Discussion of “Leveling Up Your Green Mojo: The Benefits of Beneficent Investment”
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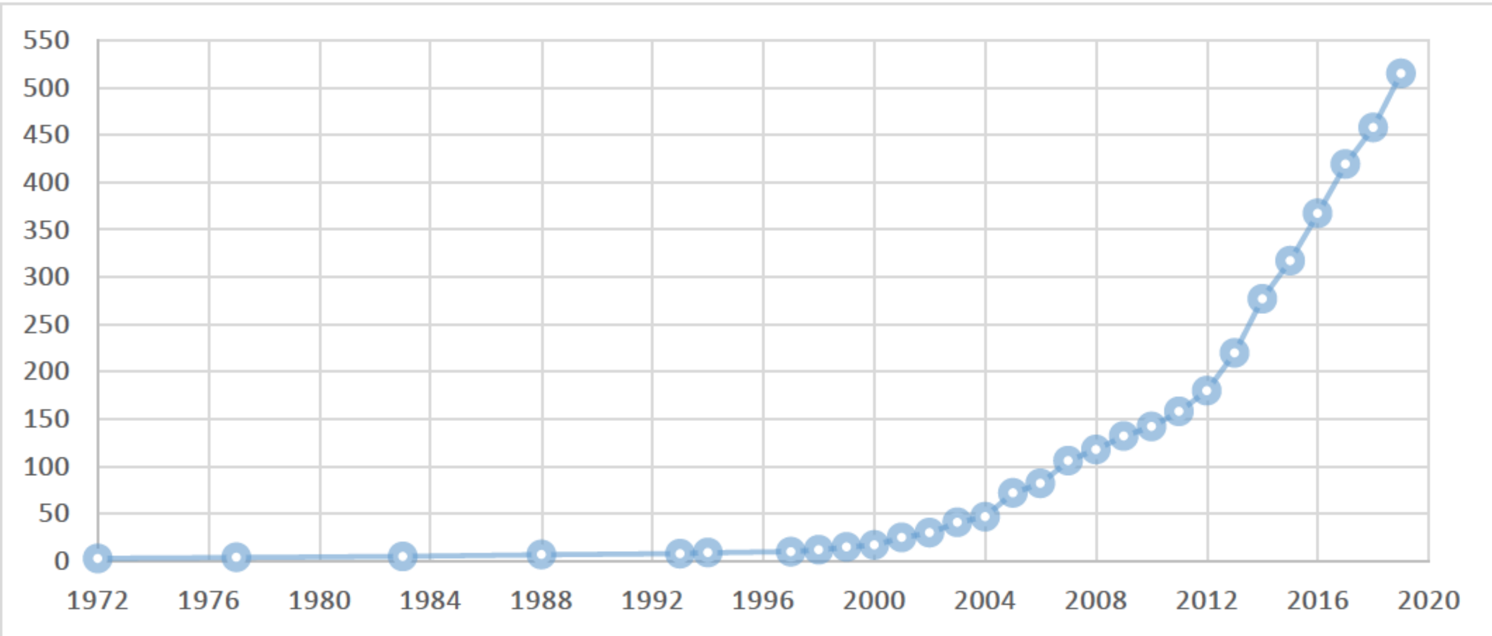
Importance of regulatory risks

- Regulatory risk is one of the most important risks that companies face and this has become more enhanced with the increased scrutiny of firms' contributions to climate change.
- Uncertainty about future regulation presents significant costs to firms as well as their investors (Pindyck, 1993)
- Authors have cleverly centered on a regulatory change that allows for better identification of firms' responses to such changes.

