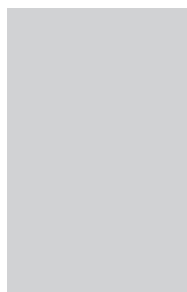


PRIVATE CAPITAL QUARTERLY

THIRD QUARTER 2017



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TIME TO RUN FOR THE HILLS?

SUSAN MAHAN FASIG, CFA / Managing Principal, Director of Private Capital

The weather in the Eastern U.S. is turning colder, but private capital markets remain hot. Through the third quarter of 2017, capital raised for private investments remains at or near record levels. Evidence of abundant capital can be found in increased prices. According to S&P Capital IQ data, the average purchase price multiple for middle market private equity deals rose above 11x in the quarter—a record high¹—and cap rates on real estate properties continued to decline below 4.4%.²

Is it time to run for the hills?

With markets flush with capital, experienced investors have continued to approach the current market with caution. In a recent article, 30+ year private fund investors at Oregon State Treasury plan noted they are gradually dialing down targets from 25% of their portfolio to 17.5%.³ They still expect their private equity investments to earn a premium to public markets, but Oregon is reducing expectations and diversifying.

Also noted in this article and highlighted in last quarter's Private Capital Quarterly, updated research from the University of Chicago demonstrated a weakening of persistence in private equity returns and a decline in the average premium.⁴

When asked about the current environment, two dynamics seem relevant:

A MATURING MARKET

Private investing is a maturing market, with increased capital, increased transparency, and more investors, both experienced as well as novices. While the big have gotten bigger, more fragmentation has also occurred. The median return may be declining, but dispersion remains high—over 1,300 basis points on average in recent vintages.⁵ In addition, some have suggested a barbell market is developing in private equity. The big, brand-name players in the space continue to do reasonably well but with lower premiums, and the smaller funds addressing less-competitive or more-challenging strategies provide the strongest alpha. However, identifying and investing with them requires more resources and discernment.

LOCKED UP CAPITAL CAN DAMPEN VOLATILITY

The nature of private funds is to invest over a multi-year period. Looking forward, there are good odds the 8+ year bull market will hit a snag. Providing capital to investment opportunities with an appropriate dose of caution and a long-term view can help dampen reactionary decisions during that snag, while preserving potential for returns. Furthermore, the appraisal-based valuation process of illiquid investments dampens measured portfolio volatility and also locks in the opportunity to invest through cycles. Certainly there will be winners and losers, but if chosen wisely, short-term stress may benefit patient, long-term capital.

Quarterly updates of the venture, buyout, private debt, energy, and real estate markets follow.

FOOTNOTES

¹ S&P Leveraged Buyout Review, 3Q17

² www.ncreif.com

³ White, Amanda, *Asset Owners Rethink Private Equity*, Top1000Funds.com, November 10, 2017

⁴ 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

⁵ Pitchbook, *2017 Global PE & VC Fund Benchmarking Report* (data through 4Q16), September 17, 2017; reflects average net IRR between top and bottom quartile breakpoints in 2011-2013 vintage funds

PRIVATE EQUITY

Venture Capital

FUNDRAISING AND INVESTING

- Globally, venture funds raised over \$35 billion in commitments in the nine months of 2017.¹ After a slow start to the year, fundraising accelerated in the second quarter, putting 2017 on pace with the prior three years.
- The estimated number of active venture funds also remains high. Although quarter-to-quarter fundraising data can be choppy due to timing of fund closings, fundraising has persisted near peak levels for several years.

