Stock Market Manipulation and Corporate Venture Capital Investments

Discussion by:
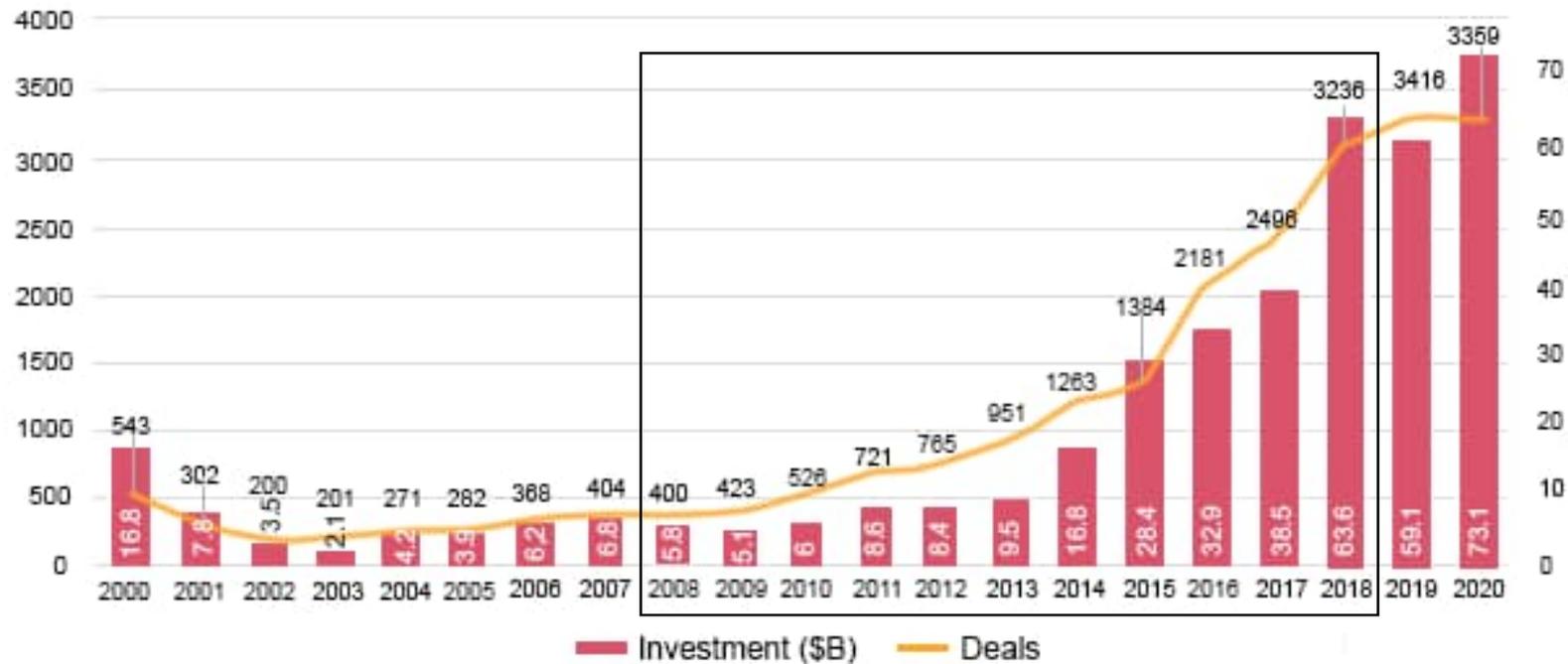
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Corporate Venture Capital: Trend

Annual global CVC financing trends 2000-2020

Source: CB Insights Report: The History of CVC

The Concept of "Manipulation"

- What is manipulation?
  - "...including but not limited to pump-and-dump schemes, wash trades, spoofing, and layering" (p. 2)

The Concept of "Manipulation," cont'd

- Who is responsible for manipulation?
  - The firm itself? (endogenous)
  - Traders? (exogenous)
  - Others?

- "Wash trading refers to an illegal activity in which a single trader buys and sells the same security in order to generate misleading market information." (Investorpedia.com)

