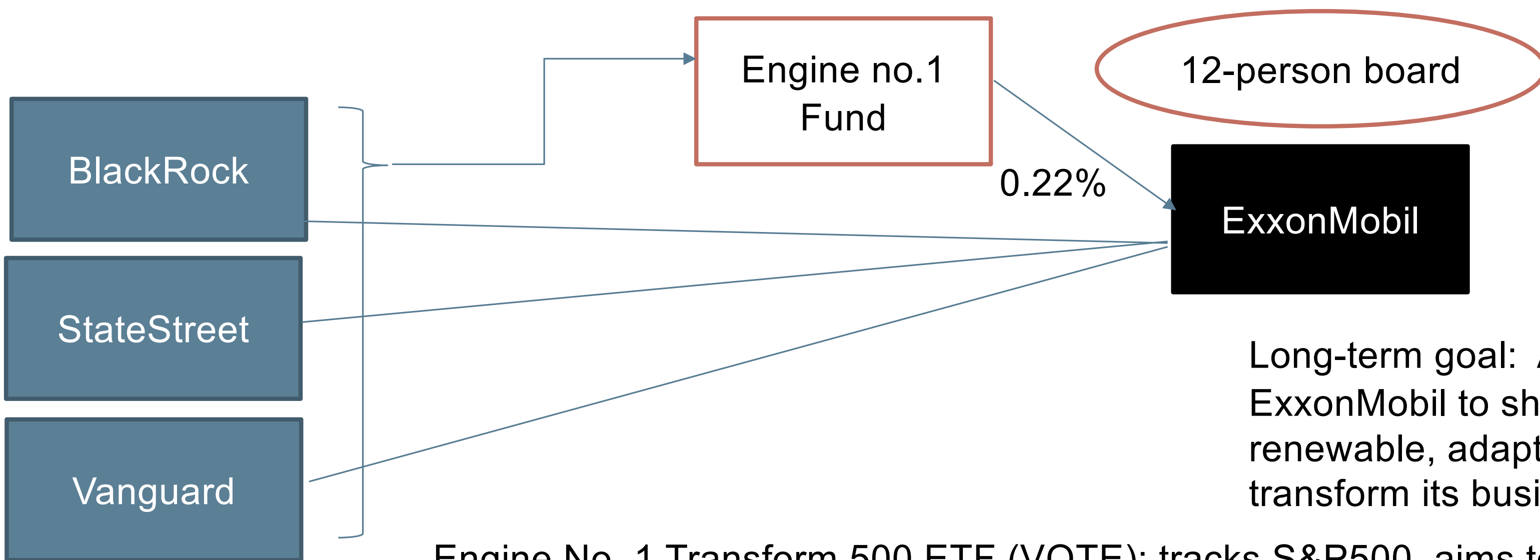
1. Apple
2. Microsoft
3. Amazon
4. Tesla
5. Alphabet

… and

10. Exxon Mobil

Engine no.1 Fund

Proposed 4 new directors
Exxon rejected the proposal
Investors supported 3 of 4
Big upset for incumbent Exxon CEO



Long-term goal: Ask ExxonMobil to shift more to renewable, adapt for climate, transform its business

Big 3 own ≈20%

Engine No. 1 Transform 500 ETF (VOTE): tracks S&P500, aims to use shareholder votes to effect boardroom changes
Higher potential to cause a positive impact

The contrast in portfolio choices

Do well by using ESG information to pick stocks

“Impact”

Do good to benefit broader society

“ESG-aware”

Excluding fossil fuel stocks and holding tech stocks to avoid carbon risk ≈ ESG-aware choice.

Holding “dirty” stocks and actively force boards to change firm policies so they becomes “clean” ≈ impact choice.

Output vs. input-based social responsibility

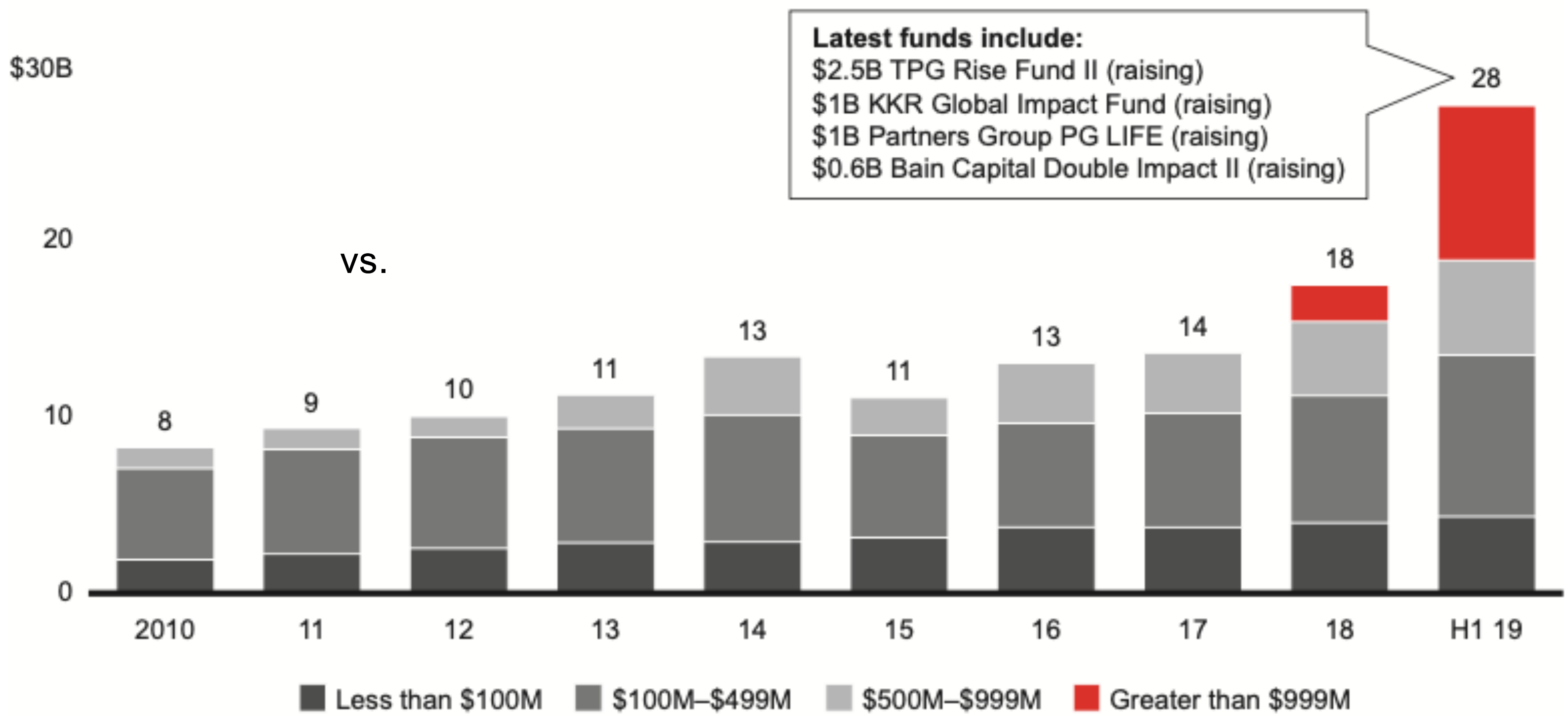
Consequentialism	Deontology (Kantian)
The view that normative properties depend only on consequences. … What is best or right is whatever makes the world best in the future (Stanford Encyclopedia of Philosophy)	*The morality of an action should be based on whether that action itself is right or wrong under a series of rules and principles, rather than based on the consequences of the action.*

