# CA

#### CAMBRIDGE ASSOCIATES LLC

### MASTER LIMITED PARTNERSHIPS

2011

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An emerging asset class, energy-related master limited partnerships (MLPs) have recently made numerous appearances in the press and have been the target of substantial product proliferation, with mutual funds, exchange-traded notes, and an exchange-traded fund all joining the MLP investment-vehicle menu in 2010 and 2011. And why not? Energy MLPs offer U.S. investors a compelling combination of advantages:

- High and generally growing yields. The energy MLP sector is dominated by "midstream" pipeline operators that operate in regulated sectors and have built-in inflation escalators within their contracts. These publicly traded firms, some of which date to the 1980s, historically have offered strong total returns anchored by consistently high yields, with stable underlying cash flows generated primarily via pipeline "tolls." The energy MLP universe is not particularly sensitive to commodity prices.<sup>1</sup>
- An identifiable catalyst that may support continued income growth. Investors seeking growth will be comforted that pipeline MLP players are well positioned to profit from a significant build-out of the U.S. natural gas distribution infrastructure over the next several years (recent technological advancements now allow profitable natural gas production in many large gas formations across the nation that were not commer-

cially feasible several years ago). And while predicting energy policy and consumer preferences for long periods is impossible, the environmental and energy-security advantages of domestically produced natural gas may help it to gain market share during the coming decades as well, which should provide a more modest but still helpful tailwind to MLPs.

• Favorable tax treatment. MLPs do not pay corporate income taxes on the profits they produce, and taxable shareholders are able to defer income tax on most MLP distributions until the shareholder sells the MLP units; these twin benefits are a significant competitive advantage relative to traditional corporations operating in the pipeline and natural gas infrastructure space.

Like any investment, MLPs are not without risks. Any changes to the favorable tax treatment of MLP income (no such changes are under serious consideration today) could undermine the attractiveness of the asset to shareholders. Further, tax-exempt investors will find MLPs less appealing than taxable investors,<sup>2</sup> and non-U.S. investors should probably steer clear.

In addition to the material (but not looming) risk presented by any future tax-code changes, other risks unique to the asset class include potential environmental restrictions that may curtail the ability of energy producers to extract "unconventional" natural gas, and the potential of limited access to the capital markets for an extended period (like REITs, MLPs pay out much of their cash flow directly to shareholders, so funding for growth projects or acquisitions typically comes

<sup>&</sup>lt;sup>1</sup> Some energy MLPs are commodity-sensitive (exposed to short-term fluctuations in commodity prices), but the majority by market capitalization are more sensitive to the volume of hydrocarbons shipped through their pipelines than to the price. That said, major commodity price shifts could impact the degree to which certain natural gas and mature oil fields can be profitably developed, and MLPs with pipeline assets serving those newly marginalized areas would certainly suffer in that event.

<sup>&</sup>lt;sup>2</sup> MLP ownership by nonprofits typically generates unrelated business taxable income, the implications of which are discussed in Section II of this report.

from equity and or debt issuance). Another unique disadvantage of the asset class is that energy MLPs tend to be managed by a separate general partner (GP), and the GP tends to take an ever-increasing share of the spoils.<sup>3</sup>

# What Might the Role of MLPs Be Within a Diversified Portfolio?

MLPs are high-yielding equity assets; they have historically offered some diversification versus broad equity universes and relatively stable cash flows. Many investors will characterize MLPs as "real assets"; however, their sensitivity to commodity prices and inflation is somewhat limited. For yield-seeking U.S. taxable investors, MLPs offer high income on which tax liability is largely deferred until the sale of the shares.

For those investors that answer the question "should I invest?" in the affirmative, the questions of "when?" and "how?" remain. We believe MLP valuations are moderately elevated, but developing a robust valuation framework for MLPs is quite challenging, given that valuation metrics in the asset class are a work in progress and the asset class's visibility within the institutional investment community is relatively new.<sup>4</sup> With their roughly 7% yields and potential medium-term distribution growth of perhaps 3% to 5% per year, return prospects for MLPs still appear favorable compared to other public equity asset classes; however, some indicators that point to elevated MLPs valuations give us pause.<sup>5</sup> A variety of managers and investment vehicles provide access to the MLP asset class; investors should realize that both costs and complexity tend to be higher than for more established asset classes, and many vehicles cater primarily to retail investors (though the institutional presence in the asset class is broadening).

#### **Issues to Consider**

Given that the asset class is extraordinarily complex, and that some investors may wish to review the highlights before deciding whether it is worth their time to truly get to know energy MLPs, we offer below a summary of certain key benefits and drawbacks of MLPs from the perspective of an investor.

#### Advantages

- Current yield of nearly 7% compares favorably to other equities (including REITs and utility stocks hovering around 4%).
- Favorable tax situation (no payment of corporate income taxes for MLPs and taxable shareholders can defer paying taxes on much of the significant income that MLPs generate for years, until the security is sold) offers a competitive advantage relative to traditional corporations.
- Underlying assets have potential for capital appreciation.
- Investment offers exposure to real assets and infrastructure.
- Distribution growth has historically exceeded inflation rates.
- Cash flows are stable with some built-in inflation indexing of revenue.
- Long-term demand for midstream infrastructure capacity is growing.
- Correlation to equity, hedge fund, and highquality fixed income asset classes is low.

<sup>&</sup>lt;sup>3</sup> One ameliorating factor that lessens the pain of the increasing GP share in profits is a recent trend in which the limited partnership (LP) merges with the GP, so that GP cash flows accrue to unitholders of the merged entity. In addition, some MLPs are revising down their maximum GP profit split, while new MLPs are launching in some cases with lower maximum GP splits. <sup>4</sup> Traditional price-earnings ratios are not particularly helpful, because earnings reported according to generally accepted accounting principles (GAAP) are quite distorted by depreciation and other tax shields. <sup>5</sup> Please see Section III for a discussion of current valuations and industry growth.

#### Considerations

- Continuation of tax benefits for MLPs and their taxable shareholders depends on a friendly legislative environment (though no changes appear likely at present).
- Somewhat small, developing market is concentrated in a few large MLPs, with generally moderate liquidity.
- Complex (and perhaps costly) unrelated business income tax liabilities have dissuaded many nonprofits from entering the asset class to date.
- Many MLPs employ somewhat aggressive corporate leverage and have low credit ratings.
- Higher GP/LP distribution splits may lead to a higher cost of capital, but industry trend is to limit the growth of the GP split.
- Should leveraged investors come back into the asset class, any subsequent periods of forced deleveraging could have a severe negative impact, as occurred in 2008.
- Cash flows may suffer during recessions as industrial users cut back their energy consumption.
- Distributions could falter if MLPs lose access to the capital markets for an extended period.
- Any environmental legislation that prevents economical extraction of non-traditional natural gas deposits, such as strict regulations on controversial fracking processes that help release trapped gas, could damage the asset class,<sup>6</sup> and the potential commercialization of economically competitive alternative energy sources that do not need pipelines is a longterm risk as well.

<sup>&</sup>lt;sup>6</sup> Some MLPs are involved in messy businesses, and spills and accidents occur with some regularity.

Energy-related master limited partnerships (MLPs) are an evolving asset class. Most partnerships were formed during the past decade, and most investors' understanding of this complex asset class remains limited. This section describes the types of companies included in the energy MLP asset class, and details the asset class's growth from the 1980s to today. Then we discuss the taxation pass-through feature that has been a huge tailwind to the growth of the asset class and its profitability. We outline the unique general partner profit-sharing feature (good for the general partners [GPs], not so wonderful for the limited partners [LPs], in our view). Finally, we offer a few thoughts on the role of MLPs in a diversified portfolio.

Energy-related MLPs are publicly traded partnerships engaged primarily in "upstream" activities like exploration, development, and production; "midstream" activities like gathering and processing, transportation via pipeline, shipping or trucking, and storage; and "downstream" activities like refining, compression, marketing, and distribution of specified natural resources as well as certain biofuels and alternative energy sources. Energy MLPs account for roughly 80% of the MLP sector, while a limited number of MLPs are active in real estate and financial activities.<sup>1</sup> The industry is primarily known for its midstream energy players with their pipeline focus, and virtually all of the MLP indices comprise only natural resources energy activities. Exhibit 1 highlights that while the MLP industry is dominated by energy infrastructure firms today, in 1990 those firms were only about one-third of the MLP sector. Our focus in this report is exclusively on energy MLPs and primarily on the midstream pipeline operators within that universe.

#### Types of Assets in the MLP Structure

In order to maintain their "pass-through" tax advantages, energy MLPs are generally required to derive most of their earnings from natural resources-related activities.2 Energy MLPs own a variety of assets with varying degrees of commodity price sensitivity. The largest portion is the midstream sector, which includes the transportation, storage, and processing of natural resources such as crude oil and natural gas. More specifically, pipeline operators compose about 75% of the market capitalization of the Wells Fargo MLP Index (Exhibit 2). Other energy MLP types include upstream oil & gas firms (8.8% of the Wells Fargo index), publicly traded GPs of some MLPs (5.3%), propane distributors (4.8%), and four other categories that together account for about 6.7% of the index: coal, marine shipping, oilfield services, and refining. The small universe of non-energy MLPs, on the other hand, is not included in the Wells Fargo or Alerian MLP indices, and these non-energy MLPs are not the focus of this report.

**Pipeline MLPs.** Pipeline MLPs generally do not take ownership of the hydrocarbon that is transported through their system. Their business model is similar to toll roads in that they collect a percentage of the total volume that travels through their lines. Contracts are primarily fixedcapacity reservation charges, and this structure ensures that the MLPs will be paid even if the service is not provided or needed. Often, service contracts last between five and ten years.

Consumer and industrial demand drive pipeline volume for refined products while refinery demand powers crude oil volume. Since pipeline MLP revenues are linked to the quantity and

<sup>&</sup>lt;sup>1</sup> There is also one MLP that operates amusement parks and another that grows macadamia nuts!

<sup>&</sup>lt;sup>2</sup> Exceptions include a few non-energy MLPs grandfathered under earlier legislation, and a modest number involved in real estate, financial, and other businesses.

distance transported, not the *market value* of the commodity being transported, their cash flows are not directly affected by changing commodity prices. Instead, revenues have tended to grow with overall energy usage. That said, pipeline MLPs do incur volume risk, in that they are vulnerable to the possibility of falling demand for the commodity in the areas they serve.

The Federal Energy Regulatory Commission regulates tariffs charged by interstate pipeline; state/local public utility commissions regulate tariffs for intrastate shipments. Pipelines are allowed to earn a reasonable return on investment to cover operating costs, depreciation, and taxes. Following the 1992 Energy Policy Act, after an initial rate is set, the pipeline's tariff rate structure is adjusted each year by the Producer Price Index (PPI) for finished goods plus a 2.65% margin for the next five years (it had been PPI + 1.3% until recently). The PPI-linked fee structure allows pipeline MLPs to receive a predictable cash flow stream that is indexed to an inflation metric; however, energy MLPs should not be viewed as a strong hedge against unanticipated inflation. For MLPs that are structured so that the GP's cut increases whenever the partnership's revenue is boosted (this is true for the majority of MLPs—see below for more on the GP/LP split), the MLPs unitholders will only receive a portion of inflation-based rate increases. In addition, MLP share prices historically have not responded favorably to the interest rate increases that often accompany unanticipated inflation.

*Natural gas pipelines* are generally used for longdistance transportation. They receive natural gas from gathering systems and other pipelines, and deliver it to industrial users, utilities, and storage facilities. The continued growth in natural gas demand from these users means that throughput (volumes shipped through the pipelines) in these pipelines is fairly stable. Refined-product pipelines transport gasoline, diesel fuel, and jet fuel, with demand coming from airports, rail yards, and terminals that then distribute the fuels to retail outlets. Demand tends to be relatively steady regardless of commodity prices, producing fairly stable cash flows, but throughput can vary depending on economic cycles.

*Crude oil pipelines* feed refiners from sea tankers, Canadian production, and domestic U.S. production. Crude oil demand is driven primarily by refinery production levels, which are affected by consumption of refined products. Cash flow tends to be fee-based and stable.

Terminal MLPs. Terminal MLPs control large storage and distribution facilities that handle crude oil and refined petroleum products. Refined product and crude oil are stored in above-ground facilities, while natural gas is stored underground, often in depleted natural gas or crude oil fields. In general, similar to pipeline operators, terminal operators do not take title to the products that are stored in or distributed from their terminals. Revenues are generated by fees that are based on the volume that is delivered through terminals, plus a service fee for blending and additive injection. Terminal contracts generally last for one year, with a minimum throughput provision that obligates the customer to move a minimum amount of product through a terminal or pay for terminal capacity reserved but not used.

Gathering and Processing MLPs. Natural gas-gathering pipelines connect completed natural gas wells to larger-diameter pipelines. Unlike most pipeline MLPs, many gathering and processing (G&P) partnerships *are* sensitive to changes in commodity prices, because natural gas prices influence drilling activity, contract type, and volumes. Prior to moving through longdistance pipelines, natural gas may be refined at a processing facility to remove water, chemical impurities, or natural gas liquids (NGLs). NGLs are further refined, or "fractionated," into ethane, butane, isobutane, and/or natural gasoline.

The revenue stream of the G&P sector tends to be more volatile than pipelines, though the magnitude of that volatility can depend on the type of contract.

*Fee-based contracts* provide the most stable source of revenues since they are based on the volume of natural gas or NGL throughput, not the price of natural gas.

