SERENITY
ALTERNATIVE INVESTMENTS

Data Center REITs and the 2018 Cloud Explosion

- Cloud provider capex spending exploded higher in 2018
- Data center REITs had their best leasing year ever, but fell short of analyst expectations, returning -14.5% in 2018
- Continued spending by cloud providers, more available space, and attractive valuations all paint a rosier picture for data center REITs in 2019.
- The data center REITs could return up to 20% over the next twelve months

Friends and Investors,

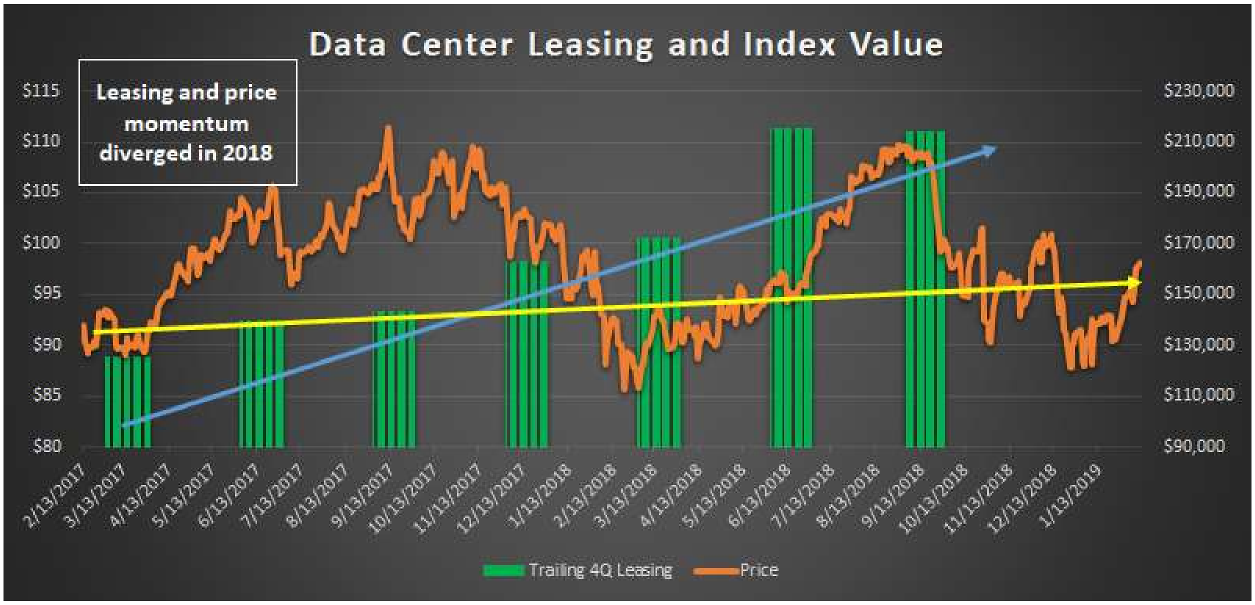
2018 may go down in history as the year of the great cloud computing explosion. Spending on cloud infrastructure has grown rapidly over the past five years, but in 2018 it leapt higher amidst a spending spree that re-shaped the entire cloud landscape. Facebook's capex doubled from $6.7 billion to $13.9 billion. Google increased their capex spend from $13 billion to $25 billion. Microsoft's capex leapt from $8.6 billion to $14.2 billion. If you include Apple and Amazon, aggregate capex spending for these 5 tech giants increased from $52 billion to $80.6 billion, a $28 billion increase, which represents year over year growth of 54%.

That's $28 billion with a B. This spike in capex spending represents the view these companies have of the future of digital data processing and storage, and it required a huge amount of new data center infrastructure to support. It's no surprise then, that data center absorption increased to 292 megawatts (MW) in the first half of 2018 according to JLL, a growth in leased MW's of 31.9%. The majority of this new data center space was booked in northern Virginia, the unofficial internet capital of the world. Leasing in this market was 168 MW in early 2018, or 57% of total leasing over that period.

With such a banner year in data center leasing on the books, one would imagine that the public data center REITs would have one of their best performance years of all time. This, however, was not the case in 2018. The data center REITs returned -14.5% in 2018, their worst performance year since 2013. Uhhh…what? This conundrum has left many data center investors scratching their heads, as record leasing has led to poor returns.

