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Abstract
Since 1981, Master Limited Partnerships (MLPs) have financed a significant share of United States oil and natural gas transport and processing infrastructure. This paper examines key trends in the midstream MLP space through broad market analysis and focused case studies to explain why the MLP model has been a successful vehicle for aggregating capital and encouraging infrastructure investment. Despite the growing use of MLPs since the 1980s, market capitalization, new IPOs, and number of existing MLPs are down from the peak years of 2013 and 2014. Through an analysis of several recent “roll-up” and simplification transactions, we identify issues in the MLP model that may affect its success moving forward. Last, this paper considers the recent Hess Midstream IPO to identify in what cases the traditional MLP model may still prove to be successful in the future.
Executive Summary

In 1981, Apache Corporation created the first Master Limited Partnership (MLP) with the creation of Apache Petroleum Corporation. Since then, the MLP model has served as an important financing vehicle for oil and natural gas transport and processing infrastructure in the United States. An MLP is a type of publicly-traded partnership whereby limited partners purchase “units” on an exchange. In a traditional structure, the MLP is 98% owned by limited partners; the remaining 2% is owned by the general partner. The MLP pays distributions to limited partners, which operate similarly to dividends paid by traditional C-Corporations. In many MLPs, the general partner also owns incentive distribution rights (IDRs) to its general partner, which entitles it to a growing percentage of the distribution as quarterly distributions to the limited partners increase.

Beginning in late 2009, capital investment in the midstream space grew substantially to support the increased production emerging from the shale boom. Because of the tax advantage that the MLP mode provided, companies formed MLPs to hold these assets. The number of energy MLPs grew from 16 in 1995 to a peak of 124 in 2013. However, between the summer of 2014 and early 2016, crude oil and natural gas lost nearly 75% and 60% of their values, respectively. As MLPs have faced challenges in recovering from the market downturn, many have shifted away from the traditional model that was created 1981. Two key trends have emerged: (1) the “roll-up” of MLPs into their corporate parent companies and (2) the elimination of incentive distribution rights (IDR) payments to the general partner, which had traditionally been used as a form of informal corporate governance.

This paper seeks to answer the following questions:

1. Why has the MLP model has historically been a successful vehicle for aggregating capital and encouraging infrastructure investment?
2. What factors in the MLP model contributed to a performance decline in 2014 and 2015?
3. How will energy companies continue to use the MLP model as a vehicle for financing projects moving forward?

This paper seeks to answer these questions through three case-study analyses of recent “roll-up” and simplification transactions, which serve as representations of broader market trends. The case studies discussed in this paper are the roll-up of Targa Resources Partners (NGLS) into its parent company Targa Resources Corporation (TGRP), the roll-up of ONEOK Partners (OKS) into its parent company ONEOK, Inc. (OKE), and Plains All American’s (PAA) decision to purchase its general partners’ 2% ownership interest. Each MLP is a unique entity structures that involves complex financial engineering aimed at producing the most tax efficient and profitable firm while
maintaining long term stable cash flows. Each case, although unique, presents various firms reactions to the recent market changes.

Through our research, we identified primary problems faced by MLPs in the market downturn. First, because MLPs trade on yield, they face a heightened pressure to continue to grow distributions. This growth became unsustainable in the lower-cash flow environment of 2015, leading to lower coverage ratios. Second, a substantial portion of an MLPs distributable cash is paid to the general partner, rather than the limited partners, through IDRs. While required by most partnership agreements, these IDRs erode the cost-of-capital advantage of an MLP. Third, while the midstream sector is typically characterized by fee-based revenues, MLPs still faced direct commodity exposure during this period, causing variability in cash flows.

While there has been some recovery in the commodity market, MLPs have been slower to recover, and, as such, many have chosen to pursue roll-up or simplification transactions. However, we believe the MLP model will still be utilized moving forward. Investment in upstream crude oil and natural gas production is predicted to increase. Further, a new trend of companies forming MLPs to support their own, rather than third-party, upstream operations is emerging. Our research suggests that operating an MLP in this environment requires a heightened awareness of (1) the true cost of IDRs, should an MLP choose to continue to include these in their partnership agreement; (2) unsustainable distribution growth, and (3) revenue streams that are not backed by long-term, fee-based contracts, thereby exposing the MLP to commodity price fluctuations.
Introduction to Master Limited Partnerships (MLPs)

What is an MLP?

Since 1981, Master Limited Partnerships (MLPs) have been used to finance a significant share oil and natural gas transport and processing infrastructure in the United States. While MLPs are used in a variety of natural resource-based businesses, this paper will focus primarily on midstream oil and gas businesses utilizing the MLP model. This section will define what an MLP is and explain why firms in the energy infrastructure space utilize this structure to finance capital expenditures in the industry.

An MLP is a type of publicly-traded partnership (PTP) where the limited partnership is publicly traded as “units” on an exchange.\(^1\) MLP units are analogous to shares traded for a public corporation – ownership of an entity traded on an exchange. However, key differentiating factors set MLP units apart from common equity shares. The MLP is structured as a limited partnership which allows it to operate as a pass-through entity and pay no taxes at the corporate-level. This tax pass-through benefit provides MLPs an advantage over entities that must pay both entity- and shareholder-level taxes. By avoiding this double taxation, investors require a lower return on equity, all else being equal, when compared to equity ownership subject to double taxation. This structure can ultimately lower the cost of capital for the MLP, thus driving investment in the space.\(^2\) The liquidity advantages that MLPs provide continues to make MLPs an advantageous structure for the highly capital-intensive energy infrastructure industry.

MLPs are structured as a limited partnership with one or more general partners (GPs), who own 2% of the partnership. The remaining 98% is sold to many limited partners, who purchase their shares when the MLP goes public or during later equity offerings, on an exchange.\(^3\) Limited partners (LPs) (i.e. unitholders) receive cash distributions – these distributions are like dividends provided by a typical corporate stock. MLP distributions can provide a higher after-tax return to investors versus traditional dividends because of the partnerships pass-through entity status.

Despite the tax and cost-of-capital advantages of the MLP model, the drawbacks of the traditional structure became more apparent in the lower commodity price environment in late 2014 into 2015. Most notably, both the growing share of distributions to the GP and the price volatility of commodities began to erode the advantages afforded by the structure. This paper will evaluate the emergence of these issues and discuss how these issues are driving midstream energy company’s use of the MLP model today.

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\(^1\) Goodgame, Master Limited Partnership Governance, 2005, pp. 472-480
\(^2\) Massey, 2016, p. 1019
\(^3\) Massey, 2016, p. 1017
History of the MLP

The first MLP, known as Apache Petroleum Company (APC), was created in 1981 by Apache Corporation. APC combined thirty-three oil and gas operations into one entity, affording the company liquidity and efficiency advantages, as well as offering investors the benefit of price appreciation. The idea of the MLP emerged in 1981 following a change in tax rates. The Economic Recovery Act of 1981 reduced the highest marginal income tax rate from 70% to 50%, while corporate tax rates remained at 46%. More favorable income tax rates increased the attractiveness of MLPs as an investment vehicle, proliferating its use. From 1981 to 1987, there were over 100 MLP IPOs. While the first of these MLPs were concentrated in the upstream oil and gas sector, the scope soon widened to include real estate assets, hotels, amusement parks, and sports teams.

The United States Congress became concerned that companies would use the MLP structure to avoid corporate taxation. Congress subsequently limited what type of businesses could receive a ‘publicly traded partnership’ designation to avoid a loss in federal income tax revenue.

Legal Definition of an MLP

Section 7704 of the Internal Revenue Code (IRC) outlines that an MLP must receive at least 90% of its gross income each year from "qualifying income" to be treated as a pass-through entity for federal tax purposes. Qualifying income includes interest, dividends, real property rents, gain on sale or disposition of real property, and income and gains derived from the exploration, development, mining, or production, processing, refining, transportation (including pipelines transporting gas, oil, or products thereof), or the marketing of any mineral or natural resource (including fertilizer, geothermal energy, and timber), industrial source carbon dioxide, or the transportation or storage of any fuel). The exact reasons for inclusion of the oil and gas energy industry in the qualifying income for MLPs are not precisely known. However, the following factors likely played a contributing role: (1) 1973 and 1979 oil crisis and (2) desire for energy independence.

The History of MLPs in Energy

The proliferation of MLPs in the energy sector is a result of two main factors: (1) the inclusion of natural resources as “qualifying income,” and (2) the ability of oil and gas infrastructure assets to provide a stable cash flow to provide regular distributions to investors. In the early 1980s, MLPs were primarily used in the upstream exploration and

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4 Alerian, 2018, pp. Accessed on April 2nd, 2018
6 Fenn, 2011
7 Latham & Watkins, Master Limited Partnerships - 101, 2018
8 Fenn, 2011
9 Internal Revenue Code 7704: Further description of qualifying income in subsection (b), (c), (d), or (e) of section 6426, or any alcohol fuel defined in section 6426(b)(4)(A) or any biodiesel fuel as defined in section 40A(d)(1
drilling sector. However, between 1981 and 1986, oil prices fell from $34 per barrel to $14 per barrel, and many upstream MLPs were forced to restructure after failing to maintain minimum quarterly distributions.\textsuperscript{10} The MLPs that survived into the 1990s were characterized by ownership of existing infrastructure assets including: pipelines, Gathering and Processing systems, and storage facilities. These existing infrastructure assets has the right mix of qualities to be structured under an MLP. These include: low maintenance costs, low asset exposure to volatile commodity prices, and stable revenue and cash flows.\textsuperscript{11}

Currently, there are 95 MLPs publicly traded; of that, 45 are in the midstream energy sector, 3 are upstream MLPs, and the remaining are involved in activities that qualify under the US revenue code but are not in the midstream or upstream energy sector.\textsuperscript{12} The midstream sector typically operates a “toll-based” business model, earning a contracted fee for each unit of transport volume. The MLP, however, does not take ownership of the resource, removing some direct commodity risk exposure.\textsuperscript{13} These predictable cash flows provide support for the heavy concentration of MLPs in the midstream sector as they are known to have more stable and consistent cash flows. Since 1986 there have been 175 MLP IPOs\textsuperscript{14} — this includes IPOs across all aspects of the oil and gas sector, minerals and mining, and real estate related companies. About 45% of the IPOs occur under the traditional midstream MLP model.\textsuperscript{15,16} This paper will focus on MLPs in the midstream sector. Figure 1 below displays historical midstream and non-midstream MLP IPOs.

\textit{Figure 1: Portion of MLP IPOs in the Midstream Sector}\textsuperscript{17,18}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Number of MLP IPOs in the Midstream Sector}
\end{figure}

\textsuperscript{10} Tax Foundation, Federal Individual Income Tax Rates History, 1913-2013  
\textsuperscript{11} Pickle, 2008/2009, pp. 8-14  
\textsuperscript{12} Howard, MLP Master List – MLPGuy.com, Data as of January 18th, 2018  
\textsuperscript{13} Alerian, 2018  
\textsuperscript{14} Patredis, The Next Generation of MLP IPOs, 2017  
\textsuperscript{15} Patredis, The Next Generation of MLP IPOs, 2017  
\textsuperscript{16} Howard, MLP Master List – MLPGuy.com, Data as of January 18th, 2018  
\textsuperscript{17} Patredis, The Next Generation of MLP IPOs, 2017  
\textsuperscript{18} Howard, MLP IPO history, Data as of January 18th, 2018
MLP Market Overview

Market performance of each individual MLP primarily depends on maintaining and growing distributions. Investors typically refer to an MLP stock as “trading on yield,” which is defined as annualized distributions divided by share price. A higher yield MLP, in theory, provides more value to an investor. Market performance is important for MLPs because it will ultimately impact their ability to raise capital through either (1) issuance of new units in equity markets and (2) access to debt. MLPs can grow distributions by either increasing cash generated from existing assets or through acquiring new assets that produce cash flows, this cash is then passed to the unit holder and the GP.

