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Master Limited Partnerships
North America

Midstream MLP 2014 Outlook

Growth Over Rates; Broader Market Vol. Could Mean Safe is Sexy

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- **2014 Outlook & Positioning** — Overall, we expect midstream MLPs to generate a 2014 total return of 10.9% as a rising interest rate environment has the potential to partially offset comparatively high yields and continued distribution growth. The broader market remained relatively calm throughout 2013 experiencing a pullback of only ~5% compared to gains that were five times that amount. MLPs on the other hand started the year off strong, but were range bound from June throughout the rest of the year as record equity issuances offset record fund flows.

  For 2014 we expect capital budgets and M&A activity to drive another record year of equity issuances that could exacerbate MLP volatility if broader market conditions are not as accommodating. There are a number of identifiable catalysts that could trigger a choppier broader market in 2014 such as budget disputes, midterm elections, and central bank policy decisions. In such markets, MLPs with large capital budgets that require a lot of equity funding could experience above avg. volatility even if growth expectations are high. As a result, we favor MLPs with well-funded balance sheets, healthy distribution coverage, and/or higher-yield catalyst driven names such as EPD, NGLS, and EMES.

- **Investment Themes for 2014** — In this report, we touch upon six themes that we see impacting sector performance next year, along with the MLPs most exposed to these trends:
  - Headwinds From Fed Taper & Rising Rates, Growth a Key Counter-Balance
  - The Dark Horse: Spread Compression Beyond Historical Median
  - Return of Broader Market Vol: Serial Issuers Challenged; Technicals More Important
  - Divergence of MLP Yields Likely to Increase M&A Activity
  - Propane/Butane Markets Strengthen on the Back of Increased Export Capacity
  - Too Hard to Ignore, Ethane Becomes a Viable Export Option

- **Challenges/Risks –** Include: **1)** A sharp correction in crude prices; **2)** Delays in environmental permits for facilities, **3)** Escalating project costs due to manpower and/or equipment mfg. shop-floor shortage, and **4)** Delays in projects construction due to difficult terrain in the Northeast. We believe that despite these challenges/risks the sector is well positioned to provide positive returns to investors, as MLPs continue to enjoy a low cost of capital and have visibility to multiple years of infrastructure growth driven by the large resource potential of US shale plays.

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Investment Themes for 2014

Over the last fifteen years MLP total returns have outpaced those of the S&P 500 by an average of 13.7% annually as the sector has benefited from a number of factors. While falling interest rates helped improve MLP valuations and yield compression, the resurgence of the North American energy industry added a tremendous fundamental tailwind that has supported distribution growth. Now the expectation is that interest rates are going to steadily increase as the economic recovery is in its fifth year and ongoing Fed accommodation appears likely to diminish with tapering predicted to commence no later than March.

This changing environment has many MLP investors questioning how the sector will perform when growth is priced at a premium and fund flows are moving away from high-yielding defensive asset classes. In our opinion, well positioned midstream MLPs should continue to perform well even in a rising interest rate environment as we expect midstream growth to nearly match that of EPS growth out of the S&P 500. That said, further yield compression does seem less likely and investors should expect distribution growth to be partially offset by increasing interest rates.

Overall, we expect midstream MLPs to generate a 2014 total return of 10.9% as a rising interest rate environment has the potential to partially offset comparatively high yields and continued distribution growth. The broader markets remained relatively calm throughout 2013 experiencing a pullback of only ~5% compared to gains that were five times that amount. MLPs on the other hand started the year off strong, but were range bound from June throughout the rest of the year as record equity issuances offset record fund flows.

For 2014 we expect capital budgets and M&A activity to drive another record year of equity issuances which could exacerbate MLP volatility if broader market conditions are not as accommodating. There are a number of identifiable catalysts that could trigger a choppier broader market in 2014 such as budget disputes, midterm elections, and central bank policy decisions. In such markets, MLPs with large capital budgets that require a lot of equity funding could experience above avg. volatility even if growth expectations are high. As a result, we favor MLPs with well-funded balance sheets, healthy distribution coverage, and/or higher-yield catalyst driven names such as EPD, NGLS, and EMES.

The six major themes that we see emerging over the course of next year include:

- Headwinds From Fed Taper & Rising Rates, Growth a Key Counter-Balance
- The Dark Horse: Spread Compression Beyond Historical Median
- Return of Broader Market Vol: Serial Issuers Challenged; Technicals More Important
- Divergence of MLP Yields Likely to Increase M&A Activity
- Propane/Butane Markets Strengthen on the Back of Increased Export Capacity
- Too Hard to Ignore, Ethane Becomes a Viable Export Option

The largest risks we see to the Midstream MLPs sector in 2014 include: **1)** A sharp correction in crude prices; **2)** Delays in environmental permits for facilities, **3)** Escalating project costs due to manpower and/or equipment mfg. shop-floor shortage, **4)** Delays in projects construction due to difficult terrain in the Northeast.

Top Buys and Sells

	Ticker	Rating	Price (12/16/13)	Target Price	Yield (%)	ETR (%)	2014E EV/EBITDA	2014E Target Yld	2014E FTM Dist Grth
Enterprise Product Partners LP	**EPD**	**Buy (1)**	**$61.60**	**$73.00**	**4.5%**	**23.1%**	**15.1x**	**4.0%**	**5.8%**
Core MLP holding, ideally positioned assets, attractive growth, strong distribution coverage, no IDRs and IG balance sheet.									
Targa Resources Partners LP	**NGLS**	**Buy (1)**	**$49.88**	**$57.00**	**6.2%**	**20.4%**	**12.9x**	**5.5%**	**8.2%**
Strategically located NGL logistics assets in the Gulf Coast and gathering & processing plants in the Permian and Bakken. Interesting candidate for consolidation.									
Emerge Energy Services LP	**EMES**	**Buy/High Risk (1H)**	**37.89**	**$42.00**	**10.6%**	**23.1%**	**9.4x**	**9.0%**	**11.7%**
Undervalued organic growth, flat capital structure conducive to accretive growth or consolidation, and high yield relative to peers.									
TC Pipelines LP	**TCP**	**Sell (3)**	**$44.37**	**$43.00**	**7.2%**	**4.2%**	**13.6x**	**7.5%**	**0.0%**
Performance to remain volatile as Canadian gas imports seem likely to decline further; Possesses a more-levered BS following recent dropdowns.									

Source: Citi Research, FactSet pricing

Headwinds from Fed Taper & Rising Rates, Growth a Key Counter-Balance

The Citi House View

Citi economists characterize the global macro-economic outlook for 2014 as an improved version of 2013 – see Global Economic Outlook and Strategy. They see tail risks continuing to recede in EMU sovereigns/ banks, China and on US fiscal policy. The latter is important because it potentially is less of a drag on US economic activity next year. More generally, the forecast shows accelerating advanced economies' growth, a gradual pick up in world trade and mini, but not major, EM stresses.

Monetary policy and liquidity support will remain mainly helpful for asset markets against this background. Of course, the long awaited taper from the Fed is coming soon. At the end of last week Citi's economists moved up their timetable for a Fed taper – see U.S. Economics Weekly: Tapering Timetable Nearly Set. They believe the combination of a fiscal compromise with greater near-term spending and accelerating growth in core retail sales has raised the likelihood of a Fed taper announcement this week to roughly 50/50. They also believe it is very likely that cutbacks in asset purchases will begin either next month or following the January meeting and they continue to expect QE to end in the third quarter of next year.

Inflation is expected to remain below the Fed's 2% medium-term target near term with some modest firming as the expansion matures and global growth picks up. The recent slowing in inflation has been dominated by a relative price shock in commodities as rents, medical care, transportation and other core services are rising at a 2½% pace. Nominal income and demand are well supported, unit labor costs are accelerating modestly and household surveys as well as business pricing intentions all suggest that risks of an undesirable disinflation or worse are very low.– see North America Road Ahead 2014 - Expect a Bumpier Ride in 2014.

Tapering, and eventually the cessation altogether of LSAPs, may create market volatility. At the end of both QE1 and QE2, US stocks corrected, by an average of about 20%. Given this recent history, it would not be surprising to see investors take risk off the table, especially after a near five year bull market. Volatility may well pick up and some of the traditional (VIX) hedges may make sense. And bond yields are likely to rise absent a simultaneous slump in activity indicators, depressing fixed income returns across the piece. But, in the absence of a material negative impact

on US/ global growth, these effects may reflect opportunities to buy assets cheaply – see Global Asset Allocation - Citi House Views for 2014.

Our 10.9% 12-month total return forecast takes into consideration the 10-year increasing to 3.25% by the end of 2014 (in-line with the Citi Economic Outlook) and an AMZ yield spread to the 10Yr UST of 300 bps (in-line with historical median).

Rising Rates a Mild Headwind for MLPs

We expect midstream MLPs to generate a 2014 total return of 10.9% as a rising interest rate environment has the potential to partially offset relatively high yields and continued distribution growth. Our 12-month total return forecast takes into consideration the 10-year increasing to 3.25% by the end of 2014, which is in-line with the Citi Economic Outlook.

The Growth Counter Balance…Copious Amounts of Capex Still Left to Spend

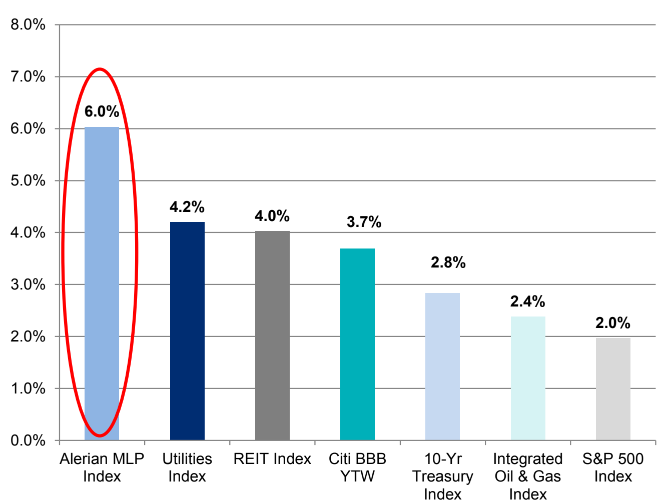
MLP growth capex hit an all-time high in ‘13 at nearly $31 billion, which we estimate will drive distribution growth of ~6.25% in ‘14. Considering the capital intensity and long lead time needed to bring midstream infrastructure into service, we see planned projects through 2018 of ~$50 billion supporting average annual growth of 4.7% (Fig. 3).

Distribution Growth Begins to Decelerate, But Keeping Pace with Earnings Growth in the Broader Market Yet ~3x the Yield

MLPs that should offer better protection to rising rates via higher long-term distribution CAGRs include: ACMP, EQM, GEL, MMP, MPLX, TLLP, and WES

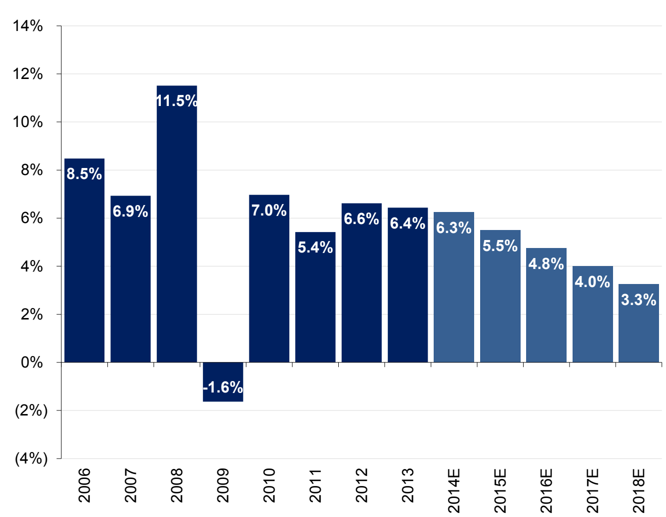
MLP yields average ~6.2%, which is higher than the yields of comparable asset classes such as Utilities, REITs, and Integrated Oil & Gas companies (Fig. 1). At the same time, MLP distributions continue to grow, supported by new project announcements and increasing throughput volumes. We estimate distribution growth will decelerate in 2014 to 6.25% (from ~6.43% in ’13) and further moderate through 2018 based on our bottoms-up analysis using individual company models – the majority of which only include projects that have already been identified/sanctioned and appear to be moving forward (Fig. 2 and 3). Importantly, the current 2014 Citi forecast for S&P 500 Operating EPS is 7%, which is roughly in-line with our MLP distribution growth expectations. So we see little reason for investors to prefer broader market growth versus midstream MLPs considering the significant yield advantage and tax efficiency of the sector.

Figure 1. MLP Index Yield vs. Other Asset Yields



Source: Citi Research & Bloomberg

Figure 2. MLP Distribution Growth: 1996 to 2017E



Source: Citi Research & Bloomberg

As we see it, MLPs that benefit the most from this energy arbitrage are those with exposure to downstream petchem (EPD, NGLS, WPZ) and to a lesser extent those who will garner increasing volumes on natural gas pipelines connected to large industrial markets (EPB, KMP, SEP, WPZ).