So what's to blame? Did the public companies somehow not keep pace with the rest of the market from a leasing perspective? Using data through Q3 of last year, the public data center REITs (DLR, CONE, QTS, COR) had leased 2.14 million square feet of new data center space over the previous four quarters. This compares to 1.3 million square feet for the same statistic from one year earlier, a growth rate of 55%. This would indicate that data center leasing grew at about the same rate as cloud spending for the public data center REITs. If leasing was not the problem in 2018…what was?

The lack of performance in data center REITs last year has much more to do with expectations that actual results. Expectations are always the wild-card of the stock market. Bad results can be good for a stock if expectations are low enough, and similarly good results can be bad for a stock if expectations are too high. In early 2018, it's clear in retrospect that analyst expectations for 2019 funds from operations (FFO – a measure of REIT earnings) were much too high. Over the course of 2018, FFO estimates for QTS, CONE, COR, and DLR decreased by about 10% on average. This was despite a record leasing year for the space as detailed above.




A number of company specific issues were responsible for this expectations re-set. Digital Realty (DLR) bought a large FFO dilutive Brazilian data center platform called Ascenty, CyrusOne (CONE) bought a large FFO dilutive European data center platform called Zenium, QTS Realty Trust (QTS) sold its C3 business, and Coresite (COR) saw delays in delivering new leasable data center space. Couple these events with tentative comments from Amazon on its Q3 earnings call, and the result was 10% reductions in 2019 FFO estimates.

The question then becomes whether more negative headlines lie on the horizon. To find some clues we can start with the large cloud player who's 3Q earnings call comments fueled analyst negativity surrounding future cloud spending, Amazon (AMZN).

Amazon is a heavy capex spender in the cloud space, with 2018 capital expenditures of $13.4 billion. Amazon's capex was up 12% in 2018, which was a disappointment to analysts. During the companies Q&A on October 25th of 2018 Brian Olsavsky said the following:

"If you look at capital leases, which is where we spend money for the data centers, it's up only 9% year-over-year, trailing 12 months, and it was up 69% last year, at the end of the year."

This comment along with less than inspiring earnings from DLR sent the data center REITs down about 7% from October 25th to the 27th of last year. The narrative that emerged was that "cloud spending is slowing". This in theory would lead to less leasing and slower growth for the data center REITs.

But did analysts give these comments too much weight? Let's see what Amazon had to say on their fourth quarter call which occurred on Jan 31st of 2019.

"I see total CapEx, that was, grew 33% in Q1, 1% in Q2, negative 1% in Q3 and then positive 17% in Q4. Just the quarter itself. So there was as you say a bit of investment in Q4 relative to Q2 and Q3. I still think the 17% is a low number for us when you talk about supporting the AWS business that's still growing in a very high clip… I would say that I would consider 2018 to be a lighter investment year and a lighter year for adding fixed head count."

This commentary paints a much rosier picture than the previous narrative surrounding cloud spending. After ramping spending on cloud in 2017, Amazon seemingly took time to digest these purchases in 2018, with two quarters of flat growth in 2Q and 3Q. By 4Q, however, they had ramped spending back up, growing 17%, and indicating it will continue to be elevated in 2019.

The broader point here is that capex spending is un-predictable and should not be extrapolated linearly in either direction. Will cloud spending continue to grow at 50% per year into the visible future? No. Facebook and Google are not likely to grow capex at 107% and 91% in 2019, but that does not mean that leasing will suddenly dry up for the data center providers. Amazon is set to re-accelerate capex, while others may digest current inventory, and data center leasing is likely to continue at a strong clip.

Commentary from the brokerage community echoes this sentiment. A recent article from DataCenterFrontier.com quoted Allen Tucker of JLL as saying "I don't think it's slowing down…we're seeing tremendous pent-up growth and demand." Later in the article Sami Badri of Credit Suisse is quoted as saying "Nothing has changed in the last three months for hyperscalers."

