PRIVATE CAPITAL QUARTERLY

FOURTH QUARTER 2017

INSIDE THIS ISSUE

DOES OVERHANG = HANGOVER?

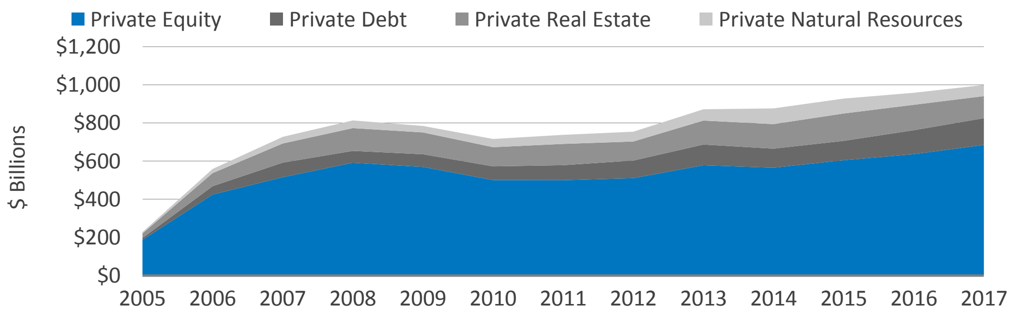
F·E·G®
investment advisors

A decade of accelerating interest in private capital has led to a record $1 trillion overhang—the amount of committed but uninvested capital.[1] Has there been a structural change in how institutions invest in equity, or is this a signal that the party is about to end leaving investors with a painful hangover?

STRUCTURAL CHANGES

According to a recent study by McKinsey & Co., global private markets raised an estimated $750 billion in 2017, continuing the bull market trend that began eight years ago.[2] Global private equity alone raised nearly $400 billion. Moreover, although distributions back to investors have outpaced new investments since 2011, valuation increases and new commitments have grown the total estimated assets under management of private markets to between $4 and $5 trillion.[3]

GLOBAL PRIVATE CAPITAL/AGGREGATE DRY POWDER BY YEAR
As of December 31, 2017



Data source: Pitchbook

While $1 trillion is a headline-grabbing number, the size is reflective of the growth of the markets and has remained fairly steady at 30% to 34% of AUM in recent years.[4] Interestingly, this ratio holds across asset classes. While this statistic is comforting, the hangover potential truly relates to a bigger question:

Can private markets absorb $1 trillion in new capital?

In McKinsey's view, yes. Firms offering mega-funds and large separate accounts have built scale and broadened their scope of strategies in recent years to include global markets, credit funds, and other strategies. These firms have developed the infrastructure necessary to meet the demand for significant capital inflows, although it remains a question whether they can repeat historically outsized performance. As noted last quarter and echoed in the McKinsey study, a bifurcation likely may be occurring, with mega-funds seeking to benefit from scale and smaller sector-specialists rolling up their sleeves for higher return opportunities. The latter requires investors to sort through a wider dispersion of strategies and results to be successful.

Performance of private funds during the third quarter of 2017 was positive across the board, ranging from 1.7% for natural resources funds to 4.9% for growth equity, globally, with non-U.S. funds bringing up the averages.[5] Year-to-date, only the natural resources sector lagged materially, generating 3.4% versus the overall global return of 12.2% for the 9-month period.[6]

With a decade of strong positive returns in the rearview mirror, it's easy to underestimate risks or to drink a little too much of the Koolaid (or a stronger beverage). Over-paying for an investment, regardless of the resources available, is still a sure way to leave investors with regret. Focus and pricing discipline may be the best hangover prevention.

FOOTNOTES

[1] Preqin, as of December 31, 2017
[2] *The Rise and Rise of Private Markets - McKinsey Global Private Markets Review 2018*, McKinsey & Co., February 2018
[3] Per 1 and 2 above, Preqin estimates dry powder at $1.0 trillion; McKinsey at $1.8 trillion
[4] *The Rise and Rise of Private Markets - McKinsey Global Private Markets Review 2018*, McKinsey & Co., February 2018
[5] Thomson One; as of September 30, 2017. Excludes Infrastructure, Timber, Fund of Funds, and Secondary funds
[6] Thomson One; as of September 30, 2017

