BACKGROUND & MOTIVATION OF THE RESEARCH

- The modern psychology may help to alleviate the frustration of an intellectual father of the scientific revolution: what's behind the 'madness of humans in financial bubble'?
- Positive fantasy about the future (e.g., "this time is different") seems to prevail ex ante when market bubbles are accumulated and such financial foibles are repeated, global phenomenon.


I add an explanation to why U.S. technology bubble (burst) in 1995-2001 happened based on the science of human motivation.

THEROETICAL BACKGROUND: ‘POSITIVE FANTASY ABOUT THE FUTURE’

- Oettingen and colleagues established mainly three consequential mechanisms of ‘positive thinking about the future’ based on the 30+ years of researches.
  - Cognitive Mechanism: Biased Information Acquisition (Kappen & Oettingen 2012)
  - Affective Mechanism: Energy-Sapping Effect (e.g., Kappen & Oettingen 2011)
  - Motivational Mechanism: Low Efforts by Mental Attainment (e.g., Kappen, Kappen, & Oettingen 2015)

- Said differently, one tends to select the pro over con information, lose the momentum, and invest less efforts once you positively dream about the future.

“...the dot-com bubble was a fantasy period...” McCullough (2018) [italics is added]

“...I can calculate the motions of the planets, but I cannot calculate the madness of men." Sir. Isaac Newton (1642-1727) [italics and bold are added]


The optimistic, feverish moods in the U.S. stock market between 1995 to 2000, reflected as a rhetorical evidence that “this time, indeed, things are different” filled in the minds and hearts of the Wall Street and the Main Street.

- The dot-com period IPOs in 1995-2000 may reflect this climate in their ‘going-public’ processes and may leave a trail in their corporate narratives to investor community: e.g., IPO prospectuses (or ‘offering prospectuses’)

Measuring Positive Future, Crash Risk, and Control Variables

- The initial sample includes all firm-years for which an offering document was filed with at least 200K file size during the dot-com bubble period, and combine the initial sample with weekly stock return data from the CRSP (Center for Research in Security Prices) and the financial statement data from Compustat to construct the variables.

- I calculated the future stock price crash risks between 6 March 2000 and 2 March 2001, which is known as the dot-com bubble burst period.

- Following Jin & Myers (2006) and Hutton, Marcus, & Tehranian (2009), I calculated the three different measures of company-specific future stock price risks: (1) NCSKEW (extremely negative stock returns beyond market expectations), (2) DUVOLs (exposure to the hazardous volatility of stock returns), (3) COUNT (the likelihood of extremely negative returns events during the year).

- Consistent with prior studies, I control for a set of known determinants of crash risk: market capitalization (LOGMV), profitability (ROA), accounting conservatism (MTB), financial leverage (LEV), past returns (RET), return volatility (SIGMA).

- Following Swinimer et al. (2014), I calculated the positive future thinking of dot-com era going-public companies using the following formula: (positive emotion – negative emotion) / (future focus – past focus). Note that I used both the ULCW (Jackson, Drasgow, & Gaskin 1997), and the Loughran-McDonald (LM) dictionary for emotional valence since the LM is the established, standard dictionary in business-context documents. The reported results are based on the LM dictionary for emotional valence and the LIWC dictionary for temporal valence.

- Though it is untabulated, the results were qualitatively similar when I used the ULCW dictionary for emotional valence.

RESULTS

The descriptive statistics were corresponded to those of prior studies in the crash risk literature (e.g., Kim, Wang, & Zhang 2019), and the mean COUNT from logistic regression indicates that 21.8 percent of the company-year observations experienced at least one crash week.

- Mainly, I find that entrepreneurial positive future thinking in the bubble era from January 1995 to March 2000 is positively associated with the future stock price crash risk (βNCSKEW=0.122**, n=505, a higher value means a stock is more ‘crash prone’; βDUVOL=0.048*, n=505, a higher value indicates a greater level of crash risk; βCOUNT=0.046**, n=462, a higher value suggests a greater likelihood of crash events) from March 2000 to March 2001.

- Interestingly, I find a pattern that this relationship is stronger for (1) the under-performed (e.g., βNCSKEW=0.332**, n=217), (2) transitory better-performed (e.g., βNCSKEW=0.186**, n=217), and (3) low litigation IPO companies (e.g., βNCSKEW=0.125**, n=404).

GENERAL DISCUSSION & FUTURE RESEARCH

- This study is the first to show that entrepreneurial positive future thinking facilitated dot-com crashes and explore the role of entrepreneurial cognition in the history of ‘technology bubble’.

- I address the question of why dot-com crashes happened (e.g., Shiller 2002) from social psychological perspectives to answer the call for stimulating dialogues between psychological science and entrepreneurship research (see Balachandra et al. 2019).

- The known mechanisms behind the psychology of thinking about the future can be tested in lab or field experiments (e.g., how MCI interventions will change entrepreneurial behaviors)

- I plan to extend this underlying psychological mechanism to address a few more phenomenon (e.g., M&As, shareholder litigation, CEO dismissal, and managerial entrenchments) in corporate America.

References Available Upon Request

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