The State of Sustainable Finance

November 2022





The State of Sustainable Finance 2022

Necessary - US\$50T+ over the next 20 years

Rising Action - expected to be US\$53T by '25 (BNEF)

Concerns - Greenwashing (DWS)/Scale/Funding

US Pushback - Florida, Texas, Election Cycles

What to Do Now: 3/5/7/10

Top 10 Misunderstandings (part 1)

1) ESG are issues, not one single thing, so let's stop treating it that way

2) Sometimes data can help but we have to be more specific as to how (ESG data is a useful potential red flag indicator on corporate behavior)

3) However, ESG data also has a history of being oversold, and this needs to be recognized and accounted for (ESG data as it stands often does not identify what companies need to do differently, is not a panacea for climate change for example)

4) Standards can help, but they need to be clear on what they are and are not, and what they can and cannot do (can a sole materiality help solve climate change?)

5) The same is true of the TCFD

Top 10 ESG Misunderstandings (Part 2)

6) That said, we welcome increased disclosure requirements, such as the proposed SEC climate disclosure rule and the SFDR in Europe, even if they remain works in progress, as transparency encourages action

7) The same is true of Net Zero commitments as well, regardless of recent pushback

8) Sometimes investing can help when it comes to ESG issues, but not always (and let's stop using the phrase ESG Investing, ESG are a series of issues, risks and opportunities)

9) Accusations of greenwashing are a good thing, not a bad thing, as it helps encourage authenticity

10) There are ways and methods in which sustainable finance and investing is effective and transformational, but we need to be honest about what works, and more focus is needed on scaling what works for purpose.

The Seven Tribes of Sustainable Finance

1) Ethical/Negative Screening – Values First (much of the 35T-> 53T by 2025 BNEF)

2) **Positive/Best In Class** – Value First - using ESG focused themes and considerations- if scaled, retains the potential to create a positive dynamic that would benefit both shareholder value & societal benefit (Generation/HBS) (5T)

3) Impact Investing, includes community investing (1T)

- 4) Thematic Investing, across asset class (1T/yr)
- 5) **ESG Integration** (greenwashing concerns DWS/BLK/SEC)
- 6) Shareholder Advocacy & Engagement (all time high '21)
- 7) Minimum Standards (NYS Common/Yale/NYC restaurants)

ESGFQ is Not 1 Thing – a series of Risks & Opportunities

Environmental

- · Air quality output
- Biodiversity impacts
- · Carbon footprint
- · Climate change resiliency
- Energy consumption
- Environmental policy
- Fresh water use
- · Ground water depletion
- Impacts on the cryosphere
- · Impacts on the food supply
- Land use
- Natural resource management
- Ocean productivity and acidification
- Regulatory & legal risks
- Supply chain management
- Vulnerability to extreme weather
- Waste & hazardous materials
 management

Social

- Access and affordability of product or service
- Consumer rights
- Corporate philanthropy
- Customer relations
- Data security and customer privacy
- · Diversity issues
- Employee engagement
- Fair disclosure and labelling
- Health and safety of communities
- Human capital management
- Human rights
- Labour relations
- Product quality and safety
- Responsible R&D
- Stakeholder and community relations
- Supply chain management

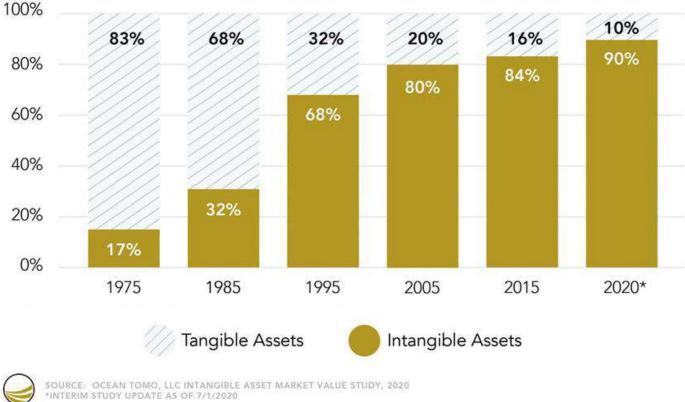
Governance

- · Accounting and audit process
- · Board composition
- Business ethics
- Compliance
- Executive remuneration
- Lobbying and political contributions
- Ownership structure
- Reporting and disclosure
- Shareholder rights
- Succession planning
- Transparency
- Voting procedures