The MLP Market Index – Alerian MLP Index

The Alerian MLP Index (AMZ) is an index of 42 energy MLP entities whose constituents represent 85% of total float-adjusted market capitalization of the MLP market. This index serves as a proxy for the overall performance of midstream MLPs. See Appendix 1 for further details on the index. Figure 2 below shows that over a 10-year period the AMZ roughly trends with the price of natural gas and crude oil, which are the underlying commodity driving a large portion of midstream MLP business.

Figure 2: 10-Year Performance of the Alerian Index against benchmarks

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19 Alerian MLP Index, 2018
20 Natural gas and crude oil prices measured by NYMEX Natural Gas priced at Henry Hub (NYMEX:NG) and NYMEX Crude Oil-Light (NYMEX: CL) priced at Cushing, Oklahoma
Midstream Value Chain

The midstream energy industry is generally considered the more stable within the oil and gas energy space relative to more commodity exposed upstream and oil field services (OFS) businesses. Midstream broadly describes firms engaged in the transportation and processing of natural resources, as described in Figure 3 below.

Figure 3: Oil and Gas Value Chain – Upstream, Midstream and Downstream

The midstream sectors low risk profile is attributed to long-term fee-based contracts that allow for stable and predictable cash flows. Typically, midstream generates revenue by charging a fee per unit volume to transport commodities. In the short-term fluctuations in commodity prices will not impact these firms as they are on a fee-based system. However, in the long run, this business is exposed to commodities as revenue is dependent on the continuation of demand for midstream services. In contrast to a fee-based system, some midstream companies operate segments that have contracts based on percent-of-proceeds. In these contracts, the midstream company processes a third-party’s resource and receives a fixed percent of the total revenue of the commodity sold. This type of contract exposes the midstream company to commodity prices, as sale revenue fluctuates with commodity prices. Therefore, the sector is not immune to downturns. Customers who have entered into long-term contracts with MLPs may still fail (enter bankruptcy), or in some cases the MLP may re-negotiate terms as an alternative to no payment.
MLP Structure Overview

Sponsored MLP Model

The Master Limited Partnership (MLP) structure generally has two types of owners. The single General Partner (GP) has a 2% equity ownership interest in the MLP, and is often owned by a large, publicly-traded entity (the MLP ‘sponsor’).\(^\text{22}\) The remaining 98% is owned by the Limited Partners (LPs), who are the “unitholders.” The LPs provide capital to the MLP in exchange for regular quarterly distributions, as mandated in the partnership agreement.\(^\text{23}\) Figure 4 demonstrates a highly simplified outline of the sponsored MLP model. MLPs are notorious for featuring very complex entity structures or being very heavily financially engineered.

Figure 4: Simplified Sponsored MLP Model

MLP Compared to Other Common Entity Structures

Understanding why a company would choose to create an MLP requires an understanding of the key differences between an MLP and other typical entity structures. Typical corporate tax structures under US law are taxed both at the company and at the ownership level. Due to the tax advantages of an MLP over many other entity structures, MLPs may be able to pay more for assets and generate higher cash flows comparatively\(^\text{24}\). However, it is important to note that this tax benefit only holds true when the MLP is operating at a lower IDR tier.\(^\text{25}\)

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\(^\text{22}\) Goodgame, Master Limited Partnership Governance, 2005, p. 474

\(^\text{24}\) Wells Fargo Equity Research, 2013, pp. 19-45

\(^\text{25}\) Wells Fargo Equity Research, 2013, pp. 19-45
C-Corporation

Unlike an MLP, a C-Corporation is owned 100% by its shareholders. Delaware General Corporation Law (DGCL) defines much broader fiduciary responsibilities. Corporations have a board of directors that is elected by the shareholders, unlike the sponsor-elected board of directors of MLP. This board is required to hold annual meetings and respond to any shareholder inquiries. Most notably, DGCL denies the ability of a corporate board of directors from modifying or restricting fiduciary duties.\(^{26}\) Figure 5 below illustrates the difference between a typical C-Corporation and MLP governance structures.

Figure 5: Typical C-Corporation Governance Structure compared to simplified Sponsor MLP Model

MLPs are exempt from entity-level income taxes due to their partnership structure. When a corporation earns a dollar of income, it is first taxed at the corporate tax rate. When a dividend is paid out to investors, it is again taxed at the investor’s applicable income tax rate (“double-taxation”). In the case of an MLP, income is “passed-through,” and not taxed until that income is paid out as a cash flow distribution to unitholders.\(^ {27}\) As a result, MLP investors do not face “double-taxation” on monthly cash flow distributions. The difference in taxation between a C-Corporation and an MLP is illustrated in Example 2 below.

Example 1: Simple illustration of a tax pass through entity – All Else Equal

C-Corporation earns $10 in income and first pays the government 21%,\(^ {28}\) leaving $7.90 available for dividends. The dividends are then taxed at the owner’s personal tax rate (this example uses 20%), leaving

\(^ {26}\) Goodgame, Master Limited Partnership Governance, 2005

\(^ {27}\) Goodgame, Master Limited Partnership Governance, 2005, p. 472

\(^ {28}\) 2018 standard corporate tax rate
only $6.32 to the owner. Compare to an MLP Unit Holder payout example to an MLP: the MLP earns $10 in income and passes 100% of this on to the investor, who then pays a tax of 20%, leaving the owner with $8.00.

YieldCo

The MLP structure is only available to companies that generate most of their revenue from qualifying sources as described in the introduction. These sources are decidedly not renewable energy generation resources such as wind or solar. Renewable energy power generation earns revenue from selling power to customers\(^\text{29}\) which does not qualify the revenue to structure under an MLP. A financial innovation, called a YieldCo, came into existence in 2013 that allows an entity to own and operate renewable energy assets and gain similar tax pass through benefits of an MLP.\(^\text{30}\) In 2015, oil prices fell which led to an increase in interest for YieldCos, which were seen as a higher-yield MLP opportunities.\(^\text{31}\) However, the increased interest in YieldCos also led to significant turmoil – it remains to be seen whether YieldCos can continue as successful entity structures in the renewable energy space. Figure 6 illustrates the structural differences between and MLP and a YieldCo.

\(^{29}\) Customer broadly refers to a purchaser of power and includes utilities, ISO’s, end customers etc.

\(^{30}\) Wheeler, 2018, p. 5

\(^{31}\) Wheeler, 2018, p. 5
Limited Liability Company (LLC)

A handful of entities in the midstream energy space are registered as LLCs, but still capture all the tax benefits of the MLP. The difference between the two entity structures is a lack of GP and a lack of IDRs. Figure 7 below provides a summary of the three different entity structures discussed.

**Figure 7: Comparison of entity structures**

<table>
<thead>
<tr>
<th></th>
<th>LP</th>
<th>LLC</th>
<th>C-Corp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Taxable Entity</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Tax Shield on Distributions</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Tax Reporting</td>
<td>K-1</td>
<td>K-1</td>
<td>1099</td>
</tr>
<tr>
<td>General Partner</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>IDRs</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Management Incentive Interests</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Voting Rights</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Public LLC Model

The public LLC model emerged in response to growing concerns around the “sponsored MLP model” in 2001. Overall market instability, punctuated by Enron’s collapse, may have played role in driving market concern – particularly as the head of Kinder Morgan, one of the largest MLPs at that time, was run by a man formerly considered for CEO of Enron. The LLC structure aims for market optimal governance while maintaining the most desirable qualities of an MLP. In this structure the LLC would not have a managing member (GP) but instead would have its own board of directors elected by the

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32 Wheeler, 2018, p. 5
33 Wells Fargo Equity Research, 2013, pp. 19-45
34 Wells Fargo Equity Research, 2013, pp. 19-45
35 McCabe, Master Limited Partnerships' Cost of Capital Conundrum, 2015
36 McCabe, Master Limited Partnerships' Cost of Capital Conundrum, 2015
This board has fiduciary duties to unit holders like boards and directors of C-Corporations. The LLC model does not require minimum distributions or IDR-like compensation for the management, unlike the sponsor model where distributions can increase for the sponsor based on performance.

The first IPO of an MLP under the public LLC model occurred in November 2004 with Copano Energy, LLC. The entity was treated as an MLP for tax purposes but structured as an LLC under the Delaware Limited Liability Company Act (DLLCA). The DLLCA permits an LLC to have a managing member (like a general partner) and the ability to modify or eliminate fiduciary duties. Copano elected to set up their LLC very similarly to a C-Corporation where the owners elect a board of directors who would have a fiduciary duty to the ownership. Copano effectively created an MLP with a C-Corporation governance structure. KinderMorgan acquired Copano in 2013 so it is difficult to draw conclusions about long term the efficacy of the model – particularly through the 2015 commodity price drop.

**MLP Considerations**

**LP Distributions and Incentive Distribution Rights**

MLPs pay quarterly distributions to unitholders, similar to dividends paid on common shares. A key distinguishing factor is that MLPs are required, unlike C-Corporations, to pay out all “available cash” to unitholders, as stipulated in the original partnership agreement. This cash is known as the “distributable cash flow.” The determination of available cash is largely at the discretion of the board of directors. The MLP may keep a portion of cash flow to reinvest in future projects or maintain the existing business operations. Quarterly distributions are determined by a calculation outlined in the original partnership agreement created at the inception of the MLP. This agreement can be, and often is, amended throughout the lifetime of an MLP. In a traditional sponsor MLP model, LPs are entitled to a minimum quarterly distribution, and receive 98% of the initial cash flow. The GP receives the remaining 2%.

While the LPs own the majority of the MLP, they have no say in the day-to-day operations. MLPs follow legal framework outlined in the Delaware Revised Uniform Limited Partnership Act (DRULPA), which permits the contractual modification, restriction, and elimination of fiduciary duties. DRULPA has a policy “to give maximum effect to the principle of freedom of contract and to the enforceability of partnership agreements.”

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37 McCabe, Master Limited Partnerships’ Cost of Capital Conundrum, 2015
38 Goodgame, New Developments in Master Limited Partnership Governance, 2012, p. 88
39 Goodgame, New Developments in Master Limited Partnership Governance, 2012, p. 88
41 Goodgame, Master Limited Partnership Governance, 2005

The law only requires that the GP act “in good faith” with “fair dealing.” Thus, the LPs have minimal influence in challenging decisions made at the GP level.

Because of the LPs minimal control, the relationship between the GP and the LP is designed to keep interests aligned. While the GP is entitled to 2% of total distributable cash flow (equal to equity ownership interest), as the dollar-per-unit quarterly distributions to the LPs increase, the GP receives a higher percentage of cash flows, typically up to a 50/50 split. The growing distributions to the GP are known as “incentive distribution rights” (IDRs). An example GP-LP distribution arrangement is outlined in Example 2 below.

Example 2: Example Distribution Payout Structure

<table>
<thead>
<tr>
<th>Tier</th>
<th>Per-Unit Distribution</th>
<th>LP %</th>
<th>GP %</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQD</td>
<td>&lt; $1.00</td>
<td>98%</td>
<td>2%</td>
</tr>
<tr>
<td>Tier 1</td>
<td>$1.00 - $1.15</td>
<td>98%</td>
<td>2%</td>
</tr>
<tr>
<td>Tier 2</td>
<td>$1.15 - $1.25</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>Tier 3</td>
<td>$1.25 – $1.50</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Tier 4</td>
<td>Above $1.50</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

The MLP may keep a portion of cash flow to reinvest in future projects or maintain the existing business operations. The distribution coverage ratio (DCR) provides investors with a quick understanding of how much cash the MLP is keeping versus distributing. A ratio of 1.0x indicates that the GP is distributing all available cash, while a distribution greater than 1.0x indicates the MLP is keeping a portion of available cash, and a ratio of less than 1.0x indicates that an MLP is using funds outside of available cash flow, such as reserves, to pay out distributions. Investors look for a ratio higher than 1 which typically implies that the MLP has some cushion to maintain future cash distributions and indicates that the MLP may be able to raise distributions further in the future.

