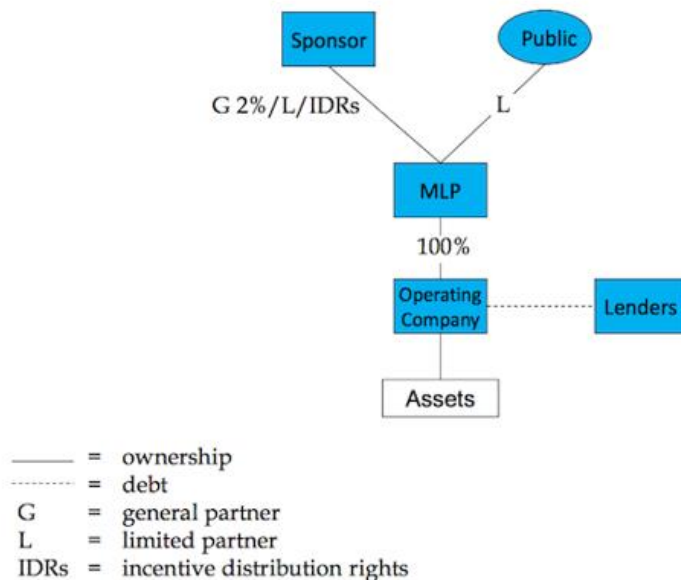


## Energy Infrastructure MLP Research (2/24/19)

Before we even jump into EI MLP's let's first discuss what MLPs are because we do like to take these opportunities to make them lessons at the same time. They are master limited partnerships and are a type of business venture that exists in the form of a publicly traded limited partnership. It combines the tax benefits of a partnership — profits are taxed only when investors actually receive distributions — with the liquidity of a public company. There is no other way of putting it other than saying that MLPs are extremely complex. Let's cover the basics.

Here are some facts about them:

1. Two owners
  - a. Limited Partners
  - b. General Partners



2. Technically don't have any employees as the general partners are responsible for providing all necessary operational services
3. Must distribute at least 90% of its qualifying income (defined as the income from relevant business activities such as midstream energy transportation, real estate, or financing) to its partners.
4. Of the last 100 MLPs to go public, more than 85% have been domiciled in Delaware
5. Beneficial Tax Advantages
  - a. Dividends that paid out are treated as a ROC (return on capital) and are therefore not subject to income tax
  - b. Most of the earnings are tax-deferred until the units (when you buy into one they are not considered shares but instead units) are actually sold and then they're taxed at the lower capital gains rate rather than at the higher personal income rate.
6. Perhaps the biggest disadvantage to being a limited partner in an MLP is that you will have to file a K-1 as opposed to a 1099, even if you don't sell any units
7. Another disadvantage is that you can only use the losses on the investment to bring down your taxes when you sell all of your units. In other words, if you sell some units for a loss, they can't be used to offset any gains you have until you sell everything. Then it becomes a pain because you need to personally keep track of the accumulated losses to ensure everything is tallied right when you do in fact sell everything.

This information is literally just scraping the surface on how complex MLPs are, though. Energy Infrastructure MLPs have been in a real bad downtrend over the last 5 years and have recently caught a small bid with the jump in oil prices this year.

