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WHITE PAPER SERIES

Risk-Neutral Shift to Master Limited Partnerships

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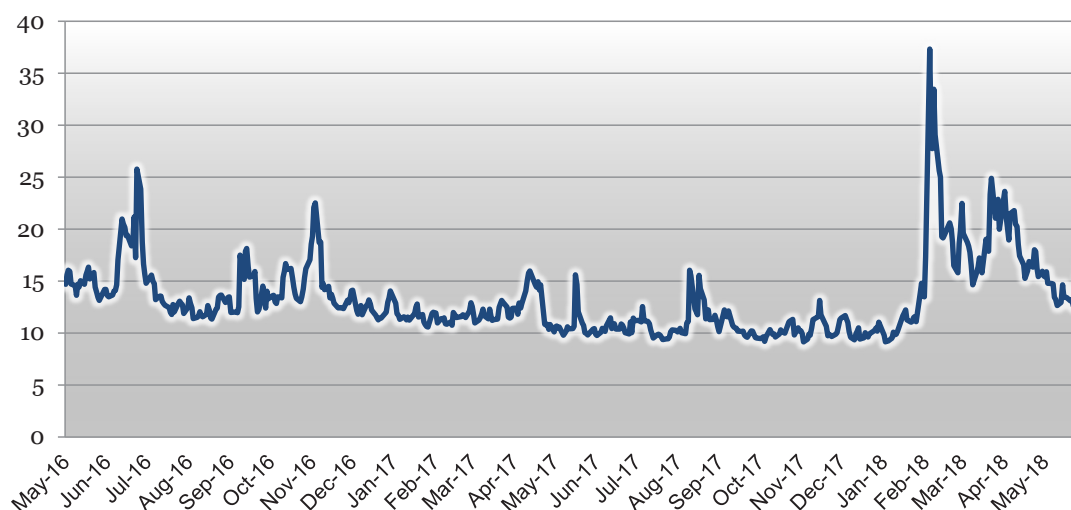
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Abstract:

Over the past few years, the S&P 500 TR Index (SPX) has marked new all-time highs but has exhibited relatively low volatility. However, during 2018, valuations, measured by Price to Earnings (P/E)¹, in the S&P 500 corrected slightly lower while realized volatility has pushed sharply higher.

Conversely, over the same time period, the market performance of the Alerian MLP TR Index (AMZX) has left the group near historically low valuations, measured by Price to Distributable Cash Flow (P/DCF)², and realized volatility has only edged higher. As a result, the current volatility profiles of the S&P 500 and the Alerian are very similar, and we have found that more MLP investors are mentioning a risk-neutral capital allocation shift from the S&P 500 and toward MLPs³.

Exhibit 1: VIX Index



The underlying concept of a risk-neutral trade is actually fairly simple and is built on the theory that risk is a form of currency which is paid for potential reward (Bruder & Gaussel, 2011). Risk in its most raw form is uncertainty, which is by definition unquantifiable, but in finance volatility can serve as a surrogate for risk (Jaeger, 2000). In a risk-neutral shift, investors attempt to identify two assets with similar volatility profiles but differing potential reward profiles. By removing capital from the asset with lower potential rewards and allocating to the asset with higher potential rewards, the investor has in theory 'paid' no additional risk but has enhanced future potential returns. The charts below address the first part of the concept by illustrating the volatility of the S&P 500 and the Alerian, as well as the relative volatility spread between the two.