PRIVATE EQUITY

Venture Capital

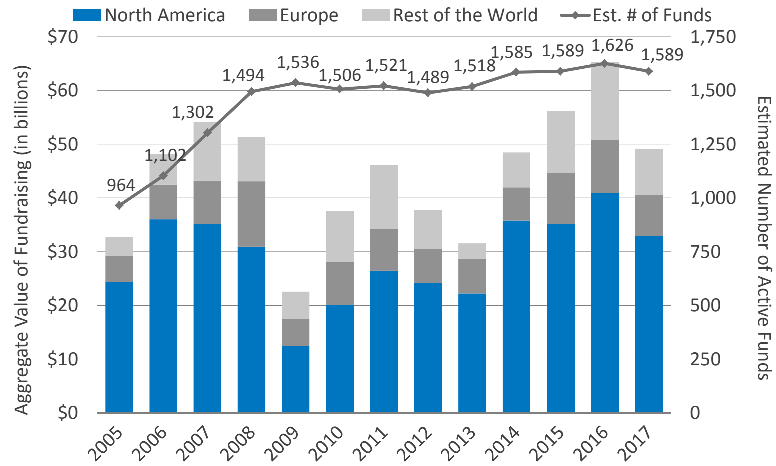
FUNDRAISING AND INVESTING

- Globally, venture funds raised just over $49 billion in commitments in 2017.[1] The aggregate amount raised is well behind the 2016 level of $65 billion due to slower fundraising in both the U.S. and Asia; however, capital raised in 2017 remains firmly ahead of the 2009-2013 post credit crisis levels and near the amounts raised in 2014 and 2015. The estimated number of active venture funds also remains high. While quarter-to-quarter fundraising data can be choppy due to timing of fund closings, fundraising has remained strong for several years.

INVESTMENT ACTIVITY

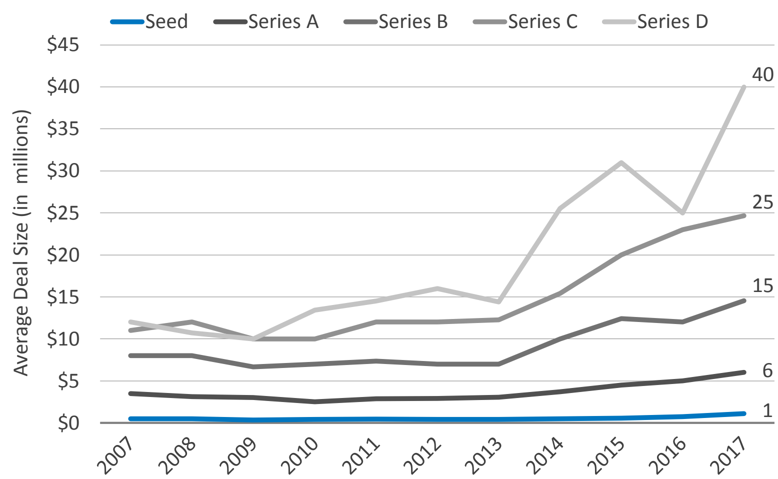
- Reflective of the fundraising environment, median deal sizes rose in 2017, with late-stage rounds at their highest level in a decade. With ample capital to deploy, funds have supported venture-backed companies in their preferences to remain private longer. As a result, these larger companies are pushing up the size of the average investment in late-stage deals.[2] By contrast, Seed and Series A round financings have been more stable.
- Similar to the round sizes, pre-money valuations of venture-backed companies continue to increase, particularly for late-stage investments, such as Series C and Series D. The median pre-money valuation for a Series C investment rose nearly 20% in 2017, while the Series D investments rose 50%. Valuations of earlier-stage financings were relatively more stable.

VENTURE FUNDRAISING AND ESTIMATED NUMBER OF ACTIVE FUNDS
As of December 31, 2017



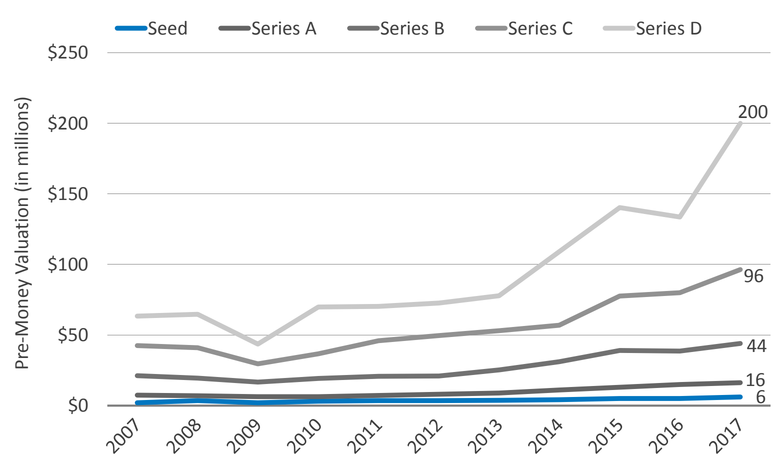
Data source: Pitchbook

MEDIAN DEAL SIZE BY FINANCING ROUND
As of December 31, 2017



Data source: Pitchbook

MEDIAN PRE-MONEY VALUATION BY FINANCING
As of December 31, 2017



Data source: Pitchbook

- Venture-backed companies received $165 billion in financing rounds across 13,500 companies in 2017. The amount of capital invested puts the annual total well ahead of recent years. We believe it also reflects the increasing involvement of other sources of funding for venture-backed companies, such as strategic or corporate investment, public equity funds making crossover investments in private companies, co-investments alongside venture funds, and other sources of capital.[3]