Looking at data center multiples, you would not guess that this was the case. Relative to consensus 2020 EBITDA estimates, the data center sector looks extremely inexpensive relative to other REITs. On a market cap weighted basis, data centers trade at a 15.6x multiple of expected 2020 EBITDA. This compares to apartment REITs at 20.6x, warehouse REITs at 22.8x, and the cell-tower companies at 19.4x. The data centers in fact trade in-line with the shopping center REITs using this metric, which is ironic considering Amazon is leasing space in data centers, while simultaneously pulling demand out of shopping centers.

| Property Sector | 2018 EBITDA Growth | 2019 EBITDA Growth | 2020 EBITDA Growth | EV/2019 EBITDA | EV/2020 EBITDA |
|---|---|---|---|---|---|
| Apartments | 4.6% | 3.8% | 4.7% | 21.7x | 20.7x |
| Data Centers | 20.2% | 10.1% | 10.2% | 17.1x | 15.6x |
| Diversified | 1.2% | 9.2% | 3.1% | 15.9x | 15.5x |
| Free Standing | 7.8% | 8.9% | 12.4% | 20.5x | 17.9x |
| Health Care | 3.5% | 3.3% | 5.8% | 17.6x | 16.7x |
| Industrial | 8.4% | 11.9% | 8.6% | 24.7x | 22.8x |
| Infrastructure | 17.5% | 2.3% | 6.8% | 20.9x | 19.5x |
| Lodging | 6.1% | 7.9% | 3.9% | 12.2x | 11.7x |
| Man. Homes | 9.6% | 8.9% | 6.1% | 22.8x | 21.1x |
| Office | 2.6% | 2.4% | 5.0% | 19.9x | 18.0x |
| Regional Malls | 2.9% | 0.3% | 5.2% | 18.2x | 17.3x |
| Self Storage | 5.3% | 3.8% | 3.9% | 20.7x | 19.9x |
| SFR | 5.3% | 3.8% | 3.9% | 20.7x | 19.9x |
| Shopping Centers | 0.1% | (1.3%) | 4.9% | 18.0x | 15.8x |
| Specialty | 17.7% | 10.4% | 5.6% | 13.5x | 12.7x |
| Timber | 5.3% | (19.3%) | 12.5% | 15.5x | 13.8x |
| Average | 7.4% | 4.1% | 6.4% | 18.8x | 17.4x |

The sectors valuation has also fallen relative to history. Going into last year, the data center REITs traded at an average FFO multiple of about 20.4x. As of this writing that multiple has compressed to 17.5x, illustrating the drop in expectations that occurred during 2018.

In addition to being extremely cheap, the publicly traded data center REITs are likely to capture a higher share of leasing in 2019 than they did in 2018. Part of the reason FFO estimates had to come down in 2018 was that some of the REITs simply ran out of space to lease. DLR spent most of 2018 at over 93% leased in northern Virginia, the highest absorption data center market. Coresite similarly had to buy a large land parcel to continue developing in northern Virginia, which takes time to build out and is completing over the course of the next 3 quarters. With more space available in the busiest data center market in the country, the REITs are much more likely to hit estimates this year and possibly even exceed them.

In the end the data center REITs are still tied to one of the fastest growing pockets of the US economy. Every day more companies move applications into the cloud, deploy new computationally intense machine learning applications, and prepare for the data deluge that will be generated by new IOT devices. Development yields for data centers still exceed those of other major property types, and EBITDA growth could be the highest in the REIT universe in both 2019 and 2020.

With the sector trading at a wide discount to consensus NAV, and a large discount to peers based on 2020 EBITDA estimates, we think it is poised for a rebound after a year of sub-par returns. Assuming 10% NAV growth (in-line with history) and 10% multiple expansion (closing part of the gap to NAV and peer multiples), the possibility exists for 20% returns over the following 12 months.

Risks to the space include private data center providers over-building, continued dilutive acquisitions, or an economically induced slow-down in cloud spending. Put simply, supply would have to increase meaningfully, or demand would have to slow meaningfully in order for data centers to see slower growth than what is currently priced into the market. While these are both certainly possibilities, brokers have seen little evidence of a slow-down in demand, and most of the supply that has been introduced to the market has been pre-leased to this point. Data center management teams have set conservative expectations for leasing so far in 2019, but there is always the possibility of them falling short.

On balance we believe too much negativity is priced into a sector that has a history of exceeding expectations. As data demand continues to grow and the industry continues to mature, investors will have to decide if data centers still deserve to trade at a multiple discount to peers. We think the combination of higher growth and discounted valuations will be too sweet to pass up.

Jump on the data train, not in front of it,

Martin Kollmorgen, CFA

CEO and Chief Investment Officer

Serenity Alternative Investments

Office: (630) 730-5745

MdKollmorgen@SerenityAlts.com

**All charts generated using data from Bloomberg, LP, S&P Global, and Serenity Alternative Investments control regulations in the countries and/or states of their citizenship, residence or domicile which might be relevant to the subscription, purchase, holding, exchange, redemption or disposal of any investments. The information contained herein does not take into account the particular investment objectives or financial circumstances of any specific person who may receive it. Before making an investment, prospective investors are advised to thoroughly and carefully review the offering memorandum with their financial, legal and tax advisers to determine whether an investment such as this is suitable for them.

