Fund Evaluation Group®
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PRIVATE CAPITAL QUARTERLY

RESEARCH REVIEW

SECOND QUARTER 2016

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Signs of Creative Thinking. Literally.

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

On a recent summer road trip, I did a double-take when passing this billboard. In this political environment, it gets your attention. Kudos to the realtor for creativity. It's a good reminder that when our antennae are up to react to one type of message (political in this case), the alternate direction is a surprise. Not rocket science, but a good reminder to challenge expectations.

Challenging our expectations has applications everywhere, but certainly is important in investing. Our data-driven world allows the quants and economists to thrive, but an awareness that data can only be backwards-looking requires us to challenge conclusions drawn from that data. Without a reliable crystal ball, we have to remain open to a variety of possible outcomes. Nothing is certain in investing.

Source: Used with permission from Jeff Cook Real Estate. jeffcookrealestate.com

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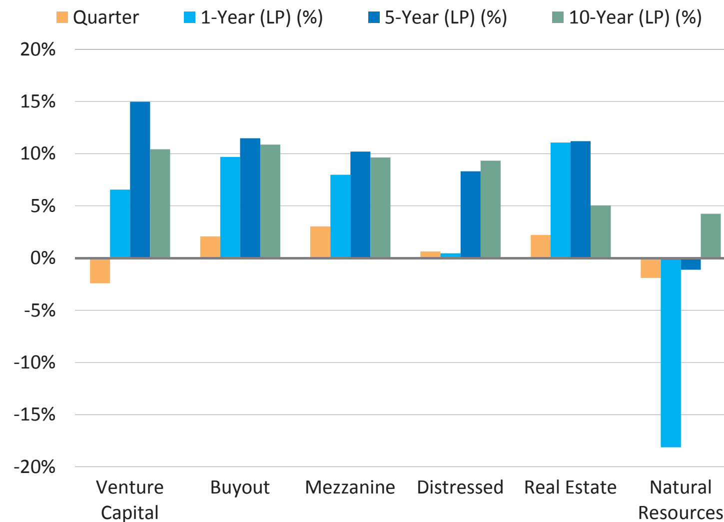

Data source: Thomson One; data as of 03/31/2016

In the most recent quarter for which we have performance data (1Q 2016), returns from private funds were modest to negative. Venture capital valuations notched down as IPO activity slowed in the face of volatile public markets. Mezzanine and real estate funds were the relative winners due to the strong income component of their total return. Buyout funds are on-track for an average year.

During this period, energy prices bottomed out before rebounding materially subsequent to quarter end. The natural resources sector has remained in flux since the dramatic drop in commodity prices that began in 2015. For our Focus Topic this quarter, FEG Director of Real Assets, Christian Busken, highlights *"Metals & Mining: Opportunities at the Bottom of the Cycle?"* This highly cyclical sector is challenged. What are our expectations? We see reasons to consider it a buying opportunity.

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Private Equity Metals and Mining: Opportunities at the Bottom of the Cycle?

CHRISTIAN BUSKEN / Senior Vice President / Director of Real Assets

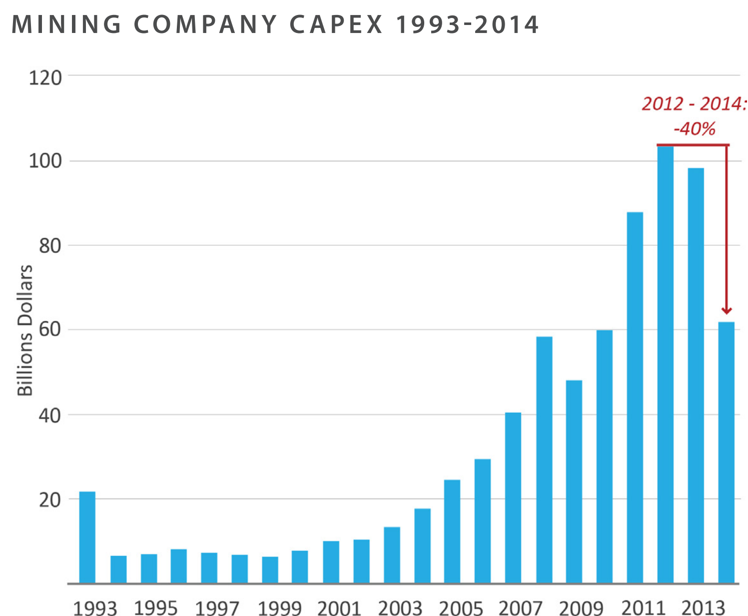
"The world will always need raw materials. That is one thing that is certain."
—Paul Gait, Senior Research Analyst, Alliance Bernstein

While distress in the energy sector has dominated the headlines over the past two years, less attention has been focused on the mining sector, which has suffered similar declines, although, arguably, the pain has been longer and deeper. After a period of exceptional growth driven by demand from emerging markets during the middle of the last decade, the global metals and mining sector has been decimated by a combination of capital misallocation, overleverage, and falling commodity prices, due in part to concerns about slower demand from China and other emerging markets. Fund Evaluation Group (FEG) has been following private equity metals and mining funds for nearly 10 years, but we have not formally recommended any dedicated funds in this space. We continue to analyze opportunities within this area of private capital and believe that certain factors could make private equity metals and mining worth consideration as part of a broad real assets portfolio at this time.

Origins of the Recent Crash

To understand the current environment for the mining sector, we have to look back to the early- to mid-2000s, when the emerging markets demand story was in its infancy and China was in the early stages of its economic expansion. As depicted in the chart below, the mining industry spent nearly $1 trillion on mining capital expenditures and production during the 2000s.[1]

MINING COMPANY CAPEX 1993-2014



Sources: Diapason, Bloomberg

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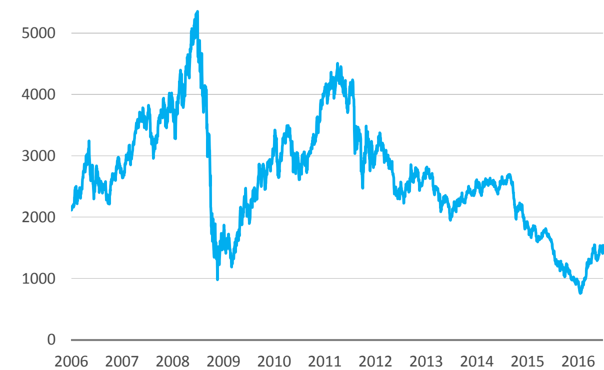
After increasing more than five-fold from the early 2000s through 2011, mining company capex declined more than 40% through 2014. Massive capital expenditures over the 10-year period from 2001 to 2011 ultimately set the stage for the current downturn, as the industry became overcapitalized in an effort to keep up with rising demand from emerging markets. The mantra at mining companies has now shifted to cutting costs and budgets, delaying projects, eliminating expansions, and deferring exploration.

