PRIVATE CAPITAL QUARTERLY

SECOND QUARTER 2017

INSIDE THIS ISSUE

WITH GROWING AUM, DOES PRIVATE STILL BEAT PUBLIC?

F·E·G®
investment advisors

The bull market in public equities continued unabated through the second quarter of 2017. Private markets continued to advance alongside their public counterparts, and generally have pushed valuation metrics and purchase multiples into heady territory.

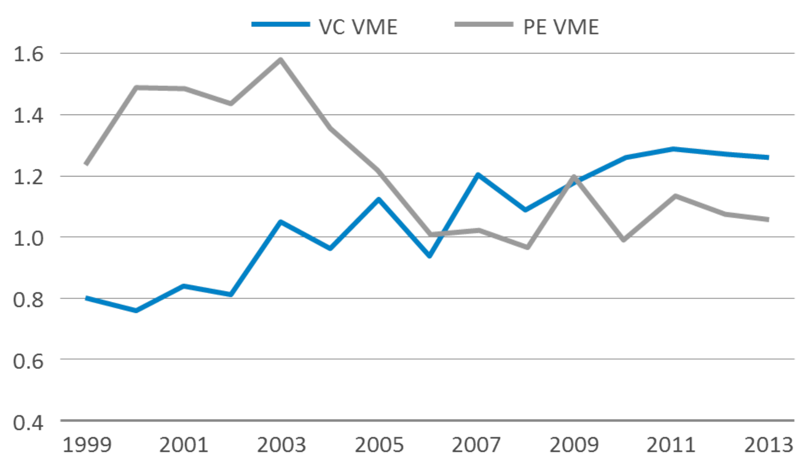
Total assets across private strategies were estimated at $6.5 trillion[1] and according to Preqin, another $1.6 trillion is available to invest in the form of 'dry powder,' up 17% from year end 2016.[2] While over half this dry powder is held in the U.S., growth has been highest in funds raised in Asia and the Rest of the World.

A number of factors are driving increased demand for private capital. Demand for the return premium potential is key, but strong overall private market performance contributes tremendously. The question is, can the markets put this amount of capital to work productively and still generate a premium return to public markets.

Well-known and well-regarded University of Chicago Booth School of Business professor Steven Kaplan recently updated his study on this topic.[3] Among other things, he noted that despite its growth, private capital commitments remain a small fraction of overall stock market capitalization. Private equity's share spiked in 2007 to represent 1.2% of the public markets, but has remained closer to 0.8% in recent periods. Venture Capital has averaged less than 0.2% since 2000.

So you could argue there is room for private investments to grow. That said, he also highlights the negative correlation between private funds and capital raised. By that measure, now may not be the most favorable environment for buyout investments, but reasonable for venture. He also notes the average buyout fund has generally matched the performance of public markets in its low periods (a 1.0 measure on the chart below), not a bad downside if that trend continues.

U.S. VC AND PE PMEs BY VINTAGE YEAR, 1999–2013
Pooled Average as of December 2016



Data sources: Burgiss, Steve Kaplan

Detailed reviews of the buyout, venture, private debt, energy, and real estate markets follow. Also, be sure to read the upcoming *FEG Insight: 2017 FEG Investment Forum*, including the recap of Christian Busken's educational breakout session entitled *Innovative Alternatives in Real Assets*. This panel discussion explored opportunities within niche areas of real estate, natural resources, and infrastructure that FEG believes can offer compelling value and are "below the radar" of many institutional investors.

FOOTNOTES

1 Willis Towers Watson, Global Alternatives Survey 2017, July 2017, data as of year-end 2016
2 Dry Powder-All Private Equity funds by Type, Preqin, www.preqin.com, as of August 2017
3 Steven N. Kaplan, Neubauer Family Distinguished Service Professor of Entrepreneurship and Finance at the University of Chicago Booth School of Business, *Private Equity and Venture Capital: Past, Present, and Future*, Presentation to PensionBridge Conference, Chicago, July 2017

Private Equity

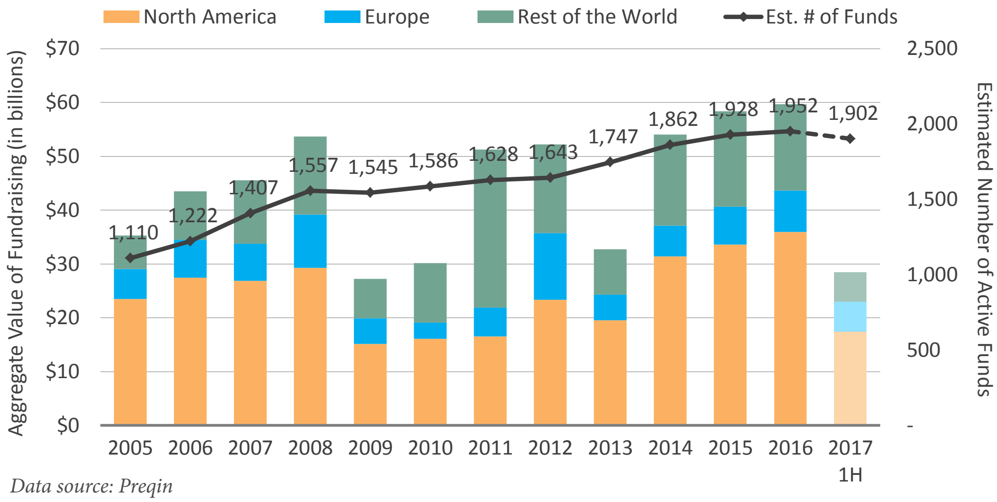
Venture Capital

FUNDRAISING AND INVESTING

- Globally, venture funds raised over $28 billion in commitments in the first half of 2017.[1] After a slow start to the year, fundraising accelerated in the second quarter, aligning this year's pace with the prior three years and indicating that this may be the fourth consecutive year over $50 billion was raised.

