



PARIS LONDON BERLIN MADRID TORINO BUSINESS SCHOOL

Event studies

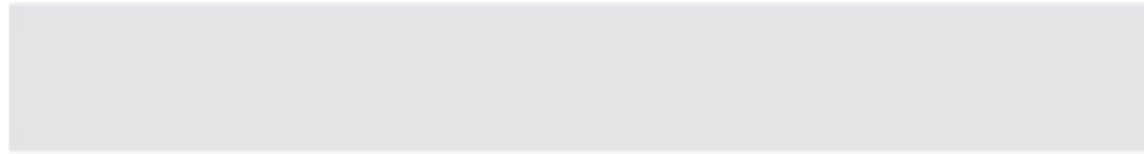
September 2013

Alberta Di Giuli

une école de la



Chambre de commerce
et d'industrie de Paris



Part 1

Event study?



Event study?



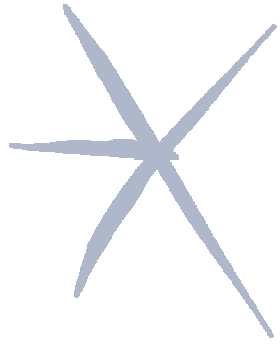
- Event studies examine the behavior of firms' stock prices around corporate events (Kothari and Warner, 2007).
- Event studies have (mainly) two purposes
 - To test for the existence of an information effect (the impact of an event on the announcing firm's value)
 - To identify factors that explain changes in firm value on the event date



Event study?



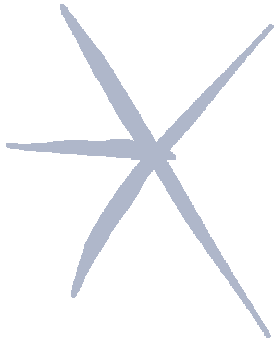
- In a corporate context, the usefulness of event studies arises from the fact that the magnitude of abnormal performance at the time of an event provides a measure of the (unanticipated) impact of this type of event on the wealth of the firms' claimholders.
- Thus, event studies focusing on announcement effects for a short-horizon around an event provide evidence relevant for understanding corporate policy decisions.
- One underlying assumption is that the market processes information about the event in an efficient and unbiased manner.



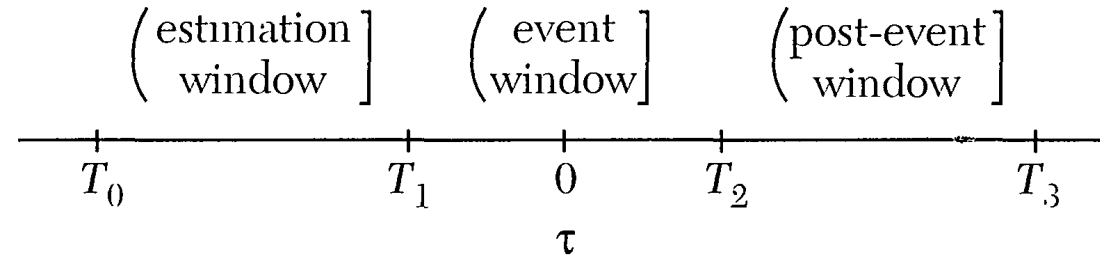
Event study?



- Event studies have a long history
 - Perhaps the first published study is by James Dolley (1933) on stock splits.
- While the profession's thinking about event study methods has evolved over time, there seems to be relatively little controversy about statistical properties of event study methods.
 - From 1974 through 2000 the total number of papers reporting event study results is 565.
- It is still based on the table layout in the classic stock split event study of Fama et al. (1969).
- They measure the securities' mean and cumulative mean abnormal return around the time of the event.



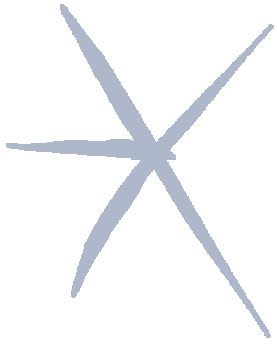
Event study?