Project investment at BHP Billiton—the world's largest miner—in 2015 will be $10 billion below its 2013 peak. BHP Billiton only has four active projects in the works, two of which are almost complete, compared to 18 mine and infrastructure developments in 2013.[2]

This decline in activity is following a typical boom-bust commodity cycle. What's different is that it follows the biggest boom in recent history. Nevertheless, overcapacity and capital destruction are eventually followed by shortages driven by a combination of economic growth and depletion in production volume. Somewhere between capital destruction and the need for new supply is the bottom of the cycle. Every commodity is a little different, but many now appear to be in that trough.

As shown in the chart, from April 2011 through early 2016, the S&P Metals and Mining sector fell over 85%.

S&P METALS & MINING INDUSTRY INDEX



Data source: Bloomberg; data as of 6/30/2016

Among the many examples of turmoil in the mining sector are the following:

- In March 2015, **X2 Resources**, a private equity mining group led by Mick Davis (former CEO of Xstrata), announced it had secured $5.2 billion in capital commitments for a fund to pursue distressed investments in the mining sector. The fund represented the largest-ever first-time dedicated mining fund. In July 2016, however, X2 announced it was restructuring after losing two key investors – commodity trading firm Noble Group and U.S. private equity firm TPG. This came after failing to complete any deals.[3]
- The Wall Street Journal reported in July 2016 that **Samsung** subsidiary **Samsung C&T** had lost approximately $700 million in a misguided foray into an Australian iron-ore mining project. The losses were due to cost overruns, construction delays, and legal disputes with the mine's owner.[4]
- **Glencore**, the Swiss-based commodity behemoth that went public in May 2011 in the biggest-ever IPO on the London Stock Exchange, saw its share price collapse in the fall of 2015 on concerns about excessive debt of almost $30 billion.[5]
- **Molycorp**, a private equity-backed mining company focused on the growing market for rare-earth minerals (used in wind turbines, medical imaging equipment, and LCD TVs) went public in 2009. By 2011, the private equity sponsor's investment of $110 million was valued at $1.5 billion and the deal was touted by Forbes as "One of The Greatest Private Equity Deals Ever".[3] Four years later, when the company filed for bankruptcy protection in mid-2015, the stock was trading at 36 cents, down from a peak of $75 in 2011. Ultimately, China's decision to increase exports of rare-earth minerals led to the company's demise.[6]

And the list goes on…

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Background: Private Equity Metals and Mining

Private equity metals and mining funds' strategies typically are to target the acquisition and development of mining properties focused on a broad range of industrial and precious metals. Mining is highly capital-intensive and investments often involve multi-year time frames to bring projects to production. Discovery through initial production can take 10 years. Additionally, many projects tend to be located in emerging or frontier markets that involve significant geopolitical risks. A private equity model that involves significant leverage does not fit well with mining, as prices are highly cyclical and leverage can easily become problematic and lead to losses. In contrast to private energy, the metals and mining sector has fewer established players and attracted much less capital through the downturn, and most—but not all—private metals and mining funds are smaller in comparison. In one sense, mining is evolving similarly to energy, where private capital became widely accepted as a source of funding over the past decade. Mining development projects typically go through three stages, all of which have different risk/return characteristics. The following outlines the process by which a mine is developed.

MINING DEVELOPMENT PROCESS

Source: FEG

While some groups focus on the riskier pre-discovery phase of development, most concentrate on expansion and development of existing projects, taking them through to full production. Given the cyclical nature of commodity prices, key risks relate to production costs and being sufficiently capitalized with limited use of leverage. Similar to energy, technical expertise is crucial to success in mining.

Among the key players in the private metals and mining sector are Resource Capital Funds (RCF), which was founded in 1998 and is one of the largest and most established groups with six funds in its track record. Other funds were established in the early- to mid-2000s, some of which were part of broader energy/natural resources funds, and include Sentient Group, Denham Capital, and Energy & Minerals Group (midstream energy plus metals and mining). Following the downturn in 2011, a number of new funds launched, including Appian (2013), Electrum (2015), EMR (2014), Waterton (2013), and ERO (2014).[7]

As of March 2016, there were 256 natural resources funds in the market targeting $141 billion in aggregate capital for fundraising. Mining comprised the smallest subset of private natural resources, with only 13 metals and mining-focused private closed-end funds seeking to raise $3.8 billion in 2016, representing 5.4% of the $141 billion total.[8] Additionally, two-thirds of institutional investors indicated a decreasing appetite for investments in metals and mining compared to a year ago, the only natural resources sector where investor interest is waning. According to Preqin, only $6.9 billion of the dry powder available for investment by private natural resources funds in 2016 is for metals and mining, although a portion of the diversified natural resources funds' $9.7 billion could also go into projects and assets in the sector.[9]

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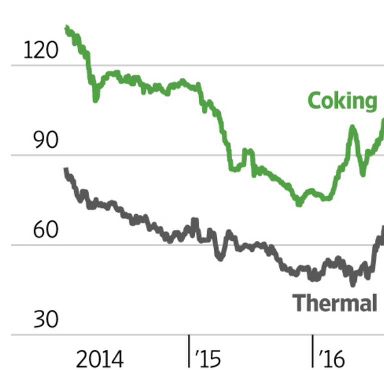
The China Question

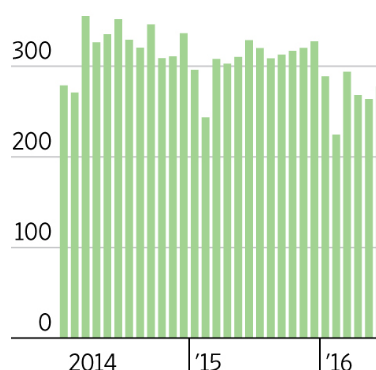
China consumes 50% of the world's aluminum, copper, nickel, iron-ore, and zinc, making it crucial to any discussion of metals and mining. The current conventional wisdom dominating the markets is that slow growth in China is widely responsible for the precipitous drop in commodity prices, particularly industrial metals (and of course, oil). The truth, however, is more nuanced and bears further analysis. First, China is in a multi-year—possibly multi-decade—process of moving from an export-focused, manufacturing economy to a consumer-led services economy. This will likely be a bumpy road marked by periods of volatility. Importantly, while China is experiencing growth rates slower than those achieved during the past decade, its economic base is now significantly larger, such that it does not need to grow at those same levels to account for large increases in demand for metals. Second, and similar to oil, the drop in metals prices is an oversupply story, where producers invested in projects that proved uneconomic due to either high production costs, excessive leverage, or both. While fixed asset investment (i.e., infrastructure and factory construction) grew by 10% in 2015, the weakest full-year growth since 2000 for an economy the size of China, this still represents significant growth. More specifically, copper consumption volume was higher in 2015 than in 2014 and is expected to grow in 2016.[10]

Importantly, China's construction statistics and domestic auto sales all surged in the first half of 2016 on the back of economic stimulus. More recently, reforms in China's coal market have fueled a rebound, with prices for thermal and coking coal used in power generation and steel production rising by one third and 20%, respectively, from their lows in the second quarter. New mining restrictions, including limiting the number of working days for coal miners, led to a 14% decline in Chinese production in the second quarter.[11] Coal prices remain well below their peaks, though recent trends indicate that even basic materials that may have been written off by investors as irrelevant are still driven by supply/demand fundamentals and may surprise to the upside. The following charts show coal prices, China's production, and imports.