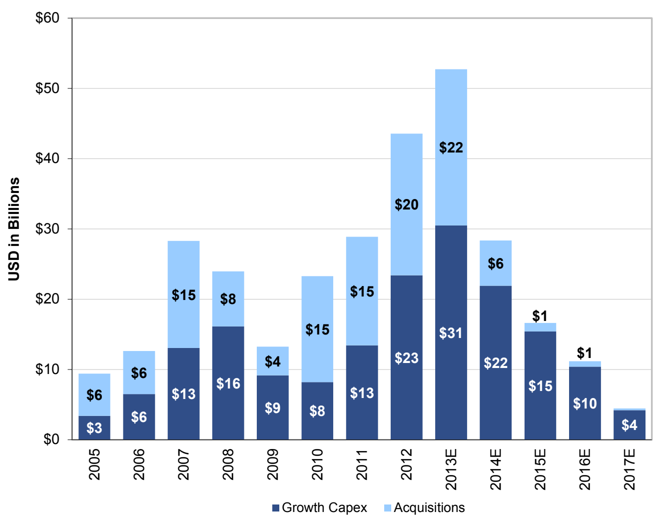
Driven by Continued U.S. Advantage on the Back of Cheap Nat Gas vs. Crude

Prior to 2007, MLP growth was much more dependent on acquisitions, but this has shifted dramatically with the shale gas and tight oil revolution. Now upstream production growth combined with downstream demand growth and increasing exports are driving continued infrastructure investment opportunities. A key driver to our positive outlook for midstream MLPs is supported by our view that the current crude to gas spread will remain wide for the foreseeable future, which provides North America a unique global advantage.

Fig. 4 below illustrates the historical price relationship between natural gas and crude oil (on a heat-equivalent basis) as well as our 5-year forecast. We forecast a continuing price discount for natural gas, which supports a continuation of US industrial energy cost and petchem feedstock advantages. In our view, midstream MLPs still remain an attractive and tax efficient way to gain exposure to the multi-year thematic growth story of the North American supply revolution and the continued need for new infrastructure.

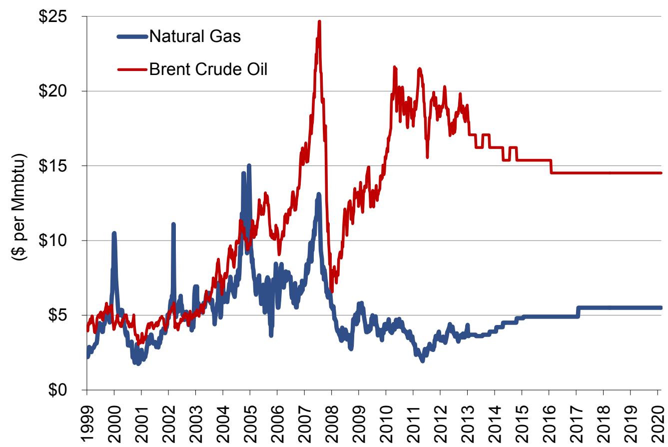
While our midstream capital spending estimates are declining over the next five years (Fig. 3), investors should note that these estimates are based mostly on projects that we have fairly good visibility on and are included in our models. If the crude-to-gas spread remains as wide as our commodity forecast shows then our capital spending estimates will likely prove conservative. Over the last three years our one year forward capital budget forecast has been conservative by 20% to 50%.

Figure 3. MLP Capital Spending: 2005A to 2017E



Source: Citi Research & Company Filings

Figure 4. Oil vs. Nat Gas ($/MMBtu): 1999 to 2017E



Source: Citi Research, Bloomberg

Putting It All Together: Citi's MLP Total Return Forecast

Taking this longer-term view into consideration, we estimate midstream MLPs will generate a 5-year IRR of 9.0% which assumes a 2018 10-Year Treasury yield of 4.5% (Fig. 5 and 6). This IRR might sound low compared to an average annualized total return of 18% over the last ten years. In our opinion, however, this estimate remains fairly attractive considering we are discounting a rising interest rate environment throughout our forecast period.

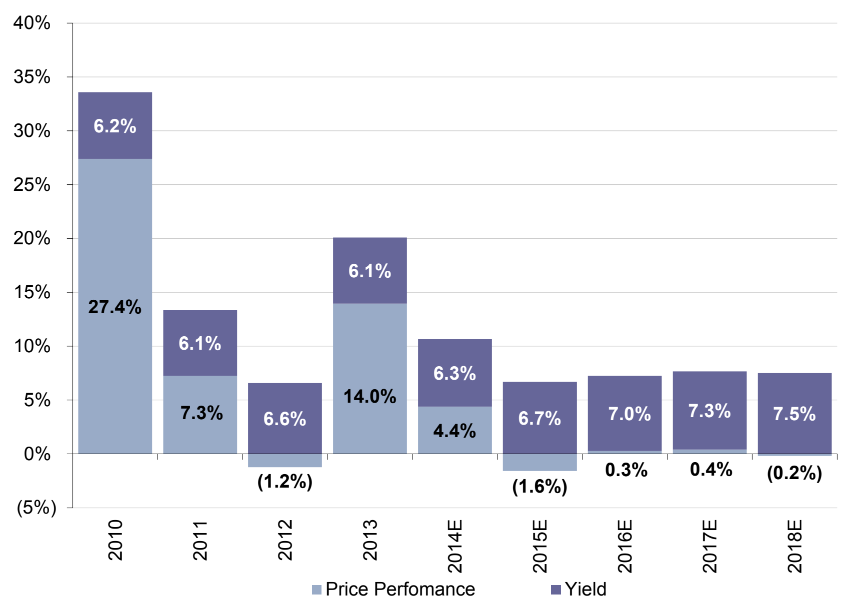
Our forecast is based upon three potential scenarios: Bear Case, Base Case, and Bull Case that assume a low/mid/high estimate for both the 10-Yr UST yield and MLP distribution growth rates. All three scenarios lead us to a positive internal rate of return (IRR) for investors. Our various outcomes indicate that **MLPs are not doomed as interest rates begin to increase** or that MLPs are wildly expensive at current levels even assuming a degradation of growth rates and significantly higher interest rates.

Figure 5. Estimated AMZ IRR

	Bear Case	Base Case	Bull Case
Terminal Grow th Rates	0.0%	0.5%	1.0%
Initial Investment	(439)	(439)	(439)
2014E	28	29	29
2015E	30	30	31
2016E	31	32	33
2017E	31	33	35
2018E	427	522	651
Five Year IRR	**5.1%**	**9.0%**	**13.5%**

Source: Citi Research

Figure 6. Alerian MLP Index Total Return: 2010A – 2018E



Source: Citi Research Estimates, Alerian

Treasury Yield Outlook

The Fed recently stated that short-term interest rates could stay near 0% as long as inflation stays benign even if the unemployment rate drops below 6.5%. However, last month's unemployment number of 7.0% continues to show marginal improvement and Citi economists believe the Fed may begin to taper the pace of QE next year. Accordingly, Citi expects the 10-year Treasury yield to end 2014 at 3.25%.

Our Base Case 10-Yr UST yield assumption is in-line with Citi's economic forecast that assumes a rate of 3.25% next year that gradually escalates to 4.5% by 2018. We also assume MLP yields will trend back to their historical median spread over treasuries of ~300 bps (319 currently). See Fig. 7 and 9 for our multi-year assumptions.

MLP Distribution Growth Outlook

Distribution growth notched down slightly in 2013 to 6.4% from 6.6% in 2012 as the sector has dramatically increased in size, while competition for projects and acquisitions has also weighed on returns. We expect this trend of slowing growth to continue in our Base case scenario. Specifically, we estimate distribution growth declines to 6.25% in '14, 5.50% in '15, 4.75% in '16, 4.00% in '17, and 3.25% in '18. Clearly our longer-term estimates have upside, but this depends on the strength of the crude oil market and the pace at which end-user natural gas demand begins to accelerate beyond 2015. See Fig. 8 and 10 for our multi-year assumptions.

Figure 7. US 10-Year Treasury Assumptions

10-Year Treasury Assumptions			
Year	Bear Case	Base Case	Bull Case
2014E	3.75%	3.25%	2.75%
2015E	4.20%	3.70%	3.20%
2016E	4.50%	4.00%	3.50%
2017E	4.75%	4.25%	3.75%
2018E	5.00%	4.50%	4.00%

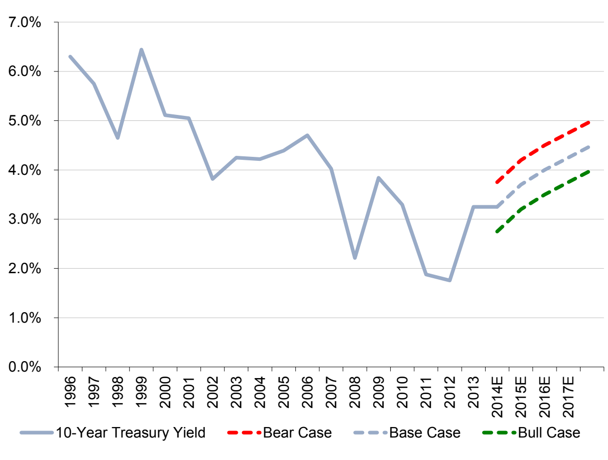
Source: Citi Research

Figure 8. Annual Distribution Growth Assumptions

Distribution Growth Assumptions			
Year	Bear Case	Base Case	Bull Case
2014E	5.3%	6.3%	7.3%
2015E	4.3%	5.5%	6.8%
2016E	3.3%	4.8%	6.3%
2017E	2.3%	4.0%	5.8%
2018E	1.3%	3.3%	5.3%

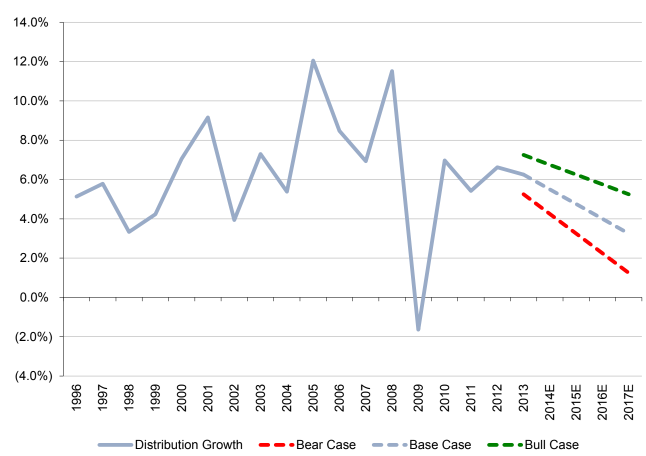
Source: Citi Research

Figure 9. 10-Year U.S. Treasury Yield Scenarios



Source: Citi Research

Figure 10. MLP Distribution Growth Rate Scenarios



Source: Citi Research

MLP Total Return Outlook

MLP total return expectations are based on two factors: **1)** Yield, as represented by distributions paid; and **2)** Principal appreciation or depreciation, driven by both the interest rate environment (yield on the 10-Yr. UST) and a compression or widening of the spread to this benchmark. For 2014, assuming the AMZ yield increases to 6.25% (300 bps spread to a 3.25% 10-year UST), we estimate the benchmark index would provide a total return of ~10.9%. Sensitivities to our estimate are illustrated in Fig. 11 below.

Figure 11. Citi MLP Total Return Expectation Model

Current AMZ Price: $439

Target Yield	Assumed Distribution Growth: 4.75%	5.25%	5.75%	6.25%	6.75%	7.25%	7.75%
4.75%	$594	$597	$600	$603	$606	$608	$611
5.25%	$538	$540	$543	$545	$548	$550	$553
5.75%	$491	$493	$496	$498	$500	$503	$505
6.25%	$452	$454	$456	**$458**	$460	$462	$465
6.75%	$418	$420	$422	$424	$426	$428	$430
7.25%	$389	$391	$393	$395	$397	$399	$400
7.75%	$364	$366	$368	$369	$371	$373	$375

Target Yield	Assumed Distribution Growth: 4.75%	5.25%	5.75%	6.25%	6.75%	7.25%	7.75%
4.75%	41.9%	42.6%	43.2%	43.9%	44.5%	45.2%	45.8%
5.25%	29.0%	29.6%	30.2%	30.8%	31.4%	32.0%	32.6%
5.75%	18.4%	18.9%	19.5%	20.0%	20.5%	21.1%	21.6%
6.25%	9.4%	9.9%	10.4%	**10.9%**	11.4%	11.9%	12.4%
6.75%	1.8%	2.3%	2.7%	3.2%	3.6%	4.1%	4.5%
7.25%	(4.8%)	(4.3%)	(3.9%)	(3.5%)	(3.1%)	(2.6%)	(2.2%)
7.75%	(10.5%)	(10.1%)	(9.7%)	(9.3%)	(8.9%)	(8.5%)	(8.1%)

Source: Citi Research

Magnitude of Valuation Uplift from Spread Compression Not Likely to Repeat

Midstream MLPs were fairly resilient throughout most of 2013 generating a total return of 22% as North American midstream fundamentals remained strong, while positive fund flows helped offset taper talk, record equity issuances, and increasing interest rates. However, MLPs started 2013 with a yield that was 485 bps above the 10-year Treasury (6.6% MLP Yield / 1.75% 10-year) compared to a historical median spread of 307 bps. Currently, this spread stands at 319 bps (6.14% MLP Yield / 2.88% 10-year) and we see less potential for MLPs to generate significant principal appreciation based on yield compression if interest rates indeed head higher.