- The estimated number of active venture funds also remains elevated. The fundraising market has consistently been near peak levels for several years.

VENTURE FUNDRAISING AND ESTIMATED NUMBER OF ACTIVE FUNDS
As of June 30, 2017

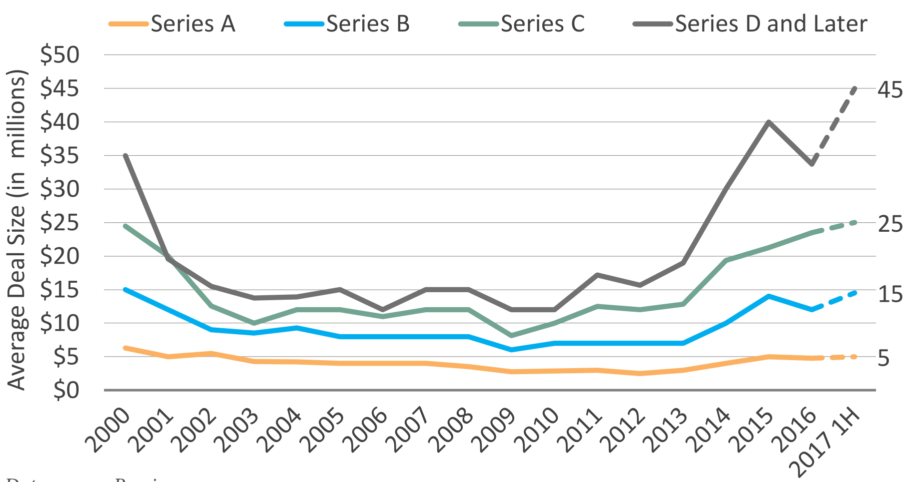


Data source: Preqin

INVESTMENT ACTIVITY

- Reflective of the fundraising environment, median deal sizes rose in 2017, with late-stage rounds nearing all-time highs. Round sizes also increased, as managers had more capital to deploy.[2]

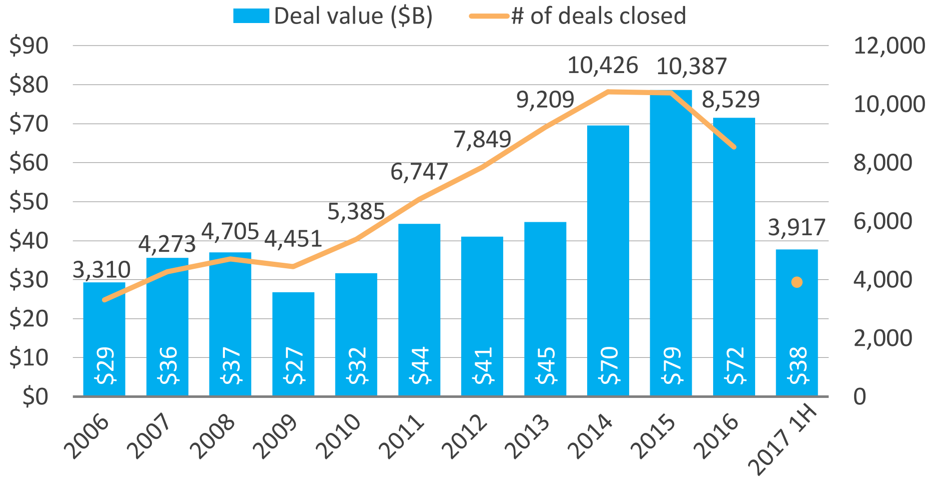
MEDIAN DEAL SIZE BY FINANCING ROUND
As of June 30, 2017



Data source: Preqin

- U.S. venture capital firms invested $38 billion in almost 4,000 companies in the first half of 2017. The dollar amount invested through the first half of the year places the annualized rate near recent peaks and annualized pace of companies receiving financing slightly below the average from 2013-2016.[3]

VENTURE BACKED INVESTMENTS
As of June 30, 2017

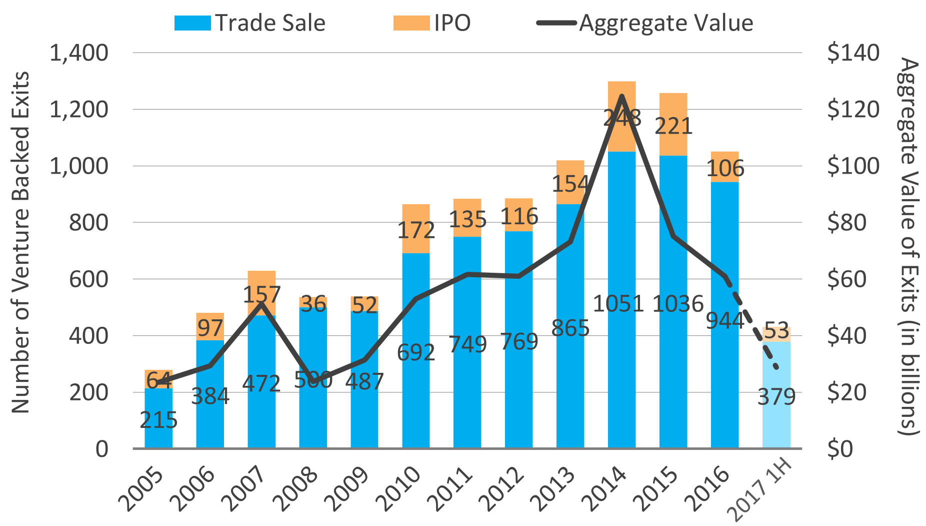


Data source: Pitchbook

EXIT ENVIRONMENT

- The pace of exit activity for both acquisitions and initial public offerings (IPOs) continued to slow in the first half of 2017, with the aggregate value of exits also falling. Recent high profile venture-backed IPOs such as Blue Apron and Cloudera have not performed as well.

