



DIVIDEND ASSETS CAPITAL, LLC

INVESTMENT ADVISORS

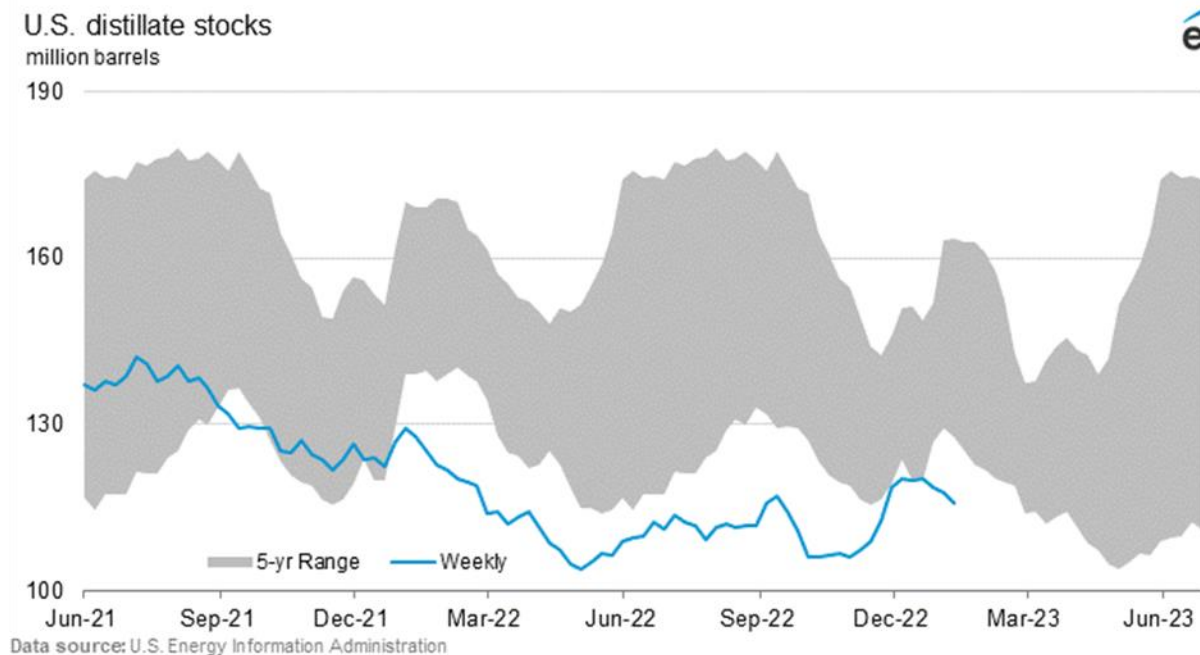
Energy Investor Monthly: January 2023

DIVIDEND ASSETS CAPITAL – INVESTMENT STRATEGIES FOR RISING INCOME & GROWTH

Insights of the Month: The Case of the Missing Distillates

The term “distillate” is often used as an industry catchall to define refined products used as fuel but is not gasoline. Technically, a distillate is a product obtained from the condensation of vapors during the refining process. In petroleum marketing, however, the term distillate is reserved for products in the middle distillation range. These products include heating oils and diesel fuel. The main distillate classifications are Nos. 1, 2, and 4 fuel oils, and Nos. 1, 2, and 4 diesel fuels. Kerosene, used primarily as jet fuel, is also a distillate but is often listed separately for statistical purposes. In this sense, most petroleum products – gasoline, diesel fuel, kerosene, and jet fuel – are, to some degree, distillates. The refining process by which they are produced, however, is the same and involves heating crude oil and allowing it to rise in a tower-like chamber. The vapor created then condenses at various levels in the tower, and the liquid components, known in the refining industry as side cuts, are drawn off and may be further refined depending on their eventual end markets.

