



RESEARCH NOTE

Master Limited Partnerships (MLPs)

October 2006

Executive Summary

- Master Limited Partnerships (MLPs) are limited partnerships that trade like stocks. MLPs own energy infrastructure assets such as oil and natural gas pipelines and terminals and are typically involved in the transportation, distribution, and storage of natural resources (natural gas, oil, propane, etc.).
- The MLP universe is quite small consisting of fewer than 50 limited partnerships with a total market value around \$80 billion. The universe is also very concentrated, with the top five partnerships accounting for 37% of market value. However, the MLP universe is expanding quickly and institutional interest in MLPs is growing rapidly.
- MLPs offer a high yield (currently 6.9%), on which typically 70-90% of taxes are deferred. MLPs have risen 17.3% over the last 10 years and 15.9% over the last five years. By comparison, the S&P 500 gained 8.3% and 2.5%, respectively, over the same time periods. MLPs have experienced lower volatility than stocks. Additionally, they exhibit a slightly negative correlation to stocks and a slightly positive correlation to inflation. As they are involved in the distribution of energy, MLPs should benefit from increased energy demand.
- After five years of strong performance, MLPs are no longer substantially undervalued. Historically, distributions have grown at high single-digit rates. However, competition and a combination of other factors may reduce future distribution growth rates. Fortunately, MLP yields remain very attractive. Returns in the mid-single digits seem more reasonable over the next 10 years.
- One major concern with MLPs is the possible conflict of interest between the general partner (who manages the MLP) and the limited partners. The compensation structure gives the GPs an incentive to grow assets through acquisitions or new projects. Generally, the larger an MLP grows, the higher the shares of profits that go to the GP. Capital markets can act as a check on this possible conflict of interest.
- MLPs are exposed to interest rate risk because they are highly leveraged so higher interest rates result in a higher cost of capital. Additionally, higher interest rates reduce the attractiveness of MLPs as a yield play.
- We believe that MLPs are attractive for taxable private wealth clients as part of a diversified real assets portfolio. They offer a high yield, a tax deferral benefit, and the potential for capital appreciation. The case for MLPs is weaker for non-profit institutions. Directly holding MLPs exposes non-profit institutions to UBTI. Accessing MLPs through closed-end mutual funds avoids UBTI, but there are disadvantages to this structure.

In this Research Note, we present an overview of Master Limited Partnerships (MLPs), analyze their merits and risks, and discuss whether investors should consider introducing them into their portfolios. We believe that MLPs are an attractive option for taxable investors as they offer a high-yield, a tax deferral benefit, and the potential for capital appreciation.

Asset Class Overview

MLPs are limited partnerships that trade like stocks. They are regulated by the SEC and trade on major exchanges. MLPs mainly own mid-stream energy infrastructure assets such as oil and natural gas pipelines and terminals and are typically involved in the transportation, distribution, and storage of natural resources (oil, natural gas, propane, coal, etc.). An investment in a MLP is essentially an investment in the

underlying asset. These assets tend to generate stable cash flows. MLPs charge fees, or tariffs, to energy producers and marketers for using these assets to transport their commodities. The type of commodity, the volume of the commodity, and the distance the commodity is being transported influence the tariff rate. MLPs provide indirect exposure to energy markets without the volatility (and potential upside) associated with commodity producers.

The MLP asset class is relatively small, consisting of less than 50 partnerships with a total market value of over \$80 billion. The universe is also very concentrated with the top two MLPs (Enterprise Products Partners LP and Kinder Morgan Energy Partners LP) comprising 22% of the universe. The top five MLPs represent 37% of the universe. However, the asset class has experienced tremendous growth in recent years. For

example, ten years ago the MLP universe consisted of just 12 funds with a combined market capitalization around \$6.5 billion. Alerian Capital Management estimates that MLPs issued \$7.5 billion in equity and received \$15 billion in total investment in 2005. They expect the universe to grow to \$120 billion by 2010.

