April 16, 2019

2019 First Quarter Midstream Energy Market Review

Dear Clients,

Finally, after what has seemed like an almost never-ending run of interruptions, the midstream sector had a relatively quiet quarter, with very little of the structural, governance and/or regulatory setbacks experienced over the last several quarters. We believe that a simple lack of distractions was key in allowing investors to refocus their attention on the sector's many positive underlying fundamentals. Hopefully we'll continue to have more quarters like these, as we believe the complicated era of structural simplifications and shifting capital funding strategies is nearing an end.

For the first quarter of 2019, the market-cap weighted Alerian MLP Index ("AMZ") produced a total return of +16.82%, while the equal-weighted Cushing® 30 MLP Index's ("MLPX") produced a total return of +20.59%.

With the turn of the calendar year, investor fears regarding a multitude of negative macro-economic and political factors, which drove the sharp broader market sell-off in December, seemed to subside. Bolstered by the early January communication from Federal Reserve Chairman Jerome Powell that the Fed will likely be more "data dependent" (i.e. patient) with future Fed Funds rate increases following December's rate hike, the broader market, as measured by the performance of the S&P 500 Index, recovered with a total return of +13.65% for the first quarter 2019. *Note: The Federal Reserve formally decided at its March meeting to leave the Fed Funds rate unchanged and projected no rate hikes in 2019 versus a prior forecast of two rate hikes in 2019.*

For the quarter, the price of West Texas Intermediate crude oil increased +32.44%, the highest quarterly increase since the 2nd quarter of 2009.[1] The Organization of the Petroleum Exporting Countries and its allies (OPEC+) remained supportive on crude oil supply, agreeing to keep their current cuts in place (~1.2mmbbls/d) at least through June 2019. These actions appeared to be having the intended effect on global inventories, as the U.S. Energy Information Administration reported that Organization of Economic Cooperation and Development (OECD) member country petroleum inventories dropped below the 5-year average (2014-2018) during the period.[2]

Energy equities recovered as well, although performance was disappointing when compared to the strong gains in crude oil prices. For the period, performance of the S&P 500 Oil & Gas Exploration and Production Index (S5OILP) was up by +14.09% and the Philadelphia Oil Service Sector Index (OSX) produced a +18.12% return.

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[1] Source: Bloomberg.
[2] Source: U.S. Energy Information Administration. "Short-Term Energy outlook." April 2019.

Living Within Cash Flow

In our opinion, the most dominant theme for the energy sector during the first quarter, including midstream, was the continued shift toward "living within cash flow" and positive free cash flow (FCF) generation. The volatility in the price of crude oil and natural gas over the last several years has triggered a fundamental shift in the way upstream investors value exploration & production (E&P) companies. Historically focused more on net asset value and relative growth rates, investors are now priortizing FCF yield and return metrics, similar to more mature sectors like that of refiners.

To adapt, E&P management teams are, in general, staying disciplined with their capital spending, aiming to improve corporate returns, generate positive FCF and attract broader investor interest. During the period (and despite higher crude oil prices), most E&Ps announced lower 2019 capital budgets along with fourth quarter 2018 earnings. According to U.S. Capital Advisors, E&P capital budgets are expected to decline by up to 10% in 2019, although production is still expected to grow by approximately 13%, versus a prior expectation of approximately 17%.[3]

The reduction of E&P company capital budgets and slower growth forecasts had negative implications for select associated midstream systems. Stock prices of E&P sponsored midstream companies such as Antero Midstream Corp. (NYSE: AM), CNXM Midstream Partners, LP (NYSE: CNXM) and Altus Midstream Co. (NYSE: ALTM) were particularly negatively impacted by this news. Despite the immediate negative reaction by investors, we believe a healthier upstream sector (a primary customer of the midsteam sector) that shifts towards a lower growth, but more sustainable and higher return business model, to be a positive long term development.

In similar fashion, midstream investors continued to demand a pivot from midstream company management teams. As companies reported fourth quarter 2018 earnings, we observed that corresponding stock prices generally traded up/down less on quartely earnings beats/misses, and more on the trajectory of announced 2019 capital budgets and perceived ability to "live within cash flow." For example, stock prices of both ONEOK Inc. (NYSE: OKE) and Targa Resources Corp. (NYSE: TRGP) traded down on 2019 capital expenditure announcements that were above consensus expectations.

