

Paper

**An Analysis of Corporate Insider Trading and
earnings Announcements in India
-- M Krishnan & Srinivasan R**

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What the paper is about ?

□ Its an interesting paper as well as a good public policy interest!

□ **Central qn:**

- **To examine relation between Insider Trading and information released during earnings announcements.**
- **Whether Insiders' trades are motivated by their desire to make profits around earnings announcements?**
- **Whether and how markets use information on insider trades to modify their valuation of unexpected earnings?**

□ **Findings**

- **Insider trades are profitable- specially for holding periods of one year.**
- **Presence of PEAD**
- **Both signals: Insider trades and Earnings announcement news are perceived as neither as information substitutes nor as complements.**

Remarks...

▣ Variables

- **How they are defined and measured ?**

▣ Data

- **Type of data and its usage**

▣ Empirics

- **Tests employed and methodology**

On ways of measuring Unexpected Earnings

- Paper defines Unexpected Earnings as the difference between earnings per share in quarter t and its lagged value from 4 quarters before. This difference is further scaled by the price per share on day -2.
 - **How do you control for: firms giving earnings guidance?**

- In India, no organized Analysts' forecasts are available / still nascent.

- So one need to resort to model earnings by a time series model.

- **Literature on this, starting from Ball & Brown (1968), suggests 4 models.**

- Qearnings follow a seasonal random walk with no drift.

- Qearnings follow a seasonal random walk with drift

- Qearnings follow a AR(1) process

- Qearnings follow a AR(1) with seasonal MA term.

$$E(Q_t) = Q_{t-4}$$

$$E(Q_t) = Q_{t-4} + \delta$$

- Qearnings data is available in Prowess from year 2000 or $E(Q_t) = Q_{t-4} + \phi_1(Q_t - Q_{t-5}) + \delta$

- **K Sen (2009, JCAE) uses this and refines it Standardized Un** $E(Q_t) = Q_{t-4} + \phi_1(Q_t - Q_{t-5}) + \delta + \theta \varepsilon_{t-4}$

On ways of measuring Unexpected Earnings...

□ Deflator

- **Paper uses a deflator, Price, for unexpected earnings: Price, measured 2 days before the earnings announcement.**
- **This deflator includes information from quarter t and also information after quarter t (as companies announce earnings typically a month after end of the quarter). Deflator includes information such as analyst revisions/ competitor earnings announcements etc. This deflator can create bias.**
- **May be using Price at the beginning / ending of the quarter t, will avoid any bias.**
- **Further, deflating by price could inflate the value of earnings surprises when price is low. <small cap stocks>**
- **How about other alternative deflators: Total Assets or Book Value of Equity**