Regulatory risk with regards to E, S, and G issues

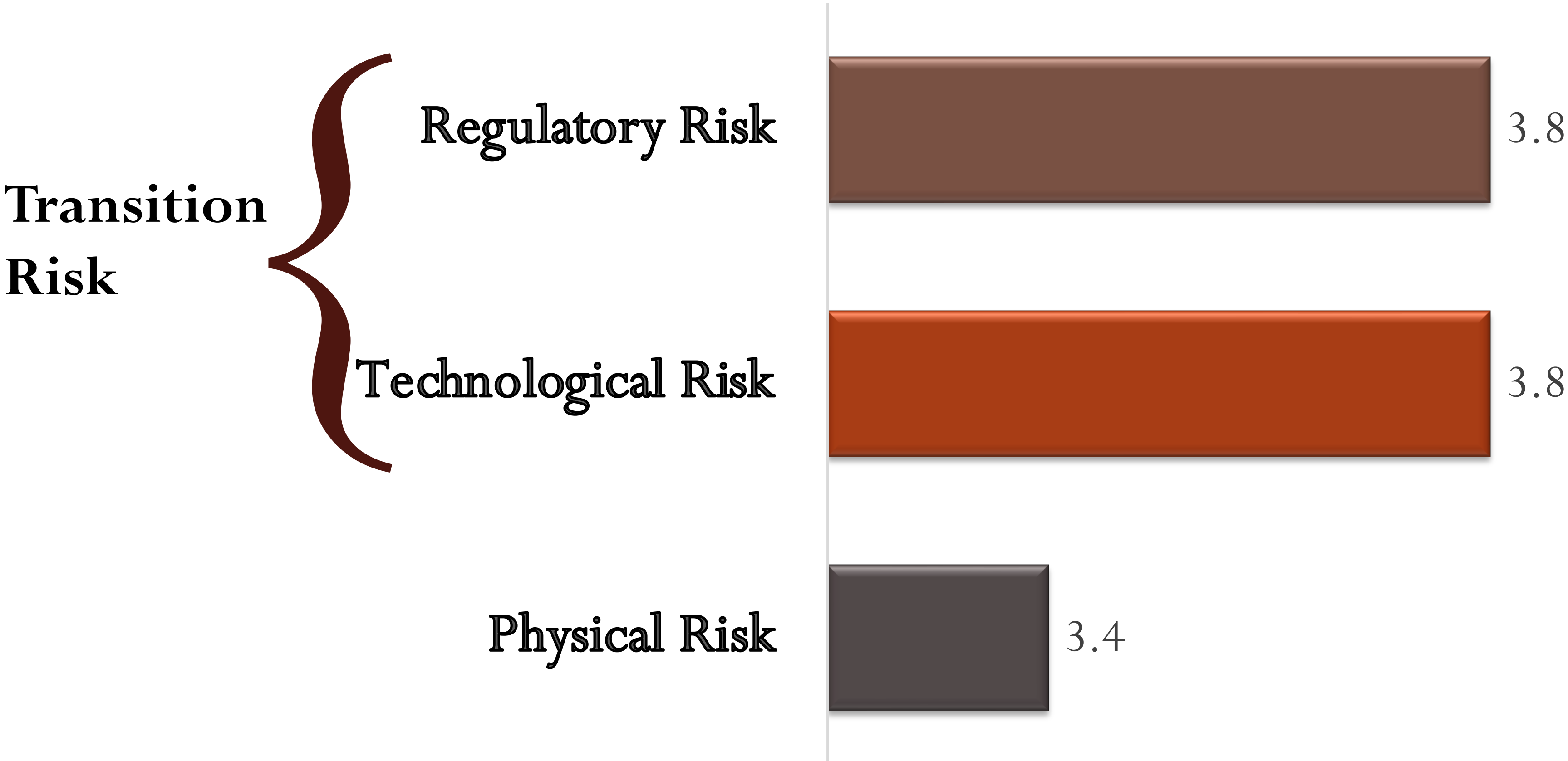
- Risk that new (costly) regulations will arise.

NUMBER OF RESPONSIBLE INVESTMENT-RELATED POLICY INSTRUMENTS OVER TIME ACROSS THE WORLD'S 50 LARGEST ECONOMIES:



Example: Importance of regulatory climate risks to institutional investors

Rating the financial materiality of climate risk from 1 to 5:



Krueger, Sautner and Starks, RFS 2020

Evidence on importance of regulatory risk

- Environmental regulatory costs can have significant effects on firms' operating costs and cash flows
  - Karpoff, Lott, and Wehrly (2005).
- Regulatory climate risks increase tail risks in stock prices.
  - Ilhan, Sautner, and Vilkov (2019)
- Poor environmental performance is associated with lower credit ratings and higher bond yield spreads, particularly for firms located in states with stricter environmental regulations.
  - Seltzer, Starks and Zhu (2022)

