IS THERE AN OPTIMUM RATE OF INVESTMENT OF VENTURE CAPITAL? A STUDY OF 473 VENTURE BIOTECH COMPANIES (SUMMARY)

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SUMMARY

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A STUDY OF 473 VENTURE BIOTECH COMPANIES

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Principal topic

By staging investment, venture capitalists strive to optimize their financial returns. Entrepreneurs on the other hand might prefer to get as much investment as early as possible so as to grow their companies as quickly as possible without running short of money and having to spend time negotiating for subsequent rounds of venture capital or, if the company falters, being abandoned by their venture capitalist. An investment agreement is a compromise between a VC’s objectives and an entrepreneur’s. In theory, there should be an optimum rate of investment in terms of how much is invested in each round and the time between rounds. But to our knowledge, the relationship has never been studied empirically.

Method

We gathered data on 473 U.S. biotechnology companies that raised first rounds of venture capital in 1993 through 1999 and subsequently went public or were acquired. For each company we have the date and amount of VC of each round, market capitalization at its IPO, or valuation when it was acquired. For public companies we have sales revenue, net income, net worth, number of employees, and market capitalization on a quarterly basis. We developed regression models to look for a relationship between performance and the rate of investment as measured by the amount invested and the time between rounds. We controlled for the age of the company when the first round of venture capital was invested, the date when the company received its first round, and the date when it went public or was acquired.

Results and Implications

For companies that had IPOs, the market capitalization correlated with the reputations of the VC firm and the investment bank, the time from the first venture capital round to the IPO, and the total amount of venture capital and the rate at which it was invested. But it did not correlate with the number of rounds. In contrast, for companies that were acquired, the acquisition valuation correlated only with the number of rounds of venture capital. When the IPO and acquisition data sets were merged, the harvest valuation correlated with the total amount of venture capital and the investment rate.

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