Exhibit 2: Historical 50-Day Volatility

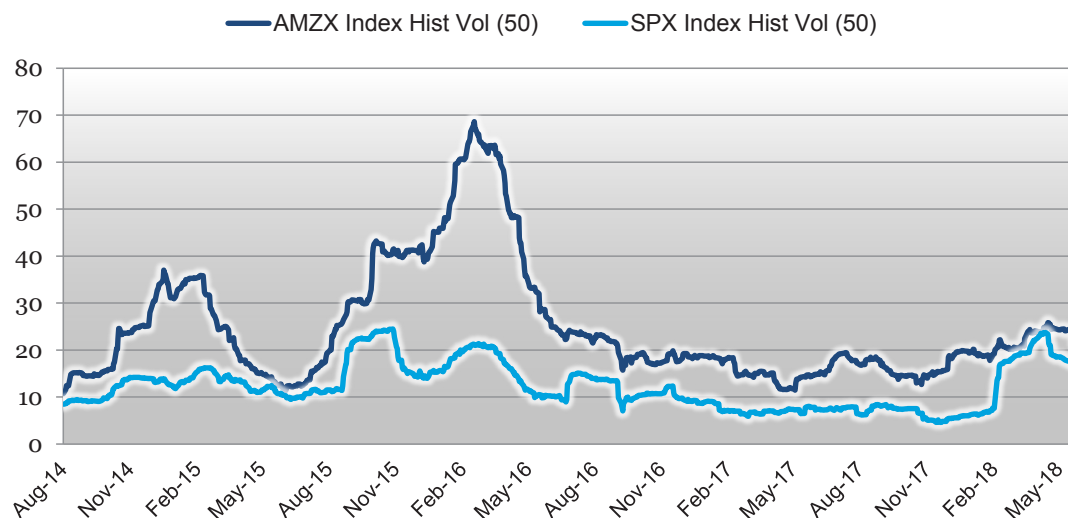
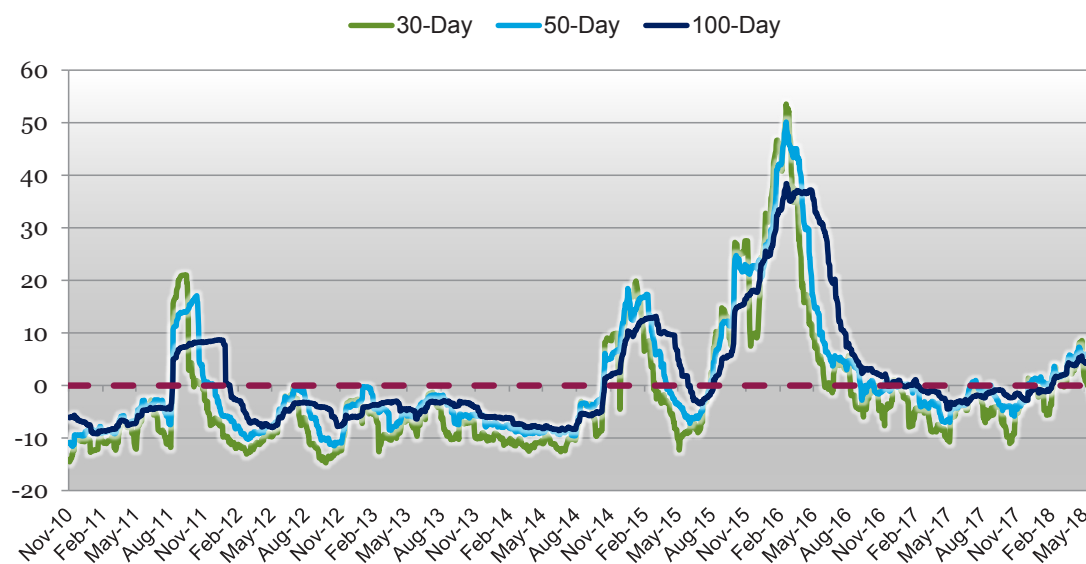


Exhibit 3: Volatility Spread: AMZX - SPX



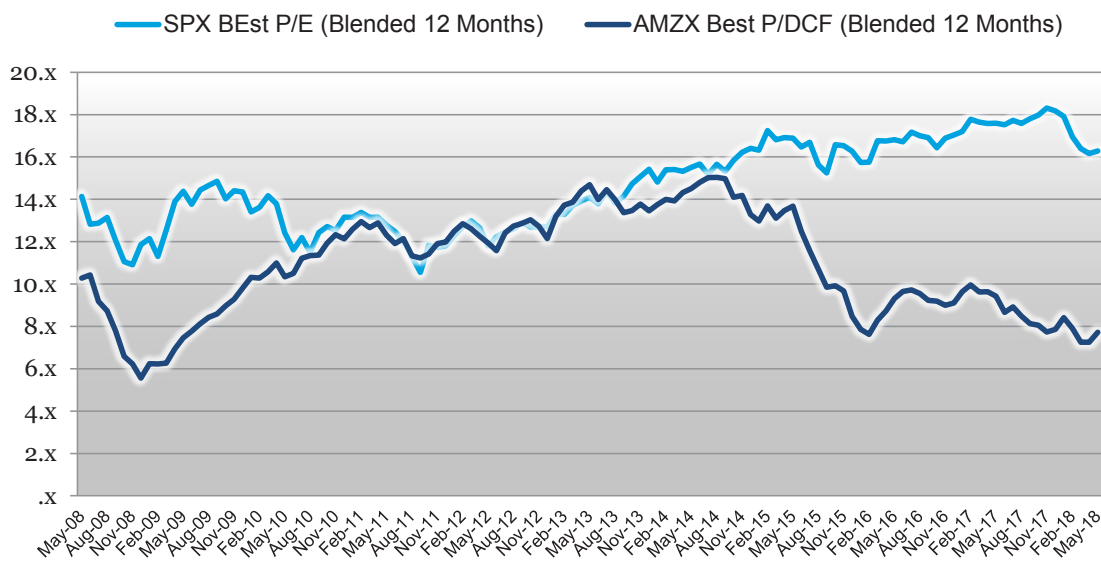
Having identified two assets with currently similar volatility profiles, the next step is assessing the potential rewards for each asset, and MLPs appear well-positioned in this regard. As of May 31, 2018, the Alerian was trading at a *discount* of 29.1% to the long-term average P/DCF while the S&P 500 Index was trading at a *premium* of 11.6% to the long-term average P/E, and this is occurring, as stated above, while volatility is lessening for MLPs and rising for the broader market. Measured against the peak P/DCF and peak P/E valuations for each, as of May 31, 2018, the Alerian MLP Index was 48.7% below its peak valuation, but the S&P 500 was much closer to its peak valuation, resting at a more meager 11.1% discount.