## Market Summary > Alerian MLP Index

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INDEXCME: AMZ

**250.94** +0.11 (0.044%) ↑

Feb 22, 5:47 PM EST · Disclaimer

1 day   5 days   1 month   6 months   YTD   1 year   **5 years**   Max



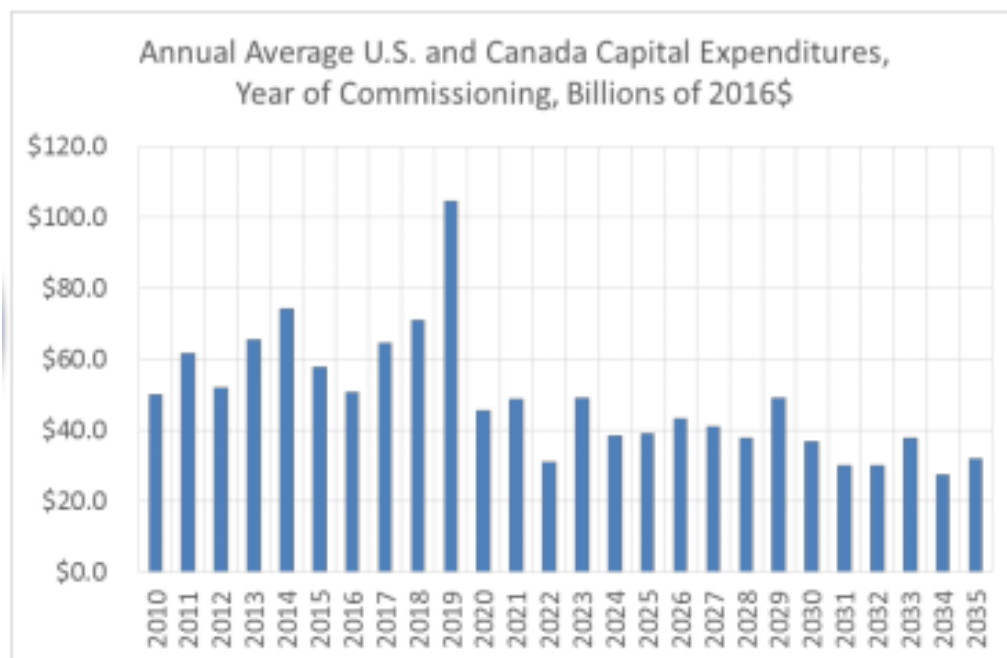
We believe a lot of this is also because many projects are finally starting to come online after years of being worked on. For example, it looks like an additional ~\$100 billion will be invested over the next five years to expand the U.S.'s energy infrastructure according to the Interstate Natural Gas Association of America. MLPs are in a unique position to capitalize on this for several reasons.

Here are some of our findings:

1. Capital expenditures for new oil and gas infrastructure development are expected to total an average \$791 billion from 2018 through 2035. These levels of investment equate to an average annual CAPEX of \$44 billion
2. Approximately 41,000 miles of pipeline and 7 million horsepower of compression and pumping are added to transport oil, gas, and NGLs from 2018 through 2035.
3. An additional 139,000 miles of gathering lines are added along with 10 million horsepower of compression and pumping to support gathering,

processing, and storage of oil, gas, and NGLs during the study's forecast period.

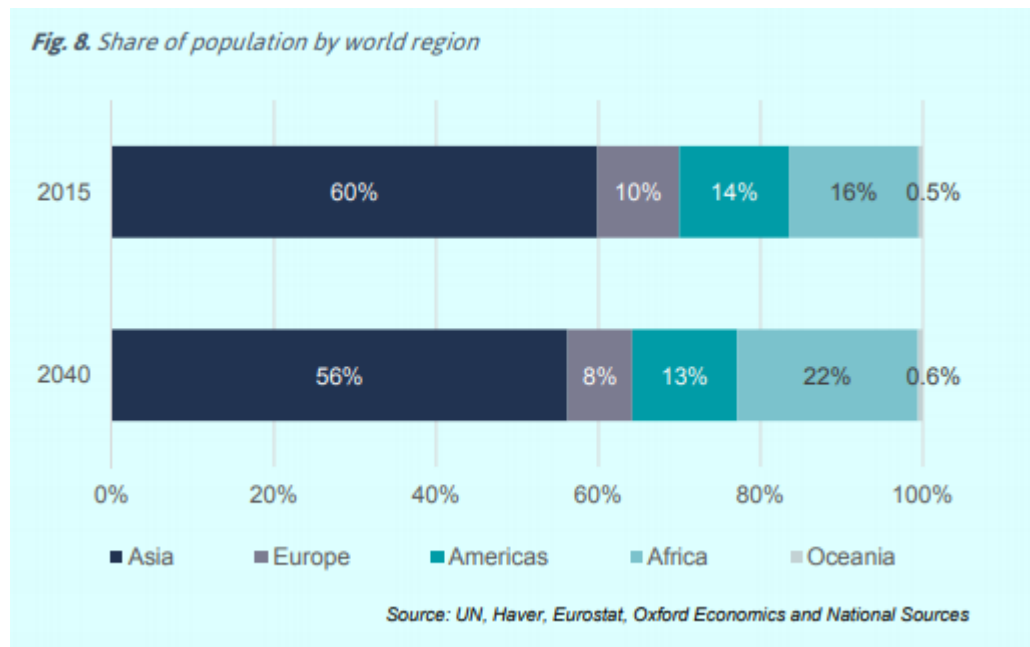
4. Investment in infrastructure contributes \$1.3 trillion to U.S. and Canadian Gross Domestic Products over the projection period, or approximately \$70 billion annually.
5. Infrastructure development will result in employment of 725,000 U.S. workers annually. Significant employment opportunities are created not only within states where infrastructure development occurs but across all states because of indirect and induced labor impacts.



