The fading green glow in the stock market. Evidence from IPOs and asset prices in the Nordics.

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Abstract

After an initial optimism for the role of the stock market in the transition to the Green Economy following the Paris Climate Accords, with corresponding focus on sustainability and ESG issues by institutional investors, the ESG agenda has had some recent knocks. The war in Ukraine and the "war on woke" by the US Trump administration are the most obvious examples. In this paper we investigate these issues. We use data from the Nordic Stock Markets. We first investigate stock market listings (IPOs), and find that high quality ESG (green) firms are issued at better terms. However, coinciding with the onset of the Ukrainian war, green IPOs dry up. To investigate whether this can be due to less willingness to fund green investments, we look at the cost of capital for existing firms. Here we find that in the period from 2018 to the onset of the war in Ukraine, green firms have lower cost of capital, but this subsidy disappears immediately after the start of the war.

Research issue

Stock markets key to financing the circular economy

- Financing large green investments (e.g. Renewable energy generation).
- Financing green innovations – IPO and subsequent SEO's finance the scaling up of startups – particularly green innovations.

Question: Is "green" investment different?

- Do investor demand different returns depending on ESG properties?
  - Is there an additional "green glow"?
    → investors demand less return from green projects (subsidized financing)
  - Reluctance to finance "brown" projects (exclusions)?
    → brown projects have to offer higher returns?

Our angle on question: Is the terms of listing on an exchange (IPO) also affected by ESG issues?

Why should ESG affect firms cost of capital?

- The pecuniary view.
  - Stock prices do not fully reflect future ESG consequences (e.g. climate).
  - Short-termism (Stein, 1989)

  → Higher long term returns for better ESG.
- The non-pecuniary view.
  Investors assumed to put extra utility on "good ESG" (e.g. sustainable) firms.
  - Equilibrium models – tradeoff ESG/Cost of Capital
    – Pástor, Stambaugh, and Taylor (2021)
    Pedersen, Fitzgibbons, and Pomorski (2021)

  → "Good" ESG can sustain lower returns.

Empirical research

- Favor the non-pecuniary view (negative green return premium)

Initial Public Offers (IPOs)

Listing on an exchange: Cost of easily accessing equity capital (SEOs)
Academic focus on costs of listing.

- What can explain *underpricing*? (IPO price set too low, excess demand).

Also issues related to how exchange listing works, spurred by worldwide decline in listed firms. (**doidge-karolyi-stulz-2013-jfe-us-left-behind**)

- Intermediaries: Fiddling with form of IPO
  - Auction IPOs, Direct Listings, SPACs
- Exchanges: Create menu of market places, differing on
  - Direct cost of being listed, Listing requirements, Regulation

Why should ESG affect IPO terms?

Argument from asset pricing discussion:
Cost of capital depend on ESG
Transfer to IPO setting:

- Cost of capital → issue price in IPO.
- Uncertainty about cost of capital
  → Underpricing (issue price too low)
  → Better liquidity (more trading necessary to establish efficient price).
- Alternatively: Rationing
- Cost of capital difference
  → Post-IPO return difference.

Test predictions on sample of Nordic IPOs.

Hypotheses to be tested

Is ESG linked to

1. Underpricing
2. first day trading volume?

ESG. How to measure?

ESG – Environment, Social & Governance concerns
Concentrate on E: Environment, Sustainability, Climate, etc.

- ESG proxy 1. Manual grouping into green(sustainable, etc) / neutral / brown(oil& gas, etc) based on main business area of company
- ESG proxy 2. Using prospectus (IPO issue document). Text analysis – To what degree is the nonstandard parts of the prospectus (business plan) concerned with environmental issues?

Nordic Stock Markets

Analysis start in 2018 (Post-Paris)
Stocks list either on main board, or alternative markets with lower requirements.

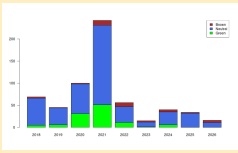
	Main Mkt	Growth mkt
Denmark	9	47
Finland	17	45
Norway	44	156
Sweden	59	202
All	131	486

Distinguish

- IPO – raising additional capital
- Pure listing – no additional capital

Sample by greenness

1. **Brown**.
   Oil and Gas.
2. **Neutral**.
   Rest
3. **Green**.
   Renewable energy.
   Circular Economy.
   Sustainability.



Asking whether ESG matters for underpricing

	Green	Neutral	Brown
Denmark	5.9	3.3	
Finland	-5.6	4.9	
Iceland		5.2	22.8
Norway	-3.9	-0.2	-1.3
Sweden	-4.8	2.5	5.4
Baltics	9.3	7.6	2.6
All	-3.1	2.6	-0.1

Regression analysis confirms: Green stocks different.
Results consistent with rationing of green stocks in IPO.

Fading Green effect in 2022?

Green IPOs taper off in 2022.
Possibility: Cost of capital subsidy fall.
Investigate using non-IPO crossection.
Asset pricing model: $E[r_i^e] = \beta_i E[r_m^e] + \gamma ESG_i$
Time varying estimates of γ (moving average)

Something happened in 2022...

Concluding

Our question: How does ESG affect IPOs?
Answer: More sustainable firms have lower costs of capital and higher price at issue.
IPOs dry out post-Ukraine war.
Possibility: cost of capital subsidy for green companies fallen.
Confirmed using crossection: Pricing of ESG disappear post-Ukraine war.

Pástor, L., Stambaugh, R. F., & Taylor, L. A. (2021).Sustainable investing in equilibrium. *Journal of Financial Economics*, *142*(2), 550–571. https://doi.org/10.1016/j.jfineco.2020.12.011

Pedersen, L. H., Fitzgibbons, S., & Pomorski, L. (2021).Responsible investing: The ESG-efficient frontier. *Journal of Financial Economics*, *142*(2), 572–597. https://doi.org/10.1016/j.jfineco.2020.11.001

Stein, J. (1989).Overreactions in the options market. *Journal of Finance*, *44*(4), 1011–23. https://doi.org/10.1111/j.1540-6261.1989.tb02635.x