Currently, integrated energy companies (e.g. Duke Energy, Exxon Mobil) own most midstream energy assets. Fiduciary Asset Management estimates that less than 20% of midstream energy assets are currently structured as MLPs. However, many companies are selling or distributing their stakes in such assets since MLPs can be attractive ownership vehicles for integrated energy companies (particularly integrated natural gas companies) relative to holding these assets directly on their balance sheets. MLPs are more tax efficient than direct ownership (no corporate taxes) and they still allow the company to significantly share in the asset's revenues. We expect to see existing MLPs to continue to acquire assets and the IPOs of new MLPs.



Similar to private partnerships, MLPs have both general and limited partners. The general partner is responsible for managing the partnership, while the limited partners provide most of the fund's capital. The general partner only has a small ownership share in the partnership (typically around 2%) and receives incentive payments for operating the partnership. These payments are meant to provide the general partner with the incentive to grow distributions rather than hoard cash.

MLPs are generally required to distribute all free cash flow (cash flow from operations less maintenance capital expenditures) to LP unitholders or the GP. Distributions to unitholders occur on a quarterly basis. Each quarterly distribution is structured into several tiers based on dollar amounts. In the first tier, for example, 95% of the distribution might go to the limited partners and the remaining 5% would go to the general partner. The general partner receives an increasing percentage of the distribution as it moves among tiers. For example, within the third or fourth tier, distributions might be split 50/50

between the limited and general partners. Each MLP defines its tiers and the distribution split within each tier differently. The partnership agreement outlines the exact tier distribution structure. Several MLPs are at or close to achieving the maximum GP/LP split, which means investors will see less benefit from each incremental dollar in revenue, thus reducing the attractiveness of MLPs. Some partnerships have reduced the maximum GP/LP split. For example, two MLPs (Valero and Enterprise) reduced the maximum GP carry from 50% to 25%.

A problem with this incentive structure is that it creates a potential conflict of interest between the limited partners and general partner. Since the general partner often receives a higher percentage of distributions as distributions increase, they have an incentive to grow distributions. The GP might have an incentive to increase the size of the current distribution to achieve the maximum GP/LP split, while sacrificing the long-term growth potential of the partnership. Alternatively, the GP may aggressively acquire new assets to boost the distribution. In many cases the same management team that operates the MLP also runs the general partner. Since the MLP will sometimes acquire assets from the general partner, the question arises if the MLP is acquiring assets at a fair price. Additionally, limited partners do not typically have voting rights so control mechanisms are limited.

Capital markets are a check on this conflict. MLPs are extremely dependent on capital markets to build and sustain their operations. Since MLPs are required to pay out almost all free cash each year, they must continually access the capital markets (equity and debt) to support growth. MLPs need external sources of capital to fund acquisitions and development. If GPs are attempting to make unsound acquisitions simply to boost their distribution, new capital will presumably be tough to come by. Additionally, we believe that investors will be willing to pay a premium for partnerships with a more attractive GP/LP split relative to companies in which GPs receive the largest carry, serving to control incentive payments.

Tax Treatment

The tax consequences surrounding MLPs can be very complicated and investors should consult their accountants or tax advisors to consider possible tax implications.

MLPs do not pay taxes at the partnership level. Instead, all net income and tax deductions flow through to the individual unitholder. Thus, investors avoid double taxation. The amount of taxes due in a given year is the difference between net income and any taxable deductions. Depreciation is the largest and most common tax deduction for MLPs. Distributions are

treated as a return of capital for tax purposes. In a given year it is estimated that taxes on 70-90% of the cash distribution are *deferred* and ordinary income tax rates apply to about 10-30% of the cash distribution. An investor's cost basis is adjusted downward by the amount of the distribution and upward by the amount of taxable income (income increases the cost basis and depreciation deductions reduce it). Once the cost basis is reduced to zero, no further depreciation expenses can be taken. Therefore, an investor who holds an MLP for many years will eventually be taxed at ordinary rates on the entire distribution. The dollar amount of taxes due in a given year and the percentage it constitutes of the cash distribution will differ for each MLP and each investor. Investors receive K-1's for each MLP specifying the tax information for the year.