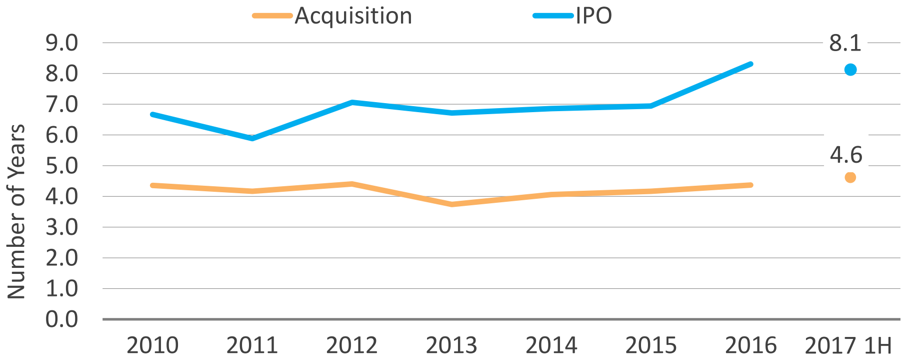
VENTURE CAPITAL EXIT ACTIVITY
As of June 30, 2017



Data source: Preqin

- Holding periods have extended for venture-backed companies for the last four years. The median time to exit through both acquisitions and IPOs is near peak levels, indicating venture investors are required to wait longer for returns to materialize.

MEDIAN TIME TO EXIT FROM FIRST VENTURE FINANCING
By Exit Type

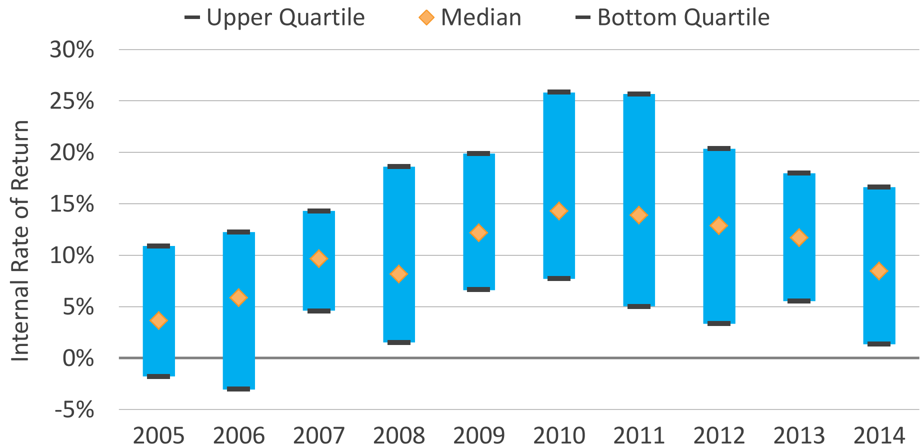


Data source: Pitchbook

PERFORMANCE

- Venture fund performance by vintage year rose steadily from 2005 to 2011, with more recent vintages trailing the 2011 high. These more recent vintages remain relatively young and performance may change substantially. The slowing exit markets and longer hold periods may affect performance and realizations in the coming quarters.

VENTURE CAPITAL PERFORMANCE
As of March 31, 2017



Data source: Thomson One

CONCLUSION

- Fundraising and investment activity has remained at elevated levels; however, a slow exit market and long holding periods are likely to adversely affect performance. Thus, as the market slows, the importance of working with experienced managers who have invested through various market cycles grows.

PRIVATE EQUITY FOOTNOTES

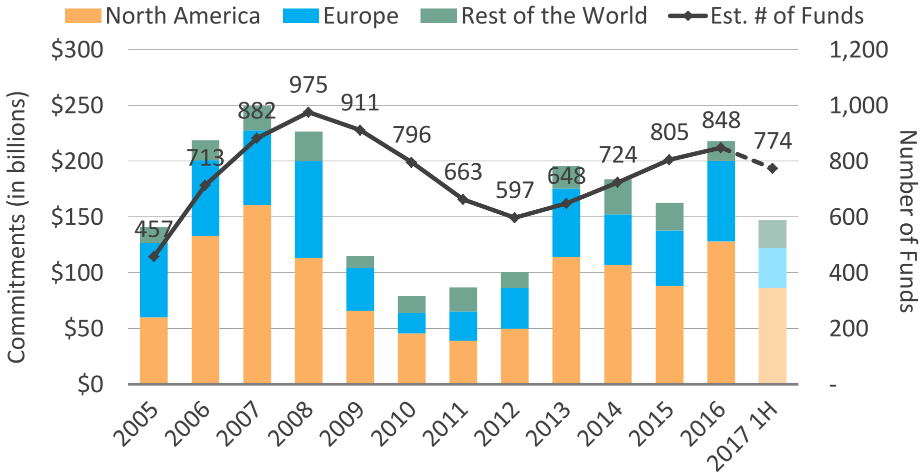
1 Preqin , www.preqin.com, accessed on August 9, 2017
2 *Ibid*
3 Pitchbook/NVCA Venture Monitor 2Q17

Buyouts

FUNDRAISING AND INVESTMENT

- Globally, fundraising for buyout funds remains strong. During the second quarter, buyout funds raised roughly $90 billion, half of which was in North American-focused funds. At this pace, 2017 is likely to be a record year for capital raised.[1]
- Capital raised for European-focused managers nearly doubled versus last year during the same time period, while Rest of World buyout funds raised approximately $16 billion, bringing the year-to-date total to $24 billion and surpassing the $17 billion raised in all of 2016.[2]

