

Identifying the Heterogeneous Impact of Highly Anticipated Events: Evidence From the Tax Cuts and Jobs Act

Andrew C. Baker
University of California, Berkeley School of Law
WFA
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Overview

- Novel way to conduct cross-sectional event studies.
 - Huge literature using event studies, surveys suggest 1000s of studies.
- Paper proposes a method that allows for:
 1. Anticipation
 2. Estimation of Heterogeneous Treatment Effects
- Application focuses on TCJA:
 - 95% chance 30 days before the event.
 - Inclusive of anticipation - 12.36% vs 0.68% effect size.
 - Heterogeneity in effects in explainable and interesting ways.

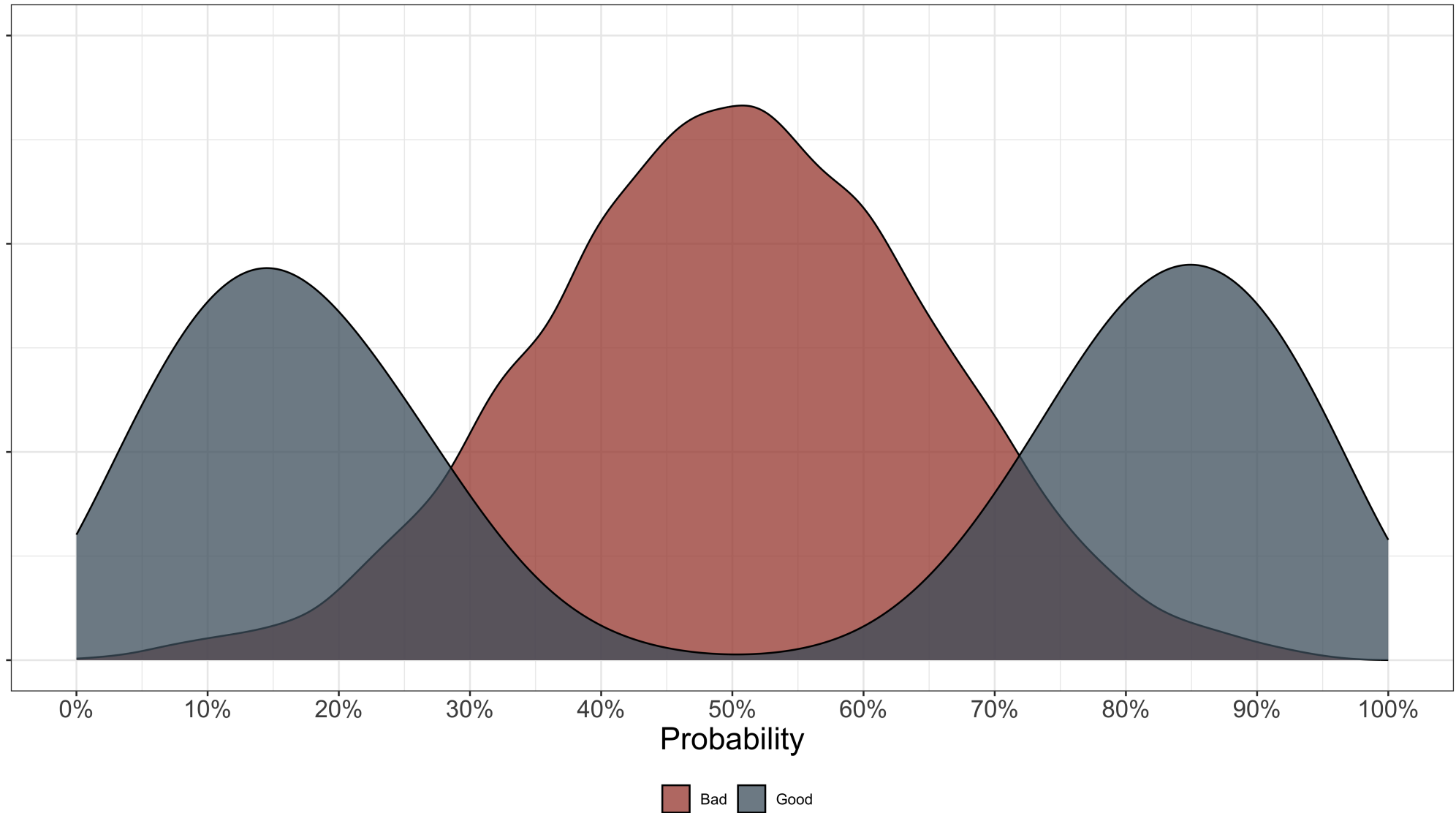
Key Methodological Innovation

- Use option prices to get more equations for estimating moment equations.
- This allows you to estimate contingent firm-specific value effects and state-contingent volatility.
- Can use these estimated values to back out counterfactual prices.
- Instead of using sign restrictions for identification (Borochin 2014), get around label switching by creating a novel method to determine if firm more likely to be a winner or loser each day in pre-estimation period.
 - Classify firm as winner if \geq half days are classified as winner.