INVESTMENT ACTIVITY

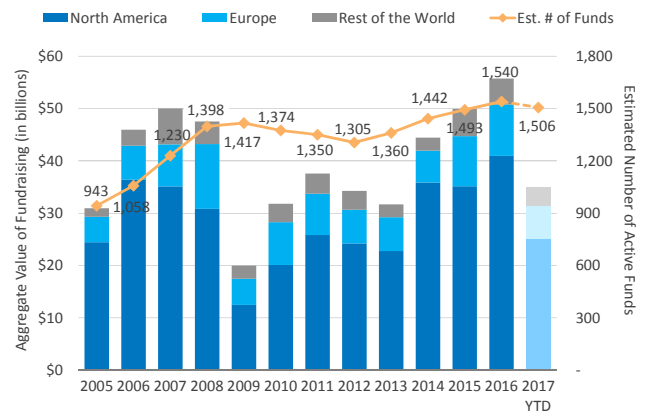
- Reflective of fundraising activity, median deal sizes rose in 2017, with late-stage rounds nearing all-time highs. With ample capital to deploy, investors have supported venture-backed companies in their preferences to remain private longer. As a result, these larger companies have pushed up the size of the average investment in late stage deals.² By contrast, Seed- and Series-A round financings have been more stable.
- U.S. venture capital firms invested \$61 billion in almost 6,000 companies in the first nine months of 2017. The amount of capital invested places the annualized rate near the peak levels of recent years. Also, the number of companies was slightly below the annual average from 2013–2016.³

EXIT ENVIRONMENT

- Exit activity of venture-backed companies slowed in 2017 for both acquisitions and initial public offerings (IPOs). The aggregate value of exits has also fallen.
- The average holding period for venture-backed companies have increased for the last four years, although only modestly for exits via an acquisition. On average, venture investors have had to wait longer before returns materialize.