BUYOUT FUNDRAISING AND ESTIMATED NUMBER OF ACTIVE FUNDS
As of June 30, 2017

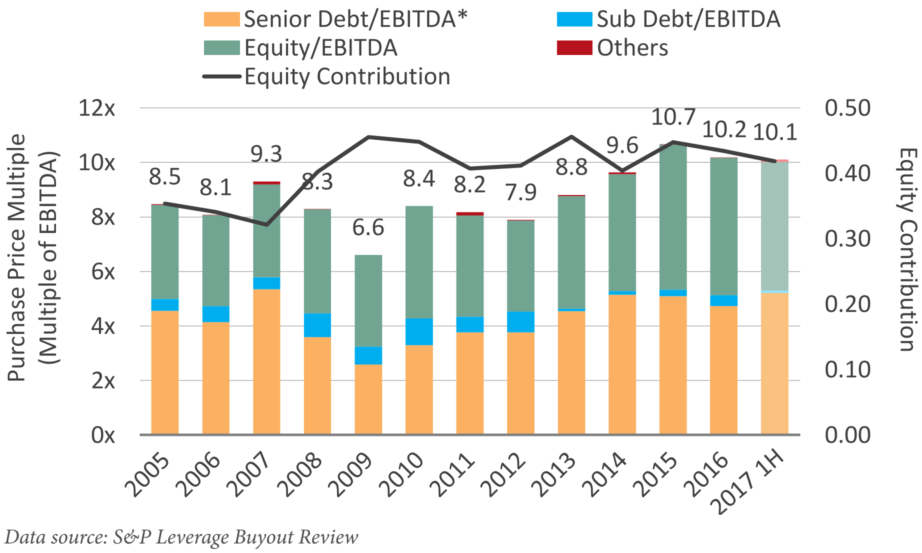


Data source: Preqin; data reflects the number of global buyout funds with a final closing in the current vintage year plus the prior three vintage years.

INVESTMENT ACTIVITY

- As of June 30, 2017, the average purchase price multiple for middle-market buyout transactions was 10.1x EBITDA.
- Leverage ratios remained relatively constant. According to S&P Capital IQ, the average debt multiple for middle market LBOs was roughly 5.3x EBITDA, which is in line with the 2015 annual average and below the 2007 peak of 5.9x EBITDA.[3]
- Equity contributions in large buyout transactions remained steady at 40%. Contributions hit their low point in 2007 when the ratio dipped below 30% and peaked in 2009 (46%) when financing was scarce. Equity contributions in middle market transactions were little changed at quarter-end, sitting at 42%.[4]

AVERAGE PURCHASE PRICE MULTIPLES & EQUITY CONTRIBUTION
As of June 30, 2017

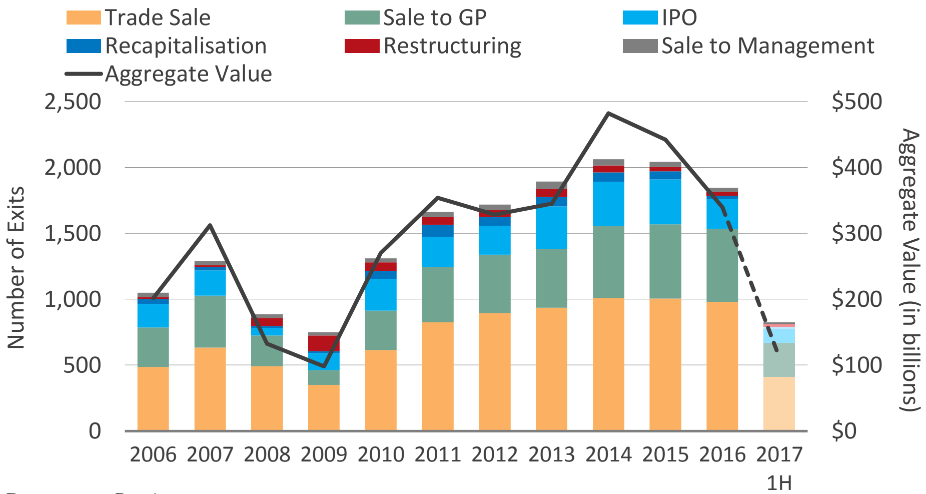


Data source: S&P Leverage Buyout Review

EXIT ACTIVITY

- Through June 30, exit activity in the buyout market was down roughly 10% from the same period last year. Aggregate exit values also were down roughly 25% when compared to the first half of 2016.[5]
- Trade sales continued to represent more than half of all buyout-related exit volume and values.

BUYOUT EXIT ACTIVITY
As of June 30, 2017



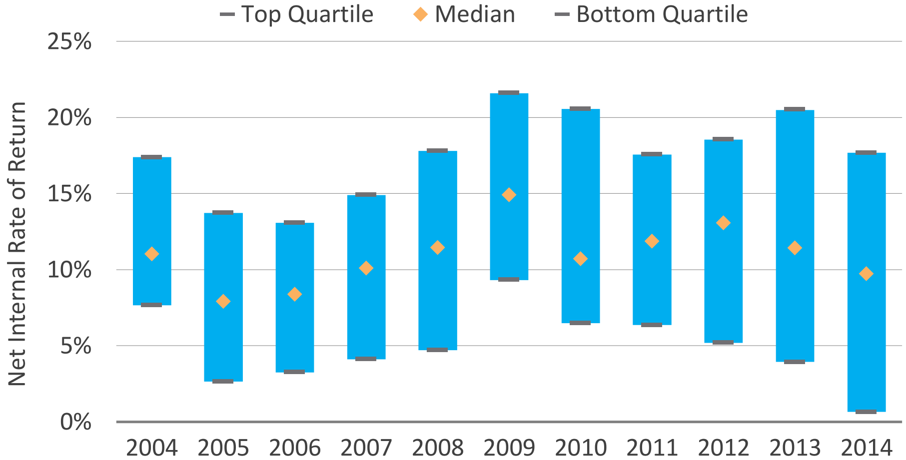
Data source: Preqin

PERFORMANCE

- Performance has been strong on a 1-, 3-, 5-, and 10-year basis, with time-weighted returns of 11.5%, 12.0%, 13.7%, and 10.4%, respectively.[6]
- The dispersion of returns between top and lower-quartile funds has consistently been over 800 basis points, demonstrating the importance of manager selection.