While gasoline is the primary end product for most refineries, distillates still make up an important part of their total output – and profitability. This can be demonstrated using a common measure of refining profitability known as the 3:2:1 crack spread. This spread is the difference between the cost of a barrel of crude oil (raw feedstock material) and the market value of the refined products, like gasoline and fuel oil, produced by a refinery. Using a simple 3:2:1 example in which 3 barrels of unrefined crude oil (1 barrel = 42 U.S. gallons) yields two barrels of gasoline and one barrel of distillate, this is how the spread is calculated. If the current price of crude oil is \$75 per barrel and the wholesale prices for gasoline and diesel are \$2 and \$3 per gallon, respectively, then a 3:2:1 crack spread implies a refinery will earn $\$23 (2 * \$2 * 42 + 1 * \$3 * 42 - 3 * \$75) / 3$ on each barrel of crude it refines. Although gasoline and distillates only account for about 70% of each refined barrel of crude oil, this 3:2:1 calculation is still an important measure of refinery profitability. With all this in mind, the question is, why are distillate inventories now so low?



In a typical year, U.S. distillate inventories tend to fluctuate, reaching a low at the end of the winter season and a high in late fall. It should come as no surprise that this is because of the seasonal demand for home heating oil. As refineries switch from producing more heating oil in the fall to making more gasoline in the spring, many reduce or even idle their operations. This is also when refineries perform maintenance and make repairs in preparation for peak seasonal demand. However, 2022 turned out to be a not-so-typical year, as distillate inventories remained consistently below their five-year averages the entire year.

What sets 2022 apart from years previously is the combined impact of Russia's invasion of Ukraine and a reduction in U.S. refining capacity, particularly in the Northeast. Back in 2016, the total refining capacity on the East Coast (PADD 1) was 1,278 Mbpd (Mbpd = thousand barrels per day). Capacity declined by over 30% to 878 Mbpd by October of 2022, the most recent month that data is available. The main reason for this reduction was the closure of refineries, some of which occurred because of fire damage and more stringent environmental regulations; however, most closures were tied directly to profitability, or lack thereof. Unfortunately, this supply deficit, which was already occurring, was compounded by Russia's invasion of Ukraine.

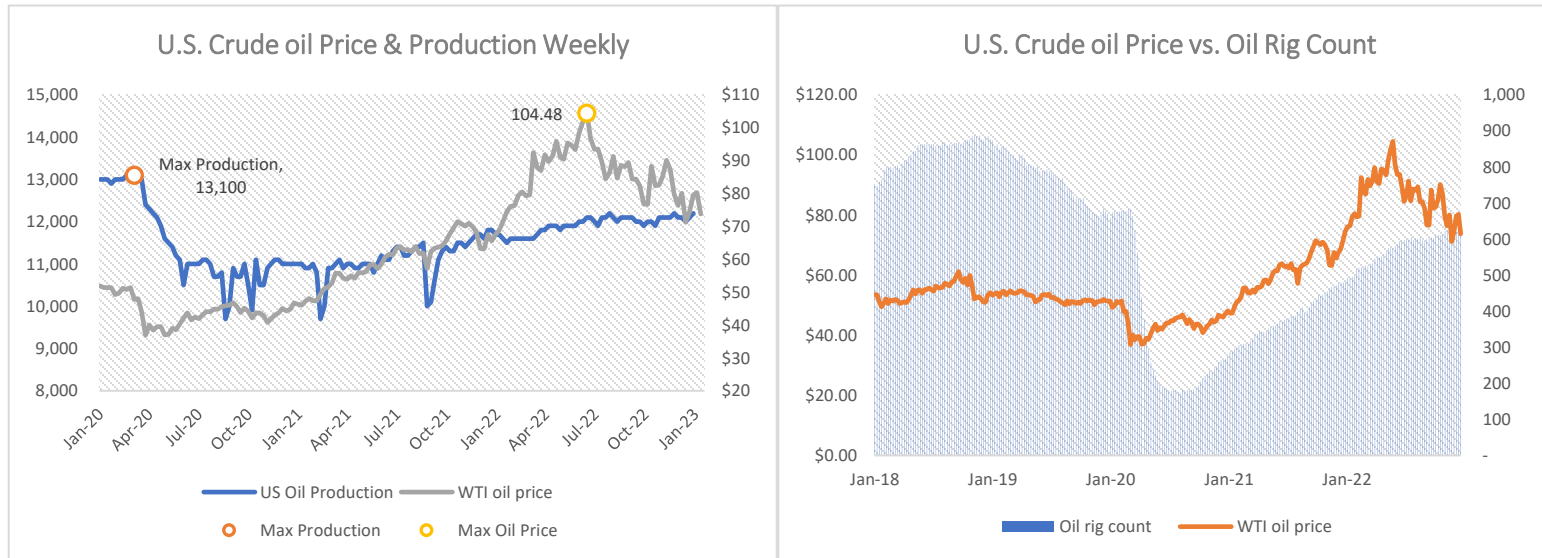
The question is, why? Before the invasion, Russia was the second largest provider of petroleum products to the U.S., after Canada, providing 474 Mbpd of refined products in 2021. Of the 474 Mbpd the U.S. imported from Russia, 355 Mbpd were unfinished. These partially refined oils are typically used as feedstocks for less complex refineries. In the U.S., most of these less complex refineries are located on the East Coast. With the end of imports of Russian products and additional demand for distillate fuel by Europe's electric power sector because of record-high natural gas prices, there has been no replacement for these partially refined feedstocks from other U.S. suppliers. As a result, less distillate is being produced, which in turn decreases supply.