EXIT ENVIRONMENT

- The exit activity of venture-backed companies slowed in 2017 for the second straight year. The number of acquisitions (trade sales) dropped, while the number of initial public offerings (IPOs) rose slightly. The aggregate value of exits also declined.

PERFORMANCE

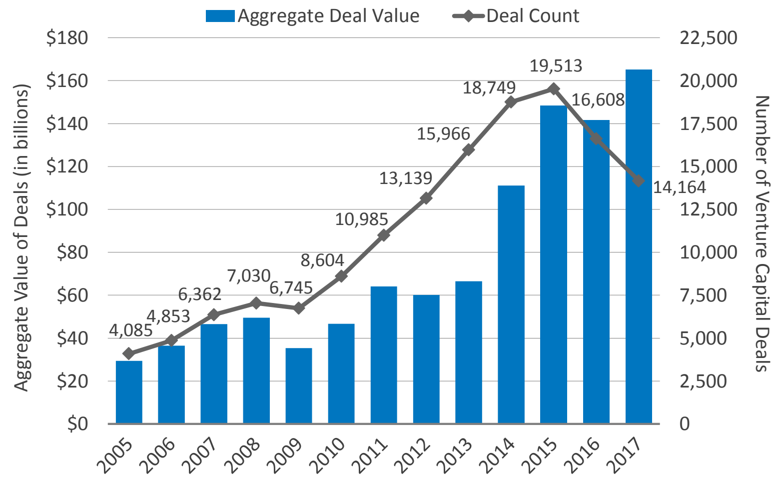
- Venture fund performance by vintage year rose steadily from 2005 to 2011 but has since moderated. More recent vintages are not yet fully realized and, in the most recent periods, not yet fully deployed.

CONCLUSION

- Valuations and financing rounds increased significantly in recent years as capital flowed to venture funds. Future activity could be affected if the moderation in fundraising in 2017 continues in 2018. Longer hold periods and fewer exits could put pressure on performance, which could in turn influence fundraising. Performance in the post Global Financial Crisis vintage years has been solid but remains significantly unrealized.