BUYOUT PERFORMANCE BY VINTAGE YEAR

As of March 31, 2017



Data source: Thomson One

CONCLUSION

- Fundraising levels and elevated purchase price multiples have continued to be areas of concern. Given performance in the first half of 2017, North American private equity firms are on pace to match or surpass fundraising levels recorded 10 years ago. Manager discipline and operational and sector expertise is critical to generating premium returns. FEG continues to look for managers with clear competitive advantages and investment philosophies built on fundamental value.

BUYOUTS FOOTNOTES

1 Preqin , "Funds in the Market," www.preqin.com, as of June 30, 2017
2 *Ibid*
3 S&P Leveraged Buyout Review – Second Quarter 2017; Note, S&P Capital IQ data only represents a sample set of leverage buyout transactions executed during a given time period
4 *Ibid*
5 Preqin, "Buyout Deals Analyst," www.preqin.com, as of June 30, 2017
6 Thomson One – Horizon Summary Report as of December 31, 2016

Private Debt

FUNDRAISING

- In recent interviews with institutional investors, Preqin noted that 28 private debt funds reached a final close in the second quarter of 2017, totaling $16 billion in capital commitments. Of those funds, 68% targeted North America, 18% focused on Europe, and 14% focused on Asia and Rest of the World.[1]
- Preqin also noted that together, direct lending and distressed debt accounted for 75% of the $16 billion in capital commitments to private debt in the second quarter, with the remaining 25% focused on mezzanine debt and special situations.[2]

FUNDAMENTAL BACKDROP

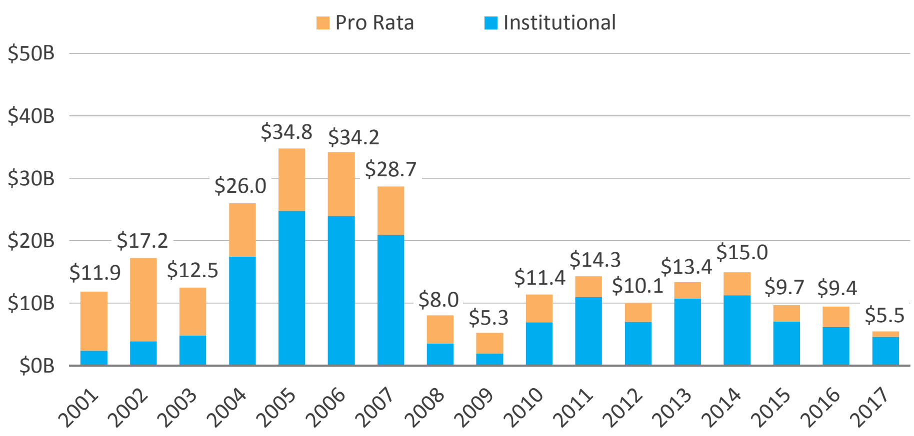
- Fundamentals in the lower middle market—i.e., companies with earnings before interest, taxes, depreciation and amortization (i.e., EBITDA) of $50 million or less—remained generally favorable, although the table shows an increase in total leverage (debt/EBITDA) while purchase price multiples remained elevated. While the equity contribution remained strong, a decrease in earnings due to recession or company-specific deterioration could present challenges to investors providing financing for these companies.

	2007	2017*
Debt/EBITDA Multiples	5.6x	5.8x
Equity Contribution	32%	44%
Purchase Price Multiple	9.3x	10.9x
Pro Forma EBITDA	$29.0M	$44.8M

Data source: S&P Global Market Intelligence – MM Quarterly 2Q17
**as of 2Q 2017*

- Transaction volume in the U.S. middle market was $5.5 billion through the first half of 2017, putting the market on pace to modestly exceed the calendar year volume of both 2015 ($9.7 billion) and 2016 ($9.4 billion). While this shows improvement versus recent years, middle market volume remained significantly lower than peak years in the late 1990s and at roughly a third of the volume of the pre-crisis (2007) years.