Adding to these two issues are regulatory restrictions, like the Jones Act, and NIMBY (not in my backyard) hostility toward the construction of new pipeline projects. Both are hampering the ability of U.S. refiners to move distillates from regions where there is excess supply, like the Gulf coast, to areas where they are needed. The U.S. Jones Act, in particular, has become a more recent barrier because it prevents the same non-U.S. flagged ships, which are often used to export distillates from the Gulf Coast, from transporting refined products to where they are needed in the Northeast.

Fortunately, weather seems to be the one mitigating factor helping to stabilize the distillate markets – at least for now. A milder start to winter combined with a slowing economy appear to have reduced demand. In addition, European refineries have stepped up production of unfinished fuel oils and refined products, seeking ways to replace their dependence on Russian crude and thus increasing their ability to export refined products to the U.S. However, none of these factors alone can alleviate all the issues arising from the growing shortfall in domestic refining capacity and the inability of U.S. refiners to deliver products from the regions where it is produced to where it is needed.

U.S. Total Crude Oil Production and U.S. Crude Rotary Rig Count (as of January 6, 2023):

1. West Texas Intermediary (WTI) oil price was \$73.77 per barrel (+3.6% m/m).
2. U.S. oil production was 12.2 mm bbl/d (+0.8% m/m).
3. U.S. oil rig count was 618 (-1.1% m/m).