VENTURE CAPITAL INVESTMENT ACTIVITY

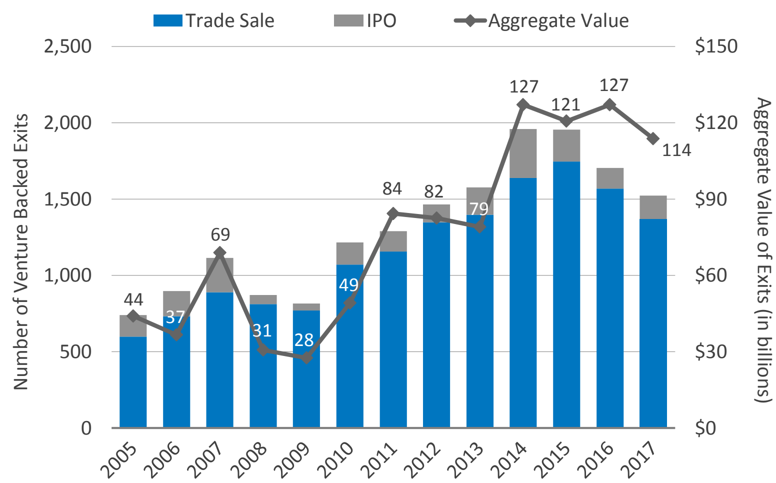
As of December 31, 2017



Data source: Pitchbook

VENTURE CAPITAL EXIT ACTIVITY

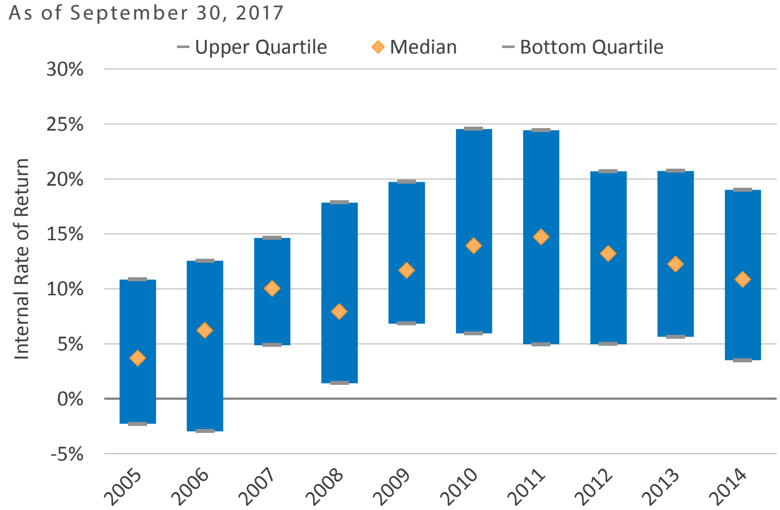
As of December 31, 2017



Data source: Pitchbook

VENTURE CAPITAL PERFORMANCE

As of September 30, 2017



Data source: Thomson One

FOOTNOTES

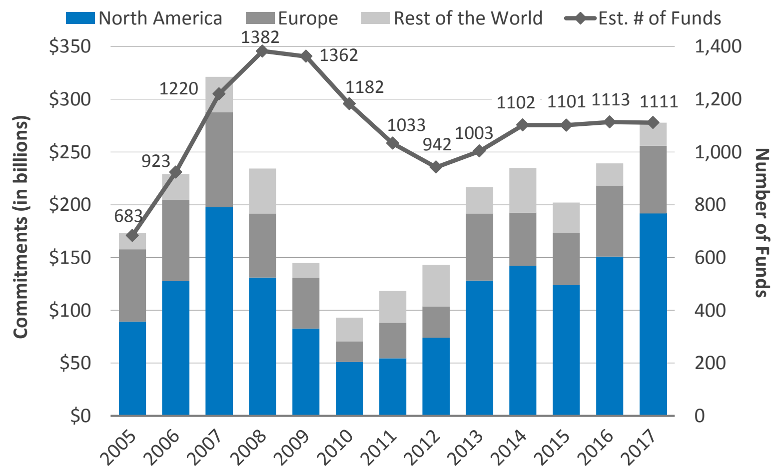
[1, 2, 3] Pitchbook, data as of December 31, 2017

Buyouts

FUNDRAISING AND INVESTING

- More than $277 billion was raised globally for leveraged buyout strategies during 2017–the highest level since 2007. Fundraising was particularly strong in the fourth quarter, with 57 funds raising roughly $84 billion of committed capital. According to Pitchbook, global fundraising for the strategy grew by nearly 16% year-over-year.[1]
- Approximately $191 billion, or 69% of capital, was raised by North American-focused buyout funds. Roughly $64 billion, or 23% of capital, was raised for European-focused funds. The rest of the world represented approximately 8% of aggregate capital commitments raised. This is to be expected, given that control equity transactions are more common in North America and Europe than in the rest of the world.[2]
- Capital commitments have become more concentrated in the largest funds over the last 10 years, with the average global buyout fund raising roughly $650 million in 2008 and nearly $1.0 billion in 2017.[3]

BUYOUT FUNDRAISING AND ESTIMATED NUMBER OF ACTIVE FUNDS
As of December 31, 2017

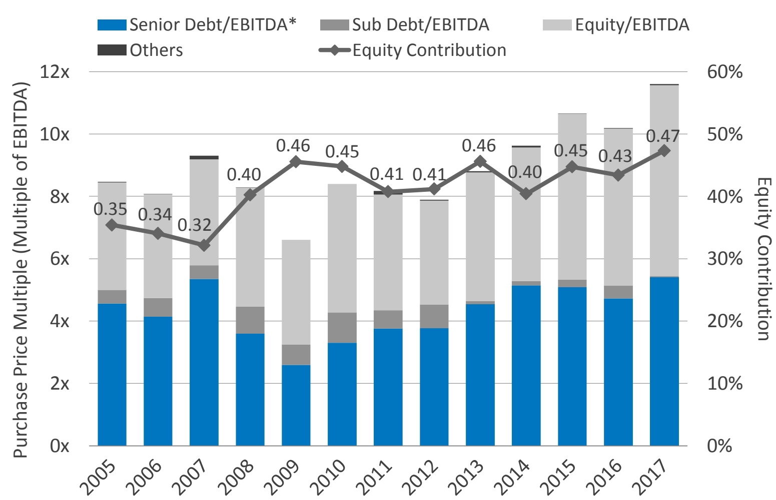


Data source: Pitchbook; data reflects the number of global buyout funds with a final closing in the current vintage year plus the prior three vintage years