MIDDLE MARKET VOLUME BY YEAR
Issuers with EBITDA of $50 Million or Less

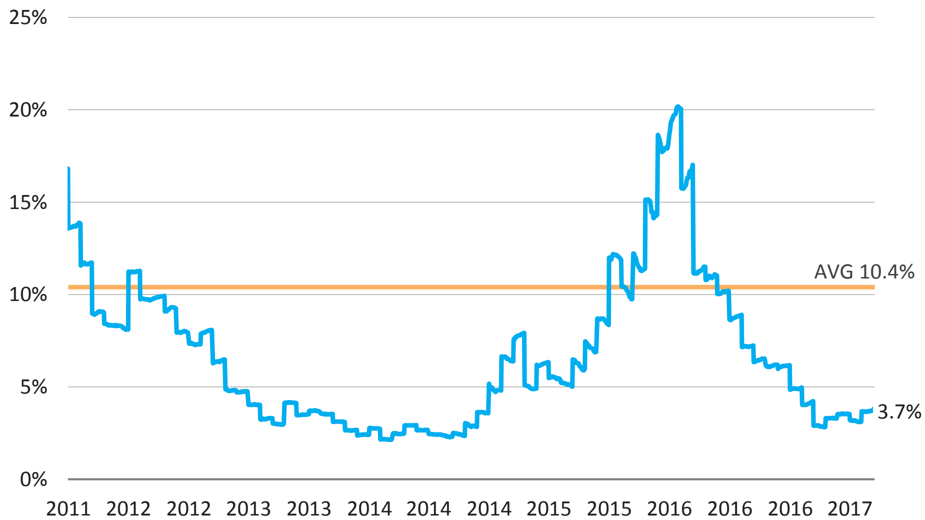


Data source: S&P Global High-End Middle Market Lending Review 2Q 2017

DISTRESSED UPDATE

- The European distressed opportunity set remains the focus of managers with broad mandates that allow them to invest in either U.S. or Europe. The emphasis of those investments remained dedicated primarily to non-performing loans, as European banks sought to reduce exposures to weaker assets ahead of Basel III implementation in 2019.
- The U.S. credit cycle has remained extended, with investors willing to accept lower credit risk premiums. Distressed managers have been raising "war chests" over the past few years in preparation for the next distressed cycle, with the traditional words of warning regarding an overvalued market coming more frequently from these managers.
- Despite warnings, the sustained rally in high yield bonds has pushed the distressed ratio—i.e., bonds trading at more than 1000 basis points over Treasuries—well below the historical average, falling to 3.8% in August 2017.

U.S. HIGH YIELD DISTRESSED RATIO
Daily



Data sources: Bank of America/Merrill Lynch, Bloomberg, L.P.; Data as of August 2, 2017
Note: Distressed ratio = Full market value of U.S. High Yield Distressed Index (HODI) as percentage of full market value of broad U.S. High Yield Index (HOAO)

CONCLUSION

- Private debt strategies remain popular and are garnering significant interest from institutional investment consultants.
- Middle market fundamentals remain reasonably healthy, reflecting a mixed bag of late cycle characteristics. Middle market volume has remained well below peak volume/pre-recession years, which FEG finds compelling.
- European distressed opportunities remain prevalent, with continued pressure for banks to sell assets due to slow growth and Basel III deadlines. U.S. defaults for 2017 remain soft and absent a U.S. recession, in which default rates typically spike. A broad-based U.S. distressed opportunity remains further down the horizon.

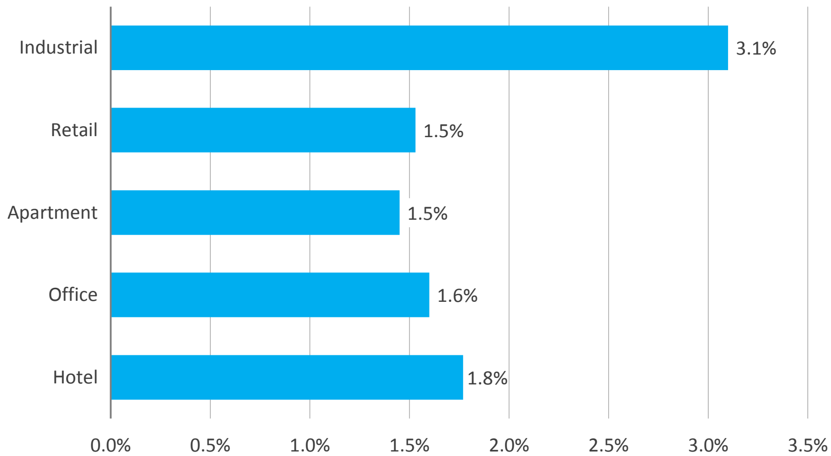
PRIVATE DEBT FOOTNOTES

[1] Preqin Quarterly Update: Private Debt Q2 2017
[2] *Ibid*

Private Real Estate

- Real estate values, as measured by the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index (NPI), increased 1.8%, during the second quarter, following a 1.5% gain in the first quarter. On a trailing one-year basis, the index gained 7.0%, and the annualized 5-year return was 10.5% as of June 30, 2017.[1]
- The industrial and hotel sectors were the top performers in the quarter, gaining 3.1%, and 1.8%, respectively. Alternatively, apartments lagged other sectors with a return of 1.5% in the quarter.
- Property fundamentals were stable in the second quarter, with occupancy for the NCREIF at 92.8%, down 20 basis points (bps) from first quarter 2017, but still only 40 basis points below the 16-year high reached in 2016.[2] Net operating income (NOI) growth was 5.1% for the trailing 12-month period.[3] The implied valuation cap rate was 4.47%, a near record-low, and cap rates for all property types in the index remained below 5%.[4]
- During the first half of 2017, global commercial real estate transaction volume totaled $360 billion, an 8% decline from the same period last year.[5] The Asia-Pacific region was dominated by Hong Kong, which surpassed Tokyo with the largest transaction volume in the region. Within Asia, Hong Kong and Singapore have the lowest cap rates globally, at 2.9% and 2.8%, respectively.[6]
- The most active real estate markets during the quarter were New York, Los Angeles, and London, with New York again topping the list at $20 billion in transaction volume.[7] Yields (cap rates) for prime office properties in major metropolitan markets globally are at or below their 10-year averages.[8]
- Among the top property transactions was the sale of 245 Park Avenue by Brookfield to HNA Group of China for $1.7 billion ($1280/sf).[9]