Percent of proceeds contracts are typically used when G&P MLPs gather and process natural gas on behalf of producers. Under this contract, the MLP sells the processed products at market prices, and then sells back to the producer at an agreed-upon percentage of the proceeds based on an index price. A typical contract allows the producer to receive 80% of the sale proceeds, while the processor keeps the remaining 20%. For MLPs that operate under this type of contract, earnings increase when natural gas and NGL prices rise (and vice versa).

*Keep-whole contracts* require the processor to replace the natural gas that was extracted while processing. The processor can either buy the natural gas at market prices or pay the producer the amount equal to the reduced Btu content. Extracting NGLs from natural gas reduces the Btu content of the processed natural gas—under this contract, the processor keeps the producer "whole" on the natural gas. Earnings for MLPs that operate with keep-whole contracts depend on the "frack spread" (the difference between prices of NGLs and natural gas), benefitting when NGL prices increase relative to natural gas prices (and vice versa). MLPs with keepwhole contracts are more sensitive to changing commodity prices than those with revenues primarily based on fees.

**Propane MLPs.** Propane MLPs distribute propane via trucks to residential, commercial, industrial, and agricultural users. Retail propane prices tend to track wholesale prices with a lag, so the direct commodity exposure of these MLPs has generally been relatively transient.

**Shipping MLPs.** Shipping MLPs use tankers or barges to transport liquefied natural gas, refined products, and by-products. The main users are large oil refiners and chemical producers. Cash flow streams are relatively stable for MLPs that have long-term contracts, though contracts tend to be shorter than those of pipeline MLPs. This sector has tended to be more volatile than other MLP sectors.

**Coal MLPs.** Coal MLPs that operate under a royalty model own property over coal seams; they enter into long-term leases that give coal operators the right to mine the coal reserves in exchange for royalty payments. Contracts are typically one to three years, so fluctuating spot prices do not immediately impact their cash flows, but commodity prices can influence longer-term results.

**Upstream MLPs.** Upstream MLPs typically own and operate oil & gas assets in mature basins with low decline rates.<sup>3</sup> The primary growth driver for these MLPs is their ability to acquire additional mature reserves at reasonable prices. Because they need to find assets in order to grow, upstream MLPs with parent companies that can sell them assets tend to be more attractive than independent upstream MLPs. This is a volatile sector because these MLPs have direct exposure to commodity prices, although they try

<sup>&</sup>lt;sup>3</sup> Wells in newer shale-gas deposits experience a sharp fall in production in their early years, while the decline rates of conventional gas deposits are more stable over time.

to mitigate this exposure by hedging a significant portion of current production.

General Partner MLPs. GPs are MLP operators and receive a share of cash flows from the partnerships they manage, but some are also publicly traded entities that operate as master limited partnerships in their own right. We provide more information on GP/LP dynamics later in this report. GPs have significant operational leverage, because their percentage share increases as the MLP's cash flow increases, and falls if the MLP's cash flow falls. Think of the GP's take as similar to the carried interest paid to a private equity fund GP, but rather than a stable 20% carry, the GP of the MLP may be entitled to just 2% when cash flows are lean, and up to 50% when the MLP assets are generating very high cash flows. Mergers & acquisitions that collapse the GP into the MLP have become increasingly frequent in recent years (though not without the potential for conflicts of interest, we generally view developments that control or cap the growth of the GP split, such as this one, as investor friendly).

#### Biofuels and Other Alternative Fuels MLPs.

These MLPs are involved in transporting alternative energy sources. This small but developing sector may be involved with ethanol and geothermal project infrastructure; solar and wind energy are excluded.

#### Other (Real Estate and Financial) MLPs.

This segment comprises a small number of real estate MLPs that have elected not to convert to the REIT structure, alongside financial MLPs (such as hedge fund GPs) and sector MLPs that were grandfathered in the 1980s when legislation began limiting the focus of MLPs to energy and real estate. These MLP types are not typically represented in the MLP industry benchmarks, and we do not include them in our exhibits. Individual MLPs vary in size and complexity, with some large MLPs participating in a diverse array of industry activities across multiple sectors. For example, an MLP may have separate pipeline units for transporting natural gas, refined products, and carbon dioxide. The exposures and risks of these individual segments differ, making some industry players difficult to categorize within subindices. However, this is not an issue for the majority of investors that would use either active managers or products linked to broad MLP indices.

#### **Dimensioning the Investment Universe**

The MLP asset class is developing quickly, with half of the Alerian MLP Index having been formed since 2000. The index in aggregate has a float-adjusted market cap of about \$145 billion (compared to a float-adjusted market cap of \$436 billion for U.S.-listed REITs). However, as would be expected from an emerging asset class, the energy MLP sector is still relatively small, concentrated, and has moderate trading liquidity.

As of year-end 2010, the entire energy MLP universe had a full market cap roughly half that of Exxon Mobil and roughly equal to those of Royal Dutch Shell and Chevron (Exhibit 4). While the Wells Fargo MLP Index includes 67 companies, the five largest constituents account for nearly 40% of its market cap, and the top ten account for about 53%. The median market cap of the MLPs in the Wells Fargo index is \$1,208 million, versus \$407 million for the broad smallcap Russell 2000® Index (Exhibit 3).

If MLPs were to be included in the Russell U.S. equity indices, their size would dictate that about one-quarter of the Wells Fargo index (broken down by market cap) would fit within Russell's small-cap or micro-cap equity index framework, more than half would be in the mid-cap size band, and the remaining 13% would be in the large-cap size band; none would be classified as mega cap. The broad Russell 3000® Index, on the other hand, is 42% mega cap and 19% large cap (Exhibit 4). Most MLPs (76%) trade on the New York Stock Exchange, but blue-chip they are not: Exhibit 2 highlights that only 46% have received a credit rating, and for those that have, the most prevalent rating is BBB (the lowest investment-grade rating). This credit quality profile is considerably lower than the overall equity universe, and given MLPs' dependence on the capital markets to fund growth, MLPs and their unitholders can suffer when bond buyers become risk averse.

MLP trading volume has nearly tripled over the last five years, but this growth is off a very low base, and the sector's dollar trading volume is about one-sixth as large as that of U.S. REITs (Exhibits 5 and 6). That said, the trading volume of the median energy MLP is greater than the trading volume of the median small-cap stock (Exhibit 7), and active managers with portfolios tilted to the sector's larger names should be reasonably nimble (most managers hold large portions of the top five index components, though they don't tend to be as concentrated as the indices in shares of the sector's largest firms).

The size of the Alerian MLP Index has increased significantly since the mid-1990s, both in numbers of MLPs and in their market caps. From the 12 MLPs in existence at the end of 1995, the population nearly doubled to 23 by the end of 2000, nearly doubled again to 45 MLPs by the end of 2005, and ended 2010 at 50. Based on market cap, the universe has been on a dramatic upward trend. At the end of 1995, the Alerian MLP Index's *total* market cap was just \$1 billion. By 2000, the sector's total market cap had increased substantially to \$15 billion. Estimates as of September 7, 2011, put the industry's market cap at \$219 billion.<sup>4</sup> The dramatic growth in this sector during the 2000s was partially spurred by "drop down" transactions, in which large integrated natural resources companies took advantage of MLPs' tax-favored status by moving assets into an MLP umbrella. This helped the large companies realize higher market valuations for the assets, benefit from specialist operating expertise, and profit from the ongoing demand for energy infrastructure. Exhibit 8 illustrates the growth in the energy-related and midstream sectors of the MLP universe.

#### The MLP Pass-Through Structure

Firms that have organized themselves as MLPs, rather than as corporations, have done so primarily for the huge tax advantages. Like REITs, MLPs are pass-through entities, meaning that if managed properly they do not pay corporate income tax on their profits. Therefore, unlike corporate dividends, MLP cash distributions are not subject to double taxation. Pass-through status is a clear advantage for these firms, because it can (1) improve an asset's after-tax profit at a given price, or (2) allow the MLP to pay more to acquire a particular asset than a tax-paying corporation could pay (because of the MLP's lower cost of equity capital), if both potential acquirers have identical after-tax profit targets for the asset. MLPs have a secondary tax benefit as well: taxable investors can typically defer paying taxes on the majority of MLP distributions for many years. If the MLP is passed through the estate to an heir, the deferral becomes permanent. The tax deferral makes a dollar of MLP vield more valuable to taxable shareholders than a dollar of traditional equity dividend yield. (Because taxable investors should prefer a tax-advantaged MLP structure over a traditional corporate structure, all things equal, MLPs have a lower cost of capital than they would if they had traditional corporate tax characteristics.) However, the tax advantage comes at a price, offsetting some of the lower cost of capital: investors' reluctance to submit themselves to the somewhat complicated tax treatment has historically constrained the

<sup>&</sup>lt;sup>4</sup> Of the industry's \$219 billion market cap, only \$145 billion is free-floating shares.

universe of potential investors for MLPs. *Taxable* MLP investors face more onerous tax-preparation chores than investors that only own traditional equities. *Nonprofit* MLP investors face the prospect of paying unrelated business income tax (UBIT), which can be complex to comply with, and which lowers the return of the investment. On the other hand, by constraining the investor base, this unattractive feature may increase the return potential for nonprofit investors that are not put off by UBIT (or that use an investment vehicle to efficiently eliminate UBIT).

In **Section II**, we examine the tax treatment of MLPs from three investment perspectives: first for private investors that are subject to U.S. income tax, and for U.S. nonprofits, as well as non-U.S. investors. The section also discusses investment vehicles and their appropriateness for taxable and nonprofit investors.

#### **GP-LP Relationships in MLPs**

MLPs share some characteristics with private equity funds. Both structures have a GP, which is responsible for managing the underlying assets, and which is eligible to extract substantial profits as a reward for delivering profits to LPs. GPs of private equity funds often charge a 2% management fee each year, and also receive 20% of all profits in excess of a specified threshold return such as 8%. GPs of MLPs, on the other hand, receive a variable slice of distributions that starts out small but typically can grow to 50% if the partnership increases its cash flows substantially (see Exhibit 9 for an example). The intent of the structure is to encourage GPs to focus on growing the partnership over time. Indeed, GPs will see cash flows accelerate as distributions to LPs increase.5

The structure leverages the GP's exposure to increases or decreases in distributions. As the

second page of Exhibit 9 makes clear, a 33% increase in a partnership's distribution would boost GP distributions by 74%, while a 33% decrease would shrink GP distributions by 59%. The percentage change in the GP's distribution is much larger than the percentage change in the LP's distribution, so the GP receives an increasingly larger share of the total distribution as it grows. Of course, the leverage works both ways, and for a partnership that is above the 50%-to-the-GP threshold, the pain of *declining* cash flows would be shared equally with the GP.<sup>6</sup>

This accelerating GP-split structure provides strong incentives to GPs to push for distribution growth, but it has a side effect of making incremental growth less valuable to LPs, thus making some growth-oriented transactions unattractive. In effect, a high marginal GP split raises the partnership's cost of equity capital. In a mature MLP operating at a 50% marginal GP split, for an additional investment to deliver MLP shareholder returns of 10%, it must offer a return on equity of at least 20% because the GP will walk away with half of the investment's incremental return.

We believe the accelerating GP split is problematic from the perspective of MLP investors. It provides a strong incentive for the GP to grow distributions, but at high split levels, distribution increases have a small marginal benefit to the MLP's shareholders. Thus GPs may stretch for growth by taking on additional debt to complete risky acquisitions, with MLP shareholders seeing only half of the benefit from deals that work out as planned, but shouldering the majority of the risk. Furthermore, GPs can see their profit share increase over time due simply to inflation.<sup>7</sup>

<sup>&</sup>lt;sup>5</sup> The GP distribution-split program is called an incentive distribution right.

<sup>&</sup>lt;sup>6</sup> In other words, if the cash flows of the combined entity declined by one dollar, the GP and the LP would each see their respective cash flows decline by 50 cents (the GP's total cash flows are smaller than the LP's, so in percentage terms the GP would suffer more from the decline, just as it benefits more from an acceleration). <sup>7</sup> Other investments that involve a profit split with the GP, such as a real estate fund, may face the same issue,

Currently, nearly half of MLPs by market cap operate at an unattractive 50% GP split, while an additional 15% of the universe operates at a 25% split (Exhibit 10).<sup>8</sup> Where does that leave investors that are evaluating the attractiveness of the MLP asset class? It's a knock, but perhaps not a deal breaker. To those who argue that the economics of the GP split make MLPs an unattractive investment, the obvious rejoinder is that those economics have apparently not dented returns for the asset class so far. Buyer beware managers are mindful of GP/LP splits when assessing individual MLPs for investment. There are two new mitigating factors that bear consideration as well:

The accelerating GP split structure may be ushered out as the MLP sector becomes more institutionalized, particularly if lower GP splits allow MLPs to grow more quickly than traditionally structured partnerships. Over the past year, some partnerships have shifted their distribution-split structure to cap the GP's profit split at lower levels, some MLPs have merged with their GP (thereby bringing the GP's profit back in-house), and some newly floated partnerships have eschewed the industry-standard model altogether by taking no GP share. Some institutional MLP fund managers have noted that, all else equal, partnerships that have lower GP splits may be positioned for better growth than those with a traditional GP split structure because they enjoy a lower cost of capital. Under the more moderate split, a wider variety of deals makes sense for the low-split MLP's shareholders (although GPs would have less financial incentive to push for those deals if they receive a smaller portion of their resulting cash flows).

<sup>8</sup> The average split is lower for the industry as a whole than for the industry's largest names.

• Many GPs also own LP shares, which helps to align their interests with those of LPs.

Would we like to see MLPs reserve a greater percentage of their distributions for unitholders and cap GP splits at lower thresholds (or merge with the GP)? Absolutely. We view the recent trend toward lower maximum splits and integrated GP/LP structures as an encouraging and investor-friendly development.