When an MLP is sold a portion of the gain is taxed at ordinary rates and a portion at the appropriate capital gains rates. The split between ordinary income and capital gains will differ for each investor and each MLP. The difference between the cost basis and the purchase price is taxed at ordinary rates. The difference between the sale price and the purchase price is taxed at the appropriate capital gains rate.

The tax-deferred benefit associated with MLPs has caused some investors to compare them to municipal bonds. However, cash distributions are not guaranteed and are not tax-free. For non-taxable investors income received from an MLP is classified as unrelated business taxable income (UBTI) and subject to the appropriate tax requirements.

Performance Summary

Given the small size and the relatively short history of the MLP asset class, the available information about it is limited. Currently two major indices track MLPs, the Alerian Capital Management (ACM) MLP Index and the Citigroup MLP Index. The Alerian MLP Index was established in December 1995 and the Citigroup Index was established in December 1999. The main difference between the two indices is that the Citigroup index only includes MLP's with a market value greater than \$500 million, while the Alerian MLP Index is broader. The Alerian index also includes publicly traded GP shares and i-units.¹ We focus on the Alerian MLP Index in this paper because it has the longer track record.

The Alerian MLP Index has risen 16.8%, annualized, since December 1995. The index has performed well over the five- and ten-year periods ended June 2006, substantially outperforming equities while experiencing

less volatility. MLPs trailed the S&P 500 for the 12-month period ended June 2006, but have outperformed it over the last three years. As their income is not directly tied to energy prices, MLPs have lagged behind the GS Natural Resources index in recent years. However, they have slightly outperformed natural resource stocks over the last five years with substantially less volatility. MLPs have also trailed the Goldman Sachs Commodity Index recently, but have outperformed it over the five- and ten-year periods ended June 2006. Many commentators have compared MLPs to REITs because both have relatively high yields, are not taxed at the corporate level, and represent a "hard" asset play. While REITs have outperformed MLPs over the last five years, they have similar returns over the last 10 years. They have also experienced similar levels of volatility.

	Returns % (as of 6/30/06)				
	YTD	1 Year	3 Years	5 Years	10 Years
Alerian MLP Index	7.2	3.3	15.8	15.9	17.3
S&P 500	2.7	8.6	11.2	2.5	8.3
DJ-Wilshire REIT Index	14.5	22.0	27.7	20.2	16.2
GS Natural Resources Index	14.0	33.7	33.0	15.5	-
GS Commodity Index	6.7	15.0	20.7	14.9	8.2
Lehman Aggregate	(0.7)	0.8	2.1	5.0	6.2

	Standard Deviation (%)			
	1 Year	3 Years	5 Years	10 Years
Alerian MLP Index	10.1	10.6	12.5	13.7
S&P 500	7.0	7.7	13.6	15.7
DJ-Wilshire REIT Index	15.1	16.5	15.1	14.6
GS Natural Resources	23.2	19.1	19.5	-
GS Commodity Index	24.7	21.1	22.3	21.7
Lehman Aggregate	2.6	4.0	4.0	3.6

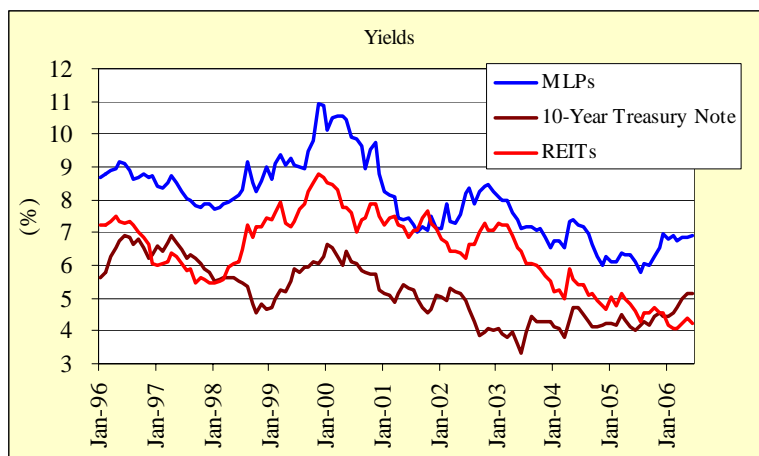
The return profile of MLPs has also been more stable than the S&P 500, natural resource stocks and commodity futures. For example, during their worst year MLPs declined just 7.8%. While the S&P 500, the GS Natural Resources Index, and the Goldman Sachs Commodity Index have all experienced annual loss years of greater than 20% since 1996.