VENTURE FUNDRAISING AND ESTIMATED NUMBER OF ACTIVE FUNDS

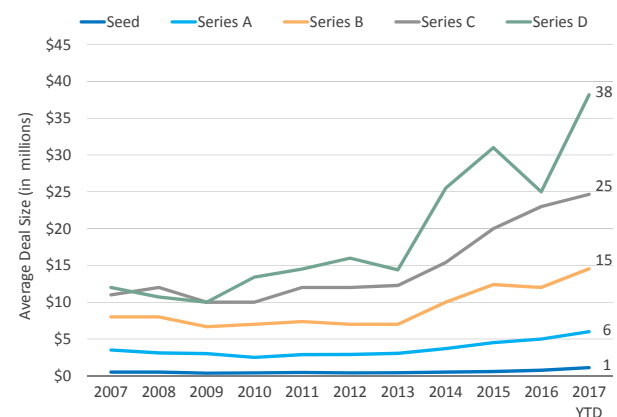
As of September 30, 2017



Data source: Pitchbook

MEDIAN DEAL SIZE BY FINANCING ROUND

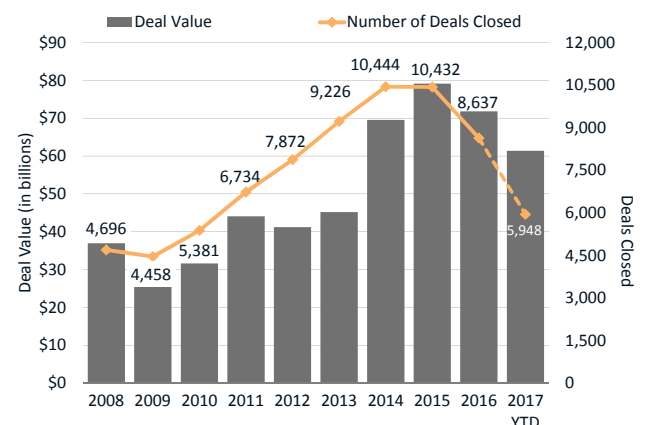
As of September 30, 2017



Data source: Pitchbook

VENTURE BACKED INVESTMENTS

As of September 30, 2017

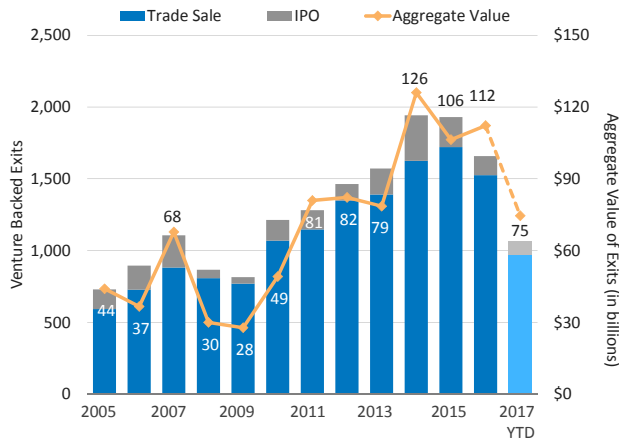


Data source: Pitchbook

Venture Capital continued

VENTURE CAPITAL EXIT ACTIVITY

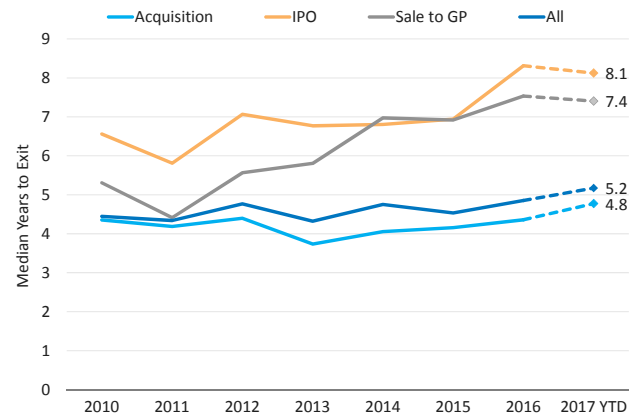
As of September 30, 2017



Data source: Pitchbook

MEDIAN TIME TO EXIT FROM FIRST VENTURE FINANCING

As of September 30, 2017



Data source: Pitchbook

PERFORMANCE

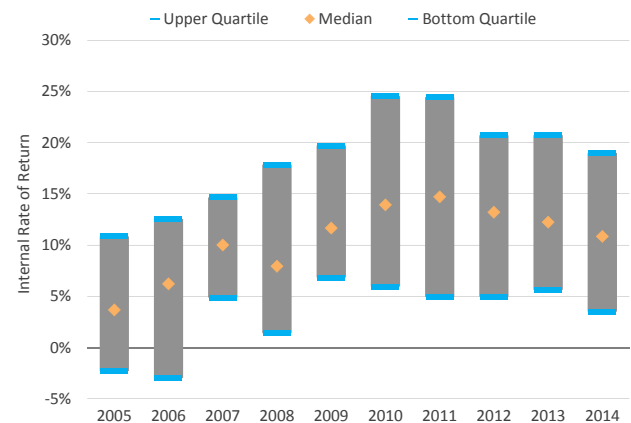
- Venture fund performance by vintage year rose steadily from 2005 to 2011 but has moderated since. More recent vintages are not fully realized and in the most recent periods, capital has not been fully deployed.

CONCLUSION

- Fundraising and investment activity remain elevated, and public exits delayed. Performance in the post Global Financial Crisis vintage years has been solid, but remains significantly unrealized. Exit opportunities over the next two to three years will determine if the recent vintages outpace the public markets.