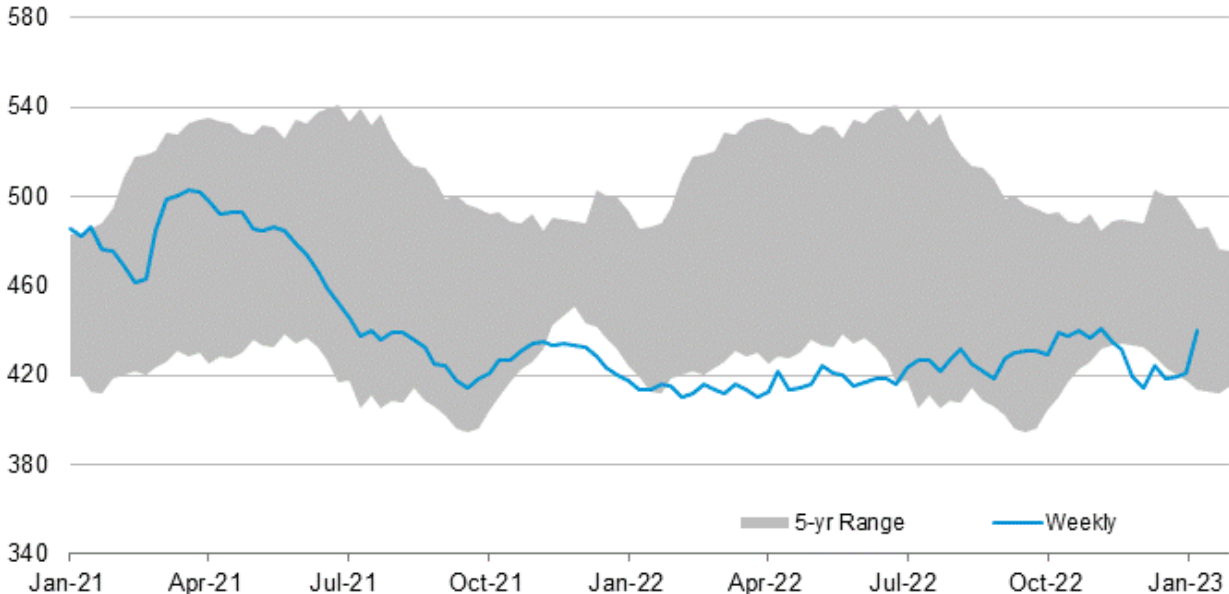
Source: Bloomberg, Dividend Assets Capital

The U.S. Commercial Crude Oil Inventories (excluding those in the Strategic Petroleum Reserve) and Inventory Changes (As January 6, 2023):

1. Inventory increased by 15.5 million barrels from the previous month to 439.6 million barrels (2.0% below the 5-year average).
2. Total crude stockpiles including the Strategic Petroleum Reserve (“SPR”) Increased by 4.8 million barrels month over month, to 811.2 million barrels

U.S. crude oil stocks

million barrels



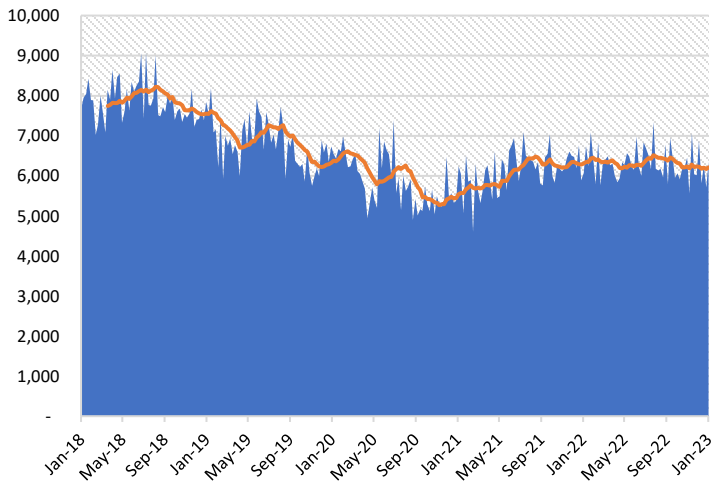
Data source: U.S. Energy Information Administration



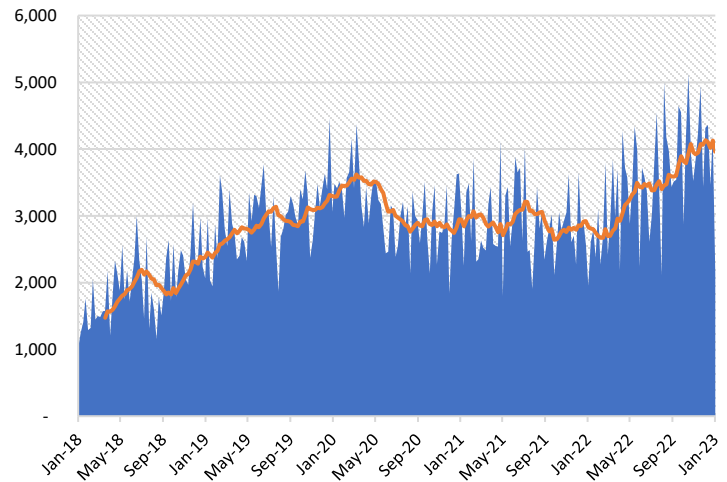
U.S. Imports and Exports (as of January 6, 2023):

1. U.S. crude oil 4-week average imports were 6.0 mm bbl/d, down 7.1% month over month.
2. U.S. crude oil 4-week average exports were 3.5 mm bbl/d, down 16.3% month over month.