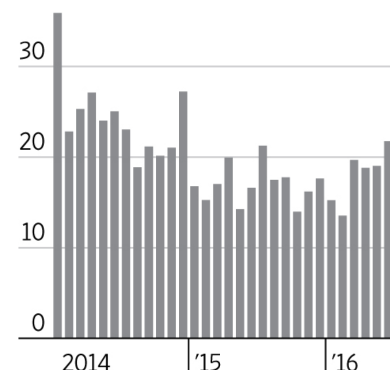
ASIA COAL PRICES



CHINA'S COAL PRODUCTION



CHINA'S COAL IMPORTS



Sources: The Steel Index, Platts (prices); ANZ (production); CEIC (imports)

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In summary, we see several positive indicators for China beyond the short-term narrative dominating the market. These include the following:

- China's absolute growth continues to increase and could surpass the U.S. in the next decade. This supports strong demand for industrial commodities.
- China's inland provinces are in the early stages of their economic development and should be key drivers of future growth. The rate of urbanization in tier-1 and tier-2 provinces is still behind coastal areas, providing room for material growth.
- Anti-corruption initiatives have reduced government spending in the short-term. Once completed, growth in fixed assets investment and infrastructure, all of which drive commodity demand, should continue.
- China is the largest acquirer of metals and mining projects in the world. China's foreign direct investment has increased to more than $100 billion and is expected to grow, with a significant portion allocated to mining projects globally.[12]

Navigating the Current Environment—Treading Lightly

In a sector that has suffered immense distress, we view private equity metals and mining as potentially compelling. This is due to the need for new equity capital as the businesses continue to restructure, divest non-core assets, and eventually, seek to invest in new projects. Nevertheless, we are cautiously approaching this sector. As we look at the landscape today, we see potential opportunities for managers with operational expertise, experience through multiple cycles, and a commitment to prudent risk management.

Similar to the energy sector, FEG's approach to private equity metals and mining is highly selective and focused on managers with a track record of preserving capital through downturn, which eliminates many managers from consideration. We seek managers who are not overburdened with managing problematic or distressed investments made at the top of the market, and who can focus on the current opportunity set. Additionally, we emphasize groups with operating expertise, rather than those with purely financial backgrounds that outsource operational management. We also note that many mining projects are located in countries or regions that have significant geopolitical risks. The mining business is risky already and risk may be compounded by challenges of government intervention or expropriation.

Mining is a highly cyclical industry and is likely approaching the bottom of the current cycle. As we look at the global metals and mining industry today in the context of private equity, there is arguably a dearth of capital compared to other sectors. We believe that capital deployed over the coming years will be well-positioned to benefit from an eventual recovery. We continue to actively evaluate opportunities in this sector on behalf of clients.

PRIVATE EQUITY METALS & MININGS FOOTNOTES

1. White & Case, Mining & Metals: Weathering the Storm No More, September 29, 2015
2. Els, Frik, This is the Scariest Mining Chart You'll See Today, September 21, 2015. www.mining.com
3. Dummett, Ben, "Mining Fund X2 Resources Loses Two Large Investors, Looks to Restructure", The Wall Street Journal, July 15, 2016
4. Cheng, Jonathan, "Samsung's Ambitious Foray Into Mining Backfires", The Wall Street Journal, July 14, 2016
5. Walt, Vivienne, "Glencore Digs Out of the Abyss", Fortune, August 1, 2016
6. Vardi, Nathan, "Moly Corp Looks Like the Best Private Equity Deal Ever", Forbes, January 26, 2011
7. FEG Manager Database
8,9. Preqin
10. Burns, Stuart, "Demand Wasn't the Problem; Why China is Still the Engine of Metals Growth", Metal Miner, January 21, 2016
11. Strumpf, Dan, "China's Coal Market Reforms Fuel Rebound in Prices", The Wall Street Journal, August 8, 2016
12. World Resources Institute

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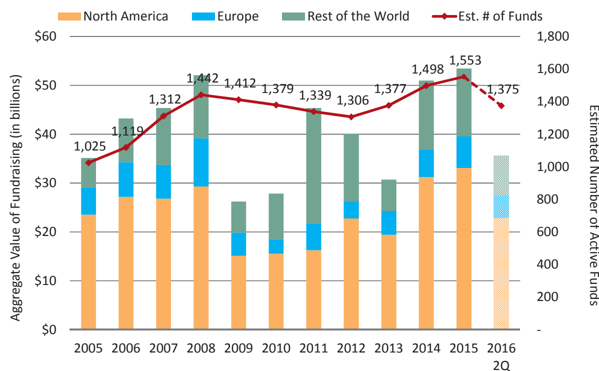
PRIVATE EQUITY

Venture Capital

FUNDRAISING AND INVESTING

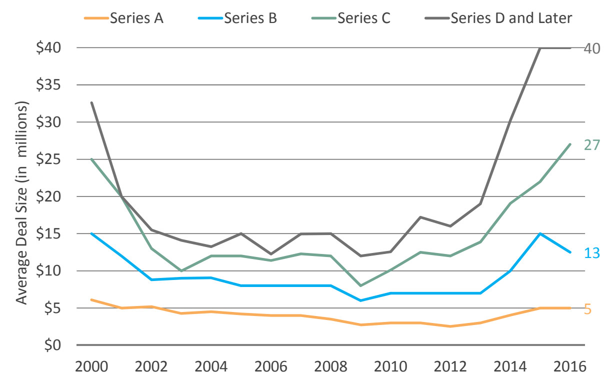
- Global venture funds raised over $30 billion in commitments in the first half of 2016.[1] On an annualized basis, fundraising increased both on a U.S.- and global-basis compared to last year.
- The number of active venture funds increased marginally in 2015, continuing the trend of the last two years.
- Median deal size was mixed in 2016. Very early- (Series A) and very late-stage (Series D and later) investments were flat compared to prior year. Series B round sizes came down while Series C investments continued to increase.[2] Feedback from venture capital managers is that the public equity investors that fueled the late-stage boom over the last several years have withdrawn from the market, a trend that is expected to push down deal sizes in the coming quarters.

VENTURE FUNDRAISING & EST. NUMBER OF ACTIVE FUNDS



Data source: Preqin; data as of June 30, 2016

MEDIAN DEAL SIZE BY FINANCING ROUND

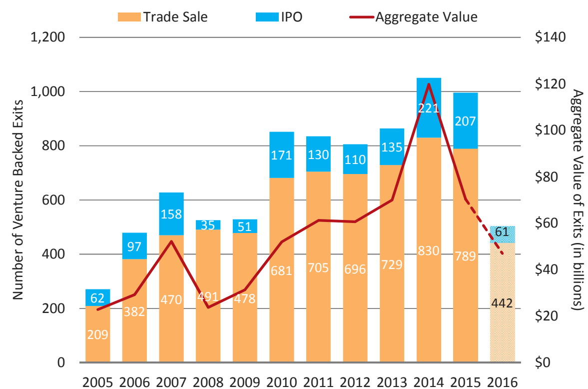


Data source: Preqin; data as of June 30, 2016

EXIT ENVIRONMENT

- During the first half of 2016, venture-backed IPO volume continued its downward trajectory.[3] According to the National Venture Capital Association (NVCA), activity was driven by the healthcare sector in the U.S. Of the 12 venture-backed IPOs in the U.S., nine were life science companies.