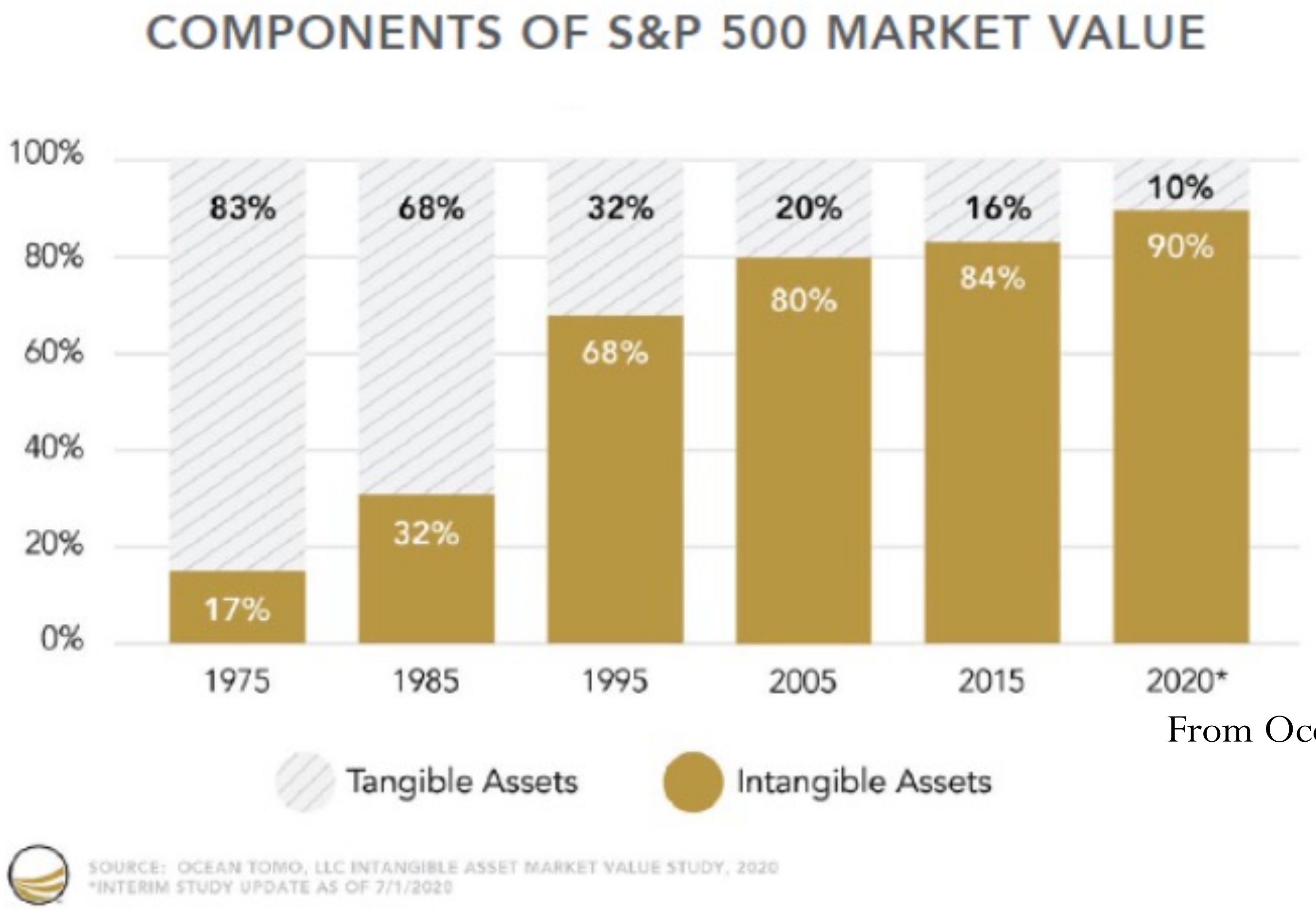
Beyond regulatory risk, what about reputation risk?

- Firms may also need to consider their reputation risk with regard to environmental issues.

- As environmental issues have become more important over time, have the reputational risks associated with environmental issues increased?

