

Tortoise QuickTake Podcast

May 2, 2016

Welcome to the Tortoise QuickTake podcast. Thank you for joining us. Today, a senior member of Tortoise provides a timely update on trending topics in the market.

Thanks for joining us today on the Tortoise QuickTake podcast. I'm James Mick, managing director and portfolio manager with Tortoise Capital Advisors.

Sentiment in investing can be a lot like momentum in sports. You can't always pinpoint when it turns, but when it does, it can build on itself and be hard to stop. Energy stocks seem to be building momentum, as sentiment has clearly turned more positive. Market commentators have even expressed sector rotations into energy and out of stalwarts such as technology companies. The change is consistent with our view that long-term investors have been given an opportunity to invest at very attractive prices given the most recent downturn. Earnings season is underway and we'll see if that momentum can continue.

As for last week's performance,

- On the commodity front, crude oil had a strong week, up 5%, while
- Natural gas also moved higher, plus 1.8% for the week
- Shifting to equities, the broader S&P 500® Energy Index finished marginally higher, up .5%
- Exploration and production companies, as measured by the Tortoise North American Oil & Gas Producers IndexSM, returned .9%
- And the Tortoise MLP Index[®] continued its positive trend, increasing 1% last week

As it relates to our main topic today, I wanted to discuss U.S. production declines and what that means for midstream companies. Specifically, we are frequently asked, "What happens to crude oil pipeline volumes if production declines as the EIA expects, i.e. approximately 800,000 bpd compared to 2015?"

Good question.

Let me first clarify, the 800,000 bpd decline in U.S. production is based on average 2016 volumes versus average 2015 volumes. However, the exit rate of production, i.e. what you end 2016 at versus what we ended 2015 at, will be closer to a 900,000 bpd decline.

To appropriately assess, it's important to point out some key factors:

- Mode of transportation can vary between pipeline, rail car, barge and truck
- Cost of transportation varies by mode
- Destination matters as it creates basis, i.e. differentials between various locations
- Strategic value of the asset matters
- And finally, a distinction between supply push and demand pull is necessary to fully appreciate the outlook

In terms of the various modes of transportation, pipeline is far and away the most utilized, yet rail made significant strides over the last several years as the need for cheap, fast takeaway capacity was high to meet the rapid rise in US crude oil production. Barge is another source of transportation, but is clearly only applicable in various regions where water ways exist. Trucking is the final mode, but is primarily used in emerging basins and over shorter distances given the cost.

Speaking of cost, pipeline is also far and away the cheapest mode of transport. Ranges vary based primarily on distance traveled and grade of crude, but pipeline transportation generally ranges between \$2 and \$4 per barrel. Rail transport typically costs 2-5 times pipeline transport. Barge varies significantly by distance, but is commonly cheaper than rail and more expensive than pipeline. Finally, trucking is the most expensive and is usually cost prohibitive except for shorter haul shipments.

Destination is key and the length of transport will often necessitate certain modes being deployed. For example, transporting crude oil from the Bakken Shale in North Dakota to refiners in the Northeast is challenging by anything but rail. No pipelines exist for that transport, and the cost of building a new pipeline would be extremely expensive and very difficult given the population density. Hence, rail is the preferred method. However, differentials play a big part in determining not only the mode, but if something actually gets transported at all. As an East coast refiner, your option is to either take crude imported from the water, based on an international price, such as Brent, or to possibly buy Bakken crude and have it shipped via rail. As such, in order to compete, the Bakken crude must price below the waterborne crude, including the cost of transport via rail, which, as noted can be \$10-\$15 per barrel. If Bakken crude, when including the incremental transport cost by rail, is higher than the international marker, it must find a different home.

The strategic value of an asset matters greatly as well. For instance, as a basin builds in production and producers get more and more comfortable with the resource base, permanent solutions tend to rule the day. Pipelines replace rail that served as a stop gap measure until new takeaway could be built. Once again the Bakken serves as a useful example, as pipeline's share of export volumes has increased from approximately 20% in early 2014 to over 50% now, while rail has fallen from over 70% of export volumes to just over 40% during the same time period.

An additional component of the strategic value of assets is determined by whether a pipeline is supply push or demand pull. Supply push pipelines provide takeaway from a specific basin, while demand pull pipelines feed a demand center, such as a refinery.

This distinction is key for many reasons, but consider the current environment where low crude oil prices and strong gasoline demand are incenting refineries to run full out, with utilizations averaging over 90%. As such, pipelines moving crude oil into a refinery provide a high degree of assurance of maintaining utilization. Especially when one considers the pipeline may deliver crude whether it is domestic or international, i.e. the pipeline still operates as long as the refinery continues to run. This is a strong distinction compared to a pipeline that is dependent on a specific basin continuing to operate based on producer break-evens, driven in large part by the commodity price.

Which brings me to my final point, location matters in evaluating the strategic nature of the pipeline. Various basins will react differently to lower prices. The Permian basin in West Texas has long been one of our favorites and one that we feel will hold up better in this low commodity price environment. So we shift the portfolios to take advantage of the best basins.

With all that background, our premise is pretty simple. Pipelines will hold up better than other modes of transportation based on cost, location and strategic value. Additionally, demand pull pipelines will hold up even better still. And supply push pipelines supporting the best basins will also fare better.

In fact, since the beginning of 2015, we have seen a decline of 450,000 bpd in terms of rail transport in the US. And while pipelines will certainly feel some of the decline in production of approximately 800,000 bpd year over year, we anticipate rail will take the brunt and pipelines will be more resilient.

The last big decline in crude oil prices and subsequently production was in 2008-2009. During that time period, pipeline volumes held up quite well and we would expect this disruption to be no different.

That wraps up our commentary for today, thanks for listening and we look forward to speaking with you next week.

Thank you for joining us. And stay tuned for our next cast. Have topics you want covered or other feedback to share? Write us at info@tortoiseadvisors.com

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The S&P Energy Select Sector® Index

The S&P Energy Select Sector Index is a capitalization-weighted index of S&P 500® Index companies in the energy sector involved in the development or production of energy products.

About Tortoise MLP Index®

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