Divestment or Investment: An Economic Framework for Steering Green Innovation

Jacquelyn Pless
MIT Sloan School of Management

NBER Entrepreneurship and Innovation Policy and the Economy Conference
May 3, 2022

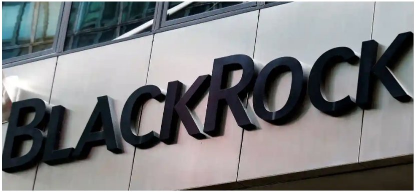
Innovation will be critical for addressing climate change

International Energy Agency

Net zero by 2050 requires huge leaps in clean energy innovation

Reaching net zero by 2050 requires further rapid deployment of available technologies as well as widespread use of technologies that are not on the market yet. Major

Climate-friendly investment commitments have been taking off



Goldman Sachs

Goldman Sachs Publishes Decarbonization Targets in 2021 TCFD Report

citi $100 Billion Environmental Finance Goal

Not necessarily committing to divestment from fossil

"We expect to remain long-term investors in carbon-intensive sectors. **We do not pursue broad divestment** from sectors and industries as a policy."
– *BlackRock*

"For companies like BlackRock, investing in a carbon-free future **must mean the immediate divestment** from coal, oil, and gas."
– *Greenpeace*

Divestment is when investors get rid of stocks, bonds, or investment funds that impose social and environmental costs to society. Refers to not just "dirty" energy companies. Includes those that use fossil through lifecycle.

The divestment movement

The effects of divestment are unclear

TIME

IDEAS

Don’t Sell Your Fossil-Fuel Stock If You Want to Make a Climate-Change Difference in 2022

Chris James | Jan. 11, 2022

Forbes

FINTECH

Investing – Rather Than Divesting – For A Greener Future

Sarah Keohane Williamson Contributor

I write about long-term, global capital markets as CEO of FCLTGlobal.

Follow

Nov 1, 2021, 12:53pm EDT

Today's talk

Is divestment or continued investment more likely to drive green innovation (and quickly enough)?

- For today's purposes, investment is continued investment in dirty-ish
- Not to suggest replacing much-needed investment in cleantech firms
- Consider "quickly enough" to align with Paris Agreement

- **Scope:**
  - Potential of, and limitations to, divestment driving green innovation
  - Not considering policy or public investments
  - Explore how investors can make investments that align with their goals

Will conclude that...

Divestment is likely not going to drive green innovation (at least not quickly enough) and may even be counterproductive.

Will conclude that...

Divestment is likely not going to drive green innovation (at least not quickly enough) and may even be counterproductive.

If done in the "right" way, continued investment in dirty firms might actually help.

Investing in dirty in the "right" way will require a number of things that ultimately boil down to active shareholder engagement.

Will conclude that...

Divestment is likely not going to drive green innovation (at least not quickly enough) and may even be counterproductive.

If done in the "right" way, continued investment in dirty firms might actually help.

Investing in dirty in the "right" way will require a number of things that ultimately boil down to active shareholder engagement.

Understanding the greenness of an organization to inform decision-making and how to steer it requires improvement on current approaches.

Divestment vs. Investment for Driving Green Innovation

What can investors do to address climate change?

- Nothing. Assume future = past.
- Walk away from dirty firms (divestment)
- Continue investing in (currently) dirty-ish firms but incorporate expectations about climate change risk (investment)
  - Similarly, continue investing in dirty-ish firms working towards reducing environmental impact and innovating (invest)
- Invest in firms specifically developing clean tech (investment)

What can investors do to address climate change?

- Nothing. Assume future = past.
- Walk away from dirty firms (divestment)
- Continue investing in (currently) dirty-ish firms but incorporate expectations about climate change risk (investment)
  - Similarly, continue investing in dirty-ish firms working towards reducing environmental impact and innovating (invest)
- Invest in firms specifically developing clean tech (investment)

How could divestment induce green innovation?