Taxes and K-1s

MLPs’ key benefit, pass-through tax status, also represents a major inconvenience for unit holders. Unit holders are LPs in a partnership and must file additional paperwork with their taxes known as a K-1. This additional burden on an investor may seem trivial but can create a barrier for non-institutional investors that may not want to deal with the extra work and hassle of multiple additional tax forms as well as filings in multiple states.

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42 Goodgame, Master Limited Partnership Governance, 2005, pp. 85-86, section 17-1101
43 Wells Fargo Equity Research, 2013, pp. 19-45
MLP Cost of Capital

The cost of capital drives the ability of an MLP to continue to grow asset base. Assets enable MLPs to generate cash flow and distribute the cash flow to unitholders. Therefore, the cost of capital is a key factor in the ability of an MLP to continue operations. An MLPs cost of capital consists of three components: LP Equity Cost, GP Equity Cost, and Cost of Debt. The conventional MLP Cost of Equity Calculation is defined as the Current Yield / % of Average Cash Flow to LP.

Market performance of the MLP depends heavily on maintaining minimum distributions, and preferably growing, distributions. Market performance is important for MLPs, as it will ultimately impact their ability to raise capital. Given the capital-intense nature of the midstream energy sector, this is vital for a company’s longevity. MLP distributions grow by either increasing cash generated from existing assets or through acquiring new assets that produce cash flows.

MLP investments must exceed its overall cost of capital, known as the hurdle rate. As an MLP grows its asset base and distribution, and is thus viewed as more ‘successful,’ its cost of capital may increase. This tension occurs because in the traditional model, as distributions grow, the MLP will move to a higher tier in the IDR structure, increasing distributions to the GP. As a result, MLPs must make increasingly more accretive (and often larger) acquisitions to avoid diluting top unit holder returns. Further, while the overall nature of assets owned by MLPs makes returns somewhat predictable, this also means there the potential for a large upside does not exist; this means investments must be acquired at a lower relative cost than the predicted cash flow. This situation can be contrasted with high risk / high payout industries like technology where an investor might make ten investments assuming nine will fail and the payoff from the one success will cover the losses and provide excess returns.

44 Wells Fargo Equity Research, 2013, pp. 19-45
45 Wells Fargo Equity Research, 2013, pp. 19-45
46 Wells Fargo Equity Research, 2013, pp. 19-45
47 McCabe, Master Limited Partnerships’ Cost of Capital Conundrum, 2015
Case Studies

In August 2014, Kinder Morgan Inc. (KMI) announced it would acquire all outstanding units of its MLP Kinder Morgan Energy Partners L.P. (KMP), as well as Kinder Morgan Management, LLC (KMR), and El Paso Pipeline Partners, L.P. (EPB). Kinder Morgan stated that by consolidating four publicly traded equity securities into one equity, the transaction would lower the company’s hurdle rate and allow for future growth, in addition to eliminating the complexities of structural subordination and incentive distribution rights. Since Kinder Morgan announced its reorganization in 2014, a wave of similar roll-up transactions and other structural simplifications have occurred. Falling commodity prices acted as a stress test on the MLP industry in 2015; in response, several MLPs merged or rolled-up into C-Corp structures, including:

- Kinder Morgan (KMI) rolled up both its MLPs (KMP and EPB), in addition to its management company Kinder Morgan Management, LLC in August of 2015
- Targa Resources Corporation (TGRP) bought all units of its MLP (NGLS) in November 2015
- ONEOK, Inc. (OKE) acquired all the units of its MLP (OKS) in June of 2017

Recently, there has been a growing trend in parent companies choosing to maintain the MLP as an entity, but instead have the MLP buy out the GP interest and IDRs, recognizing the high cost of the growing IDR tiers.

The following section presents a deeper look into three of these transactions: (1) Targa Resources Partners roll-up into its parent company C-Corporation, Targa Resources Corporation, (2) ONEOK Partners roll-up into its parent company ONEOK, Inc., and (3) Plains All American’s decision to buy out its GP interest, Plains GP Holdings, L.P. to eliminate Incentive Distribution Rights. The purpose of this section is to discuss key issues MLPs are currently facing and to evaluate the different approaches companies are taking to address the changing environment.

Targa Resources Partners – Targa Resources Corporation

On November 15, 2015 Targa Resources Corporation (TGRP) announced it would acquire all outstanding units of its MLP Targa Resources Partners, L.P. (NGLS), consolidating its MLP into the parent company, Targa Resources Corporation. The case study of the roll-up of Targa Resource Partners serves to illustrate the use of a roll-up transaction to (1) eliminate the IDRs as a method to retain cash flow and lower the cost of capital, and (2) simplify corporate structures to increase investor understanding of company operations thus increasing access to capital.

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48 Kinder Morgan, Inc, Kinder Morgan, Inc. to Purchase KMP, KMR and EPB; 2015 KMI Dividend to Increase to $2 per Share, 2014
49 Ross, When Ambition Exceeds Means: Incentives and The Limites to MLP Growth, 2018
50 Ross, When Ambition Exceeds Means: Incentives and The Limites to MLP Growth, 2018
Company Overview

Targa Resources Partners L.P. (NGLS) is a midstream energy company that provides natural gas and natural gas liquids (NGL) services across the United States. The company is also growing its presence in crude oil gathering and petroleum terminating. The partnership operates in two segments: (1) Gathering and Processing across the major shale plays: Permian Basin, Eagle Ford Shale, Barnett Shale, and SCOOP/STACK; and (2) logistics and marketing. The Logistics and Marketing segment operates in the natural gas liquids (NGL) production process; stores, fractionates, treats, transports, and sells NGLs, NGL products, refined petroleum and crude oil; and engages in natural gas marketing and distribution. End users of the MLPs’ services include commercial and industrial customers, natural gas and electric utilities, intra and interstate pipeline marketers, and end-users of NGL products (refineries, retailers, and LPG exporters).

51 Targa Resources Corporation, Form 10K, 2016
Initial Public Offering and Historical Market Performance

NGLS issued its IPO in 2007. During its eight years of trading, the partnership experienced growth through drop-downs from its parent company, TGRP, third-party acquisitions, and growth projects through capital expenditures. From 2007 until 2010, NGLS acquired approximately $3.1 billion in assets from its parent company. Following the last drop-down in 2010, NGLS focused on third-party acquisitions and growth through capital expenditures. TGRP issued its IPO in December 2010. For the purposes of this analysis, NGLS performance is evaluated since the IPO of its parent company in 2010. NGLS and TGRP performance is illustrated in Figure 8 below.

Figure 8: Historical Performance of NGLS and TGRP relative to industry benchmarks since IPO of Parent

Historically, NGLS performance exceeded that of the AMZ, as well as commodity prices. From 2010 through 2011, average NGLS share price was approximately 10% higher than the NGLS price on December 7, 2010 (IPO date of parent company), while the AMZ value

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52 These dropdowns occurred prior to the Initial Public Offering of the parent company, Targa Resources Corporation (TGRP). TGRP issued its IPO in December 2010. Prior to this IPO, TGRP was known as Targa Resources Investments, Inc.
53 Targa Resources Corporation, Form 10K, 2016, p. 5
was only 2% higher than its December 7 value. As the shale boom took hold in the industry, NGLS share price increased rapidly. During the period from 2013 through 2014, share price averaged approximately 75% higher than the 2010 value. This value peaked in the second and third quarters of 2014, when share price reached 130% higher than its 2010 value. While the AMZ did experience growth during this period, it did not see the same gains as NGLS; average value was only 30% higher from 2013 through 2014, peaking at 50% higher than 2010 value in the second and third quarters of 2014. TGRP experienced rapid growth in value during this period as well: average share price was 275% higher than its 2010 IPO value, but peaked at approximately 450% of its December 2010 IPO value.

This rapid growth that NGLS experienced was fueled by an expansion in Gathering and Processing capacity and upfront capital investments. From 2007 through 2014, NGLS invested approximately $2.6 billion in growth capital expenditures,\(^\text{55}\) including $1 billion in 2013\(^\text{56}\) and $0.70 billion in 2014.\(^\text{57}\) In February 2015, TGRP and NGLS acquired Atlas Energy (the GP and parent) and Atlas Pipeline Partners LP (the MLP), respectively. The transaction provided NGLS 12,220 of additional pipeline and 2,053 MMcf/d of processing capacity to the NGLS portfolio,\(^\text{58}\) including 10,250 miles of pipeline in the active Permian Basin.\(^\text{59}\)

**Impact of Commodity Exposure**

Despite the partnership’s growth in asset base through its acquisition of Atlas Pipeline Partners, NGLS’s exposure to commodity prices affected its performance. From October 2014 to December 2014, NGLS share price fell by nearly 50% alongside the fall in natural gas prices, which fell by approximately 25% over this time.\(^\text{60}\)

NGLS was exposed to commodity price risk through percent-of-proceeds arrangements. Under these contracts, NGLS would receive an agreed upon percentage of either the sale of natural gas or NGLs, or of a percentage based on an index related prices for natural gas and NGLs. NGLS takeaway revenues fell as natural gas prices fell in late 2014. These arrangements accounted for 51% and 60% of gathered natural gas volumes in 2014 and 2015, respectively.\(^\text{61}\) In 2015, when the roll-up transaction was announced, approximately 30% of NGLS margin was exposed to commodity prices.\(^\text{62}\) Average realized natural gas prices per MMBtu fell by approximately 43%, while average NGL prices fell by nearly 53%.\(^\text{63}\)

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\(^{55}\) Targa Resources Partners, L.P., Form 10K, 2014, p. 5  
\(^{56}\) Targa Resources Partners, L.P., Form 10K, 2013, p. 4  
\(^{57}\) Targa Resources Partners, L.P., Form 10K, 2014, p. 5  
\(^{58}\) Targa Resources Partners, L.P., Form 10K, 2014, p. 5  
\(^{60}\) Indices price information for NGLS retrieved Mar. 16, 2018 from Capital IQ Database.  
\(^{61}\) Targa Resources Partners, L.P., Form 10K, 2015, p. 34  
\(^{62}\) Targa Resources Partners, L.P., Form 10K, 2015, p.11  
\(^{63}\) Targa Resources Partners, L.P., Form 10K, 2015, p.79
Despite this exposure to commodity prices during the downturn, NGLS was able to grow distributable cash flow available to unitholders by $38 million from the fourth quarter 2014 to the fourth quarter 2015. This volume and cash flow growth was a result of the additional assets acquired in the Atlas merger. However, NGLS was required to distribute cash flow to a larger number of unitholders, as the unit count rose from 121 million at the end of 2014 to 189 million at the end of 2015, an increase of 56%. NGLS was thus required to distribute the same per-unit distribution to a larger number of unitholders, requiring higher distributable cash to maintain an adequate coverage ratio. As a result, the distributable cash flow coverage ratio fell from 1.5x in 2014 to 1.0x during this period. Further, as part of the merger with Atlas, NGLS cited an expected 11% – 13% distribution growth in 2015 to avoid the dilutive effect of the equity issuance.

*Figure 9: NGLS Distribution Growth and Coverage Ratio, 2010 – 2015*

![](image)

**Incentive Distribution Rights**

TGRP, the parent company, also owned incentive distribution rights as part of the partnership agreement. NGLS was required to distribute to the GP, in addition to its 2% ownership interest, distributions in accordance with Figure 10 below.

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64 Targa Resources Partners, L.P., Form 10K, 2015, p.22
66 Kay, Prior to Merger, Distribution Halted at Targa Resource Partners, 2015
Figure 10: NGLS IDR Payout Structure68

<table>
<thead>
<tr>
<th>Annual Cash Flow per LP Unit of NGLS</th>
<th>GP share of NGLS Profits</th>
<th>LP Share of NGLS Profits</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.3375 (MQD)</td>
<td>2%</td>
<td>98%</td>
</tr>
<tr>
<td>$0.3375 - $0.3881</td>
<td>2%</td>
<td>98%</td>
</tr>
<tr>
<td>$0.3881 - $0.4219</td>
<td>15%</td>
<td>85%</td>
</tr>
<tr>
<td>$0.4219 - $0.50625</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>&gt;$0.50625</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

The last distribution paid to unitholders in 2015 was $0.825,69 significantly above the highest tier of $0.50625. This meant that for each LP unit outstanding, NGLS was required to pay the incremental difference between each tier, as outlined above. NGLS’s historical distribution to the GP and LPs is provided in Figure 11 below.