Exhibit 4: Valuation Comparison 1: SPX P/E vs. AMZX P/DCF

| | AMZX: P/DCF | SPX: P/E |
|-----------------------------|-------------|----------|
| Current | 7.7x | 16.3x |
| High | 15.0x | 18.3x |
| Average | 10.9x | 14.6x |
| Low | 5.6x | 10.5x |
| Discount/Premium to High | -48.7% | -11.1% |
| Discount/Premium to Average | -29.1% | 11.6% |
| Discount/Premium to Low | 38.8% | 54.4% |

Furthermore, for the calendar year of 2018, as of May 31, 2018, the consensus of sell-side analysts projects the Alerian MLP Index will yield 8.0% in distributions, cover those distributions by 1.24x, and experience a compounded annual growth rate of 6.5% in underlying cash flows for 2018 and 2019. Collectively, these metrics indicate a healthy fundamental backdrop for the Alerian and could amount to returns in the low double-digits when accounting for both yield and growth. Meanwhile, the inexpensive absolute valuation brings in the third component of total return: Revaluation. While the S&P 500 has notched recent market highs, MLPs have been pressured to historically low valuation levels. To put this into perspective, the long-term average⁴ P/DCF for the Alerian is 10.9x and the P/DCF as of May 31, 2018 was 7.7x.

Exhibit 5: Valuation Comparison 2: SPX P/E vs. AMZX P/DCF



As points of comparison, the current valuation is very near to the 7.6x P/DCF seen in February 2016 yet not quite as discounted as the 5.6x P/DCF seen late in 2008. This is an incredible statement and begs the question, *what is different between the two time periods: May 2018 and February 2016?* Over the last three years, MLPs have undergone a significant evolution, which we believe leaves them well poised for future growth.

Exhibit 6: Ongoing Evolution of MLPs

| Topic | 2014 – 2017 | 2018 |
|--------------------------------|--|--|
| Valuation | 15.0x P/DCF 8/31/14; declining | 7.3x P/DCF on 3/31/18; trough? |
| Credit | Rating agencies tighten leverage metrics | Moody's upgraded the sector September 2017 |
| Credit Spreads | BBB vs. 10 Year Treasury widening | BBB vs. 10 Year back to 2013-2014 levels |
| Commodity Prices | Falling | Stable / Rising |
| Cost of Capital | Higher equity requirements at lower prices | Increased traction for self-funding equity |
| IDRs | IDR overhang | IDR significantly removed |
| Profit Cycle | Economic profits narrowing | Economic profits widening |
| Growth Capex | Temporarily moderated or high-graded | Increasing |
| Distributions/Dividends | Reduced payouts and growth rates | Stabilized payouts and growth rates |
| Technical | Prolonged tax loss selling in 2017 | Increased institutional participation YTD |
| Regulatory | Increased state and activist presence | FERC |

As illustrated above, MLPs and their management teams have matured over the last three years, which has improved the fundamental backdrop of the asset class. Regardless, MLPs valuations have drawn close to historic lows. Although there are many factors to consider when choosing to allocate capital, we look at the current midstream fundamentals with optimism and the number of current and prospective investors sharing that optimism appears to be growing. Some of those investors have examined the volatility profile of the S&P 500 TR Index and compared it to that of the Alerian MLP TR Index. After finding the volatility of the two indexes are similar, these clients have looked further into the potential rewards for each group of securities and believe they can enhance their potential returns without assuming vastly higher volatility by trimming capital from broader equities and allocating capital to the Midstream energy infrastructure asset class.