INVESTMENT ACTIVITY

- The average purchase price multiple for middle-market buyout transactions was 11.6x earnings before interest, taxes, depreciation, and amortization (EBITDA) during 2017. Leverage ratios remained relatively constant. According to S&P Capital IQ, the average debt multiple for middle market LBOs was roughly 5.5x EBITDA, below the 2007 peak of 5.9x EBITDA.[4]
- Equity contributions in large buyout transactions remained steady at 40%. The peak was 46% in 2009 when financing was scarce, and the low point occurred in 2007 when the ratio dipped below 30%. Equity contributions in middle market transactions were little changed for the quarter, at 47%.[5] It should be noted, however, that the S&P Capital IQ data represents only a sample set of leverage buyout transactions executed during a given time period.

AVERAGE PURCHASE PRICE MULTIPLES AND EQUITY CONTRIBUTION
As of December 31, 2017



Data source: S&P Leverage Buyout Review

EXIT ACTIVITY

- Approximately $787 billion of value was generated by 2,702 private-equity-backed exits during 2017. Despite a much slower exit market than in recent years, activity is still on par with the 10-year average. According to Pitchbook, one reason for the decline is that private equity sponsors are struggling to find strategic acquirers for portfolio companies.[6]
- Trade sales to strategic or financial acquirers represented the majority of global buyout-backed exits. Initial public offerings (IPO) accounted for roughly 7% of the aggregate number of exits.[7]

PERFORMANCE

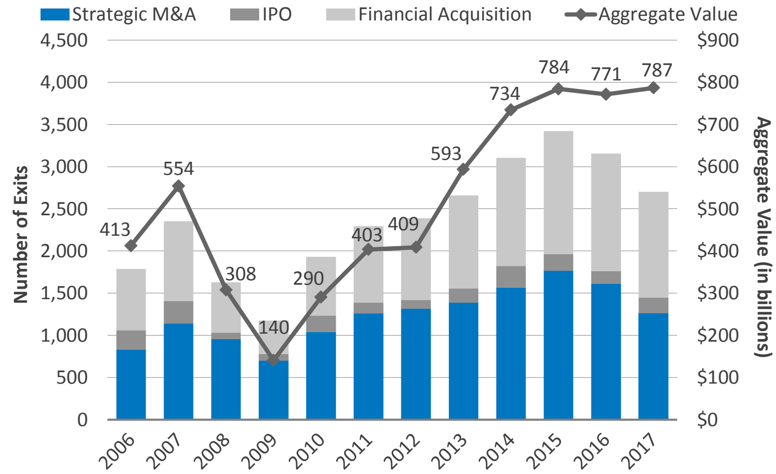
- Performance has been strong on a one, three, five, and 10-year basis, with time-weighted returns of 18.5%, 12.2%, 14.1%, and 9.0%, respectively.[8]
- The dispersion of returns between top and lower quartile funds has consistently been over 800 basis points, demonstrating the importance of manager selection.

CONCLUSION

- Near record fundraising levels combined with elevated purchase price multiples may be cause for concern within the buyout strategy. Investors should remain cautious and continue to look for managers with clear competitive advantages and investment philosophies built on fundamental value.

BUYOUT EXIT ACTIVITY

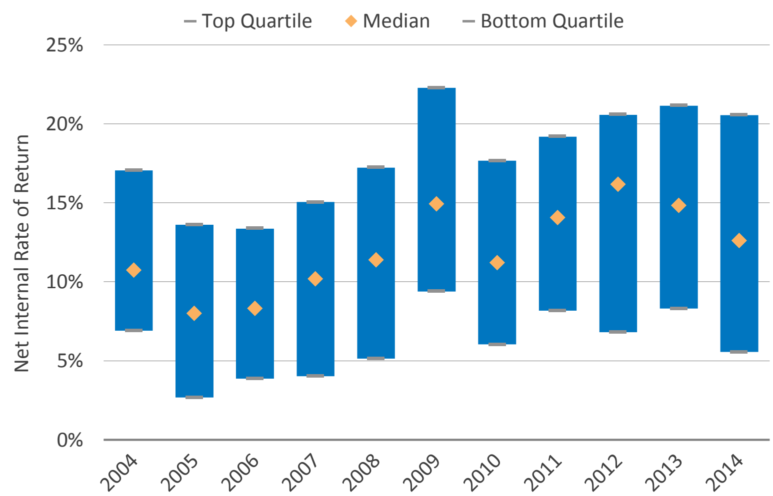
As of December 31, 2017



Data source: Pitchbook; Financial Acquisition includes secondary buyout and buyout by management