We sensed investor frustration along the lines of, "*if E&P management teams are slowing their capital spending plans, why aren't midstream teams doing the same?*" The truth however is that despite the reduction in upstream spending, there is still a tremendous amount of production growth occuring and there can be a lag effect between upstream spending and infrastructure development (i.e. the slowdown in midstream spending will probably be more apparent in 2020+). Additionaly, many midstream companies are playing catch up given the tremendous production growth over the last few years, with significant bottlenecks remaining in several basins, especially in the Permian.

With investors hyper-focused on project returns, midstream management teams are navigating a delicate balance of investing in accretive growth projects to debottlneck contrained basins while increasing free cash flow and returns to investors. Regardless, ***we believe the message that management teams must be better***

[3] Source: U.S. Capital. "USA Friday E&P Recap." March 1, 2019.

stewards of capital and priortize returns over growth is resonating across the energy sector with positive long-term implications.

For what its worth and according to our internal models, we project that only a small handful of midstream companies will become free cash flow positive in 2019. However, that number could increase materially in 2020 according to our current estimates.

Doing More with Less

We believe the move towards positive free cash flow is important and a definite positive for the midstream sector, primarily because we believe it will help improve return on invested capital (ROIC) metrics and ultimately midstream company shareholder returns. And, given the lack of meaningful access to common equity for the vast majority of midstream companies, moving towards positive free cash flow is becoming increasingly a requirement.

But this transition will take time (note we expect few companies to meet this target in 2019), and multiple strategies are being taken by management teams to reduce capital spend to "fill the gap." For example, during the period, in general, management teams continued to rationalize non-core assets, freeing up much-needed capital to redirect towards perceived higher return growth initiatives. Additionally, management teams have been increasingly seeking partners to develop projects, reducing capital needs and potentially increasing shareholder returns.

Encouragingly, we also saw positive signs of capital discipline in the form of project cancellations. Notably, Magellan Midstream Partners, LP (NYSE: MMP) continues to set the bar, deciding to cancel their Wink-to-Crane Permian crude pipeline proposal to pursue a lower-cost project with increased capital efficiency. Later in the period, MMP formally backed out of the proposed Permian Gulf Coast Pipeline joint venture, citing low return expectations. As another example, on March 29th, Kinder Morgan, Inc. (NYSE: KMI) announced that it had exited a proposed $800mm offshore crude oil export terminal project known as Texas COLT, citing "*the project does not align with our strategic priorities*."

While these project cancellations may result in less future top-line growth, we believe they will ultimately drive reduced capital spending and result in a quicker inflection to free cash flow. Just as important, fewer projects will likely help to reduce potential overbuild situations as well as de-risk other projects. ***We believe that although the trajectory of growth is coming down, we expect shareholder returns to go up. In our view, this dynamic should lead to earnings multiple expansion for the midstream sector.***

Alternative Sources of Capital

Where capital is still needed, publicly traded midstream companies have successfully accessed alternative sources of capital, primarily from private equity investors. Private equity's involvement in the midstream energy sector, which we've mentioned countless times in past letters, continued to accelerate during the quarter. We estimate that private equity was involved in almost $10 billion in North American energy infrastructure deals during the first quarter of 2019 alone. Furthermore, due to plentiful availability and competition from multiple private equity funds, we believe this to be an attractively priced and efficient source of capital for publicly traded midstream companies.

Year-to-date, private equity involvement came in a variety of forms (with select transactions below).