Having said that, history shows us to not entirely rule out a larger-than expected spread compression…

The Dark Horse: Spread Compression Beyond Historical Median

MLPs that we believe could benefit the most from yield compression include names that have moderate growth opportunities and trade with yields in the 5% to 6% range such as: DPM, MWE, and NGLS.

Since the beginning of 2013 the yield spread between MLPs and the 10-year U.S. Treasury has declined from 482 basis points (bps) to 319 bps, which is approaching the historical median of 307bps. Over the past 12 years there have only been three instances that interest rates saw a meaningful increase. The only multi-year increase of significance was from May of 2003 to June of 2006 as the yield on the 10-year went from 3.4% to 5.2%. During this time MLP yields actually decreased from 7.4% to 6.9%, while the yield spread decreased from 400 bps to 170 bps. From a performance perspective the AMZ appreciated 35% and generated a total return of 53%.

Our estimated IRR only assumes MLP yields trend back to this historical median spread, despite previous occasions when the sector traded at a much narrower spread during a rising rate environment. In our opinion, we believe this spread has further room to compress over the next few years as institutional acceptance of MLPs continues to expand and other fixed income investors look for growth to help offset a rising interest rate environment. Should spreads contract more than the our 25bps estimate for 2014, for example due to large inflows from bond investors seeking reprieve from rising rates into higher-growth MLPs, **the sector has the *potential* to post high-teens returns similar to that of 2013.**

Figure 12. 10-Yr Treasury vs. AMZ Yields: May '03 to May '06

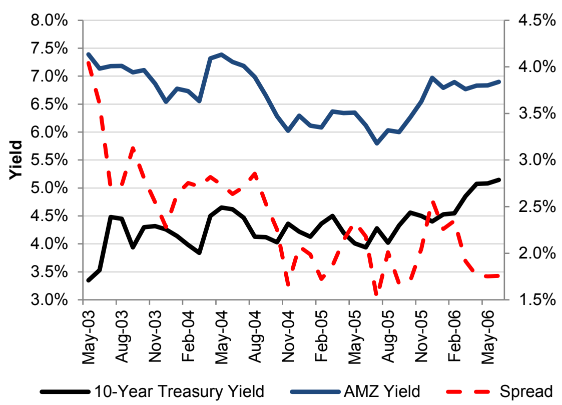


Figure 13. AMZ Price Performance & Total Return: May '03 to May '06

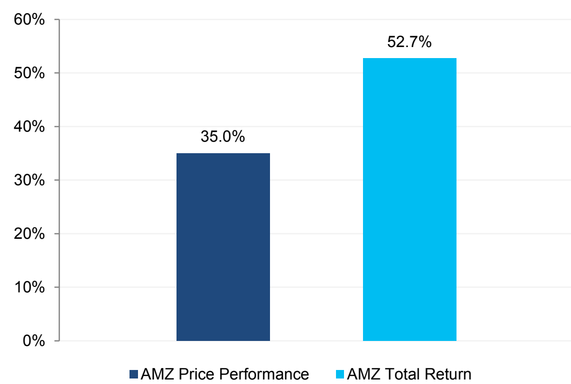


Figure 14. 10-Yr Treasury vs. AMZ Yields: 1995 to 2013

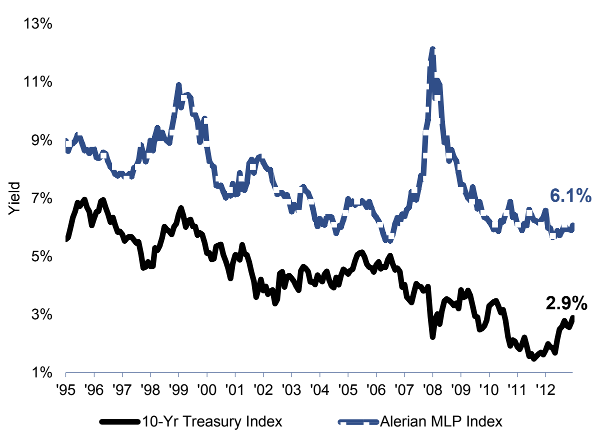
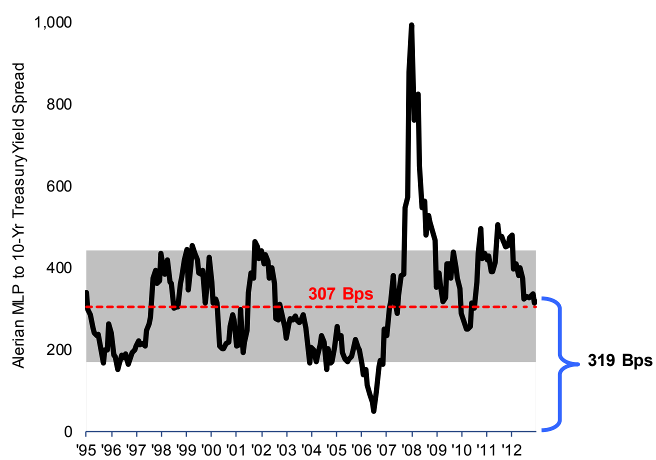


Figure 15. 10-Yr Treasury vs. AMZ Yields: 1995 to 2013



Sources for all tables: Citi Research, FactSet & Alerian

Return of Broader Market Vol: Serial Issuers Challenged; Technicals More Important

Figure 16. MLPs w/ Exposure to Broader Market Volatility

Advantaged	Dis-Advantaged
EMES	BWP
EPD	EPB
EQM	KMP
NGLS	MWE
WES	WPZ

Source: Citi Research

The broader markets remained relatively calm throughout 2013 experiencing a pullback of only ~5% compared to gains that were five times that amount. MLPs on the other hand started the year off strong, but were range bound from June throughout the rest of the year as record equity issuances offset record fund flows.

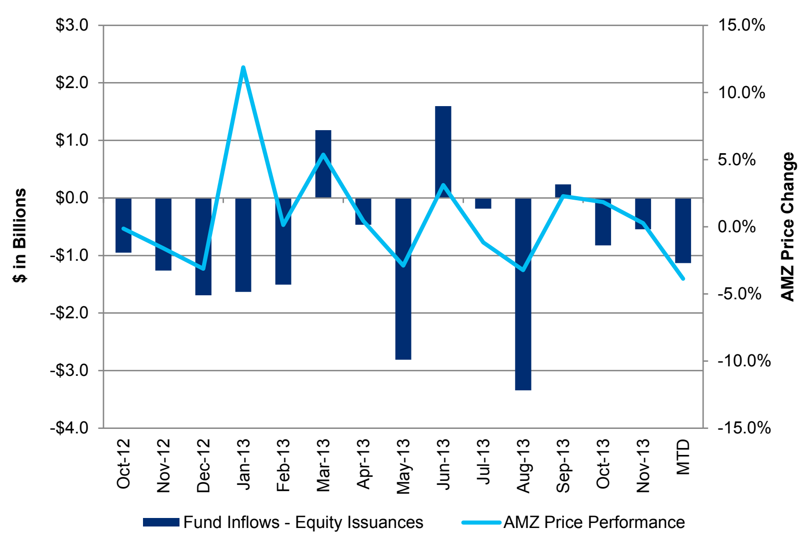
For 2014 we expect capex needs to drive another record year of equity issuances that could exacerbate MLP volatility if broader market conditions are not as accommodating. There are a number of identifiable catalysts that could trigger a choppier broader market in 2014 such as budget disputes, midterm elections, and central bank policy decisions. In such markets, MLPs with large capital budgets that require a lot of equity funding could experience above avg. volatility even if growth expectations are high. **As a result, we favor MLPs with well-funded balance sheets, healthy distribution coverage, and/or higher-yield catalyst driven names such as EPD, NGLS, and EMES.**

Δ Supply + Δ Demand = Δ Price

Monthly performance of the AMZ has been reasonably well correlated to net fund flows. The best example of this occurred in March as inflows outstripped MLP equity issuances by $1.3 bil that resulted in the index appreciating 5.4%. Conversely the AMZ was down nearly 3% in May as equity issuances outstripped fund flows by $2.3 billion (Fig. 17). Moving into 2014 we expect similar levels of equity to be issued based on our capital spending estimates. As a result, we believe MLPs have the potential to experience periods of greater volatility in 2014 if the broader market is not as accommodating as it was in 2013.

To position for such an outcome, we recommend that investors leave some dry powder available and/or position more toward highly liquid and well-funded names such as EPD moving into 2014. This should provide investors with opportunities to take advantage of market dislocations and protect against MLP volatility.

Figure 17. Net Fund Flows vs. AMZ Price Performance (Oct 2012 to Present)



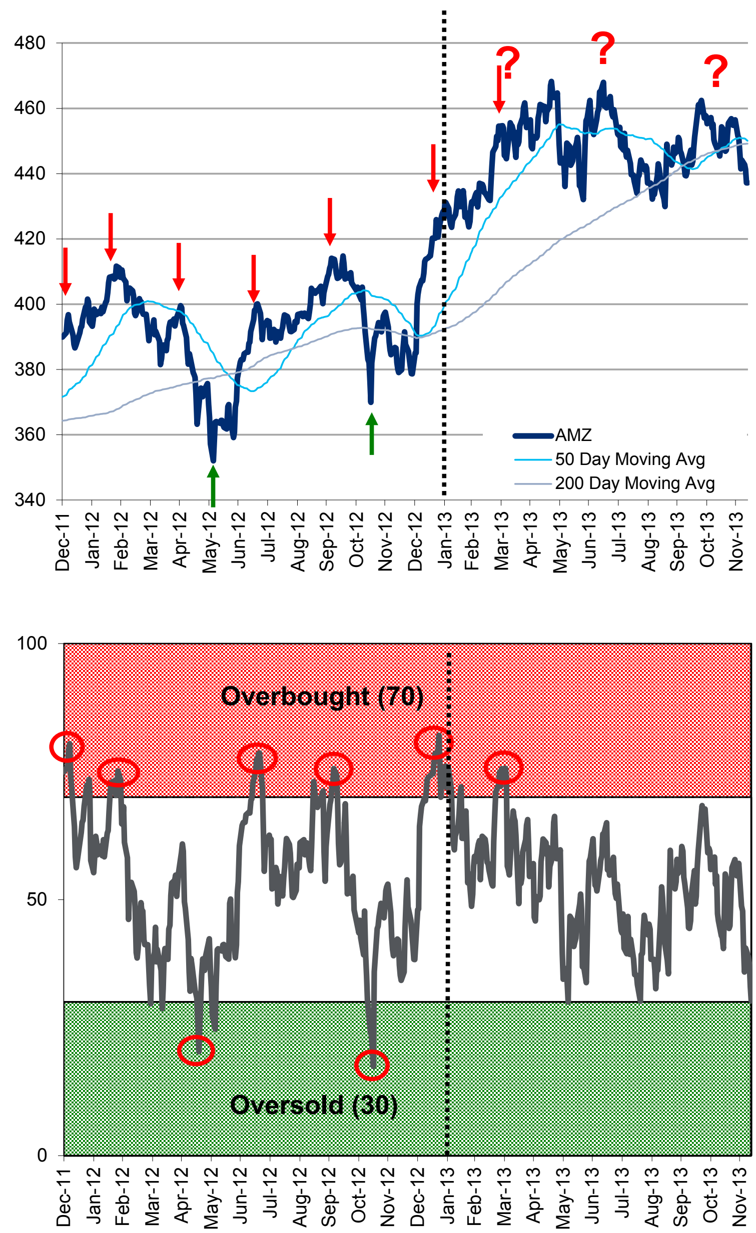
Source: Citi Research, FactSet & Bloomberg

Relative Strength Index (RSI) is a momentum indicator that measures the velocity and magnitude of a directional price movement. The RSI computes momentum as the ratio of higher closes to lower closes: stocks which have had stronger positive changes have a higher RSI than stocks which have had stronger negative changes. The RSI is typically used on a 14 day timeframe, measured on a scale from 0 to 100. When the RSI gets over 70 that is considered overbought and when it is below 30 that is considered oversold.

The RSI Could be a Useful Tool in 2014; But Market Vol Returning Matters

Throughout 2012, the RSI was a fairly predictive indicator to watch given the volatility in the market. While the AMZ total return was only 4.8% in 2012, the RSI provided Buy/Sell signals that would have generated a return of ~28%. However, 2013 experienced much lower levels of vol and this technical indicator was less useful (Fig. 18). We believe the RSI could yet again emerge as a valuable tool to enhance returns and identify attractive entry points in 2014 as it seems unlikely the low levels of broader market volatility experienced in 2013 will continued into 2014.