- Consequentialism is aligned with impact investing, where outcome measures (e.g., reduction in emissions) are used to gauge its impact and success
- Deontological moral responsibility is aligned with categorical negative screening (e.g., tobacco, alcohol, and now fossil-fuel energy) irrespective of consequences
- Deontological investors are indifferent as to whether their divestment decisions induce the divested companies to change their ways.
- We (economists) may be incorrect to assume everyone who derives non-pecuniary utility is a consequentialist. (Bonnefon, Landier, Sastry, Themar 2022)

Impact Investing

Impact Investing in PE/VC Space

Total AUM of Dedicated Impact PE/VC Funds



vs.

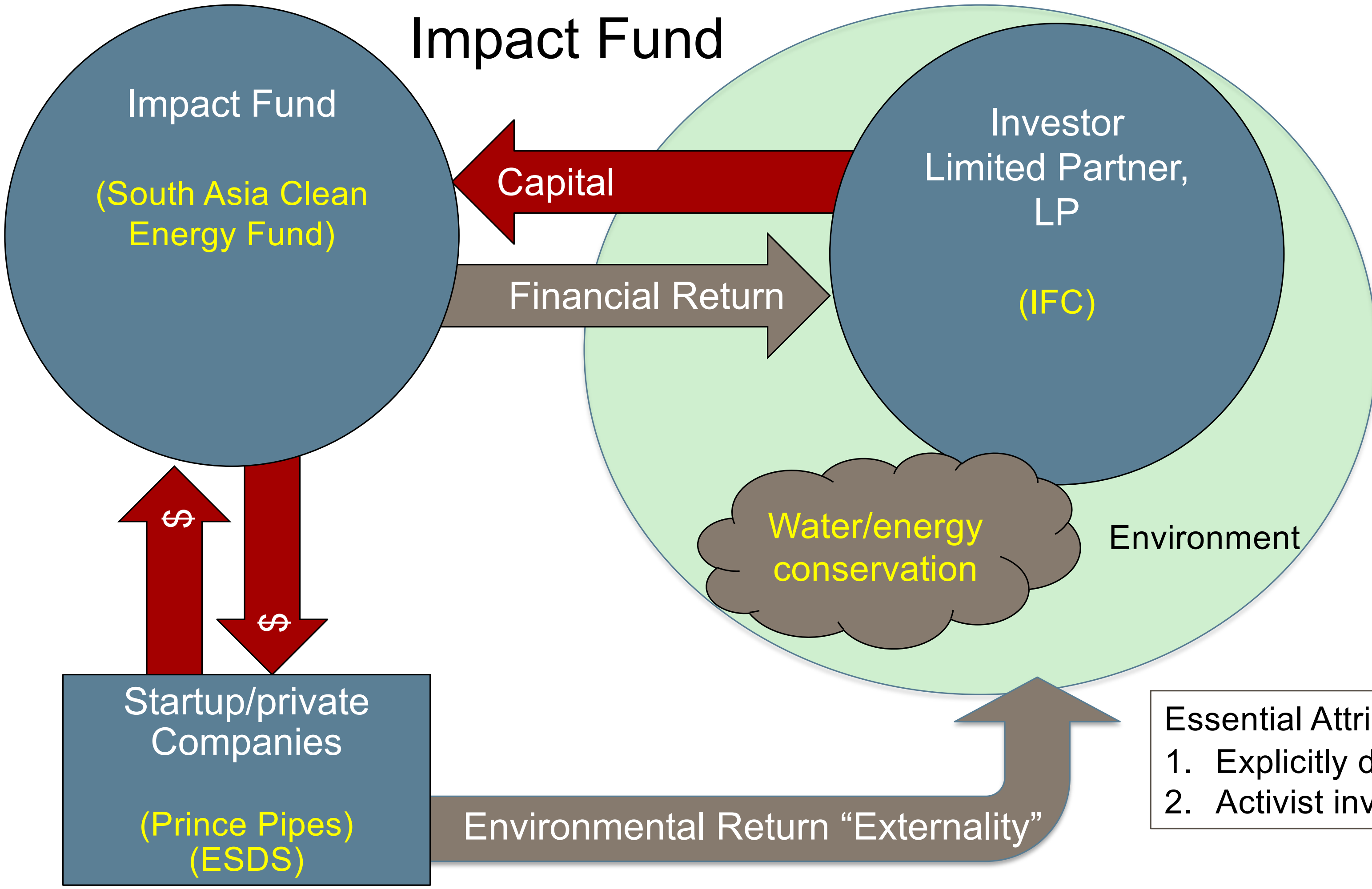
Bain (2020).