Notes and Citations:

(1) Forward Price to Earnings, utilizing the weighted average of the consensus of sell-side analysts for the blended forward 12 months, as of 5/31/2018. (2) Forward Price to Distributable Cash Flow, utilizing the weighted average of the consensus of sell-side analysts for the blended forward 12 months, as of 5/31/2018. (3) MLP interests may include securities issued by MLPs that are organized as partnerships or limited liability companies which elect to be taxed as partnerships and securities that offer economic exposure to MLPs from entities holding primarily general partner or managing member interests such as MLP i-shares and common stock of C-Corps that control general partners. (4) Price to Distributable Cash Flow (P/DCF) long-term average covers the period from January 2008 to May 2018.

Bruder, B., & Gausssel, N. (2011). *White Paper: Risk-Return Analysis of Dynamic Investment Strategies*. Paris: Lyxor Asset Management.

Jaeger, R. A. (2000). *Risk: Defining it, Measuring it, and Managing it*. Norwalk: Evaluation Associates Capital Markets, Inc.

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Alerian MLP Index (AMZ): The Alerian MLP Index is a composite of the most prominent energy Master Limited Partnerships that provides investors with an unbiased, comprehensive benchmark for this emerging asset class. The index, which is calculated using a float-adjusted, capitalization-weighted methodology, is disseminated real-time on a price-return basis (NYSE: AMZ), and the corresponding total-return index is disseminated daily (NYSE: AMZX). Relevant data points such as dividend yield are also published daily. For index values, constituents, and announcements regarding constituent changes, please visit www.alerian.com.

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Standard & Poor’s 500 Index (S&P 500): Standard and Poor’s 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 index was developed with a base level of 10 for the 1941-43 base period.

VIX Index: The Chicago Board Options Exchange Volatility Index reflects a market estimate of future volatility, based on the weighted average of the implied volatilities for a wide range of strikes. 1st & 2nd month expirations are used until 8 days from expiration, then the 2nd and 3rd are used.

Volatility refers to the amount of uncertainty or risk about the size of changes in a security’s value. A higher volatility means that a security’s value can potentially be spread out over a larger range of values. This means that the price of the security can change dramatically over a short time period in either direction. A lower volatility means that a security’s value does not fluctuate dramatically, but changes in value at a steady pace over a period of time. One measure of the relative volatility of a particular stock to the market is its beta. A beta approximates the overall volatility of a security’s returns against the returns of a relevant benchmark (usually the S&P 500 is used). For example, a stock with a beta value of 1.1 has historically moved 110% for every 100% move in the benchmark, based on price level. Conversely, a stock with a beta of .9 has historically moved 90% for every 100% move in the underlying index.

Distributable Cash Flow is calculated as net income plus depreciation and other noncash items, less maintenance capital expenditure requirements.

Earnings: The amount of profit that a company produces during a specific period, which is usually defined as a quarter (three calendar months) or a year. Earnings typically refer to after-tax net income. Ultimately, a business’s earnings are the main determinant of its share price, because earnings and the circumstances relating to them can indicate whether the business will be profitable and successful in the long run.

Price to Earnings (P/E) Forward price to earnings (forward P/E) is a measure of the price-to-earnings (P/E) ratio using forecasted earnings for the P/E calculation. While the earnings used are just an estimate and are not as reliable as current earnings data, there is still benefit in estimated P/E analysis. The forecasted earnings used in the formula can either be for the next 12 months or for the next full-year fiscal period.

Price to DCF (P/DCF) Valuation Chart Disclosures: Long term MLP valuation trends are analyzed using Distributable Cash Flow (DCF). Prices are measured using the forward DCF estimate at that point in time. DCF data used reflects forward sentiment and avoids backward-looking ratios using prior year-end data. Price to DCF (P/DCF) is measured at the median. P/DCF is price divided by Distributable Cash Flow.

DCF is Distributable Cash Flow, which is generally defined as earnings before interest, taxes, depreciation and amortization (EBITDA) less maintenance capital expenditures and interest expense. Utilizing DCF data eliminates potential distribution policy variance across MLPs, as well as potential complications from possible Earnings Before Interest, Taxes, Depreciation & Amortization (EBITDA) consolidation across the MLP and its GP.

Price to Earnings and Price to Distributable Cash Flow both seek to provide a proxy multiple for the current price relative to future business profitability, but should not be viewed as identical calculations, as they are not calculated in the same manner and may have discrepancies related to breadth of the respective investment universe, research coverage trends of securities within the universe, and company accounting practices, among other factors.

Prices and distribution estimates sourced from Bloomberg LP; Distributable Cash Flow (DCF) data is CCM calculated consensus of Wall Street estimates, as of 5/31/18.

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