As you can see, there is a big spike in CAPEX expected to occur this year followed by an average spend of \$40B over the next 15 or so years.

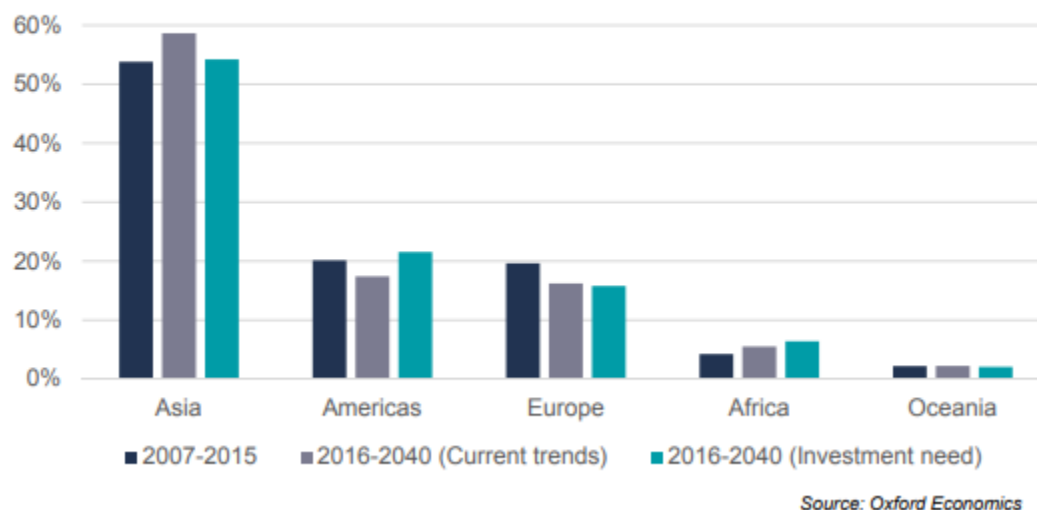
When we look globally the story remains intact. Why? Emerging markets need for better infrastructure on top of sanctions put in place by developed countries. For example, the UN Sustainable Development Goals for universal access to drinking water, sanitation and electricity by 2030 will increase the global infrastructure need by a further \$3.5 trillion over the next decade. Call it what it is, we also need to have

the infrastructure set in place for the growing world population. Think about Africa alone. The continent is expected to exceed two billion people by 2040—an increase of almost 75% over the 2015 population.



Below is also an image from Oxford on global infrastructure spending trends.

*Fig. 1. Regional share of global infrastructure investment, 2007-2040*



Asia will be leading the group for the next 20 years with a bulk of the spending coming from the Americas, Europe, and then Africa. We actually expect Africa to make up more than Oxford expects but it could be more of a timing difference between our views and theirs.

When we look at emerging markets, technology is going to play a huge part in how efficient and well the infrastructure is set in place and we can definitely touch on this in future research reports but the way we're seeing telecom companies like Orange (ORAN) and others move into Africa at a hefty pace and others into areas such as India/Pakistan/etc. we believe the infrastructure spends can grow at an even faster pace as they will have the technology sent in place for better communication, leaner processes, and so forth. Like I said, we can talk about this more in the future but wanted to just provide our two cents as to why we feel the emerging markets will spend a little more/earlier than Oxford is thinking.

So as you can see the demand and need for infrastructure spending is without a doubt prevalent but let's get to the answer for the question we received.