On ways of measuring CARs

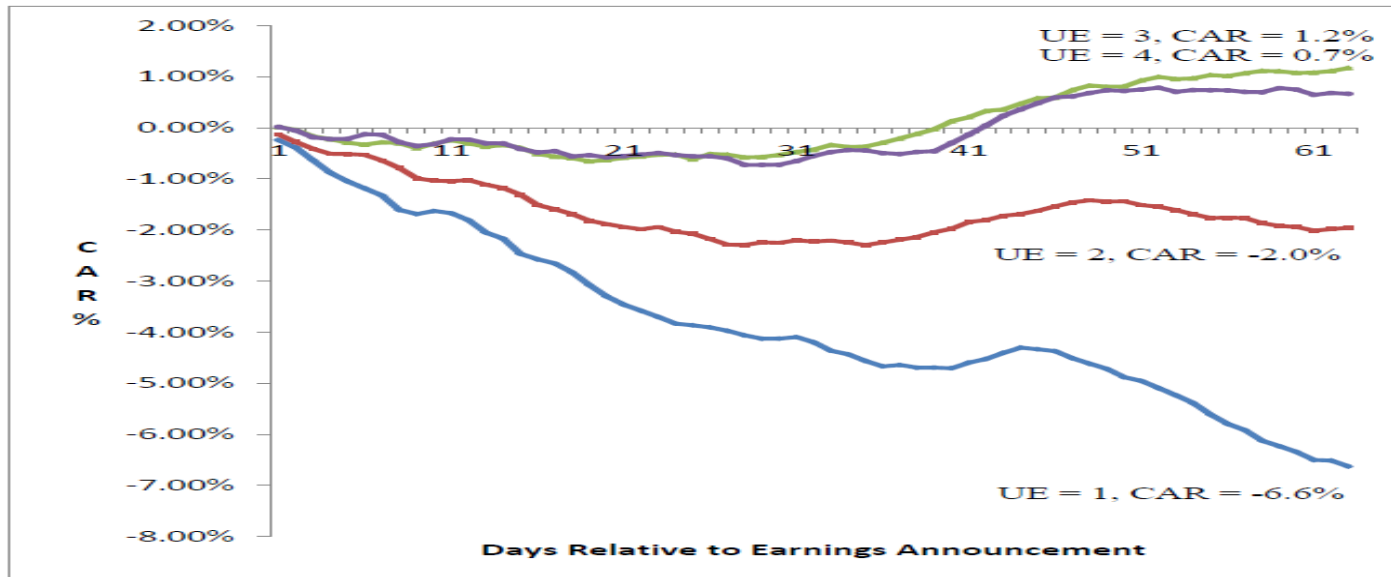
□ On Abnormal Return calculations

- **The paper calculates abnormal returns as excess returns over market**
- **Paper is silent on why they preferred such abnormal returns.**
- **Are results robust to**
- **Market model (beta adjusted)**
- **Size adjusted**
- **“three or four or five factor adjusted” returns**

□ **Bottom line is: If I need to buy the story of the paper then the KEY variables estimated need to be clean and to get robust results □**

On Data side...

- Fig 2 in the paper shows the time series plots of CAR for each of the Earnings Forecast Error quartiles.



- Even for Q3 and Q4 (Good news earnings surprises), CARs decline (almost for two months=40days) after earnings announcement. And start a rising trend one month before next earnings announcement. Similarly for Q1 and Q2 (more steep decline)
- Paper misses / ignores to comment on this fact.

On Data side...

- May be a possible explanation (as well taking clue from Fig 1) is that insiders use the post-announcement period to trade on foreknowledge of the next quarter's earnings.
 - **As a test of this conjecture, they might examine earnings forecast errors associated with the next quarterly announcement.**
- Literature shows information content of insider trades varies with type of insider (viz. Promoter, Director, KMP, Employee, Immediate Relative, Other etc.) as well with type of insider trading activity mode (market transaction; off market transaction; ESOP, Revoke/Invoke etc)
- Appears that the paper considered all type of insider trades filed to exchange / SEBI and may be should clean up their raw data carefully.

On data ~ Period

- Returns from Table 5 and Table 6 suggests that returns on average are negative during the sample period 2008-2014. Is that true? I see that index went up by 60% during this period? Why is that average returns from Table 5/6 are negative?
 - **You can see that in Column (7) and (8) of Table 5. +2 and +64 window captures average returns during the sample period (as quarterly earnings are announced every 65 days on average).**
- Sample period includes crisis/ great recession period. Are results robust to excluding this great recession (Jan 2008 – Dec 2008)?
- If insiders are buying and selling using earnings information and they continue to do that then market should learn and arbitrage it away. Why is this not arbitrated away? Do you observe decline in profitability of insider trades over time?
- May be exclude Q4 announcements as typically firms publish year end information (company risk analysis) along with Q4 earnings. Hence may contaminate a study exploring on earnings surprises.

On Empirics...

- Hypothesis tests (t-stats in Table 5 and 6)
 - Reports CARs following earnings announcements (Tab 5) and insider trades (Tab 6: Panel A). For significance test the paper uses usual t-test and a Wilcoxon Z test.
 - Cross-sectional clustering of events, earnings announcement dates and as well insider trades, cause biased standard errors.
 - Corrado (JFE, 1989) suggests a non-parametric testing procedure and is well adopted in literature viz. Campbell and Wasley (JFE,1993).
- Profitability of Insider trades around EA (Table 6)
 - Only for Insider sales but not for buys!
 - Most literature says that Insider buys are strong signals as sell signal is confounded with liquidity issues etc.
 - Are these really (economically) profitable? Given a small profit of 6% over one-year horizon and without accounting for transaction costs!!
 - Sound/ robust results may be obtained if analysis is done separately for Large / Midcap / Small cap instead of clubbing all 1600 firms together.

On Empirics...

□ Testing design

- **Somehow I don't like the design. If I need to do then will do as follows:**
- **Use double sorts. First sort on earnings surprise then on insider trading.**
- **Similar to Daniel and Titman (JF, 1997), with this design answers to:**
- **How do insider buys and sells vary with earnings surprise**
- **How do earnings surprises vary with insider buys and sells**
- **How do insider buys and sells are related to stock returns after controlling for earnings surprise (and vice versa)**

- ▣ **Enjoyed reading paper and as well learned a lot as it forced me to read literature on earnings surprises!**
- ▣ **Hope these remarks help to improve the paper and good luck!!**