Figure 11: Targa Resource Partners Distributions to Targa Resource Corporation and Limited Partners70

TGRP has, over time, has received a growing portion of the distributable cash flow from the MLP through its combination of its GP ownership interest, its LP ownership interest and incentive distribution rights. For example, between 2013 and 2014, the LP distribution grew only 18%, while the GP distribution grew 35%, as illustrated in Figure 11 above. At the end of 2015, 30% of the MLPs cash flow was distributed to TGRP through its ownership interests. This occurred despite a reduction in LP ownership interest and agreement to reduce IDRs by $77.5 million ($9.375 in the first two quarters of 2015).

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68 Targa Resources Partners LP, Form S-1, 2006, p. 59
69 Targa Resources Partners, L.P., 2015, Form 10-K, p. 58
through 2018 in connection with the Atlas merger.\textsuperscript{71} This IDR “give-back” instead reallocated the distributions to LPs.

As previously mentioned, the last drop down of assets from TRGP to NGLS took place in 2010. NGLS grew distributions by approximately 50% between 2010 and mid-2014 through cash flow growth driven by both capital expenditures and acquisitions. With a high proportion of distributable cash paid to the GP, projects need to provide a high enough return to distribute to both the LPs and the GP. The higher rate of return raises the cost of capital for NGLS. NGLS spent over $2 billion in organic growth projects from 2012 through 2014 and planned to spend an additional $700 to $900 million in 2015.\textsuperscript{72} This growth strategy was sustainable in a higher commodity market when projects yielded high returns. With lower natural gas and NGL prices, however, even negotiated fee-based contracts will yield lower returns. Over $300 million of this planned capital expenditure, however, was based on percent-of-proceeds agreements in the Gathering and Processing segment.\textsuperscript{73} These projects would likely be projected to generate lower returns in this market, making a high cost of capital prohibitive for future growth spending.

While the merger with Atlas was expected to generate growth, because of low commodity prices, these volumes did not translate into increase cash flow. This, combined with the decline in capital expenditures illustrated in Figure 12 below, suggests lower growth prospects for the MLP.

\textit{Figure 12: NGLS Capital Expenditures, 2010 – 2015}\textsuperscript{74}

\begin{table}
\centering
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline
\hline
Millions $ & $137 & $329 & $582 & $1,014 & $762 & $817 \\
\hline
\end{tabular}
\caption{NGLS Capital Expenditures, 2010 – 2015}
\end{table}

\begin{itemize}
\item \textsuperscript{71} Targa Resources Partners, L.P., Form 10-K, 2015, p. 5
\item \textsuperscript{72} Targa Resources Partners, L.P., Investor Presentation Second Quarter 2015, 2015, p. 6
\item \textsuperscript{73} Targa Resources Partners, L.P., Investor Presentation Second Quarter 2015, 2015, p. 9
\item \textsuperscript{74} S&P Global, Inc., Plains All American Pipeline Public Company Profile - Financials - Cash Flow, accessed April 1, 2018. Capital Expenditure history retrieved from the CapitalIQ Database, NGLS Private Company profile on April 1, 2018.
\end{itemize}
Targa Resources Corporation Announces Roll-Up Transaction

On November 3, 2015 TGRP, the MLP’s GP, announced it would acquire all outstanding units of NGLS in an all stock-for-unit transaction. Unit holders received 0.62 common units of TGRP stock for each unit of NGLS, an 18% premium over its average volume-weighted price in the previous 10 trading days. The transaction officially closed in February 2016. Figure 13 illustrates the changes to TGRP corporate structure following the close of the transaction.

Figure 13: Targa Resources Entity Structure before & after roll-up

TRGP cited three overarching reasons behind the transaction:

- Improved dividend coverage of a 1.05x reduces need for external financing to fund growth and improves credit metrics
- Simplified C-Corporation structure with larger market capitalization of $9 billion enhances investor understanding, thus providing access to a greater set of investors finance growth
- Elimination of incentive distribution rights reduces TRGP cost of capital, creating greater opportunity for growth projects

The transition to a C-Corp from an MLP loosened the restrictions on NGLS distributing cash flows. An MLP’s partnership agreement requires the MLP to pay out all available cash. While the MLP can hold back some cash for maintenance, reinvestment, or partnership operations, there is pressure continue to grow per-unit distributions, requiring higher distributable cash flow. This is compounded by the fact that coverage ratios are important: investors look for coverage ratios that are just above 1.0x. A C-Corporation, on the other hand, gives management and the board total discretion over the amount of dividend to distribute to shareholders. While investors’ expectations are

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75 Targa Resources Corporation, Targa Resources Corp. Announces Agreement to Acquire Targa Resources Partners LP, 2015
76 Targa Resources Corporation, Targa Resources Corp. to Acquire Targa Resources Partners, L.P., 2015, p. 5
important—investors typically expect dividends to continue—the company can, in theory, maintain more flexibility in how it manages distributions. NGLS maintained a DCR just at a 1.0x level into 2015, indicating it was not maintaining cash on hand to fund maintenance or future growth. Before the roll-up transaction, TRGP had to issue debt to fund both the IDRs and expansion. For example, in 2015, NGLS issued $1 billion to reduce its long-term revolver debt. Additionally, NGLS’s long-term debt increased from $1.4 billion in 2010 to over $5.1 billion in 2015 as its DCR ratio fell closer to a 1.0x. The roll-up transaction and conversion to a C-Corporation allowed provided TRGP flexibility to maintain more cash on hand for expansion and reduce its need to issue costly debt.

**Post-Transaction Performance**

When the transaction was announced, NGLS was trading approximately 3% below its 2010 value, but performance continued to decline following the announcement. While TGRP was trading approximately 100% above its 2010 value, this value is well below its peak of nearly 500% in mid-2014. Like NGLS, TGRP also saw its share price decline following the announcement. Figure 14 below illustrates the market reaction to the roll-up announcement and post roll-up performance of TRGP. As of March 16, 2018, TGRP was trading 6% below the transaction announcement date, while the AMZ was trading 26% lower. Both natural gas and crude oil prices, however, have seen some recovery, trading at 20% and 30% higher, respectively.

*Figure 14: NGLS and TGRP Performance Following Transaction Announcement*  

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77 S&P Capital IQ, Company Profile, 2018
79 Chart reflects percent change in bid open value as of transaction date, Nov. 3, 2015
When TGRP announced the transaction, it expected a 15% dividend growth in 2016. However, the TGRP dividend to shareholders has held constant at $0.91/unit since the third quarter of 2015.

As part of the transaction announcement, TRGP noted cumulated distributable cash flow (DCF) growth of $400 million through 2018. Cash flow growth would be necessary to support the dividend growth discussed previously. DCF at the end of 2016 was $762 million, approximately $68 million lower than DCF in 2016. While TRGP did report DCF of $852 million in February 2018, this number is only $20 million higher than the 2015. TRGP is thus far from the projected $400 million cumulative growth. One reason for this lower-than-expected DCF could be that as February 2018, TRGP still has approximately one-third of its cash flow exposed to commodity prices, resulting in earnings fluctuations.

Full-year dividend coverage was only 1.00x, below the forecasted 1.05x announced with the transactions. This low coverage indicates that TRGP is paying out most of its cash to dividend payments. Any growth projects must be financed from outside debt or equity, still leaving TRGP with a higher cost of capital versus peers with higher coverage ratios. Further contributing to TGRP’s higher cost-of-capital is its credit rating of a Ba2. TRGP has held this rating since March 2016, when it was upgraded from a Ba3.

Despite its low coverage ratio, TRGP plans to pursue $1.6 billion in announced growth projects in 2018. $1.1 billion of this total is through joint ventures. The joint venture model will allow the company to pursue growth projects without having to access equity markets. However, $475 million of these projects are commodity-based, rather than fee-based, despite the focus to increase fee-based margin. Additionally, approximately 80% of the announced project growth is in the Permian Basin. This geographically concentrates future earnings, a divergence from the geographic diversification that the company has historically used to manage price volatility.
ONEOK Partners – ONEOK Inc.

On February 1, 2017, ONEOK Inc. announced an agreement to acquire the remaining outstanding common units of its MLP, ONEOK Partners L.P. (OKS). ONEOK Inc. cited a lower cost of capital for future growth and stronger cash flow generation through the larger standalone entity as the motivation for the transaction. Similar to the Targa roll-up, the ONEOK case study serves to demonstrate the key reasons C-Corporation GPs are choosing to purchase their MLPs and operate them within the C-Corporation structure.

Company Overview

ONEOK, Inc (OKE) was founded in 1906 as an intrastate natural gas pipeline business in Oklahoma. Today, it is one of the nation’s largest energy midstream service providers. OKS currently operates in three main segments: natural gas Gathering and Processing, NGLs, and natural gas pipelines. The company’s assets include a 38,000-mile network of NGL and natural gas pipelines, processing plants, fractionators, and storage facilities across the United States.

Prior to 2006, OKS traded as Norther Borders Partners, L.P. (NBP). In April 2006 which OKE sold assets (“dropped down”) to NBP in exchange for cash and LP units. Using these proceeds, OKE purchased the remaining outstanding GP interest from TransCanada, Inc., making it the sole GP. It was at this time that OKE changed the name of the partnership from Northern Border Partners to ONEOK Partners to reflect a greater alignment of interests and more streamlined structure between the two entities because of the transaction. The new structure allowed OKE to raise debt and equity to finance growth projects that were then sold to OKS in exchange for cash, allowing the MLP to grow through drop-down transactions. From 2006 until the roll-up transaction, OKE was the sole GP of OKS. When the transaction closed, OKE also owned 39.2% of the LP units.

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86 ONEOK, Inc., ONEOK ANNOUNCES AGREEMENT TO ACQUIRE REMAINING PUBLIC STAKE IN ONEOK PARTNERS IN A TRANSACTION VALUED AT $17.2 BILLION, 2017
87 ONEOK, Inc., ONEOK ANNOUNCES HIGHER SECOND-QUARTER AND SIX MONTHS 2006 EARNINGS; INCREASES 2006 EARNINGS GUIDANCE, 2006
88 ONEOK, Inc., 2016, Form 10-K, p. 34
Historical Market Performance

Both OKE and OKS historically demonstrated a strong performance, outperforming the AMZ, natural gas, and crude oil prices. Figure 15 below charts both OKE and OKS average monthly percent change in day open price (relative to January 2010) against these benchmarks through March 2018.

*Figure 15: OKE and OKS historical trading performance relative to industry benchmarks, 2012-2017*  

Beginning in mid-2011, OKS began to outperform the AMZ. The MLP continued this performance trend until the third quarter 2014, when performance deteriorated alongside falling natural gas and crude oil prices. OKS value hit a minimum value of 18% below its 2010 share price in December 2015. During this same month, natural gas and oil prices reached a minimum value of 65% and 54% below 2010 values, respectively. While the AMZ also saw performance decline from late 2014 through 2015, it did not experience such a sharp decline in performance, as illustrated in the figure above. However, during the commodity downturn, the GP, OKE, outperformed the AMZ.

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OKE’s deteriorating performance through the 2015 appears to be driven by the MLP’s exposure to natural gas prices, primarily through its Gathering and Processing segment. In 2013 and 2014, 22% and 23% of earnings, respectively, were based on commodity prices through “percent-of-proceeds” arrangements. Through these arrangements, OKE contracts with producers to processes natural gas and NGLs, which are then sold downstream to end-users. Rather than receiving a fixed fee for a certain volume of resource processed, OKS receives a percentage of the total proceeds, which fluctuate with current commodity prices. OKS Sources of Earnings from 2013 through 2017 are illustrated in Figure 16 below.