Increase cost of capital for dirty firms

- When selling, lower price to attract buyers.
- Then more expensive to finance future investments.
- **Increase in the cost of capital reduces investment opportunities.**

Increase cost of capital for dirty firms

- When selling, lower price to attract buyers.
- Then more expensive to finance future investments.
- **Increase in the cost of capital reduces investment opportunities.**
- If buy shares of clean firms, demand increases their price and lowers their cost of capital. More investment opportunities.
- **Eventually dirty will disappear**

Increase cost of capital for dirty firms

- When selling, lower price to attract buyers.
- Then more expensive to finance future investments.
- **Increase in the cost of capital reduces investment opportunities.**
- If buy shares of clean firms, demand increases their price and lowers their cost of capital. More investment opportunities.
- **Eventually dirty will disappear**

Two conditions for this to have a material impact:

- Large enough change in cost of capital to affect investment opportunity set.
- Must happen quickly (for environmental impact)

No evidence of meaningful effects so far

The Impact of Impact Investing*

Jonathan B. Berk
Stanford University and NBER

Jules H. van Binsbergen
University of Pennsylvania and NBER

October 25, 2021

$$MRP \times \left(\frac{\text{Socially Conscious Investor Wealth}}{\text{Rest of Investor Wealth}}\right) \times f \times (1-\rho^2),$$

Function of socially conscious capital, targeted firms, and correlation between targeted and rest of the stock market.

Theory finding is an increase of 0.35 basis points. Tiny.

Empirically find no effect on cost of capital when firms are included in leading socially conscious US index.

Impact investors would need to make up >80% of all investable wealth to increase CoC by more than 1%.

Could continued public pressure change this? Maybe. Consider farm-to-table movement.

Alice Waters, Chez Panisse, Berkeley, CA.

1950s: packaged goods thrive given food processing and storage innovation.

1962: Rachel Carson publishes *Silent Spring*

1960s-70s: hippy culture. Consumer demand begins to shift toward natural options.

1971: Waters opens legendary Chez Panisse

Today: "plant-based" and "vegetable-forward" have entered our lexicon.

Could continued public pressure change this? Maybe. Consider farm-to-table movement.

Alice Waters, Chez Panisse, Berkeley, CA.

1950s: packaged goods thrive given food processing and storage innovation.

1962: Rachel Carson publishes *Silent Spring*

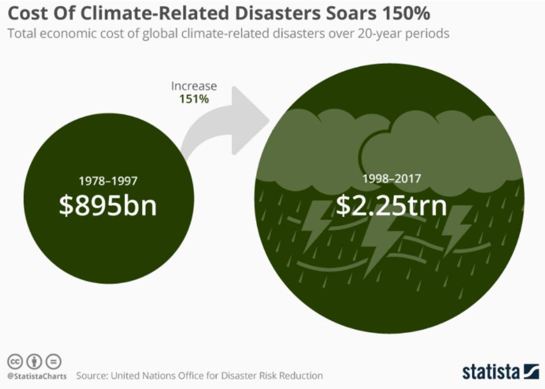
1960s-70s: hippy culture. Consumer demand begins to shift toward natural options.

1971: Waters opens legendary Chez Panisse

Today: "plant-based" and "vegetable-forward" have entered our lexicon.

Need substantial reduction in demand, and we don't have 70 years to wait.

And it’s unclear whether public pressure main driver so far



Care about markets at the end of the day. Public pressure has stigmatized fossil investments.

“*Our investment conviction is that sustainability and climate-integrated portfolios can provide better risk-adjusted returns*” – Blackrock

Why continue to invest?

Have a seat at the table to help steer.

- **Divestment means no longer having a seat at the table**
  - Having control rights allows you to engage with management and influence the organization's decision-making

Have a seat at the table to help steer.

- **Divestment means no longer having a seat at the table**
    - Having control rights allows you to engage with management and influence the organization's decision-making
- **For every seller there is a buyer**
    - Transfer of shareholder rights
    - Likely from those that care about social and environmental costs to those that don't
    - New owners less likely to exercise control rights to steer the organization towards sustainable practices and innovation

Voice (engagement) as opposed to exit (divestment or boycott) achieves the socially optimal outcome if majority of investors are even slightly socially responsible.

Exit only more effective and achieves social optimum if majority are purely selfish.

Exit can even reduce social welfare.