Year	Annual Returns (%)					
	Alerian MLP	S&P 500	DJ-Wilshire REIT Indx	GS Natural Resources	GS Commodity Index	Lehman Aggregate
1996	16.6	23.1	37.0	-	33.9	3.6
1997	26.2	33.4	19.5	16.9	(14.1)	9.7
1998	(3.0)	28.7	(17.0)	(24.6)	(35.7)	8.7
1999	(7.8)	21.0	(2.6)	27.2	40.9	(0.8)
2000	45.7	(9.1)	31.0	15.8	39.7	11.6
2001	43.7	(11.9)	12.4	(15.6)	(30.6)	8.4
2002	23.5	(22.1)	3.6	(13.3)	29.6	10.3
2003	44.5	28.7	36.2	34.0	20.7	4.1
2004	16.7	10.9	33.1	24.6	17.3	4.3
2005	6.3	4.9	13.8	36.5	25.6	2.4

MLPs exhibit a low correlation to other asset classes. The Alerian MLP Index is negatively correlated to the S&P 500. Additionally, MLPs have a slightly positive correlation to inflation, while stocks and bonds are

¹ Institutional units (i-units) are similar to MLPs except that they make distributions in the form of additional stock rather than cash. Distributions are treated similarly to stock splits for tax purposes. I-units are not subject to UBTI.

negatively impacted by inflation. MLPs returns are heavily influenced by interest rates as seen by their correlation to the Lehman Aggregate Bond Index. As expected, MLPs are also highly correlated to REITs as investors have a tendency to view both asset classes as yield plays. They also exhibit a low correlation to natural resource stocks and natural gas spot prices. However, this is somewhat misleading. For example, when natural gas spot prices dropped 8.2% in November of 2001, MLPs lost 2.7%. When natural gas futures declined 19.3% and oil futures lost 7.8% during the fourth quarter of 2005, the Alerian MLP Index fell 7.3%. However, in other periods energy prices have dropped sharply and MLPs still posted positive returns. For example, MLPs rose 5.5% during July and August of this year while natural gas futures tumbled 31.6%. While the revenues of MLPs are not directly linked to energy futures or spot prices, their shares would likely decline if energy prices fell drastically (i.e. oil fell to \$40 a barrel or natural gas fell to \$3 or \$4 per Btu).



Rolling 12-Month Correlations of Alerian MLP Index					
S&P 500	Lehman Aggregate	GS Natural Resources Index	Inflation	Natural Gas Spot Prices	Wilshire REIT Index
-0.15	0.49	0.18	0.07	0.05	0.56