VENTURE CAPITAL PERFORMANCE

As of September 30, 2017



Data source: Thomson One

Buyouts

FUNDRAISING AND INVESTING

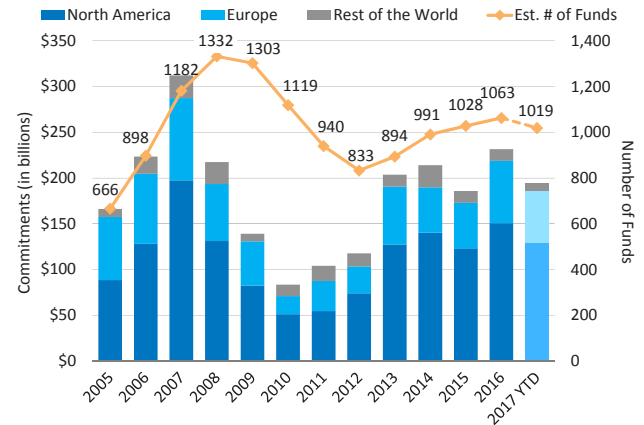
- Fundraising for global buyout strategies remains robust. According to Pitchbook data, global buyout firms raised more than \$194 billion across 214 funds during the first three quarters of 2017. Annual fundraising is on pace to reach nearly \$260 billion—the highest level since 2007.¹
- Approximately \$130 billion, or 67% of the capital, was raised by North American-focused buyout funds. Roughly \$57 billion, or 29% of the capital, was raised for European-focused funds. The rest of the world represented less than 5% of aggregate capital commitments raised. This is not surprising given control equity transactions are more common in North America and Europe.²
- Over the last 10 years, capital commitments became more concentrated in the largest funds. Since 2008, the average global buyout fund raised has grown from roughly \$650 to \$900 million.³

INVESTMENT ACTIVITY

- As of September 30, 2017, the average purchase price multiple for middle-market buyout transactions was 11.4x EBITDA. 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 39%. The peak was 46% in 2009, when financing was scarce. The low point was in 2007, when the ratio dipped below 30%. Equity contributions in middle market transactions were little changed at 46%.⁵ (Note, the S&P Capital IQ data only represents a sample set of leverage buyout transactions executed during a given time period.)

BUYOUT FUNDRAISING AND ESTIMATED NUMBER OF ACTIVE FUNDS

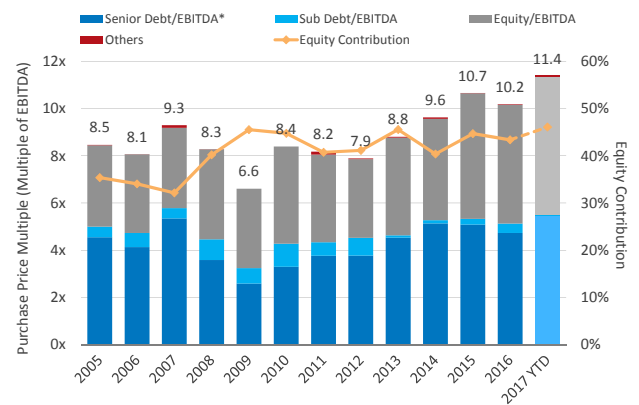
As of September 30, 2017



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

AVERAGE PURCHASE PRICE MULTIPLES AND EQUITY CONTRIBUTION

As of September 30, 2017



Data source: S&P Leverage Buyout Review

Buyouts continued

EXIT ACTIVITY

- Despite a much slower exit market than in recent years, activity is still on par with the 10-year average. As of September 30, 2017, approximately \$567 billion of value has been generated by 1,924 private equity backed exits year-to-date. According to Pitchbook data, 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. IPOs accounted for less than 7% of the aggregate number of exits.⁷

PERFORMANCE

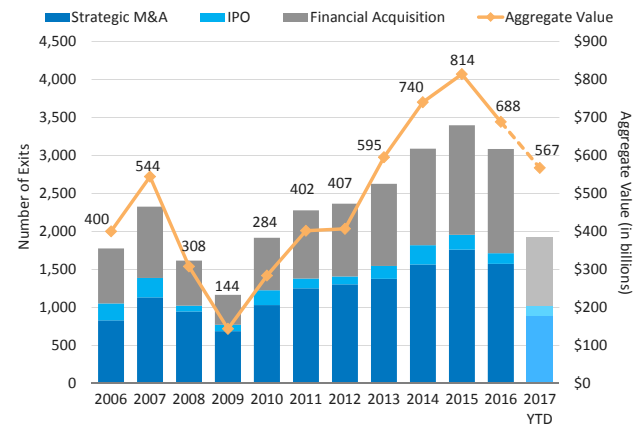
- Performance has been strong on a one-, three-, five-, and ten-year basis, with time-weighted returns of 18.7%, 10.4%, 14.4%, and 8.7%, respectively.⁸
- The dispersion of returns between top- and lower-quartile funds has consistently been over 800 basis points, demonstrating the importance of manager selection.