The question was:

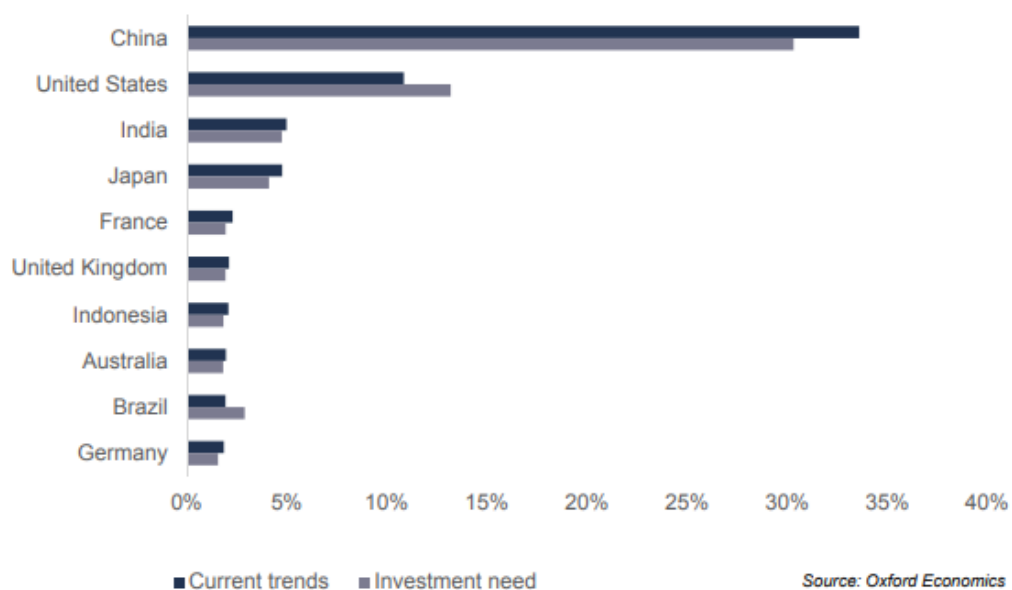
***"Our 3rd party research consultant just released their 10 year projected returns from 2019-2028 and their highest projected asset class is MLPs at 11.5% annualized. What are your thoughts, CUBE?"***

So for those reading this here a list of major assets classes:

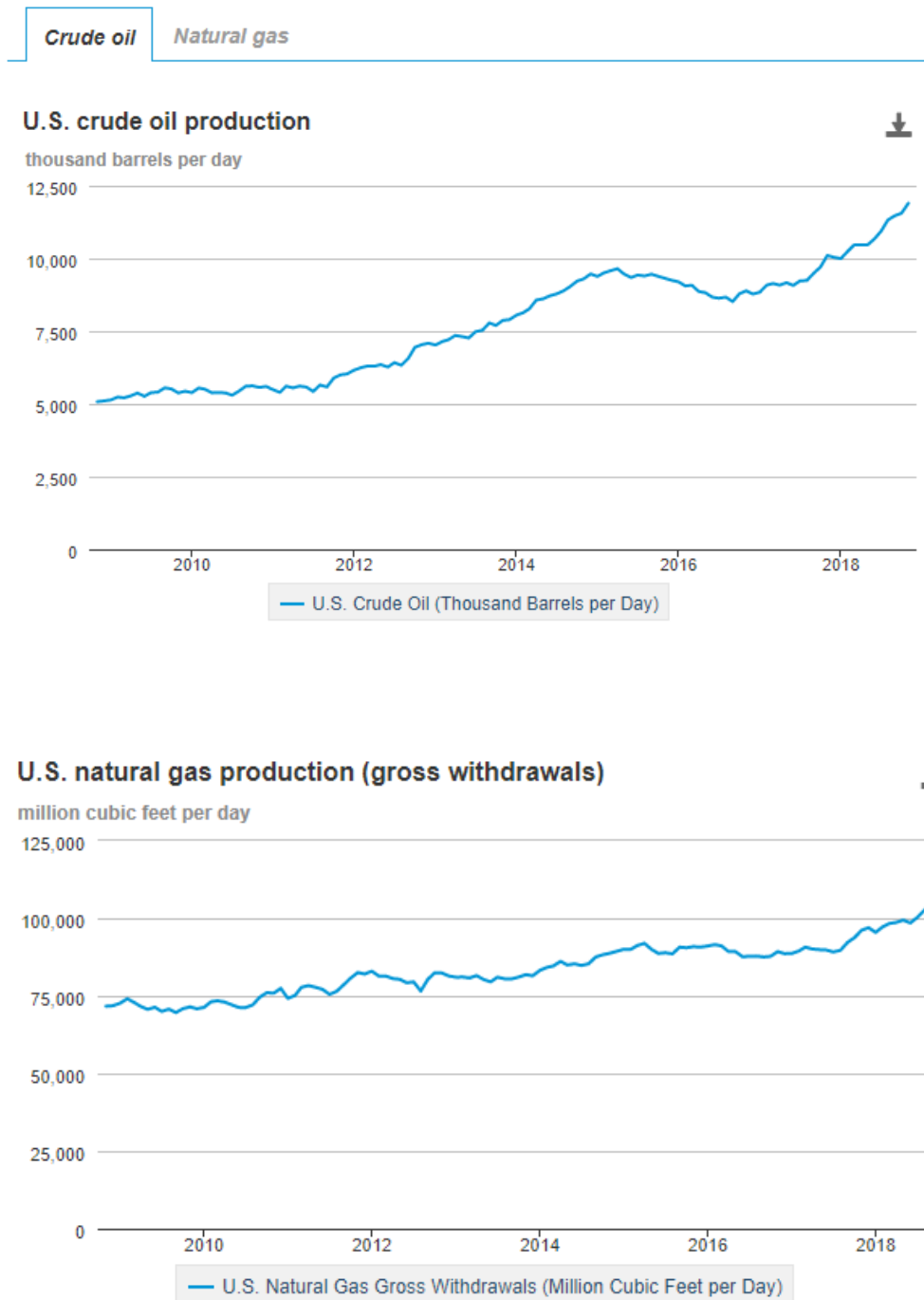
1.	Publicly Traded Real Estate Shares and REITs
2.	High Yield Fixed Income
3.	US Investment Grade Fixed Income
4.	Inflation-Indexed Securities
5.	Emerging Markets Fixed Income
6.	Hedge Funds
7.	Emerging Markets Equity
8.	Commodities
9.	Non-US Equity
10.	Non-US Fixed Income
11.	Gold
12.	Managed Futures
13.	US Equity
14.	US Cash and Cash Equivalents
15.	Master Limited Partnerships