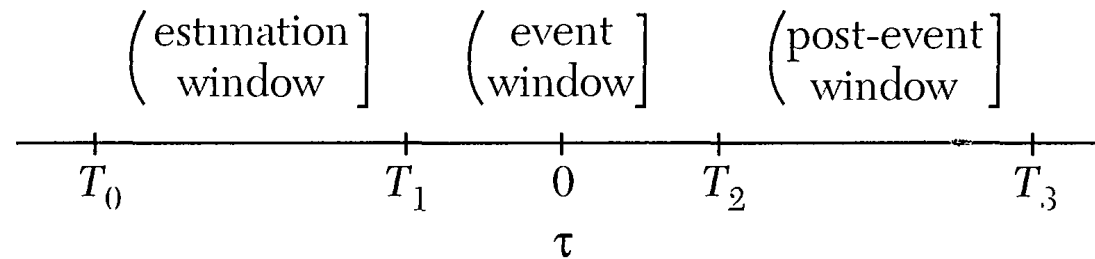
- Let $t = 0$ represent the time of the event. For each sample security i , the return on the security for time period t relative to the event, R_{it} , is:

$$R_{it} = K_{it} + e_{it},$$

- where K_{it} is the “normal” (i.e., expected or predicted return given a particular model of expected returns), and e_{it} is the component of returns which is abnormal or unexpected.



Event study?



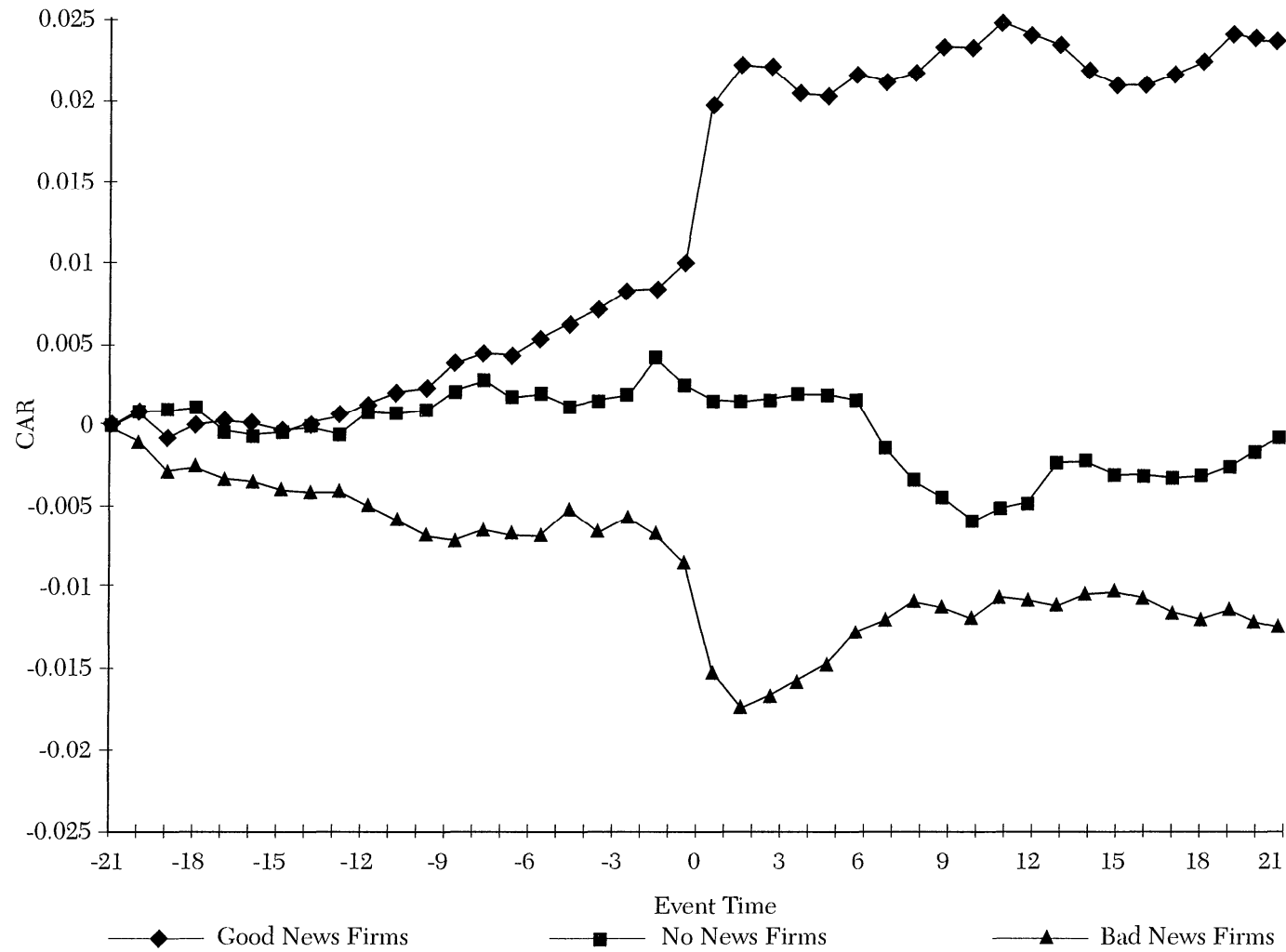
- Given this return decomposition, the abnormal return, e_{it} , is the difference between the observed return and the predicted return:

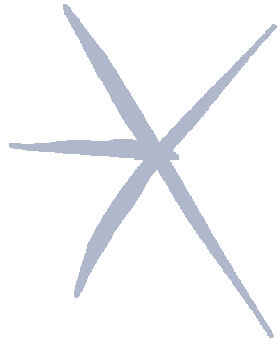
$$e_{it} = R_{it} - K_{it}$$

- Equivalently, e_{it} is the difference between the return conditional on the event and the expected return unconditional on the event.
- Thus, the abnormal return is a direct measure of the (unexpected) change in security holder wealth associated with the event.



Event study?





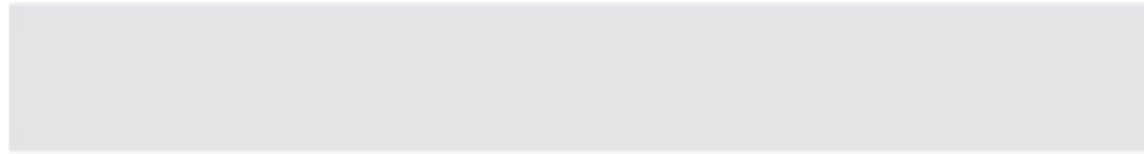
Long or short?



- What are the sources of bias in long-run event studies?
 - CAR vs buy-and-hold returns
 - Getting the benchmark index wrong
 - Indices have new listings over the long horizon.

And mainly

- Small mistakes lead to big mistakes in abnormal return assessments.



Part 2

Which event(s)?



Which Events?



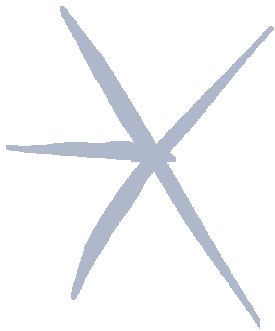
- “Standard financial events”
 - Mergers
 - Earning announcements
 -
- But also...
- Happy non-financial events
 - Marriage (Bunkanwanicha, Fan, Wiwattanakantang, 2009)
- Sad non-financial events
 - Disasters (Kaplanski and Levy, 2010; Hill and Schneeweis, 1983)
- Death of a CEO



Death of a CEO?