Figure 16: OKS Sources of Earnings, 2013 - 2017

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90 ONEOK, Inc., September 2016 Investor Update, p. 9
91 ONEOK, Inc., September 2016 Investor Update, p. 21
92 ONEOK, Inc., March 2017 Investor Update, p. 10
93 Prior to 2015, OKS reported ‘operating income’ and not segment EBITDA
In 2014, nearly one-fourth of OKS operating income was derived from the Gathering and Processing segment.\textsuperscript{94} Given that 66% of this segment earnings were determined based on commodity prices (as illustrated in Figure 17 below), OKS experienced a significant decrease in operating income as commodity prices fell. Figure 18 displays both 2014 and 2015 quarter-by-quarter earnings for the Gathering and Processing segment. Gathering and Processing operating income was $202 million lower in 2014 versus 2015.

**Figure 17: Gathering and Processing Sources of Earnings, 2013 – 2017\textsuperscript{95}**

![Bar chart showing the percentage of operating income derived from fee-based and commodity-based sources for each year from 2013 to 2017.]

**Figure 18: 2015 versus 2014 Gathering & Processing Operating Income\textsuperscript{96}**

![Column chart comparing quarter-by-quarter operating income for 2014 and 2015.]

\textsuperscript{94} ONEOK, Inc., 2016, Form 10-K, pp. 50,51
\textsuperscript{95} ONEOK, Inc., March 2018 Investor Update, p. 15
\textsuperscript{96} ONEOK, Inc., ONEOK PARTNERS ANNOUNCES FIRST-QUARTER 2015 RESULTS; REAFFIRMS 2015 FINANCIAL GUIDANCE, 2015.
While this includes a $73 million asset impairment charge, realized NGL, condensate, and natural gas sales prices were lower by $0.59/gallon, $38.62/Bbl, and $0.28/MMbtu, respectively, contributing to the decline in earnings.\textsuperscript{97} It is, however, important to note that OKS renegotiated many of these Percent-of-Proceed arrangements through 2015 and 2016, resulting in an average fee revenue of $0.76/MMBtu in 2016 versus $0.44/MMBtu in 2015. Further, as of March 2018, 85\% of the Gathering and Processing segment and 90\% of total earnings OKE earnings were fee-based.\textsuperscript{98}

**Partnership Distribution Growth and Incentive Distribution Rights**

From the first quarter of 2010 through the transaction announcement date in the first quarter 2017, OKS grew its DCF by $230 million from $122 million to $355 million, as illustrated in Figure 19 below. While there are periods where DCF falls quarter-over-quarter, OKS was able to maintain positive distribution growth through these periods while still maintaining an adequate level of distribution coverage. In the fourth quarter of 2014, OKS raised its distribution to $0.79/unit.\textsuperscript{99} This, however, was the last distribution increase prior to the roll-up transaction.

*Figure 19: Distributable Cash Flow and Distribution Growth, 2010 – 2017\textsuperscript{100}*

\textsuperscript{97} ONEOK, Inc., ONEOK Partners Announces Fourth-quarter and Full-year 2015 Results, 2016
\textsuperscript{98} ONEOK, Inc., ONEOK Partners Announces Third-Quarter 2015 Results, 2015
\textsuperscript{99} ONEOK, Inc., ONEOK Partners Announces Second Quarter 2015 Results, 2015
\textsuperscript{100} ONEOK, Inc., ONEOK PARTNERS ANNOUNCES FIRST-QUARTER 2015 RESULTS; REAFFIRMS 2015 FINANCIAL GUIDANCE, 2015
\textsuperscript{99} ONEOK, Inc., 2018, March 2018 Investor Update, pp. 13, 15
\textsuperscript{99} ONEOK, Inc., Investor Relations: Dividend History
\textsuperscript{100} ONEOK, Inc., Investor Relations: First to Fourth Quarterly Financial Results, 2012 - 2017
The effect of lower cash flow from reduced commodity prices in 2015, combined with a pressure to sustain distributions, led to a distribution coverage ratio of 0.60x by the first quarter of 2015, as illustrated in Figure 20 below.\(^{101}\) Any distribution cut would signal lower growth prospects to investors, as OKS was likely dipping into reserve funds to finance distributions, rather than investing in capital growth projects.

*Figure 20: Distribution Coverage Ratio, 2010 – 2017*

![Distribution Coverage Ratio Chart](image)

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**Incentive Distribution Rights**

OKS was also challenged by the need to maintain stable distribution growth were OKE’s (the GP) ownership of the IDRs. The OKE-OKS IDR tier structure is outlined in Figure 21 below.

*Figure 21: OKS IDR Payout Structure\(^{102}\)*

<table>
<thead>
<tr>
<th>Annual Cash Flow per LP Unit of OKS</th>
<th>GP Share of OKS Profits</th>
<th>LP Share of OKS Profits</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.275 - $0.3025</td>
<td>2%</td>
<td>98%</td>
</tr>
<tr>
<td>$0.3025 - $0.3575</td>
<td>15%</td>
<td>85%</td>
</tr>
<tr>
<td>$0.3575 - $0.4675</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>&gt;$0.4675</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

\(^{101}\) Data derived from ONEOK investor relations quarterly press releases from 2012 to 2017

\(^{102}\) ONEOK, Inc., Form 10-K, 2016, p. 99
When OKE paid its distribution of $0.79/unit distribution in 2015 and 2016, it was well over the $0.4675 Tier 4 threshold. This means that the MLP must pay the GP 50% of all distributions paid over $0.465/unit.\(^\text{103}\) Thus, while the LPs benefitted in the increase in per-unit distributions from 2010 through 2016, the GP also benefitted substantially through IDR payments. In 2016, OKE paid the GP $429 million in IDRs, an increase of approximately 275% from 2010. Over this same time, distributions to the LPs only grew by 100%. By 2016, approximately 60% of all DCF was paid to OKE through its 39.2% ownership of LP units, 2% GP interests, and IDRs, as illustrated in Figure 22 below.\(^\text{104}\)

\textit{Figure 22: OKS Distributions to General Partner and Limited Partners, 2010 -2016}\(^\text{105}\)

![Graph showing OKS distributions to General Partner and Limited Partners, 2010-2016.](image)

Because such a substantial portion of cash flow was required to be paid to OKE, distribution growth became increasingly difficult, especially in the low cash flow environment of 2015. When the distribution was $0.79/unit, the MLP was required to pay the GP approximately $0.37 for every LP unit outstanding. For the MLP to increase distributions by 2% to $0.806, it would be required to pay a distribution of $0.806 on each LP unit, as well as pay an additional $0.016\(^\text{106}\) for each LP unit to the GP. Thus, a distribution increase of 2% costs the MLP more than 2% in additional DCF if it wishes to maintain coverage.\(^\text{107}\) These IDRs also raise the cost of capital for the OKS, as projects must generate a high enough return to distribute to both LPs and the GP.\(^\text{108}\) Given lower commodity prices and volumes, and thus lower rates of return finding future growth projects that generate this necessary return can prove challenging.

\(^\text{103}\) For example, the GP was entitled to 50% of all cash paid to limited partners from $0.4675/unit to $0.79/unit

\(^\text{104}\) ONEOK, Inc., Form 10-K 2016, p. 36


\(^\text{106}\) Calculated by $0.806-$0.79

\(^\text{107}\) Patredis, Monday Mailbag: How Do Incentive Distribution Rights Work?, 2015

\(^\text{108}\) McCabe, Master Limited Partnerships’ Cost of Capital Conundrum, 2015
**ONEOK Partners Equity Issuance**

In August 2015, following two quarters of DCF ratios below a 1.0x, OKS was forced to raise $750 million in equity, through a combination of $650 million (21.5 million LP units) to GP OKE, and $100 million (3.3 million LP units). This equity issuance raised OKE ownership from 36.8% to 41.2%. The fact that a sizeable portion of this equity went to the parent company is important to note – because OKE derived a substantial portion of cash flow from the MLP through incentive distribution rights (as illustrated in Figure 22 above), a distribution cut would severely affect cash flow at the corporate level. OKE, however, paid for this equity through corporate debt issuance of $500 million. Following the transaction, Moody’s downgraded OKE from Baa3 to Ba1 citing the need for OKE to re-leverage to support OKS EBITDA growth. OKS outlook was also changed from stable to negative.

According to OKE, the purpose of this transaction was to pay down debt at the MLP level. In 2014, OKS increased its short-term borrowings from $0 commercial paper outstanding at the end of 2013 to $1.1 billion at the end of 2014 and continued to maintain short-term debt levels above historical levels into 2015, as illustrated in Figure 23 below.

*Figure 23: ONEOK Partners Short-Term Borrowings Trend, 2011 – 2017*

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109 Oil and Gas Financial Journal Staff, ONEOK agrees to purchase 21.5M common units from ONEOK Partners, 2015
110 Moody’s Investor Servic, Rating Action: Moody’s downgrades Plains to Ba1; outlook stable, 2017
111 ONEOK, Inc., Investor Relations: ONEOK PARTNERS ANNOUNCES AGREEMENTS TO SELL 24.9 MILLION COMMON UNITS, 2015
112 Short term borrowing information retrieved from OKS Capital IQ Company Profile, March 17, 2018.
OKS stated that the purpose of the commercial paper program was to fund short-term liquidity needs for working capital and capital expenditures.\textsuperscript{113} The partnership also increased the size of its commercial paper program from $1.7 billion to $2.4 billion by March 2015, allowing for a higher borrowing maximum.\textsuperscript{114} It appears that OKS was using short-term debt to fund partnership operations, as the distribution coverage ratio below 1.0x meant that it did not have excess cash to fund capital expenditure projects. Figure 24 below illustrates OKS’s decline in capital expenditures following a peak in 2016.

\textit{Figure 24: ONEOK Partners Capital Expenditure Trend, 2011 – 2017} \textsuperscript{115}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure24.png}
\caption{ONEOK Partners Capital Expenditure Trend, 2011 – 2017}
\end{figure}

\textbf{ONEOK Announces Roll-Up Transaction}

While distributable cash flow grew, and coverage ratios improved through 2016, OKS did not increase its distribution. Further, OKS continued to sustain $1.1 billion in short-term debt into 2016 through its commercial paper program to fund liquidity needs, well above historical averages\textsuperscript{116}.

In February 2017, OKE announced it would purchase all outstanding units of OKS it did not already own, citing stronger cash flow generation, greater access to capital markets, and a lower cost of funding as motivations behind the transaction. OKE also highlighted a dividend increase of 21\% in 2017, and growth of 9\% to 11\% through 2021. Further, following the downgrading of OKE’s credit ratings in 2015, the higher cash flow retention through the combined company was expected to enhance credit metrics.\textsuperscript{117} A return to

\textsuperscript{113} ONEOK, Inc., Form 10-K, 2013. ONEOK, Inc., Form 10-K, 2014
\textsuperscript{114} ONEOK, Inc., Form 10-K, 2015
\textsuperscript{115} Capital expenditure information retrieved from OKS Capital IQ Company Profile, March 17, 2018.
\textsuperscript{116} Historical averages retrieved from OKS Capital IQ Company Profile, March 17, 2018.
\textsuperscript{117} ONEOK, Inc., Investor Relations: ONEOK ANNOUNCES AGREEMENT TO ACQUIRE REMAINING PUBLIC STAKE IN ONEOK PARTNERS IN A TRANSACTION VALUED AT $17.2 BILLION, 2017
investment-grade ratings would reduce the cost of borrowing to fund future capital growth projects.

Transaction Results

Following the merger, Moody’s immediately upgraded OKE’s senior unsecured notes to Baa3 from Ba1, an investment grade level, with a “stable” rating outlook. Moody’s cited a simplified organizational structure, elimination of distributions, and stable cashflow as the basis for the ratings upgrade.¹¹⁸

OKE has exhibited positive returns since the transaction close. As of March 11, 2018, share price was 11% higher than the transaction close date of June 30, 2017 and has also significantly outperformed the AMZ.¹¹⁹ The company also issued a dividend of $0.745/unit in the second quarter of 2017 (June 2017), an increase of 21%, as noted in the transaction motivations above. Trends since transaction close are illustrated below in Figure 25.