VENTURE CAPITAL EXIT ACTIVITY



Data source: Preqin; data as of June 30, 2016

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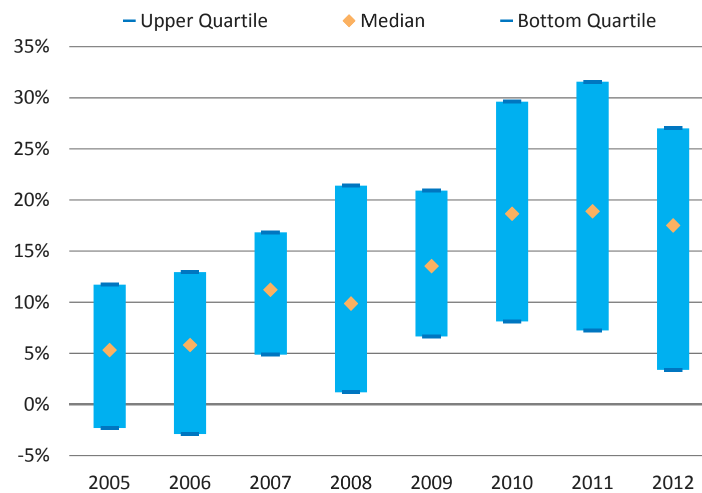
VENTURE CAPITAL PERFORMANCE

- Venture fund performance weakened in the first quarter as public market exit activity slowed. Longer term performance remained strong for funds with vintage years of 2008-2012. Given the strong IPO and acquisition activity over the last three years, venture funds have posted double-digit median net internal rates of return and top quartile returns consistently above 20%. If volatility in the public market and weakness in late-stage financing continues, venture capital performance could trend lower.

VENTURE CAPITAL PERFORMANCE



Data source: Thomson One; data as of March 31, 2016

CONCLUSION

- Venture capital metrics are mixed. Fundraising and performance have been strong while exit opportunities have weakened. Softness in the IPO market and late-stage financings may lead to lower valuations and near-term performance.

PRIVATE EQUITY FOOTNOTES

[1] Preqin
[2] Preqin
[3] Preqin

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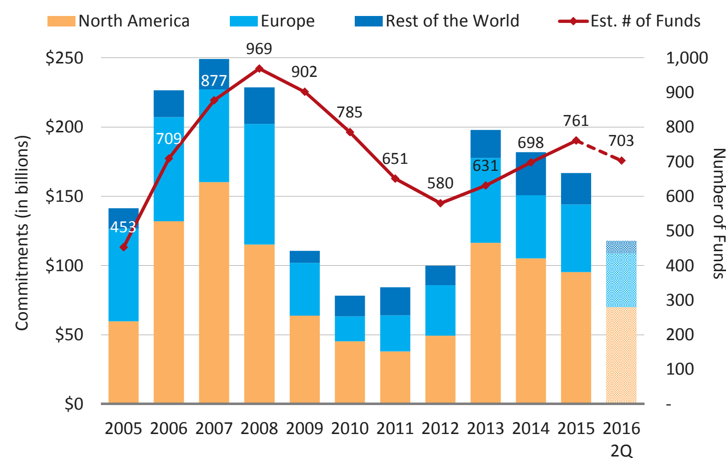
Buyouts

GLOBAL BUYOUT INVESTMENT AND FUNDRAISING

- Global buyout fundraising was strong during the first half of 2016. More than $100 billion was raised by funds in this sector.
- If the current pace continues, 2016 will be the biggest fundraising year since 2008. Commitments for both European- and U.S.-based funds are well ahead of last year's pace, while fundraising for emerging markets and other countries declined compared to 2015.[1]

BUYOUT FUNDRAISING & EST. NUMBER OF ACTIVE FUNDS



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. As of June 30, 2016

GLOBAL BUYOUT INVESTMENT ACTIVITY

- During the first half of 2016, purchase price multiples for middle-market buyout transactions fell to 8.2x EBITDA. Leverage ratios also fell during the quarter. According to S&P Capital IQ, the average debt multiple for middle-market LBOs was 4.3x EBITDA, which was a full turn below the 2015 annual average of 5.3x EBITDA.[2]
- Equity contributions in large buyout transactions increased to 40%, but remained below the 2009 peak of 47%. Equity contributions in middle-market transactions were little changed at 44%.[3] (Note, the S&P Capital IQ data only represents a sample set of leverage buyout transactions executed during a given time period.)

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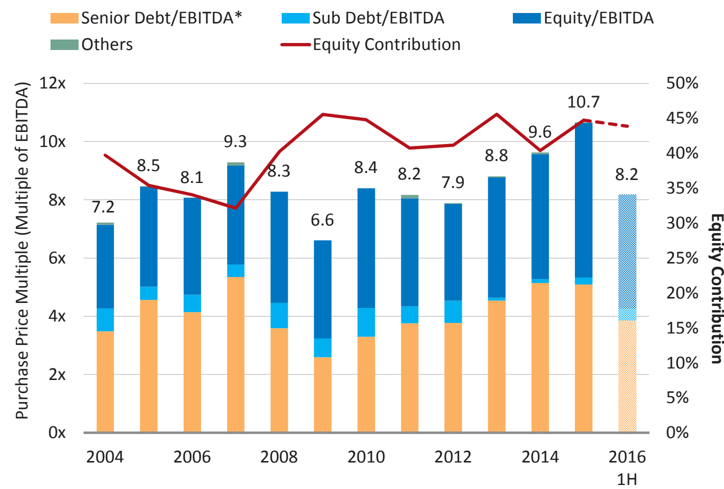
AVERAGE PURCHASE PRICE MULTIPLES & EQUITY CONTRIBUTION

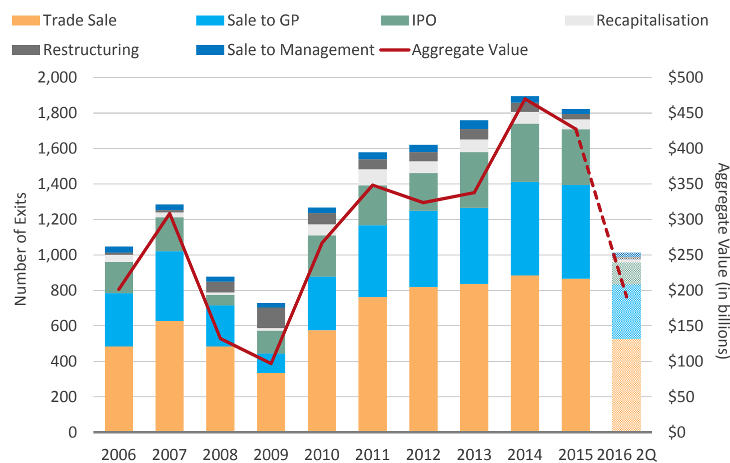


Data source: S&P Leverage Buyout Review; as of June 30, 2016

GLOBAL BUYOUT EXIT ACTIVITY

- Exit activity in the first half of the year was slightly ahead of the pace in 2015. IPO activity slowed in part due to continued public market volatility.[4] Acquisitions through trade sales or other financial sponsors increased in 2016 compared to year-ago levels.
- Trade sales continued to represent more than half of all buyout-related exit volume and values.