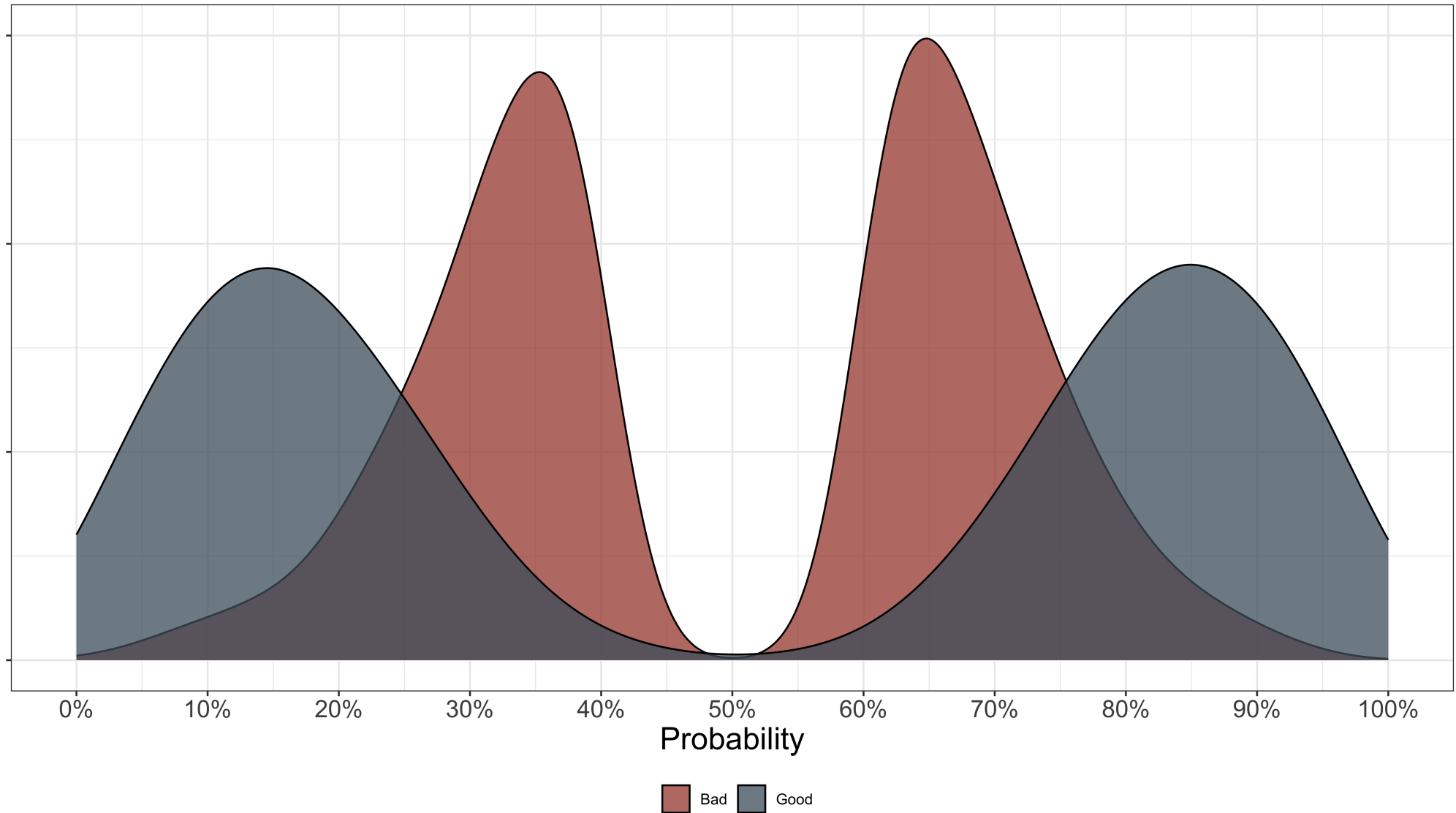
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- **What does this distribution look like across firms?**
- **How does s_i vary by $\overline{q_t}$?**
- **What happens to the estimated average effect if you prune some measure of the center of the distribution?**

Probability of Passage



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- Additional thoughts on the q_{it} :
 - In cases where there *are* prediction market values, could they be used in the model?
 - Is it necessary to classify a firm as a static winner/loser? What if it changes?
 - Does it matter for anything besides rhetoric that we can classify q as a physical property?

Use of Options Prices

- Key move in this series of papers now is to use both equity and option prices to measure effects.
- This is clearly very good!
- But can we do more?
 - Seems to me that we're just using more price series to tie down more parameters (assuming model is correct).
 - What about using varying maturity dates rather than holding τ constant?
- Optimal \mathcal{J} trades off additional signal from overidentification against noise from less liquid options.
 - Would be great to optimize this tradeoff explicitly.

Other Design Choices

- 100 firms with most liquid options.
- No non-zero open interest day in pre-period.
- $J = 6$.
- TCJA introduction in Congress as starting date.
 - **Can you use stationary q beforehand as placebo style test?**

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 - **Can you use stationary q beforehand as placebo style test?**
- **All seem sensible to me, but in keeping with theme of robustness in structural analysis can you:**
 - **Show sensitivity of $\widehat{S_{i,u}}/\widehat{S_{i,d}} - 1$ to small changes in M, J , starting date.**
 - **Think of ways to optimally select these values for broader pick up.**

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- **Use PCA or other method to get a lower dimensional set of latent factors in addition to lasso approach.**
- **Consider heat-mapping.**

Heat Map