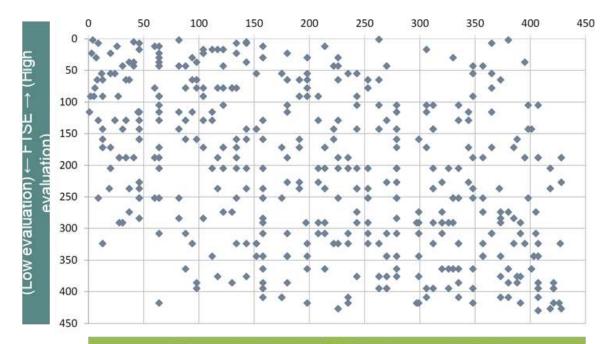
Additional considerations for funds...

- Advisory committee powers and composition
- Client alignment & fee structure
- Fund governance

COMPONENTS of S&P 500 MARKET VALUE



Comparison of ESG evaluation by FTSE and MSCI



(High evaluation) ← MSCI → (Low evaluation)

Process







Sustainable Investing - Public Equity Example

Example: Parnassus Endeavor Fund since inception in 2005, +12.87% per year vs S&P 500 + 9.92%, Parnassus assets under management have grown > 25x last 10+ years frequent outperformance over past 1,3,5 and 10 years

Objective: The Parnassus Endeavor Fund invests in U.S. large cap w/ long-term competitive advantages, quality management teams and a primary focus on outstanding workplaces (formerly Parnassus Workplace Fund)

Was chosen in 2016 by our Brown class to be the partner of the Endowment (also Mirova Sustainable Growth)



Brown Class Portfolio 2016: +272% vs +120% S&P 500 versus almost all active fund managers including Parnassus Endeavor our partner at the Brown Endowment

(MMM, GOOG, AMAT, XYL, HASI)

(Value first investors considering ESG with Expertise largely outperform benchmarks -not well understood)

Techniques for evaluating companies is also a work in progress – process again (transformation)



More GSS Bonds and RE Project Finance, and more creativity (Nature/Social Impact)

More Confidence and Integrity in Sustainable Finance (transparency and verification)

More \$ overall for the Low Carbon Transition ***

More Applied Systems Thinking (always a focus)

Accelerated transformation also need across asset classes including infrastructure, PE/VC, and regions, requiring unique focuses, priorities and strategies for Southeast Asia, South Asia, Africa, the Americas, learning from EU/Western best practice, but adopting for local reality

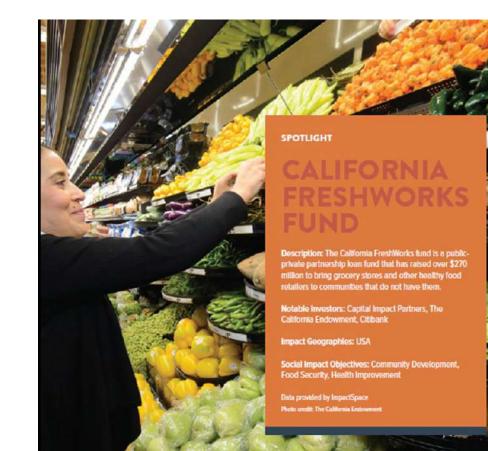


Norges Bank Climate Action Plan (AOS)

Goals and Targets combined with actions and policies (China)

Impact Metrics that Matter (GIIN)

Impact Investing Example



The Value of Everything - how to reach a majority?