Figure 18. (Top Chart) Alerian MLP Index: January 2011 to Present; (Bottom Chart) AMZ Relative Strength Index: 2011 to Present



Source: Citi Research, Bloomberg

Figure 19. MLPs w/ Higher Likelihood of Exposure

Low Yield	High Yield / No GP
ACMP	BPL
EQM	BPWP
KMI	EROC
OKS	GEL
PSXP	MWE
SEP	NS
SXL	
WES	

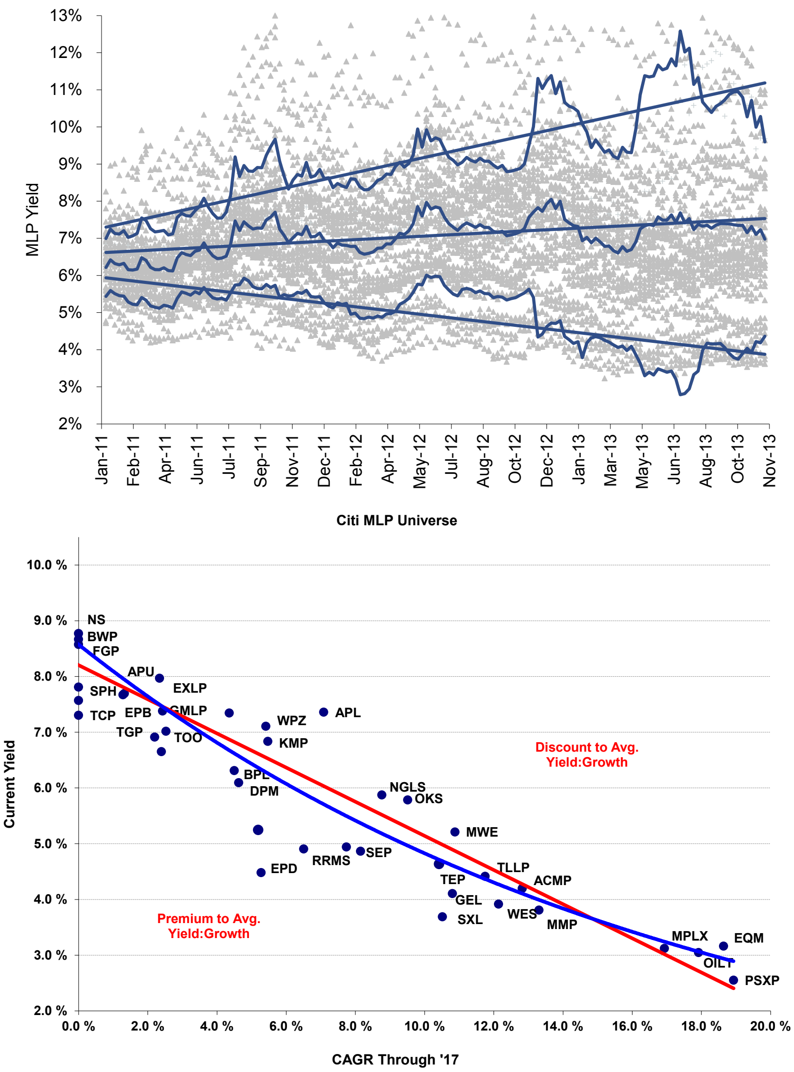
Source: Citi Research

Divergence in MLP Yields Likely to Increase M&A Activity

We expect consolidation to increase in 2014 as valuations among MLPs have continued to diverge over the last three years. In the current environment, MLPs with lower yielding equity have the opportunity to leverage their cost of capital advantage to accretively acquire/merge with higher yielding MLPs. The motivating factors that could spur such consolidation include: **1)** Distribution growth if organic opportunities dry up; **2)** Diversification; and **3)** Management desires to plug "holes" as a move toward full integration.

Fig. 20 below provides a fairly telling picture of how MLPs that have growth and stable cash flows now trade at significantly lower yields compared to MLPs that are perceived by the market as higher risk with limited growth opportunities. While ±1 standard deviation from the average yield was 5.6% to 7.2% in 2011, this now stands at 4.4% to 9.6%. We view this as a positive indicator that consolidation will likely increase over the next few years especially if organic growth opportunities begin to dry up.

Figure 20. (Top Chart) Average MLP Yield ±1 Standard Deviation; (Bottom Chart) Yield vs. Growth (2017E - Note: Not adjusted for distribution coverage variances)



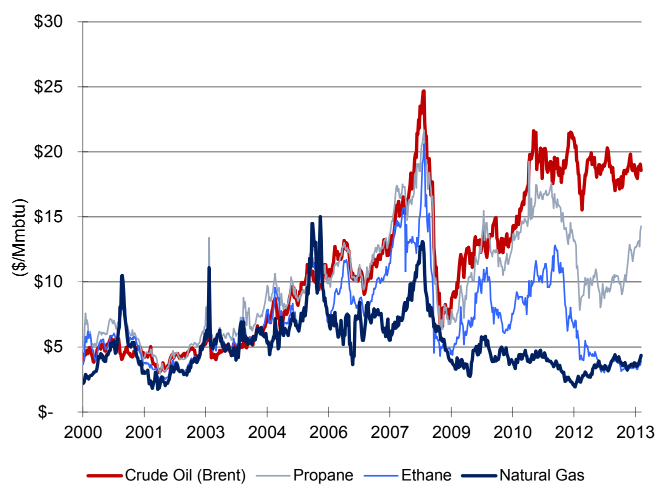
Source: Citi Research Estimates, Bloomberg pricing

Propane/Butane Markets Strengthen on the Back of Increased Export Capacity

Propane: From Oversupplied to Overseas

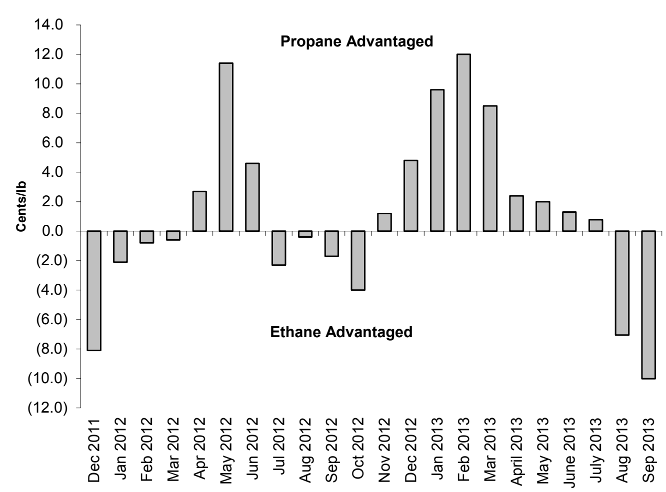
The largest domestic markets for propane include the petrochemical industry, residential/commercial space heating, and crop drying in agriculture. Space heating and crop drying are not growing end markets for propane, which leaves the petrochemical industry as the marginal consumer. However, the petrochemical industry is highly adaptive and can swing its feedstock preference toward the lowest cost option. The commodity fell into over supplied territory in 2012 as domestic propane production grew >20% YOY while the petrochemical industry did not increase its consumption until the price fell far enough to compete with ethane as a feedstock. However, this sharp correction in domestic price opened up a large arbitrage for propane to sell in the global market as an export, which drove a number of expansion projects that just started to come on-line in 2013. Specifically, propane/butane export capacity doubled from ~160 MBbls/d in 2012 to ~328 MBbls/d. This large addition of export capacity has provided the outlet necessary to balance the domestic propane market, reduce inventory levels, and support higher prices (Fig. 23 and 24).

Figure 21. Historical Crude, Nat gas, Ethane & Propane Price ($/MMBtu)



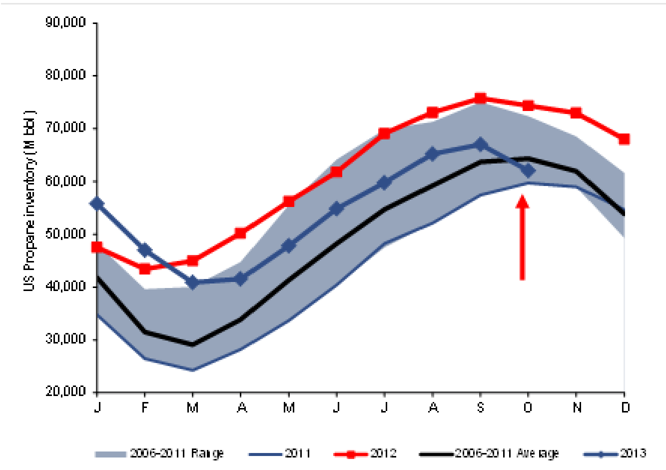
Source: Bloomberg, Citi Research

Figure 22. Advantaged Feedstock Pricing: Ethane vs. Propane



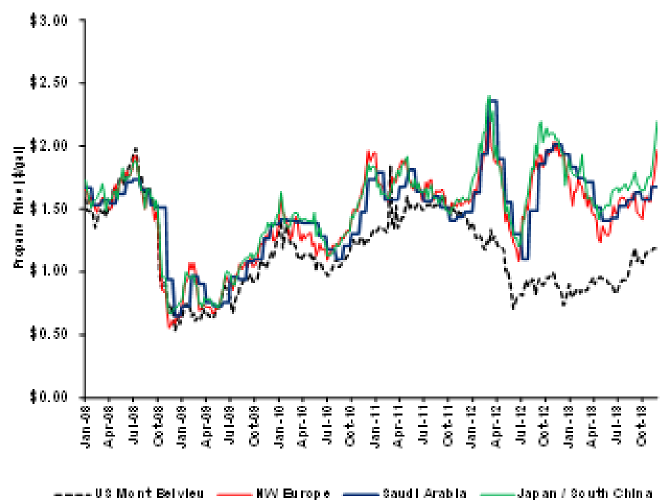
Source: EIA, Citi Research Estimates, Jacobs Consultancy Inc. Hodson Report

Figure 23. Propane Inventory Levels



Source: EIA, Citi Research

Figure 24. Global Propane Prices ($/gal)



Source: Bloomberg, Citi Research

As we see it, MLPs that benefit the most from rising lighter-end NGLs include DPM, NGLS, OKS, and WPZ; whereas those with exposure to butane blending margins include BPL, KMP, and SXL.

Retail Propane operators (APU, FGP, SPU) would be disadvantaged by both rising propane prices and shifting propane pipeline flows out of the North East, in our view.

Next Up: Rising Propane & Butane Prices as Exports Draw Down Inventories

Over the last 12 months propane production from natural gas plants has averaged ~14% YoY growth. In our multi-case NGL supply model (Fig. 26 and 27) we estimate growth will continue at a pace that ranges from ~6% to 14% over the next several years. Despite this impressive growth, we expect announced propane export capacity of ~1.0 million Bbls/d to provide a sufficient outlet to balance the US market (Fig. 25). Importantly, we see inventory drawdowns that would support higher prices even assuming 30-50% capacity utilization on these facilities.

Our base case scenario (Fig. 26) incorporates an avg. annual NGL growth rate of ~6.8%. Our 2014 assumption is less than the ~14% growth rate propane experienced in 2013 to reflect the risk of lower crude prices on production levels. Under this scenario, export capacity utilizations of ~35% imply propane inventories remain within historical levels until 2016, whereas higher utilizations quickly begin to strain inventory levels.

Our bull case scenario (Fig. 27) assumes higher production growth and export dock utilization levels. Under this scenario inventory levels begin to show signs of strain in 2014. To this point, we estimate domestic propane supply would need to grow at an annual rate of greater than ~15% over the next several years to sufficiently utilize announced export capacity so as not to draw-down inventories beyond historical norms.

Therefore, if Brent crude prices remain supportive in 2014 we believe domestic propane prices will at times need to rise toward a global price (less ~$0.25 for transportation & export facility fees) in order to balance the market as production gains may not match up perfectly with export capacity additions. What follows may have significant market impacts, which could include:

1. **Higher Domestic Propane Prices.** The beneficiaries of improved propane / butane pricing include G&P MLPs with keep-whole and/or percent-of-proceeds processing contracts. Alternatively, higher prices could squeeze retail propane margins should operators not be able to pass higher prices onto customers.

2. **The Unintended Consequences of ATEX.** Reduced product flows to the North East during peak demand periods has constrained local supply as sufficient production from the Marcellus & Utica has not yet come online. Now retail propane operators might need to pay an additional premium to source product to meet N.E. demand during a colder than normal start to winter. While cold weather is normally beneficial to retail propane operators, Northeast retailers might experience offsetting margin compression.

3. **Other NGLs Should Also Find Support.** We expect butane and iso-butane prices to also benefit from additional propane export capacity expansions. The physical characteristics of butane make it easier to export compared to propane and these markets are also much smaller compared to the overall domestic propane market. Combined the butane/isobutene market is 500 MBbls/d compared to the propane market that is 1.5 million Bbls/d. To date we have seen little in the way of butane exports, but should pricing get too cheap we believe this market has the potential to correct fairly quickly. Beneficiaries will be G&P MLPs with commodity sensitive processing contracts; whereas MLPs with exposure to domestic butane blending could see lower than normal margins.