"Impact Investing" Barber, Morse, and Yasuda (2021)

Do nonpecuniary motives affect investors' allocation of capital in a way that reflects an intentional willingness to pay for impact?

- Study: Impact Investments ≡ VC funds with **explicit dual objectives** to generate positive externalities + financial returns
- Document:
  1) **Realized performance** of Traditional VC versus Impact VC
  2) Discrete choice model to infer **willingness to pay for impact**
  3) **By which types of investors**

Impact Fund

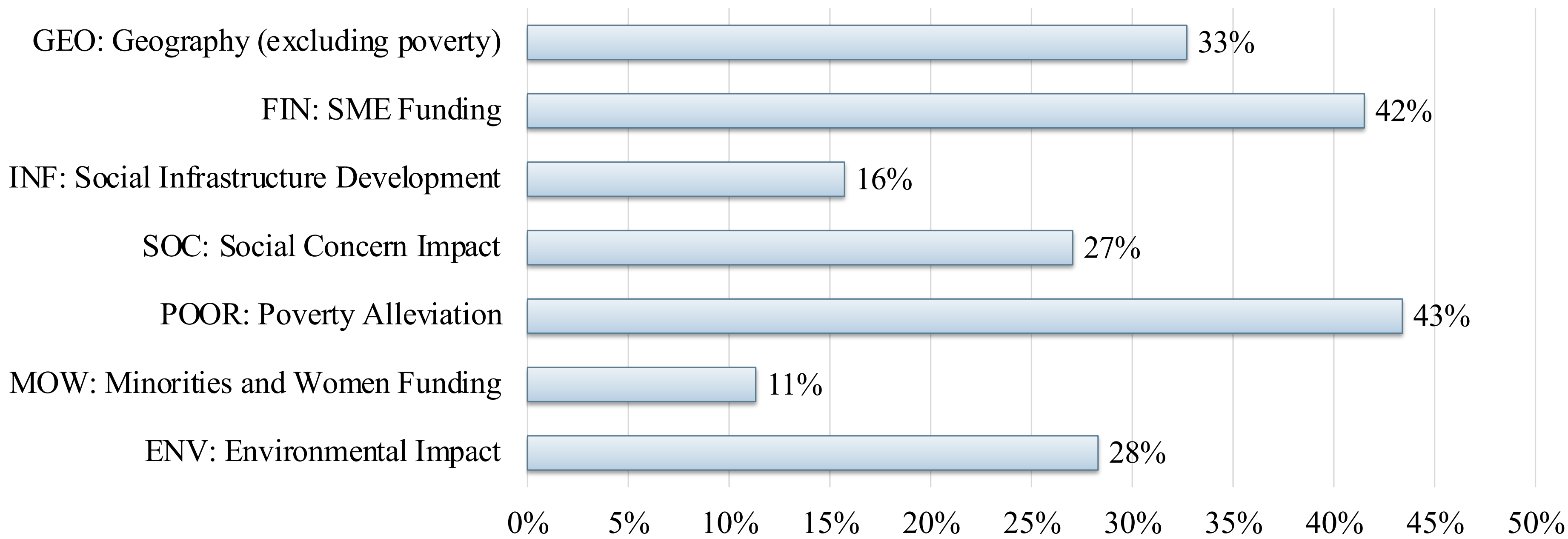


Essential Attributes

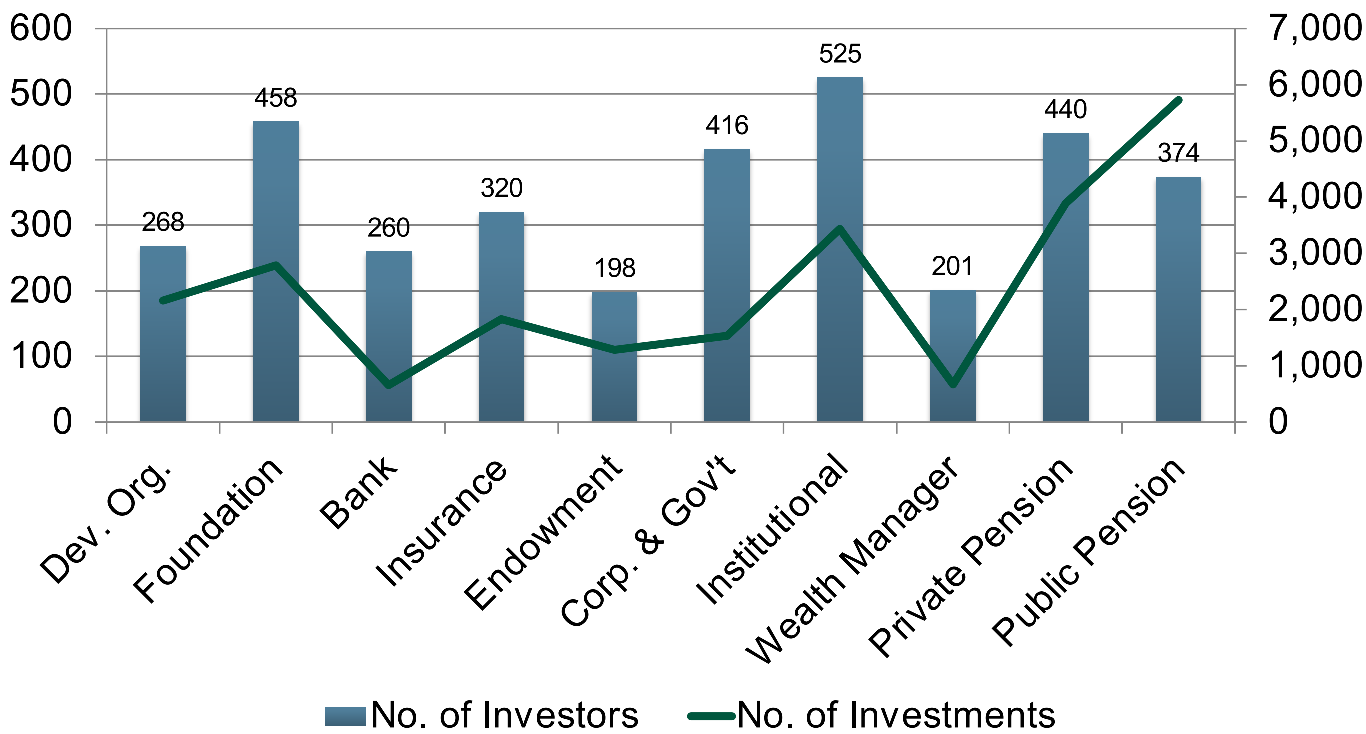
1. Explicitly dual-objective