# How Should Investors Categorize an MLP Investment?

MLPs are most appropriately categorized as real asset investments, similar to REITs or natural resources equities. However, unlike other natural resources equities, MLPs' cash flows tend to be driven less by commodity prices. The cash flows of most MLP firms are much more sensitive to the volume of the commodity shipped through the pipelines (typically natural gas) than to the commodity's price. Demand for energy commodities such as natural gas is less volatile than their prices, and demand generally increases over time (however, recessions can certainly cause demand to dip). The U.S. Department of Energy's Energy Information Administration (EIA) predicts that domestic natural gas consumption will increase by 0.5% on an annualized average basis over the next 25 years (Exhibit 11), while domestic production will increase at an estimated 0.9% annualized rate. The differential comes from expanded exports, which the EIA estimates will increase from 5% of domestic gas production today to nearly 10% of production in 2035.

but the issue is probably less of a concern with a real estate fund with a ten-year life than with a perpetual MLP.

#### **History & Evolution of Master Limited Partnerships**

The origins of the modern master limited partnership (MLP) are relatively recent, dating back to only the early 1980s, with MLPs still considered an emerging asset class as the characteristics, sector composition, tax treatment, and demand and supply environment continue to evolve.

Following the Economic Tax Recovery Act of 1981, limited partnerships, which are the predecessors of the MLP, gained tax favorable treatment with liberal cost recovery periods for certain investments, leading to significant growth in partnerships offered as tax shelters. In 1981, Apache Petroleum Corporation became the first limited partnership to trade publicly, effectively becoming the country's first MLP. The general partner (GP) of this entity was the Apache Corporation, which consolidated limited partnership interests in 30 separate exploration and development (E&P) programs into a single group of exchange-traded units.

A variety of businesses across several industries chose to use this structure, including those in real estate, restaurants, hotels and motels, oil and natural gas exploration and production, cable TV, investment advisors (such as AllianceBernstein, Blackstone, Fortress, and Och-Ziff), diversified holding companies (such as Icahn Enterprises), amusement parks, and even professional sports teams such as the Boston Celtics. Many of these partnerships were private, rather than the publicly traded partnerships that exist today, and many relied on tax advantages rather than the economics of the fundamental underlying business to perpetuate their existence. This led to widespread use of the partnership structure, and tax avoidance beyond its original intentions, so Congress began to implement a series of fiscal changes to amend the rules applicable to partnerships.

Later, as tax legislation changed in the 1980s to tighten the definition of qualifying investments, MLPs were grandfathered contingent upon paying an additional tax, but the majority of non-natural resource MLPs ceased to use the MLP structure. Although there are some MLPs focused on asset management, real estate, and timber, the majority are natural resource– and energy-related, and the MLP indices generally comprise energy and natural resources sectors. The dramatic changes in the composition of the MLP universe since 1990 are illustrated in Exhibit 1.

In the nearly 30-year time period that these partnerships have evolved, several fiscal developments have refined the status of the MLP and its tax treatment. Several pieces of legislation were critical in the development of the MLP industry. First, the Tax Reform Act of 1986 established the basis for the modern MLP by describing the structural elements for limited partnerships, and amended the cost recovery systems and other tax provisions, thereby making tax shelters less attractive. The legislation sought to shift the focus from tax avoidance to having the partnerships hold mature assets that generated income. Subsequently, the Revenue Act of 1987 created the operating characteristics for limited partnerships, and eliminated the special tax status for all businesses except those engaged in energy and natural resource activities. To encourage U.S. energy infrastructure investment, the Act specified that there would be no entity level taxation, with no federal taxes levied on those publicly traded partnerships that were involved in exploration, mining, processing, refining, production, storage, transportation, and marketing of minerals, oil & gas, geothermal, and timber resources. Preferential tax treatment was only given to MLPs deriving at least 90% of their revenues from these natural resource activities.

Over the ensuing years, integrated energy businesses recognized the advantages of the MLP structure, which facilitated moving less growthoriented types of processing and transport assets out of their core growth-oriented exploration and production businesses, allowing the slower growth, toll road-type assets to garner more tax favorable

treatment. Energy infrastructure assets within major integrated energy companies tend to be underused as they are not part of the core, for-profit business. Shareholders value the major energy company's E&P growth activities, reserve replacement, and other metrics, but not the maintenance of pipeline assets. For major energy companies, E&P earnings far exceed midstream transport and processing earnings, so they focus less attention and management expertise on these midstream assets. Moving these latter asset types from the corporate entity into an MLP-i.e., "drop downs"-accelerated growth in the MLP industry. The major energy company can still control the midstream asset through controlling the GP, but it benefits from the more tax-efficient treatment of the MLP structure where stable cash flows are more highly valued. The majority of MLPs still engage in midstream activities, like gathering, processing, pipeline transport, and terminal storage activities, rather than upstream activities like E&P, or downstream activities such as distribution, oil refining, or oilfield services. Other energy-related activities, such as power generation, electricity distribution, and transmission and distribution utility systems, do not qualify for MLP status.

Although the American Jobs Creation Act of 2004 attempted to broaden mutual fund investment by allowing MLP distributions and income allocations to be classified as "qualified income," MLPs largely continue to be dominated by retail investors. Institutional ownership of MLPs (Exhibit 30) is still in the minority in the industry. Restrictions on mutual fund ownership of MLPs, the generation of unrelated business taxable income, and tax return and portfolio reporting complications have impeded the broader acceptance of MLPs as an investable asset class for mutual funds and other institutions. Institutional ownership to date peaked in late 2007 at just over 30%, driven in particular by widespread usage of MLPs by hedge funds, many of which unwound those positions as the market dropped in 2008. Institutional ownership declined to about 25% in 2009 and 2010, and is now once again on the upswing.

In 2008, the Emergency Economic Stabilization Act expanded the definition of MLPs to include the transport and storage of biofuels, such as ethanol and biodiesel, and alternative energy sources, such as liquefied petroleum gas, hydrogen, and natural gas, as well as liquid fuels derived from biomass, among others.

However, despite the largely retail-oriented investor base, trading volumes for the MLP sector have increased dramatically, from under \$10 million daily trading volume to over \$600 million in mid-2011 (Exhibit 5). The vast majority of MLP units are traded on the New York Stock Exchange, with a minority traded on Nasdaq, and even fewer on other U.S. and Canadian exchanges, or over the counter. Financial and capital allocation discipline is effectively enforced on the MLPs by their need to consistently return to the capital markets to finance ongoing growth and acquisitions. This contributed to the industry having continued effective access to the capital markets, even during the period since 2008, although use of debt to fund growth, rather than equity issuance, had grown appreciably through April 2011, as illustrated in Exhibit 21.

Although still dominated by midstream energy assets, the MLP sector has expanded to include coal and maritime shipping MLPs, as well as E&P MLPs. Under current legislation, qualifying natural resources include oil, gas and petroleum products; coal and other minerals; timber; any other non-renewable resource. Changes in 2008 broadened the definition to include industrial source carbon dioxide and ethanol, biodiesel, and other alternative fuels' transportation and storage. Qualifying activities now include exploration, development and production, mining, gathering and processing, refining, compression, transportation via pipeline, shipping and trucking, storage, marketing, and distribution, but exclude any retail element.

#### Exhibit 1 Evolution of the Master Limited Partnership Universe by Sector



Source: National Association of Publicly Traded Partnerships.

Note: Other businesses includes agricultural, amusement park, and cemetery master limited partnerships.

#### Exhibit 2 Characteristics of the Wells Fargo MLP Index As of July 31, 2011



#### Sector Weightings and Number of Constituents

#### Top Five Constituents: Sector and Index Weightings

<u>Name</u>	<u>Weight</u>	Sector
Enterprise Product Partners LP	13.4%	Midstream - Natural Gas
Kinder Morgan Energy Partners LP	8.6%	Midstream - Petroleum
Plains All American Pipeline LP	5.1%	Midstream - Petroleum
Energy Transfer Partners LP	4.6%	Midstream - Natural Gas
Linn Energy LLC	4.6%	Oil & Gas

Exchanges on Which MLPs Trade



**Credit Rating and Number of Constituents** 



Sources: Standard & Poor's and Wells Fargo Securities, LLC.

Notes: Number of constituents shown in parentheses. Sector and constituent breakdowns are float-adjusted market capitalization weighted. Exchange and credit rating breakdowns are company weighted.

#### Exhibit 3 **Comparison of Median and Constituent Market Capitalizations** As of July 31, 2011



Sources: FactSet Research Systems, Frank Russell Company, Standard & Poor's, and Wells Fargo Securities, LLC. Notes: Market capitalization data based on float-adjusted figures. Individual master limited partnerships (MLPs) labeled using ticker. See Appendix Exhibit 3 for corresponding MLP names.

#### Exhibit 4 Master Limited Partnership Market Capitalization Distribution and Comparison As of July 31, 2011



Sources: FactSet Research Systems, Frank Russell Company, Standard & Poor's, and Wells Fargo Securities, LLC.

Notes: All market capitalization data based on float-adjusted figures with the exception of Wells Fargo MLP full market cap shown above. Micro cap is defined as a market cap of less than \$0.6 billion; small cap, between \$0.6 billion and \$2.4 billion; mid cap, between \$2.4 billion and \$16.7 billion; large cap, between \$16.7 billion and \$41.2 billion; and mega cap, greater than \$41.2 billion.

#### Exhibit 5 Three-Month Average Daily Trading Volume: FTSE® NAREIT All Equity REITs Index and Alerian MLP Index March 31, 1997 – June 30, 2011



Sources: Alerian, FactSet Research Systems, FTSE International Limited, and National Association of Real Estate Investment Trusts. Note: Top five Alerian MLP Index constituents determined by ranking market capitalization at each calendar year-end period.

#### Exhibit 6 Three-Month Average Daily Trading Volume and Market Capitalization of MLPs and Other Equities As of June 30, 2011



Sources: Alerian, FactSet Research Systems, Fidelity Investments, Frank Russell Company, FTSE International Limited, North American Real Estate Investment Trust, and Standard & Poor's. Notes: Trading volume and market capitalization data based on three-month average figures. Bid/ask spread data are as of August 26, 2011. Master limited partnerships represented by the Alerian MLP Index; REITs represented by the FTSE® NAREIT All Equity REITs Index; utility equities represented by the S&P 500 Utilities Index; large-cap U.S. equities represented by the S&P 500 Index; small-cap U.S. equities represented by the Russell 2000® Index, and broad U.S. equity market represented by the Russell 3000® Index.

\* Bid/ask spread shown for Alerian MLP Index uses ETN data; all other spreads shown use ETF data.

#### Exhibit 7 Three-Month Average Daily Trading Volume and Market Capitalization Comparison: Alerian MLP Index As of June 30, 2011



Sources: Alerian, FactSet Research Systems, Frank Russell Company, and FTSE International Limited.

Notes: Size of bubble determined by weight of constituent in Alerian MLP Index. Vertical lines show median average daily trading volume (in US\$ millions) for Russell 2000® Index, Alerian MLP Index, and FTSE® NAREIT All Equity REITs Index. Tickers used to identify top master limited partnerships as determined by median average daily trading volume. EPD is the ticker for Enterprise Product Partners L.P., KMP for Kinder Morgan Energy Partners L.P., ETP for Energy Transfer Partners L.P., and LINE for Linn Energy LLC.

#### Exhibit 8 Growth of the Master Limited Partnership Market 1995–2010



Source: Alerian.

#### Exhibit 8 (continued) Growth of the Master Limited Partnership Market

1998–2010 • U.S. Dollar • December 31, 1998 = \$100



Sources: Standard & Poor's and Wells Fargo Securities, LLC. Note: Labels above bars represent number of index constituents.

#### Exhibit 9 Hypothetical Distribution Split Between Limited Partners and General Partners



#### Exhibit 9 (continued) Hypothetical Distribution Split Between Limited Partners and General Partners



Distribution Increases Are Magnified for the General Partner...

Source: Hypothetical partnership structure from Alerian. Note: Assumes a generic master limited partnership that pays 2% of gross distributions to general partners for the first 6.25 cents earned, 15% of the next 6.25 cents, 25% of the next 12.5 cents, and 50% of all distributions over 25 cents.

Exhibit 10 Current and Maximum General Partner Distribution Split of Broad Master Limited Partnership Universe As of June 30, 2011



Sources: FactSet Research Systems and Tortoise Capital Advisors, LLC.

Notes: The 2% or less category includes partnerships where the limited partner benefits directly from any general partner distributions; the 25% category includes distributions between 15% and 37%; the 50% category includes distributions of 45% and above. Patterned areas indicate maximum splits of 25% or less, including partnerships without an external GP. Cambridge Associates believes the broad sample of 56 master limited partnerships (MLPs) shown is representative of the full universe of energy MLPs. Size of individual MLPs within pie chart is determined by market capitalization.



Exhibit 11 Growth in U.S. Energy Consumption

#### Actual and Estimated Annual Growth



Sources: National Bureau of Economic Research, Thomson Datastream, and U.S. Energy Information Administration.

Notes: Recession periods are shown in gray dashed bars and use periods determined by the National Bureau of Economic Research. The shaded area beginning in 2011 indicates forecasted data.

In the first section we explained what makes master limited partnerships (MLPs) unique (primarily their market niche and their tax pass-through feature) and highlighted the development of the asset class. This section shifts gears to address the investment characteristics of the asset class. The section reviews the complex tax treatment for both taxable and tax-exempt investors in energy MLPs. Following that, we discuss historical returns, correlations, and distribution income, and whether MLPs offer a hedge against unanticipated inflation. Next, we discuss the variety of investment vehicles available to investors that desire exposure to energy MLPs. Finally, we enumerate some of the risks that MLP investors face.