Bonds \$100tn	Cash \$75tn	Shares \$67tn		
Property ^{\$95tn}	State owned enterprises \$35tn	Derivatives \$30tn		
	Infrastructure \$30tn	Real assets \$10tn		

What should our goals be? Five Pillars of Focus

- 1. A Majority of Investment Considering Sustainability or Impact as Primary (investment process)
- 2. Scale up Corporate Transformation with better strategies (corporate process/Signal-VDM)
- 3. Maximize Innovation (Climate Tech VC)
- 4. Establish an agreed global consensus to act (people/consumption/votes)
- 5. Policy is helpful, but requires this consensus to be relied upon

What Academic Ecosystems can do

Climate Tech VC

InvestNYC/The GIIN - building out research for investors - establishing better frameworks

ESG+/Signal Climate Analytics/Real Impact Tracker - tracking corporate and investor

transformation and performance analytics

Jobs at financial, corporate and other institutions, and other Networking opportunities/Building communities of Practice/Access to Sr. Speakers and Asset Owners, cutting edge technology and thinking

Collaborative Environments, including for bringing corporates and investors together

Climate Tech VC by Deals

Over the past 2 years, we've tracked 1,140 venture-backed climate tech companies across 7 industries and 62 sectors

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Count of venture-backed climate companies tracked by CTVC since Q3 2020

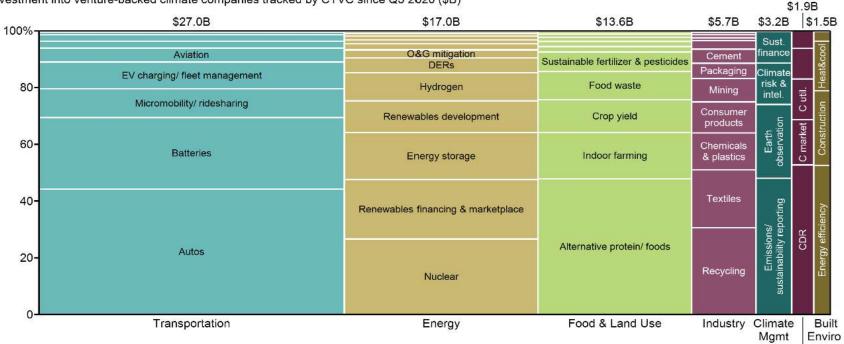
1000/	274	234	225	161	124	75	47
100%	Farming equipment Nature restoration Farm operations management Water	Geothermal Low-carbon fuels Wind Nuclear	Trucking Maritime	Wastewater Mining	Sustainable finance	Building materials Constr- uction	Carbon utiliz-
80-	Livestock	Solar	Aviation	Manufacturing		uouon	ation
	Sustainable fertilizer & pesticides	Renewables financing & marketplace	Autos	Cement/ concrete	Climate risk & intelligence	Heating & cooling	
	Indoor farming	marketplace	Autos	Sustainable packaging			
60 - 40-		Grid management	Batteries Micromobility/ ridesharing	Textiles Chemicals & plastics			
	Food waste	DERs			Earth observation	5	
	Crop yield	Hydrogen				Energy efficiency	CDR
20-				Consumer products	Emissions/		
		Renewables development					
Alternative protein/ foods	Energy storage	EV charging/ fleet management	Recycling	sustainability reporting			
0	Food & Land Use	Energy	Transportation	Industry	Climate Mgmt E	Built nvironme	Carbon ent

Climate Tech VC by \$

We've tracked \$70B in total climate tech venture funding over the past two years -82% of which was invested into Transportation, Energy, Food & Land Use companies

CT VC

Investment into venture-backed climate companies tracked by CTVC since Q3 2020 (\$B)



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InvestNYC: Solving the SDGs with Finance





Finally, what we need are intentional transitions

- 1. Country specific roadmaps
- 2. Pathway to Scale, along with adequate Case Studies that can be scaled for purpose
- 3. With a Global Consensus formed for Action

ESG Data (backwards, Red flags), Commitments (vague or specific/targets), Standards vs.

Transformation (the potential "Materiality" Trap), tracking the real transition across the five main pillars of focus

Finally on Transitions

Discussion point for Q&A:

Is it okay with all of this in mind to have a primary focus at COP 27/Egypt on voluntary country commitments?

Conclusion

- We certainly welcome policy and country level commitments, especially useful in China/India to get things going, however this has been insufficient, so more is needed (3/5/7/10).
- Accelerated corporate and investment strategy implementation, combined with maximized innovation as possible in parallel, while building a global consensus to act, so that policy can be enabled and stick seems to be required.
- ESG isn't as simple as it might seem, and it is very much now a competitiveness issue.