Exit vs. Voice

Eleonora Broccardo

Università di Trento

Oliver Hart

Harvard University

Luigi Zingales*

University of Chicago

First Version, July 2020, revised, April 2022

How do investors effectively target their investments?

Evaluating enviro impact and understanding org practices that work

Need to **evaluate** how organizations are performing on **environmental impact**.

How? Lots of potential for greenwashing.

And need to know what **strategies and management practices** lead to desired outcomes.

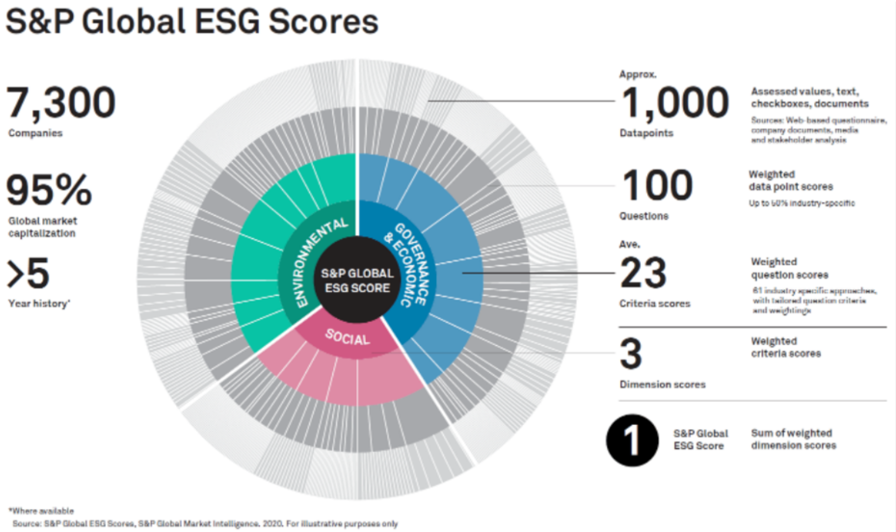
New SEC disclosure rules

Public companies to **disclose climate-related risks** that will have a material impact

Report greenhouse gas emissions

Climate-related **financial metrics** in audited financial statements

What's in the ESG indicator black box?



Why ESG indicators (as constructed today) are not very helpful

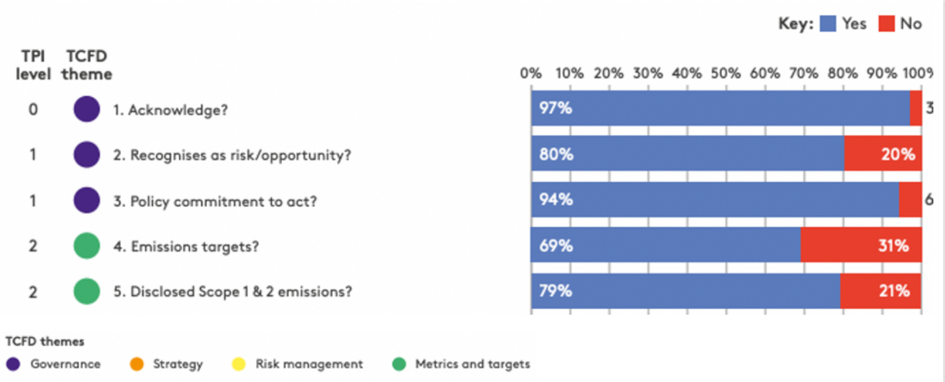
- Composed of more than 100 questions capturing different behavior and outcomes of interest
- The E, S, and G generally aim to address different issues
- Weighted arbitrarily
- Many of them and they're inconsistent

Unpacking ESG indicators

TPI assesses largest companies across the dirtiest sectors (2020 example):