BUYOUT PERFORMANCE BY VINTAGE YEAR

As of December 31, 2017



Data source: Thomson One

FOOTNOTES

[1, 2, 3, 6, 7] Pitchbook, data as of December 31, 2017

[4] S&P Leveraged Buyout Review – Fourth Quarter 2017

[5, 8] Thomson One – Horizon Summary Report as of September 30, 2017

PRIVATE DEBT

FUNDRAISING

- Private debt funds represent the third largest segment of private capital assets under management (AUM) at $638 billion—13% of overall private capital AUM. Private debt fills a gap left by the banking industry following the Global Financial Crisis in 2007 and 2008, and investors seeking yield have embraced new credit strategies.
- During 2017, private debt fundraising surpassed $100 billion in aggregate capital commitments—a new record. Funds focused on direct lending ended the year with more than double the amount committed in 2016. The average fund size also more than doubled for direct lending funds in 2017, reaching $1 billion.[1]

FUNDAMENTAL BACKDROP

- Fundamentals in the lower middle market remained favorable, although there has been a meaningful increase in purchase price multiples over the past decade. Earnings remain robust and well-supported by strong equity contributions.

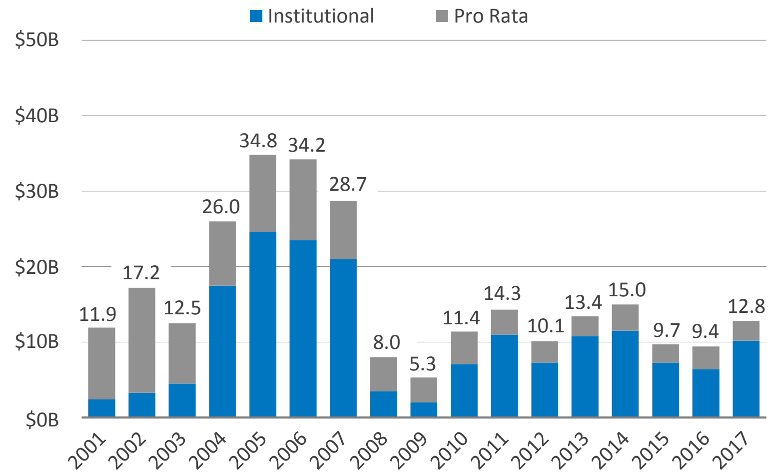
	2007	2017
Debt/EBITDA Multiples	5.6x	5.5x
Equity Contribution	32%	47%
Purchase Price Multiple	9.3x	11.6x
Pro Forma EBITDA	$29.0M	$42.2M

Data source: S&P Global Market Intelligence High-End Middle Market Lending Review 4Q 2017

- Transaction volume in the U.S. middle market reached the highest level since 2014. Despite this strength, middle market volume remains significantly below the peak years of the late 1990s, and roughly a third of the pre-crisis (2007) pace.

MIDDLE MARKET VOLUME BY YEAR

Issuers with EBITDA of $50 Million or Less



Data source: S&P Global High-End Middle Market Lending Review 4Q 2017

DISTRESSED UPDATE

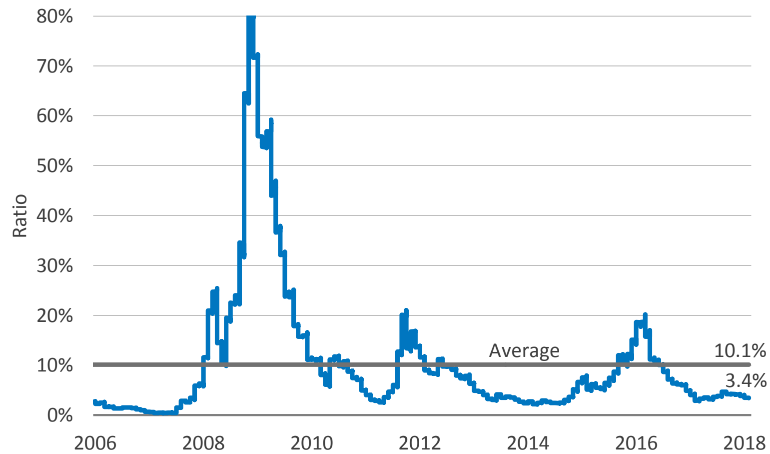
- Distressed managers have been raising "war chests" over the past few years in preparation for the next distressed cycle, although many have been wisely reluctant to call capital amid the strength of the current bull market. Indeed, the distressed ratio—bonds trading at more than 10% over Treasuries—remains well below historical average, measured at 3.4% at the end of 2017.