NCREIF NATIONAL PROPERTY INDEX SECTOR RETURNS
Second Quarter 2017



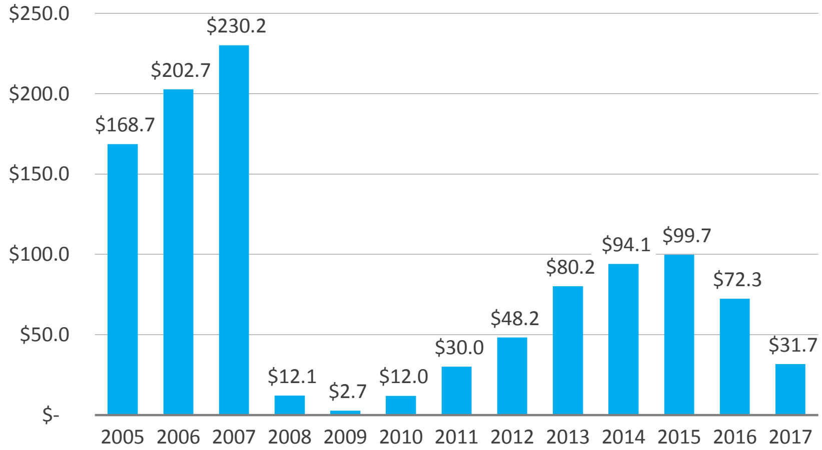
Data source: NCREIF

CAPITAL MARKETS

- New CMBS issuance totaled $21.2 billion in the second quarter of 2017, more than double the $10.5 billion during the first quarter, bringing the mid-year total to $31.7 billion, an increase over the same period in 2016.[10] The majority of new CMBS loans were backed by trophy office properties in major metropolitan markets, primarily in New York City.

- New risk retention regulations took effect in 2017, designed to hold banks more accountable for their own lending operations by imposing higher capital requirements. The implementation of these new regulations did not result in a slowdown in CMBS lending year-to-date. Nevertheless, CMBS still comprises a much smaller portion of the commercial real estate debt market relative to the pre-Global Financial Crisis period.[11]
- According to the Mortgage Bankers Association, lending for commercial real estate properties rose for all property types in the second quarter compared to the first quarter. During the second quarter, originations for hotel properties increased 139% percent compared to the first quarter 2017. Private real estate debt funds and commercial mortgage REITs have become active lenders, seeking to fill the void left by lower CMBS issuance.

U.S. CMBS ISSUANCE
As of June 30, 2017



Data source: Bloomberg, L.P and Trepp, LLC

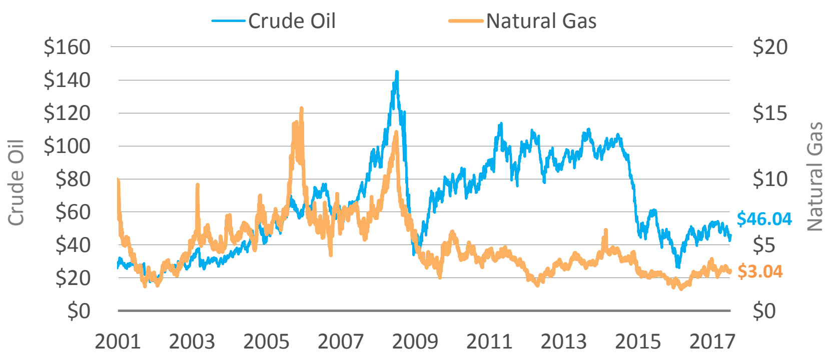
PRIVATE REAL ESTATE FOOTNOTES

[1] www.ncreif.com July 25, 2017
[2,3,4] *Ibid*
[5] Real Capital Analytics–Global Capital Trends–Second Quarter 2017
[6,7,8,9,10] *Ibid*
[11] Trepp CMBS Research: Q1 2017 Issuance Recap

Natural Resources

- After declining 5.8% in the first quarter, oil prices fell another 9.0% in the second quarter of 2017, closing at $46.04/barrel, down from $50.60/barrel at the end of the first quarter.[1] Oil prices fell despite an agreement by OPEC in late May to extend production cuts as expectations were largely factored into the market and many doubted OPEC's ability to fully comply with production quotas.
- Ongoing concerns about growing production in the U.S.—driven by a rising rig count—weighed on the oil market. Key factors that could contribute to higher prices in the latter half of the year include slower rig count growth, continued inventory drawdowns, and better-than-expected demand growth out of Asia. Weakness in the U.S. dollar was a positive contributor to prices during the quarter.[2]
- Natural gas prices declined 4.9% during the second quarter, closing at $3.04/MMBtu, following a 15.8% decline in the first quarter.[3] After a warmer-than-expected winter led to declines the first quarter, the second quarter was characterized by a rising rig count and growth in associated gas produced from oil wells in the Permian Basin. Limited near-term production growth and increasing export demand could lead to price increases into the second half of the year. Rising industrial demand, coal-to-gas switching, and LNG exports also could support higher prices.[4]

CRUDE OIL AND NATURAL GAS PRICES



Data source: Energy Information Agency

- According to energy services firm Baker Hughes, the U.S. oil rig count ended the second quarter of 2017 at 756, an increase of 94 rigs (14%) compared to 662 rigs at the end of the first quarter.[5] Year-over-year, the total U.S. oil rig count nearly doubled at the end of the second quarter 2016.[6] Despite the increase, the rig count remains well below the peak of over 1,600 rigs in the fall of 2014.
- The downturn in oil prices during the second quarter led to slower merger and acquisition activity, with deal flow falling to the lowest level since the first quarter of 2016.[7] Specifically, deal activity in the Permian Basin dropped considerably compared to prior quarters, with less than $3 billion in total transaction value compared to over $40 billion in the prior three quarters.[8]

NATURAL RESOURCES FOOTNOTES

[1] CoreCommodity Quarterly Letter – June 30, 2017
[2] EnCap Quarterly Letter, June 30, 2017
[3,4] *Ibid*
[5] CoreCommodity Quarterly Letter – March 31, 2017
[6] *Ibid*
[7] EnCap Quarterly Letter, June 30, 2017
[8] *Ibid*

DISCLOSURES

This report was prepared by Fund Evaluation Group, LLC (FEG), a federally registered investment adviser under the Investment Advisers Act of 1940, as amended, providing non-discretionary and discretionary investment advice to its clients on an individual basis. Registration as an investment adviser does not imply a certain level of skill or training. The oral and written communications of an adviser provide you with information about which you determine to hire or retain an adviser. Fund Evaluation Group, LLC, Form ADV Part 2A & 2B can be obtained by written request directly to: Fund Evaluation Group, LLC, 201 East Fifth Street, Suite 1600, Cincinnati, OH 45202, Attention: Compliance Department.