CONCLUSION

- Fundraising levels and elevated purchase price multiples continue to be areas of concern. Through nine months of 2017, North American private equity firms are on pace to match, or surpass fundraising levels recorded 10 years ago. FEG continues to look for managers with clear competitive advantages and investment philosophies built on fundamental value.

BUYOUT EXIT ACTIVITY

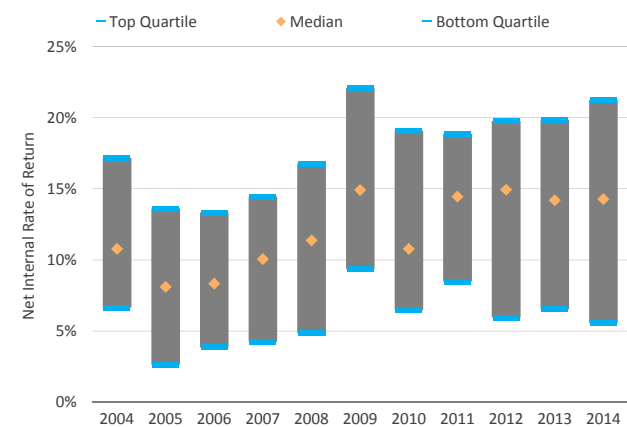
As of September 30, 2017



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

BUYOUT PERFORMANCE BY VINTAGE YEAR

As of September 30, 2017



Data source: Thomson One

BUYOUTS FOOTNOTES

^{1, 2, 3, 6, 7} Pitchbook, data as of September 30, 2017

^{4, 5} S&P Leveraged Buyout Review – Third Quarter 2017

⁸ Thomson One – Horizon Summary Report as of June 30, 2017

PRIVATE DEBT

FUNDRAISING

- According to Preqin, North America remains the most active region in the private lending industry: 66% of private debt deals tracked were based in the region, versus 29% in Europe and 4% in Asia and the rest of the world.¹
- The largest proportion of third-quarter transactions were in the industrial (25% of total), information technology (17%), and consumer discretionary (17%) sectors.
- Private debt ‘dry powder’ remained high. As of September 2017, \$214 billion in capital was available for private debt investments, just below the \$215 billion record high in December 2015.²

FUNDAMENTAL BACKDROP

- Fundamentals in the lower middle market—defined as companies with EBITDA of \$50 million or less—remained favorable for debt investors, although the table below shows a meaningful increase in purchase price multiples. Any decrease in the earnings of these companies due to recession or company specific deterioration could present challenges to those providing equity for these companies.

LOWER MIDDLE MARKET FUNDAMENTALS

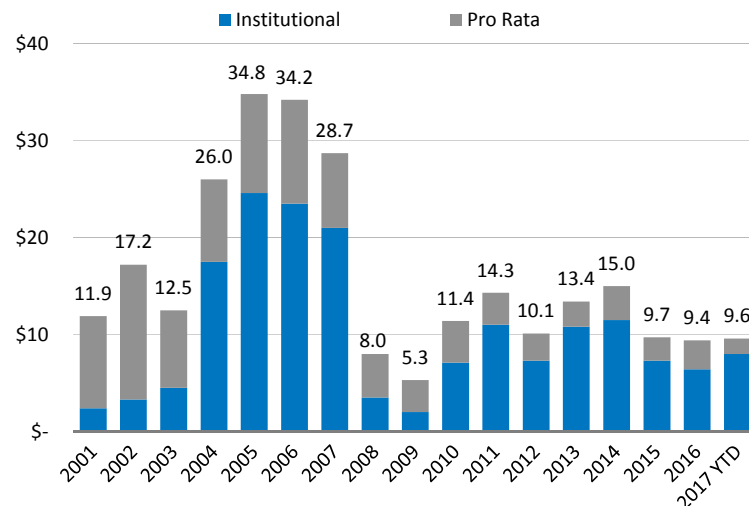
	2007	3Q17
Debt / EBITDA Multiples	5.6x	5.5x
Equity Contribution	32%	46%
Purchase Price Multiple	9.3x	11.4x
Pro Forma EBITDA	\$29.0 M	\$42.2M