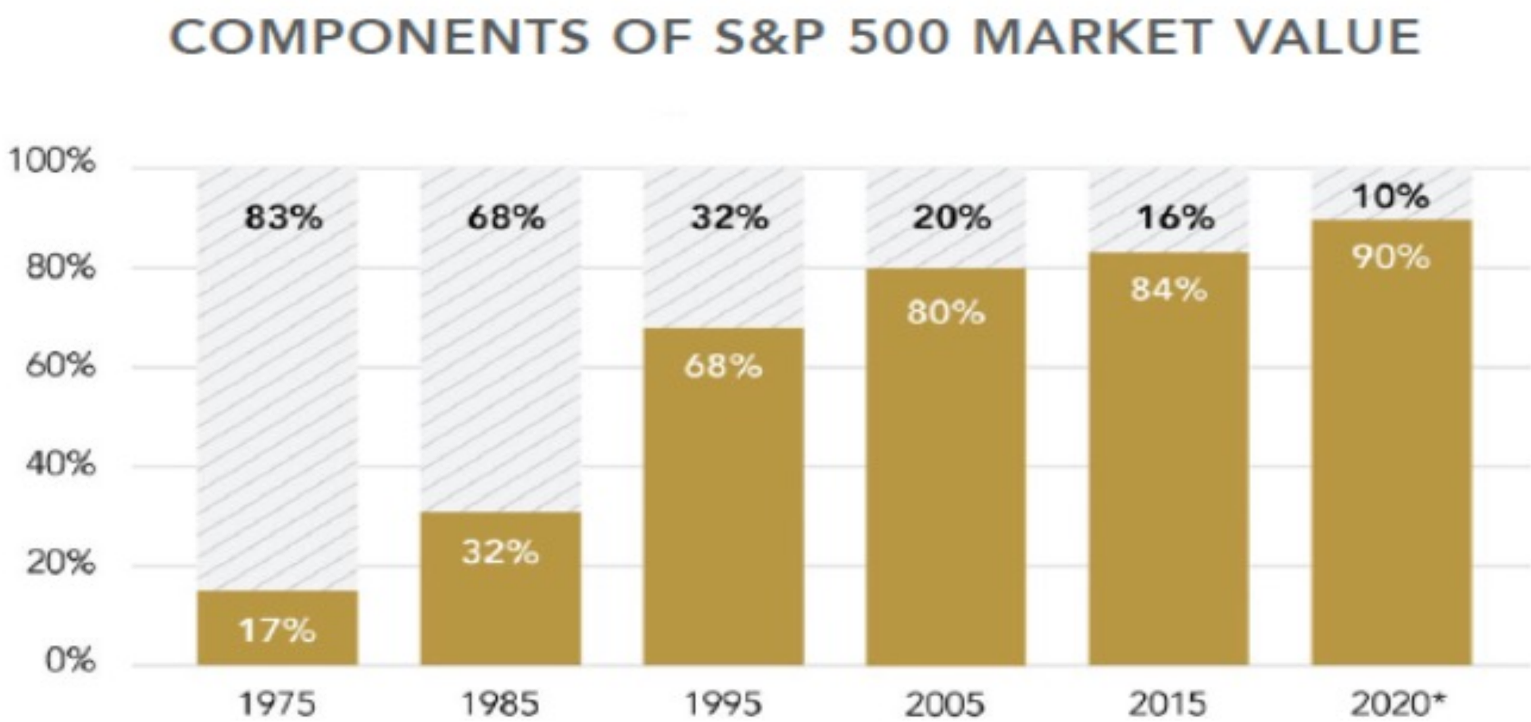
- Reputation risk as reflected in degree of intangible assets