2. Activist investing

Impact Categories:

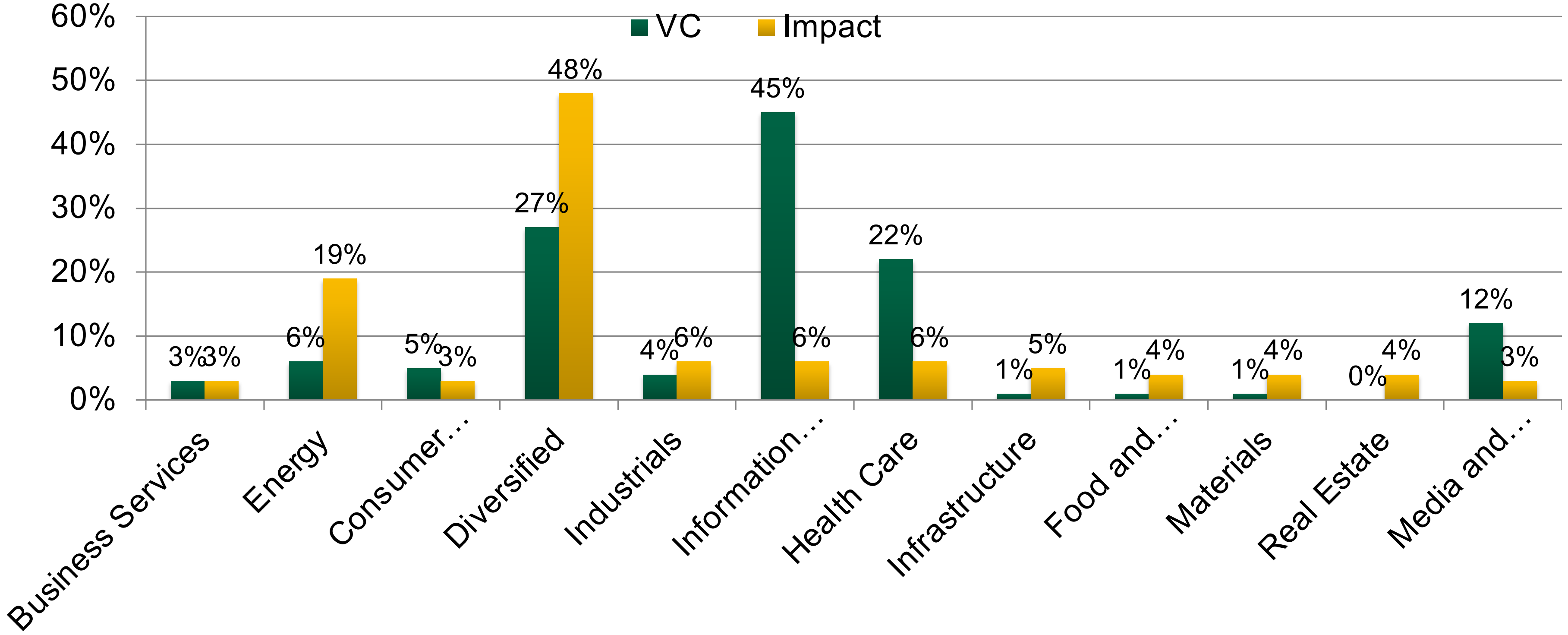
% of Funds with Attribute (multiple entries allowed)



Number of Investors (Investments) by Limited Partner (LP) Investor Type



Impact vs. Traditional VC by Industry



Willingness-to-pay

<u>Idea:</u> Investors have utility over impact and financial returns

- Hedonic pricing = methods to price attributes providing utility
  - Court (1939), Griliches (1961), Rosen (1974), McFadden (1986)
- Cameron/James (1987): Willingness to pay from discrete choice.

$$U^*_{ij} = \mu_i + \beta\mathbb{E}[r_j] + \delta_i \mathrm{IMP}_j + \Gamma' X_{ij} + \varepsilon_{ij}$$

