

Recent Developments in Climate Change and Corporate Finance

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- Four out of five had entire sessions dedicated to it.

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 - 3 Society for Financial Studies Cavalcade North America 2021
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 - 5 NBER Corporate Finance Summer Institute 2021
- All told, there ended up being twenty-seven related papers from these conferences alone.

Terminology

- ESG = “Environmental, Social, and Governance”
- E&S = “Environmental and Social”
- SRI = “Socially Responsible Investing”
- CSR = “Corporate Social Responsibility”
- Impact investing

- “Green investors” or “social investors” are investors who care about monetary and non-monetary payoffs.
- “Traditional investors” or “commercial investors” are investors who only care about monetary payoffs.

- CEI = “Carbon Emission Intensity”
- GHG = “Greenhouse Gas”

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- Possible change in the “social contract” for firms.
 - ▶ Friedman (1970): “The social responsibility of business is to increase its profits.”
 - ▶ Business Roundtable (2019): The purpose of a corporation is to promote “an economy that serves all Americans.”

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Major Questions

- How to measure a firm's social impact?
- How should we characterize investors' preferences about firm ethical behavior?
- How do investors with heterogeneous preferences affect asset prices and capital allocation?
- How costly is ESG investing relative to traditional investing?
- What does ESG investing look like outside of public equity?
- What are the real effects of ESG investing?

How to measure a firm's ESG impacts?

There's a lot of ESG rating agencies with ad hoc methodology (weighted average of emissions, board diversity, etc.) and conflicting results.

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- Sautner et al (2021) measure a firm's climate change exposures using text analysis of earnings conference calls.

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- Sautner et al (2021) measure a firm's climate change exposures using text analysis of earnings conference calls.
- Berg et al (2021) refine ESG ratings using classical errors-in-variables approach with ESG ratings from other agencies as instruments. OLS of stock prices on ESG ratings are biased downward by 60% compared to 2SLS (attenuation bias). Average signal-to-noise is 60%.

How to measure a firm's ESG impacts? (con't)

What are the effects of more detailed mandatory ESG disclosures?

- Kreuger et al (2021) find that mandatory ESG reporting improves firm's information environment (analysts' earnings forecasts become more accurate and less dispersed), negative ESG incidents become less likely, and stock price crash risk declines.

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- Goldstein et al (2021) show that an improvement in the quality of non-monetary information can reduce overall price informativeness for traditional investors and increase firm's cost of capital.

How should we characterize investors' preferences about firm ethical behavior?

A couple paper use experiments to learn about how investors' "moral" preferences about firm behavior.

- Bonnefon et al (2021) find participants are willing to pay \$0.70 more for buying a share in a firm that gives one more dollar per share to charities. Symmetrically, a firm that makes profits by exercising a negative externality of \$1 on a charity is valued \$0.90 less. Scaling of non-pecuniary preferences is linear.

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- Heeb et al (2021) find that investors have a higher WTP for a sustainable investment, but it does not grow with the social impact of the investment.
- Colonnelli and Gormsen (2021) find evidence of "big business discontent" using perceptions of ESG impact. They find that higher discontent leads to lower support for corporate bailouts.

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 - ▶ Positive signal about non-monetary payoff → increase green investor demand → traditional investors cut back demand because they infer from the price a worse realization of the monetary payoff.

How do investors with heterogeneous preferences affect capital allocation?

- Green and Roth (2020) argue against “value-aligned” investment strategies for green investors:

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- Landier (2021) argue that a socially responsible fund should prioritize investments in companies with acute negative externalities and facing strong capital search friction that commit to capping their emissions.

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- Pastor et al (2021) construct a “green factor”, a return spread between environmentally friendly and unfriendly stocks. They show that U.S. green stocks outperformed peers as climate concerns strengthened, but their positive performance would disappear without climate-concern shocks.

What does ESG investing look like outside of public equity?

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- Ivanov et al (2021) estimate how CEI affect bank loans. High-emission firms face shorter loan maturities, lower access to permanent forms of bank financing, higher interest rates, and higher

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- Krueger (2021) find that firm's sustainability policies reduce labor costs and enable firms to recruit and retain high skilled workers. Workers earn about 10% lower wages in firms that operate in more sustainable sectors.

What are the real effects of ESG investing? (con't)

- Hong et al (2021) build a DSGE model to evaluate the welfare consequences of mandates to invest in sustainable firms. They argue that existing mandates are insufficient to achieve first best.

Other Papers

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- **Political ideology:** Kaviani et al (2021) find that the CSR rating of firms declined significantly after increased exposure to conservative media. Change in local ideology drives the results.

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