Data source: S&P Global High-End Middle Market Lending Review 3Q17

- Transaction volume in the U.S. middle market was \$9.6 billion through the third quarter of 2017, a pace that slightly exceeds annual volume for 2015 and 2016 (\$9.7 billion and \$9.4 billion, respectively). Despite this increase, middle market volume remained significantly below its peak years in the late 1990s and roughly one-third of pre-crisis (2007) pace.³

MIDDLE-MARKET VOLUME BY YEAR

Issuers with EBITDA of \$50 Million or less

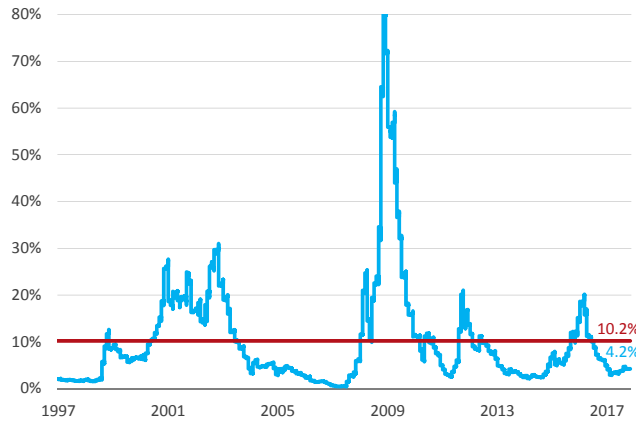


Source: S&P Leveraged Buyout Review 3Q17

DISTRESSED UPDATE

- The European distressed opportunity set in non-performing loans has remained the focus of managers global with mandates as European banks seek to reduce exposures to weaker assets ahead of Basel III implementation in 2019.
- The U.S. credit cycle remains 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. Regardless, the sustained rally in high yield bonds has kept the distressed ratio—bonds trading at more than 1000 basis points over Treasuries—well below its historical average, measured at 4.2% in November 2017.

U.S. HIGH YIELD DISTRESSED RATIO



Data sources: Bank of America/Merrill Lynch, Bloomberg, L.P.; Data as of 11/9/ 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

- 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 and volumes remains well below peak volume/pre-recession years, which we find compelling.
- European distressed opportunities remain prevalent with continued pressure from slow growth and Basel III deadlines. Also, U.S. defaults for 2017 remain soft, and absent a U.S. recession, a broad-based U.S. distressed opportunity remains in the offing.

PRIVATE DEBT FOOTNOTES

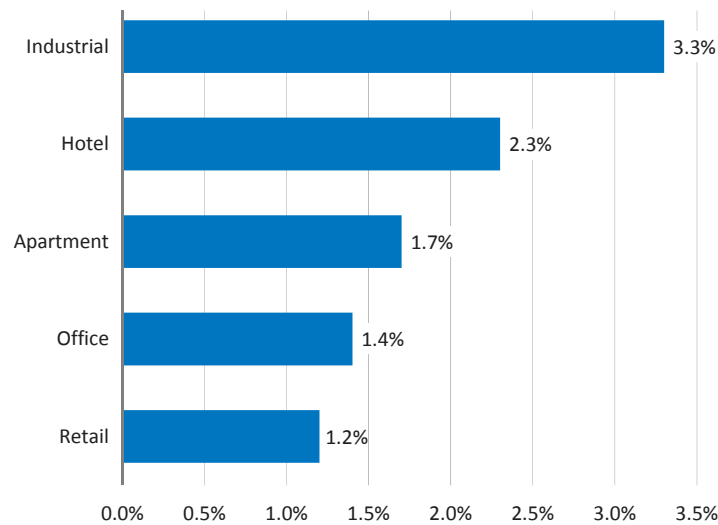
^{1,2} Preqin Quarterly Update: Private Debt Spotlight Q3 2017