4. **Propane Takes Market Share from Naphtha.** We estimate an additional 700 MBpd of propane could reach the global market by the spring of 2016, assuming all export projects come online and are fully utilized. It is our view that these barrels will push their way into the global market and directly compete with other fuels such as naphtha. Said another way, U.S. propane exports can be seen as the equivalent of supplying incremental crude barrels to the global market.

Figure 25. U.S. Export Capacity Projects

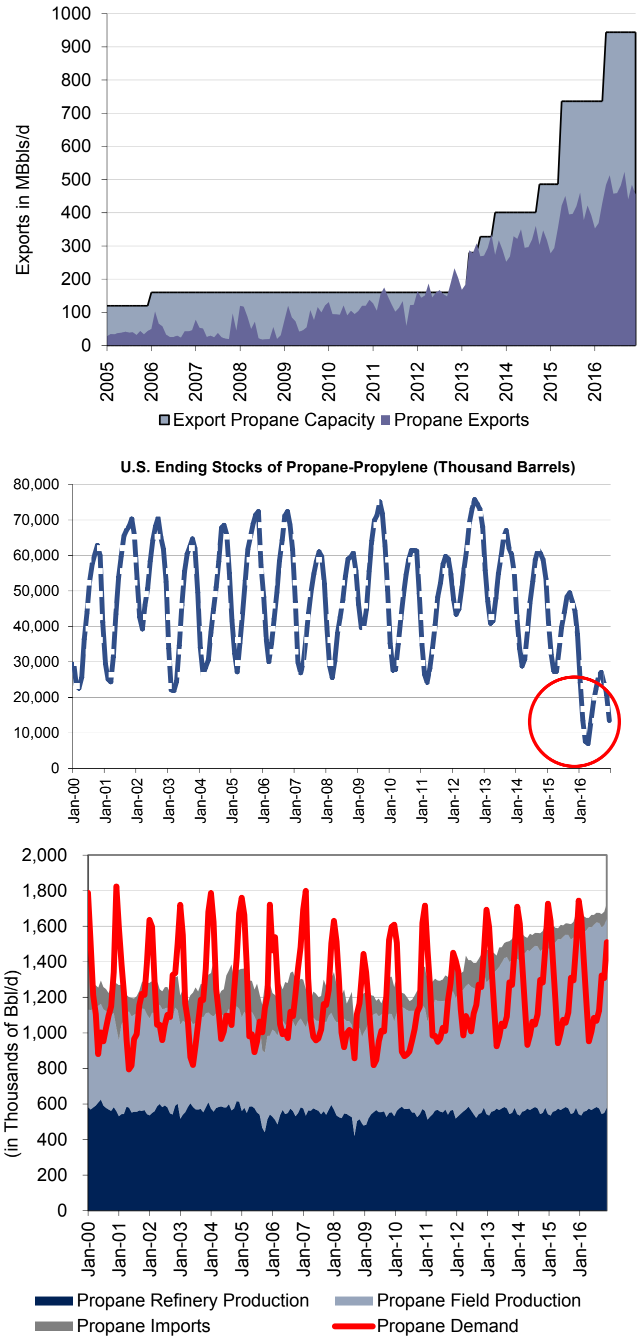
U.S. Propane Export Capacity							
Exisitng Facilities & Sanctioned Projects	**Ship Loadings**	**Bbls/Month Low**	**Bbls/Month High**	**Bbls/Day Low**	**Bbls/Day High**	**Timing**	**Source**
EPD	MGC, VLGC	7,500,000	8,500,000	250,000	283,333	Current	9/13/2013 Press Release
SXE - Marcus Hook	MGC	100,000	100,000	3,333	3,333	Current	Citi Estimate
NGLS	MGC	1,000,000	1,000,000	33,333	33,333	Current	Slide 15 of Presentation
Total of Current		**8,600,000**	**9,600,000**	**286,667**	**320,000**		
NGLS	4 VLGC / mo	2,200,000	2,200,000	73,333	73,333	3Q:13	Slide 15 of Presentation
NGLS	2 - 4 VLGC / mo	1,100,000	2,200,000	36,667	73,333	3Q:14	Slide 15 of Presentation
Mariner East (SXE)	MGC	600,000	1,200,000	20,000	40,000	2H:14	9/26/12 RRC PR
EPD	3 VLGC / mo	1,500,000	1,500,000	50,000	50,000	1Q:15	9/13/2013 Press Release
Mariner South (SXE)	VLGC	6,000,000	6,000,000	200,000	200,000	1Q:15	5/6/2013 Press Release
EPD	VLGC	6,000,000	6,500,000	200,000	216,667	4Q:15	10/2/2013 Press Release
Total Current + Sanctioned		**26,000,000**	**29,200,000**	**866,667**	**973,333**		
Pending Projects							
Mariner East Phase 2 (SXE)	TBD						9/26/2012 Press Release
Moss Lake LPG Terminal (WPZ/BWP)	VLGC	1,100,000	2,200,000	36,667	73,333	End of 2015	10/1/13 Press Release
Total Pending		**1,100,000**	**2,200,000**	**36,667**	**73,333**		
Total Potential		**27,100,000**	**31,400,000**	**903,333**	**1,046,667**		

Source: Citi Research

Figure 26. Base Case: Moderate NGL growth

NGL Production Growth Assumptions	Annual	Monthly
2013 / 2014	6.84%	0.57%
2015	6.84%	0.57%
2016	6.84%	0.57%
2017	6.84%	0.57%
2018	6.84%	0.57%
2019	6.84%	0.57%
2020	6.84%	0.57%
NGLs Growth Target 2020		
2020 NGL Est Bbls/d	4,950	
Target	5,000	

Export Capacity Utilization Assumptions	Annual
2013 / 2014	35.00%
2015	30.00%
2016	30.00%
2017	30.00%
2018	30.00%
2019	30.00%
2020	30.00%

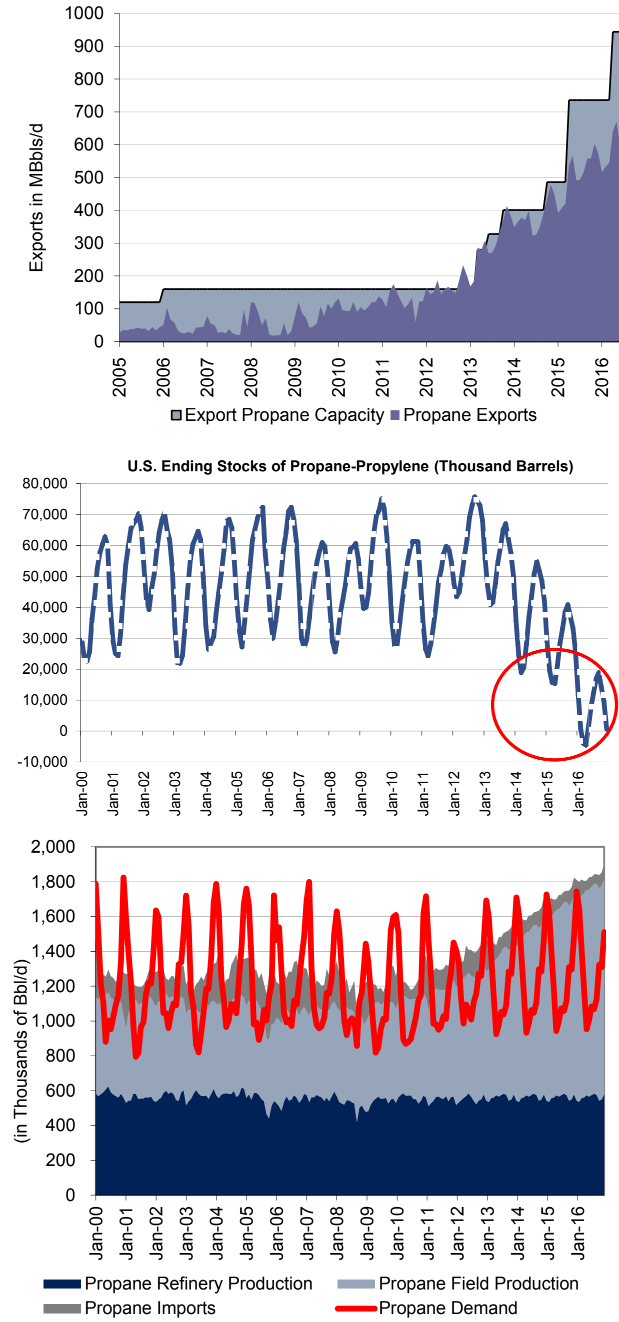


Source: Citi Research, EIA Historical data

Figure 27. Bull Case: Higher Near-term NGL growth & Exports

NGL Production Growth Assumptions	Annual	Monthly
2013 / 2014	14.00%	1.17%
2015	12.00%	1.00%
2016	8.00%	0.67%
2017	5.00%	0.42%
2018	3.00%	0.25%
2019	3.00%	0.25%
2020	3.00%	0.25%
NGLs Growth Target 2020		
2020 NGL Est Bbls/d	5,042	
Target	5,000	

Export Capacity Utilization Assumptions	Annual
2013 / 2014	75.00%
2015	50.00%
2016	50.00%
2017	50.00%
2018	50.00%
2019	50.00%
2020	50.00%



Source: Citi Research, EIA Historical data

Too Hard to Ignore, Ethane Becomes a Viable Export Option

MLPs with significant exposure to ethane exports include EPD and NGLS/TRGP.

We expect ethane to remain over-supplied with a rather large percentage of potential production being rejected into the natural gas stream for the foreseeable future. Importantly, we expect this to be the case even assuming all announced ethylene cracker expansions and new build projects come on-line by 2018. Further we believe ethane exports are a reasonable option for Northwest European crackers to consider as a feedstock alternative. While one ethane supply agreement between INEOS and Range Resources of up to 20 MBbls/d was announced in 2012, we expect to see more of these announced in 2014.

Figure 28. Ethylene Cracker Cost Assumptions

Cost Assumptions ($/lb)	High	Low
Ethane Conversion	$1.25	$0.25
Ethylene Expansion	$0.83	$0.53
Ethylene Greenfield	$1.82	$1.20

Source: Citi Research

Currently, field production of NGLs is ~2.7 million Bbls/d, but we estimate this number is understated by ~310 MBbls/d due to ethane rejection. We estimate field NGL production could reach ~5.0 million Bbls/d by 2020 assuming current activity levels are sustained and new exports markets are secured. This would put ethane production at ~2.1 million Bbls/d by 2020, which exceeds estimated ethane demand of 1.7 million Bbls/d by ~400 MBbls/d (Fig. 33 and 35).

Our demand forecast is based on ethylene cracker capacity growing from 59 billion lbs./year to 86 billion lbs./year by the end of 2018, which includes all eight cracker expansions that have been announced are brought on-line (Fig. 36). In total, we estimate these announced expansions could top ~$35 billion with a large majority of that spending falling within a two to three year period (Fig. 28 to 30).

Said another way, the U.S. would need **another 14.6 billion Lbs/year** of ethylene cracker capacity on top of the nearly 27 billion lbs./year that is currently in the pipeline to be built through 2018 to provide sufficient demand to meet this growing supply. While this is a possibility, the realities of the construction environment, regulatory permitting, cost escalation, labor shortages all seem likely to dampen the progress of new build capacity in the U.S. Increasing this spending by another 60% to 70% to keep up with ethane supply seems unlikely in such a short period of time, which implies that ethane exports are beginning to look more likely over the next several years.