- U^*_{ij} : random utility of investor *i* from investing in fund *j*
- $\mathbb{E}[r_j]$: expected return for fund *j*
- IMP_j : dummy = 1 if fund *j* is impact fund
- X_{ij} : other factors (prior relationship, size, geo, industry, home bias)

U_{ij}=1 iff U^*_{ij}>0

$$Logit(U_{ij}) = \mu_i + \beta\mathbb{E}[r_j] + \delta_i \mathrm{IMP}_j + \Gamma' X_{ij} + \varepsilon_{ij}$$

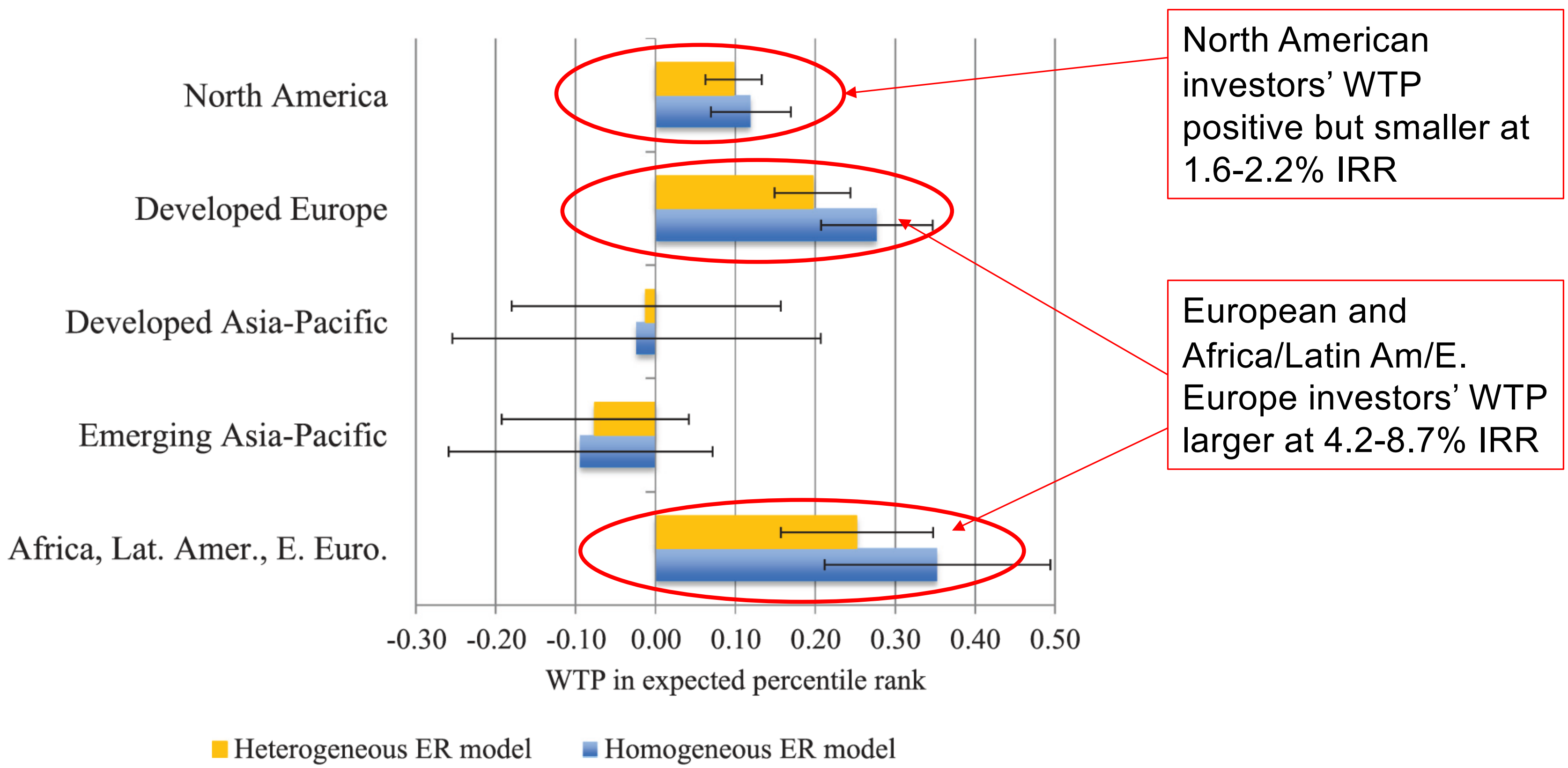
$$wtp\_imp_i = \frac{\left(\partial u / \partial \mathrm{IMP_j}\right)_i}{\partial u / \partial \mathbb{E}[r_j]} = \frac{\partial \mathbb{E}[r_j]}{\partial \mathrm{IMP_j}} = \frac{\delta_i}{\beta}$$