- ***Providing attractively priced preferred equity capital to fund acquisitions.***
  - EQM Midstream Partners, LP (NYSE: EQM) issued $1.1 billion of 8.5% Series A Convertible Prefered Units to a consortium of private equity funds, including BlackRock, GSO Capital Partners and Magnetar Capital, to acquire a 60% interest in Eureka Midstream Holdings, LLC and 100% interest in Hornet Midstream Holdings, LLC. (March 14, 2019)
  - Noble Midstream Partners, LP (NYSE: NBLX) secured a $200mm 6.5% Preferred Equity commitment from Global Infrastructure Partners to invest in the EPIC Crude Pipeline. (March 25, 2019)
- ***Entering into asset-level joint ventures, freeing up capital for publicly traded midstream companies.***
  - SemGroup Corp. (NYSE: SEMG) and KKR formed a joint venture to create a Canadian midstream infrastructure platform, with SEMG contibuting its SemCAMS subsidiary into the newly formed JV in exchange for $460mm in cash and a 51% interest. (January 10, 2019)
  - Targa Resources Corp. (NYSE: TRGP), GSO Capital Partners and Blackstone formed a joint venture to own TRGP's Bakken assets, with TRGP selling a 45% interest in Targa Badlands LLC for $1.6 billion in cash. (February 19, 2019)
- ***Acquiring public companies outright.***
  - Tallgrass Energy LP (NYSE: TGE) and Blackstone entered into a definitive agreement for Blackstone to acquire 100% of TGE's general partner and a 44% economic interest in TGE for $3.3 billion. (January 31, 2019)
  - American Midstream Partners, LP (NYSE: AMID) and ArcLight Capital entered into a definitive agreement for ArcLight to acquire all outstanding units of AMID. (March 18, 2019)

Large institutional investors have increased activity in the midstream sector as well, with a notable investment from the Canada Pension Plan Investment Board (CPPIB) during the period into a newly formed joint venture with The Williams Companies, Inc. (NYSE: WMB). According to the company, CPPIB paid ~$1.34 billion at an estimated 14-16x EBITDA to acquire a 35% interest in a joint venture owning select Northeast gathering and processing assets.

The point we are attempting to make is, although retail fund flows into publicly traded midstream pooled vehicles remain anemic, the ***sector is attracting significant flows from institutional and private equity investors***. During the period, there were ***several examples of large, sophisticated institutional investors paying higher cash flow multiples than those at which many publicly traded midstream companies are trading.***

Alternative Threats?

With more alternative capital moving into the midstream sector in conjunction with a disconnect in public-private valuations, we believe there is continued support for publicly traded midstream equities to trade higher, more in line with the values private investors are ascribing to the sector. However, we admit increasing unease regarding the growing influence of private equity investors and the staggering amount of private capital looking for a home in the midstream energy sector.

To provide context, a recent Preqin report noted that a record $85 billion of private equity infrastructure capital was raised in 2018, up from a previous record of $75 billion in 2017. According to Prequin's forecast, 2019 will be even higher, with a reported 208 infrastructure funds currently seeking a combined $193 billion in capital. This report also claims that as of the end of 2018, there is an astonishing $172 billion of "dry powder" looking to be invested.[4]

Patrick Adefuye, Head of Real Assets at Preqin, notes in the report "*It is hard to overstate the prodigious growth of the infrastructure fundraising market in recent years. 2018 saw the asset class secure almost twice as much capital as it did as recently as 2014, having set three consecutive annual fundraising records. It is testament to the appetite that investors have for infrastructure – its diversification, inflation-hedging and income stream potential are all key advantages, especially given the concerns many investors have about a prospective market downturn.*" [5]

Admittedly, not all of this capital will be directed toward North American energy infrastructure, however, Preqin also points out that, "*while Europe has historically been the most active market for private infrastructure investment, North America has seen a large number of funds raised in recent years, particularly in the energy sector.*"[6]

While we believe there are positive attributes of elevated private equity involvement in public company financings (as noted in the previous section), we are also cognizant of the competitive threats arising from a large private equity base armed with relatively cheap capital and an interest in energy infrastructure, specifically at the project level.

As an example, during the period, a Blackstone private equity fund committed $500mm to a partnership with Waterfield Midstream to provide water management services in the Permian basin in February. Also, a TPG Capital fund acquired a majority stake in Goodnight Midstream, another water management provider in the Permian and Bakken, for $930mm in March. Finally, just post quarter-end, a Stonepeak Infrastructure Partners fund acquired Oryx, the largest privately held midstream crude operator in the Permian basin, for $3.6 billion.

Will continued private equity investment result in a valuation uplift for publicly traded midstream equities? And/or provide attractive M&A opportunities for buyers and sellers (with privately held assets eventually coming to market at some point in the future with discounted valuations)? Or rather, could this result in the overbuilding of infrastructure assets and diminishing returns for all?

Regulatory Challenges Remain

Despite improvements in midstream sector financial performance and investor sentiment, regulatory and environmental challenges remain at both state and federal levels. Likely most visible are the continued permitting delays and legal hurdles facing large industry pipeline projects.

