



VANDERBILT UNIVERSITY
OWEN GRADUATE SCHOOL OF MANAGEMENT

FMRC

Financial Markets Research Center

PRIVATE EQUITY & VENTURE CAPITAL

THE CONFERENCE IN REVIEW | FALL 2014 | NASHVILLE



As privately held companies spur new innovations—even new industries—the private equity and venture capital funds that fuel these operations continue to grow at a rapid pace, producing a unique set of investment opportunities and challenges. Researchers from institutions such as MIT, the University of Texas and the London School of Economics joined colleagues at Vanderbilt University for the 2014 Fall Financial Markets Research Center (FMRC) Conference on Oct. 9–10 to discuss the dynamics of this increasingly vibrant sector of the global economy. This year's conference, organized by Assistant Professor of Finance Nicholas Crain, also included a keynote lecture by Vanderbilt alumnus and Board of Trust member Bruce Evans, managing director at Summit Partners.

New Avenues for Private Equity Research: A Practitioner's View

Bruce R. Evans, Managing Partner, Summit Partners and Chairman of the Investment Committee for Vanderbilt University's Board of Trust

I've been with Summit for 28 years. We started as a late-stage venture firm with about \$160 million under management. Today, we manage essentially three businesses: a late-stage venture firm, a growth equity company with \$4 billion in capital under management, and a credit business that co-invests with our equity businesses.

I'm interested in the part of the market that finances emerging growth companies, as opposed to buyout firms, which tend to work more directly with companies. When Sarbanes-Oxley was passed in the early 2000s, companies had a much harder time going public. As a result, you're seeing much more reliance on private financing in later stages of growth companies, despite valuations like we've seen with the Alibaba IPO.

There are a few research questions I'm interested in. One relates to benchmarking: How do you benchmark venture capital properly? It tends to be more growth-focused, but is benchmarked against the private equity business, which focuses mainly on buyouts.

Another area I think about is regulation. The Dodd-Frank Act directed the SEC to define venture capital and the Commission—somewhat arbitrarily in my opinion—divided the industry in half. If you are deemed a venture capital firm, you are not regulated. Otherwise, you have to register as investment advisors.

With registration come lots of compliance rules and some expenses. So just as dollars started to flow into the private alternative to the public markets, the SEC said let's regulate that thing. And my fear, as a practitioner, is that it will create a vacuum of capital flows in the same way Sarbanes Oxley did for IPOs.

The potential research question for the academic side is to ask where that line in the industry should be drawn. Where does venture capital end and something else begin?





Cleaner and Cheaper: How Restaurants Benefit from Private Equity Buyouts

Albert Sheen, Lundquist College of Business, University of Oregon

The popular image of private equity firms tends to be that of *Barbarians at the Gate*, ready to strip a company of its assets, then quickly sell for a profit. Attempting to assess what happens to buyout targets following an acquisition, researchers Shai Bernstein of Stanford University and Albert Sheen of the University of Oregon turned to health-inspection records in Florida, which, unlike most areas of the U.S., are collected at the state level and offer a consistent measure of quality. Bernstein and Sheen compared similar chain restaurants (e.g., Checkers) that were directly owned and operated by a private equity firm after a buyout

versus those owned and operated by an individual franchisee. “Our results suggest that following the PE buyout, customers are better off, as restaurants become safer and better maintained,” according to the working paper Sheen presented at the FMRC Conference. In addition, he said, menu prices at PE-owned restaurants dropped by an average of 30-cents across all items. “Private equity involvement not only improve[s] operational practices, but also appear[s] to positively affect consumers.”



Thomas Chemmanur,
Carroll School of Management, Boston College

Location, location, location. While this axiom holds true for real estate and retailing, what does it mean for private equity investment, particularly across borders? A working paper, co-authored by Thomas Chemmanur of Boston College, Tyler J. Hull of the Norwegian School of Economics and Karthik Krishnan of Northeastern University, suggests that investor proximity to a target firm does matter. Efficient travel options, facilitated by open-skies agreements (OSAs) between U.S.-based private equity groups and a target company’s home country allow for the closer monitoring of management teams, which in turn leads to greater operational efficiency. In addition, “we find that investment by U.S. [private equity] investors increases the likelihood of a successful exit by two percentage points,” according to the paper presented by Chemmanur at the Fall 2014 FMRC Conference. Those same effects were not found among private equity firms based outside the U.S. The researchers analyzed 8,416 leveraged buyout (LBO) transactions between 2001–2010 from 28 nations, finding that the presence of an OSA with the U.S. increased the likelihood of investment from U.S.-based private equity by a meaningful 2.8 percentage points.