CONCLUSION

- Demand for private debt strategies remains robust, as institutional investors continue to embrace the strategy amid lackluster return potential from public credit instruments.
- Middle market fundamentals remain reasonably healthy, reflecting late cycle characteristics, and middle market volume remains well below peak volume/pre-recession years.
- European distressed opportunities remain prevalent; growth has improved markedly. U.S. defaults for 2017 remain soft, and a broad-based U.S. distressed opportunity remains in the offing absent a U.S. recession.

U.S. HIGH YIELD DISTRESSED RATIO

Daily



Data sources: Bank of America/Merrill Lynch, Bloomberg, L.P.; Data as of 02/08/2018
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)

FOOTNOTES

[1] Preqin Global Private Debt Report

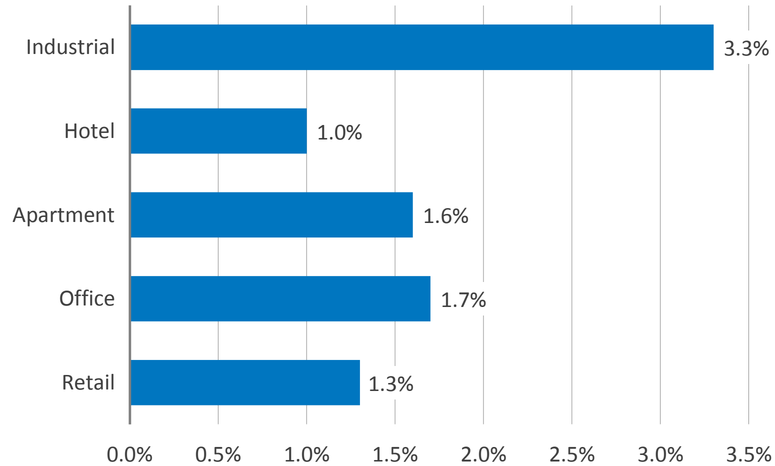
PRIVATE REAL ESTATE

- Real estate values, as measured by the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index (NPI), increased 1.8% during the fourth quarter.[1] The industrial sector continues to benefit from strong demand for warehouse space from online retailers.
- Property fundamentals strengthened in the fourth quarter, with occupancy for the NCREIF rising to 93.6%, a 16-year high.[2] Industrial had the highest occupancy rate, at 96.4%, followed by retail at 93%.
- Global commercial real estate transaction volume totaled $873 billion in 2017, a 14% increase from 2016 and the second strongest year since the peak in 2007.[3]
- In Europe, investment volume increased 8%. Conversely, total transaction volume declined in the U.S. for a fifth consecutive quarter, and was down 8% for the year; however, pricing in the U.S. generally remained stable.[4]
- Despite record-high pricing for global real estate properties, investors continue to invest capital, as seen by the ongoing trend of near record-high transaction volume.

CAPITAL MARKETS

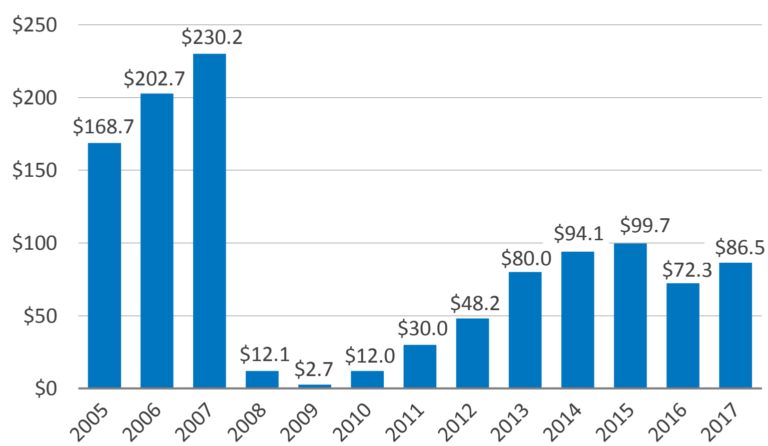
- Tighter bank regulations have constrained the financing available to certain commercial real estate projects, and created an environment where specialty lenders (i.e., real estate debt funds) can provide tailored financing solutions to fill the gap in areas previously filled by other real estate lenders, including CMBS.
- Despite some uncertainty around the implementation of new risk retention regulations designed to hold banks more accountable for their own lending operations, the regulations did not result in a slowdown in CMBS activity for the year. CMBS still comprises a much smaller portion of the commercial real estate debt market than it did at the peak of the market 10 years ago.[5]