## MLPs' Appeal Differs Depending on the Investor's Tax Status

As we noted earlier, MLPs are distinctly a product of the tax code; part of their appeal is dependent on whether the investor can benefit from some of their individual tax features. U.S. taxable investors will generally find MLPs more attractive than tax-exempt or non-U.S. investors.

We have done our best to provide a plain English discussion of the tax treatment, but because we are not tax experts, potential MLP investors should engage competent tax counsel and not rely on our abridged and simplified discussion of the asset class's tax treatment. The tax treatment of MLPs is fiendishly complex, both for taxable *and* tax-exempt investors, and there are gray areas and some disagreement among tax practitioners regarding certain characteristics; we are in no position to be the tie-breaker of those disagreements. **MLPs for Taxable Investors.** MLPs are not subject to corporate income tax, leaving more of their revenue to flow through to investors, but they also have particular appeal for taxable investors, because much of their high yields can be tax-deferred for several years, allowing gains to compound before the taxpayer ultimately has to pay taxes. This is a modest advantage versus other high-yielding equities, which have moderate tax drag currently due to the 15% tax rate on most dividend payments, and it is a huge advantage versus high-yield corporate bond strategies (where coupon distributions are taxed at the 35% income tax rate<sup>9</sup>).

MLP investors (unitholders) receive quarterly cash distributions that are based on the large amount of distributable cash flow that many partnerships generate. Taxable income, on the other hand, is typically minimized by substantial amounts of depreciation, depletion, and amortization (DD&A) that flow through to the MLP's investors. Generally, DD&A is equal to about 80% of distributable cash flow, but the amount varies (and tends to decrease over time in a given MLP if it does not continue to invest in additional assets). In practice, investors in a given year generally pay taxes on income equal to roughly 20% of the MLP's distribution yield, and the remainder of the eventual tax liability can be deferred until the investor sells the partnership units (the deferred tax liability is completely eliminated if the partnership units eventually pass to the investor's heirs as part of the estate).

<sup>&</sup>lt;sup>9</sup> The current top marginal federal tax rate for investors not subject to the alternative minimum tax is 35%. This rate is scheduled to increase, and to be accompanied by a Medicare surcharge, in coming years. Investors in many states and some localities are subject to income tax as well; combined state and local rates can top 12%, but rates of 6% or less are more typical.

Here's how the deferral is eventually recaptured: each dollar of DD&A tax shields that benefits the investor during its holding period is subtracted from the investor's original purchase price of the MLP units, creating an "adjusted basis." When the investor sells its MLP units, the difference between the original sales price and the adjusted basis is taxed as ordinary income, "recapturing" the portion of income that had been previously shielded by DD&A. Then, the difference between the sales proceeds and the investor's *actual* cost basis is taxed at the capital gains tax rate. Exhibit 12 shows this process graphically.<sup>10</sup>

MLP investors will find that the process of preparing tax returns is more burdensome and costly than for a portfolio without them. Separate-account investors can expect to receive IRS K-1 forms for perhaps 20 individual MLPs. The K-1s report the allocation of each unitholder's share of the MLP's income, gain, deductions, and losses. A unitholder is also required to file income tax returns in each state where a partnership generates income<sup>11</sup> (and pay income tax in those states when appropriate), and the K-1 breaks out the tax data required to complete these state forms.

Investors that wish to limit the administrative burden may choose to invest in certain types of commingled vehicles, but some of these vehicles trade high costs for their tax simplicity. A discussion of investment vehicles can be found after our description of the MLP tax treatment for nonprofit institutions.

Investors directly investing in MLPs (via a separately managed account, for example) should generally own the MLPs within a taxable account rather than within an individual retirement account (IRA). A taxable account allows the investor to receive the tax benefit of the MLP's deferred income. Reserve space in the IRA for absolute return hedge funds, high-yield bonds, Treasury Inflation-Protected Securities, actively managed equity mutual funds, or other assets that are less tax-friendly than MLPs. MLPs can cause IRAs to face a tax liability stemming from unrelated business taxable income (UBTI), which is unfamiliar to most individual taxpayers but is the bane of some nonprofits, both for its economic cost and its administrative complexity.<sup>12</sup> IRAs that receive more than \$1,000 in UBTI in a year (which could easily result from holding \$80,000 worth of MLP units or even less) are subject to preparing tax returns and paying unrelated business income tax (UBIT).

In that same vein, families looking to transfer assets to a family foundation or other charity should think long and hard before transferring MLP units to the foundation. The benefits of donating MLP units to charity are fewer than with highly appreciated stock, because the transfer triggers the recapture of the deferred taxes. Additionally, some nonprofits will find the presence of MLPs to be more of a burden than a benefit, because they generate UBTI that can increase the cost of tax compliance. Some investment vehicles eliminate UBTI issues. Most of those do so by paying corporate income tax, which makes MLPs palatable for IRAs and foundations that are averse to generating UBTI, but eliminates some of the economic benefit of the

<sup>&</sup>lt;sup>10</sup> Tax practitioners reading our textual explanation or reviewing the exhibit will notice that we have not covered some nuances, in the interest of clarity. We do not believe these nuances are critical to understanding the investment characteristics of the asset class, but they are certainly important for the purposes of complying with tax law. We reiterate that investors seeking to invest in MLPs should seek the counsel of a tax expert. <sup>11</sup> Some states do not require investors to file when the income in that state is *de minimis*.

<sup>&</sup>lt;sup>12</sup> For nonprofit institutions, UBTI can stem from business activities that are not related to the institution's tax-exempt core function (for example, rental income for an office building owned by a university and rented to businesses unaffiliated with the university). MLPs generate UBTI for nonprofits as well as within IRA accounts.

MLP structure. More information on investment vehicles is available later in this section.

**MLPs for Tax-Exempt Investors.** The MLP tax characteristics that appeal to taxable investors may actually conspire to make MLPs *less appealing* to tax-exempt investors, although some nonprofit investors may find that the negative tax consequences of owning MLPs are outweighed by their high yield and reasonable growth prospects.<sup>13</sup>

The nonprofit institution owning MLPs is subject to complex and somewhat controversial tax rules that will increase costs (both the modest actual tax liability stemming from UBTI and the cost of preparing tax returns). Some nonprofits will conclude that generation of UBTI is a deal breaker, while others (particularly institutions that already pay UBIT because of other investments or operations) may not find the MLP's production of UBTI to be particularly burdensome or costly.

Nonprofits should review the tax treatment of MLPs for taxable investors that we include above; the tax treatment for nonprofits contains more similarities than differences to that of taxable investors. For nonprofits that own MLP units, taxable income generally is about 20% as large as the distribution yield, as much of the MLP's income is typically shielded from tax because of large DD&A expenses. The nonprofit pays 35% income tax each year on the amount of income that is unshielded by DD&A (again, this taxable amount is roughly 20% the size of the distribution in many cases). The similarities with the individual's tax treatment end there. When the nonprofit sells MLP units, it is not subject to capital gains tax on the difference between the sales price and the original purchase price (individuals do pay capital gains tax on that difference). Another key potential difference stems from the recapture of deferred taxes at the time

of sale. Recall that individuals that sell units must pay tax on the income that had been deferred over their holding period (by the DD&A tax shield). Whether nonprofits are subject to that same recapture of previously deferred income is a source of some discussion among practitioners and the industry, but assuming nonprofits will not face recapture, then the actual tax impact of generating UBTI should be fairly modest.<sup>14</sup> If 80% of the MLP portfolio's distributions were shielded, the annual UBIT drag on a portfolio yielding 6% would be only about 40 basis points (bps).<sup>15</sup> The tax preparation costs are hard to generalize but constitute an additional drag, certainly.

Earlier we mentioned that the tax-friendly nature of MLPs for individuals is a bit of a curse for nonprofits. An explanation is in order. With any asset that has favorable tax characteristics, taxable investors may bid up prices (thus pushing down future pre-tax returns) because of the product's tax-related appeal. The best example of this is municipal bonds. Municipalities historically have paid lower bond yields than private companies (and often the federal government), because the favorable tax characteristics of municipal bonds attract investors, and those investors are willing to give up a little pre-tax yield because their after-tax yield is better than that of corporate or Treasury bonds.<sup>16</sup> In the same way, MLPs would probably be much cheaper today if their yields were fully taxable during the year of receipt.

<sup>&</sup>lt;sup>13</sup>This section refers to nonprofits such as U.S. endowments and foundations.

<sup>&</sup>lt;sup>14</sup>Tax practitioners associated with MLP investment managers Harvest Fund Advisors and Tortoise Capital Advisors, as well as the MLP industry trade association (National Association of Publicly Traded Partnerships), have opined that nonprofits are not subject to recapture, but a handful of tax practitioners believe they are. <sup>15</sup> If 20% of the 6% yield is taxable at a 35% rate, that equates to 20%\*6%\*35% = 0.42%.

<sup>&</sup>lt;sup>16</sup> And for that reason, the pre-tax return of municipal bonds has lagged the pre-tax return of Treasury bonds over time.

All things equal, MLPs should deliver higher after-tax returns to nonprofit institutions in the long run than they will to taxable private investors.<sup>17</sup>

However, nonprofits have access to a range of yield-oriented investments that do not have tax consequences, whereas the yielding universe is narrower for tax-conscious investors. When nonprofits assess the risk/return prospects of MLPs versus other potential investments, they should incorporate generation of UBTI into their assessment.

**MLPs for Non-U.S. Investors.** While there is no prohibition for non-U.S. investors investing in MLPs, these investors are subject to withholding tax associated with the Foreign Investment in Real Property Tax Act, limiting non-U.S. investors' attraction to MLPs. Some non-U.S. investors have used swaps to gain exposure to MLPs. Swap contracts expose the investor to counterparty risks; investors can reduce but not eliminate counterparty risk via a well-crafted Credit Support Annex to their ISDA agreement, mandating the terms of collateral posting.<sup>18</sup>

#### Quantifying and Describing the Historical Returns and Volatility of MLPs

Since the inception of the Wells Fargo MLP Index in 1990, MLP returns have been attractive, though investors of course cannot purchase historical returns. Since inception (Exhibit 13), MLPs have returned an annualized 16.1%, trouncing REIT returns (10.9% annualized), and those of both utility stocks (7.1%) and the S&P 500 (8.5%). MLP total returns have historically been a bit less volatile than REITs, utility shares, and the S&P 500 as well. In 1998 and 1999, MLPs (and other income-oriented investments) severely underperformed the S&P 500 as investors bid up technology shares. From 2000 through 2002, however, MLPs opened a three-digit cumulative performance gap versus the S&P 500, doubling over those three years, while the S&P dropped 38%.<sup>19</sup> For the full 1990-2010 period, MLP prices compounded at 7.6% annually (moderately higher than distribution growth) while MLP distribution income compounded at 9.0% (Exhibit 14).

While the majority of MLPs are focused on "midstream" energy activities, the industry is broader than that, and returns can vary significantly from one segment to the next. Exhibit 15 shows the 2008 and 2009 returns for selected subindices of the Wells Fargo MLP Index. As you would expect, general partners (GPs) (which are leveraged to limited partners' [LPs] cash flow growth), upstream assets, and marine shipping MLPs were sectors that experienced high volatility during the period, with sharp 2008 falls and similarly sharp 2009 rebounds.

#### Strong Historical Returns Stem from Hefty Yields and Steady Distribution Growth.

From 1990 to 2010, the Wells Fargo index has returned an annualized 16.4%. As Exhibit 14 illustrates, distribution income generated about half of this remarkably strong return, while the rest came from growth in unit prices (which in turn have been supported over the long term by distribution growth). Distribution growth has been reasonably consistent and well in excess of inflation, as shown in Exhibits 16 and 17. Manager and sell-side expectations for near-term

<sup>&</sup>lt;sup>17</sup>This is partly because the individual is subject to capital gains tax on any increase in unit price, while the nonprofit is not. Additionally, many practitioners argue that nonprofits are not subject to the recapture of previously deferred income tax when they sell units, unlike individuals.

<sup>&</sup>lt;sup>18</sup> "ISDA" is the shorthand name for an ISDA Master Agreement, which is a standardized derivatives contract spelling out terms for both of the swap counterparties pioneered by the International Swaps and Derivatives Association.

<sup>&</sup>lt;sup>19</sup> Refers to total returns including reinvested distributions/dividends.

distribution growth are slightly lower than the historical averages depicted in these exhibits. While distribution growth averaged 5.7% from 1998 to 2010, Morgan Stanley expects that 2011 and 2012 growth will clock in at 5.1% and 5.5%, respectively. Wells Fargo plugs in 4.8% and 6.3%, respectively for 2011 and 2012, and MLP equity manager Tortoise anticipates near-term distribution growth in the range of 3% to 5%.<sup>20</sup> We make the case for continued distribution growth in **Section III**, while the end of this section outlines risk factors (some of which might hamper the future distribution growth that has supported historical returns and that is baked in to current share prices).

MLP Returns Move to Their Own Beat; Not an Ideal Inflation Hedge. MLPs have offered a meaningful degree of diversification relative to both broad equities and energy equities. Since 1991, MLPs have exhibited a 36% correlation for the full period with the S&P 500 Index and a 41% correlation with the Wilshire 5000 Energy Index (Exhibit 18). MLPs have been more highly correlated to high-yield bonds, exhibiting a 55% correlation, given the asset class's relatively low credit quality and continued reliance on capital markets for expansion. While the cash flows of some MLP types are sensitive to commodity prices, the midstream pipeline operators that make up the majority of the indices generally are not, and since 1991, MLP returns have only exhibited a 30% correlation with the Dow Jones-UBS Commodities Index. Correlations of MLP returns to crude oil and natural gas prices have been even lower.