Open-Skies Agreements Boost Cross-Border Private Equity Investments

Career Concerns Lead to Overly Conservative VC Investments

Nicholas Crain,
Owen Graduate School of Management, Vanderbilt University

Making risky investments may seem like a portfolio manager’s last-ditch effort to make up for poor performance. In fact, studies have shown that’s the case for investment managers at mutual and hedge funds. But the opposite holds true for venture capital funds’ General Partners (GPs), according to a working paper presented by Nicholas Crain, assistant professor at Vanderbilt’s Owen Graduate School of Management and faculty organizer of the Fall 2014 FMRC Conference. Examining a proprietary data set from Neuberger Berman covering the investments of 181 venture capital funds, Crain finds that the incentive to raise money for a second fund appears to prompt more inefficiently conservative—and diversified—investments at the start of a venture capital GP’s career as compared to investments made after the establishment of a successful record. “Career concerns in venture capital tend to discourage risk-taking,” he writes. “Following good performance early in a fund, GPs pursue a more risky investment strategy ... by investing in more volatile portfolio companies and by allocating their remaining capital amongst a smaller number of investments.”





VCs Put Patents to Work Inside Their Own Portfolios

Juanita González-Uribe, London School of Economics

Venture capital investors don't just talk about financing innovation, they're actually doing it—at least as measured by patent citations. While VC investors financed less than 4% of industrial patents in the U.S. over the past 40 years, the ones in their portfolios generated twice as many follow-on citations as comparable patents, according to research by Juanita González-Uribe of the London School of Economics. Further, while most patent citations come from outside a VC portfolio, “the increase in the likelihood of a citation from a company inside the VC portfolio

is two times higher than from any other assignee,” González-Uribe writes in the working paper she presented at the Fall 2014 FMRC Conference. She acknowledges that the increased citations may reflect either a VC firm's ability to select potentially influential patents, or a VC investment signaling commercial value to others. One potential interpretation of the finding, González-Uribe writes, is that VC firms can finance the most “influential innovations because they can at least partially overcome the inappropriability of the innovation process by internalizing some of the R&D externalities of any company they back in the R&D of other companies in their portfolio.”



Tax Returns Offer Insight into Private Firm Buyouts

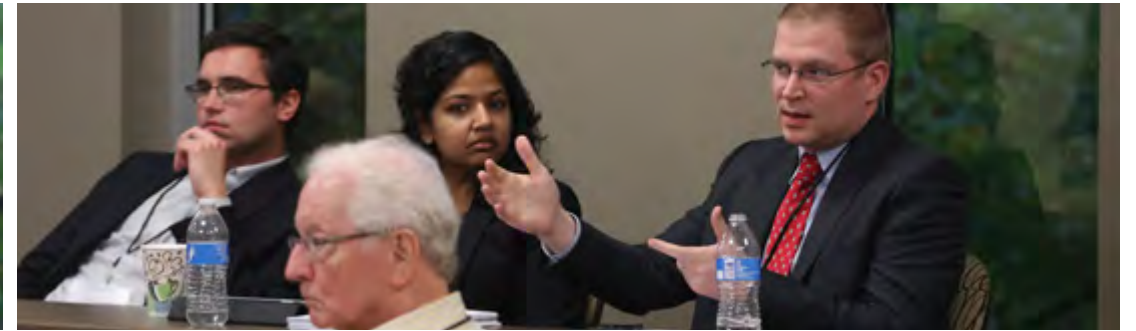
Jonathan Cohn, McCombs School of Business, University of Texas

While private equity (PE) buyouts of publicly traded companies tend to grab headlines, PE buyouts of privately held firms are much more common. However, the availability of reliable data on private transactions has limited research on the motivations and consequences of these PE acquisitions. Using a novel sample of corporate tax returns between 1995–2009, Jonathan Cohn of the University of Texas and Erin M. Towery of the University of

Georgia find that buyouts of private companies create value in at least two ways: by improving operational performance (a median 1.5% increase in return-on-sales for underperforming companies) and by investing in growth. “Our results suggest that the purpose and consequences of private firm buyouts are very different than those of public firm buyouts,” according to the working paper Cohn presented at the Fall 2014 FMRC Conference. “Unlike the public firms, private firms acquired in PE buyout experience substantial operational changes post-buyout, both in terms of operating performance and growth.” In addition, this study is the first the researchers are aware of that analyzes the determinants of private firm PE buyouts. “One possible implication of our results is that private equity buyouts are viable substitutes for initial public offerings as a means of raising growth equity for these firms.”