Intangible assets in U.S. stock market



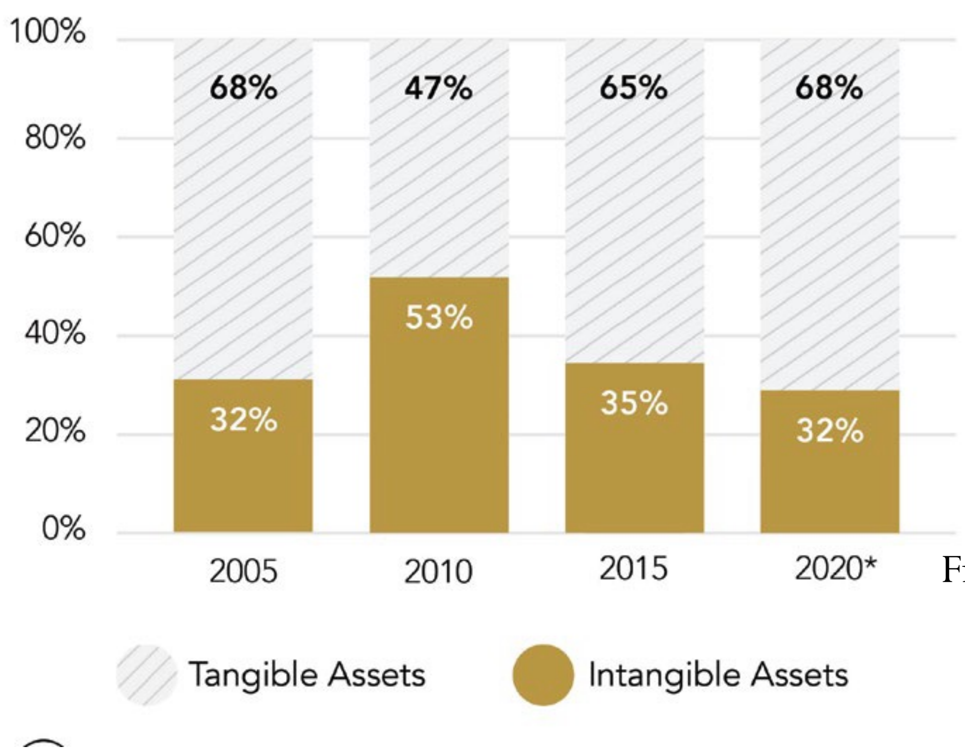
From Ocean Tomo Report

Intangible assets in U.S. stock market



Top 5 companies in S&P 500 according to market values	1975	1985	1995	2005	2015	2020*
	IBM	IBM	GE	GE		Apple
	Exxon	Exxon	Exxon	Exxon		Microsoft
	P&G	GE	Coke	Microsoft		Amazon
	GE	Schlbgr	Altria	Citigroup		Alphabet
	3M	Chevron	Walmart	Walmart		Facebook

Intangible assets in Chinese stock market



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Examine differences across sectors with more or less intangible assets

Questions about the empirical methodology and results

Geographic location

Figure 1: The Distribution of MCEP Cities

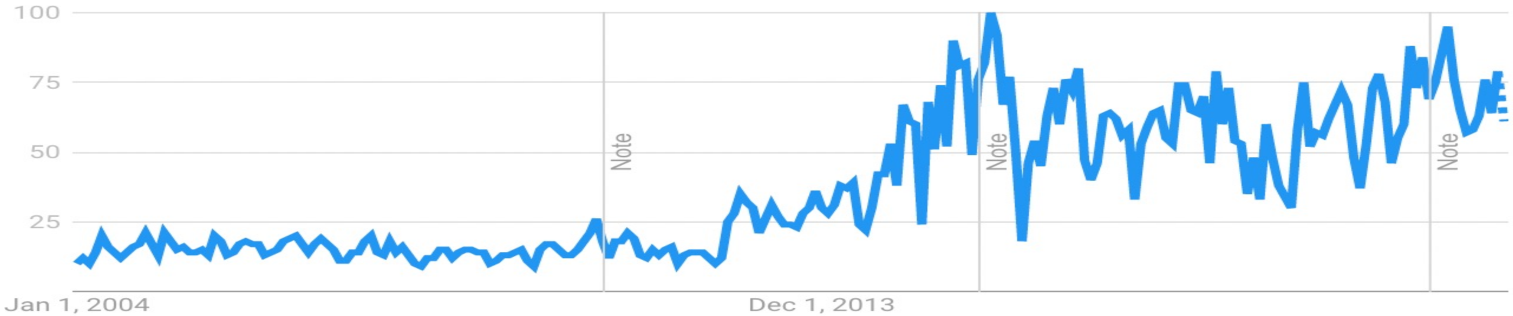
This figure shows the distribution of major cities for environmental protection across mainland China.

How important is geographic location of the firm?