The flipside of MLPs' fairly low correlation with commodities is that they are not expected to be a reliable hedge against unanticipated infla-

tion, despite claims to the contrary by some in the industry, and despite some structural links of MLP cash flows to inflation. The regulated tariff rates that determine pipeline fees for many MLPs are partially indexed to the Producer Price Index so there is some alignment of MLP cash flows with inflation. This is partially offset by the historical negative sensitivity of MLP share prices to rising interest rates, which likely stems from the impact on relative valuations of an income-oriented investment when bond yields rise, and on the dependence of MLPs on debt financing. We believe that MLP total returns will likely outpace inflation over the long term, but this is true of a great many assets. The return of assets chosen to defend against inflationary bouts should accelerate during periods of unanticipated inflation, and there is little reason to believe that MLP returns will do that. Since 1990, MLPs have exhibited no correlation to inflation, nor any degree of inflation beta (Exhibit 19).<sup>21</sup>

Volatility Has Been Substantial. Over the past ten years, the volatility of MLPs has been similar to that of utility shares and to indices of highdividend equities, but has remained substantially below that of REITs (Exhibit 20). The annualized standard deviation of the Wells Fargo MLP Index over the past ten years has been 16.5%, versus 16.3% for both the S&P Utilities and the Dow Jones U.S. Select Dividend Index (REIT volatility was 25.1% over the period). Among the factors that have contributed to the sector's volatility: MLPs are concentrated in the pipeline sector, they are dependent on access to the capital markets for their continued growth, and they have substantial balance sheet leverage. On the other hand, the MLP sector's history of consis-

<sup>&</sup>lt;sup>20</sup>While the three firms' distribution-growth estimates refer to their own coverage universe, rather than to the full MLP industry, we believe that their coverage universes are generally representative of the entire MLP industry.

<sup>&</sup>lt;sup>21</sup> The correlation and inflation beta calculations presented in the exhibit use rolling 12-month returns and rolling 12-month CPI. This methodology helps to minimize potential distortions arising from leads or lags in the timing of an asset's response to (or influence on) changes in CPI. It is consistent with the approach used in our September 2010 Market Commentary *The Right Time for Natural Resources Equities?* 

tently high distributions has helped to moderate volatility somewhat.

MLPs suffered sharply negative returns in 2008, along with all other risk assets. The Alerian index returned -36.9%, almost identical to the -37.0% return of the S&P 500. The months of September and November 2008 both saw returns of about -17% as waves of forced selling by leveraged investors swept the sector. Leveraged investors built MLP positions in the mid to late 2000s, as several MLP-centric closed-end funds launched, and as hedge funds entered into total return swaps allowing them to control large positions with relatively small equity commitments resulting in 5 to 10 times leverage. Some of the hedge funds with total return swaps were forced to sell to meet collateral requirements and investor redemptions in late 2008. In addition, closed-end funds are typically 25% to 40% leveraged and face regulatory limits that cap their leverage level; forced selling by these funds was another significant contributor to the vicious circle of deleveraging that pummeled MLP prices in late 2008.

Many Types of Investment Vehicles Offer MLP Exposure; Some Are Untested. A wide variety of investment vehicles are available to investors seeking MLP exposure. Among these are separately managed accounts, three types of exchange-traded products, a new line of mutual funds, and swaps. Fortunately, families and institutions can simplify the list of options by eliminating several types of vehicles from consideration.

Separately managed accounts. Separate accounts are likely to be the MLP vehicle of choice for most taxable investors, and for many institutions that do not find the asset class's inherent UBIT exposure and related accounting burden to be onerous. Separate accounts help taxable investors take advantage of the asset class's tax benefits. They are the most common vehicle for active MLP managers as well, so nonprofits that are not UBTI averse may also gravitate to separate accounts. Fees vary, but 75 bps to 100 bps is typical. Many managers hold 20 to 40 names, often with meaningful underweights to the large firms that command huge allocations within the MLP indices. Some institutional investors may be surprised to learn that minimum investments are much lower than is typical for broad equity managers. At least one manager that we know of has launched a commingled vehicle that preserves the basic tax characteristics of the investment while streamlining the accounting somewhat by sending out one consolidated K-1.

Exchange-Traded Funds, Mutual Funds, and Closed-End Funds. The recently created MLP exchange-traded fund (ETF),<sup>22</sup> the wide variety of closed-end funds that have offered MLP exposure for several years, and the new dedicated MLP mutual funds<sup>23</sup> all have very limited appeal in our opinion. The appeal of these products is that they remove the tax complexity, providing investors with a 1099 tax form rather than with K-1s. They also do not impose UBIT bills on nonprofits. But the way in which they do this is not magic; they simply pay the tax at corporate rates, rather than the shareholder paying UBIT! Add in high fees across the board (these products are largely targeted at small-balance retail investors for use in retirement accounts) and these are a recipe for slow-drip disappointment.<sup>24</sup>

<sup>&</sup>lt;sup>22</sup> Ticker symbol AMLP.

<sup>&</sup>lt;sup>23</sup>The open-end fund universe includes a suite of funds managed by SteelPath (an asset-management spin-off of MLP index provider Alerian).

<sup>&</sup>lt;sup>24</sup>Some promoters of these products advance the claim that they will outperform the indices in a downturn, because they will generate beneficial tax losses. This is certainly possible, but investors expecting near-term downturns that would offset the disadvantages of these products should rethink the decision to invest in MLPs in the first place. Investments that limit "downside capture" versus an index are appealing if they can compound at a higher rate than the index. But structures with high structural tax headwinds and large fees are

Exchange-Traded Notes and Swaps. Exchange-traded notes (ETNs)<sup>25</sup> and swap-based products have considerable drawbacks, but are appealing to certain types of investors (particularly to taxexempt investors for whom generating UBTI is anathema). They avoid exposing nonprofit investors (and IRAs) to UBIT, and unlike mutual funds and ETFs, they do it without paying corporate income tax. The ETNs, most of which were launched in 2009 and 2010, are essentially corporate bonds that pay MLP index returns (minus a fee) at maturity. Unlike other corporate bonds, the notes have a ticker symbol and trade on exchanges just like a stock or an ETF. The J.P. Morgan Alerian MLP Index ETN, for example, trades an average of about \$60 million worth of shares each day, and larger trades could be accommodated as well, subject to the liquidity of the MLPs upon which the product is based.<sup>26</sup>

Counterparty risk is a key concern for ETN investors; if the issuing bank goes bankrupt, the investor is obviously less likely to receive the security's full payment at maturity. ETNs typically offer an early redemption feature that can limit the counterparty risk somewhat (weekly redemption rights for large blocks of notes can limit the risk from a slow and visible descent into bankruptcy, but would offer less protection from some of the well-publicized bank failures and near-failures of recent years). Few investors would have a large enough block of any particular product to participate in an early redemption (\$50 million in any given product is typically the cutoff), so they would be dependent on large investors engaging in arbitrage to keep

unlikely to be able to match index returns over the long term. Closed-end funds have the additional drawback of leverage and of varying discounts to net asset value. <sup>25</sup> Ticker symbols include AMJ, MLPI, and MLPN. <sup>26</sup> Large blocks of additional shares of the ETN can be created or redeemed to accommodate large trades, with the market impact of these trades related to the ability to buy and sell the MLPs themselves. This is true even though the ETN is a bond and does not have any actual underlying MLP units. ETN prices reasonably close to net asset value in the event of creditworthiness concerns. This is clearly a process that can and may break down. Investors considering ETNs should limit their exposure to any individual counterparty.

Fees are high at roughly 80 bps for year, and only passive exposure is possible (there are no actively managed ETNs). Because the notes pay out the index return less fees, tracking error should generally not be a problem with ETNs, absent specific counterparty concerns.<sup>27</sup> Total return swaps (commonly referred to as simply "swaps" or "TRS") offer similar UBIT-sheltering benefits and counterparty risks as ETNs. Swaps are contracts that an investor has with a counterparty (typically a large bank) to deliver the total return of particular MLPs. Active managers can buy baskets of swaps for nonprofit investors, replicating the economic exposure of actually owning the underlying MLPs, but without generating UBTI.<sup>28</sup> Swaps have significant fees as well.

Long/Short Hedge Funds. Some MLP equity managers run long/short hedge funds focused on MLPs. While in concept this could be promising, in practice we have not seen firms that we believe can add value on both the long and the short side. Most firms seem to devote their fundamental research to the long side (i.e., looking for MLPs that they believe will outperform), while using the short side of the book primarily to hedge broad equity risk and/or interest rate risk. In exchange for high fees that tend to accompany

<sup>&</sup>lt;sup>27</sup> However, if liquidity in the MLP market severely deteriorated, it is possible that ETNs and ETFs could trade at noteworthy premiums or discounts. Municipal bond ETFs have faced this problem, because they are much more easily traded than their underlying bonds. Currently, MLP liquidity is fairly strong, allowing a smoothly functioning arbitrage process to minimize premiums or discounts.

<sup>&</sup>lt;sup>28</sup> The UBIT treatment of swaps has not been thoroughly tested. Investors should seek out qualified tax counsel, and even then should be aware that the playing field can change at any time.
long/short hedge fund structures, we much prefer to see firms adding fundamental value on both the long and short side of their books. For investors desiring MLP exposure with less equity beta, using equity-index hedges would avoid the payment of high management fees and 20% incentive fees.

#### **Risks Are Wide Ranging**

While MLPs offer a number of attractive features, the asset class is certainly not without risk. We briefly spell out here what we believe to be the key uncertainties and risks to the asset class.

#### Unfavorable Taxation or Regulatory

**Changes.** MLPs are a creature of the tax code, and just as tax-law changes gave birth to the asset class in the 1980s, future tax law changes could kill the asset class. We do not believe any such changes are under serious consideration, but tax laws are unpredictable (for example, the December 2010 compromise extension of the Bush tax cuts, which many observers did not anticipate prior to the November elections). A large element of the appeal to the key MLP shareholder base of individual investors is the ability to defer taxes on distributions; any effort to limit or eliminate that feature could have a sharply negative impact on unit prices (just as municipal bonds would suffer if their yields were suddenly subject to income tax). Also, MLPs do not pay corporate income tax, giving them the ability to pay more for assets than a taxpaying corporation and still deliver a handsome return; any attempt to tax MLP income at the partnership level would have a deleterious impact on the operations, distributions, and unit price of MLPs. Conversely, any move to expand MLP tax benefits to other areas in which the government is encouraging investment (such as "smart" electrical grids) may have unpredictable impacts. The newly tax-blessed firms would compete with existing MLPs for capital, but they would also

provide investors opportunities for additional diversification.

Tax changes are not the only ways in which Washington could kill or maim the MLP golden goose. Potential regulatory changes (most of which have not been floated) create risks for investors in any asset class, but particularly in MLPs. Changes in the tariff structure by the Federal Energy Regulatory Commission (or by local or regional regulatory commissions in some cases) would affect cash-flow generation for MLPs. These regulatory bodies mediate in cases where an MLP applies to raise its rates. Finally, environmental regulation is a threat to the development of non-traditional natural gas fields. Extraction of natural gas from shale formations such as the Marcellus and Haynesville formations is highly dependent on unconventional drilling techniques that have been perfected recently, and that have come under some fire from environmental and community groups. Rather than relying on traditional vertical drilling, gas in some formations is more efficiently removed by drilling horizontally through the formation and using fluid under pressure to fracture the rock, releasing the gas. This process, colloquially called "fracking," injects trade-secret combinations of proprietary drilling fluids, likely including unhealthy solvents, into shale formations at high pressures.<sup>29</sup> Without the ability to frack, some shale gas plays would be uneconomical at current prices for natural gas, so continued regulatory support for advanced drilling techniques is critical for the MLPs that own assets supporting those shale plays. While the current administration appears to favor the expansion of relatively clean natural gas as an energy source,

<sup>&</sup>lt;sup>29</sup> This process generally occurs far below aquifers, but residents in some communities near drilling activities have complained of well contamination. In addition, the process leaves drillers with large quantities of toxic wastewater contaminated by salts, solvents, and radiation; disposal practices for this wastewater are evolving and controversial.

making aggressive regulatory initiatives from the Environmental Protection Agency less likely, MLP investors must remained attuned to the regulatory environment. If natural gas production were to be sharply curtailed due to new regulatory constraints, some MLPs would essentially own highways to nowhere.

Leverage and Ongoing Need to Access Capital Markets. Because MLPs generally pay out the vast majority of their operating cash flow as distributions, their ability to grow their operations (both organically and via acquisitions) is highly dependent on tapping the debt and equity markets, and MLPs tend to borrow heavily to purchase assets. A dislocation in these markets could reduce a partnership's ability to grow (and possibly even to pay) distributions, because projects would become more expensive.

In 2008 and early 2009, as the financial crisis was well underway, a number of MLPs with investmentgrade credit ratings were able to attract new equity and debt capital, but junk-rated MLPs had a considerably harder time. Wells Fargo tracked high-yield debt offerings by MLPs in 2008, noting a drought of speculative-grade debt offerings from August 2008 through year-end. Investment-grade offerings occurred throughout 2008, including four during the very tumultuous fourth quarter. Non-investment-grade MLPs relied on revolving credit facilities for funding during the crisis.

Equity offerings are also common, because MLPs have been able to put new equity capital to work in projects that are accretive to assets (as a reminder, their lack of corporate income tax helps them compete effectively versus traditional C-corporations). These equity offerings have taken the form of initial public offerings (such as for GP MLPs—the \$2.9 billion 2011 offering of Kinder Morgan, Inc.), secondary offerings, and PIPE (private investment in public equity) transactions. Exhibit 21, which lays out the recent history of capital market and merger & acquisition activity for MLPs, illustrates that the sector's ability to raise equity and debt capital and complete transactions has been reasonably consistent, particularly given the unsettled nature of markets from mid-2007 through mid-2009.