For example, the U.S. Fourth Circuit Court of Appeals denied a rehearing in March on a key decision limiting access to the Appalachian Trail for the Atlantic Coast Pipeline (ACP). This decision also carried implications for the Mountain Valley Pipeline (MVP), which continues to grapple with delays and cost over-runs. On the crude oil side, Enbridge, Inc. (NYSE: ENB) was hit with fresh legal challenges to its Line 5 and Line 3 Replacement projects in Michigan and Minnesota. While the KeystoneXL project received a new presidential permit from

[4] Source: Preqin Ltd. "2018 Fundraising Update." January 7, 2019.
[5] Source: Preqin Ltd. "2018 Fundraising Update." January 7, 2019.
[6] Source: Preqin Ltd. "Preqin Quarterly Update: Infrastructure Q1 2019." April 10, 2019.

the Trump administration to cross the Canadian border, the permit will most certainly be challenged, and the pipeline remains mired in ongoing court proceedings.

In short, large-scale new build crude oil and natural gas pipelines are likely to face significant hurdles to permitting and construction which could challenge their viability. *(Note: On April 10 President Trump signed two executive orders aimed to streamline oil and gas pipeline projects with the stated goal of making it harder for states to block such projects. However, many analysts are skeptical that the order will have a material impact on clearing state approvals.)* On the positive side, we firmly believe that the challenges facing new projects materially enhance the value of existing "assets in the ground."

In Colorado, the general assembly passed Senate Bill 19-181 in response to last year's failed ballot initiative that would have essentially banned fracking through punitive setback requirements. At a high-level, the legislation will likely increase "local control" over the permitting and regulation of new wells by local governments and communities, although the extent and applicability of the new standards is not yet clear. Additionally, the mandate of the primary state energy regulatory body, the Colorado Oil and Gas Conservation Commission (COGCC), was changed by this legislation from 'fostering' oil and gas development to 'regulating' the industry in a manner that protects public health and welfare. While clearly not an outright positive, we believe the legislation avoids the worst-case scenario (a frack ban) and will mostly impact operators in more populated areas. While full clarity is still lacking, we believe core DJ Basin operations in Weld County will be relatively insulated.

At the federal level, over one year has passed since the 2018 upheaval caused by the Notice of Proposed Rulemaking (NOPR) of the Federal Energy Regulatory Commission (FERC) to address corporate tax reform. While the most negative implications were subsequently moderated in the final order, some concern surfaced during the quarter over a Notice of Inquiry (NOI) by the FERC proposing alternative methods for determining allowed pipeline returns on equity (ROEs). Despite the initial concern, independent analysis suggests relatively minimal impact to pipeline tariff rates from these alternative methodologies, if not higher rates in some cases. Additionally, several pipelines have already announced negotiated settlements with shippers in response to last year's ruling with only moderate reductions in expected future earnings.

Conclusion

We were pleased with the strong first quarter performance for the overall energy midstream sector. The industry's demand for new gathering, transmission, fractionation and export infrastructure appears to be as strong as we have seen over the last several years. With the era of structural simplification and the winding down of incentive distribution right (IDR) elimination coming to a close, we believe the sector is in a much stronger position now in terms of lower leverage, higher distribution coverage, better ability to self-fund capital expenditures, and improving and attractive ROIC metrics. Hopefully, with this structural shift near completion, investors will re-focus on the performance potential we believe exists in the energy midstream sector for the remainder of 2019.

Please let us know if you'd like to have an in-depth conversation of these topics. As always, we appreciate your support and continued confidence in us.

Best regards,

Cushing Investment Team

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Glossary of Indices: The Alerian MLP Index (AMZ) is a composite of the most prominent energy master limited partnerships. The Cushing® 30 MLP Index (MLPX) is an equal weighted index that tracks the performance of 30 publicly traded MLP securities that hold midstream energy infrastructure assets in North America. The S&P 500 Index is a capitalization-weighted index of 500 stocks. The 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 S&P 500 Oil & Gas E&P Sub Industry Index (S5OILP) is a capitalization-weighted index of oil & gas exploration & production companies within the S&P 500 Index. The Philadelphia Stock Exchange Oil Service Sector Index (OSX) is a price-weighted index composed of 15 companies that provide oil drilling and production services, oil field equipment, support services and geophysical / reservoir services. Indices are included for comparative purposes only.

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