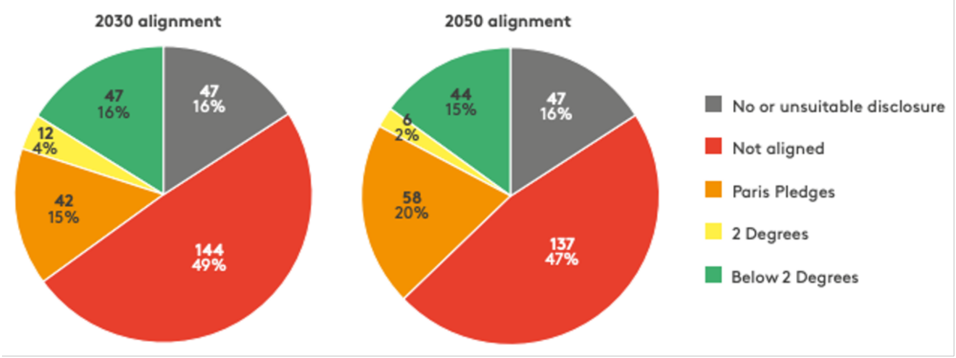
– About 400 companies representing 16% of global market value

– Energy, industrial and materials, transport, and consumer goods and services



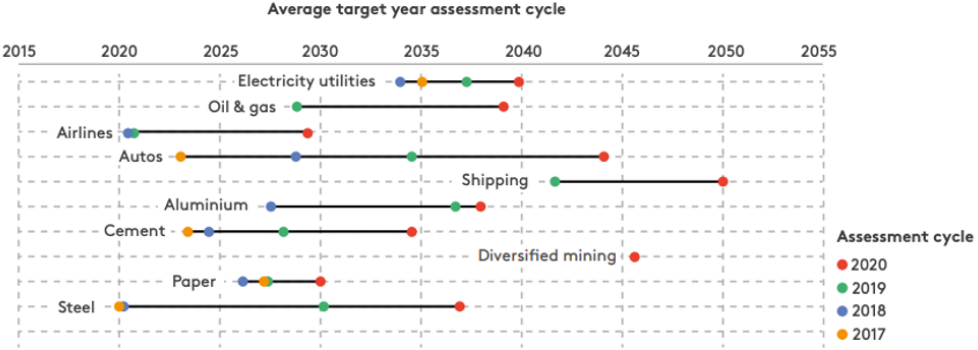
Source: Transition Pathways Initiative

Yet only 17% of companies assessed are aligned with <=2C°



Source: Transition Pathways Initiative

Companies' stated timelines are different and change



Source: Transition Pathways Initiative

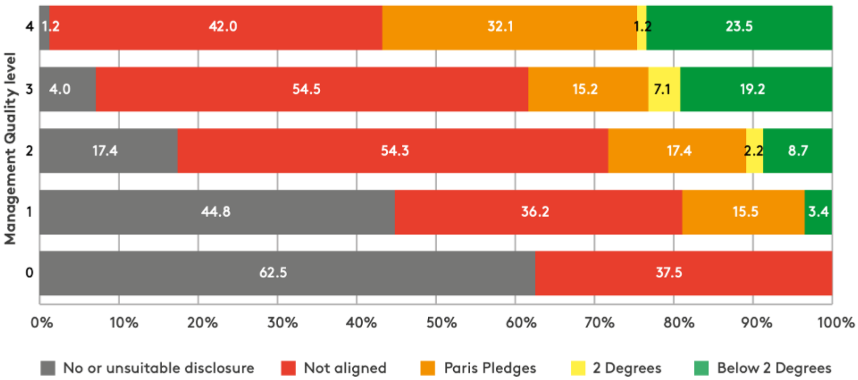
Poor performance on governance and strategy

Source: Transition Pathways Initiative

Management quality and Paris Agreement alignment

Level 0: Unaware/perceived as not an issue
Level 1: Aware and has a policy
Level 2: Building capacity (targets, disclosure)

Level 3: Integrating into operational decision-making
Level 4: Strategic assessment (risk and opps in strategy, tied to exec remuneration)



Source: Transition Pathways Initiative

Concluding thoughts

- Although **divestment** has helped deligitimize fossil fuel companies, it is **likely not the most effective strategy** for driving green innovation
  - Would need to be massive to meaningfully affect cost of capital

- **Active shareholder engagement and working with management** could help steer sustainability and innovation efforts
  - Note that this refers to investment in dirty-ish companies.
  - Need continued investment in cleantech (and engagement with management likely beneficial there too).

- **Still have lots to learn about what management practices foster innovation and improve environmental impact**