BUYOUT EXIT ACTIVITY



Data source: Preqin; as of June 30, 2016

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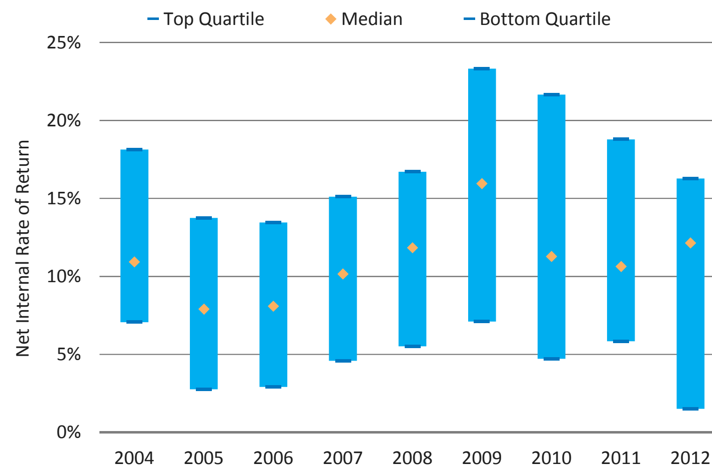
GLOBAL BUYOUT PERFORMANCE

- Performance has been strong on a one-, three-, five-, and 10-year basis with time-weighted returns of 8.5%, 13.3%, 12.3%, and 11.2%, respectively.[5]
- The dispersion of returns between top- and lower-quartile funds has consistently been over 950 basis points, demonstrating the importance of manger selection.

BUYOUT PERFORMANCE BY VINTAGE YEAR



Data source: Thomson One; as of March 31, 2016

CONCLUSION

- The data indicates the market is beginning to turn for buyout funds. Average purchase price multiples among middle-market buyout transactions appear to have peaked during 2015, which should give opportunities for managers deploying capital today. The elevated fundraising levels give reason for concern, however, as manager discipline is critical to making successful investments when the market is flush with capital. FEG continues to look for managers with clear competitive advantages and investment philosophies built on fundamental value.

BUYOUTS: FOOTNOTES

[1,2] Preqin, "Funds in the Market," www.preqin.com, as of June 30, 2016
[3] S&P Leveraged Buyout Review – Second Quarter 2016
[4] Preqin, "Buyout Deals Analyst," www.preqin.com, as of June 30, 2016
[5] Thomson One – Horizon Summary Report as of March 31, 2016

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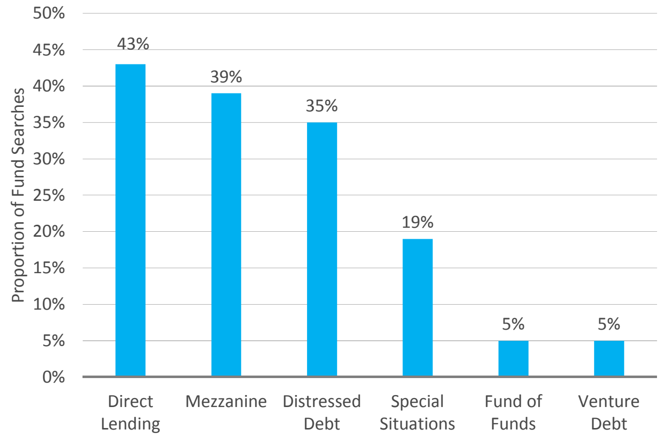
PRIVATE DEBT

PRIVATE DEBT FUNDRAISING

- Investor interest in private senior debt (i.e., direct lending) and mezzanine debt is apparent in recent surveys. Private debt investors emphasized these areas of investment over other private debt options near-term.

FUND TYPES TARGETED BY PRIVATE DEBT INVESTORS IN THE NEXT 12 MONTHS

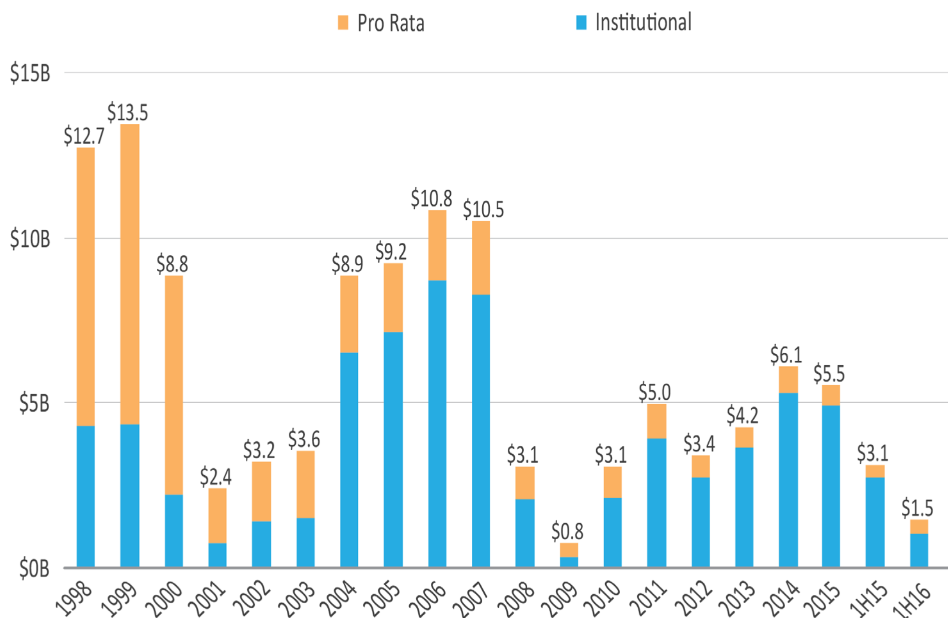


Data source: Preqin Data Online

PRIVATE DEBT FUNDAMENTAL BACKDROP

- According to S&P Capital IQ, total leverage multiples of leveraged buyout (LBO) middle-market transactions remained at 5x through the first half of 2016. Middle-market new issuance remained soft in the first half, as risk retention rules for collateralized loan obligations (CLOs) continued to limit new issuance of bank loans. First half volume of $1.5 billion was 50% of the year-ago pace.
- The middle-market appears healthy through the first half of 2016. Leverage multiples were modestly elevated, but average pro-forma earnings before interest, taxes, depreciation, and amortization (EBITDA) increased to $37.7 million (14% above the year-ago period and 5% above the full year of 2015), according to S&P Global Market Intelligence. Additionally, the average equity contribution from sponsors remained solid at 47.8% of total capital in the second half of 2016.