³ S&P Global Market Intelligence – High-End Middle Market Lending Review 3Q 2017

REAL ESTATE

- Real estate values, as measured by the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index, increased 1.7% during the third quarter. On a trailing one-year basis, the index gained 6.9%, and the annualized 5-year return was 10.4% as of September 30, 2017.¹
- Similar to second quarter, the industrial and hotel sectors were the top performers, gaining 3.3% and 2.3% respectively in the third quarter. Alternatively, retail was the weakest performing property type, with a return of 1.2%.²
- Property fundamentals were stable in the third quarter, with occupancy for the NCREIF at 92.8%, in-line with the second quarter of 2017 and near the 16-year high reached in the first half of 2017.³
- Net operating income growth was 5.1% for the trailing 12-month period, above its long-term average of 3.2%.⁴
- The implied valuation cap rate was 4.38%, a near record-low. Cap rates declined (valuations increased) for all property types in the index.⁵
- Global commercial real estate transaction volume increased 12% from the same period last year.⁶ In Europe, investment volume grew for the first time in seven quarters, led by the U.K., while the Asia-Pacific region was dominated by Hong Kong, where transaction volume was up 38% year-over-year.
- Conversely, in the U.S., total transaction volume fell for four consecutive quarters and was down 9% in the third quarter; however, pricing remained stable.⁷
- The most active real estate markets during third quarter were New York, Los Angeles, and London. New York led with \$28 billion in total volume, despite a year-over year decline of 40% in overall volume. In London, transaction volume totaled \$25.6 billion, an 18% increase year-over-year.⁸ The top property transactions during third quarter were in London and included the sale of 20 Fenchurch Street for \$1.7 billion and the sale of the Grosvenor House Hotel for \$716 million.⁹

NCREIF NATIONAL PROPERTY INDEX SECTOR RETURNS
Third Quarter 2017



Data source: NCREIF

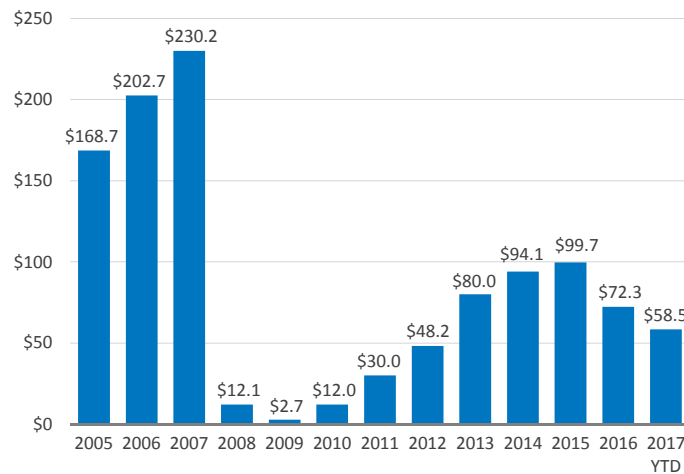
CAPITAL MARKETS

- New CMBS issuance totaled \$26.8 billion in the third quarter of 2017, making it the most active quarter since third quarter 2014.¹⁰ Approximately 36% of new CMBS loans were backed by hotel properties, while trophy office properties in New York and San Francisco made up an additional 27% of new issuance. The largest CMBS deal in the third quarter was a \$2.1 billion deal secured by a portfolio of 460 Motel 6 properties across the U.S. and Canada.¹¹