Like REITs, MLPs tend to carry significant debt loads. Total debt to capital remained below that of REITs during the past decade, but well above other non-financial companies (Exhibit 22). The debt-to-equity ratio of the Alerian MLP Index ended 2010 at 90.9%, somewhat lower than its historical average, but more than twice the level of the Russell 3000® ex Financials Index (Exhibit 23). A sharp decline in natural gas use would make it difficult for some MLPs to service their debt loads, while a prolonged credit crunch could make debt rollovers tricky for other MLPs. That said, we believe that MLPs were less impacted by credit concerns than REITs during 2008–09. Midstream MLP cash flow sources have historically been somewhat more reliable in an economic downturn than shopping mall or office tenants.

Interest Rates. Rising interest rates can be detrimental to MLPs in several ways. First, MLPs must continually access debt markets to grow, as previously mentioned; rising interest expense can push down distributions or force the MLP to pursue higher risk/return projects. Second, given the detrimental impact of a higher cost of capital on the ability of MLPs to acquire or build new assets, the tax "shield" of an MLP may decline more quickly in an elevated interest rate environment than it otherwise would. Finally, many investors view MLPs as an income investment; higher bond yields mean that MLP yields have more competition for investors and that can push down MLP prices to make distribution yields competitive in a newly high-yielding world. Exhibit 24 illustrates the historical performance

of MLPs during periods of rising interest rates, but it is important to remember that the history of the MLP industry so far has been written in a falling-rate secular environment. However, during the short bouts of rising interest rates, MLP unit prices often fell, then fairly quickly recovered.

**Deflationary Environment.** In a sustained environment of falling consumption and low or negative economic growth, industrial energy demand could erode, ultimately having a negative impact on MLP volumes. However, on a long-term basis, population growth and utility demand for cleaner-burning fuels should support long-term growth in natural gas production and consumption.

**Increased Efficiency.** An increase in the efficiency of building heating systems or industrial uses that resulted in falling consumption of natural gas would be a negative for pipeline companies. The efficiency of residential gas furnaces was typically about 65% in the early 1970s, while tax credits in 2009 and 2010 incented many consumers to install furnaces with 95% or greater efficiency. Given the high efficiency levels available today, however, a sharp further increase in efficiency seems unlikely. Similarly, wide-scale shifts to renewable heating sources such as geothermal would be a negative for MLPs, but these are unlikely to occur in the absence of large tax incentives.

#### Universe Size, Concentration, and Liquidity.

The MLP universe is growing, but relative to other major asset classes, it is still small in aggregate. Populated by relatively few entities, the impact of the few largest MLPs is disproportionately high. The five largest MLPs represent 36.3% of one of the major indices (Exhibit 2) with a significant number of small- to mid-cap MLPs in the sector. Liquidity is growing as the market increases in size, but the MLP sector is not yet a diversified and highly liquid market, as was evident in late 2008 when deleveraging, high volumes of investor redemptions, and unwinding of hedge funds' total return swaps caused a dramatic decline in the MLP market. Most hedge funds subsequently exited the MLP market, but their impact on the MLP market in 2008 was material.

Commodity Prices. Some MLPs, particularly those in the gathering and processing (G&P) or upstream sectors, have significant exposure to fluctuations in commodity prices or frack spreads. Weaker-than-expected commodity prices over the long term would hurt the cash flows of G&P and upstream MLPs. Investors need to distinguish between midstream-focused MLPs, which exhibit only indirect long-term commodity sensitivity, and upstream-focused MLPs, which exhibit greater direct commodity sensitivity. Given the midstream sector's large weight in the MLP universe, MLP returns are less dependent on rising commodity prices than other energyrelated equity sectors. As Exhibit 25 highlights, the energy MLP universe has performed somewhat better during periods of rising oil and natural gas prices than during other periods, but the differential is much smaller than for conventional energy equities.

What impact might sustained low prices for natural gas have on the midstream MLP sectors that are generally less sensitive to commodity prices? It is far from certain. Sustained lower prices *should* boost volumes of natural gas through pipelines, as utilities and other users begin increasing their use of comparatively cheap natural gas, substituting it for other fuel sources such as coal. However, if sustained low prices made certain natural gas production operations unprofitable, their operators may shutter those unprofitable facilities. MLPs supplying infrastructure to facilities that are marginally profitable at (for example) a \$4.30 wellhead natural gas price may find themselves without gas to ship if low gas prices encouraged the operator to shut down production at that site. According to a recent study by energy and metal industry research and consulting firm Wood Mackenzie, 40% of the natural gas produced in the United States last year didn't meet its producers' break-even price threshold. The answer also depends on the relative pricing of natural gas liquids such as butane and ethane versus the price of natural gas. If the prices of natural gas liquids remain relatively high, gas drilling would likely still continue apace.

Dependence on Pipeline Volumes. Although cash flow generation is not typically tied to commodity prices, the overall commodity price environment will affect aggregate demand for MLP throughput. It is possible that sustained high prices for crude oil and/or refined products would incite demand destruction, which would lower volumes shipped through pipelines. Sustained supply disruptions due to major prolonged environmental or terrorist incidents could lower volume, and hence cash flows. Demand patterns might also change if alternative renewable energy sources displaced the more traditional energy sources over time.

**Conflicts of Interest.** The competing interests of GPs (to increase distributions and achieve higher income splits) and LPs (to achieve long-term sustainable growth) may create frictions. The recent trend of GP/LP mergers helps alleviate this risk somewhat.





Notes: This exhibit is intended for illustrative purposes only. Those seeking to invest in MLPs should seek the counsel of a tax expert. \* Using 2010 rates.

## Exhibit 13 **Cumulative Wealth of Master Limited Partnerships Versus Other Asset Classes**

January 1, 1990 – July 31, 2011 • U.S. Dollar • December 31, 1989 = \$100



Sources: Barclays Capital, Bloomberg L.P., FactSet Research Systems, FTSE International Limited, National Association of Real Estate Investment Trusts, Standard & Poor's, Thomson Datastream, and Wells Fargo Securities, LLC.

Notes: Recession periods are shown in gray bars and use periods determined by the National Bureau of Economic Research. Data are monthly.

#### Exhibit 14 Components of Total Return: Wells Fargo MLP Index 1990–2011



Average Annual Compound	Return	Annualized Standard Devia	Annualized Standard Deviation				
Price Return:	7.4	Price Return:	14.3				
Income Return:	8.2	Income Return:	2.0				
Total Return:	16.1	Total Return:	14.8				

Sources: Bloomberg L.P. and Wells Fargo Securities, LLC. Note: Data for 2011 are through July.

### Exhibit 15 Performance of Wells Fargo MLP Subindices During 2008 Deleveraging and 2009 Rebound



Sources: Standard & Poor's and Wells Fargo Securities, Inc.

#### Exhibit 16 Annual Median Wells Fargo MLP Index Distribution Growth Rate and Inflation 1998–2012



Sources: Standard & Poor's, Thomson Datastream, and Wells Fargo Securities, LLC.

Notes: Distribution growth is median figure for all master limited partnerships, including those that have reduced distributions. Figures represent declared distributions paid out to common unitholders. CPI-U data for 2011 represent year-over-year change through July. Distribution growth data for 2011 and 2012 are estimates.

Exhibit 17 Annual MLP Index Distribution Growth and U.S. Inflation



Sources: Alerian and Thomson Datastream.

Notes: Distribution growth data on a per unit basis. Ten largest master limited partnerships determined using float-adjusted market capitalization figures.

\* ETP distribution growth of 43% for 2006 has been omitted from graph.

## Exhibit 18 Correlation of the Wells Fargo MLP Index With Other Asset Classes

January 31, 1990 - July 31, 2011



Sources: Barclays Capital, Bloomberg, L.P., Standard & Poor's, Thomson Datastream, Wells Fargo Securities, LLC, and Wilshire Associates, Inc. Note: Analysis based on rolling 36-month returns with data beginning January 1990 through present.

## Exhibit 19 Correlation With Inflation

January 31, 1990 – July 31, 2011



Sources: Bloomberg L.P., Standard & Poor's, Thomson Datastream, U.S. Department of Labor - Bureau of Labor Statistics, Wells Fargo Securities, LLC, and Wilshire Associates. Note: Graphs use rolling 36-month correlation and beta figures calculated based on rolling 12-month returns from January 1990 through July 2011.

#### Exhibit 20 Comparison of Wells Fargo MLP Index and Other Asset Classes As of July 31, 2011



#### Exhibit 20 (continued) Comparison of Wells Fargo MLP Index and Other Asset Classes August 1, 2006 – July 31, 2011



Sources: Barclays Capital, Bloomberg, L.P., Dow Jones & Company, Inc., FactSet Research Systems, FTSE International Limited, National Association of Real Estate Investment Trusts, Standard & Poor's, Thomson Datastream, and Wells Fargo Securities, LLC.

Notes: Size of bubble reflects index market capitalization. Market capitalizations are as of July 31, 2011. All data are monthly.

#### Exhibit 21 Capital Market and Merger & Acquisition Activity for Master Limited Partnerships 2005–11



Sources: Kayne Anderson, UBS Investment Bank, and Vinson & Elkins. Note: PIPE is the abbreviation for private investment in public equity. \* Through April.

#### Exhibit 22 Median Total Debt to Capital Ratio: Alerian MLP Index, Russell 3000® Index ex Financials and FTSE® NAREIT All Equity REITs Index 1999–2010



Sources: Alerian, FactSet Research Systems, and Frank Russell Company.

#### Exhibit 23 Median Total Debt to Equity Ratio: Alerian MLP Index and Russell 3000® Index ex Financials 1999–2010



Sources: Alerian, FactSet Research Systems, and Frank Russell Company.

## Exhibit 24 Wells Fargo MLP Index and Russell 3000® Index:

Returns During Six-Month Ten-Year Treasury Yield Increases of 50 Basis Points or More

January 31, 1990 - July 31, 2011



Sources: Frank Russell Company, Standard & Poor's, Thomson Datastream, and Wells Fargo Securities, LLC.

Notes: Criteria based on a six-month increase of the ten-year U.S. Treasury yield of 50 basis points or more. In an overlapping six-month series, first period was used. Periods shown are six months ending May 1990, May 1992, February 1994, September 1994, April 1996, March 1997, February 1999, December 1999, March 2002, July 2003, July 2004, October 2005, April 2006, May 2009, and January 2011. January 2011 data shown in bottom graph, but are not included in calculation for average returns as subsequent return period is not yet complete.

#### Exhibit 25 Wells Fargo MLP Index and Wilshire 5000 Energy Index: Returns During Six-Month Periods of Oil & Gas Price Increases of 50% or More

January 31, 1990 – July 31, 2011



Sources: Cambridge Associates LLC, Standard & Poor's, Thomson Datastream, Wells Fargo Securities, LLC, and Wilshire Associates, Inc. Notes: Criteria based on a six-month 50% increase in Cambridge Associates 50% Oil/50% Gas Index. In an overlapping six-month series, first period was used. Periods shown are six months ending November 1990, January 1996, July 1999, May 2000, December 2000, March 2002, January 2003, August 2005, March 2007, February 2008, and February 2010.

## Valuations Somewhat Tricky to Assess Robustly

Master limited partnerships (MLPs) are equities, but their distinct tax treatment renders some of the more traditional valuation metrics useless. Net income (earnings) is the backbone of the equity valuation metrics upon which we are most reliant, such as the Shiller price-earnings (P/E) ratio and the return on equity–adjusted P/E. But with MLPs, GAAP-calculated earnings are structurally understated and distorted due to massive tax shields including depreciation, so P/E metrics are not meaningful. Book value multiples are also not necessarily meaningful, because of the impact of depreciation.<sup>30</sup>

Retail investors active in the MLP space have historically focused on distribution yields. Despite the impression that they are overly simplistic valuation metrics, we believe that yields are very meaningful for MLPs, because unlike corporate managers, MLPs generally must pay out all of their available cash to unitholders. Trailing distribution yields are available for historical periods and do not require sell-side estimates. Typically, higher-risk MLPs (such as those with commodity price sensitivity) trade at higher yields, while lower risk MLPs and those with stronger distribution-growth prospects (including general partners [GPs]) trade at lower yields. A limitation of using distribution yields is that they are backward-looking. However, unlike trailing 12-month P/E ratios for traditional equities, distribution yields are less likely to be heavily managed by the firm, nor are they typically distorted by restructuring charges, lossreserve releases, and other transitory impacts.

<sup>30</sup> While pipelines are depreciated over 35 years, they may last far longer if properly maintained, so book values may not be closely linked to the value of the company's assets. In valuing individual MLPs, MLP managers may use forward yields, forward price-to-distributable cash flow (basically the inverse of the yield), or a multi-stage distribution discount model. The accuracy of growth assumptions is critical to these metrics, and they are generally not available on an industry-wide basis to assess the overall MLP market.

Given the high debt levels of many MLPs, EV/ EBITDA can be another useful metric. This metric divides the enterprise value (EV, the partnership's total capital base including equity and debt) by the most recent earnings before interest, taxes, depreciation, and amortization, or EBITDA. Price-to-EBITDA is another useful metric, which focuses on the value of the equity in relation to cash flow. One advantage of EBITDA metrics over distributable cash flow is that EBITDA is widely available from financial data vendors and does not depend on assumptions of future growth. One disadvantage is that EBITDA does not include the impact of interest expense or the GP's revenue split-two significant costs that directly impact the yield that investors receive. It is also backward-looking, which could have the effect of making MLPs look cheap during periods when distribution growth is about to downshift, or making them look rich before distribution growth accelerates.