Outlook

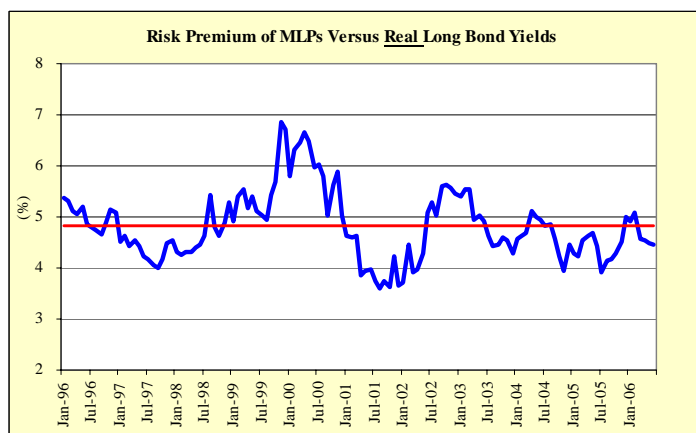
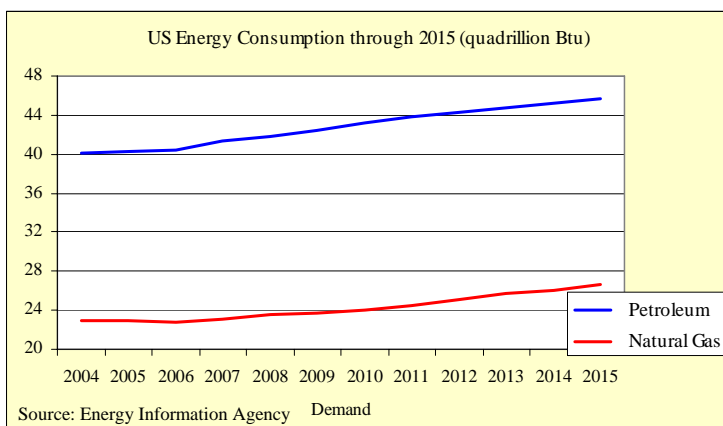
Asset Class Yields (as of 6/30)	
MLPs	6.9
REITs	4.2
10-Year Treasury Note	5.1
10-Year TIPS	2.5
Utilities	3.4
Municipal Bonds	4.1

One of the most attractive features of MLPs is that they are high-yielding investments that provide a tax deferral benefit. The distribution yield on the Alerian MLP Index is 6.9%. By comparison, the yield on the NAREIT Real Estate Index is 4.2%. While 70-90% of a MLP's distribution is tax-deferred, only about 10% of a REIT's yield is tax-deferred. Currently, the spread between MLPs and REITs is 269 basis points, historically since January 1996 the spread has been around 156 basis points. Relative to REITs, MLPs appear to be attractively priced, especially if they are able to grow distributions more rapidly than REITs. The yield is also very attractive versus other asset classes. The dividend yield on the S&P 500 is just 1.9%, the yield on the S&P Utilities Index is 3.4%, and the yield on the Lehman Municipal Bond Index is 4.1%. While MLP yields have fallen substantially in recent years as the result of strong returns (in absolute terms distributions are far higher), we believe that a distribution yield of nearly 7% is very attractive.

MLP distributions tend to be stable and growing. Given that they own physical assets not subject to heavy competition, their available distribution stream should be steady. Additionally, most MLPs have distribution coverage ratios (cash available for distribution to limited partners/actual distribution) greater than 1x, which is the most widely used measure of safety for MLPs. According to Kayne Anderson, from 2000 through 2005 MLP distributions increased at an annualized rate of 8.0%. The distribution growth rate is driven by the acquisition of additional assets, growth in volume, and the development of new projects. While we do not believe it is reasonable for investors to expect such a high growth rate in the future, a growth rate in distributions of around 3% seems reasonable in light of increased energy demand and expected increases in energy infrastructure development. However, competition might drive down growth rates even lower.

Some MLPs offer a degree of inflation protection and price stability. Interstate petroleum pipelines have their tariff rates regulated by the Federal Energy Regulatory Commission (FERC). Currently, tariff rates are increased by PPI for Finished Goods + 1.3% each year. Intrastate pipeline tariff rates are often regulated by state energy authorities and carry a degree of inflation protection. In addition to providing inflation protection these regulations reduce the likelihood of falling tariff rates (and thus falling revenues).

Another merit of MLPs is that they have the opportunity to benefit from increases in energy demand without the volatility associated with being directly exposed to commodity prices. MLPs rarely take ownership of the commodities stored in or transported through their assets and thus their revenues are not directly linked to prices of natural resources. However, pipeline operator fees are linked to volume. Thus, they should benefit from increased energy demand. According to the Energy Information Agency, US consumption of petroleum should grow 14% over the next 10 years and natural gas consumption should increase by 17%.