Figure 25: OKE Returns and Distribution Yield Relative to Alerian Index since Transaction Close²²⁰

¹¹⁸ Moody’s Investor Service, Rating Action: Moody’s upgrades ONEOK, Inc. to Baa3, downgrades ONEOK Partners to Baa3, 2017
¹¹⁹ OKE return data retrieved March 16, 2018 from Capital IQ Database.
²²⁰ OKE share price and dividend yield retrieved Mar. 16, 2018 from Capital IQ Database.
The distribution remained at $0.745/unit for the third quarter\textsuperscript{121}, but subsequently increased that distribution to $0.77/unit for the fourth quarter 2017. The annual dividend coverage ratio was 1.34x, well above the sustainable 1.0x level.\textsuperscript{122}

Unlike TRGP discussed previously, OKE has grown distributions in line with the transaction goals; however, the time period to evaluate since the transaction closed is limited. The ability to maintain this distribution growth rests on the company’s ability to grow cash flow through growth projects. According to the company’s 2018 guidance, it anticipates between $1.9 billion and $2.3 billion in capital expenditures this year, an increase from the original guidance number of $1.3 billion to $1.5 billion. Since late 2017, over $2.3 billion in projects have been announced with completion by 2020, including expansions to NGLs infrastructure, natural gas processing, and pipeline systems. Importantly, this capacity is contracted and backed by long-term contracts, serving as support that the company will be able to provide stable cash flows for future distribution growth.\textsuperscript{123,124,125,126}

**Plains All American Pipeline, L.P.**

As previously discussed, IDR\'s make sustained distribution growth difficult and raise the cost of capital for MLPs. The case of Plains All American serves to illustrate a growing trend in the MLP space – the removal of IDR\'s through a buyout of the GP. From 2006 through 2010, five MLP\’s chose to eliminate IDRs. Since 2015, 10 MLP\’s have removed IDR\’s as part of the partnership agreement to manage the growing share of distributable cash flow paid to the GP. Four of these announced simplifications have occurred in the first three months of 2018. Figure 26 below illustrates the growing trend in companies eliminating IDR\’s as a method of simplifying the MLP structure to operate effectively in today\’s environment.

\textsuperscript{121} ONEOK, Inc., Investor Relations: ONEOK ANNOUNCES HIGHER THIRD-QUARTER 2017 FINANCIAL RESULTS; MAINTAINS 2017 FINANCIAL GUIDANCE, 2017
\textsuperscript{122} ONEOK, Inc., Investor Relations: ONEOK ANNOUNCES HIGHER FOURTH-QUARTER AND FULL-YEAR 2017 OPERATING INCOME AND ADJUSTED EBITDA, 2018
\textsuperscript{123} ONEOK, Inc., Investor Relations: ONEOK TO INVEST $2.3 BILLION FOR ADDITIONAL NGL AND NATURAL GAS INFRASTRUCTURE, 2018
\textsuperscript{124} ONEOK, Inc., Investor Relations: ONEOK TO EXPAND INFRASTRUCTURE TO SERVE STACK GROWTH, 2017
\textsuperscript{125} ONEOK, Inc., Investor Relations: ONEOK Announces West Texas LPG System Expansion into the Delaware Basin, 2017
\textsuperscript{126} Projects include a $130 million investment in STACK region with EnLink, a$200 million investment in West Texas into Delaware Basin, and a $2.3 billion into 2020 to support NGL and natural gas infrastructure in Texas, North Dakota, and mid-continent regions.
Plains All American (PAA) ‘bought out’ the GP interest, Plains GP Holdings L.P. (PAGP) through an exchange for common units of the MLP, effectively converting the GP interest to a non-economic interest.\textsuperscript{128} The following section will provide an overview of PAA as a company, explain what specific company and market factors led to the necessity of this transaction, and evaluate performance metrics since completion. Through this evaluation, we seek to identify what factors, if any, make an IDR elimination a preferable option compared to a roll-up transaction.

**Company Overview\textsuperscript{129}**

PAA is a midstream energy infrastructure firm that owns and operates midstream energy assets and provides logistics services for crude oil, NGL, natural gas, and refined products. The company operates in three main segments: Transportation, Facilities, and Supply and Logistics.\textsuperscript{130}

The Transportation segment consists primarily of fee-based earnings associated with transporting crude oil, and NGLs on pipelines, gathering systems, trucks, and barges.\textsuperscript{131} Like the Transportation segment, the Facilities segment also generates fee-based earnings. The Facilities segment provides tank and terminal storage facilities and throughput services for crude oil, natural gas, and NGLs. Earnings from the Supply and Logistics segment are merchant-based and involve the purchase, sale, and resale of crude oil. Segment earnings also include the seasonal storage of resources, as well as the transportation of crude oil and NGL to market hub locations or end users. These merchant activities allow PAA to capture margin during certain market conditions.\textsuperscript{132}

\textsuperscript{127} Morris, MLP Structural Simplifications: Part 2 – IDR Eliminations, 2018
\textsuperscript{128} Business Wire, Plains All American Pipeline, L.P. and Plains GP Holdings Announce Successful Results of Simplification Process and Related Actions, 2016
\textsuperscript{129} Plains All American Pipeline, L.P., Corporate Website Company Overview, 2018
\textsuperscript{130} Plains All American Pipeline, L.P., Corporate Website Company Overview, 2018
\textsuperscript{131} Plains All American Pipeline, L.P., Corporate Website Company Overview, 2018
\textsuperscript{132} Plains All American Pipeline, L.P., Corporate Website Company Overview, 2018
**Initial Public Offering and Historical Performance**

PAA completed its IPO in 1998. Prior to the simplification transaction in 2016, per the organizational structure described by the company, Plains GP Holdings, L.P. effectively held the 2% GP interest.\(^{133}\) PAGP did not complete an IPO until October 2013.\(^{134}\)

Figure 27 illustrates the decline in performance of PAA since the IPO of the GP (PAGP) in October 2013. PAGP issued its IPO in October 2013 at the height of the shale boom when oil was trading at $103 per barrel. When the simplification was announced in July 2016, oil had lost over half its value, and PAGP was trading 55% below its IPO value. Similarly, PAA, its MLP, was trading 46% below its October 2013 value.

*Figure 27: Historical Performance of PAA relative to industry benchmarks since 2008\(^{135}\)*

Figure 28 illustrates the decline in performance of PAA since the IPO of the general partner (PAGP) in October 2013. PAGP issued its IPO in October 2013 at the height of the shale boom when oil was trading at $103 per barrel. When the simplification was announced in July 2016, oil had lost over half its value, and PAGP was trading 55% below its IPO value. Similarly, PAA, its MLP, was trading 46% below its October 2013 value.

\(^{133}\) Plains All American Pipeline, L.P., Form 10-K, p. 4-5, 2016

\(^{134}\) Plains All American Pipeline, L.P., Form 10-K

The decline in PAA performance was fueled by the partnership’s exposure to commodity prices through its Supply and Logistics segment. While Transportation and Facilities earnings have been relatively stable, Supply and Logistics earnings quarter-by-quarter earnings have been historically volatile, even prior to the late-2014 price crash.\textsuperscript{137} This segment generates revenue through capitalizing on price differentials between locations – it purchases crude oil, NGL, and natural gas, and resells the resources downstream, taking advantage of price arbitrage opportunities. These price differentials are affected by both location-specific supply and demand as well as the competitive environment, both outside of PAA control. The earnings volatility of the Supply and Logistics segment relative to both the Transportation and Facilities segments is illustrated in Figure 29 below.

\textsuperscript{137} Plains All American Pipeline, L.P., Form 10-K, 2016, p. 31
In 2012 and 2013, Supply and Logistics segment contributed nearly 40% of total adjusted EBITDA\(^{140}\). When the transaction was announced in 2016, that percentage had declined to approximately 17%, and continued to all to 3% in 2017. This equates to a difference in $463 million in segment adjusted EBITDA through 2016 and $762 through 2017. While this loss was partially offset by an increase in earnings in the Facilities and Transportation segments, adjusted EBITDA was still $86 million lower in 2017\(^{141} \text{ 142}\). Figure 30 below illustrates PAA historical earnings by segment from 2010 through 2017.

\(^{138}\) Denning, Some Have a Way With Words. Plains All American ... Not Have Way, 2017

\(^{139}\) Segment financial information retrieved PAA Capital IQ Company Profile, March 16, 2018.

\(^{140}\) PAA defines Adjusted EBITDA as earnings before interest, taxes, depreciation and amortization, equity-indexed compensation plan charges, gains and losses from derivative activities, acquisition costs, and other selected items that impact comparability, per 2016 10-K. Plains All American Pipeline, L.P., Form 10-K, 2016, p. 84

\(^{141}\) Plains All American Pipeline, L.P., Form 10-K, 2017, p. 82. Plains All American Pipeline, L.P., Form 10-K, 2014, pp. 78,80,85

\(^{142}\) Prior to 2016, PAA reported Segment Profits and in 2016 changed to reporting Adjusted EBITDA, which is reflected in this data. Plains All American Pipeline, L.P., Form 10-K, 2016, p. 84
It is essential that the partnership continue to grow its distribution to maintain the cost of capital benefit afforded by the MLP structure. The ability to grow this distribution, however, depends on stable, predictable cash flows. Like OKS’s Gathering and Processing unit in 2013 and 2014, PAA Supply and Logistics segment deviates from the traditional “toll-based” model that historically made midstream companies good candidates for the MLP model. The effect of this variability and reduction in adjusted EBITDA resulted in inconsistent levels of distribution coverage levels.

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Figure 30: PAA Segment Earnings, 2012 – 2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Transportation</th>
<th>Facilities</th>
<th>Supply &amp; Logistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$0.7</td>
<td>$0.8</td>
<td>$0.5</td>
</tr>
<tr>
<td>2013</td>
<td>$0.7</td>
<td>$0.6</td>
<td>$0.6</td>
</tr>
<tr>
<td>2014</td>
<td>$1.0</td>
<td>$0.6</td>
<td>$1.0</td>
</tr>
<tr>
<td>2015</td>
<td>$1.1</td>
<td>$0.6</td>
<td>$1.1</td>
</tr>
<tr>
<td>2016</td>
<td>$1.1</td>
<td>$0.7</td>
<td>$0.7</td>
</tr>
<tr>
<td>2017</td>
<td>$1.3</td>
<td>$0.7</td>
<td>$0.7</td>
</tr>
</tbody>
</table>

Segment financial information retrieved March 16, 2018 from Capital IQ Database PAA Public Company Profile

Denning, Some Have a Way With Words. Plains All American ... Not Have Way, 2017
Despite the variability in DCF, PAA still maintained an average distribution growth rate of approximately 2% from first quarter 2013 through the second quarter 2015, before slowing, and eventually stopping all distribution growth in late 2015. However, to sustain this growth, PAA saw its distribution coverage ratio fall to 0.73x in the third quarter 2015. Average distribution coverage ratio from the second quarter of 2015 until the transaction announcement in the third quarter of 2016 was 0.80x, as illustrated in Figure 31 below.

Figure 31: PAA quarterly distribution and coverage ratios

Further, because the company had sustained coverage ratios below 1.0x through 2015, by January 2016, PAA faced a $1.7 billion funding gap after paying its distributions to common unitholders and LPs and for maintenance capital expenditures. Total capital expenditures had declined significantly, as illustrated in Figure 32. This reduction in capital expenditures signaled weak growth prospects for the MLP, translating into a higher cost of capital for the company to compensate investors for added risk.