## Current Valuations Appear Somewhat Rich

A significant pickup in investor interest in recent years has combined with strong demand for yield to push up prices of MLPs, and valuations appear somewhat rich. The distribution yield of the Alerian MLP Index was 6.7% as of September 9, 2011, which is moderately lower than the 7.2% average yield over the past ten years (Exhibits 26 and 27). For the yield to increase to its ten-year average level (assuming no change in the cash distribution), share prices would need to decrease by 6.6%.

Valuations are also rich according to EBITDA multiples. The Alerian index's median price-to-EBITDA multiple ended 2010 at an all-time high of 10.9, versus an average of 7.4 since 1995, while the median EV/EBITDA (which includes both debt and equity in the numerator) is also elevated (Exhibit 28). Morgan Stanley publishes forward estimates of price-to-discounted cash flow and of EV/EBITDA and both are about 1 standard deviation higher than their mean level (note that the history of both metrics—since late 2005 and early 2006, respectively—is quite short).

Distribution growth estimates are of course not completely uniform, but Wells Fargo projects growth rates of around 5% over the next two years, while Morgan Stanley forecasts 2011 growth of 5.1% and 2012 growth of 5.5%.

While current yields and expected growth are *both* on the low side versus the (fairly short) history of the asset class, interest rates are also considerably lower, and relative yield metrics are instructive (since MLPs compete with other income-oriented instruments). MLP yield spreads over the very skimpy yield of the ten-year Treasury note, at 363 basis points (bps) as of July 31, 2011, were moderately above their historical average of 307 bps (Exhibit 29). MLP yields were also 238 bps above that of corporate bonds rated BBB, versus an average 130 bp yield premium.

While yield-based and EBITDA-based MLP valuations appear moderately elevated, we would caution that the asset class is relatively young, and we cannot say with certainty whether historical averages are representative of a future average level. The availability of appropriate industrywide valuation metrics is also far from robust.

Some observers believe that the widely anticipated embrace of institutional investors,

including pension funds, will bring structurally higher MLP valuations going forward. If this pans out, it would imply higher prices in the near term, but lower returns in the very long term, even for those that bought in at lower prices (for investors reinvesting their substantial distributions back into additional MLP units).

## MLP Growth Driven by Natural Gas Infrastructure Investments

Energy MLPs-and their cash distributionsgrow organically and via acquisitions (that is, by building or buying new assets). At an underlying level, the substantial investment in the infrastructure that supports the gathering, processing, and transportation of natural gas and other petroleum products has largely driven the asset and revenue growth of energy MLPs. Natural gas consumption is likely to continue expanding as population grows. In parallel with organic demand growth, natural gas is likely to continue to find political favor due to its lower greenhouse-gas emissions versus coal,<sup>31</sup> its suitability for use in electricity generation alongside inconsistent wind and solar power sources, and its energy-security benefits (because it is produced domestically).<sup>32</sup>

Old, legacy oil fields in the United States are ironically an additional source of growth, as firms use new drilling technology to exploit fields thought to be tapped out. MLPs provide important infrastructure to these projects, which will be feasible provided oil prices remain elevated. In fact, in April 2011, Baker Hughes reported that the number of U.S. oil rigs topped the number of gas rigs for the first time since 1995.

<sup>&</sup>lt;sup>31</sup> However, as mentioned in Section II in the description of MLP risks, natural gas production is not without environmental consequences. Extracting natural gas from unconventional deposits produces large amounts of toxic wastewater, for which disposal procedures are evolving and controversial.

<sup>&</sup>lt;sup>32</sup>The fact that U.S. natural gas production is scattered across many states, supporting high-paying jobs, doesn't hurt.

Further support for future MLP growth may also come from the need to build infrastructure to transport biofuels and other alternative energy sources, and from emerging technologies that lead to new locations for energy sources, necessitating the build out of transport facilities.

Asset acquisitions, an important source of growth, are below their peak levels but have rebounded sharply, as the cost of capital has declined amid investor demand for additional MLP equity and debt issuance. Wells Fargo reports that MLPs have spent \$53 billion on acquisitions in the past five years, with acquisitions peaking at \$17.6 billion in 2007; 2010 acquisitions of \$14.0 billion were below 2007 levels but were larger than 2008 and 2009 combined.<sup>33</sup>

The ability of tax-advantaged MLPs to take market share away from traditional corporations has also influenced MLP growth. By not having to pay taxes on income, MLPs have been able to pay higher prices for assets than C-corporation competitors and still deliver returns. Three broad categories-pipelines, gathering/processing/ fractionation, and upstream—accounted for 77% of all acquisition activity over the past five years (\$13.2 billion for pipeline assets, \$15.4 billion for gathering and processing assets, and \$11.7 billion for upstream assets). MLP acquisitions in those three categories were completed at average price multiples of 9.6, 9.2, and 6.2 times forward EBITDA, respectively, over the past five years.<sup>34</sup> Multiples of 9 times forward EBITDA would be considered rich for many other sectors of the economy that do not have MLPs' tax benefits, but high multiples have been par for the course for MLPs. That said, the acquisition environment has heated up over the past year as equity and

debt capital has washed back into the sector, and multiples have increased. In a January 2011 report Morgan Stanley noted the aggressive up-front valuations of recent acquisitions by MLPs, writing that "optimistic growth assumptions several years into the future [are] required to support the economics."

Since 2005, acquisitions have been partly fueled by "drop down" assets; these are assets sold by parent companies into affiliated MLPs to monetize part of their ownership interest while still maintaining upside (via the GP incentive distribution rights). MLPs can usually be spun out at a higher cash flow multiple than the parent company, which allows the parent to grow midstream assets through acquisitions at the MLP level at a lower cost of capital due to the tax pass-through status. Many parent companies also seek to completely divest midstream assets via an affiliated MLP and redeploy the proceeds in higher-growth activities such as exploration and production (reflecting the parent company's typically higher cost of capital). High barriers to entry due to significant initial capital costs and the ability to designate new rights of way create inherent advantages for existing MLPs or prospective "drop down" entities that have already established their businesses.

Industry estimates indicate that energy companies own approximately \$200 billion of existing assets that could be brought under an MLP umbrella; in addition to existing assets, an additional \$100 billion in new natural gas infrastructure investment is needed,<sup>35</sup> as well as nearly \$100 billion in crude oil and refined petroleum products processing, storage, and transportation infrastructure. Additional asset types that have begun to be included more recently in MLP

<sup>&</sup>lt;sup>33</sup> Acquisition totals and multiples for 2010 are as of November 2010.

<sup>&</sup>lt;sup>34</sup>The averages are weighted by the dollar value of transactions in a given year. For example, if a given year represented 30% of the five-year period's total transactions for the sector, then that year's multiple would be given a 30% weighting in calculating the average multiple.

<sup>&</sup>lt;sup>35</sup> A gas industry–sponsored study, which is quite optimistic on the electric power sector's long-term shift to natural gas (expecting a doubling of consumption in the next 25 years) anticipates a \$250 billion infrastructure spend to accommodate that growth.

structures include refineries, oil & gas wells, coal gasification, and liquefied natural gas (LNG) degasification facilities, which should expand the universe size. LNG degasification facilities are expected to expand significantly as natural gas liquefication and transport have become more economical, and a meaningful number of LNG regasification facilities are expected to be built in the future as LNG is increasingly imported to the United States from major production sites in Algeria, Indonesia, and Malaysia, with Africa, the Middle East, and Russia's export volumes growing, as U.S. demand for LNG grows.

While acquisition capital represented roughly 85% to 90% of all growth capital spending from 2000 to 2003, MLPs have increasingly pursued organic growth at the expense of acquisitions, and by 2009, organic growth accounted for 72% of growth capital spending. The emergence of natural gas shale plays, which require new pipeline and associated infrastructure to link these new areas of supply with consuming markets, has spurred this shift in composition.

The MLP industry's growth has been supported by slow but steady growth in the demand for natural gas, crude oil, and refined products. Since the oil crises of the 1970s, domestic demand for refined petroleum products and natural gas has risen at a steady 1.5% annual rate. The U.S. Energy Information Administration (EIA) forecasts annualized domestic demand for natural gas over the next 25 years will grow at a modest 0.5% rate as its base case (recall Exhibit 11)<sup>36</sup>; however, export growth will pick up some of the slack, with production growth growing at 0.9% as exports expand from 5% to 10% of production. With biofuel- and renewable-related assets now considered permissible for MLP ownership, the processing and transport of these sources may help support MLP growth as well. The EIA forecasts strong domestic consumption growth

rates for this sector, although from a small base (the EIA's base case pegs ethanol consumption growth at 3.5% annually, as ethanol grows from 1% of total U.S. energy consumption to an estimated 2%).

Not all of the potential growth of the MLP industry will necessarily benefit current MLP shareholders,<sup>37</sup> but distribution growth has been strong and steady during the industry's reasonably short history so far, and both Morgan Stanley and Wells Fargo are forecasting near-term growth of roughly 5% per year. Estimates as of mid-2010 were lower, and it is quite possible that current estimates will end up being overly optimistic.

Although the MLP investor base remains dominated by retail investors (Exhibit 30), MLPs are expected to find homes in additional institutional portfolios in the future, both as broader acceptance of MLPs as an asset class grows and as more institutional-friendly investment vehicles are developed that may shield nonprofits from some of the more burdensome aspects of the generating unrelated business taxable income. In late 2010 and early 2011, a number of public pension funds announced planned allocations to MLPs. A larger institutional presence would likely boost the asset class's liquidity, and would incent managers to develop more institutionalfriendly investment vehicles. Beginning in 2004, mutual funds have been allowed to incorporate meaningful allocations to MLPs. Few funds have done so to date, with the exception of some MLP-focused funds that launched in 2010. This reluctance is partly because mutual fund tax reporting generally must be provided to shareholders early in the calendar year, while K-1s are not available to MLP unitholders until several months later. Fund managers are wary of providing estimates early in the year that may need to be adjusted later, after many of the funds' shareholders have already filed their taxes.

<sup>&</sup>lt;sup>36</sup> Slowing population growth and efficiency gains both contribute to the deceleration in energy consumption growth.

<sup>&</sup>lt;sup>37</sup> GPs, affiliated C-corporation companies, and others have benefitted from the MLP industry's growth along-side unitholders.

#### Exhibit 26 Master Limited Partnership Yields Versus Other Asset Classes As of July 31, 2011



Sources: Alerian, FactSet Research Systems, FTSE International Limited, National Association of Real Estate Investment Trusts, Standard & Poor's, and Thomson Datastream.

## Exhibit 27 Historical Yields of Master Limited Partnerships and Other Asset Classes

December 31, 1995 – July 31, 2011



Sources: Alerian, Barclays Capital, Bloomberg L.P., FactSet Research Systems, FTSE International Limited, National Association of Real Estate Investment Trusts, National Bureau of Economic Research, Standard & Poor's, Thomson Datastream, and Wells Fargo Securities, LLC.

Notes: Data are monthly. Recession periods are shown in gray bars and use periods determined by the National Bureau of Economic Research. Yield-to-worst shown for Barclays Capital High Yield Composite Index.

\* Yields for the FTSE® NAREIT All Equity REITs Index begin January 1999.

#### Exhibit 28 Alerian MLP Index Valuation Ratios: Median Figures for Top Ten Index Constituents March 31, 1995 – June 30, 2011



Sources: Alerian and FactSet Research Systems. Note: Data are quarterly.

#### Exhibit 29



Alerian MLP Index: Spreads Relative to Ten-Year Treasury Bonds and Barclays Capital U.S. Credit BBB Index December 31, 1995 – July 31, 2011

# Alerian MLP Index/Ten-Year Treasury ---- Alerian MLP Index/Barclays Capital U.S. Credit BBB Index

#### December 31, 1995 - July 31, 2011

	Yie	eld		Spread
	Average	St Dev		Average
Alerian MLP Index	7.8	4.7	Alerian MLP/Ten-Year Treasury	307
Ten-Year Treasury	4.7	3.8	Alerian MLP/BC U.S. Credit BBB	130
BC U.S. Credit BBB Index	6.5	4.3		

Sources: Alerian, Barclays Capital, and Thomson Datastream.

Note: Yield-to-worst is used for the Barclays Capital Credit BBB Index.

#### Exhibit 30 Institutional Ownership of Master Limited Partnerships 2000–10



Sources: FactSet Research Systems and Tudor, Pickering, Holt & Co.

## Conclusion

The energy master limited partnership (MLP) asset class is dominated by firms that generate significant untaxed cash flows by managing much of the United States' energy infrastructure. These firms have hitched on to the growing development of non-traditional natural gas reserves, and benefitted from traditional energy demand and the emerging biofuels industry.

MLPs offer high and growing yields that are partially tax-deferred for U.S. taxpayers, allowing yields to compound tax-free for years. While taxpayers find much to like, some nonprofits may find MLPs to be more trouble than benefit, due to the complexity of complying with tax laws about unrelated business taxable income (UBTI). Nonprofits that are comfortable with UBTI may be attracted to the sector, but those that are UBTI averse need to assess whether they are comfortable with the credit risk of exchangetraded notes or swaps, or willing to sacrifice returns to the payment of corporate income tax (which happens within exchange-traded funds and other products with "blockers") in order to avoid the accounting hassle of paying unrelated business income tax themselves.