NCREIF NATIONAL PROPERTY INDEX SECTOR RETURNS
Fourth Quarter 2017



Data source: NCREIF

U.S. CMBS ISSUANCE
As of December 31, 2017



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

LENDER COMPOSITION	2014	2016
CMBS	27%	16%
Commercial Banks	26%	32%
Other	48%	52%

Data source: Mortgage Bankers Association

FOOTNOTES

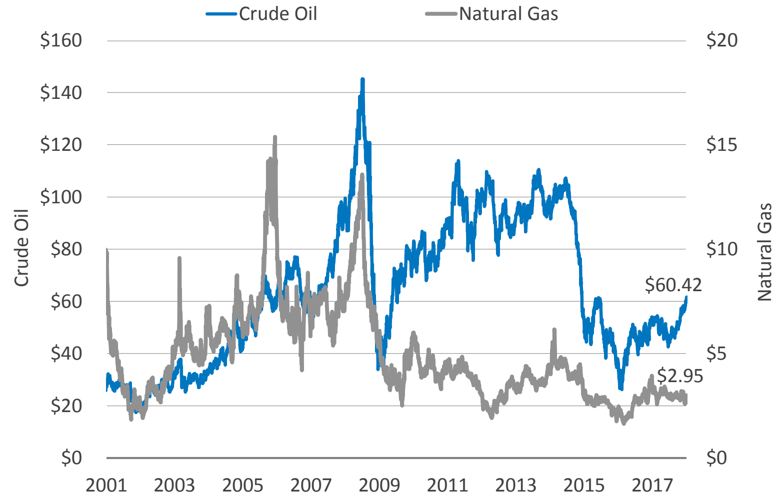
[1, 2] www.ncreif.com January 25, 2018
[3, 4] Real Capital Analytics–Global Capital Trends–Third Quarter 2017
[5] Trepp CMBS Research: Q4-2017 Issuance Recap, January 2018

NATURAL RESOURCES

- Improving supply/demand fundamentals were a key factor driving gains in oil prices during the quarter. Drawdowns in U.S. crude oil inventories continued, bringing the total reduction to more than 100 million barrels, in line with five-year averages.[1]
- During 2017, the International Energy Agency (IEA) announced upward revisions in demand growth (2.3 million barrels/day), primarily from emerging markets.[2]
- For the full year, natural gas prices declined 20% due to higher production growth, mild weather earlier in the year, and increased rig counts and greater wellhead efficiencies. On the positive side, increased demand for natural gas should come from rising industrial demand, liquid natural gas (LNG) exports, and ongoing coal-to-gas switching by power producers.[3]
- According to energy services firm Baker Hughes, on a year-over-year basis, the total U.S. oil rig count increased by 222, a 42% increase. Despite the increase, the rig count remains well below the peak of over 1,600 rigs in the fall of 2014.[4]
- Despite higher prices and a recovery in oil prices later in the year, overall mergers and acquisitions activity declined in 2017, with deal valued down by nearly half in the fourth quarter of 2017 compared to the same period in 2016.[5] While the upstream deal count declined, the overall transaction value of $158 billion was the highest since 2014.

CRUDE OIL AND NATURAL GAS PRICES

As of June 30, 2017



Data source: Energy Information Agency

FOOTNOTES

[1, 2] CoreCommodity Quarterly Letter – February 12, 2018
[3] EnCap Quarterly Letter, September 30, 2017
[4] www.bakerhughes.com
[5] PWC Insights - U.S. Oil and Gas Deals – January 2018

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.

The S&P 500 Index is capitalization-weighted index of 500 stocks. The S&P 500 Index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

The NCREIF Property Index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only.

HFRI ED: Distressed/Restructuring Index
Distressed/Restructuring strategies which employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. Managers are typically actively involved with the management of these companies, frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments which are publicly traded, in some cases actively and in others under reduced liquidity but in general for which a reasonable public market exists. In contrast to Special Situations, Distressed Strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure.

All data is as of December 31, 2017 unless otherwise noted.

RESEARCH AND PORTFOLIO MANAGEMENT TEAM

CHERYL A. BARKER
Senior Research Liaison
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

PATRICK BONNELL
Research Analyst
Global Fixed Income and Credit

CHRISTIAN S. BUSKEN
Senior Vice President
Director of Real Assets

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

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

ANANYA HANDA
Research Analyst
Global Fixed Income and Credit

EMILY C. HOGYA
Portfolio Analyst
Portfolio Management

BRIAN A. HOOPER
Vice President
Global Equities

GREGORY D. HOUSER, CFA, CAIA
Director
Research

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

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

SAMUEL A. RAGAN
Senior Research Analyst
Global Equities

BEN SULLIVAN
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.