There is no guarantee that the investment objectives of the Fund will be achieved. There is no secondary market for interests and none is expected to develop. You should not make an investment unless you have a long term holding objective and are prepared to lose all or a substantial portion of your investment. An investment in the Fund is speculative and involves a high degree of risk. Opportunities for withdrawal and transferability of interests are restricted. As a result, investors may not have access to capital except according to the terms of withdrawal specified within the confidential offering memorandum and other related documents. The fees and expenses that will be charged by the Fund and/or its Manager may be higher than the fees and expenses of other investment alternatives and may offset profits.

With respect to the present document and/or its attachments, the Manager makes no warranty or representation, whether express or implied, and assumes no legal liability for the accuracy, completeness or usefulness of any information disclosed. Certain information is based on data provided by third-party sources and, although believed to be reliable, it has not been independently verified and its accuracy or completeness cannot be guaranteed and should not be relied upon as such. Performance information and/or results, unless otherwise indicated, are un-audited and their appearance in this document reflects the estimated returns net of all expenses and fees. Investment return and the principal value of an investment will fluctuate and may be quite volatile. In addition to exposure to adverse market conditions, investments may also be exposed to changes in regulations, change in providers of capital and other service providers.

The Manager does not accept any responsibility or liability whatsoever caused by any action taken in reliance upon this document and/or its attachments. The private investment fund described herein has not been registered under the Investment Company Act of 1940, as amended, and the interests therein have not been registered under the Securities Act of 1933, as amended (the "1933 Act"), or in any state or foreign securities laws. These interests will be offered and sold only to "Accredited Investors" as such term is defined under federal securities laws. The Manager assumes that by acceptance of this document and/or attachments that the recipient understands the risks involved – including the loss of some or all of any investment that the recipient or the entity that he/she represents. An investment in the Fund is not suitable for all investors.

This material is for informational purposes only. Any opinions expressed herein represent current opinions only and while the information contained herein is from sources believed reliable there is no representation that it is accurate or complete and it should not be relied upon as such. The Manager accepts no liability for loss arising from the use of this material. Federal and state securities laws, however, impose liabilities under certain circumstances on persons who act in good faith and nothing herein shall in any way constitute a waiver or limitation of any rights that a client may have under federal or state securities laws.

The performance representations contained herein are not representations that such performance will continue in the future or that any investment scenario or performance will even be similar to such description. Any investment described herein is an example only and is not a representation that the same or even similar investment scenarios will arise in the future or that investments made will be profitable. No representation is being made that any investment will or is likely to achieve profits or losses similar to those shown. In fact, there are frequently sharp differences between prior performance results and actual Fund results.

References to the past performance of other private investment funds or the Manager are for informational purposes only. Other investments may not be selected to represent an appropriate benchmark. The Fund's strategy is not designed to mimic these investments and an individual may not be able to invest directly in each of the indices or funds shown. The Fund's holdings may vary significantly from these referenced investments. The historical performance data listed is for informational purposes only and should not be construed as an indicator of future performance of the Fund or any other fund managed by the Manager. The performance listed herein is unaudited, net of all fees. YTD returns for all indices are calculated using closing prices as of Jan 14th, the first day of the funds operation. Data is subject to revision.

Certain information contained in this material constitutes forward-looking statements, which can be identified by the use of forward-looking terminology such as "may," "will," "should," "expect," "anticipate," "target," "project," "estimate," "intend," "continue," or "believe," or the negatives thereof or other variations thereon or comparable terminology. Such statements are not guarantees of future performance or activities. Due to various risks and uncertainties, actual events or results or the actual performance of the Fund described herein may differ materially from those reflected or contemplated in such forward-looking statements.

Our investment program involves substantial risk, including the loss of principal, and no assurance can be given that our investment objectives will be achieved. Among other things, certain investment techniques as described herein can, in certain circumstances, maximize the adverse impact to which the Fund's investment portfolio may be subject. The Fund may use varying degrees of leverage and the use of leverage can lead to large losses as well as large gains. Investment guidelines and objectives may vary depending on market conditions.