Figure 29. Ethylene Expansions / New Build Cost& Potential Returns

Ethylene Expansions / New Build Cost ($ in Millions)											Cost	High-case	High-case	Low-case	Low-case
Location	Company	2012	2013	2014	2015	2016	2017	2018	2019	2020	($/Lbs)	EBITDA	Multiple	EBITDA	Multiple
Taft, LA	Dow		$577								$0.68	$302.1	1.91x	$101.3	5.70x
Lake Charles, LA	Sasol NA							$4,980			$1.51	$1,172.7	4.25x	$393.2	12.67x
Lake Charles #1, LA	Westlake		$160								$0.68	$83.5	1.91x	$28.0	5.70x
Lake Charles #2, LA	Westlake				$160						$0.68	$83.5	1.91x	$28.0	5.70x
Geismar, LA	Williams Olefins			$500							$0.83	$213.2	2.34x	$71.5	6.99x
Cedar Bayou, TX	CP Chem						$6,000				$1.82	$1,172.7	5.12x	$393.2	15.26x
Freeport, TX	Dow						$4,000				$1.21	$1,172.7	3.41x	$393.2	10.17x
Monaca, PA	Shell							$3,000			$1.20	$888.4	3.38x	$297.9	10.07x
Baytown, TX	Exxon						$4,980				$1.51	$1,172.7	4.25x	$393.2	12.67x
Point Comfort, TX	Formosa						$3,471				$1.51	$817.4	4.25x	$274.0	12.67x
Ingleside, TX	Oxy / Mexichem						$1,560				$1.30	$426.5	3.66x	$143.0	10.91x
Not disclosed	Indorama							$4,316			$1.51	$1,016.4	4.25x	$340.7	12.67x
Calvert City, KY	Westlake			$225							$1.25	$64.0	3.52x	$21.4	10.49x
La Porte, TX	LyondellBasell			$420							$0.53	$284.3	1.48x	$95.3	4.41x
Morris, IL	LyondellBasell	$25									$0.25	$35.5	0.70x	$11.9	2.10x
Channelview, TX	LyondellBasell				$200						$0.80	$88.8	2.25x	$29.8	6.71x
Corpus Christi, TX	LyondellBasell				$530						$0.66	$284.3	1.86x	$95.3	5.56x
Port Arthur, TX	BASF/Total		$285								$0.68	$149.3	1.91x	$50.0	5.70x
Chocolate Bayou, TX	Ineos		$316								$0.68	$165.3	1.91x	$55.4	5.70x
Total Capital Invested	**$35,704**	**$25**	**$1,338**	**$1,145**	**$890**	**$0**	**$20,011**	**$12,296**	**$0**	**$0**	**$1.01**		**2.86x**		**8.52x**

Source: Citi Research

Figure 30. Ethylene Margin ($/lb) Assumptions (High and Low case)

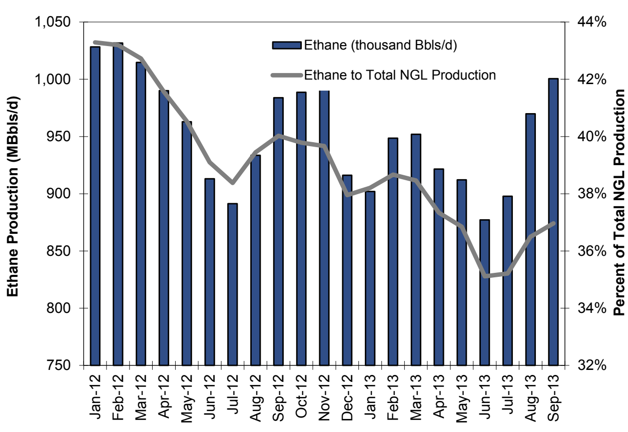
	Margin Assumptions	High	Low
A	Crude Price ($/Bbl)	$100	$75
B	# Gal/Bbl	42	42
C = A / B	Crude Price ($/gal)	$2.38	$1.79
D	Lbs of Ethylene / gal of Crude	4.75	4.75
E = C / D	**Crude Price (in Lbs of Ethylene Equivalent)**	**$0.50**	**$0.38**
F	Ethylene to Brent Crude Ratio	110%	95%
G = E x F	**Ethylene Price ($/Lb)**	**$0.55**	**$0.36**
H	Ethane Cost ($/Gal)	$0.25	$0.35
I	Transportation Cost ($/Gal)	$0.05	$0.05
J = H + I	Ethane Feedstock Cost	$0.30	$0.40
K	Gal of Ethane/Lb of Ethylene	0.42	0.42
L = J x K	Ethylene Feedstock Costs ($/Lb)	$0.13	$0.17
M	Fixed & Variable Cost ($/lb)	$0.07	$0.07
N = L + M	**Ethylene Cash Costs ($/Lb)**	**$0.20**	**$0.24**
O = G - N	**Ethylene Margin ($/Lb)**	**$0.36**	**$0.12**

Source: Citi Research

Evidence of Ethane Rejection

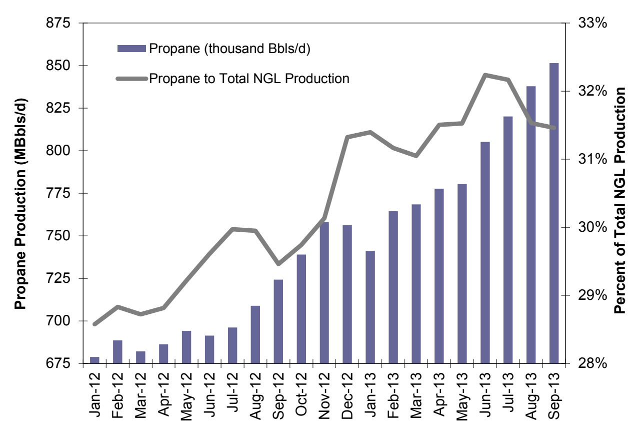
U.S. ethane production peaked at the beginning of 2012 at 1.032 million Bbls/d and accounted for more than 43% of total NGL production. By June of this year ethane production was down 15% to 877 thousand Bbls/d and only made up for 35% of total NGL production (Fig. 31). Over the same timeframe propane production was up 19% from 680 thousand Bbls/d to 840 thousand Bbls/d and now accounts for ~32% of total NGL production, which up from ~28% of total NGL production in January of 2012 (Fig 32). Speaking with producers and processors it is our opinion that most new wells have higher ethane content, not lower ethane content. Therefore, we believe it is reasonable to assume ethane production could be as high as 1.3 million Bbls/d and make up for 43% of total NGL production.

Figure 31. Ethane Production vs. Percent of NGL Production



Source: EIA, Citi Research Estimates

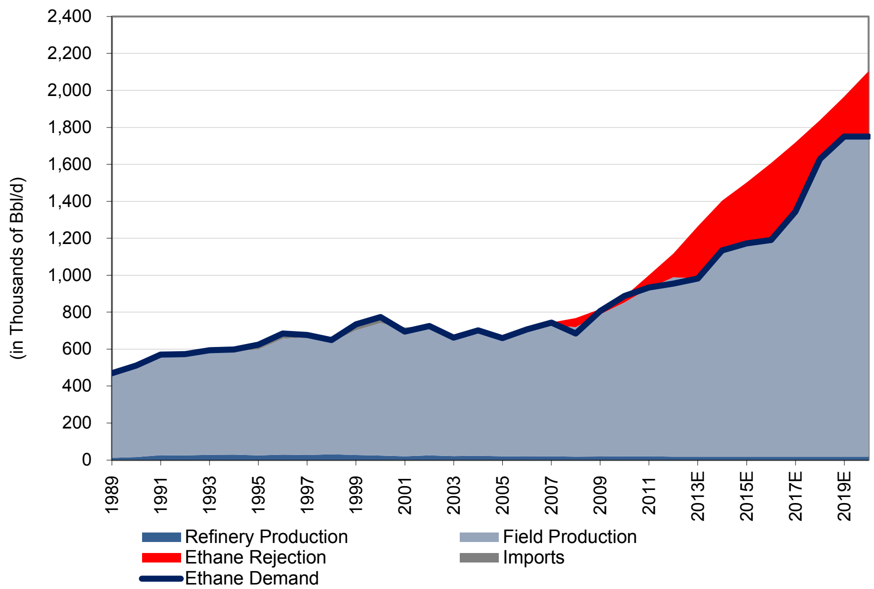
Figure 32. Propane Production vs. Percent of NGL Production



Source: EIA, Citi Research Estimates

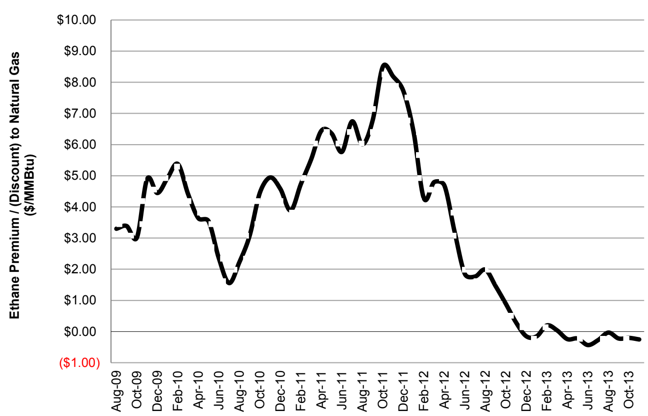
Petchem Demand is Key. The only demand source for ethane is the petrochemical industry, while natural gas processing is by far the largest source of supply. As ethane supply outpaced demand the premium that ethane trades for above natural gas and the incentive to strip ethane out of the natural gas stream fell sharply throughout 2012 (Fig. 34). Currently, the price of ethane is linked to natural gas and we do not expect this change for the foreseeable future.

Figure 33. Ethane Supply vs. Demand (Petchem Cracker Capacity) Forecast (MBbls/d)



Source: Citi Research Estimates, EIA

Figure 34. Ethane Premium (Discount) to Natural Gas ($/MMbtu)



Source: Bloomberg, Citi Research

Figure 35. Citi NGL Production Forecast

NGL	Current	Avg. YoY Growth	2020E	Avg. Annual Growth
Ethane	1,001	-3.2%	1,733	7.6%
Ethane Rejection	312	177.1%	420	4.0%
Propane	852	14.2%	1,396	6.8%
Butane	230	18.7%	377	6.8%
Iso-Butane	253	9.7%	414	6.8%
Pentanes	372	8.2%	610	6.8%
Total	**3,019**	**6.1%**	**4,950**	**6.8%**

Source: Citi Research

Figure 36. Ethylene Cracker Capacity Additions (2013 – 2020) & Implied Ethane Demand

Ethylene Expansions (MM Lbs/yr)										
Location	**Company**	**Current**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Taft, LA	Dow		850							
Lake Charles, LA	Sasol NA							3,300		
Lake Charles #1, LA	Westlake		235							
Lake Charles #2, LA	Westlake				235					
Geismar, LA	Williams Olefins			600						
Cedar Bayou, TX	CP Chem						3,300			
Freeport, TX	Dow						3,300			
Monaca, PA	Shell							2,500		
Baytow n, TX	Exxon						3,300			
Point Comfort, TX	Formosa						2,300			
Ingleside, TX	Oxy / Mexichem						1,200			
Not disclosed	Indorama							2,860		
Calvert City, KY	Westlake			180						
La Porte, TX	LyondellBasell			800						
Morris, IL	LyondellBasell			100						
Channelview , TX	LyondellBasell				250					
Corpus Christi, TX	LyondellBasell				800					
Port Arthur, TX	BASF/Total		420							
Chocolate Bayou, TX	Ineos		465							
Total Incremental Capacity		**59,027**	**1,970**	**1,680**	**1,285**	**0**	**13,400**	**8,660**	**0**	**0**
Ethylene Capacity (Billion Lbs)		**59.0**	**61.0**	**62.7**	**64.0**	**64.0**	**77.4**	**86.0**	**86.0**	**86.0**

Ethane Demand (Thousand Bbls/d)										
Location	**Company**	**Current**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Taft, LA	Dow		22							
Lake Charles, LA	Sasol NA							86		
Lake Charles #1, LA	Westlake		6							
Lake Charles #2, LA	Westlake				5					
Geismar, LA	Williams Olefins			16						
Cedar Bayou, TX	CP Chem						86			
Freeport, TX	Dow						72			
Monaca, PA	Shell							65		
Baytow n, TX	Exxon						86			
Point Comfort, TX	Formosa						60			
Ingleside, TX	Oxy / Mexichem						31			
Not disclosed	Indorama							74		
Calvert City, KY	Westlake			5						
La Porte, TX	LyondellBasell			21						
Morris, IL	LyondellBasell			3						
Channelview , TX	LyondellBasell				7					
Corpus Christi, TX	LyondellBasell				21					
Port Arthur, TX	BASF/Total		11							
Chocolate Bayou, TX	Ineos		12							
Total Incremental Ethane Demand			**51**	**44**	**32**	**0**	**335**	**225**	**0**	**0**
Ethane Demand (MM Bbls)		**1,045**	**1,096**	**1,140**	**1,172**	**1,172**	**1,507**	**1,733**	**1,733**	**1,733**

Source: Citi Research

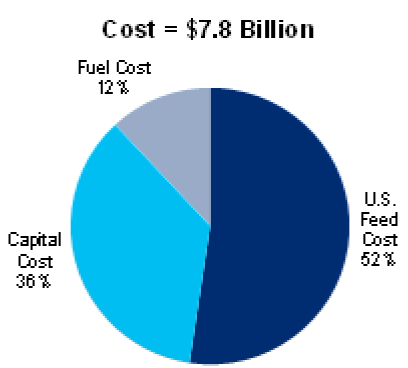
(LNG Exports + Propane Exports) / ? = Ethane Exports

A Walk Through the Arb…Given our base forecast for continued ethane rejection of 300 – 400 MBbls/d through 2020, we believe ethane will remain linked to natural gas pricing for the foreseeable future absent the exportation of ethane in larger quantities. Figures 37 through 39 illustrate our calculation of the current price arbitrage & economics that we believe support ethane exports.

Specifically, we estimate the capital cost to construct an export facility to be ~$700 million. This cost is roughly double that of propane, but is much less than an LNG export facility as ethane requires less of a change in pressure and temperature to liquefy than does natural gas. The FOB cost ($/MMBtu) of ethane assuming a $0.26/gal price now stands at ~$6.50, which is less than LNG's cost of ~$7.15.

