

## FIN 540 Markup Pricing

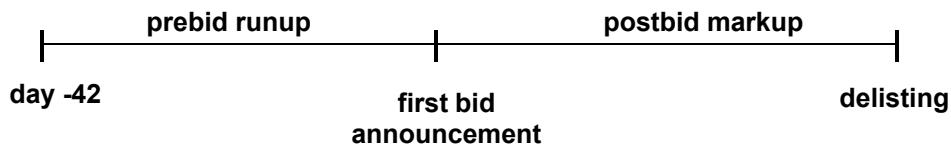
### Questions:

**Why do target stock prices rise before public offers?**

**Does this affect the final price of the acquisition?**

**Why?**

## Takeover Premiums Usually Include Some Period of Prebid Runup



**In this example, to measure the total premium:**

- a 42 trading day (two months) runup period is added to
- the price appreciation from the day of the first bid announcement through delisting

**Stylized Fact (on average):**  
**Prebid Runups = Postbid Markups**

**This is true for mergers, tender offers, MBOs, etc.**

**Two questions (at least):**

- **What causes the prebid runup?**
- **How does it affect the postbid markup?**

**What Causes Prebid Runup?**

**(1) Insider Trading -- Lisa Meulbroek (JFin '92):**

- **illegal insider trading accounts for (at least) half of the runup in cases where it is detected and prosecuted**

**unresolved issues:**

**(a) contagion effects -- effect of informed traders' activity on other traders' actions**

- **Barclay & Warner (JFE '93) posit that the market learns information from medium-sized trades**
- **"merger rumors" often follow unusual price & volume behavior [Pound & Zeckhauser (JBus '90)]**

## What Causes Prebid Runup? (cont.)

### unresolved issues (cont.):

#### (b) What do we know about (illegal) insider trading that is not prosecuted?

- Does the SEC use the size of the prebid runup (or the postbid markup) as an input to its search for insider trading?
- size of runup shows that market learned information before the bid, perhaps from insiders' trading
- size of the markup shows that profits available to insiders from buying early

## What Causes Prebid Runup? (cont.)

### (2) Toehold purchases by potential acquirers

- Mikkelson & Ruback (JFE, '85) show that 13D filings (>5%) are associated with positive abnormal returns
- Jarrell & Poulsen (JLEO, '89) show that holding by the bidder (from 14D filings) are correlated with prebid runup

## What Causes Prebid Runup? (cont.)

### (3) Merger rumors

- Jarrell & Poulsen (JLEO, '89) show that stories in the Wall Street Journal identifying the firm as a potential target are correlated with prebid runup
- but Pound & Zeckhauser (JBus '90) show that most merger rumors (in the "Heard on the Street" column) do not lead to takeovers within 12 months
  - also, most of these stories seem to be a reaction to recent "unusual" price & volume behavior
  - is this a symptom of insider trading?

## How Does Runup Affect Markup?

### (1) Substitution hypothesis [Jarrell & Poulsen (JLEO, '89)]:

- since bidder can observe prebid runup, and
- its valuation of the target firm is (presumably) based on superior information, then
- final bid price should be unaffected by runup
  - perfect substitution between prebid runup and postbid markup

## How Does Runup Affect Markup? (cont.)

### (2) (Rational) Markup pricing hypothesis:

- takeovers are not best characterized as a two-person negotiation
- concern about potential competition from other bidders has a big effect on the price bidders are willing to pay
  - otherwise, why do most of the rents seem to go to the targets?

## How Does Runup Affect Markup? (cont.)

### (2) (Rational) Markup pricing hypothesis:

- if the bidder cannot identify the cause of the prebid runup (e.g., its own purchases of target stock to acquire a toehold position), it must take into account the prebid price of the target stock (including the runup)
  - the postbid markup is uncorrelated with the prebid runup
  - the total premium is higher by the amount of the prebid runup

## How Does Runup Affect Markup? (cont.)

### (3) Deal size hypothesis:

- total premium is predetermined in a given deal
- division between runup and markup is determined by the probability that the deal will occur before the first bid is announced
  - this implies that runup and markup are positively correlated (both driven by the size of the total premium)

## Evidence in this paper

### 1,398 (all) successful takeovers of NYSE & Amex-listed target firms, 1975-91

- prebid runup for 42 days before first bid
- postbid markup from bid day to delisting
  - 1,173 cases where this period was less than 1 year
  - stock price > \$2
  - equity capitalization > \$10 million
- relate markup to runup to discriminate among various hypotheses

## Evidence in this paper (cont.)

### News events:

- 555 cases one year before first bid
- story confirmed by either target or bidder that acquisition was being discussed
- story about original 13D filing
- story saying a firm was a potential target
- story saying a firm adopts a poison pill

### Insider trading cases:

- SEC prosecutions mentioned in WSJ, DJNR, Lexis (134 takeovers)

## Evidence in this paper (cont.)

### Auctions:

- 223 cases
- more than one bidder

### Tender Offers:

- 526 cases (first bid)

### Management buyouts (MBOs):

- 140 cases (mgmt part of bidder group)

### Cash used as sole compensation:

- 745 cases

## Tests for Substitution

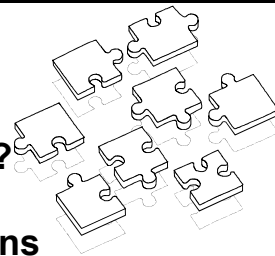
### Regress Total Premium (Total) on the Runup:

- if  $b = 1$ , no substitution (markup pricing)
- if  $b < 1$ , substitution by  $(1-b)\%$  of runup in terms of a lower markup
- if  $b > 1$ , consistent with "deal size" hypothesis
  - big runups and big markups go together

## Markup Pricing in Mergers & Acquisitions: Conclusions

### Interesting empirical puzzle:

- Why don't we see more substitution?
- When merger/tender offer negotiations occur, how do they deal with the prebid runup?





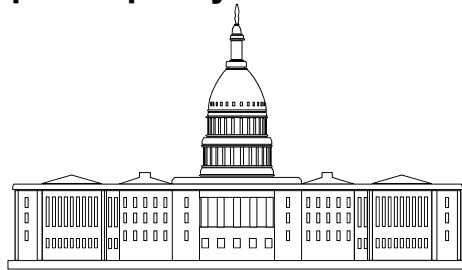
## Markup Pricing in Mergers & Acquisitions: Conclusions

If runup increases the cost of takeovers,

- Who is damaged (under what circumstances)?



- What sort of public policy should be followed?



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