Acquisitions and Technology Value Revision

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This paper

Idea:

- *"The share price of Medarex Inc. rose by nearly 10 percent amid speculation it could be an acquisition target, on the day AstraZeneca agreed to acquire Cambridge Antibody Technology."*
- Why?

Framework

- Two potential acquirors A and B
- Two firms C and D, technology peers
- News: "A buys C"

Framework

- C's stock price rises
- Why? Because A offers a premium to the current stock price
    - Why?
- Synergies (Operating efficiency; Market power)
- Or, A is overvalued relative to C
- Or, C is undervalued and A knows it

Framework

- The rise in C is a (still) a controversial and active topic!

Framework

- This paper: D (the tech peer's) stock price rises
- Why?
- In a sense this result is "cleaner"
- There is no deal involving D – not clear why D's stock price should change
- Stock prices change with news
- Why?
- News of the A-C deal implies that:
  - D has high synergies with A and/or B
  - D is undervalued
  - A and/or B are overvalued

- Regardless: It has to be a story about news, about information revelation

- Suggestion: If so then dropping deals that had a definitive pre-agreement prior to the announcement date, or keeping only hostile and unsolicited bids, should strengthen the results

- Easy to check

Peer Firms Definition

- Authors match target firms to (on average) 40 "tech peers" based on Jaffe patent similarity

- No other matching criteria? Size, profitability, firm age... we know targets are on average small and young. Are you matching to big & old "peers"?

- Why equal weight CAAR?? Firm sizes are hugely skewed. Effects are larger for smaller peer firms, so matching may help

Higher Likelihood of Acquisition

- "A buys C" signals a higher likelihood of acquisition for D
- D is 0.8% more likely to be acquired next year
- Consistent with all three stories (synergies, overvalued acquirors, undervalued targets*).
- Also, we know that mergers arrive in waves. Consistent with herding (Welch) too?

Vulnerable Peers

- *"Technology peers who are more **vulnerable to acquisitions** have more positive price revisions at the deal announcement."*
- Where *vulnerable to acquisitions* = low M/B, low PP&E, low profitability, blockholder
- Consistent with all three stories (synergies, overvalued acquirors, undervalued targets*).

Target Undervaluation

- The authors test whether the deals in their sample are driven by undervaluation of the target:

- *"... it takes only 12 months for the target firms of withdrawn deals to lose the value gained at the time of the initial announcement if they are not subsequently taken over..."*

- But withdrawn deals are a small subset and systematically differ from completed deals

- So this cannot speak to **all** deals in your sample

Market Power

- The authors find: It's not bad for "potential customers"
- *"...consider potential rather than just actual customers since the costs of switching suppliers may be low."*
- If switching costs $=0$ then the effect should be **the same** for potential and actual customers. If switching costs >0 then the effect should be greater for mere actual customers
- *"The CAAR on generic potential customers is 0.11%"*

Main Findings

- When an acquisition is announced, "tech peers" with similar patent portfolios see a 0.26% positive CAR as well
- Tech peers are 0.8% more likely to be acquired next year

Existing Literature

- Song and Walkling (2000): *"An extensive literature, beginning with Eckbo (1983,1985) and extending through Mitchell and Mulherin (1996), finds that [industry] rivals of acquisition targets earn significant, positive abnormal returns."*
  - *"The source of these positive rival returns is unresolved."*
- Cai Song and Walkling (2011): "Industry Shocks and the Transfer of Information across Rivals" (In their case rival bidders)

Summary

- The follow-on tests and interpretations are inconclusive
- BUT, opportunity to say something new about the nature of merger waves and acquisitions!
- What is the aspect that patent similarity can shed light on, that (noisy) industry groupings can not?

Minor Comments

- Medarex is a nice example, move it earlier in the intro!
- Match target firms to (on average) 40 "tech peers" based on Jaffe patent similarity...
- No other matching criteria? Size, profitability, firm age... we know targets are on average small and young. Are you matching to big & old "peers"?
- The equal-weight CAAR of the peers is positive. (Why equal weight?? Firm sizes are hugely skewed. You find that the effects are larger for smaller peer firms..., so if the reason is there's no "pop" in large peer firms, then matching peers on size might save you...)
- This exaggerates the magnitudes. When authors say "increase of 612 million" that is average CAR times total mktcap of the peers? It should be value-weighted CAR times the total mktcap!

Minor Comments

- Have you checked confounding factors?
- *"Other factors known to affect bidder returns include the form of payment (Travlos 1987; Huang and Walkling 1987; Wansley, Lane, and Yang 1983), and target firm organizational structure and nationality (Faccio, McConnell, and Stolin 2007; Fuller, Netter, and Stegemoller 2002; Moeller, Schlingemann, and Stulz 2004, 2005). Finally, Masulis, Wang, and Xie (2007) report a significant neg ative relation between the existence of anti-takeover provisions and acquirer returns."* – Cai Song Walkling 2011

Minor Comments

- I assume the average CAR ("qualitatively similar") results are not presented because they are smaller / insignificant? Why is that? Where does the difference between CAAR and average CARs come from?

- Again, matching potential targets on e.g. firm size, age, profits may help clean up the comparison and give you more power.

- It's well known that merges come in "waves"

- Many of which are triggered by new technologies

- Why is it a concern if your results for tech peers is explained by / collinear with industry peers? To some extent this must be true

Minor Comments

- Table V is not a placebo test. It's just bootstrapping your *p*-values?
- *p*-values seem remarkably strong given the small N. I would drop the consistent-variance Z-stats and put things in a regression framework with proper clustering
- Authors seem to switch back and forth between CAAR and average CAR at points. Why?