Baseline Results

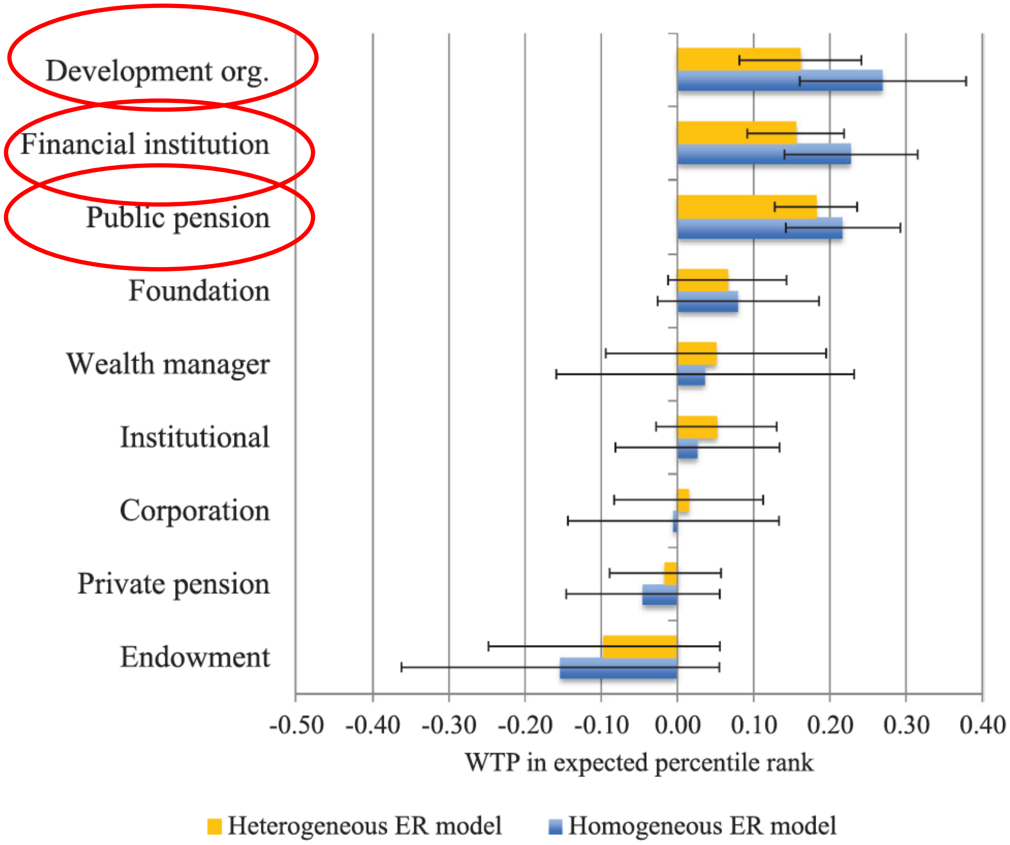
Panel A: Homogeneous expected returns forecast	
Expected returns	3.354***
	[0.276]
Impact	0.591***
	[0.0599]
WTP estimate	0.176
Pseudo *R*-squared	0.261
Observations	3047,430
Panel B: Heterogeneous expected returns forecast	
Expected Returns	4.655***
	[0.225]
Impact	0.613***
	[0.0577]
WTP Estimate	0.132
Pseudo *R*-squared	0.263

- Willingness-to-Pay of 17.6 percentile ranks ≈ 3.7% excess IRR.
- 13.2 percentile ranks ≈ 2.5% excess IRR.
- Overall investors are indifferent between investing in impact funds with lower expected financial returns (by 2.5-3.7% IRR) and investing in traditional VC funds without impact.

WTP by Geography



WTP by Investor Type



- Development organizations, banks and insurance companies, and public pension have positive willingness-to-pay

WTP by Investor Attributes

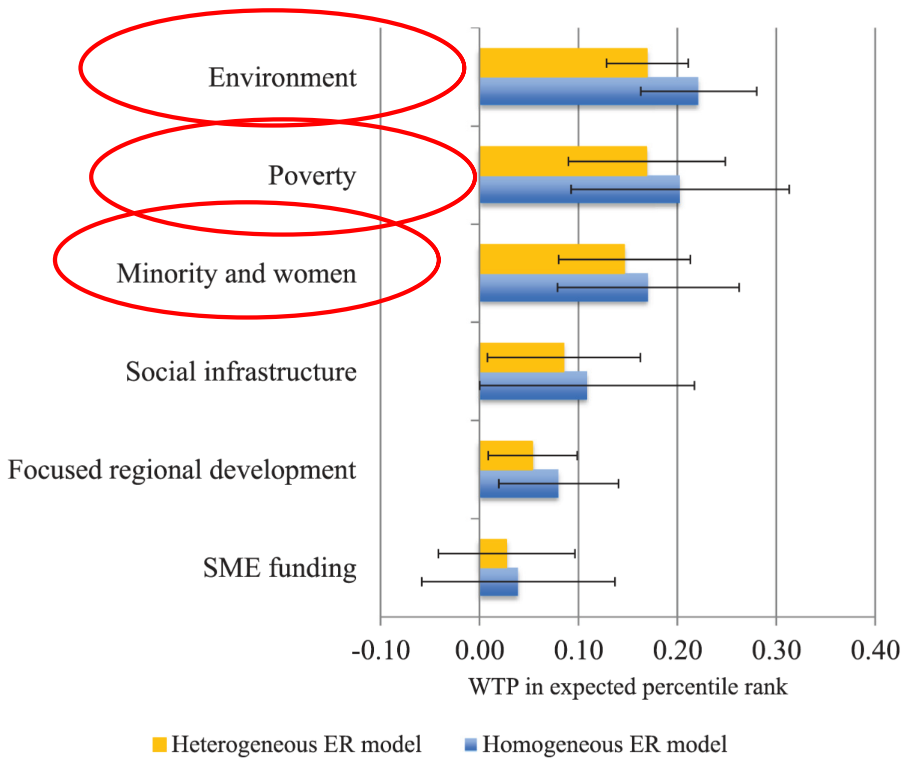
UNPRI signatory	0.12***
UNPRI post-signing	0.22***
Mission	0.27***
Household	–
Intermediated	–
Pressure	0.29***
Restrictions by charter	
Restictions by laws	−0.24***
Standard controls	YES
LP attributes	YES
Impact*LP geo	NO
Impact*LP type	NO
Pseudo R-squared	0.262
Observations	3047,430

- Organizations with mission have higher willingness to pay
- Political pressure → positive WTP

  (mostly local social funds)
- Legal restrictions → negative WTP

U.S.-style fiduciary duty is binding

WTP by Impact Category



- Impact investors are willing to pay more for categories with higher public good or externality content (3-4.7%)
- Consistent with high nonpecuniary utility making them happier & more willing to trade off

Paper Summary

- LPs accept 2.5-3.7% lower expected IRR (“willingness to pay”) for impact funds compared to traditional VC funds.
- Development organizations, foundations, financial institutions, public pensions, Europeans, and UN PRI signatories have high willingness to pay (WTP).
- Investors with mission objectives and/or facing political pressure have high WTP.
- Investors bound by U.S.-style fiduciary duty have low WTP.