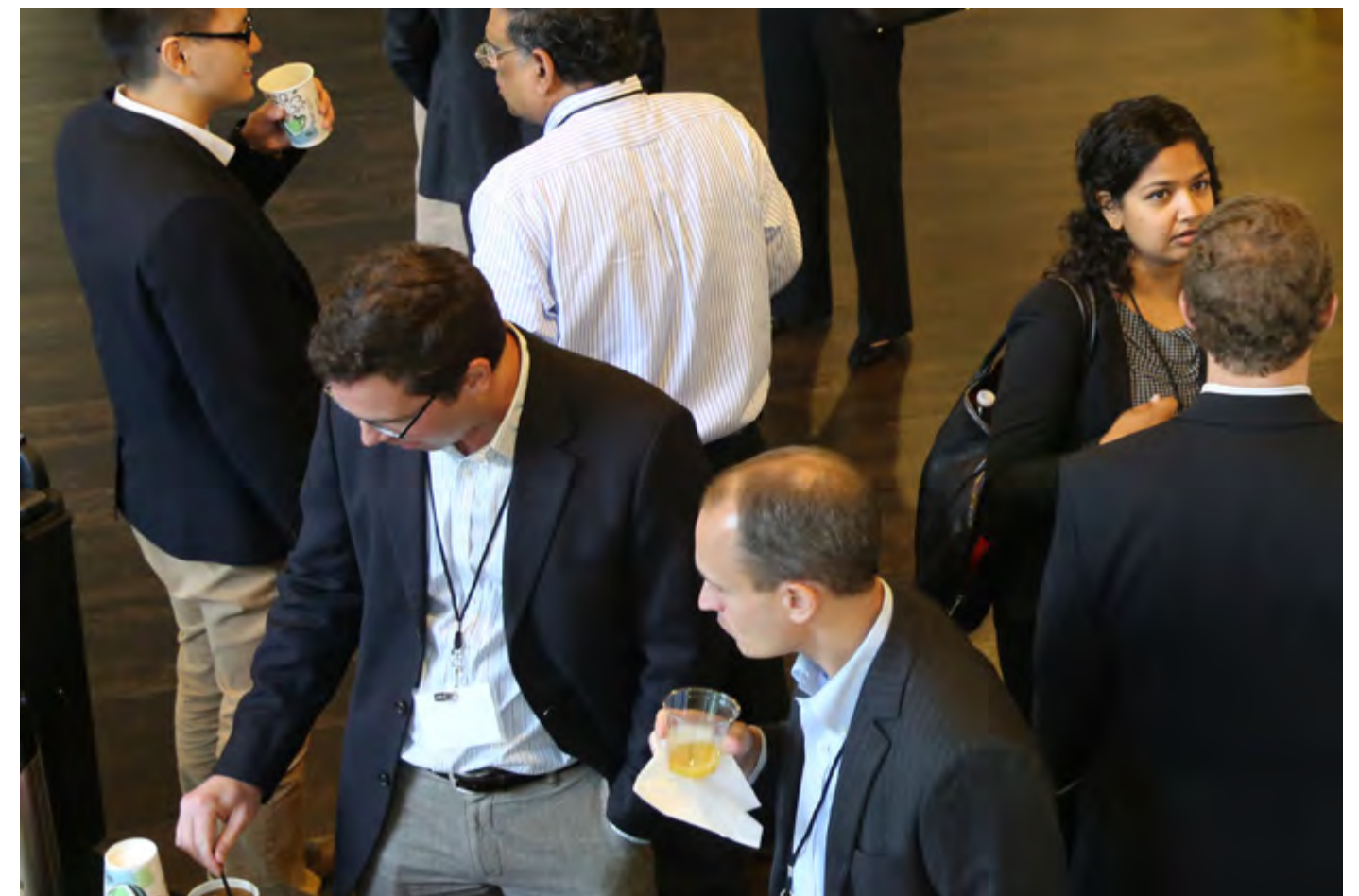
Understanding When and Why Private Equity Firms Manipulate Returns



Oleg Gredil, Kenan-Flagler Business School,
University of North Carolina

With no liquid markets for most assets held by private equity (PE) firms, investors evaluating a fund's performance often must rely on the asset values reported by the fund's managers. A new study by Gregory Brown and Oleg Gredil, both of the University of North Carolina, along with Steben Kaplan of the University of Chicago, finds evidence of net asset value (NAV) misreporting among buyout and venture funds. Poorly performing funds appear to boost returns when they are actively trying to raise a new fund. "However, these attempts are unsuccessful," suggesting that

investors see through the inflated returns, according to the working paper presented by Gredil at the Fall 2014 FMRC Conference. At the other end of the spectrum, the best-performing funds tend to understate returns to avoid being labeled as manipulators. The research uses data obtained from Burgiss, a data service provider catering to institutional investors. The co-authors also address potential risk-adjustment abnormalities by creating a series of placebo portfolios using public companies that share similar properties. In addition, the researchers "find strong evidence of peer-chasing where top-performing funds report lower returns and bottom-performing funds report higher returns."





About the FMRC

Since its founding in 1988, Vanderbilt University's Financial Markets Research Center has sought to bring together academic researchers, industry practitioners, and policymakers to analyze pressing topics in finance. Past speakers and conference participants include former U.S. Federal Reserve Chairmen Paul Volcker and Alan Greenspan; Nobel winners Eugene Fama, Myron Scholes and Robert Shiller; and industry leaders William Brodsky, longtime Chairman and CEO of the Chicago Board Options Exchange, and Thomas Peterffy, founder of Interactive Brokers. Through its corporate sponsorships, the FMRC supports the enrichment of knowledge and education about financial markets.





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