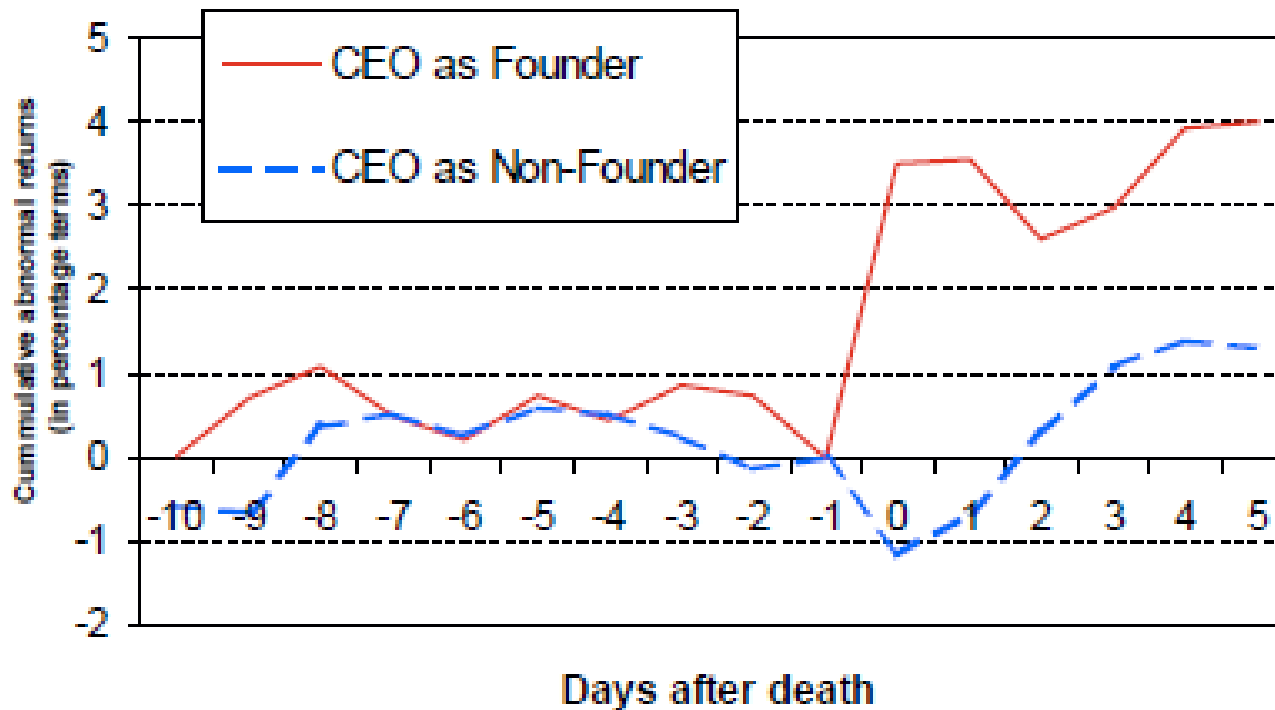
- FOUNDER (a manager with firm-specific capital)
 - since the firm must hire a replacement and expend additional resources to identify and/or develop the new manager's firm-specific abilities=> negative effect on share price.
 - access to the productive opportunity may lie with the prospective manager, as in the case of a corporate founder taking the firm public. In this situation, the rents arising from access to the productive opportunity will accrue to the founder-manager, rather than to shareholders=> positive effect
- NON FOUNDER

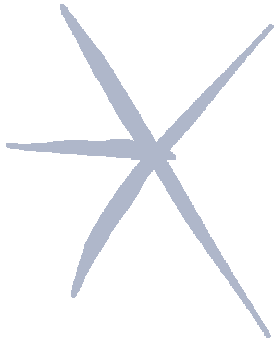


Death of a CEO

Stock Price and CEO Death

Source: Johnson et al.