LEVERAGED BUYOUT MIDDLE-MARKET VOLUME BY YEAR



Data source: S&P Capital IQ: LCD's Leveraged Buyout Review – 1Q16

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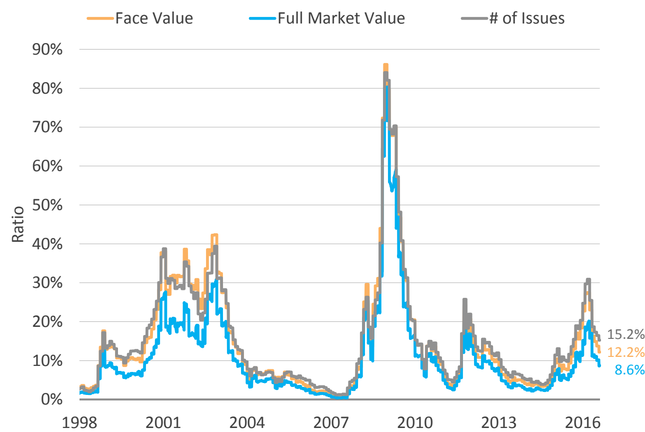
DISTRESSED UPDATE

- The European distressed opportunity set remained attractive. Market observers note an increase in sales from Spanish and Italian banks in recent quarters. According to PwC Portfolio Advisory Group, non-performing loan sales from European banks are expected to remain above €100 billion in 2016. Basel III requirements are set to trigger additional improvement in the balance sheets of European banks in the next few years. New leverage ratios must be met in 2018 and new capital and liquidity requirements are expected to be met in 2019.

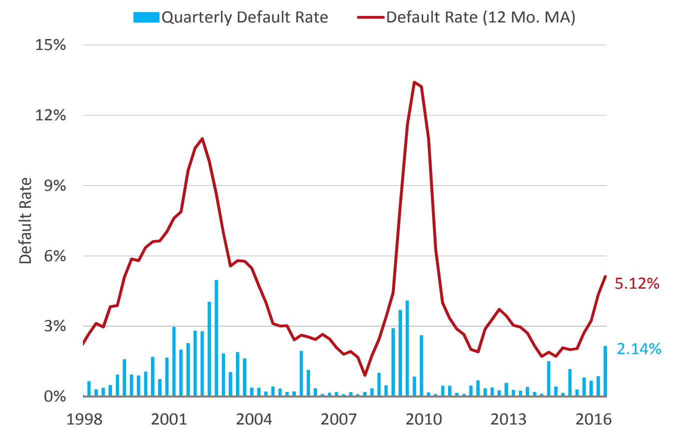
- The U.S. distressed opportunity set continued to evolve. Early in the year, selling of riskier assets pushed yields on high yield bonds through 10%, which attracted investors back into the market. This buying continued through the end of the second quarter, pushing the Barclays U.S. High Yield Index to a 9.1% return on the year. As a result, the distressed ratio declined from earlier in the year while default rates—a trailing 12-month measure—rose significantly, largely due to energy- and commodity-related distress.

U.S HIGH YIELD DISTRESSED RATIOS



Data sources: Bank of America/ Merrill Lynch, Bloomberg L.P; data as of 08/04/2016

U.S HIGH YIELD DEFAULT RATE



Data sources: BofA/ML, Moody's, Edward Altman; data as of 2Q2016

CONCLUSION

- Direct lending and mezzanine debt investment opportunities are attracting the most interest within the private debt sector.

- Middle-market fundamentals remain reasonably healthy, reflecting a mixed bag of late cycle characteristics. Total leverage remains reasonable and supported by equity.

- European distressed opportunities remain prevalent and predicated on the next few years ahead of Basel III completion. U.S. defaults have increased, but remain energy-centric. Absent a U.S. recession, a broad-based U.S. distressed opportunity remains further down the horizon.

PRIVATE DEBT FOOTNOTES

[1] Preqin, "Funds in the Market," www.preqin.com, as of June 30, 2016
[2] PWC Portfolio Advisory Group Market Update, March 2016

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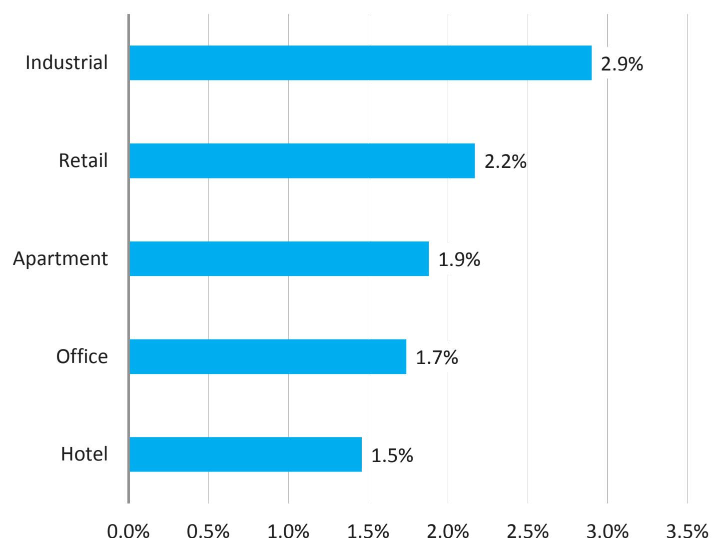
Private Real Estate

- Real estate values, as measured by the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index (NPI), increased 2.0% during the second quarter, following a 2.1% gain in the first quarter. On a trailing one-year basis, the index gained 10.6%, and the annualized five-year return was 11.5% as of June 30, 2016.[1] While fundamentals remained stable, commercial real estate markets showed signs of slowing during the quarter, as vacancies for some property types rose and financing tightened. Additionally, risk aversion from institutional investors driven by concerns about rising interest rates, slower global economic growth, and Brexit contributed to a decline in transaction volume. Nevertheless, property fundamentals such as rents, net operating income, and occupancy levels are stable and new supply, while growing, remains limited in most areas.

- For the second quarter, the retail and industrial sectors were the top performers, gaining 2.9% and 2.2%, respectively.[2] Cap rates in the U.S., already at or below historic lows, were largely unchanged, driven by investor's continued demand for yield in a low interest rate environment. Property prices, as measured by the Moody's/Real Capital Analytics Commercial Property Price Indices (RCA CPPI) national aggregate, were mixed, with major markets declining and secondary markets rising—further indication of risk aversion by investors in areas where valuations have been stretched.[3]

- Real estate transaction volume in the U.S. totaled $93.9 billion in the second quarter, a 4% decline compared to the same period in 2015.[4] On a global basis, commercial property transaction volume also declined, with a total of $173 billion in the second quarter, down 21% from the second quarter of 2015.[5] In North America, transaction volume declined 9% in the second quarter and 14% year-to-date in 2016. Deal volume in secondary markets, however, was up 13% on a year-over-year basis, and reflected a move by investors into markets with more attractive pricing compared to core-major metropolitan markets.[6] Despite the decline in transaction volume, pricing for commercial real estate markets remained healthy during the second quarter.

