



Midstream and Oil Correlations: Is Frustration Warranted?

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Summary

- The perception of many investors is that midstream has a heightened correlation with oil when it is falling, but the correlation seems to disappear when oil prices are moving higher.
- While commodity prices have improved, energy stocks are still down across the board relative to price levels at the end of 2019, though midstream has provided the best price performance.
- For midstream investors frustrated by perceived oil correlations, actual correlations and performance may not be as bad as it “feels” when viewed within the context of other energy indexes.

One of the most frequently asked questions in our interactions with investors surrounds the correlation between oil prices and midstream, or lack thereof. Admittedly, oil correlations have been a source of frustration over the years. The perception of many investors is that midstream/MLPs have a heightened correlation with oil when it is falling, but the correlation seems to disappear when oil prices are moving higher. In other words, midstream/MLPs get punished when oil falls but do not duly participate in the upside when oil prices improve. Today’s note looks at oil correlations for midstream and other energy indexes, focusing on the [Alerian MLP Infrastructure Index](#) (AMZI) to represent MLPs and the [Alerian Midstream Energy Select Index](#) (AMEI) to represent broader midstream.¹

What does the correlation data show?

The analysis below focuses on long-term and short-term correlations for midstream and oil prices, with comparisons against other energy indexes for context. It bears mentioning that correlation numbers can be fickle. Daily, weekly, and monthly correlations can vary noticeably for the same time period. Additionally, correlations are complicated by the April 20, 2020 negative closing price for West Texas Intermediate (WTI) crude, which appears to skew the data and understate correlations. For this reason, the analysis includes a ten-year correlation as of April 2020 before oil prices went negative and a more recent ten-year correlation between energy indexes and Brent – the global oil benchmark, which did not fall into negative territory. (The weekly ten-year correlation between Brent and WTI is 0.91.) While correlations vary, there are two key observations that can be made from the data.

Long-term: Midstream indexes tend to have a lower oil correlation than other energy indexes.

Based on the weekly correlations, midstream indexes have a correlation with oil of 0.5, but the monthly correlations are higher at 0.6 – 0.7 as shown on the following page. For other energy indexes, oil correlations based on weekly data are around 0.6, while the monthly correlations are around 0.7 – 0.8. Relative to other energy sectors, midstream would be expected to have a lower long-term oil correlation given its fee-based business model and the direct commodity price exposure inherent in exploration and production (E&P) or oilfield services (OS) companies. In other words, the long-term correlation data tends to align with expectations.

¹ The AMEI Index is 75% corporations and 25% MLPs. The Alerian Midstream Energy Index (AMNA) is more representative of the midstream space, but AMEI has a longer history, making it more suitable for this analysis.

	Ten-Year Correlation with WTI Crude As of 4/17/20*		Ten-Year Correlation with Brent Crude As of 9/14/21	
	Weekly	Monthly	Weekly	Monthly
	Alerian MLP Infrastructure Index (AMZI)	0.52	0.69	0.51
Alerian Midstream Energy Select Index (AMEI)	0.54	0.72	0.55	0.67
S&P Oil & Gas Exploration & Production Select Industry Index (SPSIOP)	0.64	0.80	0.63	0.67
Energy Select Sector Index (IXE)	0.62	0.79	0.62	0.71
PHLX Oil Service Sector Index (OSX)	0.60	0.81	0.57	0.76

*Based on the ten years from 4/17/10 to 4/17/20 - before WTI oil prices went negative on 4/20/20.

Source: Bloomberg as of September 15, 2021.

Short-term: Energy indexes have had similar oil correlations since April 2020; performance varies.

Whether looking at correlations based on weekly or daily data, midstream and other energy indexes are closely grouped in terms of their WTI correlations since April 2020 as shown below. For midstream, the short-term correlations based on weekly data largely align with the ten-year weekly correlations, while short-term correlations for other energy indexes are a shade below their long-term correlations. While the correlations are very similar, performance numbers since April 2020 have varied as shown in the table. Commodity-sensitive E&P and OS companies have outperformed during oil's recovery, but midstream has seen decent upside, outperforming broad energy represented by the IXE Index. Looking at price performance since the end of 2019, energy indexes are down across the board despite oil's gains, with broad midstream, represented by the AMEI Index, showing the best performance and OS companies down the most.

	Correlation with WTI Crude Since 4/22/20		Price Performance since 4/22/20	Price Performance since 12/31/19
	Weekly	Daily		
	Alerian MLP Infrastructure Index (AMZI)	0.55	0.39	52.6%
Alerian Midstream Energy Select Index (AMEI)	0.60	0.38	60.7%	-7.3%
S&P Oil & Gas Exploration & Production Select Industry Index (SPSIOP)	0.57	0.40	89.2%	-10.4%
Energy Select Sector Index (IXE)	0.60	0.39	43.0%	-19.9%
PHLX Oil Service Sector Index (OSX)	0.53	0.38	101.0%	-31.8%
		WTI Crude:	411.3%	15.4%

Price performance as of September 14, 2021.

Source: Bloomberg as of September 14, 2021.

What are the takeaways for midstream investors?

Oil prices have staged an impressive rally since April 2020, surpassing even pre-pandemic levels by double-digit percentages. As discussed last week, natural gas prices have recently jumped to multi-year highs ([read more](#)). While commodity prices have improved, energy stocks, including midstream, are still down relative to price levels at the end of 2019. Clearly, oil prices trade independently of energy stocks with different drivers, including supply-demand dynamics that can be impacted by OPEC+ actions, weather, geopolitics, and more. Outside of commodity prices, energy stocks are impacted by sentiment, money flows, and market trends (growth vs. value, ESG considerations) to name a few factors.

For midstream investors frustrated by perceived oil correlations, actual correlations and performance may not be as bad as it "feels" when viewed within the context of other energy indexes. Midstream/MLPs have outperformed broad energy (IXE Index) in oil's recovery despite a lower correlation with oil prices. Of the energy indexes shown, midstream (AMEI Index) has been the best performer on a price-return basis since the end of 2019, and MLPs (AMZI Index) have performed in line with broad energy over the same time period. Of course, total return for midstream and MLPs has been even more competitive given generous dividends. Any standalone comparison between oil prices and midstream/MLPs will leave investors feeling short-changed, but in the context of energy performance more broadly, midstream/MLP investors can take some comfort in relative price performance since the pandemic.

AMZI is the underlying index for the Alerian MLP ETF (AMLP) and the ETRACS Alerian MLP Infrastructure Index ETN Series B (MLPB). AMEI is the underlying index for the Alerian Energy Infrastructure ETF (ENFR).

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