U.S. Crude Oil Imports



U.S. Crude Oil Exports

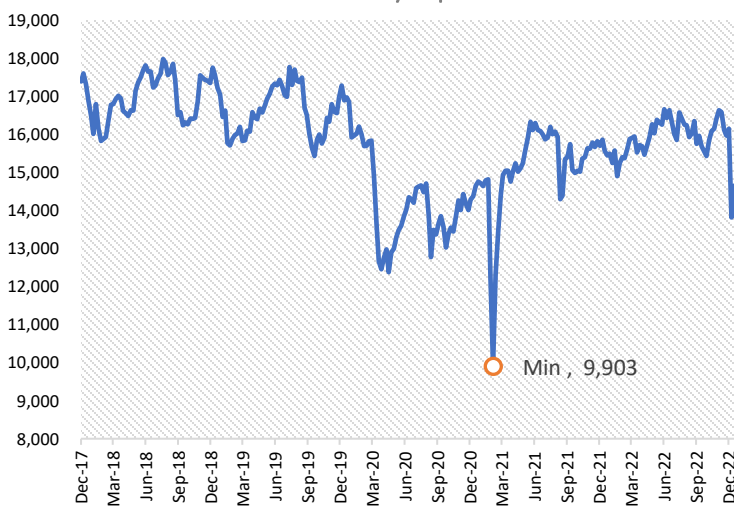


Source: Bloomberg, Dividend Assets Capital

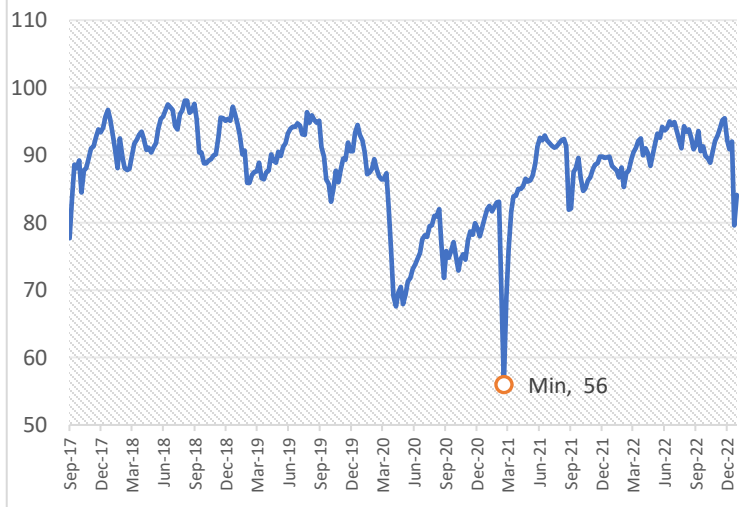
U.S. Refinery Inputs and Utilization Rates (as of January 6, 2023):

1. U.S. crude oil refinery inputs averaged 14.7 mm bbl/d for the week ending January 6, 2023. Four-week inputs averaged 15.1 million bbl/d, 3.8% lower than the same time a year ago.
2. Refinery Utilization Rate was 84.1%, down from 92.2% for the previous month. This is also lower than the same period last year, which was an 88.4% utilization rate.

U.S. Refinery Inputs



U.S. Refinery Utilization Rate



Source: Bloomberg, Dividend Assets Capital

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Clarity: A transparent and understandable approach to portfolio management.

Simplicity: We believe dividends are the best indicator of the future price performance of a stock.

Devotion: We build confidence through a disciplined process and strong devotion to our investment philosophy and clients.



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INVESTMENT ADVISORS

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