NCREIF NATIONAL PROPERTY INDEX SECTOR RETURNS Second Quarter 2016



Data source: NCREIF

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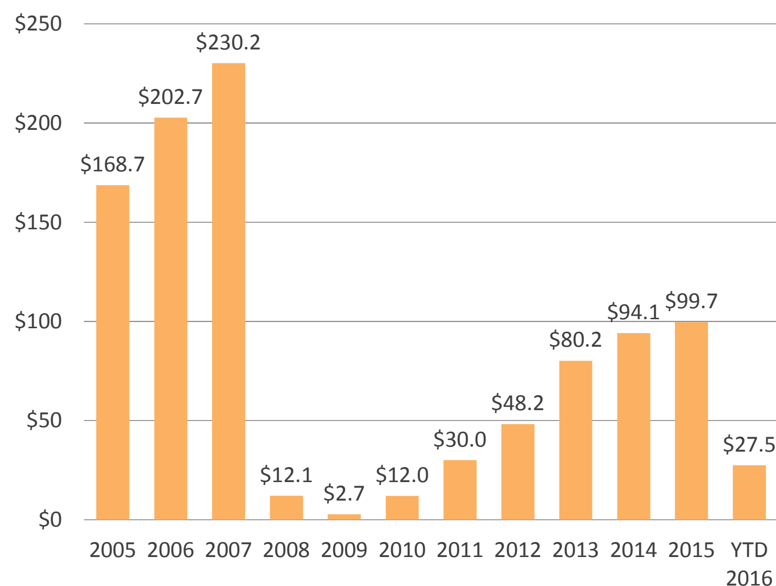
REAL ESTATE CAPITAL MARKETS

- The second quarter of 2016 was challenging for CMBS due to ongoing volatile market conditions. New CMBS issuance totaled $10.9 billion in the second quarter, a significant decline compared to the same period in 2015, in which total issuance was approximately $25.5 billion.[7] A combination of factors contributed to the sharp drop in new issuance, including dislocations in the high yield debt market as well as global volatility and concerns about higher interest rates. Additionally, regulatory pressures have led to fewer investors willing to buy the "B-piece" (lower tranche) of new CMBS securities due to new risk retention requirements of Dodd-Frank legislation slated to take effect in 2017. Under the new rules, issuers of asset-backed products must retain 5% of the bonds they sell and B-piece buyers are required to hold for five years.[8]

- The CMBS delinquency rate inched up during the second quarter and stood at 4.60% at quarter-end, but is still 85 basis points below one year ago. CMBS delinquencies have fallen significantly from a record high of 10.3% in July 2012. During the second quarter, retail delinquency rates rose 36 basis points to 5.72%, the largest increase among the major property types.[9]

- Over the next two years, approximately $255 billion (43% of the CMBS market) matures and will need to be refinanced. While this should create opportunities for buyers of commercial real estate, the current dislocations are creating a financing challenge for buyers of commercial properties given the significant equity capital raised for private real estate.[10]

- Expectations going into 2016 were for $110-125 billion of new CMBS issuance for the year, but those projections have been scaled back to a range of $60-75 billion. The result could be a lack of capital available for real estate borrowers and potentially lower prices. CMBS fills a key segment of the financing market for middle-market properties, and if the CMBS market continues to contract, it is unclear whether other groups (i.e., banks and insurance companies) will provide permanent financing for these types of properties.[11] There has been an uptick in private real estate debt funds being structured.



Data source: Bloomberg, L.P.; as of June 30, 2016

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PROPERTY SECTORS

Apartments

- While the apartment sector market remains the strongest of the major real estate property types in terms of occupancies and rental growth, there were signs of slowing during the second quarter. The vacancy rate remained at 4.5% from a record-low of 4.2% in mid-2015, and nationally, average effective rents grew 3.7% during the second quarter compared with a 5.1% increase in the same period last year.[12] While overall rent growth is cooling and some developers are struggling to get the rents they anticipated, the market remains historically strong. Rents are still rising well above the long-term average of about 3% per year. The slowdown reflects in part a surge of new supply in the country's hot rental markets that is limiting landlords' ability to raise rents, as well as uncertainty about the health of the technology sectors. Renters also are less willing to accept steep rent increases in markets like San Francisco, which has seen rents jump 50% since the recession.[13] Overall, fundamentals point to a moderating market driven by a rebalancing of supply and demand after years of strong growth.

Office

- Demand for U.S. office space grew at its fastest pace since 2007 during the second quarter, absorbing 11.4 million square feet of additional space and 21.4 million square feet during 2016. Average rents increased 1.3% over the last year to $26.92 per square foot.[14] Vacancy continued to inch downward reaching 14.6% overall—12.1% in CBDs and 16.1% in the suburbs. Nashville remains the tightest market in the country, followed by San Francisco, Salt Lake City, Portland and Seattle-Bellevue.[15] Approximately 101 million square feet is expected to be delivered over the next three years, but in secondary markets where new supply remains limited and tenant demand is high, vacancy will likely fall below pre-recession levels.[16]

REAL ESTATE FOOTNOTES

[1,2] www.ncreif.com August 1, 2016
[3] Real Capital Analytics–Global Capital Trends–Second Quarter 2016
[4-6] www.ncreif.com August 1, 2016
[7-11] www.trepp.com August 3, 2016
[12,13] Kusisto, Laura, "Apartment Rents Rise 4% in Second Quarter; Growth Slowing From Pack", The Wall Street Journal, July 5, 2016
[14 - 16] United States Office Outlook – Q2 2016, JLL. August 8, 2016

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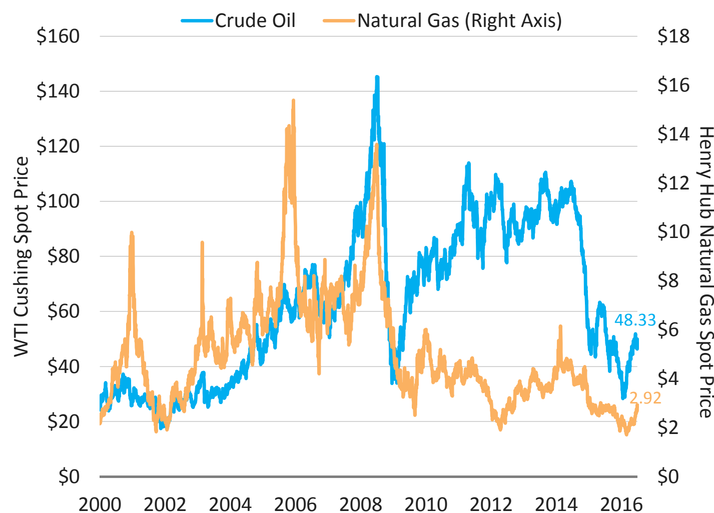
Natural Resources