MLPs offer diversification to an equity-dominated portfolio and do not move in lockstep with other real assets. Some cash flows are tied to inflation metrics, but returns are unlikely to march closely alongside inflation. Historical volatility has been high; however, backward-looking volatility was compounded by excess leverage in 2007 and 2008 that we believe has not returned to the asset class.

Is this a great entry time? MLP valuations appear to be moderately elevated today, and a host of new investment vehicles and publicity have attracted new categories of investors to the industry. This generally makes us wary rather than enthusiastic. The asset class may be hardpressed to match the returns of the past decade. Going forward, however, long-run returns could certainly match or top those of broad equity indices if MLPs deliver long-run distribution growth that approximates analyst expectations for medium-term growth. Investors that are not seduced into thinking the industry's past returns are 100% repeatable may still find MLPs to be a reasonable real asset addition to the portfolio, particularly for taxable investors. Numerous indices exist for measuring the performance of the master limited partnership (MLP) universe, with slightly differing compositions. However, the performance patterns of the various MLP indices show a high degree of correlation (Appendix Exhibit 1).

On the following pages are both index definitions and statistical highlights of several major MLP indices.

#### Alerian MLP Index (Bloomberg ticker

AMZ). The Alerian MLP Index is a composite of 50 major energy MLPs traded on the American Stock Exchange, Nasdaq, or New York Stock Exchange. It is calculated by Standard & Poor's using a float-adjusted, market capitalizationweighted methodology. The index is disseminated by the New York Stock Exchange in real time on a price return basis. Constituents must be publicly traded partnerships or limited liability companies (LLC) exempt from corporate taxation as a result of the 1986 Tax Reform Act, and engaged in the transportation, storage, processing, or production of energy commodities. The constituents must represent either the limited partner (LP) or general partner (GP) interests, or both, of a partnership that is an operating company, or common units of an LLC that is an operating company. In addition, each constituent security must have a median daily trading volume over Alerian's minimum-liquidity threshold, and preferably an unadjusted market cap of at least \$500 million. Alerian has both mandatory and preferential criteria for inclusion in the index. Financial viability is a factor, with each constituent security maintaining trailing four consecutive quarters of distributable cash flow that equals or exceeds the partnership's minimum quarterly distribution. In April 2010, Alerian announced a new MLP index focusing solely on the 15 largest energy MLPs

by market cap, the Alerian Large Cap Index. Calculated using an equal-weighted methodology, the index is distributed on a price return basis through ticker ALCI and on a total return basis through ticker ALCIX. Alerian also provides two other MLP indices, the MLP Infrastructure Index, comprising 25 midstream-focused energy infrastructure MLPs, and the Natural Gas MLP Index, comprising the 15 largest natural gas infrastructure MLPs by market cap. In March 2010, Alerian spun out its asset management group into a new separate entity, SteelPath Capital. The index business is retained within Alerian, but cross-ownership exists between Alerian and SteelPath.

#### Atlantic MLP Energy Index (AAMLPE).

Atlantic Asset Management publishes four different MLP indices: MLP Total Index (AAMLPT), MLP Natural Resources Index (AAMLNR), MLP Energy including Coal Index (AAMLPEC), and MLP Energy Index (AAMLPE). The Atlantic MLP Energy Index is a value-weighted basket of only energy-related and energy infrastructure publicly traded partnerships. The index is reconstituted monthly, as of the closing of the prior month, with weightings determined by the outstanding common shares multiplied by the ending share price on the last business day. No weighting is permitted to exceed 10% of the index, with all other weightings adjusted accordingly. Issues are excluded from the index if they cease paying regular dividends, or until they begin to do so. New issues are added in the month following the posting of a publicly available month-end market price. Atlantic Asset Management was formerly an affiliate of Tortoise Capital Advisors LLC. Although they are now separate entities, they still share a marketing alliance.

Cushing® 30 MLP Index (MLPX). The Cushing® 30 MLP index provides a benchmark to measure the performance of the more widely held energy infrastructure MLPs. This equal-weighted index uses a formula-based, proprietary valuation methodology to rank MLPs for inclusion in the index. The Cushing® 30 is calculated by Standard & Poor's using the proprietary valuation methodology set out by Swank Energy Income Advisors for the Cushing<sup>®</sup> 30 MLP Index and as appropriate for application to the MLP investment universe and this index mandate. The index is disseminated in real time on a price return basis. The corresponding total return index is calculated on an end-of-day basis and is disseminated daily through its ticker symbol, MLPXTR.

Citigroup MLP Index (DJI:CITIMLP and **DJI:CITIMLPT).** The Citigroup MLP Index was created together with Citigroup Corporate and Investment Banking to provide investors with a benchmark for MLP performance, and is produced in conjunction with Dow Jones Indexes, which calculates, maintains, and disseminates the index. The Citigroup MLP Index (DJI:CITIMLP on a price return basis and DJI:CITIMLPT on a total return basis) includes natural resource-related MLPs that meet minimum market cap thresholds. Represented are companies with a primary business in exploration, development, mining or production, processing, refining, transportation, or the marketing of minerals or natural resources that are structured as MLPs and traded on a major U.S. exchange. Only natural resource-related MLPs with a total market cap of at least \$500 million are added as components during the quarterly index rebalancings.

#### S&P MLP Index (SPMLP and SPMLPT).

The S&P MLP Index is designed to provide exposure to leading partnerships that trade on major U.S. exchanges, and is calculated and

disseminated by Standard & Poor's. The index includes both MLPs and publicly traded LLCs, which have a similar legal structure to MLPs and share the same tax benefits, and is published on both a price and total return basis. As the vast majority of traded partnerships have operations in the oil & gas industries, the S&P MLP Index follows the Global Industry Classification Standard (GICS) and focuses on companies in the GICS Energy Sector and the GICS Gas Utilities Industry. Publicly traded partnerships must meet minimum float-adjusted market cap thresholds of \$300 million, and minimum liquidity requirements. Adjustments are made to the market cap weights to reflect available float, reduce stock concentration, and enhance index liquidity.

#### Tortoise MLP Index (TMLP and TMLPT).

The Tortoise MLP Index is a float-adjusted, cap-weighted index of energy MLPs. The index comprises publicly traded companies organized in the form of limited partnerships or LLCs engaged in the transportation, production, processing, and/or storage of energy commodities. The index has a 10% cap on any one constituent at the time it is rebalanced, and includes all energy subsectors and GPs represented by the energy MLP sector. Standard & Poor's independently calculates the index on both a price return and a total return basis. The price return version of the index uses the ticker TMLP and the total return index level is calculated at the end of each trading day and uses the ticker TMLPT. The minimum total equity market cap is \$200 million.

## Wells Fargo MLP Index (WMLP and

**WCHWMLPT).** The Wells Fargo (previously Wachovia) MLP Index is intended to measure the performance of all energy MLPs. The index is a float-adjusted, cap-weighted index of energy MLPs with a market cap of at least \$200 million at the time of inclusion and at least 60 days of trading activity. The index composition is determined by Wells Fargo Capital Markets, LLC and the index value is calculated by Standard & Poor's, and is available on both a price and total return basis. The index is broken down into subsectors including coal, oil & gas, marine transportation, refining, and oilfield services, as well as midstream, which includes natural gas pipelines; oil pipelines; gathering, processing, and natural gas liquids; and refined products. The Wells Fargo Midstream MLP Index is a component of the total index comprising midstream-oriented MLPs with a minimum market cap of \$200 million. Appendix Exhibit 2 shows performance and volatility for the Wells Fargo MLP Index and the Midstream subindex. Appendix Exhibit 3 lists the constituents of the MLP Index as of July 31, 2011.

### Appendix Exhibit 1 Correlation Matrix of Various Equity and Master Limited Partnership Indices

#### Five-Year Correlations: August 1, 2006 – July 31, 2011

		Wells Fargo MLP					Russell	S&P 500	FTSE® NAREIT
	Wells Fargo	Midstream	Alerian MLP	S&P MLP	Citigroup	S&P 500	2000®	Energy	All Equity
	MLP Index	Index	Index	Index	MLP Index	Index	Index	Index	REITs Index
Wells Fargo MLP Index	1.00								
Wells Fargo MLP Midstream Index	1.00	1.00							
Alerian MLP Index	1.00	1.00	1.00						
S&P MLP Index	1.00	0.99	1.00	1.00					
Citigroup MLP Index	1.00	0.99	1.00	0.99	1.00				
S&P 500 Index	0.51	0.50	0.50	0.47	0.48	1.00			
Russell 2000® Index	0.47	0.46	0.46	0.43	0.43	0.94	1.00		
S&P 500 Energy	0.45	0.42	0.44	0.41	0.42	0.72	0.61	1.00	
FTSE® NAREIT All Equity REITs Index	0.34	0.34	0.33	0.30	0.31	0.81	0.86	0.43	1.00

#### Ten-Year Correlations: August 1, 2001 – July 31, 2011

		Wells Fargo MLP					Russell	S&P 500	FTSE® NAREIT
	Wells Fargo	Midstream	Alerian MLP	S&P MLP	Citigroup	S&P 500	2000®	Energy	All Equity
	MLP Index	Index	Index	Index	MLP Index	Index	Index	Index	REITs Index
Wells Fargo MLP Index	1.00								
Wells Fargo MLP Midstream Index	1.00	1.00							
Alerian MLP Index	0.99	0.99	1.00						
S&P MLP Index	0.99	0.99	0.99	1.00					
Citigroup MLP Index	0.99	0.99	0.99	0.99	1.00				
S&P 500 Index	0.44	0.42	0.44	0.42	0.41	1.00			
Russell 2000® Index	0.44	0.42	0.43	0.41	0.41	0.90	1.00		
S&P 500 Energy	0.39	0.36	0.38	0.37	0.36	0.63	0.57	1.00	
FTSE® NAREIT All Equity REITs Index	0.33	0.32	0.33	0.30	0.30	0.69	0.75	0.36	1.00

Sources: Bloomberg L.P., Citigroup Global Markets, Frank Russell Company, FTSE International Limited, National Association of Real Estate Investment Trusts, Standard & Poor's, Thomson Datastream, and Wells Fargo Securities, LLC.

#### Appendix Exhibit 2 Performance and Volatility of Wells Fargo MLP Composite and Midstream Indices As of July 31, 2011



#### Wells Fargo MLP Composite Index: Sector Weightings







MLP Midstream

■MLP Composite

#### Appendix Exhibit 2 (continued) Performance and Volatility of Wells Fargo MLP Composite and Midstream Indices 1996–2011



Sources: Alerian, Bloomberg, L.P., Standard & Poor's, and Wells Fargo Securities, LLC. Notes: Market capitalization data are based on float-adjusted figures. Cumulative wealth and annualized return figures based on monthly data. Data for 2011 are through July.

## Appendix Exhibit 3 Wells Fargo MLP Index Constituents As of July 31, 2011

MLP	<u>Ticker</u>	MLP	<u>Ticker</u>	MLP	<u>Ticker</u>
Alliance Holdings GP LP	AHGP	Energy Transfer Equity LP	ETE	Oxford Resource Partners LP	OXF
Alliance Resource Partners	ARLP	Energy Transfer Partners LP	ETP	PAA Natural Gas Storage LP	PNG
AmeriGas Partners LP	APU	Enterprise Product Partners LP	EPD	Penn Virginia Resource Partners LP	PVR
Atlas Energy LP	ATLS	EV Energy Partners LP	EVEP	Pioneer Southwest Energy Partners LP	PSE
Atlas Pipeline Partners LP	APL	Exterran Partners LP	EXLP	Plains All American Pipeline LP	PAA
Boardwalk Pipeline Partners	BWP	Ferrellgas Partners LP	FGP	QR Energy LP	QRE
BreitBurn Energy Partners LP	BBEP	Genesis Energy LP	GEL	Regency Energy Partners LP	RGNC
Buckeye Partners LP	BPL	Global Partners LP	GLP	Rhino Resource Partners LP	RNO
Calumet Specialty Products Partners LP	CLMT	Holly Energy Partners LP	HEP	Spectra Energy Partners LP	SEP
Capital Product Partners LP	CPLP	Inergy LP	NRGY	Star Gas Partners LP	SGU
Cheniere Energy Partners LP	CQP	Kinder Morgan Energy Partners LP	KMP	Suburban Propane Partners LP	SPH
Chesapeake Midstream Partners	CHKM	Kinder Morgan Management LLC	KMR	Sunoco Logistics Partners LP	SXL
Copano Energy LLC	CPNO	Legacy Reserves LP	LGCY	Targa Resources Partners LP	NGLS
Crestwood Midstream Partners LP	CMLP	Linn Energy LLC	LINE	TC Pipelines LP	TCLP
Crosstex Energy LP	XTEX	Magellan Midstream Partners	MMP	Teekay LNG Partners LP	TGP
DCP Midstream Partners LP	DPM	Markwest Energy Partners LP	MWE	Teekay Offshore Partners LP	тоо
Dorchester Minerals LP	DMLP	Martin Midstream Partners LP	MMLP	Terra Nitrogen Co, LP	TNH
Duncan Energy Partners LP	DEP	Natural Resource Partners LP	NRP	Transmontaigne Partners LP	TLP
Eagle Rock Energy Partners LP	EROC	Navios Maritime Partners LP	NMM	Vanguard Natural Resources, LLC	VNR
El Paso Pipeline Partners LP	EPB	Niska Gas Storage Partners LLC	NKA	Western Gas Partners LP	WES
Enbridge Energy Management LLC	EEQ	NuStar Energy LP	NS	Williams Partners LP	WPZ
Enbridge Energy Partners LP	EEP	NuStar GP Holdings LLC	NSH		
Encore Energy Partners LP	ENP	ONEOK Partners LP	OKS		

Sources: Standard & Poor's and Wells Fargo Securities, LLC.