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Figure 32: PAA Capital Expenditures, 2010 – 2016

Capital expenditure information retrieved March 16, 2018 from Capital IQ Database PAA Public Company Profile

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146 Capital expenditure information retrieved March 16, 2018 from Capital IQ Database PAA Public Company Profile
In January 2016, PAA issued $1.5 billion in convertible preferred equity to fund its shortfall, which temporarily increased the coverage ratio above a 1.0x in the first quarter of 2016.\textsuperscript{147} The distribution, however, remained unchanged at $0.70/unit for the first and second quarters of 2016, and coverage ratio fell below 1.0x the following quarter.\textsuperscript{148} When the simplification was announced in the third quarter 2016, the distribution was cut by 21\% to $0.55/unit, and the coverage ratio was 0.73x. It is also important to note that during this period, PAA yield was nearing 14\% because of its falling share price (Figure 33 below).\textsuperscript{149} Because yield should be approximately equal to the company’s cost of equity, raising capital to fund future growth was difficult.

\textit{Figure 33: Distribution Yield vs. Share Price}\textsuperscript{150}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{distribution_yield_vs_share_price.png}
\end{figure}

\textbf{PAA Announces ‘Buy Out’ of GP}

In July 2016, PAA announced a simplification of its organizational structure in response to this persistent funding shortfall. Through this transaction, PAA would eliminate incentive distribution rights (IDRs) to the GP and all economic rights associated with the 2\% GP interests held by Plains GP Holdings, L.P. (PAGP). In exchange, PAGP would receive 245.5 million newly issued PAA units, representing 34.8\% of the MLP.\textsuperscript{151} Together with its 42\% economic interest Plains AAP, L.P. (AAP), PAGP had a 14\% interest in PAA following the transaction.\textsuperscript{152}

\begin{itemize}
\item \textsuperscript{147} Denning, A Week of Warning for MLPs, 2016
\item \textsuperscript{148} Plains All American Pipeline, L.P., Fourth-Quarter 2017 Earnings Package, Non-GAAP & Supplemental Reconciliations, 2018, p. 11
\item \textsuperscript{149} Plains All American Pipeline, L.P., Fourth-Quarter 2017 Earnings Package, Non-GAAP & Supplemental Reconciliations, 2017, p. 11
\item \textsuperscript{150} Information retrieved March 16, 2018 from Capital IQ Database PAA Public Company Profile
\item \textsuperscript{151} Business Wire, Plains All American Pipeline, L.P. and Plains GP Holdings Announce Successful Results of Simplification Process and Related Actions, 2016
\item \textsuperscript{152} Plains All American Pipeline, L.P., Form 10-K, 2016, p. 6
\end{itemize}
PAA Announces ‘Buy Out’ of GP

In July 2016, PAA announced a simplification of its organizational structure in response to this persistent funding shortfall. Through this transaction, PAA would eliminate IDR$ to the GP and all economic rights associated with the 2% GP interests held by PAGP. In exchange, PAGP would receive 245.5 million newly issued PAA units, representing 34.8% of the MLP.\textsuperscript{153} PAGP effectively has a 14% interest in PAA following the transaction.\textsuperscript{154}

Impacts of the simplification transactions

The stated objectives of the simplification transactions were as follows:\textsuperscript{155}

1. Reduce cost of equity through the elimination of IDR$.
2. Simplify PAA’s capital structure, providing greater understanding for potential debt and equity investors.
3. Better align interests of all equity stakeholders by allowing unitholders to participate in the election of the board of directors.
4. Increase coverage above a 1.0x annualized coverage through a distribution reduction.

The initial concern with the concept of removing IDR$ from the MLP structure is the loss of incentive alignment between the GP controlling the operations of the MLP and the common unit holders. In response to this concern additional rights were given to PAGP Class A shareholders and PAA common and preferred unitholders. These equity stakeholders now have the right to participate in the election of directors of the GP (PAGP) board of directors. The board of directors was also expanded to include six independent members. PAA referred to this as a unified governance structure.\textsuperscript{156} It is important to note, though, that while IDR$ are designed to align GP and LP interests, when the transaction was announced in 2016, nearly 35% of DCF was paid to the GP through its 2% interest and IDR$.\textsuperscript{157} Because the GP was receiving such a high proportion of the cash flow relative to the LPs, equal per-unit distributions may better align incentives between the two groups.\textsuperscript{158}

\textsuperscript{153} Business Wire, Plains All American Pipeline, L.P. and Plains GP Holdings Announce Successful Results of Simplification Process and Related Actions, 2016
\textsuperscript{154} Plains All American Pipeline, L.P., Form 10-K, 2016, p. 6
\textsuperscript{155} Plains G.P. Holdings, L.P., Schedule 14A
\textsuperscript{156} Plains All American Pipeline, L.P., 10-K, 2016, p. 70
\textsuperscript{157} Plains All American Pipeline, L.P., Form 10-K, 2016, pp. F-30
\textsuperscript{158} Alerian MLP Index, Feb 22\textsuperscript{nd}, 2018
The simplification transaction was officially completed in November 2016. An analysis of market metrics suggests that the stated objections, namely improving PAA credit and coverage profile, have not been met. Figure 34 illustrates both PAA and PAGP performance since the transaction closed. While the AMZ is trading below its November 2016 value, both PAA and PAGP have underperformed the Index.

Figure 34: Distribution Yield vs. Share Price

In August 2017, PAA reported lower-than-expected second quarter earnings, forcing the company to revise its 2017 Adjusted EBITDA guidance and 2018 Preliminary Forecast. The root cause of this issue was the previously mentioned margin-based Supply and Logistics segment. Following the second quarter earnings report, PAA subsequently cut its third quarter distribution by an additional 45% to $0.30, approximately 57% lower than when the simplification transaction was announced in 2016. The company announced that they would exclude this segment entirely from how they calculated distributions to remove volatility in distributable cash flow, ensuring that future distributions would be determined primarily on fee-based revenue. As a result, in August of 2017, Moody’s downgraded PAA from a Baa3 to a Ba1 because of “continued failure to meet EBITDA guidance.”

The reduction in the third quarter distribution was part of a larger plan to improve credit metrics. The distribution reduction is expected to save approximately $725 million per year. Additionally, the partnership has divested non-core and strategic assets, as well as issued additional Series B Preferred Equity, to pay down debt, improving leverage metrics, and fund expansion projects. This additional cash flow from asset sales and equity issuance improved the coverage ratio in the fourth quarter of 2017 to a 1.92x. Further,

161 Pulsinelli, Plains All American Pipeline to cut distribution, take other steps to reduce debt, 2017
162 Moody’s Investor Service, Rating Action: Moody’s downgrades Plains to Ba1; outlook stable, 2017
163 Plains All American Pipeline, L.P., 2018, Fourth-Quarter 2017 Earnings Package, Non-GAAP & Supplemental Reconciliations, p. 11
leverage metrics do appear to be improving. Its Debt-to-Adjusted EBITDA ratio is down to a 4.4x (as of fourth quarter 2017), closer to the target of 3.5x-4.0x, and well below the June 2017 5.0x.\textsuperscript{164}

The short time horizon since the deleveraging program began makes it difficult to draw long-term conclusions regarding PAA growth prospects. It does appear, however, that the partnership remains committed to growing distributions based on fee-based earnings, in line with the more traditional “toll-based” midstream model. This is evidenced by PAA 2018 EBITDA guidance, which attributes $2.2 of $2.3 forecasted total adjusted EBITDA (approximately 96%) to fee-based Transportation and Facilities segments.\textsuperscript{165}

**Discussion**

For the last 20 years the MLP structure has played an important role for businesses in the midstream energy sector. The MLP, as a tool, helps to aggregate capital in the oil and gas space into partnerships that may otherwise have not occurred without the special treatment allowed for MLPs in the US Tax Code. The effects of the 2018 tax reforms remain uncertain for MLPs. We do know that the corporate tax rate was reduced to 21%; however, the Act also grants a 20% income tax deduction to MLP unitholders on income earned from the MLP. While the relative tax benefit between C-Corp and the MLP structure shrunk due to the reduced corporate tax rate, MLP’s still have a tax advantage over the traditional corporation.\textsuperscript{166}

Although MLPs offer benefits, most notably the ability to avoid double taxation and pass-through revenues directly to owners (GP and LPs), the structure faced serious challenges during the fall in commodity prices in 2015 when revenues dropped. The continuation of the “new normal” of lower oil and gas prices will continue to be a challenge. Due to these challenges many MLPs have sought to change their entity structure from the traditional sponsored MLP model. In 2013, there were 124 energy MLPs.\textsuperscript{167} Today, there are 95.\textsuperscript{168}

The case studies of TRGP, OKE, and PAA represent three recent examples of traditionally MLPs changing their fundamental structure to continue to operate profitably in the midstream space.

\textsuperscript{164} Plains All American Pipeline, L.P., 2018, Fourth-Quarter 2017 Earnings Package, p. 9
\textsuperscript{165} Plains All American Pipeline, L.P., Plains All American Pipeline, L.P. and Plains GP Holdings Report Fourth-Quarter and Full-Year 2017 Results, 2018
\textsuperscript{166} Baldwin, Forbes 2018 Tax Guide to MLPs, 2018
\textsuperscript{167} Alerian MLP Index, 2018
\textsuperscript{168} Howard, MLP Master List, 2018
The common issues faced by MLPs that choose to restructure themselves either as a non-MLP entity or move away from the traditional sponsor model are to:

- Lower the MLP’s cost of capital resulting from expensive IDRs to the GP
- Increase distribution coverage to reduce need to access external markets for growth projects
- Simplify business model to allow a broader set of individuals to participate
- Enhance credit metrics to allow for broader and deeper access to pools of capital when needed

In this environment, fee-based earnings appear to be an important factor for success. A key distinguishing factor between the TRGP, OKE, and PAA’s post-transaction operations is company focus on fee-based earnings. While OKE has made a very targeted effort to reduce commodity exposure following 2015, TRGP and PAA have not reduced exposure to the same degree. While OKE has increased fee-based earnings to 90%, TRGP has only increased fee-based earnings to 66%.169, 170 While PAA has increased its fee-based earnings to 95%, it accomplished this by removing the supply and logistics segment from its distribution calculations. Historically, this segment had generated approximately one-third of PAA adjusted EBITDA.171 In generating dividend and distribution growth, stable earnings are key; of the companies discussed, OKE maintains the lowest amount of commodity exposure and is the only one that has followed through with announced distribution growth.

A second important factor is a minimal reliance on debt and equity markets. The most prominent reason behind these transactions is to reduce the company’s cost of capital. To keep cost of capital low following the transaction, companies must be able to also generate sufficient returns to pay distributions and fund capital projects with cash flow. The 1.0x and 0.94x coverage that TRGP and PAA, respectively, reported do not allow for this.172 Continually relying on outside markets, however, will require higher return projects to also allow for higher leverage, debt payments, and higher equity levels.

Last, it appears that a shift away from IDRs is the norm in the industry. While traditionally used as a form of governance, 7 of the top 10 MLPs as measured by market capitalization do not have IDRs.173

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169 ONEOK, Inc., March 2018 Investor Update, 2018
170 Targa Resources Corporation, February Investor Presentation, 2018
171 Plains All American Pipeline, L.P., Fourth-Quarter 2017 Earnings Package, 2018
172 Plains All American Pipeline, L.P., Fourth-Quarter 2017 Earnings Package, 2018
173 Targa Resources Corporation, Targa Resources Corp. Reports Fourth Quarter and Full Year 2017 Financial Results and Provides 2018 Operational and Financial Guidance, 2018
174 Data retrieved from MLPData.com on April 2, 2019
The Future of MLPs

MLP IPO Market

While some struggling MLPs have moved on from the traditional MLP model, several large IPOs occurred. Noble Energy Partners was the first IPO in 2016 after a 14-month drought in the MLP IPO market. The Noble MLP IPO was then slowly followed by a slew of additional IPOs occurring in a more rapid succession – at a pace typical with recent historical market trends. The performance of these newly minted IPOs is mixed when compared to the industry benchmark Alerian Index. A timeline of recent MLP IPOs is provided below.