Impact investors are willing to trade off financial returns

U.S.-style fiduciary duty may constrain some impact investors’ welfare maximization

Sustainable Funds

“Survivalist, Consequentialist, and Deontological: The Three Colors of Sustainable Investing”

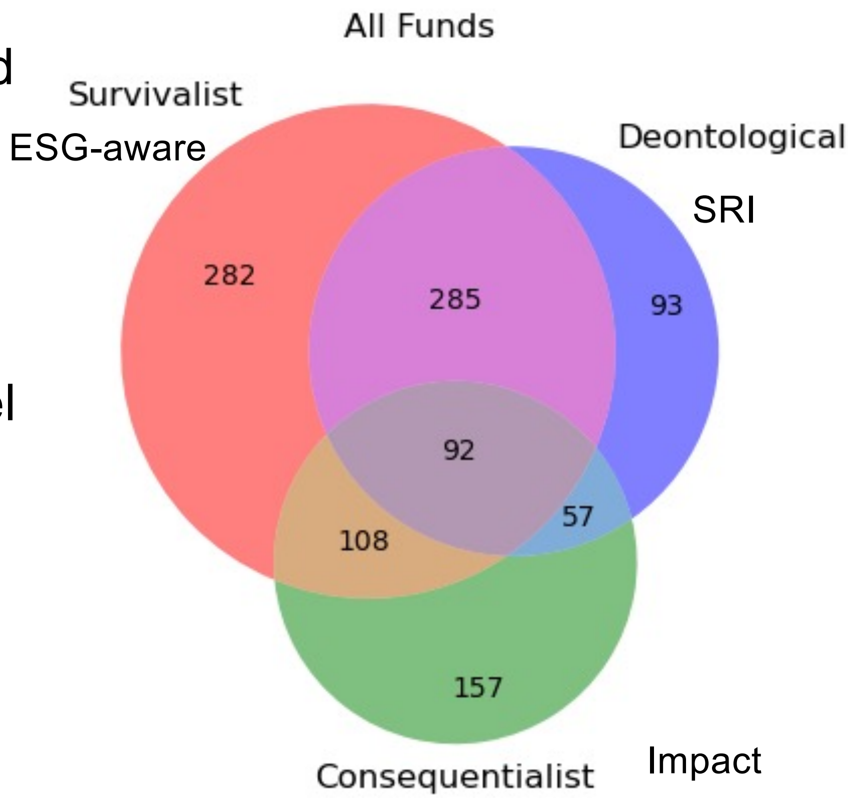
Motivation:

- Confusion among ESG-aware, impact, and SRI goals of sustainable investing
- Risk of mismatch between households’ goals and the actual impact generated by fund managers

Goals:

1. Develop a machine learning-based model to classify sustainable funds
2. Study differences in portfolio choices & impact on society/environment among 3 types of funds

Finding (preliminary): ESG-aware funds green their portfolios, impact funds green the planet



Yang and Yasuda (2023)

Case Studies Disclaimers

- Examples of SRI/impact/ESG investment products available to individual investors
- For illustration purpose only
- Not investment recommendations

ESG-aware fund example

Fidelity® International Sustainability Index Fund

Principal Investment Strategies

- Normally investing at least 80% of assets in securities included in the MSCI ACWI (All Country World Index) ex USA ESG Leaders Index and in depository receipts representing securities included in the index. The MSCI ACWI (All Country World Index) ex USA ESG Leaders Index is a capitalization-weighted index that provides exposure to companies with high environmental, social, and governance (ESG) performance relative to their sector peers, as rated by MSCI ESG Research. The

"MSCI ESG Ratings aim to measure a company's management of financially relevant ESG risks and opportunities. We use a rules-based methodology to identify industry leaders and laggards according to their exposure to ESG risks and how well they manage those risks relative to peers."

Designed to mitigate portfolio ESG risk, not to generate externality.

SRI fund example

SPDR® S&P 500® Fossil Fuel Reserves Free ETF

The Index is designed to measure the performance of companies in the S&P 500 Index that are “fossil fuel free”, which are defined as companies that do not own fossil fuel reserves (either proven or probable). For purposes of the composition of the Index, fossil fuel reserves are defined as (i) thermal coal reserves, (ii) other non-metallurgical coal reserves (e.g., coal for chemical biproducts, coal briquettes, residential use, liquid fuel, cement production, paper manufacturing, pharmaceutical, alumina refineries, ferrochrome, anthracite) (iii) conventional or unconventional oil reserves (e.g., natural gas liquids, oil sands, condensates and liquid petroleum gas), (iv) natural gas reserves, (v) shale gas reserves, and (vi) oil and gas reserves that have not been disclosed transparently as specific types of oil or gas, or are disclosed as one aggregate quantity of oil and gas reserves combined.