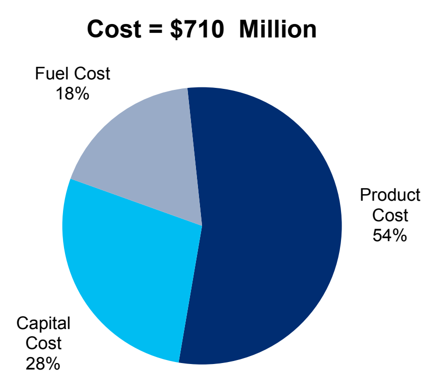
Under a scenario of relatively wide natural gas-to-crude pricing, the ethane export arbitrage is more attractive than LNG (currently ~$5/MMBtu), with a significantly lower capital investment. Under our "High Case" example in Figures 28 through 30, we estimate an average potential pay-back period of ~3 years for ethylene cracker expansions, with expansions and ethane conversions indicating much lower costs per lb. than greenfield projects. We therefore believe that North West European ethylene producers, who are currently under a massive price disadvantage vs. US petchem producers, should be sufficiently incentivized to spend the capital to upgrade/convert their facilities to run ethane over naphtha.

Figure 37. LNG Export: Sabine Pass



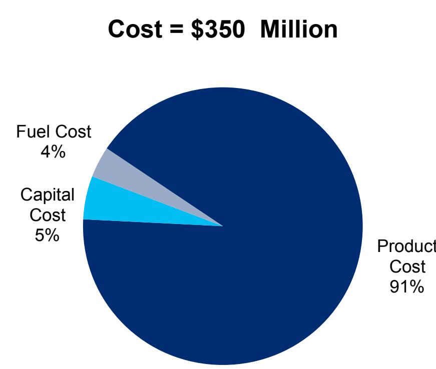
Project Scope:	
MMTPA	18
Bcf/d	2.4
Unit Economics ($/MMbtu):	
Product Cost	$3.75
Capital Cost	$2.55
Fuel Cost	$0.85
FOB Cost ($/MMbtu)	**$7.16**
Competing Benchmark	Asia LNG
Benchmark Price	$15.55
Potential Arb ($/MMBtu)	**$8.39**

Figure 38. Ethane Project: Estimate



Project Scope:	
Bbls/d	70,000
Unit Economics ($/gal):	
Product Cost	$0.26
Capital Cost	$0.13
Fuel Cost	$0.09
FOB Cost ($/gal)	**$0.48**
FOB Cost ($/MMbtu)	**$6.52**
Competing Benchmark	Naphtha
Benchmark Price	$19.95
Potential Arb ($/MMBtu)	**$13.43**

Figure 39. Propane Export: Texas Gulf Coast



Project Scope:	
Bbl/d	70,000
Unit Economics ($/gal):	
Product Cost	$1.20
Capital Cost	$0.07
Fuel Cost	$0.05
FOB Cost ($/gal)	**$1.31**
FOB Cost ($/MMbtu)	**$14.38**
Competing Benchmark	Saudi
Benchmark Price	$16.42
Potential Arb ($/MMBtu)	**$2.04**

Source: EIA, Citi Research Estimates

Enterprise Products Partners LP

(EPD.N; US$61.63; 1)

Valuation

Our 12-month target price for EPD is $73.00 per unit. Our target price assumes that the partnership will be able to increase distributions to $2.92/unit on an annualized basis 12 months from now and that the units should trade with a 4.00% yield. Our choice of the implied yield is a function of the MLP's growth outlook, risk profile, and the broader yield environment. Longer term, we expect midstream MLPs to outperform alternative yield asset classes as a result of strong fundamentals as seen in recent results and growing distribution to unit holders.

We use internal rate of return (IRR) and discounted cash flow (DCF) methodologies to help support our implied yield valuation. These secondary valuation metrics are based on our 5-year operational forecast that takes into account near-term growth opportunities and/or risk factors. Our terminal yield and growth estimates take into account a more normalized yield environment and a slower pace of long-term industry growth. The long-term yield we use to value EPD is 5.0%, which is anchored by our 2017 MLP index yield estimate of 7% (300 basis points above a 10-year Treasury yield of 4%) minus 200 basis points. Historically the partnership has traded at a yield that was 70 basis points lower than the MLP index, but growth prospects and risks associated with existing assets have reduced this spread closer to our long-term assumption. Based on terminal distribution growth of 1%, we derive an IRR of ~10% and a DCF of $78.50/unit. The equity value for EPD based on our DCF model is higher than our implied yield valuation, but nonetheless supports our view on the partnership.

Risks

Our rating and price target are based on the consideration of key risk factors that include: 1) balance sheet strength, 2) distribution coverage, and 3) variability of cash flows. Enterprise Products has an investment grade credit rating and maintains a balance sheet with a Debt/EBITDA ratio of ~3.70x, which is in line with the MLP average at ~4.4x. Its distribution coverage for 2013 is projected to be ~1.50x, well above our coverage group of 1.10x. Taking into consideration the partnership's extensive asset base that is geographically diversified, we view EPD's cash flows as relatively stable. Other risk factors considered include volatility of monthly returns as well as daily trading volume. Risks to the MLP achieving our 12-month target price include the following: 1) a material decrease in natural gas production or crude oil refining as a result of sharp changes to commodity prices; 2) the inability of the partnership to obtain access to new natural gas volumes for its processing and pipeline business; and 3) a decrease in the difference between NGL product prices and natural gas prices that results in lower processing margins. If the impact on the partnership from any of these factors proves to be greater than we anticipate, the MLP may not reach our target price.

Targa Resources Partners LP

(NGLS.N; US$49.32; 1)

Valuation

Our 12-month target price on NGLS is $57.00 per unit based on a projected yield of 5.5% and our 12-month forward distribution estimate of $3.14/unit, which implies ~10% growth from the current distribution. In our view NGLS will continue to trade at a slight premium relative to its peers based on its above average growth and well positioned assets that we believe will continue to provide attractive expansion opportunities over the next several years. We use internal rate of return (IRR) and discounted cash flow (DCF) methodologies to help support our implied yield valuation. These secondary valuation metrics are based on our 5-year operational forecast that takes into account near-term growth opportunities and/or risk factors. Our terminal yield and growth estimates take into account a more normalized yield environment and a slower pace of long-term industry growth. The long-term yield we use to value NGLS is 6.50%, which is anchored by our 2017 MLP index yield estimate of 7% (300 basis points above a 10-year Treasury yield of 4%) minus 50 basis points. Historically the partnership has traded at a yield that was 20 basis points lower than the MLP index. Based on terminal distribution growth of 1%, we derive an IRR of ~14% and a DCF of $66.80/unit. The equity value for NGLS based on our DCF model is higher than our implied yield valuation, but nonetheless supports our positive view on the partnership.

Risks

Our rating and target price on NGLS are based on the consideration of key risk factors that include: 1) balance sheet strength, 2) distribution coverage, and 3) variability of cash flows. The partnership's balance sheet strength as measured by 2013 Debt/EBITDA is projected to be 4.1x, which is in-line with a peer group average of 4.0x. However, we expect leverage to come down over the next few years as cash flows associated with investments ramp-up. The partnership's 2013 distribution coverage ratio is expected to be 1.09x, which is also in-line with a peer group average of 1.10x. We also expect coverage to improve in future years as commodity prices stabilize and contributions from recent investments increase. Due to the partnership's sensitivity to commodity prices, we view cash flows as being somewhat variable, but this volatility should decrease as new fee-based projects are brought on-line. Risks to NGLS achieving our 12-month target price include: 1) reduced throughput volumes; 2) a significant decrease in commodity prices; and 3) reduced margins on its Marketing & Distribution segment. A material decrease in natural gas production, as a result of lower drilling activity in areas served by the partnership's assets, would also negatively impact cash flow. If the impact on the partnership from any of these factors proves to be greater than we anticipate, the MLP may not reach our target price. Conversely, units could materially outperform our target price if commodity prices increase and volumes outperform our current expectations.

Emerge Energy Services LP

(EMES.N; US$38.10; 1H)

Valuation

Our target price of $42.00 is based on our matrix valuation approach. We use three different valuation methodologies to reach our target price. We believe this approach captures the different valuation philosophies in the market today. Based on our valuation matrix, we get a valuation range from $34to $48 with our highest

valuation coming from our Ev/EBITDA multiple analysis and lowest through our discounted cash distribution analysis.

Our implied yield valuation analysis derives a valuation of $42.70 and assumes the partnership will increase the distribution to $3.84/unit annualized with units trading at a 9.0% yield. Our target yield takes into consideration the current yield environment, the limited nature of Emerge's take-or-pay and efforts-based contracts, the variable nature of spot margin pricing in the sands segment, and the potential for additional growth through acquisitions and/or a take-out down the road.

Our EV/EBITDA analysis is based on a 2014 multiple of 12.0x which reflects our view towards near term-upside to cash flows given the current windfall margins sand producers are earning due to previous supply constraints and record oil & gas drilling. Our multiple-based approach derives a valuation of $48.24/unit.

Our discounted cash distribution (DCD) valuation analysis uses our 5-year operational forecast that takes into account near-term growth opportunities, risk factors, and our view that frac sand gross margins will compress from ~$27/ton today to ~$17/ton in 2017. Our terminal yield and growth estimates take into account a more normalized yield environment and a slower pace of long-term industry growth. The long term yield we use to value EMES is 9.0%, which is anchored by our 2017 MLP index yield estimate of 7% (300 basis points above a 10-year treasury yield of 4%) plus 200 basis points. Based on terminal distribution growth of 0%, we derive an internal rate of return (IRR) of 6.7% and a DCD of $34.71/unit.

Risks

Our Buy/High Risk rating on Emerge Energy Services LP is based on the consideration of key risk factors: 1) variable rate distribution policy, 2) high degree of uncertainty for future frac sand margins that could come under pressure if supply is over-built, and 3) a high level of customer and contract concentrations in the sands segment. On average, EMES generates ~75% of cash flows from frac sand, with the remaining 25% from Fuels processing and distribution. The core customers for the EMES' WI facilities are major oilfield services companies engaged in hydraulic fracturing. Two customers together account for ~83% of the sand volumes produced by the New Auburn Plant, or ~40% of our total NTM volume forecast. In 2012, the top three customers accounted for 84% of revenues in the Sand segment. Risks to the MLP achieving our 12-month target price include the following: 1) a trend towards vertical integration of proppants by E&P and/or OFS customers, 2) a dramatically lower crude price environment where liquids-directed drilling decreases thereby impacting sales volumes and margins on frac sand, and 3) a near-term over-build of frac sand capacity given the high prices of frac sand and high ROIC available to new entrants today. If the impact of these factors proves to be greater than we anticipate, the MLP may not reach our target price. Conversely, the units could materially outperform our target price if frac sand margins improve (or at least hold steady) and/or volumes on the partnership's processing plants exceed amounts we have forecast.

TC PipeLines LP

(TCP.N; US$43.89; 3)

Valuation

Our 12-month target price for TC PipeLines is $43.00 per unit. Our implied yield valuation assumes the partnership will keep its annual distribution flat at $3.24 per unit over the next 12 months and the units should trade at a yield of 7.50%. Our choice of the implied yield is a function of the MLP's growth outlook, risk profile, and the broader yield environment. Our choice of yield reflects TCP's solid liquidity, relatively high coverage, potential natural gas supply improvement, and a 25% IDR cap, but discounts declining natural gas imports from Canada and the potentially negative impact of TransCanada's toll case. We use internal rate of return (IRR) and discounted cash flow (DCF) methodologies to help support our implied yield valuation. These secondary valuation metrics are based on our 5-year operational forecast that takes into account near-term growth opportunities and/or risk factors. Our terminal yield and growth estimates take into account a more normalized yield environment and a slower pace of long-term industry growth. The long-term yield we use to value TCP is 7.50%, which is anchored by our 2017 MLP index yield estimate of 7% (300 basis points above a 10-year Treasury yield of 4%) plus 50 basis points. Historically the partnership has traded at a yield that was 30 basis higher than the MLP index, but growth prospects and risks associated with existing assets has increased this spread further from our long-term assumption. Based on terminal distribution growth of 0%, we derive an IRR of 3.4% and a DCF of $43.14/unit. The equity value for TCP based on our DCF model is in-line with our implied yield valuation and supports our view on the partnership.

Risks

Our rating on TC PipeLines is based on the consideration of key risk factors that include: 1) balance sheet strength, 2) distribution coverage, 3) variability of cash flows. TC PipeLines balance sheet strength as measured by expected 2013E Net Debt/EBITDA is 5.4x, higher than the MLP average of 4.0x. The partnership's coverage ratio is 1.04x, below the MLP average of 1.14x. Based on the volume declines on the partnership's pipelines and the effect of the new rate case, we expect the partnership's cash flow to have high variability in the mid-term. Other factors considered in rating include volatility of monthly returns as well as daily trading volume. Risks to the MLP achieving our valuation target include the following: 1) increased regulatory requirements that increase the cost of doing business; and 2) increased competition that takes market share and reduces profitability. The pipeline business is highly competitive, and other pipeline systems serve the same markets as the partnership. There can be no assurance that a shipper would re-contract with the partnership once a contract expires. If the impact on TC PipeLines from any of these factors proves to be greater than we anticipate, the MLP will likely have difficulty achieving our target price. Conversely, if demand for natural gas transportation from Canada to the U.S. increases the partnership's units could outperform our target price.