Figure 35: Timeline of recent MLP IPOs

While there has been a re-emergence of MLP IPOs in recent years, these MLPs are different. The new MLP is not the pure play midstream company, as seen with TGRP, OKE, or PAA. These pure-play companies operated by transporting a third-party upstream oil and gas company’s resource. A similarity across these new IPOs is the existence of a strong GP involved in multiple aspects of the oil and gas energy value chain. These companies acquire or build midstream assets that are sold to the MLP, which it utilizes to move its own product. Thus, the upstream company gains the benefits of the MLP while continuing to operate midstream assets they need to move product. The recent IPOs allow investors to gain exposure to the specific pipeline assets owned by the GP.

It is too early to tell if the new round of IPOs is indicative of a long-term trend towards IPOs in the sector. However, it does demonstrate that the MLP model continues to be

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174 Samson, BP files for New York IPO of pipeline MLP, 2017
relevant particularly for upstream producers looking to monetize midstream assets most efficiently.

Looking Forward

Since the commodity market bottomed out in February 2016, the AMZ has seen some recovery.\textsuperscript{175} However, this recovery has been slower than that of industry benchmarks, including crude oil, natural gas, the S&P 500 Utility Index, and the S&P 500. As of March 2018, average daily returns of the AMZ were only 3% higher than February 2016, while crude oil and natural gas prices were 94% and 27% higher, respectively. The AMZ recovery relative to benchmarks is illustrated in Figure 36 below.

\subsection*{Figure 36: AMZ recovery relative to industry benchmarks}\textsuperscript{176}

![Graph showing AMZ recovery relative to industry benchmarks]

While the MLP market has been slow to recover, in some respects, the outlook is positive. Average annual distribution growth for MLPs fell from 6.3\% in 2014 to 1.5\% in 2017. However, the slowing of distribution growth has allowed for MLPs to pay down existing debt thereby improving credit metrics, as well as improve distribution coverage.\textsuperscript{177} Of the top 10 MLPs by market capitalization, eight have DCR ratios above a 1.0x. The two that are currently below a 1.0x are Plains All American and Andeavor Logistics.\textsuperscript{178} Andeavor, however, announced a transaction at the end of 2017 to merge its two limited partnerships and remove incentive distribution rights with the intention of improving coverage.\textsuperscript{179} This transaction provides additional support for companies moving away from the tradition IDR-based compensation for the GP.

\textsuperscript{175} As measured by the Alerian MLP Index
\textsuperscript{176} Alerian MLP Index, NYMEX: Natural Gas & Crude Oil, S&P 500. Retrieved March 16, 2018 from Capital IQ Database.
\textsuperscript{177} Alerian MLP Index, 2018. Data retrieved from “distribution growth drives returns” graph
\textsuperscript{178} Data retrieved from MLPData.com on April 2, 2018
\textsuperscript{179} Andeavor, Andeavor Announces Merger of its MLPs and Financial Repositioning of Andeavor Logistics through IDR Buy-In, 2017
Further, NYMEX crude oil prices are up 13% in 2018.\textsuperscript{180} Rising prices are driving capital spending increases for upstream companies. Upstream spending grew 40% in 2017 and is expected to increase another 9% in 2018. This spending should translate into higher production levels and midstream processing and transportation will be necessary. Pipeline expenditures are also expected to rise, with twice as many pipeline miles expected to be constructed in 2018 versus 2017.\textsuperscript{181}

**Key Takeaways**

This project sought to examine what factors within the traditional MLP model – characterized by a 2% GP ownership interest, 98% LP ownership interest, and incentive rights – may have contributed to the decline in performance through the downturn in the commodity market in 2014 and 2015. It also considered what steps companies took in the wake of lower performance to continue to finance crude oil and natural gas infrastructure projects. Through a case-study analysis, this paper discussed two of the approaches midstream energy companies are taking to restructure business in the new, lower commodity environment. Targa Resources Corporation (TGRP) and ONEOK, Inc. (OKE) both chose to purchase their respective MLPs and merge the partnership into the parent company structure, while Plains All American (PAA) chose to buy its general partner to remove the obligation to pay incentive distribution rights. These three case studies are examples of a broader market trend to restructure or simplify the model, given factors that were exposed during the downturn.

Currently, the MLP entity structure remains available only to a small set of firms with qualifying revenue streams, as defined by the US Tax Code. Changes to the US Tax Code following the 2018 Tax Reforms continue to support a tax advantage for MLPs, despite a reduction in the corporate tax rate reducing the relative MLP advantage.\textsuperscript{182} Thus, it is likely that its use will continue midstream energy companies will continue to utilize the structure in the future, an idea further supported by recent growth in MLP IPOs. Trends in the industry, however, suggest that companies must create a legal and operational structure that that ensures long-term viability in an inherently riskier commodity market. This includes a more heightened awareness of (1) stringent IDR structures, which may erode the cost-of-capital advantage afforded by lower MLP tax rates; (2) distribution streams that grow too quickly, thereby leading to reserve depletion and low coverage ratios; (3) investments in growth projects that are not backed by long-term, fee-based revenues, as these expose MLPs to fluctuating revenue streams.

In the future, it is possible that businesses may continue to try to replicate the structure and benefits of an MLP to capture the tax benefits; this replication has already been seen with the creation of YieldCos in 2013 and with recent public LLCs models. There may also

\textsuperscript{180} NYMEX Crude Oil prices as of April 20, 2018 retrieved from CapitalIQ data base  
\textsuperscript{181} Xu, US oil, gas industry capital spending to increase in 2018, 2018  
\textsuperscript{182} Baldwin, 2018 Tax Guide to MLPs, 2018
be a push to allow a more diverse set of energy related revenue streams to qualify for the MLP structure under the US Tax Code. For example, in 2008, Congress first expanded qualifying sources of income beyond conventional natural resources to include ethanol, biodiesel, and liquified natural gas\textsuperscript{183}. This may be particularly true in the power space as renewable energy developers seek to make renewable projects.

\textsuperscript{183} Massey, 2016, p. 1020
Appendix

Appendix 1: The Alerian MLP Index – Market Capitalization, Constituents, and Historical Performance\(^\text{184}\)

Company Profile
Alerian is an independent provider of Master Limited Partnership (MLP) and energy infrastructure market intelligence. Its benchmarks, including the flagship Alerian MLP Index (AMZ), are widely used by industry executives, investment professionals, research analysts, and national media to analyze relative performance. As of April 28, 2017, over $18 billion is directly tied to the Alerian Index Series through exchange-traded funds and notes, separately managed accounts, and structured products.

Alerian Index Constituents as of April 2018

<table>
<thead>
<tr>
<th>Company Name</th>
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<tbody>
<tr>
<td>Antero Midstream Partners LP</td>
<td>Holly Energy Partners LP</td>
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<td>Andeavor Logistics LP</td>
<td>Magellan Midstream Partners LP</td>
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<td>AmeriGas Partners LP</td>
<td>MPLX LP</td>
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<td>Alliance Resource Partners LP</td>
<td>Noble Midstream Partners LP</td>
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<td>Buckeye Partners LP</td>
<td>NGL Energy Partners LP</td>
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<td>Boardwalk Pipeline Partners LP</td>
<td>NuStar Energy LP</td>
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<tr>
<td>Crestwood Equity Partners LP</td>
<td>Plains All American Pipeline LP</td>
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<td>Western Gas Partners LP</td>
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<tr>
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<td>Williams Partners LP</td>
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\(^{184}\) Information and company description from Alerian.com
Appendix 2: Recent IPOs Market Performance

Figure 37: Unit Price Performance of Recent IPOs against overall MLP Market\textsuperscript{185}

![Graph showing unit price performance of recent IPOs against overall MLP market.]

Figure 38: Yield of Recent IPOs against overall MLP Market\textsuperscript{186}

![Graph showing yield of recent IPOs against overall MLP market.]


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**Glossary of Terms**

**Simplification** - An exchange, merger, contribution, or other transaction that results in elimination of the IDR’s and the continued trading of the MLP’s common equity.

**Roll-Up** - A merger (typically with an equity consideration) that results in the MLP being combined with (or a wholly owned subsidiary of) the sponsor MLP.

**Available cash flow** – cash flow available to common unit holders and the GP. Usually cash flow from operations less maintenance capex.

**Cash or adjusted yield** – an MLP’s current yield adjusted for its GP share of cash flow. For example, if the GP is receiving 10% of an MLP’s total distributions and the partnership’s units trade at a 7% yield, the cash yield would be 7.8% (current yield / [1 – % of cash distributions paid to GP]).

**Current yield** – current declared quarterly distribution annualized divided by current stock price.

**Distributable cash flow (DCF)** – the cash flow available to be paid to common unit holders after payments to the general partner. Some people do not distinguish DCF from Available Cash Flow, so it’s important to pay attention to whether the GP payment have been taken out.

**Distribution** – In a typical partnership agreement, the MLP is required to distribute all of its “available cash.” MLPs typically distribute all available cash flow (i.e., cash flow from operations less maintenance capex) to unit holders in the form of distributions. However, management typically has some discretion in how much cash flow it chooses to pay out. Usually quarterly distribution increases must be approved by the board.

**Distribution coverage ratio** – the “cushion” a partnership has in paying its cash distribution. The higher the ratio is, the greater the safety of the distribution. Is calculated either as (1) available cash flow (before taking out GP payments) divided by total cash distributed or (2) distributable cash flow divided by distributions to LPs, usually calculated on a per unit basis. I prefer the method that takes out the GP payments, as that’s a better indication of coverage of the current quarterly or annual distribution to LPs, which is what investors should care about.

**Distribution tiers** – percentage allocations (and the associated thresholds) of available cash flow between common unitholders and the general partner based on specified target distribution levels. Also referred to as “splits”.

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Dropdown – the sale of an asset from a parent company (or sponsor company) to the underlying partnership. Drop downs are tricky from a board perspective and usually require a fairness opinion issued by an investment bank indicating that the valuation paid is fair, given that this is a transaction between related parties.

Earnings per unit (EPU) – synonymous with a corporation’s earnings per share (EPS). EPU is calculated by dividing net income allocated to the limited partners divided by the weighted average units outstanding at the end of the period.

General partner (GP) – (1) manages the day-to-day operations of the partnership, (2) generally has a 2% ownership stake in the partnership, and (3) is eligible to receive an incentive distribution (through the ownership of the MLPs’ IDRs).

Incentive distribution rights (IDRs) – IDRs allow the holder (typically the GP) to receive an increasing %age of quarterly distributions after the MQD and target distribution thresholds have been achieved. In most partnerships, IDRs can reach a tier wherein the GP is receiving 50% of every incremental dollar paid to the LP unit holders. This is known as the 50/50, or “high splits” tier.

Limited partners – (1) provide capital, (2) have no role in the MLPs’ operations or management, and (3) receive cash distributions.

Maintenance capital expenditure – the investment required to maintain the partnership’s existing assets.

Master limited partnerships (MLPs) – limited partnership investment vehicles consisting of units (rather than shares) that are traded on public exchanges. MLPs consist of a general partner and limited partners. Also known as “publicly traded partnerships”.

Minimum quarterly distribution (MQD) – the minimum distribution the partnership plans to pay to its common and subordinated unit holders upon initial public offering (assuming the company can generate sufficient cash flow from its operations after the payment of fees, expenses, maintenance capex, and cash flow to the GP). The partnership does not guarantee its ability to pay out the MQD during any quarter.

Subordinated units – subordinate in the capital structure to common units. For a period of time, the subordinated units will not be entitled to receive distributions until the common units have received the MQD plus any arrearages from prior quarters. Subordinated units increase the likelihood that (during the subordinated period) there will be sufficient available cash to be distributed to the common units. In addition, subordinated units are not entitled to distribution arrearages.

Units – synonymous with a corporation’s shares.
Weighted average cost of capital – represents the cost to the entity of financing and should be the hurdle rate for new investments. As it relates to MLPs, it is the proportional weight of equity and debt in a partnership’s capital structure. Unlike corporations, MLPs do not realize a tax benefit on their debt (since they do not pay corporate taxes).