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Has Marathon's Refining Empire Hit a Wall?

Limits to growth for U.S. independent.

Morningstar Commodities Research
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Sandy Fielden
Director, Oil and Products Research
+1 512 431-8044
sandy.fielden@morningstar.com

Data Sources for This Publication
U.S. Energy Information Administration
CME Group
To discover more about the data sources used, click here.

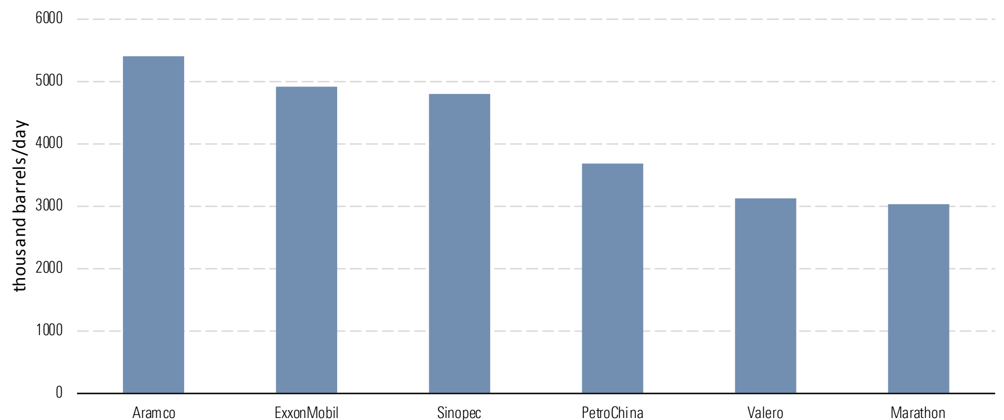
New Giant on the Block

Andeavor's acquisition by Marathon Petroleum, announced April 30, 2018, combines the second- and fifth-ranked U.S. refiners into the nation's largest crude processor—a new giant on the block—with capacity of over 3 million barrels/day, or mmb/d. The acquisition is expected to close during the second half of 2018, and the combined company will be known as Marathon. Complementary networks of refining and marketing assets are likely to produce significant consolidation savings in the short term. However, the deal almost certainly limits Marathon's future expansion by acquisition in the U.S. refining market. That means growth can only come through expanding exports, investing abroad, or diversifying. This note reviews the implications of the acquisition in terms of U.S. refining and discusses the new company's paths to future growth.

The Stats

Marathon becomes the largest independent refiner in the U.S. with 3mmb/d capacity at 16 plants, leapfrogging Valero with 2.6 mmb/d capacity at 12 U.S. plants (although Valero is bigger worldwide, with two refineries in Canada and the U.K. for a total 3.1 mmb/d). In third place behind Valero comes Phillips 66 with 1.9 mmb/d capacity at 11 U.S. plants and 0.3 mmb/d at two plants in Europe. PBF Energy trails the top three U.S. independents with 0.9 mmb/d capacity at five plants, and Holly Frontier comes in fifth, with 0.5 mmb/d capacity at five plants. Among the major oil companies operating in the U.S. (ExxonMobil, Shell, BP, Chevron, and Total) ExxonMobil is in fourth place behind Phillips 66 with 1.7 mmb/d capacity and Chevron is fifth with 0.9 mmb/d. In world refining terms, recent accurate data is hard to source, but we believe Marathon and Valero rank about fifth and sixth behind leader Saudi Aramco with 5.4 mmb/d capacity, ExxonMobil with 4.9 mmb/d, and Chinese national companies Sinopec and PetroChina with 4.8 mmb/d and 3.7 mmb/d capacity, respectively (Exhibit 1).

Exhibit 1 Worldwide Refining Capacity by Company



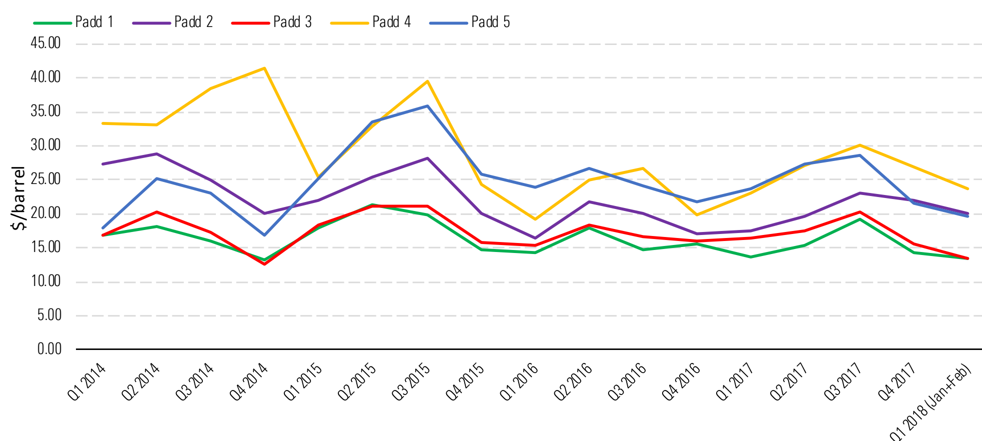
Source: Company reports, Morningstar

Home Advantage

As we discussed in a July 2017 note (see "Refiners Slow Response to Shale Bounty"), U.S. refiners enjoyed record margins during the shale era between 2011 and 2015, primarily due to lower-priced domestic crude and a booming refined product export market. As can be seen in Exhibit 2, margins narrowed in 2016 and only recovered in the final quarter of 2017 before dipping again in first-quarter 2018 in the face of higher crude prices. The chart shows estimated quarterly refinery 3-2-1 crack spread margins for each of the five Department of Energy Petroleum Administration for Defense Districts, or PADDs, between 2014 and 2017, with an estimate for first-quarter 2018 based on January and February. The data is derived from Energy Information Administration refiner sales and crude purchase reports.