Appendix A-1

Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

IMPORTANT DISCLOSURES

TC PipeLines LP (TCP)

Ratings and Target Price History
Fundamental Research

Analyst: John K Tysseland

	Date	Rating	Target Price	Closing Price
1	13-Feb-11	2H	*51.50	51.30
2	11-May-11	2H	*52.00	46.91
3	29-Jul-11	2H	*48.50	44.46
4	6-Oct-11	2H	*43.50	44.41

	Date	Rating	Target Price	Closing Price
5	8-Oct-11	Stock rating system changed		
6	8-Oct-11	*2	43.50	44.02
7	27-Oct-11	2	*45.50	46.78
8	19-Feb-12	2	*45.00	46.80

	Date	Rating	Target Price	Closing Price
9	25-Apr-12	2	*44.50	42.67
10	11-Feb-13	2	*45.00	44.40
11	16-Apr-13	*3	*42.00	49.30
12	30-Oct-13	3	*43.00	51.10

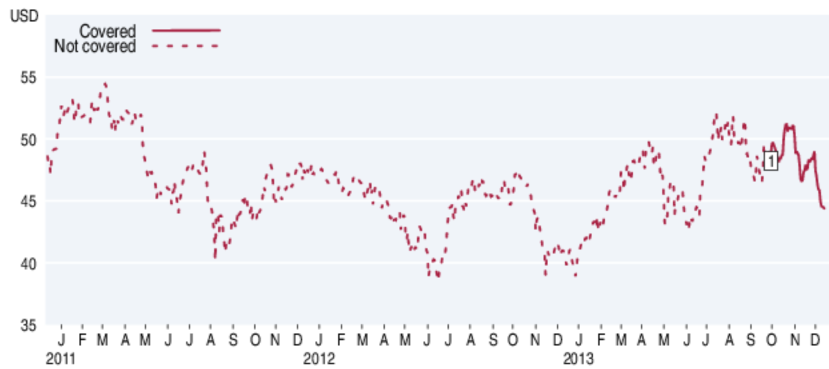
* Indicates change

Rating/target price changes above reflect Eastern Standard Time

TC PipeLines LP (TCP)

Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)

Analyst: John K Tysseland



	Date	Rating	Target Price	Closing Price
1	29-Sep-13	*ADD LP	-	49.04

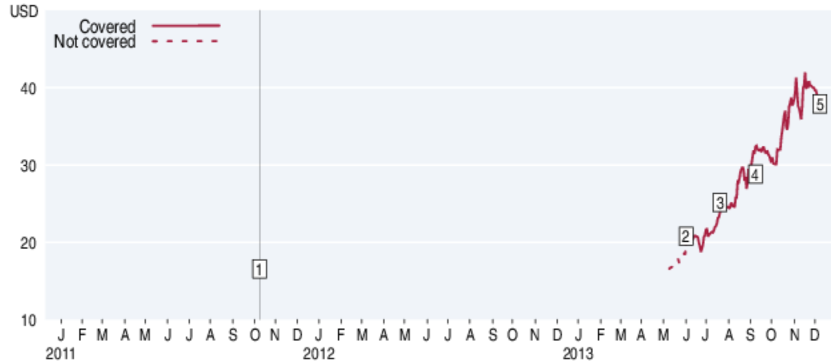
* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Emerge Energy Services LP (EMES)

Ratings and Target Price History
Fundamental Research

Analyst: John K Tysseland
Covered since June 3 2013



	Date	Rating	Target Price	Closing Price
1	8-Oct-11	Stock rating system changed		
2	3-Jun-13	*1H	*21.00	19.72
3	19-Jul-13	1H	*26.50	23.76
4	9-Sep-13	1H	*36.00	32.36
5	9-Dec-13	1H	*42.00	37.97

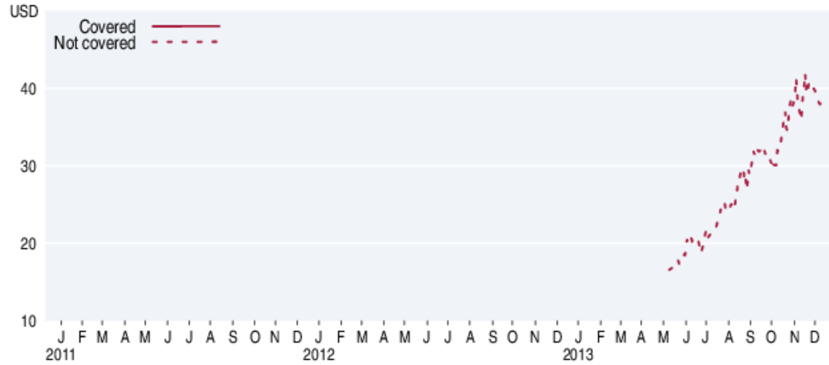
* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Emerge Energy Services LP (EMES)

Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)

Analyst: John K Tysseland
Covered since June 3 2013



* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Enterprise Products Partners LP (EPD)

Ratings and Target Price History
Fundamental Research

Analyst: John K Tysseland

	Date	Rating	Target Price	Closing Price
1	18-Feb-11	1M	*48.00	44.00
2	11-May-11	1M	*48.50	41.41
3	6-Oct-11	1M	*47.00	41.29
4	8-Oct-11	Stock rating system changed		
5	8-Oct-11	*1	47.00	40.90
6	3-Nov-11	1	*49.50	44.67
7	11-Jan-12	1	*52.00	46.57
8	2-Feb-12	1	*56.00	49.87
9	3-May-12	1	*59.00	52.26
10	2-Nov-12	1	*60.50	53.17
11	29-Jan-13	1	*62.00	56.35
12	16-Apr-13	1	*70.50	60.50
13	2-Aug-13	1	*71.50	62.09
14	1-Nov-13	1	*73.00	63.24

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Enterprise Products Partners LP (EPD)

Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)

Analyst: John K Tysseland

	Date	Rating	Target Price	Closing Price
1	20-Jan-11	*ADD MP	-	42.17

	Date	Rating	Target Price	Closing Price
2	4-Feb-13	*REM MP	-	55.99

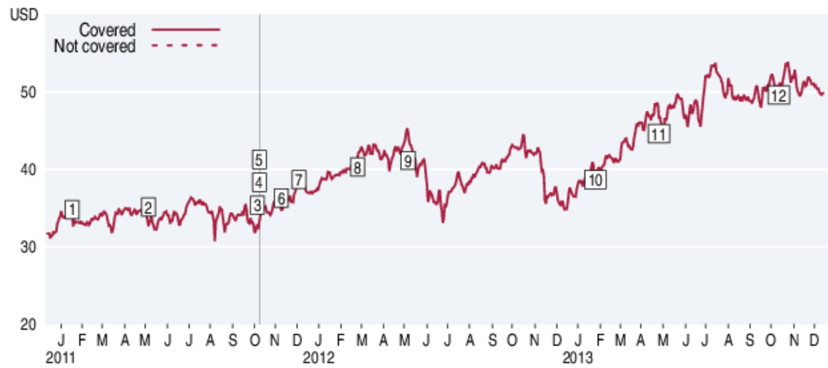
* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Targa Resources Partners LP (NGLS)

Ratings and Target Price History
Fundamental Research

Analyst: John K Tysseland



	Date	Rating	Target Price	Closing Price
1	18-Jan-11	1H	*40.50	34.80
2	5-May-11	1H	*43.50	32.67
3	6-Oct-11	1H	*41.00	32.90
4	8-Oct-11	Stock rating system changed		

	Date	Rating	Target Price	Closing Price
5	8-Oct-11	*1	41.00	32.29
6	9-Nov-11	1	*41.50	34.75
7	4-Dec-11	1	*44.00	38.44
8	24-Feb-12	1	*45.50	41.55

	Date	Rating	Target Price	Closing Price
9	7-May-12	1	*49.50	44.74
10	25-Jan-13	1	*50.00	39.26
11	25-Apr-13	1	*55.00	46.68
12	11-Oct-13	1	*57.00	50.62

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Targa Resources Partners LP (NGLS)

Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)

Analyst: John K Tysseland

	Date	Rating	Target Price	Closing Price
1	16-Sep-11	*ADD MP	-	34.01

	Date	Rating	Target Price	Closing Price
2	11-Jul-12	*REM MP	-	37.85

	Date	Rating	Target Price	Closing Price
3	29-Sep-13	*ADD MP	-	50.79

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Citigroup Global Markets Inc. owns a position of 1 million USD or more in the debt securities of Enterprise Products Partners LP

Citigroup Global Markets Inc. owns a position of 1 million USD or more in the debt securities of Targa Resources Partners LP

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of Emerge Energy Services LP, Enterprise Products Partners LP, Targa Resources Partners LP.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from TC PipeLines LP, Emerge Energy Services LP, Enterprise Products Partners LP, Targa Resources Partners LP.

Citigroup Global Markets Inc. or its affiliates expects to receive or intends to seek, within the next three months, compensation for investment banking services from Enterprise Products Partners LP, Targa Resources Partners LP.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from TC PipeLines LP, Targa Resources Partners LP in the past 12 months.

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Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, securities-related: TC PipeLines LP, Enterprise Products Partners LP, Targa Resources Partners LP.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, non-securities-related: TC PipeLines LP, Targa Resources Partners LP.

Citigroup Global Markets Inc. or an affiliate received compensation in the past 12 months from Enterprise Products Partners LP, Targa Resources Partners LP, Emerge Energy Services LP.

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Citi Research Equity Ratings Distribution

	12 Month Rating			*Relative Rating*		
Data current as of 30 Sep 2013	**Buy**	**Hold**	**Sell**	**Buy**	**Hold**	**Sell**
Citi Research Global Fundamental Coverage	48%	40%	12%	6%	87%	6%
% of companies in each rating category that are investment banking clients	55%	50%	43%	64%	51%	48%

Guide to Citi Research Fundamental Research Investment Ratings:

Citi Research stock recommendations include an investment rating and an optional risk rating to highlight high risk stocks.

Risk rating takes into account both price volatility and fundamental criteria. Stocks will either have no risk rating or a High risk rating assigned.

Investment Ratings: Citi Research investment ratings are Buy, Neutral and Sell. Our ratings are a function of analyst expectations of expected total return ("ETR") and risk. ETR is the sum of the forecast price appreciation (or depreciation) plus the dividend yield for a stock within the next 12 months. The Investment rating definitions are: Buy (1) ETR of 15% or more or 25% or more for High risk stocks; and Sell (3) for negative ETR. Any covered stock not assigned a Buy or a Sell is a Neutral (2). For stocks rated Neutral (2), if an analyst believes that there are insufficient valuation drivers and/or investment catalysts to derive a positive or negative investment view, they may elect with the approval of Citi Research management not to assign a target price and, thus, not derive an ETR. Analysts may place covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and / or trading in the company's securities (e.g. trading suspension). As soon as practically possible, the analyst will publish a note re-establishing a rating and investment thesis. To satisfy regulatory requirements, we correspond Under Review and Neutral to Hold in our ratings distribution table for our 12-month fundamental rating system. However, we reiterate that we do not consider Under Review to be a recommendation.

Relative three-month ratings: Citi Research may also assign a three-month relative call (or rating) to a stock to highlight expected out-performance (most preferred) or under-performance (least preferred) versus the geographic and industry sector over a 3 month period. The relative call may highlight a specific near-term catalyst or event impacting the company or the market that is anticipated to have a short-term price impact on the equity securities of the company. Absent any specific catalyst the analyst(s) will indicate the most and least preferred stocks in the universe of stocks under consideration, explaining the basis for this short-term view. This three-month view may be different from and does not affect a stock's fundamental equity rating, which reflects a longer-term total absolute return expectation. For purposes of NASD/NYSE ratings-distribution-disclosure rules, most preferred calls correspond to a buy recommendation and least preferred calls correspond to a sell recommendation. Any stock not assigned to a most preferred or least preferred call is considered non-relative-rated (NRR). For purposes of NASD/NYSE ratings-distribution-disclosure rules we correspond NRR to Hold in our ratings distribution table for our 3-month relative rating system. However, we reiterate that we do not consider NRR to be a recommendation.

Prior to October 8, 2011, the firm's stock recommendation system included a risk rating and an investment rating. **Risk ratings,** which took into account both price volatility and fundamental criteria, were: Low (L), Medium (M), High (H), and Speculative (S). **Investment Ratings** of Buy, Hold and Sell were a function of the Citi Research expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating. Additionally, analysts could have placed covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and/or trading in the company's securities (e.g. trading suspension). Stocks placed "Under Review" were monitored daily by management and as practically possible, the analyst published a note re-establishing a rating and investment thesis. For securities in developed markets (US, UK, Europe, Japan, and Australia/New Zealand), investment ratings were:Buy (1) (expected total return of 10% or more for Low-Risk stocks, 15% or more for Medium-Risk stocks, 20% or more for High-Risk stocks, and 35% or more for Speculative stocks); Hold (2) (0%-10% for Low-Risk stocks, 0%-15% for Medium-Risk stocks, 0%-20% for High-Risk stocks, and 0%-35% for Speculative stocks); and Sell (3) (negative total return). For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings were:Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to

review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

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Citigroup Global Markets Inc	John K Tysseland; Sunil Sibal; Louis Lazzara; Mirek Zak, CFA; Michael Sheen; Vikram Bagri

OTHER DISCLOSURES

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