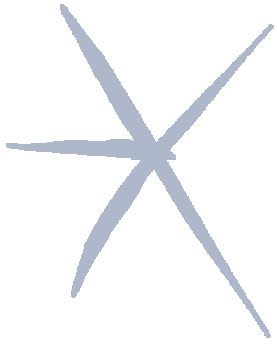




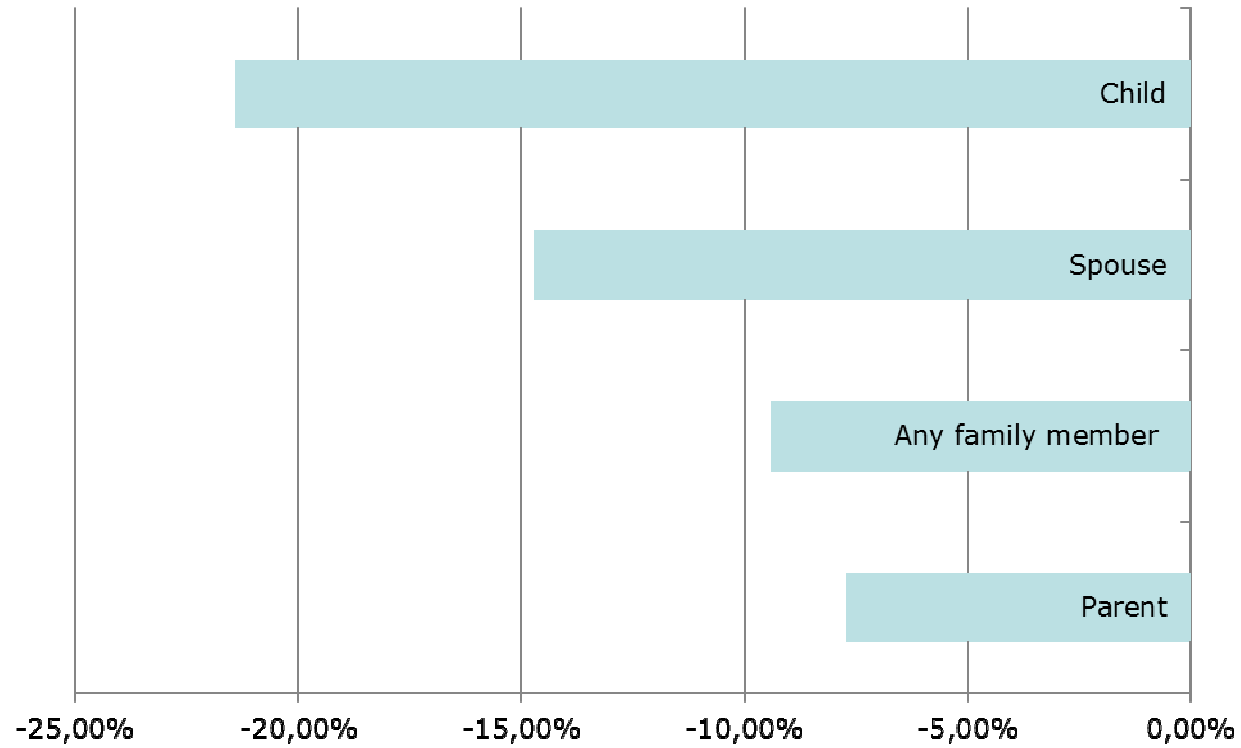
Ceo death---a (VERY) different approach



- Bennedsen et al (2006) analyze private companies
- They study the effect of the death of the CEOs and *relatives*.
- Returns on assets (ROA) fall by 0.6 percentage points using a two-year window around managerial deaths.