Are some locales more sensitive to the regulatory risks and the benefits than others?

Different time frames?
Changes in interest in China

Google Trends Searches of Topic: Environmental Social and Corporate Governance



Google Trends Searches of Term: Environmental

How do firms change over time beyond the MCEP designation?

- Is there a general trend?

- After the 2009 Copenhagen Accord, state-owned firms around the world improved their environmental performance more than other firms (Hsu, Liang, and Matos, 2018)

- What about in China? Are the changes after 2010 related to the 2009 Copenhagen Accord?

Downside risks?

- Are the investments lowering the firms' downside risks?
  - Hoepner, Oikonomou, Sautner, Starks, and Zhou, (2021) find that engagement on environmental issues lower a firm's downside risk
  - The authors suggest a different mechanism that affects firms' environmental decisions.

- Does this mechanism affect downside risks?
  - Would it be possible to examine for each firm:
    - Changes in the Lower Partial Moment?
    - Changes in the Value at Risk?

Values versus *value*?

- Do the investments that are defined as beneficent arise because of *values* or *value* considerations?

- The authors discuss this difference, but is it possible to dig into it deeper?

Media attention

- Authors examine media attention towards environmental issues for cities, what about the media attention toward the firms?

- Media attention can influence investors and consumers

Consumer sentiment on environmental issues

- According to PWC and EY (Jing Daily),
  - 34% of Chinese consumers "often" or "always" agree that a business's environmental actions influence purchase behavior compared to 29% of U.S. consumers
  - A higher percentage of high-income Chinese consumers are willing to pay between 11 and 30 percent premium for buying an electric vehicle compared to US consumers
- According to IPSOS,
  - 91% of Chinese consumers are willing to seek out products that are healthier and better for the environment; highest of countries sampled, which had an average of 79%

Questions on media attention

- For example, given consumers' sentiment towards environmental issues, how is this reflected in firms' actions?

- What are the difference in incentives for national versus local news media?

Further questions on media attention

- Reverse causality? That is, perhaps more articles mentioning the city because firms had started taking more environmental projects.
- Is there more media exposure for specific projects after the policy? It could serve as a marketing benefit.

Environmental externalities

- Who should deal with market failures to control?
  - Government or Corporations?
    - State-owned enterprises as hypothesized by Hart and Zingales (2017) and Hsu, Liang, and Matos (2018)
- Evidence on state ownership and CSR issues
  - Hsu, Liang, and Matos (2018)
    - State-owned firms are more engaged (primarily energy firms and firms in emerging economies).
  - Boubakri, Guedhami, Kwok and Wang (2019)
    - Privatized firms have more CSR intensity, state-ownership contributes to the nonlinear relationship
  - McGuinness, Vieito and Wang (2017)
    - Nonlinear relationship between state-ownership and CSR in China

The authors can provide more insights in either this paper or a follow-on paper

- Examine state-owned firms versus other firms
  - About 50% of sample firms are state-owned
  - Authors control for state ownership, but I would like to see a more in-depth analysis of the differences across firms' ownership

- This can not only give more insights into the mechanisms but can also provide broader insights into the relationship between state ownership and managerial decisions on firms' environmental activities.

Additional analyses to highlight findings I

- Examine 7 cities removed as MCEPS and the 7 cities that replaced them
- Can we get a greater understanding of the incentives between the firm-specific and non-firm specific projects, which should help us understand better why firms seem to be favoring the non-firm specific ones
- Do non-firm-specific projects get more media attention?
- Are non-firm-specific less costly/risky because many firms invest together?

Additional analyses to highlight findings II

- Can you show a tighter link between the changes in taxes, subsidies and bank loans and the firms' investment decisions?

- Economic significance of difference in environmental spending? 0.867% before MCEP designation and 1.07% after.
  - It is a 23% increase but 1% of revenues? How does this compare to nonenvironmental investments?
  - How much does this vary across companies and geographies?

Additional analysis potentially in a different paper

- Examine the firms' lenders and provide analyses of the financial institutions

  - It is important that we understand how the financial institutions are affected by these regulatory changes.

Conclusions

- Congratulations!
- Important and interesting paper from which we can learn a lot.
- The authors also have the opportunity to go deeper in researching many related issues.