Manipulation Measures

Appendix 1: Manipulation measurements in SMARTS, Inc. and CMCRC database

| Variable names	Definitions/ Descriptions
Continuous Trading Manipulation 30 mins Number of Alerts	The Continuous Trading Manipulation metric identifies unusual 30-minute changes in liquidity, returns, and transaction costs using the following steps: a) For each 30-minute interval (j) after the opening of the current trading day (t), calculate the following metrics for every security in the market: 1-Total trading value in the past 30 minutes (Val); 2-Total trading volume in the past 30 minutes (Vol); 3-Return in the past 30 minutes (Ret); 4-Average effective spread in the past 30 minutes (Eff Spr);5-Average quoted spread in the past 30 minutes (Quoted Spr). b) For every security in the market, compute the average value of the metrics above for each 30-minute interval (j) over the previous 30 trading days (t-1 to t-31). c) For the j-th 30-minute interval of the current trading day (t): For security i, determine the difference (Security_Deltai,j,t,m) between metric m for the current interval (j) and the average metric value for the same interval (j) over the past 30 trading days. For trading volume and trading value metrics, calculate the percentage change instead. Compute the average value of Deltai,j,t,m across all securities (Mkt_Deltaj,t,m). For the 30-minute return metric, use index returns to calculate the average delta. Determine the difference between (Security_Deltai,j,t,m) and (Mkt_Deltaj,t,m) for the current trading day (Current_Security_Deltai,j,t,m) and the average daily difference over the past 30 trading days (Hist_Security_Deltai,j,t,m). If there are three or more metrics where (Current_Security_Deltai,j,t,m) is more than three standard deviations away from Hist_Security_Deltai,j,t,m, increment the Continuous Trading Manipulation alert count by one.
End-of-day (EOD) price dislocation	A dislocated End-of-Day (EOD) price is defined as one that deviates from its mean price change by 4 standard deviations over the previous 100 trading days, measured at the close of trading. The following morning, this price typically reverts back to the mean. The EOD price dislocation value signifies the trading value in the final 15 minutes for a security (i) experiencing EOD price dislocation on a specific day (t). In the study, a dummy variable is employed to indicate whether security (i) experienced an EOD price dislocation event.
Continuous Trading Manipulation 30 mins Value Ratio (bps)	The metric represents the proportion of trading value for all 30-minute (j) intervals with Continuous Trading Manipulation alerts, in relation to the total trading value for security i on day t. The study employs the monthly continuous trading manipulation 30-minute value ratio (bps) by aggregating the ratios for each day within a month when security i was subjected to continuous trading manipulation.

The Story: Manipulation and CVC

- Theory / hypotheses:
  - CVC → Manipulation? (pre or post)

    OR
  - Manipulation → CVC?

- The "story," i.e., the predicted relation, is not sufficiently clear and crisp from the current writing.

The Evidence

- <u>Short-term:</u>
  - "The findings reveal a downward trend in stock manipulation before CVC entry, with an increase occurring immediately after entry…

- <u>Long-term:</u>
  - "… followed by a decrease one year after."

- Are firms reducing stock market manipulation leading up to a CVC investment, simply to then completely reverse and actually *boost* manipulation? Why?

The Evidence, cont'd

- Manipulation: Decrease by 23% (2 yr pre-CVC), then increase by 29-46% (6-12 mo post-CVC), and then decrease __% (1-2 yr post-CVC)
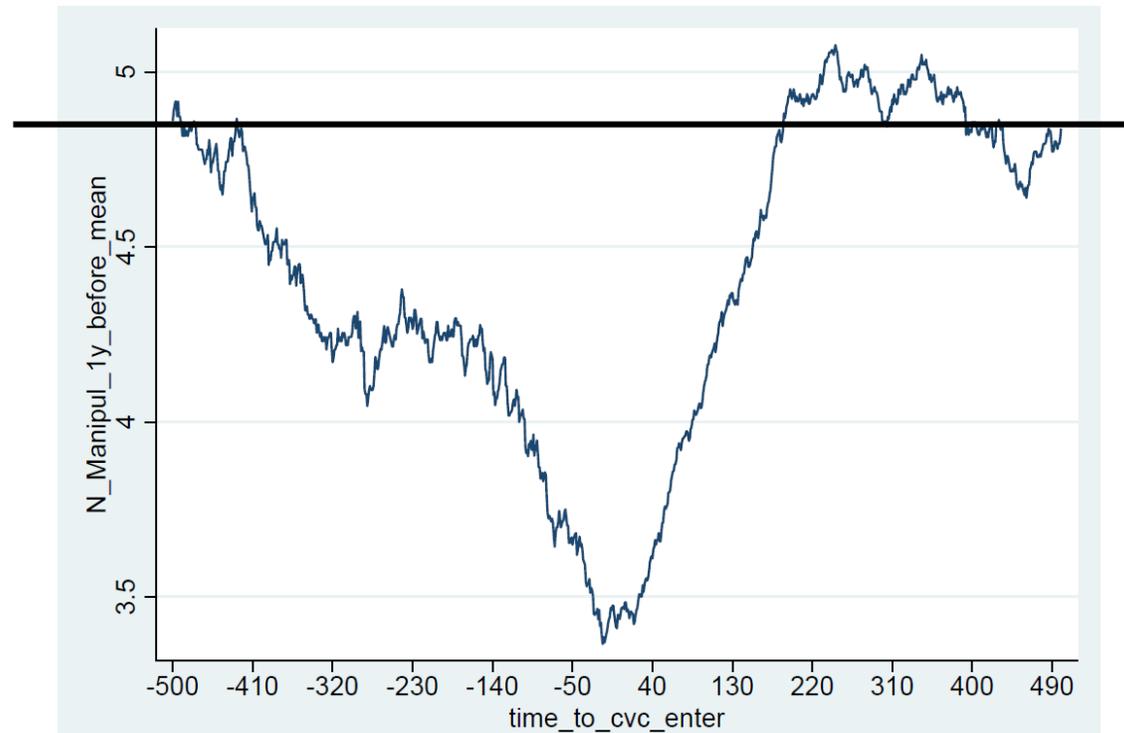
Robustness & Limitations

- Significant difference in economic significance: 18% panel OLS vs. 11% matched PS lower over 90 days.

- Too many limitations stated in section 5…

Thank you!