

# Do derivatives matter? Evidence from a policy experiment

Deepak Agrawal   K R Subramanyam   Prasanna Tantri  
Ramabhadhran Thirumalai

Discussed by:  
Nidhi Aggarwal  
, Finance Research Group, IGIDR

December 19, 2015

# The paper

- ▶ Examines if derivatives have an impact on stock valuation, price efficiency and underlying liquidity.

# The paper

- ▶ Examines if derivatives have an impact on stock valuation, price efficiency and underlying liquidity.
- ▶ Exploits a policy intervention when the Indian regulator raised the minimum thresholds to allow a stock to **continue** trading on derivatives.

# The paper

- ▶ Examines if derivatives have an impact on stock valuation, price efficiency and underlying liquidity.
- ▶ Exploits a policy intervention when the Indian regulator raised the minimum thresholds to allow a stock to **continue** trading on derivatives.
- ▶ Finds that a delisting from the derivatives segment:
  - ▶ Impacts stock valuation adversely,
  - ▶ Reduces price efficiency,
  - ▶ Reduces stock liquidity,
  - ▶ No major impact on stock price volatility

# The paper

- ▶ Examines if derivatives have an impact on stock valuation, price efficiency and underlying liquidity.
- ▶ Exploits a policy intervention when the Indian regulator raised the minimum thresholds to allow a stock to **continue** trading on derivatives.
- ▶ Finds that a delisting from the derivatives segment:
  - ▶ Impacts stock valuation adversely,
  - ▶ Reduces price efficiency,
  - ▶ Reduces stock liquidity,
  - ▶ No major impact on stock price volatility
- ▶ **Takeway:** Derivatives indeed matter!

# Overall

- ▶ A very well executed study while accounting for endogeneity issues.

# Overall

- ▶ A very well executed study while accounting for endogeneity issues.
- ▶ **Policy importance:** Role of derivatives often questioned, especially in India where they are seen merely as tools for speculation.

# Overall

- ▶ A very well executed study while accounting for endogeneity issues.
- ▶ **Policy importance:** Role of derivatives often questioned, especially in India where they are seen merely as tools for speculation.
- ▶ **Academic** contribution:



# Overall

- ▶ A very well executed study while accounting for endogeneity issues.
- ▶ **Policy importance:** Role of derivatives often questioned, especially in India where they are seen merely as tools for speculation.
- ▶ **Academic** contribution:
  - ▶ Adds to the evidence examining the importance of derivatives.

# Overall

- ▶ A very well executed study while accounting for endogeneity issues.
- ▶ **Policy importance:** Role of derivatives often questioned, especially in India where they are seen merely as tools for speculation.
- ▶ **Academic** contribution:
  - ▶ Adds to the evidence examining the importance of derivatives.
  - ▶ **Distinguishes** itself by using a natural experiment which provides clean identification opportunities, and lends credibility to the main results.

# Implementation

- ▶ Why CNX 200 as a proxy for the market instead of Nifty 50?

# Implementation

- ▶ Why CNX 200 as a proxy for the market instead of Nifty 50?
- ▶ Matching technique: covariates? Match balance?

# Implementation

- ▶ Why CNX 200 as a proxy for the market instead of Nifty 50?
- ▶ Matching technique: covariates? Match balance?
- ▶ Why not report matched sample results instead of pooled control sample? Especially for liquidity variables.

# Implementation

- ▶ Why CNX 200 as a proxy for the market instead of Nifty 50?
- ▶ Matching technique: covariates? Match balance?
- ▶ Why not report matched sample results instead of pooled control sample? Especially for liquidity variables.
- ▶ Price efficiency: Why not investigate the speed of stock price adjustment to firm specific information?

# Implementation

- ▶ Why CNX 200 as a proxy for the market instead of Nifty 50?
- ▶ Matching technique: covariates? Match balance?
- ▶ Why not report matched sample results instead of pooled control sample? Especially for liquidity variables.
- ▶ Price efficiency: Why not investigate the speed of stock price adjustment to firm specific information?
- ▶ Liquidity measures: why include derivatives to capture the impact on underlying stock liquidity?

# Implementation

- ▶ Why CNX 200 as a proxy for the market instead of Nifty 50?
- ▶ Matching technique: covariates? Match balance?
- ▶ Why not report matched sample results instead of pooled control sample? Especially for liquidity variables.
- ▶ Price efficiency: Why not investigate the speed of stock price adjustment to firm specific information?
- ▶ Liquidity measures: why include derivatives to capture the impact on underlying stock liquidity? Bid-ask? Price impact?



# Implementation

- ▶ Why CNX 200 as a proxy for the market instead of Nifty 50?
- ▶ Matching technique: covariates? Match balance?
- ▶ Why not report matched sample results instead of pooled control sample? Especially for liquidity variables.
- ▶ Price efficiency: Why not investigate the speed of stock price adjustment to firm specific information?
- ▶ Liquidity measures: why include derivatives to capture the impact on underlying stock liquidity? Bid-ask? Price impact?
- ▶ Regression discontinuity?

# Short selling

- ▶ Short selling **constraints** on the spot market, and hence derivatives have an even important role in India.

# Short selling

- ▶ Short selling **constraints** on the spot market, and hence derivatives have an even important role in India.
- ▶ Negative news absorption in spot prices for a security with derivatives versus not.

# Short selling

- ▶ Short selling **constraints** on the spot market, and hence derivatives have an even important role in India.
- ▶ Negative news absorption in spot prices for a security with derivatives versus not.
  - ▶ Options introduction mitigate the impact of short selling constraints (Philips, 2011).

# Short selling

- ▶ Short selling **constraints** on the spot market, and hence derivatives have an even important role in India.
- ▶ Negative news absorption in spot prices for a security with derivatives versus not.
  - ▶ Options introduction mitigate the impact of short selling constraints (Philips, 2011).
  - ▶ Impact of short selling bans after the 2007-09 crisis was higher for securities with no listed options (Beber and Pagano, 2013).

# Short selling

- ▶ Short selling **constraints** on the spot market, and hence derivatives have an even important role in India.
- ▶ Negative news absorption in spot prices for a security with derivatives versus not.
  - ▶ Options introduction mitigate the impact of short selling constraints (Philips, 2011).
  - ▶ Impact of short selling bans after the 2007-09 crisis was higher for securities with no listed options (Beber and Pagano, 2013).
- ▶ **Question:** Do we a slower reaction of spot prices to negative news after derivatives delisting?

# The current SEBI rules: Are they optimal?

- ▶ Useful to ask if the current regulatory rules for derivatives exclusion optimal?
- ▶ Especially the MWPL limit. Economic rationale?
  - ▶ **Question:** Can derivatives mitigate the effect of higher insider ownership on a stock?

Thank you