The information herein was obtained from various sources. FEG does not guarantee the accuracy or completeness of such information provided by third parties. The information in this report is given as of the date indicated and believed to be reliable. FEG assumes no obligation to update this information, or to advise on further developments relating to it. FEG, its affiliates, directors, officers, employees, employee benefit programs and client accounts may have a long position in any securities of issuers discussed in this report.

Index performance results do not represent any managed portfolio returns. An investor cannot invest directly in a presented index, as an investment vehicle replicating an index would be required. An index does not charge management fees or brokerage expenses, and no such fees or expenses were deducted from the performance shown.

Neither the information nor any opinion expressed in this report constitutes an offer, or an invitation to make an offer, to buy or sell any securities.

Any return expectations provided are not intended as, and must not be regarded as, a representation, warranty or predication that the investment will achieve any particular rate of return over any particular time period or that investors will not incur losses.

Past performance is not indicative of future results.

Investments in private funds are speculative, involve a high degree of risk, and are designed for sophisticated investors.

An investor could lose all or a substantial amount of his or her investment. Private capital funds' fees and expenses may offset private capital funds' profits. Private capital funds are not required to provide periodic pricing or valuation information to investors except as defined in the fund documents. Private capital funds may involve complex tax structures and delays in distributing important tax information. Private capital funds are not subject to the same regulatory requirements as mutual funds. Private capital funds are not liquid and require investors to commit to funding capital calls over a period of several years; any default on a capital call may result in substantial penalties and/or legal action. Private capital fund managers have total authority over the private capital funds. The use of a single advisor applying similar strategies could mean lack of diversification and, consequently, higher risk.

All data is as of June 30, 2017 unless otherwise noted.

RESEARCH AND PORTFOLIO MANAGEMENT TEAM

JEREMY M. ALBERS, CFA, CAIA
Research Analyst
Global Fixed Income and Credit

CHERYL A. BARKER
Senior Research Analyst
Global Equities

NOLAN M. BEAN, CFA, CAIA
Managing Principal
Head of Institutional Investments

KEITH M. BERLIN
Senior Vice President
Director of Global Fixed Income and Credit

CHRISTIAN S. BUSKEN
Senior Vice President
Director of Real Assets

KEVIN J. CONROY, CFA, CAIA
Vice President
Hedged Strategies

KEVIN C. DEE
Research Analyst
Global Fixed Income and Credit

MATT DENBLEYKER
Vice President
Real Asset Research Analyst

BRAD DERFLINGER, CFA
Vice President
Assistant Portfolio Manager,
Risk Management

GREGORY M. DOWLING, CFA, CAIA
Managing Principal
Chief Investment Officer,
Head of Research

SUSAN MAHAN FASIG, CFA
Managing Principal
Portfolio Manager, Private Investments

ANTHONY L. FESTA, CFA
Managing Principal
Head of Portfolio Strategy

MICHAEL B. FRANKE, CFA
Senior *Research* Analyst
Hedged Strategies

BRIAN A. HOOPER
Vice President
Global Equities

GREGORY D. HOUSER, CFA, CAIA
Senior Vice President
Capital Markets

XAVIER A. JIMENEZ
Research Analyst
Real Assets

MARK A. KOENIG, CFA
Senior Vice President
Director of Quantitative Analysis

J. ALAN LENAHAN, CFA, CAIA
Managing Principal
Chief Investment Officer,
Head of Portfolio Management

CHARLIE W. LUECKE
Senior Research Analyst
Private Equity

DAVID L. MASON, CAIA
Vice President
Investment Strategies

LAUREN M. MAYERNIK
Research Analyst
Private Equity

SEAN P. MCCHESNEY
Vice President
Hedged Strategies

MICHAEL J. OYSTER, CFA
Managing Principal
Chief Investment Strategist

MICHAEL J. O'CONNOR, CFA, CAIA
Vice President
Assistant Portfolio Manager,
Public Investments

WILLIAM B. PHELPS, CAIA
Senior Analyst
Investment Strategies

SAMUEL A. RAGAN
Research Analyst
Global Equities

G. SCOTT TABOR, CAIA
Senior Vice President
Private Capital

STEVEN G. THIEME, CFA
Senior Research Analyst
Hedged Equity

NATHAN C. WERNER, CFA, CAIA
Senior Vice President
Director of Private Equity

201 East Fifth Street
Suite 1600
Cincinnati, Ohio 45202

513.977.4400
information@feg.com
www.feg.com

Dallas | Detroit | Indianapolis

Subscribe to FEG's communications at ***www.feg.com/subscribe.***

The CFA designation is a professional certification issued by the CFA Institute to qualified financial analysts who: (i) have a bachelor's degree and four years of professional experience involving investment decision making or four years of qualified work experience[full time, but not necessarily investment related]; (ii) complete a self-study program (250 hours of study for each of the three levels); (iii) successfully complete a series of three six-hour exams; and (iv) pledge to adhere to the CFA Institute Code of Ethics and Standards of Professional Conduct.

The Chartered Alternative Investment Analyst Association® is an independent, not-for-profit global organization committed to education and professionalism in the field of alternative investments. Founded in 2002, the CAIA Association is the sponsoring body for the CAIA designation. Recognized globally, the designation certifies one's mastery of the concepts, tools and practices essential for understanding alternative investments and promotes adherence to high standards of professional conduct.

Research and Portfolio Management Team as of date of publication.