We found it quite ironic that the 11.5% number the third party conducted is pretty much right in-line with the U.S. infrastructure spending trends.

*Fig. 25. Infrastructure investment requirements 2016-2040: 10 largest markets, share of world total*



We found it quite ironic that the 11.5% number the third party conducted is pretty much right in-line with the U.S. infrastructure spending trends. Also if we look at the charts below, U.S. production of Oil and Nat Gas is on a steady rise.





Over the next 10 years, we don't believe MLPs are going to be the best performing asset class. While we do think MLPs will grow given the data we have and fall somewhere in the higher range, we think they will underperform several asset classes but mainly Emerging Markets equities and REITs.

We believe this to be the case because not only have EM and REITs been outperforming MLPs, if MLPs are going to rise it's because of several reasons that will also help support EM and REITs.

1. Low interest rate environment
2. Infrastructure spending to remain strong
3. GDP growth to continue

Most of the MLPs we've seen are conducting business in the United States and Canada. The reason we posted the international trends isn't just for benchmark purposes but also as a means of answering why we think EM and REITs can outperform because they have more exposure to these booming areas we highlighted – including the technology aspect we mentioned that could spur even more growth.

Also, if the U.S. economy continues to outperform and grow more than other countries over the next decade, we can see a sustained and stronger Dollar. As a result, oil (which is priced in USD) will become more expensive for other countries to purchase and put a bit of a cap on how expensive the commodity can get. In addition, a stronger U.S. economy will lead to higher interest rates which aren't good for MLPs as they rely heavily on debt financing and also plays into the domino effect of higher interest rates equaling a stronger dollar equaling a cap on oil prices. (Side note: higher yields elsewhere also makes MLP yields less attractive). All of this would probably hurt traditional REITs too but play into the hands of EM as they would be exporting more goods to the U.S. and at the same time taking advantage of the lower oil prices as most EMs are importers of the commodity. As you can see, we kind of see MLPs getting sandwiched a bit by both. Just to reiterate, we still see

MLPs, given the data we have, bouncing back but just don't see them being the top performing asset class over the next decade. The average 8.8% yield on the Alerian MLP Index (AMZ) that we posted above is very attractive alongside other ETFs like (MLPA) and (AMZA) but it's all about what the price does.

Another topic we'd like to have a discussion about is regarding the future of alternative energy and how that may affect a lot of the MLPs over the course of the next few decades considering they are primarily comprised of pipelines of petroleum and natural gas.