Creditor Control of Environmental Activity: The Role of Liquidation Value

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Introduction

- I study how creditors influence their borrowers' environmental activity.
- Poor environmental practices may cause contamination reducing liquidation value.
- Costly for creditors because:
  (1) Creditors sell assets to recover their claim
  (2) Diminished liquidation value reduces creditors' bargaining power
- **Prediction:** Creditor control leads to better environmental outcomes when contamination has a large adverse effect on liquidation value.
- **Important:** Banks are under pressure to *exit* polluting industry. Removing bank debt from polluting firms' capital structure can have negative consequences on the environment if banks' *voice* improves environmental practices

Empirical Strategy

Bona fide prospective purchaser(BFPP):

- Passed in December 2001, BFPP exempts a purchaser from cleanup liability if the purchaser:
  (1) Does due diligence prior to the purchase
  (2) Takes *reasonable steps* to limit releases after the purchase
- BFPP defense only applies to CERCLA and not RCRA $\implies$ BFPP protects the value of contaminated assets that are only exposed to CERCLA.
- Treated (control) group = Industries *less* (*more*) exposed to RCRA.
- Compare response to BFPP when there is high and low creditor control

Non-violators: The effect of BFPP is ambiguous because for firms acquiring land, BFPP creates incentives to take *reasonable steps* to limit pollution.

Violators: Post BFPP, BFPP protected pollution $\uparrow$ because (1) adverse effect on asset value is reduced and (2) $\uparrow$ creditors control leads to increased divestiture and reductions in firms' expansion such as M&A

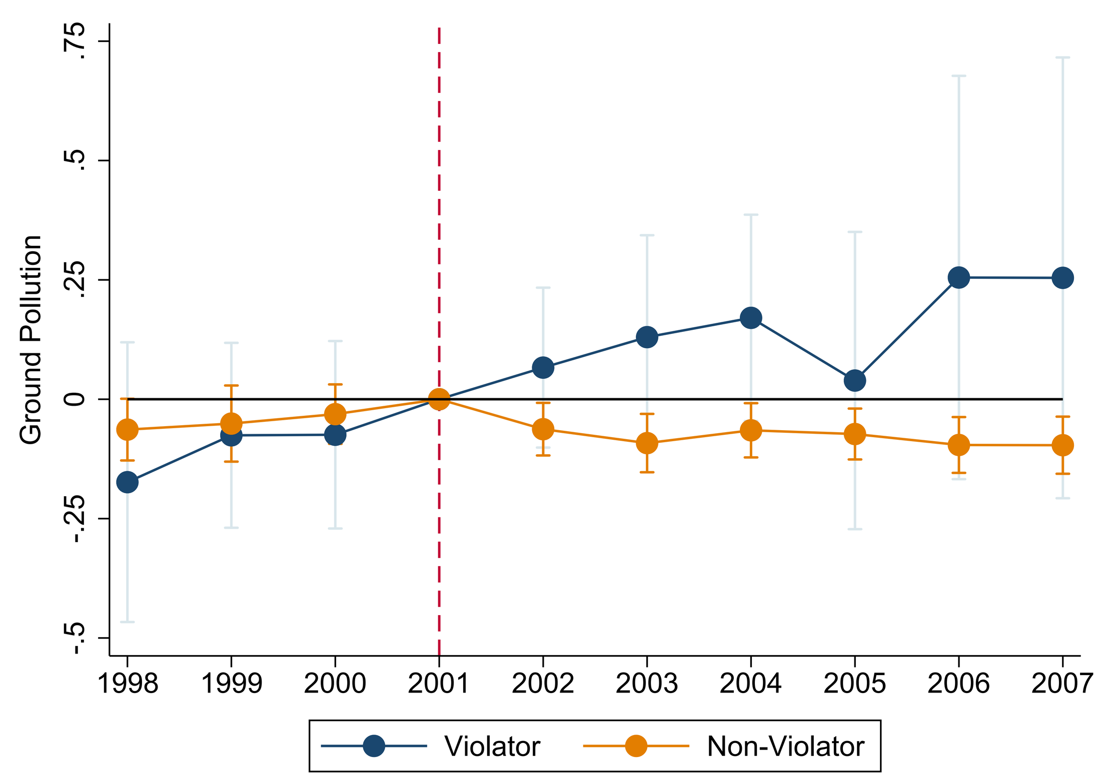
Triple-Difference Specification

$$y = \beta_1 Viol \times BFPP \times Post + Other\ vars + FEs + \epsilon$$

- $y = log(1 + Ground\ Pollution)$
- $Viol$ is an indicator of whether parent company experiences a *new* violation in recent two years
- $BFPP$ equals to one if plant belongs to an industry that is protected by BFPP, and is zero otherwise
- $Post$ is an indicator of whether year is ≥ 2002
- **Identifying assumption:** The effect of a covenant violation on pollution that is more and less exposed to BFPP protection exhibits parallel trends

Main Results

- $\uparrow$ Saleability of contaminated assets (BFPP) $\implies$ $\uparrow$ pollution for violators but has little effect on non-violators



Outcome: *log(1+Ground Pollution)*	(1)	(2)	(3)
$Viol \times BFPP \times Post$	0.308***	0.259***	0.171*
	(0.087)	(0.078)	(0.088)
Other variables	Yes	Yes	Yes
Plant×Chem & Parent×Chem	Yes	Yes	Yes
Chem×Year FE	Yes	Yes	Yes
Industry×Year FE	Yes	Yes	Yes
State×Year FE	No	Yes	Yes
Parent×Year FE	No	No	Yes

Economic Magnitude

- The effect is 14-25%, **1.5-4** times larger than parent liability protection and reducing lenders' exposure to environmental liability
- Stronger parent liability protection leads to a 5-9% increase in pollution by subsidiaries (Akey and Appel 2021).
- Reducing lenders' environmental liability reduces pollution by 9% (Bellon 2021)

Additional Tests

- $\uparrow$ in pollution is driven by both the intensive and extensive margins of ground pollution
- Placebo tests: No effect on water and air emissions
- Using chemical-level exposure to BFPP instead of industry leads to the same conclusion
- Creditors are more likely to include include environmental information covenants in loan agreements for violating borrowers

Contribution

1. My findings show that increasing the adverse effect that pollution has on asset value incentives creditors to discipline corporate environmental behavior
2. Highlight a novel implication of the market for corporate asset: The demand for corporate assets affects how the financial market, particularly creditors, influences corporate environmental policy

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