MLPs could benefit from the possible development of new energy sources. According to the Interstate Natural Gas Association of America, \$42 billion needs to be invested in new infrastructure projects to meet expected demand growth. The possible development of projects such as the Canadian oil sands or ultra-deepwater drilling may provide new sources of income, as new distribution systems might need to be built.

One concern related to growth is competition. Currently, pipeline operators are in limited competition with one and another. However, as the universe grows, MLPs could build new pipelines to compete with existing ones.

Another risk is the impact of rising interest rates. Since MLPs are dependent on external sources of financing, rising interest rates can substantially increase their cost of capital. Rising interest rates also lower the yield spread between MLPs and Treasuries, reducing the attractiveness of MLPs as a yield play. For example, between December 1998 and November 1999, when the yield on the 10-year Treasury rose from 4.65% to 6.03%, MLPs lost 9.4%. Goldman Sachs estimates that each 50 basis point change on the 10-year Treasury yield moves MLP prices by 7%. However, the current yield on the 10-Year Treasury (4.65% as of September 28) is not substantially below our equilibrium forecast of 5.0%.

An additional risk is the narrowing of the spread between the yield on MLPs and the *real* yield on the 10-year Treasury. As of June 30, the spread was 4.47% (6.9% on the Alerian MLP Index versus 2.43%). Since 1995 the average spread has been 481 basis points and spread was far larger in 1999. Thus, one could argue that public MLPs are overpriced. However, like REITS, one can also argue that MLPs were significantly undervalued during the late nineties and thus the current spread is appropriate

An additional concern is that the price multiple paid for acquisitions is increasing. According to Wachovia Capital Markets, the average multiple paid by MLPs for assets has risen from 6.5x EBITDA in 2003 to 7.9x EBITDA in 2005. Morgan Stanley estimates that current gas pipeline transactions are taking place at 9.5x EV/EBITDA versus a historical average of 8.3x. According to Morgan Stanley, MLP assets generally sell at 7-9x EBITDA while the MLP group is currently trading around 12x EBITDA. MLPs no longer appear to be cheaply priced. While a portion of this difference is probably due to the fact that the MLP does not pay taxes, owning MLPs is not tax-free (eventually deferred taxes must be paid). Increasing purchase multiples along with a rising cost of capital might serve to drive down the yield that MLPs are earning from their assets.

Due to rising purchase multiples, increasing GP splits, and possible increases in the cost of capital, distribution coverage ratios for MLPs may begin to decline. A few MLPs have negative rating outlooks from S&P and Moody's due to declining distribution coverage ratios. Slowing distribution growth and excessive growth in MLP issuances might also reduce future returns. We believe that smaller, faster growing MLPs may offer a better opportunity than the larger, more established MLPs.

On balance, MLPs appear attractive in a low-return world, but they are not without risk. MLPs offer a high yield and should benefit from increased energy demand. However, rising interest rates, increasing purchase multiples, and higher GP incentive payments might drive down future returns.

Implementation

The universe of potential MLP-focused investment managers is also quite small, consisting of just three managers with six closed-end funds. However, we believe that as the universe expands and investor interest continues to grow, more funds will become available. Additionally, under the American Jobs Creation Act of 2004, an open-ended mutual fund can hold up to 25% of its assets in MLPs and still classify

MLP distributions as qualified income. This should serve to increase institutional interest in the asset class.

MLP are typically more attractive for taxable investors than for not-for-profit institutions. This is because income received from MLPs is classified as unrelated business taxable income (UBTI) and thus subject to its tax reporting and tax paying requirements.

As we mentioned earlier, the universe of potential managers is quite small with six closed-funds being run by three managers. Additionally, Fiduciary Asset Management and Tortoise Capital offer separate accounts. Kayne Anderson also offers an offshore and onshore MLP hedge fund product. Most closed-end funds have very short tracks records; the oldest one began trading in the second quarter of 2004. However, some of the investment advisors have a longer history of managing MLPs through other vehicles. Below, we list funds that invest primarily (70% or more) in public or private MLPs (Kayne Energy Development).