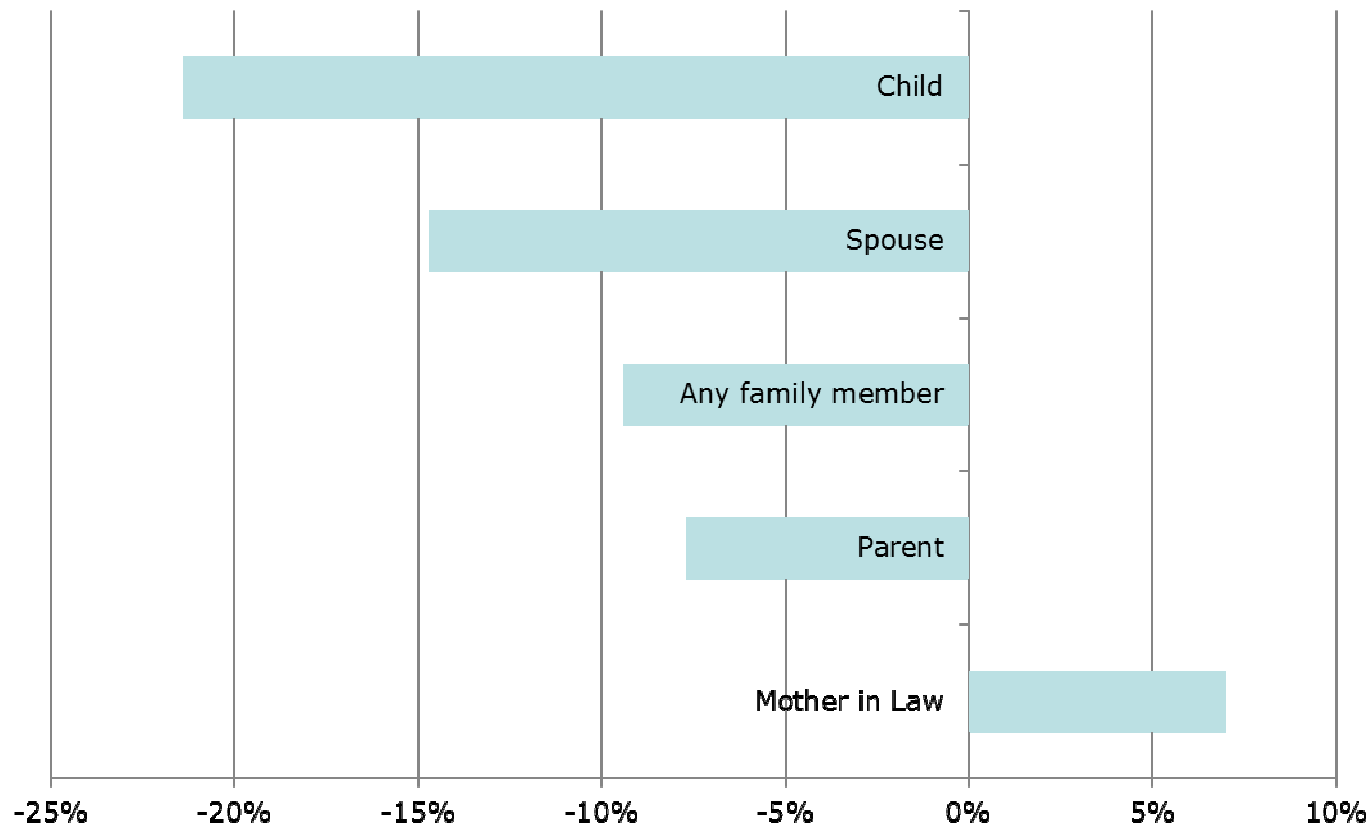


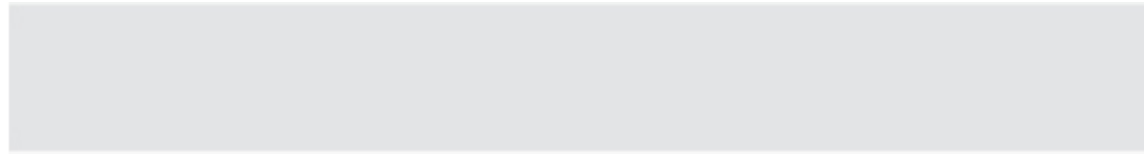
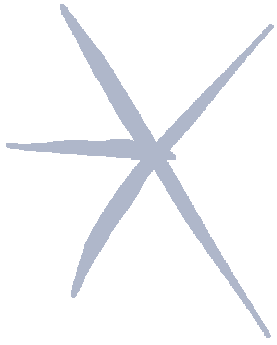
Ceo death---a (VERY) different appraoch





Ceo death---a (VERY) different appraoch





Part 3

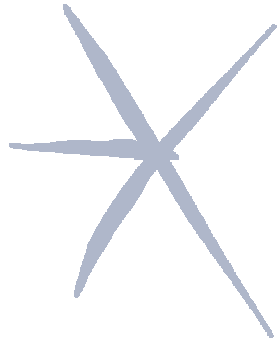
Event study & panel data



Causality—event studies meet panel data



- Sometimes in economics and finance there are issues with causality.
- A correlation simply means that a relationship exists between two factors – X and Y - but it tells you nothing about the direction of that relationship. It's possible that X causes Y ; it's also possible that Y causes X ; (it might also be possible that X and Y are both caused by some other factor, Z).



