

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.
- This is 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

Creditor control: Financial covenant violation

- Technical default that gives increases lenders bargaining power
- Control rights are allocated to creditors because manager/shareholder would have taken a different action otherwise

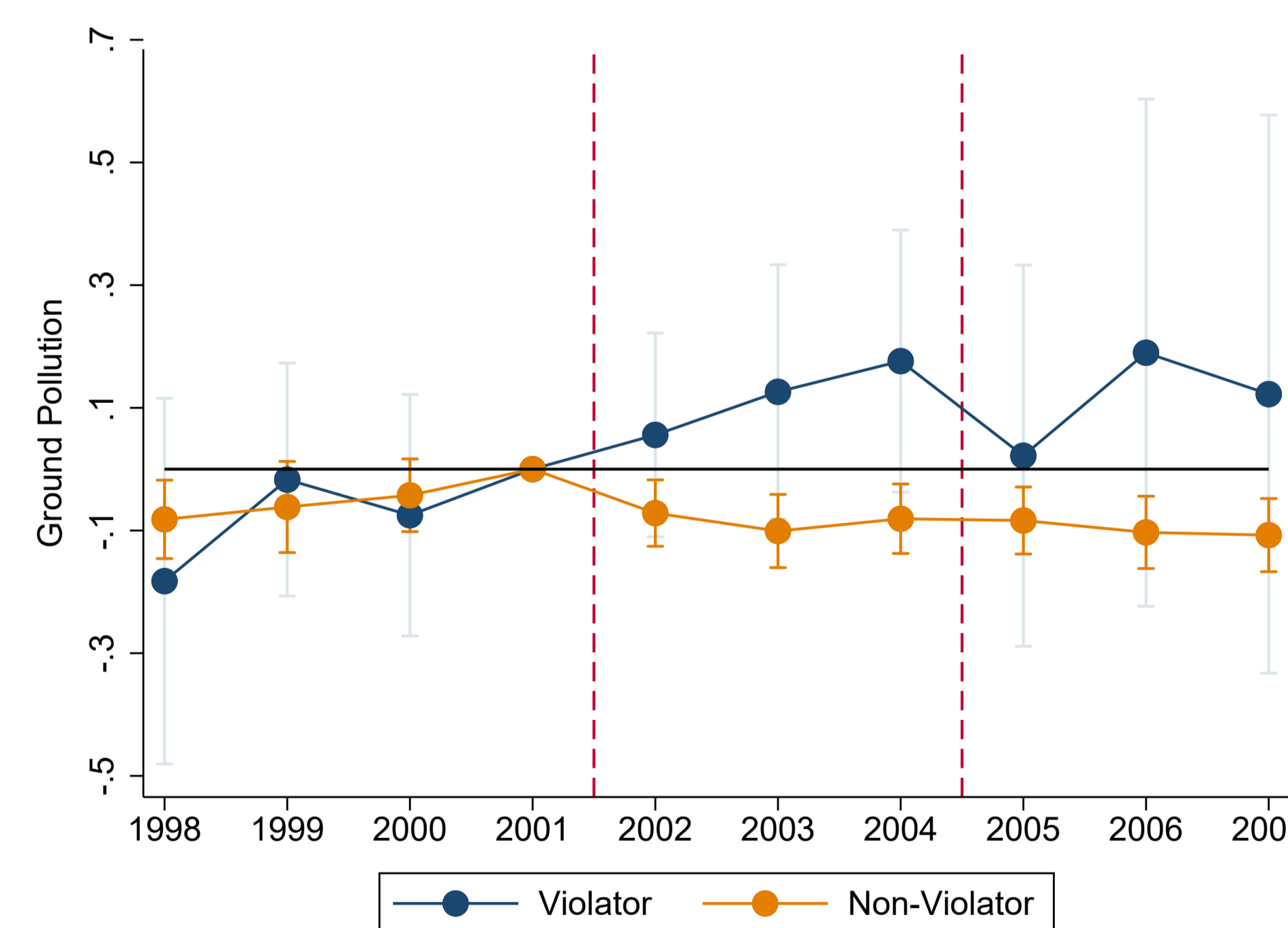
Triple-Difference Specification

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

- $y = \log(1 + Ground\ Pollution)$
- *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 difference in BFPP protected and non-protected pollution would have evolved similarly across violating and non-violating firms in the absence of BFPP

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)
$Viol \times BFPP \times Post$	0.313*** (0.087)	0.64*** (0.078)	0.171* (0.088)
Other variables	Yes	Yes	Yes
Plant \times Chem & Parent \times Chem	Yes	Yes	Yes
Chem \times Year FE	Yes	Yes	Yes
Industry \times Year FE	Yes	Yes	Yes
State \times Year FE	No	Yes	Yes
Parent \times 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
- The increase in ground pollution is driven by investments in less effective abatement technology rather than production.
- The effect is stronger when creditors have larger bargaining power.
- 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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