Fund	Ticker
Fiduciary/Claymore MLP Opportunity Fund	FMO
Energy Income and Growth Fund (managed by Fiducary)	FEN
Kayne Anerson MLP Investment Company	KYN
Kayne Anderson Energy Development Company	KED
Tortoise Energy Capital Corporate	TYY
Tortoise Energy Infrastructure Fund	TYG

There are several differences between holding MLPs in a separate account versus holding them in a closed-end fund. The main benefit associated with the closed-end format is the consolidation of K1s. Instead of receiving K1s from each partnership, the investor just receives a 1099 from the fund. Additionally, closed-end funds do not generate UBTI.

However, the simplification of tax reporting comes at a cost. MLP closed-end funds are treated as corporations, not as regulated investment companies, so taxes must be paid by the fund. The same tax treatment that applies to individuals directly holding MLPs applies to the fund. The fund then pays a dividend to investors, which is meant to approximate the distribution paid by the MLPs. A portion of the dividend is treated as a return of capital (reducing the cost basis) and a portion is immediately taxable at the dividend tax rate. Several of the closed-end funds are currently trading at a discount to NAV. Relative to NAV, market prices range from a discount of 10.1% to a premium of 3.4%. Changes in the discount/premium to NAV can have a substantial impact on performance. For example, many closed-end funds saw their discounts expand widely (or their premiums turn into discounts) during the last few months of 2005, resulting in poor relative performance. The size of the discount (or premium) has varied substantially over time. As one would expect, closed-end funds increase the volatility of returns.

Closed-end funds are also leveraged with leverage ratios typically ranging from 25-35% of total assets. Management fees are based on total assets, and the use of leverage increases the advisor's management fee. This can create a potential conflict of interest between the investors and the fund. Separate accounts generally do not utilize leverage and separate account fees are usually less than 1.0%. Closed-end funds tend to be more expensive, with expense ratios ranging from 1% to 2%. Including interest expense and taxes as part of the expense ratio pushes total costs to nearly 3% for many closed-end funds. For taxable clients, we would expect closed-end MLP funds to provide lower returns (and fewer benefits) relative to direct MLP ownership. Closed-end funds may invest 20-30% of their assets in non-MLP securities. Some separate account managers are considering making investments in private securities such as PIPEs.

For taxable investors considering implementing MLPs, we recommend using a separate account format. We believe that two of the most attractive elements of MLPs are their tax deferral benefit and high yield. Holding MLPs in a closed-end format reduces some of these benefits. The separate account format is problematic for non-taxable clients because of UBTI. Closed-end funds are an option for institutional clients to avoid UBTI and gain exposure to the asset class, but these funds contain several drawbacks as mentioned earlier.

The final question is where MLPs should be placed within a client's asset allocation. MLPs do not cleanly fit into an asset class bucket because of their unique characteristics. They behave like long-term bonds because of their interest rate sensitivity, but also exhibit characteristics of real estate and energy. We believe MLPs are best considered part of a client's real asset allocation. While their direct inflation protection is limited, similar to REITS, pipeline operators should be able to pass along cost increases to their customers. MLPs also offer exposure to growth in energy demand and infrastructure and a nice complement to direct commodity exposure.

Conclusion

We believe MLPs are worth considering for taxable private wealth clients. They offer a high-yield, a tax deferral benefit, and the potential for capital appreciation. MLPs should also benefit from increased demand for natural resources and increased spending on energy infrastructure. We recommend that taxable clients utilize the separate account format. The case for MLPs is dicier for non-profit institutions because of UBTI. Institutions may invest in MLPs through closed-end mutual funds that sidestep UBTI, but the costs are high.

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References

Siegal, Yves, Michael Blum and Sharon Lui. "Master Limited Partnerships: Primer 2nd Edition," Wachovia Capital Markets LLC, August 23, 2005

"Master Limited Partnership Primer—Understanding an Emerging Asset Class," Alerian Capital Management, April 1, 2006.

Soler, Scott. "Master Limited Partnerships: What Assets Can Be Placed into an MLP? (A Primer)," *Morgan Stanley Equity Research*, October 3, 2005.

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