HARVESTING START-UPS: REAL OPTIONS OR THE END OF GROWTH? (SUMMARY)

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SUMMARY

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Principal Topic
When firms make incremental investments in high growth firms, we have argued this signals the writing of a real option, allowing the firm to capture future growth opportunities. We find when this occurs, market reactions are positive, 0.79% (p < .01). In this study we ask what happens when firms go on to acquire their partners.

For discrete options, the decision to make the acquisition occurs only if the target firm has met predetermined goals, such as the milestone goals found commonly on biotechnology private placements. Thus if the “revealed” information about the firm (since the writing of the option) is positive, then we expect to see an exercise occur. If not, they decline to make additional investments.

We observe a second type of exercise decision, that we labor timber options. Timber options are those who continue to grow over time, and the key issue is whether the rate of growth is accelerating, stable, or in decline. Firms investing in accelerating growth ought to delay their decision to invest. Stable and declining growth suggests the investing firm will likely benefit from harvesting its profits, re-investing in higher growth opportunities elsewhere. Hence the exercise decisions subtly signals the end of high growth in the targeted firm.

Discrete or timber options: which is it?

Method
We employed an event study to gauge market reactions to biotechnology firms being acquired. Event studies regress an individual firm’s stock price information against a market index. This regression creates a predicted stock price on the event day. Differences between the predicted stock price and the actual stock price are known as abnormal returns.

The three day abnormal return (-1.0,+1) for acquisitions are -1.17% (p < .05). This suggests markets view these as timber options. We then regress the abnormal returns to explain the size of the abnormal returns. First, we find that pharmaceutical investors enjoyed better returns ( -1.07%  p < .05) than did biotechnology firms (-1.24% p <.1). Time since last private placement was negative, suggesting either timber options or else a perhaps “escalation of commitment”. Acquired firm age, size, and syndication were not significant.

Results and Implications
First, this provides an empirical test of real options exercise decisions involving young, knowledge-intensity firms. Second, this provides a richer understanding of the real options reasoning used to explain acquisition decisions.

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