Categorically designed to align one’s value with portfolio holdings (deontological), not to generate externality

Impact fund example

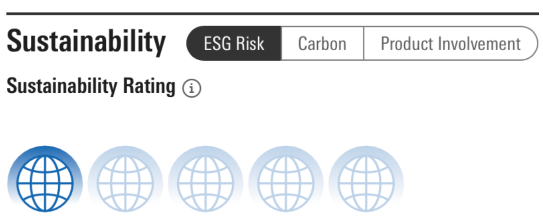
ENGINE NO. 1 TRANSFORM CLIMATE ETF

- Companies whose leadership has recognized the importance of sustainability and has responded through climate-specific reporting and targets. This can include carbon emissions reporting as well as commitments to cutting carbon emissions by a given amount by a given date. For example, the Adviser could use records of companies that have set science-based carbon targets through the World Resources Institute in order to identify companies that are committed transforming themselves.

- Companies whose business practices, products, and services reflect progress in slowing, preventing, and reversing climate change. This can be judged by the historical and projected carbon intensity of the business, including how capital budgets, research and development, and corporate strategy are shifting over time. For example, the Adviser could assess corporate filings and investor presentations to assess how a specific company is transforming its products, services, or operations in order to meet the demands of climate change.

- Companies whose business model is well-adapted to the risks and opportunities that climate change presents. The Adviser may assess the degree to which climate change and the social, government, business, and investor movements to fight it will affect the growth, profitability, and risk to potential investments over time. For example, the Adviser could analyze the carbon emissions associated with a specific company to understand how a potential tax on carbon might affect the company's profitability.

Designed to allocate capital to induce externality generation



… but considered "Low sustainability" by Morningstar because it holds stocks in high environmental impact ("dirty") sectors! (John Deere, lithium, GM)

SFDR and Article 8/9 Funds

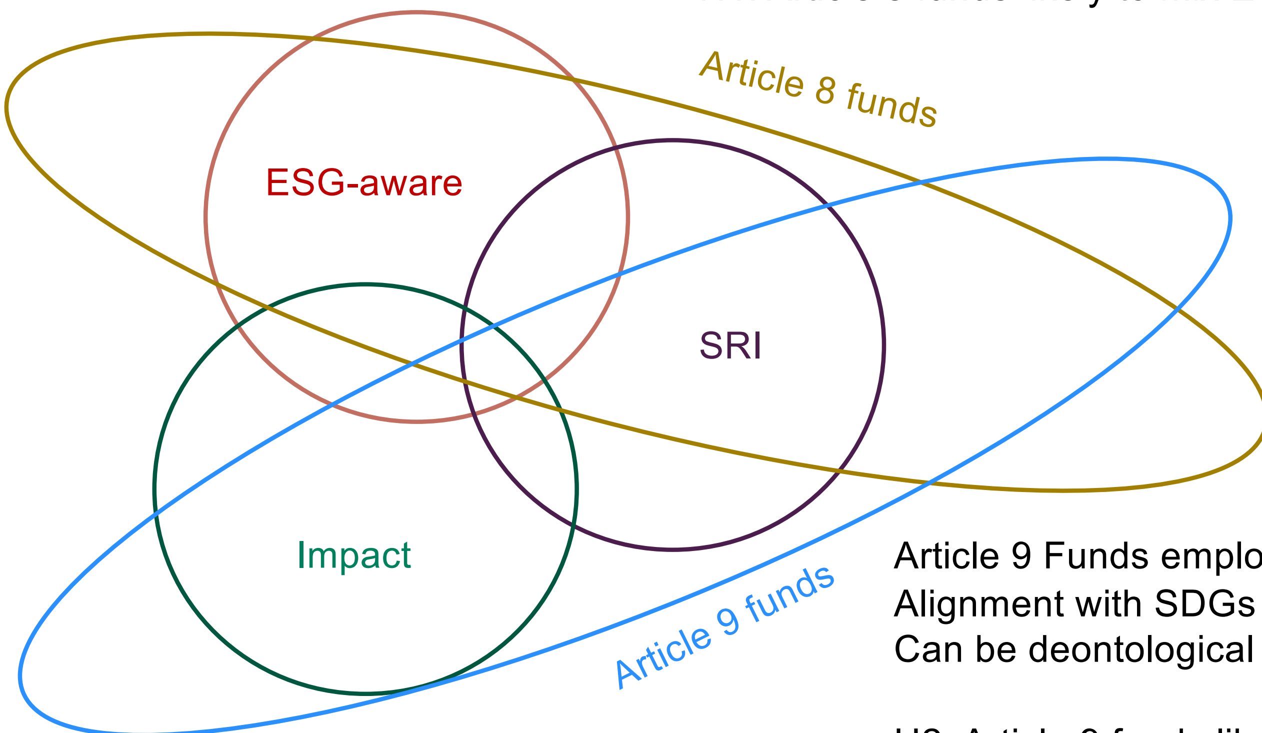
- Sustainable Finance Disclosure Regulation (SFDR) is a new EU regulation for financial products
- Requires funds to classify as Article 6, 8 or 9 funds
- Article 6: does not incorporate ESG information
- Article 8: incorporate E&S characteristics
- Article 9: E&S sustainability is a primary goal

How will the SFDR classification map to the 3 investor goals?

Will Article 9 funds be impact funds?

My Hypotheses in work in progress

Article 8 Funds are allowed to use negative screening, both to mitigate risk and avoid sin stocks.
H1: Article 8 funds likely to mix ESG-aware and SRI goals.



Article 9 Funds employ positive screening
Alignment with SDGs is a primary goal
Can be deontological or consequentialist

H2: Article 9 funds likely to be a mix of SRI and Impact funds

How much impact Article 9 funds generate depends on the mix of SRI vs. impact funds, impact of PAIs, etc.

Conclusion

1. Impact investing is explicitly dual-objective and activist.

2. Investors in impact VC funds are willing to pay for impact.

3. Many sustainable funds available to households today are not impact funds

As we debate the role of sustainable finance in transition to net zero economy, need to reckon with the fact that much of capital managed by “sustainable” funds is not mobilized to generate externality.

Thank you!

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