- Despite some uncertainty around the implementation of new risk retention regulations (designed to hold banks more accountable for their own lending operations), the overall impact has not resulted in a slowdown in CMBS activity for the year.¹² Total issuance for 2017 is expected to reach \$80-85 billion, surpassing last year’s total. Nevertheless, CMBS still comprises a much smaller portion of the commercial real estate debt market than it did at the peak of the market ten years ago.¹³
- Commercial-loan dollar volume rose by 21% in the third quarter, driven by increases in hotel and health care property loans.¹⁴ Compared to the third quarter 2016, loan volume for hotels and health care properties rose year-over-year by 116% and 97% percent, respectively.
- Other major property types posted strong year-over-year gains, including industrial (+20%), multifamily (+15%), office (+8%), and retail (+8%).¹⁵

U.S. CMBS ISSUANCE

As of September 30, 2017



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

REAL ESTATE FOOTNOTES

^{1, 2, 3, 4, 5} www.ncreif.com October 25, 2017

^{6, 7, 8, 9} Real Capital Analytics—Global Capital Trends—Third Quarter 2017

^{10, 11, 12, 13} Trepp CMBS Research: Q3-2017 Issuance Recap, November 2017

^{14, 15} Mortgage Bankers Association

NATURAL RESOURCES

- After declining 9.0% in the second quarter, oil prices rose 12% in the third quarter of 2017, closing at \$51.67/barrel, up from \$46.04/barrel at the end of the second quarter.¹ Improving supply/demand fundamentals was a key factor driving gains during the quarter. The International Energy Agency (IEA) announced upward revisions in demand growth (2.3 million barrels/day) primarily from emerging markets, along with a global supply pullback in August of approximately 700,000 barrels per day, which was the first decline in four months.² Additionally, a decline in global crude supplies occurred in August due to scheduled maintenance and supply outages related to hurricane Harvey. Finally, expectations that OPEC would extend its production cut agreement beyond March of 2018, along with slower growth in the domestic rig count, contributed to improving sentiment for oil prices.³
- Natural gas prices were essentially flat during the third quarter, closing at \$3.01/MMBtu.⁴ Higher production growth, driven by increased rig counts and greater well efficiencies continued to put downward pressure on natural gas prices. Furthermore, growth in production of “associated gas” (natural gas produced as a by-product of oil production) has added to the incremental supply. 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.⁵ Colder-than-expected weather patterns heading into the winter months could also bolster demand.
- According to energy services firm Baker Hughes, the U.S. oil rig count ended the third quarter at 750.⁶ On a year-over-year basis, the total U.S. oil rig count increased by 325, a 76% increase.⁷ Despite the increase, the rig count remains well below the peak of over 1,600 rigs in the fall of 2014. The U.S. total natural gas rig count finished the third quarter at 189, increasing 97% year-over-year.⁸
- The downturn in oil prices during the first half of the year led to slower merger and acquisition activity in the third quarter, with deal volume falling to its lowest level in 18 months.⁹ Similar to last quarter, deal activity in the Permian Basin dropped considerably compared to prior quarters. The largest acquisitions were driven by financial private-equity players and included Silver Run’s \$2.15 billion corporate purchase of Oklahoma operator Alta Mesa, and a large Rocky Mountain asset sale by Halcon Resources and QEP Resources.¹⁰ The fundraising environment for private energy continues to be dominated by mega-funds, with EnCap, Natural Gas Partners, and Quantum Energy Partners all in the market, raising multi-billion dollar funds.

NATURAL RESOURCES FOOTNOTES

^{1,4} CoreCommodity Quarterly Letter – September 30, 2017

² International Energy Agency www.iea.org

³ Alessi, Christopher, Oil Trades in Narrow Range, The Wall Street Journal, September 19, 2017

^{5,9,10} EnCap Quarterly Letter, September 30, 2017

^{6,7,8} www.bakerhughes.com

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

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