- After falling to multi-year lows early in the first quarter, crude oil prices continued their rebound in the second quarter, gaining 26.1% to close at $48.33/barrel compared to $38.34/barrel at the end of the first quarter.[1] As the quarter closed, oil prices posted their sixth consecutive monthly increase. Positive factors supporting oil prices during the quarter included the ongoing disruption in Nigerian production (current production ~1.4MMBb/d – lowest level in nearly 30 years), wildfires in Canada, the potential for disruption in Venezuelan production, ongoing declines in U.S. supply, and a robust U.S. driving season.[2]

- During the quarter, the International Energy Agency (IEA) released a new report estimating that non-OPEC supply, of which the U.S. has been the largest source of growth in recent years, is expected to contract by ~0.9 MMBbl/d in 2016.[3] Total U.S. oil production is also down approximately 10% year-over-year to ~8.6 MMBbl/d, according to weekly data provided by the U.S. Energy Information Administration (EIA). Oil demand also began to steady during the quarter, led by rising gasoline usage in the U.S. and strong gasoline/diesel demand in India. Despite the recent run up, most analysts believe oil prices will be relatively range bound for the remainder of the year.[4]

- Natural gas prices surged 49% during the second quarter to close at $2.92/MMBtu compared to $1.96/MMBtu at the end of the first quarter.[4] Still, the second quarter was the fifth straight quarter below $3.00 MMBtu. The five-year average Henry Hub gas forward curve closed the quarter at $3.06/MMBtu, up 10% since the first quarter. During the second quarter, a tight supply/demand picture began to come into balance as North American associated gas production declined and warm weather spurred demand. Many analysts believe there is an opportunity for gas prices to strengthen further over the remainder of the year as associated gas production continues to decline due to the lack of North American drilling activity and increased Northeast gas infrastructure bottlenecks.[5]

CRUDE OIL AND NATURAL GAS PRICES
As of June 30, 2016



Data source: Bloomberg L.P.

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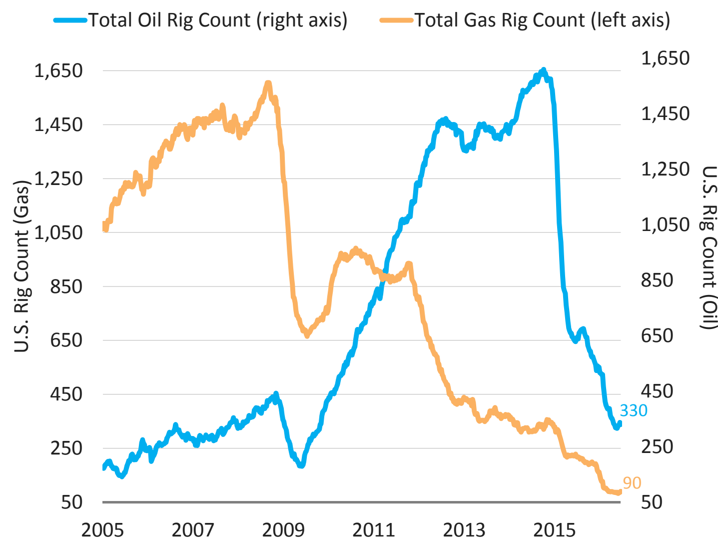
- The U.S. total oil and gas onshore and offshore rig count continued to decrease during the second quarter, ending the quarter with 421 total rigs running, a decrease of 51% on a year-over-year basis.[7] The oil rig count decreased by 42 to 330 (9.3%) as of the end of the second quarter, down 80% from a peak of approximately 1,600 in September 2014. The U.S. natural gas rig count also decreased during the second quarter to 90 from 92 at the end of the first quarter, a 2.2% decline.[8] Year-over-year, the U.S. total oil rig count is down 47.5%, or roughly 298 rigs. If commodity prices stay depressed, well economics will continue to dominate and operators will focus on the most economic areas. Non-core and uneconomic plays at the current strip will see the largest decline in rig activity.[9]

- U.S. deal activity and valuations picked up in the second quarter, with the Permian Basin (West Texas) leading the way. Thirty-nine onshore asset transactions occurred during the quarter, totaling $9.3 billion. Of the 39 asset transactions, 28 were oil weighted and valued at $7.1 billion and 10 were gas weighted and valued at $2.1 billion.[10] The Permian Basin continued to dominate the transaction market, with 13 deals occurring valued at $3.1 billion and averaging ~$17,000/acre. The largest deal during the quarter was Enervest's acquisition of GulfTex and BlackBrush's Eagle Ford acreage for $1.2 billion. Investment by private-equity firms remained a key factor in the upstream transaction market, as they continued to look to put money to work. Bankruptcy filings by E&Ps also continued to occur as a handful of companies filed for protection.[11]

CRUDE OIL (WTI) AND U.S. TOTAL OIL/GAS COUNT
As of June 30, 2016



Data source: Bloomberg L.P.

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TIMBER

- As measured by the NCREIF Timberland Index, U.S. timberland values increased by 1.0% during the second quarter, following a modest 0.3% decline in the first quarter of 2016.[12] This was the first quarterly decline in more than four years. On a trailing one-year basis, the NCREIF Timberland Index returned 0.9%.[13] Southeastern pine stumpage markets contracted over the quarter, while hardwood demand increased. In the Pacific Northwest, domestic markets continued to improve, though export demand remained flat. Northeastern hardwood markets weakened across many major species. [14]
- The trend of TIMOs (Timber Investment Management Organizations) selling to other TIMOs continued during the second quarter, as three sizeable timberland deals closed. CatchMark closed on 51,700 acres in South Carolina from FIA for an estimated $102 million. Resource Management Service announced an agreement to purchase a 50-year timber deed on a 54,334-acreage position in North Carolina for $78 million. In the upper peninsula of Michigan, Hancock closed on the 362,000-acre Bishop property from The Forestland Group. Although an exact price is not yet known, analysts expect the deal to be worth approximately $200 million.[15]
- In terms of pricing, average delivered prices for Douglas-fir in the Pacific Northwest rose 0.1% during the quarter and finished 6.4% above year-ago levels.[16] In the U.S. South, where timber prices are more dependent on the strength of the U.S. housing market, prices declined 0.7%, but are up slightly (+0.6%) compared to year-ago levels. New housing starts continued to be strong, averaging approximately 1.2 million units on an annualized basis during the second quarter, an increase of 9.5% from the same period last year.[17]

NATURAL RESOURCES FOOTNOTES

[1] CoreCommodity Quarterly Letter – June 2016
[2-11] EnCap Investments – Second Quarter 2016 Letter
[12] www.ncreif.org, accessed August 3rd, 2016
[13-17] Forest Investment Associates Quarter Update – Second Quarter 2016

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The Moody's/RCA Commercial Property Price Indices measure price changes in US commercial real estate based on completed sales of the same commercial properties over time, or the "repeat-sales" methodology.

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.

The NCREIF Timberland Index is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only. All properties in the Timberland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment.

Information on any indices mentioned can be obtained either through your consultant or by written request to information@feg.com.

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