The new company has a good geographic balance of refining and marketing assets. That reflects Andeavor's strength in the West Coast (PADD 5) and Rockies (PADD 4) regions, which have the strongest crack spread margins. Marathon's footprint in the Midwest (PADD 2) region has also enjoyed robust margins. Marathon also has two large refineries on the Gulf Coast (PADD 3) that experienced the second-lowest regional margins but benefit most from refined product exports that are not included in the domestic crack spread numbers. Neither firm has a refining presence in the worst-performing East Coast PADD 1 region.

Exhibit 2 Refinery 3-2-1 Crack Spread Margins



Source: EIA, Morningstar

In 2018 so far, higher crude prices have dampened margins, although refined product prices strengthened in April and early May as demand picked up. A rapid increase in U.S. domestic crude production—up by 1.3 mmb/d during the first 18 weeks of 2018 compared with the year-ago period—has maintained downward pressure on U.S. West Texas Intermediate crude prices. WTI traded at an average $4.65/barrel discount to international equivalent Brent crude during this period, favoring U.S. refiners over international competitors.

Short-Term Boost

In the short term, the new company should gain from consolidation in its refining and marketing networks (it predicted expected synergies of at least $1 billion in announcing the acquisition). Refiners like Marathon with complex plants that remove more sulfur and process heavier crudes should also benefit from changes in the refining market for fuel oils because of new International Maritime Organization bunker fuel sulfur limits coming into effect in January 2020.

Given these positives in the refining environment, we expect an expanded Marathon to continue performing well for the next several years.

Less Rosy Future

However, with the initial dust having settled, we examined the deal with respect to longer-term prospects for refining and marketing in the U.S. In that context, the picture doesn't look as rosy for Marathon or its competitors in the independent refining sector because of a dearth of growth options. Our doubts are rooted in an assumption of continued tepid demand growth for refined products in the U.S. That slow growth has been a feature of the refining landscape since 2007, when federal regulations began to affect demand for gasoline and diesel by requiring the substitution of renewable fuels such as ethanol (see our April note "Trump Strings Along Farmers and Refiners With Waivers"). Environmental Protection Agency Corporate Average Fuel Economy regulations have also kept the lid on fuel demand.

During the shale era, demand for gasoline recovered ground lost since 2007 to reach a new peak of 9.3 mmb/d in 2016, but sales were flat in 2017. Diesel sales in 2017 were still 6% below their level in 2007. Although the Trump administration has begun to dismantle federal regulations, any consequent uptick in demand will likely be countered by continued improvements in vehicle efficiency and the encroachment of alternative technologies such as electric autos.

Overseas Growth

If our assumption of tepid growth is correct, then refiners can only look for expansion via competitor acquisition in the U.S. market, overseas expansion, or diversification into new markets.

In the case of Marathon, we assume the door to competitor acquisition is now closed by U.S. monopoly regulations. Its next option is expansion abroad, and there are certainly good possibilities there. As we discussed in a May 2017 note (see "Mexican Downstream Opportunity for U.S. Refiners"), Andeavor is a leading investor in downstream marketing assets in Mexico, and the new company intends to pursue that avenue. Marathon's Gulf Coast refineries are also in a strong position to benefit from continued growth in refined product exports to Latin America. However, these opportunities are currently supported by existing domestic refineries; as such, they are constrained by throughput capacity limits unless the new company expands its fleet.

Overseas refinery acquisition is one route to continued growth for U.S. independent refiners and is a path that, as we noted above, both Valero and Phillips 66 have followed in Canada and Europe. This strategy increases crude throughput and creates a broader geographic footprint that could benefit from expanding demand in developing markets. The downside is that U.S. refinery margins, complexity, and utilization rates are generally better than those of overseas competitors. The markets with the fastest growth in Asia are also harder to enter because of the dominant role played by local state-owned or subsidized companies. As a result, returns from overseas refinery investments are likely to be lower than those available in the U.S. even if growth rates are higher.

Diversification

That leaves diversification into new markets as the last and perhaps most promising route to continued growth. This is harder to quantify, as it's something of a catchall and can be pursued in any number of directions. Marathon already has a significant interest in natural gas gathering and processing in the Utica through its subsidiary MarkWest, and both Andeavor and Marathon have built up crude gathering and logistics operations, but these are closely related to refining operations.

In fact, having achieved world-scale refining operations, perhaps the most obvious path to continued growth is that followed by the major oil companies, which have retreated from oil refining over the past decade while increasing their exposure to petrochemicals and natural gas, as well as more adventurous forays into renewables and other innovative technologies. M

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For More Information

+1 800 546-9646 North America
+44 20 3194 1455 Europe
commoditydata-sales@morningstar.com

22 West Washington Street
Chicago, IL 60602 USA

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