Causality—event studies meet panel data



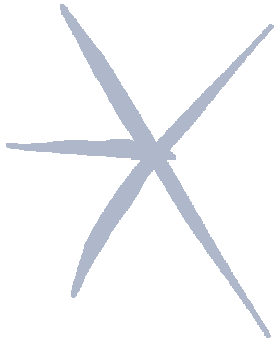
- Consider the police-murder correlation in two cities, Denver and Washington (that have about the same population). Washington has three times the as many police as Denver and eight time times the number of murders. Unless you have other information is hard to say what's causing what.
- Consider also the folktale of the king who learned that the most disease-ridden province in his kingdom was also the province with most doctors. His solution? He promptly ordered all the doctors shot dead (Freakeconomics).



Causality—event studies meet panel data



- Sometimes when you have a panel you can understand which variable affects which. For example if X moves “first” and then the other variable Y reacts with a lag of time, you (might) conclude that X drives Y.
- But sometimes you cannot assess causality even when you have a panel:
 - “Sticky” variables
 - Two variables move “together”
 - Not “enough” data
- Here event studies might be helpful when you have a panel as well!



Causality—event studies meet panel data



- In 2009, a shareholder of AT&T argued that managers exercise wide discretion over the use of corporate resources for political purposes, and that the use of a company's assets for these purposes could reduce shareholder value.
- However, the board of AT&T disagreed, arguing that AT&T's corporate political spending is in the best interests of its shareholders.



Causality—event studies meet panel data



- One major issue in resolving this debate is that corporate political contributions and equity value are endogenous. The two are endogenous because on one the hand, corporate political contributions could cause a higher (or lower) equity value of the contributing firms.
 - On the other hand, firms that perform or expect to perform better (or worse) could contribute more, resulting in a positive (or negative) correlation between equity value and political contributions.
- => you need an exogenous shock an event study



Causality—event studies meet panel data



- Prabhat et al (2012) analyse the *McConnell v. FEC* Supreme Court decision of 2003 which impose greater restrictions on firms' abilities to make political contributions
- They use this unexpected and exogenous shocks to campaign finance regimes to conduct an event study to evaluate whether corporate political contributions increase the equity value of the contributing firms.
- The idea is if corporate political contributions increase (or reduce) a firm's equity value, then restrictions on the firm's ability to contribute should reduce (or increase) its equity value as well.



Causality—event studies meet panel data



- Result:
NEGATIVE
strong and significant
effect on the value
firms (especially those
that contributed more).

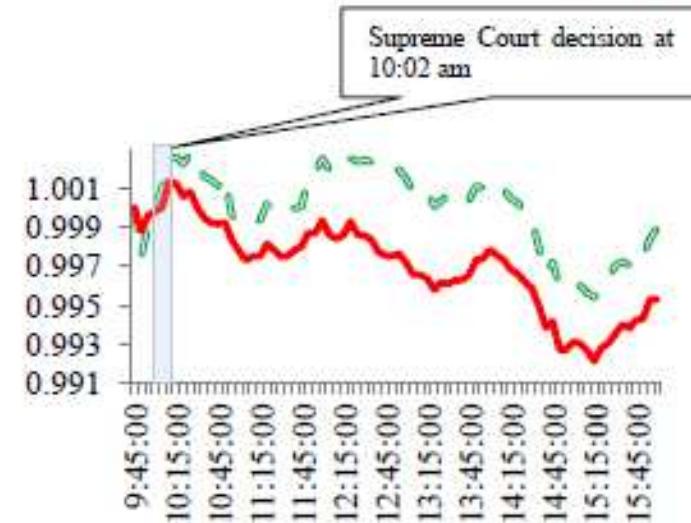


Figure 4. McConnell decision: Cumulative intraday returns of firms making large soft money contributions (Top) and those making small soft money contributions (Bottom)